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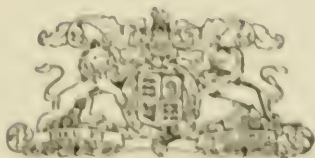
VOLUME 8.

SEVENTH SESSION OF THE TWELFTH PARLIAMENT

OF THE

DOMINION OF CANADA

SESSION 1917



VOLUME LII.



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TO THE

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OF THE

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### CONTENTS OF VOLUME 1.

(This volume is bound in three parts.)

1. Report of the Auditor General for the year ended 31st March, 1916, Volume I, Parts a b and A to K; Volume II, Parts L to U; Volume III, Parts V to Z; Volume IV, Part ZZ. Presented by Sir George Foster April 19, 1917.  
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### CONTENTS OF VOLUME 2.

2. The Public Accounts of Canada, for the fiscal year ended March 31, 1916. Presented by Sir Thomas White, February 1, 1917...*Printed for distribution and sessional papers.*
3. Estimates of sums required for the service of the Dominion for the year ending on the 31st March, 1915, and in accordance with the provisions of "The British North America Act, 1867," the Governor General recommends these Estimates to the House of Commons. Presented by Sir Thomas White, January 21, 1917.  
*Printed for distribution and sessional papers.*
4. Supplementary Estimates of sums required for the service of the Dominion for the year ending on the 31st March, 1917, and, in accordance with the provisions of "The British North America Act, 1867," the Governor General recommends these Estimates to the House of Commons. Presented by Sir Thomas White February 5, 1917.  
*Printed for distribution and sessional papers.*
5. Supplementary Estimates of sums required for the service of the Dominion for the year ending on the 31st March, 1918. Presented by Sir Thomas White, August 15, 1917.  
*Printed for distribution and sessional papers.*
6. List of Shareholders in the Chartered Banks of the Dominion of Canada as on December 31, 1915. Presented by Sir Thomas White, January 25, 1917. . . . . *Not printed.*
7. Report on certified cheques, drafts or bills of exchange, dividends, remittances annual and unclaimed balances in Chartered Banks of the Dominion of Canada, for five years and upwards prior to December 31, 1915. Presented by Sir Thomas White, January 25, 1917. . . . . *Not printed.*

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8. Report of the Superintendent of Insurance for the year 1916. Presented by Sir Thomas White, July 27, 1917.  
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9. Abstract of Statements of Insurance Companies in Canada for the year ended December 31, 1916. Presented by Sir Thomas White, May 2, 1917.  
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- 10.** Report of the Department of Trade and Commerce for the fiscal year ended 31st March, 1916: Part I.—Canadian Trade (Imports in and Exports from Canada). Presented by Sir George Foster, April 19, 1917. . . . . *Printed for distribution and sessional papers.*

**CONTENTS OF VOLUME 5.**

- 10a.** Report of the Department of Trade and Commerce for the fiscal year ended March 31, 1916:—Part II.—Canadian Trade with France, Germany, the United Kingdom and the United States. Presented by Sir George Foster, January 25, 1917.  
*Printed for distribution and sessional papers.*
- 10b.** Report of the Department of Trade and Commerce for the fiscal year ended March 31, 1916.—Part III.—Canadian Trade with British and Foreign Countries (except France, Germany, United Kingdom and United States). Presented by Sir George Foster, April 19, 1917. . . . . *Printed for distribution and sessional papers.*
- 10c.** Report of the Department of Trade and Commerce for the fiscal year ended March 31, 1916 (Part IV, Miscellaneous Information). Presented by Sir George Foster, June 4, 1917. . . . . *Printed for distribution and sessional papers.*

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- 10d.** Report of the Department of Trade and Commerce, Part V—Grain Statistics, compiled by the Inspection Branch of the Department, Ottawa, for the fiscal year ended March 31, 1916, the crop year ended August 31, 1916, and the season of navigation ended December 14, 1916; and Report of the Board of Grain Commissioners. Presented by Sir George Foster, June 8, 1917. . . . . *Printed for distribution and sessional papers.*
- 10e.** Report of the Department of Trade and Commerce, for the fiscal year ending March 31, 1916 (Part VI.—Subsidized Steamship Services, with Statistics showing Steamship Traffic to December 31, 1916, and Estimates for fiscal year 1917-1918). Presented by Sir George Foster, May 3, 1917. . . . . *Printed for distribution and sessional papers.*
- 10f.** Report of the Department of Trade and Commerce for the fiscal year ended March 31, 1916: Part VII—Trade of Foreign Countries, Treaties and Conventions. Presented by Sir George Foster, 1917. . . . . *Printed for distribution and sessional papers.*

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- 11.** Report of the Department of Customs for the year ended March 31, 1916. Presented by Hon. Mr. Reid, January 29, 1917. . . . . *Printed for distribution and sessional papers.*

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- 12, 13, 14.** Reports, Returns and Statistics of the Inland Revenues of the Dominion of Canada, for the fiscal year ended March 31, 1916. Part I.—Excise. Part II.—Weights and Measures, Gas and Electricity. Part III.—Adulteration of Food. Presented by Sir James Loughheed, January 26, 1917. . . . . *Printed for distribution and sessional papers.*
- 15.** Report of the Minister of Agriculture for the Dominion of Canada, for the year ended March 31, 1916. Presented by Hon. Mr. Burrell, January 26, 1917.  
*Printed for distribution and sessional papers.*
- 15a.** Report of the Dairy and Cold Storage Commissioner for the fiscal year ending March 31, 1916. (Dairying, Fruit, Extension of Markets and Cold Storage.) Presented by Hon. Mr. Burrell, 1917. . . . . *Not printed.*



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- 21.** Forty-ninth Annual Report of the Department of Marine and Fisheries, for the year 1915-16—Marine. Presented by Hon. Mr. Hazen, January 23, 1917.  
*Printed for distribution and sessional papers.*
- 22.** List of Shipping issued by the Department of Marine and Fisheries, being a list of vessels on the Registry Books of the Dominion of Canada, on the 31st day of December, 1916. Presented by Hon. Mr. Hazen, September 4, 1917.  
*Printed for distribution and sessional papers.*
- 23.** Supplement to the Forty-ninth Annual Report of the Department of Marine and Fisheries for the fiscal year 1915-16. (Marine)—Steamboat Inspection Report. Presented by Hon. Mr. Hazen, April 19, 1917... *Printed for distribution and sessional papers.*

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- 24.** Report of the Postmaster General for the year ended 31st March, 1916. Presented by Hon. Mr. Blondin, February 1, 1917... *Printed for distribution and sessional papers.*
- 25.** Annual Report of the Department of the Interior, for the fiscal year ending March 31, 1916. Presented by Hon. Mr. Roche, January 22, 1917.  
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- 25b.** Annual Report of the Topographical Surveys Branch of the Department of Interior, 1915-16. Presented by Hon. Mr. Roche, June 19, 1917.  
*Printed for distribution and sessional papers.*
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- 25d.** Fifteenth Report of the Geographic Board of Canada for year ended March 31, 1916. Presented, 1917... *Not printed.*
- 25e.** Report of the British Columbia Hydrometric Survey for the calendar year 1915 (Water Resources Paper No. 18 of the Dominion Water Power Branch, Department of the Interior). Presented by Hon. Mr. Roche, July 5, 1917.  
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- 25f.** Progress Report of the Manitoba Hydrometric Survey for the calendar year 1915 (Water Resources Paper No. 19 of the Dominion Water Power Branch, Department of the Interior). Presented by Hon. Mr. Roche, July 7, 1917.  
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- 26.** Summary Report of the operations of the Geological Survey, Department of Mines, for the calendar year, 1916. Presented by Hon. Mr. Meighen, August 23, 1917.  
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- 26a.** Summary Report of the Mines Branch of the Department of Mines, for the calendar year ending 31st December, 1915. Presented by Hon. Mr. Patenaude, April 19, 1917.  
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27. Report of the Department of Indian Affairs for the year ended March 31, 1916. Presented by Hon. Mr. Roche, January 22, 1917.  
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28. Report of the Royal Northwest Mounted Police, 1916. Presented by Sir Robert Borden, April 19, 1917... ..*Printed for distribution and sessional papers.*

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29. Report of the Secretary of State of Canada for the year ended March 31, 1916. Presented by Hon. Mr. Roche, August 18, 1917... ..*Printed for distribution and sessional papers.*
30. The Civil Service List of Canada for the year 1916. Presented 1917.  
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31. Eighth Annual Report of the Civil Service Commission of Canada for the year ended August 31, 1916. Presented by Hon. Mr. Patenaude, April 19, 1917.  
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33. Report of the Secretary of State for External Affairs for the year ended March 31, 1917. Presented 1917... ..*Printed for distribution and sessional papers*

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34. Report of the Minister of Justice as to the Penitentiaries of Canada for the fiscal year ending March 31, 1916. Presented 1917... ..*Printed for distribution and sessional papers*
35. Report of the Militia Council for the Dominion of Canada, for the fiscal year ending March 31, 1916. Presented by Sir A. E. Kemp, February 3, 1917.  
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36. Report of the Department of Labour for the fiscal year ending March 31, 1916. Presented by Hon. Mr. Crothers, January 22, 1917.  
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- 36a. Ninth Report of the Registrar of Boards of Cancellation and Investigation of the proceedings under "The Industrial Disputes Investigation Act, 1907," for the fiscal year ending March 31, 1916. Presented by Hon. Mr. Crothers, January 22, 1917.  
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37. Twelfth Annual Report of the Commissioners of the Transcontinental Railway for the year ended March 31, 1916. Presented by Hon. Mr. Coady, April 19, 1917.  
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38. Report of the Department of the Naval Service, for the fiscal year ending March 31, 1916. Presented by Hon. Mr. Hazen, January 22, 1917.  
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- 38a. Supplement to the Sixth Annual Report of the Department of Naval Service, Fisheries Branch, Contributions to Canadian Biology, being studies from the biological systems of Canada, 1915-1916. Presented by Hon. Mr. Hazen, June 4, 1917.  
*Printed for distribution and sessional papers.*
- 38c. Lobster Conservation in Canada, by A. P. Knight, M.A.  
*Printed for distribution and sessional papers.*
39. Forty-ninth Annual Report of the Fisheries Branch of the Department of the Naval Service, 1915-16. Presented by Hon. Mr. Hazen, January 22, 1917.  
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- 41.** Copies of Orders in Council, as follows:—  
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 P.C. 1720, dated the 15th day of July, 1916, respecting the appointment of a Parliamentary Secretary of the Department of Militia and Defence, during the continuance of the present war.  
 P.C. 1730, dated the 19th day of July, 1916, respecting the appointment of Fleming Blanchard McCurdy, Member of the House of Commons for the Electoral District of Shelburne and Queens, to the position of Parliamentary Secretary of the Department of Militia and Defence, during the continuance of the present war.  
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- 42.** Papers relating to the Imperial War Conference, 1917. Presented by Sir Robert Borden, January 22, 1917... ..*Printed for sessional papers only.*
- 42a.** Copy of a Parliamentary Paper (Cd. 8566), containing extracts from the Minutes of the Proceedings of the Imperial War Conference, 1917, and Papers laid before the Conference. Presented by Sir Robert Borden, June 15, 1917.  
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- 43.** Copies of Orders in Council, as follows:—  
 P.C. 64-15-25, dated the 29th June, 1916, authorizing the superannuation of Mr. Silas Blair Kent, a clerk in Sub-division "B" of the First Division, employed as chief fishing bounty officer of the Naval Service Department.  
 P.C. 3192, dated 30th December, 1916, Regulations governing the payment of Separation Allowance in the Royal Canadian Navy and Royal Naval Canadian Volunteer Reserve.  
 P.C. 3108, dated 19th September, 1916, Regulations governing payment of "Command Money" to officers on "Special Service," etc., in the Royal Canadian Navy.  
 P.C. 2942, dated 29th November, 1916, Regulations governing payment of "Hard-lyng Money" in the Royal Canadian Navy.  
 P.C. 2442, dated 11th October, 1916, Amendment to Order in Council P.C. 1334, dated 3rd June, 1916, establishing Rates of Pensions for the Military and Naval Forces of Canada.  
 P.C. 2130, dated 9th September, 1916, Regulations for enrolment of men in the Royal Canadian Volunteer Reserve for service in the Royal Navy.  
 P.C. 1939, dated 18th August, 1916, Order made under War Measures Act, 1914, to reduce risk of persons of enemy nationality landing in Canada under guise of neutrals. Presented by Hon. Mr. Hazen, January 22, 1917... ..*Not printed.*
- 43a.** Copy of extract from Order in Council No. P.C. 942, dated 5th April, 1917, with reference to Regulations governing the Payment of Separation Allowance in the Royal Canadian Navy. Presented by Hon. Mr. Hazen, June 11, 1917... ..*Not printed.*
- 43b.** Copy of extract from Order in Council No. P.C. 1397, dated 21st May, 1917: Rules and Regulations to apply to persons who are employed in or who are in or in the vicinity of any store, wharf, etc., in or upon which any ammunition, etc., is handled. Presented by Hon. Mr. Hazen, June 11, 1917... ..*Not printed.*

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- 43c.** Copy of Extract from Order in Council No. P.C. 1576, dated 11th June, 1917: Regulations instituting the rank of Chief Skipper and Skipper in the Royal Canadian Navy. Presented by Hon. Mr. Hazen, June 20, 1917... .Not printed.
- 43d.** Copy of Order in Council, P.C. 69/1774, dated 28th June, 1917, containing Regulations for the Payment of Specialist Allowance to R.N.C.V.R. and R.N.C.V.R. Overseas Division. Presented by Hon. Mr. Hazen, July 9, 1917... .Not printed.
- 43e.** Copy Extract from Order in Council, P.C. No. 1783, dated 29th June, 1917:—Rules and Regulations governing the issue of Pay, Allowances and Pensions, Department of the Naval Service—Copy Extract from Order in Council, P.C. No. 1871, dated 6th July, 1917:—Amendment to the Regulations for the payment of Separation Allowance to the dependents of those on Active Service under the Naval Service Department. Presented by Sir James Lougheed, July 12, 1917. (Senate)... .Not printed.
- 43f.** Extract from Order in Council, P.C. 1993 of the 17th July, 1917: Scale of Subsistence Allowances to Officers and men of the Naval Service when travelling on duty.—And also,—Extract from Order in Council, P.C. 1994 of the 17th July, 1917: Scale of Allowances in lieu of lodging, provisions, fuel and light, for Officers and men of the Naval Service. Presented by Hon. Mr. Hazen, August 6, 1917... .Not printed.
- 43g.** Extract from Order in Council, P.C. 2105, dated 9th August, 1917: Amendments to regulations for the issue of pay, allowances and pensions to officers, warrant officers and men Invalided, etc., from the Naval Service. Presented by Hon. Mr. Hazen August 27, 1917... .Not printed.
- 43h.** Extract from Order in Council ("Defence of Canada Order"), P.C. No. 2277, dated the 17th August, 1917:—Amendments respecting Naval Service. The Senate... .Not printed.
- 43i.** Extract from Order in Council, No. P.C. 2433, dated 1st September, 1917:—Regulations re Pay and Allowances to Officers and Men after discharge from the Canadian Naval Service. The Senate... .Not printed.
- 44.** Correspondence relating to the withdrawal of the Ross Rifle from the Canadian Army Corps. Presented by Sir Robert Borden, January 22, 1917.  
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- 45.** Report of the War Purchasing Commission, covering period from its appointment on May 8, 1915, to December 31, 1916. Presented by Hon. Mr. Kemp, January 23, 1917.  
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- 46.** Copies of Orders in Council respecting the establishment of a National Service Board of Canada, and appointments thereto, under the provisions of the War Measures Act 1914. Presented by Sir Robert Borden, January 23, 1917.  
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- 47.** Copy of Agreement between His Majesty the King and The Canada Coal Company, Ltd., concerning the lease of the Vale Railway. Presented by Hon. Mr. Casgrain, January 23, 1917... .Not printed.
- 48.** Copy of Agreement between His Majesty the King and The Quebec and Saguenay Railway Co., The Quebec Railway Light and Power Co., The Lotbinière and Megantic Railway Co., and The Quebec Railway Light Heat and Power Co., concerning the acquisition by the Government of the said railways. Presented by Hon. Mr. Casgrain, January 23, 1917... .Not printed.
- 48a.** Return to an Order of the House, of the 23rd April, 1917, for a copy of all proceedings in the Exchequer Court of Canada, and judgment of Mr. Justice Cunniff concerning the reference of the Quebec and Saguenay Railway, the Quebec and Montmorency Railway and the Lotbinière and Megantic Railway. Presented June 21, 1917. Mr. Lemieux.  
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- 48b. Return to an Order of the House, of the 14th May, 1917, for a copy of the judgment delivered by Mr. Justice Cassels on the 24th day of January, 1917, in the matter of fixing the price to be paid by the Government for the Quebec, Montmorency and Charlevoix Railway, the Quebec and Saguenay Railway, and the Lotbinière and Megantic Railway, under the statute of last session, Chapter 22, 6-7 George V. Presented June 27, 1917. Mr. Graham. . . . . *Not printed.*
49. Statement of Governor General's Warrants issued since the last Session of Parliament on account of 1916-17. Presented by Sir Thomas White, January 25, 1917. . . . . *Not printed.*
- 49a. Statement of Governor General's Warrants issued since the adjournment of Parliament on February 7, 1917. Presented by Sir Thomas White, April 24, 1917. . . . . *Not Printed.*
50. Copy of Amendments to the Radiotelegraph Regulations since the 1st August, 1914. Presented by Hon. Mr. Hazen, January 25, 1917. . . . . *Not printed.*
- 50a. Copy of Amendment to subsection (d) of section 104 of the Radiotelegraph Regulations; Operation of ship stations within a Canadian harbour. Presented by Hon. Mr. Hazen, January 29, 1917. . . . . *Not printed.*
- 50b. Copy of Amendment to Radiotelegraph Regulations issued by the Minister of the Naval Service, under Section 11, Chapter 43, of the Radiotelegraph Act, 3-4 George V. Presented by Hon. Mr. Hazen, April 19, 1917. . . . . *Not printed.*
51. Statement of Expenditure on account of "Miscellaneous Unforeseen Expenses," from the 1st April, 1916, to the 18th January, 1917, in accordance with the Appropriation Act of 1916. Presented by Sir Thomas White, January 25, 1917. . . . . *Not printed.*
52. Statement of Temporary Loans issued since April 1, 1916, to 18th January, 1917. Presented by Sir Thomas White, January 25, 1917. . . . . *Not printed.*
53. Report and Statement of Receipts and Expenditures of the Ottawa Improvement Commission to March 31, 1916. Presented by Sir Thomas White, January 25, 1917. . . . . *Not printed.*
54. Statement of the Receipts and Expenditures of the Royal Society of Canada, for the year ended April 30, 1916. Presented by Sir Thomas White, January 25, 1917. . . . . *Not printed.*
55. Statement of Receipts and Expenditures of the National Battlefields Commission to 31st March, 1916. Presented by Sir Thomas White, January 25, 1917. . . . . *Not printed.*
56. Statement of Superannuation and Retiring Allowances in the Civil Service during the year ending 31st December, 1916, showing name, rank, salary, service allowance and cause of retirement of each person superannuated or retired, also whether vacancy has been filled by promotion, or by appointment, and the salary of any new appointee. Presented by Sir Thomas White, January 25, 1917. . . . . *Not printed.*
57. Statement in pursuance of Section 17 of the Civil Service Insurance Act, for the year ending March 31, 1916. Presented by Sir Thomas White, January 25, 1917. . . . . *Not printed.*
58. Regulations under "The Destructive Insect and Pest Act," pursuant to Section 9, Chapter 31 of 9-10 Edward VII. Presented by Hon. Mr. Burrell, January 26, 1917. . . . . *Not printed.*
59. Account of the average number of men employed on the Dominion Police Force during each month of the year 1916, and of their pay and travelling expenses, pursuant to Chapter 92, Section 6, Subsection 2, of the Revised Statutes of Canada. Presented by Hon. Mr. Doherty, January 26, 1917. . . . . *Not printed.*
60. Copy of the evidence taken before the Hon. Sir Charles Davidson, Kt., Commissioner appointed to inquire into the purchase by and on behalf of the Government of the Dominion of Canada, of Arms, Munitions, Implements, Materials, Horses, Supplies, and other things for the purpose of the present war, and as to the expenditures and payments made or agreed to be made therefor; together with the Report of the said Commissioner concerning the sale of Small Arms Ammunition; purchase of Submarines, and Military Cloth (Auburn Woollen Mills Co.). Presented by Hon. Mr. Meighen, January 30, 1917. . . . . *Not printed.*



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61. Report submitted by the officer in charge of the Canadian Records Office, London, Eng. to The Right Honourable Sir Robert Borden, G.C.M.G., M.P., Prime Minister of Canada, on the work of the Canadian War Records Office since the date of its foundation to the 11th January, 1917. Presented by Sir Robert Borden, January 31, 1917.  
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62. Annual Return respecting Trade Unions under Chapter 125, R.S.C., 1906. Presented by Hon. Mr. Patenaude, January 31, 1917...*Not printed.*
63. A detailed statement of all bonds or securities registered in the Department of the Secretary of State of Canada, since last return (22nd January, 1916) submitted to the Parliament of Canada under Section 32 of Chapter 19, of the Revised Statutes of Canada, 1906. Presented by Hon. Mr. Blondin, January 31, 1917...*Not printed.*
64. Return of Orders in Council which have been published in the *Canada Gazette*, between the 1st January, 1916, and the 31st December, 1916, in accordance with the provisions of Section 5 of "The Dominion Lands Survey Act," Chapter 21, 7-8 Edward VII. Presented by Hon. Mr. Roche, February 1, 1917...*Not printed.*
65. Return of Orders in Council which have been published in the *Canada Gazette*, between 1st January, 1916, and the 31st December, 1916, in accordance with the provisions of "The Forest Reserves and Park Act," Section 19, of Chapter 16, 1-2 George V. Presented by Hon. Mr. Roche, February 1, 1917...*Not printed.*
66. Return of Orders in Council which have been published in the *Canada Gazette*, between the 1st January, 1916, and the 31st December, 1916, in accordance with the provisions of Chapter 47, 2 George V, entitled "The Railway Belt Water Act." Presented by Hon. Mr. Roche, February 1, 1917...*Not printed.*
67. Return of Orders in Council which have been published in the *Canada Gazette* and in the *British Columbia Gazette*, between 1st January, 1916, and the 31st December, 1916, in accordance with provisions of Subsection (d) of Section 38 of the regulations for the survey, administration, disposal and management of Dominion Lands within the 40-mile Railway Belt in the Province of British Columbia. Presented by Hon. Mr. Roche, February 1, 1917...*Not printed.*
68. Return showing all lands sold by the Canadian Pacific Railway Company during the year, from the 1st October, 1915, to 30th September, 1916, together with the names of the purchasers, in accordance with the Statutes of Canada, 1886, Chapter 9, Section 8. Presented by Hon. Mr. Roche, February 1, 1917...*Not printed.*
69. Return of Orders in Council which have been published in the *Canada Gazette*, between 1st January, 1916, and the 31st December, 1916, in accordance with the provisions of Section 77 of "The Dominion Lands Act," Chapter 20, 7-8 Edward VII. Presented by Hon. Mr. Roche, February 1, 1917...*Not printed.*
70. Certified copies of Reports of the Committee of the Privy Council, approved by His Excellency the Governor General on the 29th November, 1916, giving authority for the cancellation on and from the 1st January, 1917, of the agreements between the Government of Canada and the Governments of Manitoba, Saskatchewan and Alberta, respectively, respecting the services of the Royal North West Mounted Police in those provinces. Presented by Sir Robert Borden, February 1, 1917.  
*Printed for sessional papers only.*
- 70a. Return to an Address to His Excellency the Governor General, of the 31st January 1917, for a copy of all documents, letters, messages, correspondence, etc., respecting the termination of the agreements between the Government of Canada and the Governments of the Provinces of Saskatchewan and Alberta in reference to the Royal North West Mounted Police. Presented June 1, 1917. Mr. McCrea...*Not printed.*
71. Return to an Order of the House, of the 26th March, 1916, for a copy of all returns, letters and correspondence concerning the appointment of Mr. Alfred Gagné, Harbour Commissioner of Quebec, and concerning all other candidates for the position of Commissioner on the Harbour Board of Quebec, to represent the *Basin St-Jacques*. Presented February 2, 1917. Mr. Bourassa...*Not printed.*

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**CONTENTS OF VOLUME 21—Continued.**

- 72.** Return to an Address to His Royal Highness the Governor General, of the 2nd February, 1914, for a copy of all Orders in Council, correspondence, petitions, telegrams and other papers or documents bearing date between the years 1885 and 1914 in any way relating to the prohibition of the export of Sockeye Salmon from the Province of British Columbia. Presented February 2, 1917.—*Mr. Sinclair*. . . . . *Not printed.*
- 73.** Seventh Annual Report of the Commission of Conservation for the fiscal year ending March 31, 1916. Presented by Hon. Mr. Hazen, February 5, 1917. . . . . *Not printed.*
- 74.** Copy of correspondence between Sir Robert Borden and Sir Wilfrid Laurier respecting proposals for the extension of the term of Parliament, November 3, 1915, to January 3, 1917. Presented by Sir Robert Borden, May 23, 1917.  
*Printed for sessional papers only.*
- 75.** Detailed Statement of Customs Duties and the Refund thereof, under Section 92, Consolidated Revenue Act, for the year ended March 31, 1916. (Senate). . . . . *Not printed.*
- 75a.** Detailed Statement of all Remissions and Refunds of the Tolls or duties for the fiscal year ending March 31, 1916.—Also,—Supplementary statement of the Remissions and Refunds of Tolls and Duties from the Department of Marine and Fisheries. Presented by Hon. Mr. Patenaude, April 19, 1917. . . . . *Not printed.*
- 76.** Ordinances of the Yukon Territory, passed by the Yukon Council in 1916. (Senate).  
*Not printed.*
- 76a.** Return of Orders in Council passed under the provisions of Section 18, of Chapter 63, Revised Statutes of Canada, "An Act to provide for the Government of the Yukon Territory." Presented by Hon. Mr. Patenaude, April 19, 1917. . . . . *Not printed.*
- 76b.** Return of Orders in Council passed in the year 1917, under the provisions of Section 18, of Chapter 63, Revised Statutes of Canada, "An Act to provide for the Government of the Yukon Territory." Presented by Hon. Mr. Sevigny, July 5, 1917.  
*Not printed.*
- 77.** Copy of extract from Order in Council No. P.C. 43/263, dated 27th January, 1917, authorizing Regulations governing the payment of Allowance for the Accountant Officers in the Royal Canadian Navy of Receiving Ships and Depot Ships, in accordance with the provisions of Section 47, Chapter 43, 9-10 Edward VII. Presented by Hon. Mr. Hazen, February 6, 1917. . . . . *Not printed.*
- 78.** Return to an Order of the House of the 31st January, 1917, for a copy of all correspondence respecting the appointment of a Commission to investigate the financial and economic condition of Canadian railways, showing the names of the Commissioners, the rate of their remuneration, along with the names of the secretaries and engineers appointed by them, or by the Commission, and the rate of their remuneration. Presented February 6, 1917.—*Sir Wilfrid Laurier*. . . . . *Not printed.*
- 79.** Return to an Order of the House of the 31st January, 1917, for a copy of all papers, letters, telegrams and other documents relative to the removal of Mr. H. D. McKenzie as mechanical foreman at Stellarton on the Canadian Government Railways, and the appointment of his successor. Presented February 6, 1917.—*Mr. Macdonald*.  
*Not printed.*
- 80.** Return to an Order of the House of the 31st January, 1917, for a return showing the quantity of freight carried over the Grand Trunk Pacific Railway between Lévis and Moncton since that portion of said railway has been operated by the Canadian Government Railways System. Presented February 6, 1917.—*Mr. Copp*. . . . . *Not printed.*
- 81.** Return to an Order of the House of the 12th April, 1916, for a Return showing:—1. How many clerks there are in the Interior Department who belong to and are paid from the outside service vote and who work in the inside service? 2. The names of said clerks? 3. Salary paid to each? 4. How long each has been in the service of the Department? 5. If all or any of these clerks have passed any examination. If so, what examination and on what date or dates? Presented February 6, 1917.—*Mr. Turriff*. . . . . *Not printed.*

CONTENTS OF VOLUME 21—*Continued.*

82. Return to an Order of the House of the 15th March, 1916, for a copy of all correspondence between the Government and the Provinces, regarding increased co-operation in the promotion of immigration and land settlement, commencing with a letter of the Minister of the Interior to the Provincial Prime Ministers, in November, 1911. Presented February 6, 1917.—*Sir Wilfrid Laurier*... ..*Not printed.*
83. Return to an Order of the House of the 27th March, 1916, for a Return showing:—1. The names and salaries of the persons employed in the Immigration Service in the City of Montreal; their respective salaries when appointed and what they receive at the present time? 2. Which of such employees are given travelling or other expenses, and how much has been paid to each on that account since their respective appointments. Presented February 6, 1917.—*Mr. Lachance*... ..*Not printed.*
84. Return to an Order of the House of the 31st January, 1917, for a return showing the quantities of timber cut, and the sum paid therefor, to date, under the lease or sale of timber made by the Indian Department to Mr. Arthur Webber from lands situated near Ship Harbour Lake, Halifax County, together with the name or names of all surveyors of the timber cut from the said Indian lands under the above-mentioned sale or lease, and copies of all reports made in connection therewith by said surveyors. Presented February 6, 1917.—*Mr. McLean (Halifax)*... ..*Not printed.*
85. A copy of the Special Report made by the Royal Commission on Indian Affairs on the Kitsilano Indian Reserve, together with the Order in Council passed on the 28th March, 1916, and all other papers and correspondence relating to the Report. (Senate)  
*Not printed.*
86. Return to an Address to His Excellency the Governor General, of the 31st January, 1917, for a copy of all correspondence exchanged between the Dominion Government and the Provincial Governments inviting them to a conference on the subject of making provisions for returned soldiers, including a copy of the proceedings of the conference which took place on the 10th of January at Ottawa on the same subject. Presented February 7, 1917.—*Sir Wilfrid Laurier*... ..*Printed for sessional papers only.*
87. Return to an Order of the House, of the 31st January, 1917, for a copy of all correspondence between any Member of the Government and Sir Thomas Tait referring to his appointment to, and resignation from, the National Service Board. Presented February 7, 1917.—*Mr. Graham*... ..*Printed for sessional papers only.*
- 87a. Return to an Order of the House of the 31st January, 1917, for a copy of all correspondence between Mr. Murray, Secretary of the Manufacturers' Association, and any Member of the Government, or Sir Thomas Tait, as head of the National Service Board, concerning his suggested appointment as Secretary of the National Service Board. Presented June 1, 1917.—*Mr. Graham*... ..*Not printed.*
88. Correspondence between the Prime Minister and the Leader of the Opposition concerning the formation of a Parliamentary National Service Commission. Presented by Sir Robert Borden, February 7, 1917... ..*Printed for sessional papers only.*
89. Return to an Order of the House, of the 5th February, 1917, for a copy of all petitions, letters, telegrams, reports and other documents relative to the closing of the Canard and Spittlog Post Office and the opening of Loiselleville Post Office, in the County of Essex, together with a copy of all petitions and documents relative to the establishment of rural mail routes from the Loiselleville Post Office. Presented February 7, 1917.—*Mr. Wilcox*... ..*Not printed.*
90. Report on the Canadian Army Medical Service, by Colonel Herbert A. Bruce, Special Inspector General, Medical Service, Canadian Expeditionary Force, dated at London, England, 20th September, 1916. Presented by Sir Robert Borden, February 7, 1917.  
*Not printed.*
- 90a. Report on the Canadian Army Medical Service, by a Board of Officers, presided over by Surgeon-General Sir William Haulte, K.C.M.G., C.B., V.C., dated at London, England, December 22, 1916. Presented by Sir Robert Borden, February 7, 1917. *Not printed.*

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- 90b.** Copy of Interim Report of the Surgeon-General G. C. Jones, Director Medical Services. Canadians, in reply to the Report on the Canadian Army Medical Service by Colonel Herbert A. Bruce, Special Inspector-General, Medical Services, Canadian Expeditionary Force, dated London, September 28, 1916. Presented by Sir Edward Kemp, May 31, 1917. . . . . *Not printed.*
- 91.** Return to an Order of the House, of the 7th February, 1917, for a copy of all letters, telegrams, papers and other documents relative to the closing of the Marine Agency at Pictou last autumn, and as to the re-opening of said agency. Presented April 19, 1917. —*Mr. Macdonald.* . . . . . *Not printed.*
- 92.** Return to an Order of the House of the 5th February, 1917, for a Return showing:—1. The number of horses that have been bought in Canada for war purposes in each of the years 1914, 1915 and 1916, respectively, (a) for the Canadian Army; (b) for Britain; and (c) for France and our other Allies. 2. The amount paid for the horses in each of the years for the different countries mentioned. Presented April 19, 1917.—*Mr. Edwards.* . . . . . *Not printed.*
- 93.** Return to an Order of the House of the 31st January, 1917, for a Return showing:—1. The names, home addresses and former occupations of all censors, decoders or other employees of the Government in the different cable stations in Nova Scotia during the calendar year 1916. 2. The name of the person who recommended each of the said censors, decoders or employees. 3. What salary was paid to each of said persons for the calendar year 1916. Presented April 19, 1917.—*Mr. Sinclair.* . . . . . *Not printed.*
- 94.** Copies of General Orders promulgated to the Militia for the period between December 30, 1915, and February 8, 1917. Presented by Sir Edward Kemp, April 19, 1917. . . . . *Not printed.*
- 95.** Return to an Order of the House of the 11th March, 1915, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Frank Dunlop, of Graves Point, at Sydney Mines, in the riding of North Cape Breton and Victoria, N.S., and the expenses of such investigation in detail. Presented April 19, 1917.—*Mr. McKenzie.* . . . . . *Not printed.*
- 96.** Return to an Order of the House of the 3rd April, 1916, for a Return showing:—1. The names of the staff in the office of the High Commissioner for Canada in London? 2. Whether any of these officials are natives of Canada. If so which ones? 3. Whether it is true, as alleged, that Canada is the only British Dominion which employs none of its natives in its High Commissioner's Office. Presented April 19, 1917.—*Mr. Proulx.* . . . . . *Not printed.*
- 97.** Return to an Address to His Royal Highness the Governor General, of the 22nd February, 1915, for a copy of all Orders in Council, memoranda, correspondence or other documents in the possession of the Government, or any Department thereof, relating to the trade in dried fish and wines between Portugal and Canada. Presented April 19, 1917.—*Mr. Sinclair.* . . . . . *Not printed.*
- 98.** Return to an Order of the House of the 31st January, 1917, for a tabulated statement showing the number of divorces granted by the Parliament of Canada since 1867. Presented April 19, 1917.—*Mr. Lemieux.* . . . . . *Not printed.*
- 99.** Return to an Order of the House of the 3rd February, 1916, for a copy of all letters, telegrams and other documents, including tenders, relating to the mail contract from Tatamagouche to New Annan and Tatamagouche Mountain, in the County of Colchester. Presented April 19, 1917.—*Mr. Macdonald.* . . . . . *Not printed.*
- 100.** Copy of new Rule in substitution of Rule 236 of the General Rules and Orders now in force regulating the practice and procedure in the Exchequer Court of Canada, made on the 16th day of February, 1917. Presented by Hon. Mr. Patenaude, April 19, 1917. . . . . *Not printed.*

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**CONTENTS OF VOLUME 21—Continued.**

- 100a.** Copy of Rule 200 of the General Rules and Orders now in force regulating the practice and procedure in the Exchequer Court of Canada; also, Copy of General Order respecting fees and costs in the Exchequer Court in the exercise of its jurisdiction as a Court of Admiralty. Presented by Hon. Mr. Patenaude, May 3, 1917.....*Not printed.*
- 101.** Return to an Order of the House of the 5th February, 1917, for a return showing a list of all persons employed during the year 1916 in the round-house of the Canadian Government Railways at Pirate Harbour, N.S., as brakemen, telegraphers, cleaners and labourers, showing the dates of their appointments and length of time employed respectively, and also the monthly rate of wages paid to each of said employees. Presented April 19, 1917.—*Mr. Sinclair*.....*Not printed.*
- 102.** Return to an Order of the House of the 31st January, 1917, for a copy of all letters, papers, telegrams and other documents relative to the application for, and the granting of, a Conciliation Board to the employees of the Acadia Coal Company in the spring of 1916, the proceedings of said Board, and all other papers in relation to the same. Presented April 19, 1917.—*Mr. Macdonald*.....*Not printed.*
- 103.** Return to an Order of the House of the 31st January, 1917, for a copy of all correspondence, telegrams and documents of all kinds exchanged between any person or persons and the Department of Labour or any other Department of the Government relating to the labour trouble at Thetford Mines, P.Q., and also copies of all correspondence exchanged between the different Departments of the Government respecting the same question. Presented April 19, 1917.—*Mr. Verville*.....*Not printed.*
- 104.** Return to an Order of the House of the 31st January, 1917, for a copy of all letters, papers, telegrams and other documents relative to the application for, and the refusal to grant a Conciliation Board as petitioned for under the Industrial Disputes Investigation Act by the employees of the Canadian Government Railway at Pictou, who were members of the Longshoremen's Union at Pictou during the year 1916. Presented April 19, 1917.—*Mr. Macdonald*.....*Not printed.*
- 105.** Return to an Order of the House of the 7th February, 1917, for a copy of the contract between the Government and the P. Lyall & Sons Construction Company for the reconstruction of the Parliament Building. Presented April 20, 1917.—*Mr. Murphy*.  
*Printed for Sessional Papers only*
- 106.** Copy of Order in Council P.C. 1062, dated 16th April, 1917, ordering that wheat, wheat flour and semolina be transferred to the list of goods which may be imported into Canada free of duty of customs. Presented by Sir Thomas White, April 20, 1917.  
*Printed for Sessional Papers only*
- 107.** Return to an Order of the House of the 19th April, 1917, for a return showing—1. Whether the Government is aware as to whether there are cases in the Military Service in which men after enlistment have been given leave on harvesting furlough, and during such leave have been injured by accident, and who have in consequence of such accident incurred hospital bills, and who having been treated in hospital have returned to military duty and been discharged on account of injuries so received. 2. If so, whether claims have been made for hospital care and treatment. 3. If such claims have been recognized by the Government. 4. If not, why not. 5. If so, what action has been taken in connection therewith. 6. Whether in such cases the enlisted person is not entitled to pay up to time of discharge, and also the payment of his hospital account. Presented April 20, 1917.—*Mr. MacNutt*.....*Not printed.*
- 108.** Copy of a communication from the Deputy Minister of Militia and Defence, relative to the total value of the Oliver equipment, so-called, supplied the Canadian soldiers who have crossed to England since the commencement of the present war. Presented by Sir Edward Kemp, April 20, 1917.....*Not printed.*
- 109.** Return to an Order of the House of the 19th April, 1917, for a return showing—1. The names of the Members of Parliament who now belong, or who did belong to the Government

CONTENTS OF VOLUME 21—*Continued.*

- Forces or the Militia Forces of Canada since the present war was declared. 2. Whether these Members or any of them were, or are in receipt of pay from the Militia Department and in receipt of their indemnity as Members at the same time. 3. Whether the wives of these Members, or any of them were, or are in receipt of separation allowance. Presented April 20, 1917.—*Mr. Hughes (Kings, P.E.I.)* . . . . .*Not printed.*
- 109a. Supplementary return to an Order of the House of the 19th April, 1917, for a return showing:—1. The names of the Members of Parliament who now belong, or who did belong to the Overseas Forces or the Militia Forces of Canada since the present war was declared. 2. Whether these Members, or any of them were, or are in receipt of pay from the Militia Department and in receipt of their indemnity as Members at the same time. 3. Whether the wives of these Members, or any of them were, or are in receipt of separation allowance. Presented April 24, 1917.—*Mr. Hughes (Kings, P.E.I.)* . . . . .*Not printed.*
- 109b. Return to an Order of the House of the 25th April, 1917, for a return showing:—1. How many Members of the House of Commons are serving or have served in the Canadian Army. 2. The names of each of said Members, the date of appointment, and rank. 3. The names of those Members who have resigned or have withdrawn from military service and the date of withdrawal or resignation. 4. How much has been paid to each for military salary, expenses and separation allowance to wife or relatives, respectively. Presented May 31, 1917.—*Mr. Turriff* . . . . .*Not printed.*
- 109c. Corrected copy of a return to an Order of the House of the 25th April, 1917, for a return showing:—1. How many Members of the House of Commons are serving or have served in the Canadian Army. 2. The names of each of said Members, the date of appointment, and rank. 3. The names of those Members who have resigned or have withdrawn from military service and the date of withdrawal or resignation. 4. How much has been paid to each for military service, expenses and separation allowance to wife or relatives, respectively. Presented June 14, 1917.—*Mr. Turriff* . . . . .*Not printed.*
110. Return to an Order of the House of the 19th April, 1917, for a return showing:—1. What amounts have been given to the Canadian Patriotic Fund to December 31, 1916, and what amounts have been promised for 1917, by the different counties, towns and cities in each of the different provinces. 2. The names of the different counties, towns and cities, and the respective amounts subscribed and promised by each. 3. What counties, cities and towns in each province, if any, have not contributed any amount to the said fund up to the present time. Presented April 24, 1917.—*Mr. Edwards* . . . . .*Not printed.*
- 110a. Return to an Order of the House of the 19th April, 1917, for a return showing:—1. How much money has been subscribed and voted to the Canadian Patriotic Fund by each of the different provinces to December 31, 1916. 2. How much money has been paid to the Canadian Patriotic Fund by each of the different provinces during the same time. 3. How much money has been promised by county, township, city or other grants by each province for the year 1917. 4. How many persons in each province have received assistance from the Canadian Patriotic Fund to December 31, 1916. 5. The total amount so expended in each province. Presented April 24, 1917.—*Mr. Edwards* . . . . .*Not printed.*
111. Copy of Order in Council P.C. 802, dated 23rd March, 1917, in respect to taking over of the Ross Rifle Factory by the Government of Canada. Presented by Sir Edward Kemp, April 24, 1917 . . . . .*Not printed.*
112. Return to an Order of the House of the 31st January, 1917, for a copy of all documents, letters, telegrams and other correspondence in the Department of the Interior, relating to grazing leases numbers 2785, 2803, 2843, 3701, 3998, 4603, 5566, 6220 and 6221. Presented April 25, 1917.—*Mr. Steele* . . . . .*Not printed.*
113. Memorandum from the Superintendent of Immigration respecting the advertising by the Canadian Government in United States newspapers for farm hands to work in Canada; together with a copy of the advertisements and instructions concerning the same. Presented by Hon. Mr. Roche, April 25, 1917 . . . . .*Not printed.*

CONTENTS OF VOLUME 21—*Continued.*

## 114. Copies of Orders in Council:—

P.C. 341, dated the 7th day of February, 1917, respecting the exportation of newsprint paper in sheets or rolls by license only under regulations by the Minister of Customs.

P.C. 445, dated the 17th day of February, 1917, containing orders and regulations respecting the price, sale, control, distribution, transport, etc., of newsprint paper in sheets or rolls.

P.C. 1059, dated the 16th day of April, 1917, empowering the Minister of Customs to fix the quantity and price of newsprint paper furnished or to be furnished to the publishers in Canada by the manufacturers; and controlling the distribution and delivery of the same.

P.C. 1060, dated the 16th day of April, appointing R. A. Pringle a commissioner to conduct an inquiry into and concerning the manufacture, sale, price and supply of newsprint paper within the Dominion of Canada. Presented by Sir Thomas White, April 26, 1917. . . . . *Not printed.*

115. P.C. 3412, dated the 19th day of December, 1917, concerning the appointment of Mr. S. A. Armstrong as Director of the Military Hospitals Commission. Presented by Sir Thomas White, April 26, 1917. . . . . *Not printed.*

116. Return to an Order of the House of the 3rd February, 1917, for a return showing the names and post office addresses of all purchasers of fish scrap from the reduction works at Canso in 1916, showing the price paid by each of said purchasers. Presented April 26, 1917.—*Mr. Sinclair.* . . . . . *Not printed.*

117. Return to an address to His Excellency the Governor General of the 23rd April, 1917, for a copy of the Order in Council increasing the toll rates on Victoria bridge, Montreal, and also a copy of all petitions, telegrams, letters and other documents referring to said increase. Presented April 30, 1917.—*Mr. Lemieux.* . . . . . *Not printed.*

118. Return to an Order of the House of the 23rd April, 1917, for a copy of all letters, telegrams, petitions and all other papers concerning the substitution of the name of Luceville given to the Intercolonial Railway Station of Ste. Luce, County of Rimouski, Quebec. Presented April 30, 1917.—*Mr. Lemieux.* . . . . . *Not printed.*

119. Return to an Order of the House of the 31st January, 1917, for a copy of all vouchers, correspondence, etc., in connection with the repairs to Beaver Harbour Wharf, Halifax County, within the last four years. Presented April 30, 1917.—*Mr. McLean (Halifax).* . . . . . *Not printed.*

120. Return to an Order of the House of the 31st January, 1917, for a copy of all correspondence, vouchers, etc., in connection with the repairs to Harrigan Cove Wharf, Halifax County, in 1914-15, under the foremanship of James McDonald. Presented April 30, 1917.—*Mr. McLean (Halifax).* . . . . . *Not printed.*

121. Supplementary return to an Order of the House of the 16th February, 1916, for a return showing:—1. The amounts expended in Railway Subsidies in Canada during the years 1912, 1913, 1914 and 1915. 2. The amounts by provinces, and the names of the lines to which granted. 3. Amounts expended on the construction of Government-owned railways in Canada during the above years. 4. The amount expended in each province, and the name of the line of railway on which such expenditure was made. 5. Amounts expended on harbour and river improvements in Canada during the above years. 6. The amounts by provinces and the particular places where expended. 7. Amounts expended on the building of public wharves, public breakwaters, and public dredging in North Cape Breton and Victoria during the years 1905 to 1911, inclusive, including the expenditure on Government railways. 8. Amounts expended for like purposes in the west county, during the years 1912, 1913, 1914 and 1915. Presented April 30, 1917.—*Mr. McKenzie.* . . . . . *Not printed.*

122. Return to an Order of the House of the 19th April, 1916, for a copy of all letters, petitions, correspondence and telegrams exchanged between the Government, its district officers,

CONTENTS OF VOLUME 21—*Continued.*

and all other persons, concerning either the construction or repairing or purchase of the wharves at the following places: Ile Perrot Sud, the Church in the Village of Ile Perrot, the Village of Vaudreuil, Pointe Cavagnal, Hudson, Rigaud, Graham, Pointe Fortune, and Ile Perrot Nord. Also, a copy of all specifications and reports already brought down at my request in relation to the documents prior to and since 1904, and a statement of the amounts that have been paid for such construction or repairs, and to whom they were paid. Presented April 30, 1917.—*Mr. Boyer* . . . . . *Not printed.*

**122a.** Return to an Order of the House of the 16th February, 1916, for a copy of all letters, petitions, correspondence, telegrams and reports, exchanged between the Government, the engineers residing in the district, and all other persons, concerning the construction and repairing done to the wharves mentioned below, since 1904, and of all data and reports already produced at my request and relating to documents prior to 1904; also the amounts of money paid for such construction and repairing, and to whom paid:—The wharf at Ile Perrot North, South, and at the Church; of the Village of Vaudreuil; of Pointe Cavagnal; of Hudson; of Graham; of Rigaud, and of Pointe Fortune. Presented April 30, 1917.—*Mr. Boyer* . . . . . *Not printed.*

**122b.** Return to an Order of the House of the 30th April, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports exchanged between the Government, the resident engineer and all other persons, concerning the construction and repairing done to the wharves at Ile Perrot North, South and at the Church; Village of Vaudreuil, Pointe Cavagnal, Hudson, Graham, Rigaud and Point Fortune since 1904. Also, a copy of all data and reports regarding above already produced at my request relating to documents prior to 1904, showing the amounts of money paid for such construction and repairing, and to whom paid. And also, return to an Order of the House of the 30th April, 1917, for a copy of all letters, petitions, correspondence and telegrams exchanged between the Government, the district engineer, and any other persons concerning either the construction, repairing or purchase of the wharves at Ile Perrot South, the Church in the Village of Ile Perrot, Village of Vaudreuil, Pointe Cavagnal, Hudson, Rigaud, Graham, Pointe Fortune and Ile Perrot North, since 1904. Also a copy of all specifications and reports already brought down at my request in relation to above prior to, and since 1904, giving a statement of the amounts that have been paid for such construction or repairs, showing to whom they were paid. Presented August 13, 1917.—*Mr. Boyer*.  
*Not printed.*

**123.** Return to an Order of the House of the 19th April, 1916, for a copy of all letters, petitions, correspondence and telegrams exchanged between the Government, its resident engineer, and all other persons, concerning the dredging work done at the following places:—Ste. Anne de Bellevue, Pointe Fortune, Ottawa River Channel between Ile au Foin and Ile à Paquin, Graham channel, Rigaud channel, Hudson Heights channel, Hudson, Como, Pointe Cavagnal, channel at Vaudreuil Village, Dorion Bay channel, Ile Perrot Church, Ile Perrot Sud Wharf, and Ile Perrot Nord Wharf. Also, a statement of the amounts paid to different persons, companies, etc., for such work, the dates, etc., and a copy of the estimates already brought down at my request, the whole since 1904. Presented April 30, 1917.—*Mr. Boyer* . . . . . *Not printed.*

**123a.** Return to an Order of the House of the 16th February, 1916, for a copy of all letters, petitions, correspondence, telegrams and reports exchanged between the Government, the resident engineer of the district, and all other persons, concerning the dredging work done at the places below named, and the amount of money paid to divers, persons companies, etc., for such work, as well as the statements already presented at any request, the whole since 1904:—At the wharf of Ile Perrot, North, South and at the Church; in Dorion Bay channel; at Vaudreuil Village channel; at Pointe Cavagnal; at Como; at Hudson; at Hudson Heights channel; at Graham channel; in the Rigaud River channel; in the Ottawa river; Ile aux Poires channel; at Pointe Fortune, and at Ste-Anne de Bellevue channel. Presented April 30, 1917.—*Mr. Boyer* . . . . . *Not printed.*

**124.** Return to an Order of the House of the 3rd May, 1916, for a copy of all letters, telegrams, bills, vouchers and memoranda in connection with the repairs to the wharf at Upper Prospect, Halifax County, N.S., in 1915. Presented April 30, 1917.—*Mr. McLean (Halifax)* . . . . . *Not printed.*



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125. Return to an Order of the House of the 3rd May, 1916, for a copy of all letters, telegrams, bills, vouchers and memoranda in connection with the repairs to the wharf at Shad Bay, Halifax County, N.S., in 1915. Presented April 30, 1917.—*Mr. McLean (Halifax)* . . . . .Not printed.
126. Return to an Order of the House of the 1st February, 1917, for a copy of all correspondence in the possession of the Department of Public Works bearing date after September, 1911, relating to the expenditure of money voted last session for harbour improvements at Tracadie, in the County of Antigonish, including copies of all letters relating to the same written by Mr. G. A. R. Rollings to the said Minister of Public Works or to any other member of the Government. Presented April 30, 1917.—*Mr. Sinclair*. Not printed.
127. Return to an Order of the House of the 3rd February, 1917, for a copy of all letters, telegrams, reports and other documents received by the Government during the years 1915 and 1916, relative to the repairs required on the breakwater at Souris, P.E.I. Presented April 30, 1917.—*Mr. Hughes (Kings, P.E.I.)* . . . . .Not printed.
128. Return to an Order of the House of the 1st February, 1917, for a copy of all correspondence in the possession of the Department of Public Works bearing date after September, 1911, relating to the extension of a breakwater at Green's Point, in the County of Antigonish. Presented April 30, 1917.—*Mr. Sinclair* . . . . .Not printed.
129. Return to an Order of the House of the 31st January, 1917, for a copy of all correspondence, vouchers, etc., in connection with the construction of the Mashaboon Harbour Wharf, Halifax County, in 1913. Presented April 30, 1917.—*Mr. McLean (Halifax)* . . . . .Not printed.
130. Return to an Order of the House of the 31st January, 1917, for a return showing all expenditures made since March 31, 1916, by the Public Works Department in the several provinces of Canada, specifying the name of the work, the amount already spent thereon, and the estimated total expenditure in each case. Presented April 30, 1917.—*Mr. McLean (Halifax)* . . . . .Not printed.
131. Return to an Order of the House of the 31st January, 1917, for a copy of all correspondence, vouchers, etc., in connection with the construction of the Port Dufferin West Wharf, Halifax County, in 1913-14. Presented April 30, 1917.—*Mr. McLean (Halifax)* . . . . .Not printed.
132. Return to an Order of the House of the 31st January, 1917, for a copy of all correspondence, vouchers, etc., in connection with the repairs to the Port Dufferin East Wharf, Halifax County, in 1915. Presented April 30, 1917.—*Mr. McLean (Halifax)* . . . . .Not printed.
133. Return to an Order of the House of the 31st January, 1917, for a copy of all correspondence, vouchers, etc., in connection with the construction of a wharf at Mount Sable West, Halifax County. Presented April 30, 1917.—*Mr. McLean (Halifax)* . . . . .Not printed.
134. Return to an Order of the House of the 27th March, 1916, for a copy of all correspondence, letters, telegrams, etc., in any way referring to the dredging at Margaree Harbour, Inverness County, N.S., during 1913, 1914, 1915 and 1916. Presented April 30, 1917.—*Mr. Chisholm* . . . . .Not printed.
135. Copy of Order in Council, P.C. 1142, dated the 24th day of April, 1917, under the provisions of the War Measures Act, 1914, containing regulations under which British ships registered in Canada or under construction for neutral owners may until further notice be requisitioned by His Majesty for the carriage of foodstuffs, etc., or for any purpose whatsoever; and cancelling Orders in Council, P.C. 2573, dated the 24th day of November 1916, and P.C. 1914, dated the 31st day of March, 1917, in respect thereof. Also certified copy of a report of the Committee of the Privy Council, approved by His Excellency the Governor General on the 30th day of January, 1917, respecting the exercise of the requisitioning power by His Majesty's Government in the case of Canadian vessels. Presented by Hon. Mr. Reid April 30, 1917 . . . . .Not printed.

CONTENTS OF VOLUME 21—*Continued.*

136. Return to an Order of the House of the 23rd April, 1917, for a return showing:—1. The names, former post office addresses, occupations and salaries paid to the censors and decoders in the employ of the Government at Hazel Hill and Canso during the year 1916. 2. How much has been expended in connection with this service at Canso and Hazel Hill since the first of August, 1914, up to the present date. 3. How much has been expended in connection with the said service in embracing all the stations in the province of Nova Scotia from August 1, 1914, up to the present date. Presented May 2, 1917.—*Mr. Sinclair*. . . . .*Not printed.*
137. Return to an Order of the House of the 23rd April, 1917, for a copy of all contracts and agreements between Sir Charles Ross, his successors or assigns, and His Majesty the King, represented by the Minister of Militia and Defence, since and including the agreement between them dated the 27th day of March, A.D., 1902. Presented May 2, 1917. *Mr. Northrup*. . . . .*Printed for Scssional Papers only.*
138. Return to an Order of the House of the 23rd April, 1917, for a return showing:—1. How many permanent civil servants or officials were in the employ of the Department of Militia and Defence on the 10th day of October, 1911, and how many on the 31st of March, 1917. 2. How many temporary civil servants and employees of all kinds were in the employ of the said Department on the 10th day of October, 1911, and how many on the 31st of March, 1917. 3. How many permanent civil servants or officials were appointed by said Department since the 1st of August, 1914. 4. How many temporary civil servants and employees were employed by said Department since August 1, 1914. 5. What was the gross amount paid by said Department for salaries and expenses to both permanent and temporary civil servants and employees for the fiscal year ending March 31, 1914. 6. What was the gross amount paid by said Department for salaries and expenses of all permanent and temporary civil servants and employees for the fiscal year ending March 31, 1917. 7. How many civil servants were appointed by said Department since October 10, 1911, under the provisions of Section 21 of the Civil Service Act. Presented May 2, 1917.—*Mr. Macdonald*. . . . .*Not printed.*
- 138a. Return to an Order of the House of the 2nd May, 1917, for a return showing:—1. How many permanent civil servants or officials were in the employ of the Department of Naval Affairs on the 10th day of October, 1911, and how many on the 31st of March, 1917. 2. How many temporary civil servants and employees of all kinds were in the employ of the said Department on the 10th day of October, 1911, and how many on the 31st of March, 1917. 3. How many permanent civil servants or officials were appointed by said Department since the 1st of August, 1914. 4. How many temporary civil servants and employees were employed by said Department since August 1, 1914. 5. What was the gross amount paid by said Department for salaries and expenses to both permanent and temporary civil servants and employees for the fiscal year ending March 31, 1911. 6. What was the gross amount paid by said Department for salaries and expenses of all permanent and temporary civil servants and employees for the fiscal year ending March 31, 1917. 7. How many civil servants were appointed by said Department since October 10, 1911, under the provisions of Section 21 of the Civil Service Act. Presented May 16, 1917.—*Mr. Chisholm*. . . . .*Not printed.*
- 138b. Return to an Order of the House of the 2nd May, 1917, for a return showing:—1. How many permanent civil servants or officials were in the employ of the Department of Marine and Fisheries on the 10th day of October, 1911, and how many on the 31st day of March, 1917. 2. How many temporary civil servants and employees of all kinds were in the employ of the said Department on the 10th day of October, 1911, and how many on the 31st of March, 1917. 3. How many permanent civil servants or officials were appointed by said Department since the 1st of August, 1914. 4. How many temporary civil servants and employees were employed by said Department since August 1, 1914. 5. What was the gross amount paid by said Department for salaries and expenses to both permanent and temporary civil servants and employees for the fiscal year ending March 31, 1911. 6. What was the gross amount paid by said Department for salaries and expenses of all

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permanent and temporary civil servants and employees for the fiscal year ending March 31, 1917. 7. How many civil servants were appointed by said Department since October 10, 1911, under the provisions of Section 21 of the Civil Service Act. Presented May 31, 1917.—*Mr. Sinclair* . . . . . *Not printed.*

**138c.** Return to an Order of the House of the 9th May, 1917, for a return showing:—1. How many permanent civil servants or officials were in the employ of the Department of External Affairs on the 10th day of October, 1911, and how many on the 31st of March, 1917. 2. How many temporary civil servants and employees of all kinds were in the employ of the said Department on the 10th day of October, 1911, and how many on the 31st of March, 1917. 3. How many permanent civil servants or officials were appointed by said Department since the 1st of August, 1914. 4. How many temporary civil servants and employees were employed by said Department since August 1, 1914. 5. What was the gross amount paid by said Department for salaries and expenses to both permanent and temporary civil servants and employees for the fiscal year ending March 31, 1911. 6. What was the gross amount paid by said Department for salaries and expenses of all permanent and temporary civil servants and employees for the fiscal year ending March 31, 1917. 7. How many civil servants were appointed by said Department since October 10, 1911, under the provisions of Section 21 of the Civil Service Act. Presented June 1, 1917.—*Mr. Sinclair* . . . . . *Not printed.*

**138d.** Return to an Order of the House of the 9th May, 1917, for a return showing:—1. How many permanent civil servants or officials were in the employ of the Department of Justice on the 10th day of October, 1911, and how many on the 31st of March, 1917. 2. How many temporary civil servants and employees of all kinds were in the employ of the said Department on the 10th day of October, 1911, and how many on the 31st of March, 1917. 3. How many permanent civil servants or officials were appointed by said Department since the 1st of August, 1914. 4. How many temporary civil servants and employees were employed by said Department since August 1, 1914. 5. What was the gross amount paid by said Department for salaries and expenses to both permanent and temporary civil servants and employees for the fiscal year ending March 31, 1911. 6. What was the gross amount paid by said Department for salaries and expenses of all permanent and temporary civil servants and employees for the fiscal year ending March 31, 1917. 7. How many civil servants were appointed by said Department since October 10, 1911, under the provisions of Section 21 of the Civil Service Act. Presented June 21, 1917.—*Mr. Sinclair* . . . . . *Not printed.*

**138e.** Return to an Order of the House of the 14th May, 1917, for a return showing:—1. How many permanent civil servants or officials were in the employ of the Department of Finance on the 10th day of October, 1911, and how many on the 31st of March, 1917. 2. How many temporary civil servants and employees of all kinds were in the employ of the said Department on the 10th day of October, 1911, and how many on the 31st of March, 1917. 3. How many permanent civil servants or officials were appointed by said Department since the 1st of August, 1914. 4. How many temporary civil servants and employees were employed by said Department since August 1, 1914. 5. What was the gross amount paid by said Department for salaries and expenses to both permanent and temporary civil servants and employees for the fiscal year ending March 31, 1911. 6. What was the gross amount paid by said Department for salaries and expenses of all permanent and temporary civil servants and employees for the fiscal year ending March 31, 1917. 7. How many civil servants were appointed by said Department since October 10, 1911, under the provisions of Section 21 of the Civil Service Act. Presented June 29, 1917.—*M. Macdonald (Halifax)* . . . . . *Not printed.*

**138f.** Return to an Order of the House of the 2nd May 1917, for a return showing:—1. How many permanent civil servants and officials were in the employ of the Department of Indian Affairs on the 10th day of October, 1911, and how many on the 31st of March, 1917. 2. How many temporary civil servants and employees of all kinds were in the employ of the said Department on the 10th day of October, 1911, and how many on the 31st of March, 1917. 3. How many permanent civil servants or officials were appointed

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by said Department since 1st of August, 1914. 4. How many temporary civil servants and employees were employed by said Department since August 1, 1914. 5. What was the gross amount paid by said Department for salaries and expenses to both permanent and temporary civil servants and employees for the fiscal year ending March 31, 1914. 6. What was the gross amount paid by said Department for salaries and expenses of all permanent and temporary civil servants and employees for the fiscal year ending March 31, 1917. 7. How many civil servants were appointed by said Department since October 10, 1911, under the provisions of Section 21 of the Civil Service Act. Presented by Hon. Mr. Roche, July 10, 1917.—*Mr. Kyle* . . . . . *Not printed.*

**138g.** Return to an Order of the House of the 23rd April, 1917, for a return showing:—1. How many permanent civil servants or officials were in the employ of the Department of Agriculture on the 10th day of October, 1911, and how many on the 31st day of March, 1917. 2. How many temporary civil servants and employees of all kinds were in the employ of the said Department on the 10th day of October, 1911, and how many on the 31st of March, 1917. 3. How many permanent civil servants or officials were appointed by said Department since the 1st of August, 1914. 4. How many temporary civil servants and employees were employed by said Department since August 1, 1914. 5. What was the gross amount paid by said Department for salaries and expenses to both permanent and temporary civil servants and employees for the fiscal year ending March 31, 1914. 6. What was the gross amount paid by said Department for salaries and expenses of all permanent and temporary civil servants and employees for the fiscal year ending March 31, 1917. 7. How many civil servants were appointed by said Department since October 10, 1911, under the provisions of Section 21 of the Civil Service Act. Presented August 15, 1917.—*Mr. Hughes (P.E.I.)* . . . . . *Not printed.*

**138h.** Return to an Order of the House of the 2nd May, 1917, for a return showing:—1. How many permanent civil servants or officials were in the employ of the Department of State and Mines on the 10th day of October, 1911, and how many on the 31st of March, 1917. 2. How many temporary civil servants and employees of all kinds were in the employ of the said Department on the 10th day of October, 1911, and how many on the 31st of March, 1917. 3. How many permanent civil servants or officials were appointed by said Department since the 1st of August, 1914. 4. How many temporary civil servants and employees were employed by said Department since August 1, 1914. 5. What was the gross amount paid by said Department for salaries and expenses to both permanent and temporary civil servants and employees for the fiscal year ending March 31, 1911. 6. What was the gross amount paid by said Department for salaries and expenses of all permanent and temporary civil servants and employees for the fiscal year ending March 31, 1917. 7. How many civil servants were appointed by said Department since October 10, 1911, under the provisions of Section 21 of the Civil Service Act. Presented August 21, 1917.—*Mr. McKenzie* . . . . . *Not printed.*

**139.** Return to an address to His Excellency the Governor General of the 23rd April, 1917, for a copy of the Order in Council and all other papers in connection with the awarding of the contract to J. C. Shields and others, or to the Inland Express Company for carrying the mails from Ashcroft to Fort George, B.C. Presented May 2, 1917.—*Mr. Turiff* . . . . . *Not printed.*

**140.** Return to an Address to His Excellency the Governor General of the 31st January, 1917, for a copy of all correspondence exchanged with the Government of the Province of Manitoba concerning a statute passed by the Legislature of Manitoba at its last session, entitled, "An Act to amend the Jury Act"; together with copies of all Orders in Council respecting same. Presented May 3, 1917.—*Sir Wilfrid Laurier* . . . *Not printed.*

**141.** Return to an Order of the House of the 7th February, 1917, for a return showing:—1. The number of interned allens, and nationality of each, employed on public works since the 4th August, 1914. 2. The number employed in industrial work in the provinces of Canada, and the nationality of each, since the 1st of August, 1914. 3. The number so employed at the present time. Presented May 3, 1917.—*Mr. Kyle* . . . . . *Not printed.*

CONTENTS OF VOLUME 21—*Continued.*

- 142.** Return to an Order of the House of the 2nd May, 1917, for a copy of the report of the Royal Commission appointed by Order in Council, 20th September, 1916, to inquire into and report upon the conditions in regard to the delivery of cargoes of coal to coasting vessels in the Maritime Provinces. Presented May 7, 1917.—*Mr. Hughes (Kings, P.E.I.)* . . . . . *Not printed.*
- 143.** Return to an Order of the House of the 31st January, 1917, for a return showing:—1. How many applicants for enlistment in the Canadian Overseas Forces have been rejected on account of being physically unfit. 2. How many have been discharged after enlistment for the same reason. Presented May 7, 1917.—*Mr. Steele* . . . . . *Not printed.*
- 143a.** Return to an Order of the House of the 30th April, 1917, for a return showing:—1. How many Americans have enrolled in Canadian Regiments since the commencement of the war. 2. How many natives of the British Isles are so enrolled in Canada since the 1st of August, 1914. Presented July 31, 1917.—*Mr. Boulay* . . . . . *Not printed.*
- 143b.** Return to an Order of the House of the 31st January, 1917, for a return showing:—1. How many men have enlisted in Canada for overseas service. 2. How many of these have been subsequently discharged as unfit. 3. How many of these were discharged in Canada, and how many overseas. Presented May 7, 1917.—*Mr. Graham* . . . . . *Not printed.*
- 143c.** Return to an Order of the House of the 14th May, 1917, for a return showing:—1. Whether the Minister of Militia or any of the authorities of the Militia Department has official statistics as to the recruiting of soldiers in Canada for overseas service. 2. If so, what the correct figures are of enlistments in the different overseas regiments raised since August, 1914, to date (a) Canadian speaking the French language (b) Canadians speaking the English language and born in Canada; (c) British subjects by birth born outside of Canada; (d) British subjects by naturalization; (e) British subjects by birth born outside of Canada; (d) British subjects by naturalization; (e) French Canadian soldiers in regiments commanded by officers speaking the English language raised in the province of Quebec; and (f) French Canadian soldiers in battalions raised in the other provinces of Canada. Presented June 14, 1917.—*Mr. Lanctôt* . . . . . *Not printed.*
- 143d.** Copy of Census Statistics showing Summary of Strength of all Units of the Canadian Expeditionary Forces in England, period 14th May, 1917, together with statement showing number of Canadian troops in France, England, in the Near East, St. Lucia and in Canada, June, 1917. Presented by Sir Edward Kemp, June 15, 1917. . . . . *Not printed.*
- 144.** P.C. 2314, dated 7th October, 1916, appointing a Special Seed Commissioner and three assistants, with authority to purchase seed wheat to fill requisitions for seed from municipal governing bodies in districts that have suffered crop failure due to the prevalence of rust and frost. Also, P.C. 2073, dated 14th December, 1916, authorizing the Special Seed Commission to purchase seed oats and seed barley to fill requisitions for seed from municipal governing bodies and farmers' organizations in districts where there is no supply. Presented by Hon. Mr. Burrell, May 8, 1917. . . . . *Not printed.*
- 145.** Return to an Order of the House of the 1st February, 1917, for a copy of all communications, reports and documents concerning the alleged treatment of Theo. Kelly, a prisoner in the Stony Mountain Penitentiary. Presented May 4, 1917.—*Mr. Buchanan* . . . . . *Not printed.*
- 146.** Copy of Order in Council, P.C. 1187, dated 28th April, 1917, authorizing the gratuity, at the request of His Majesty's Government in England, of a further 200 miles of rails for use in France in connection with the war. Presented by Hon. Mr. Meighen, May 18, 1917. . . . . *Not printed.*
- 146a.** Return to an Order of the House of the 13th June, 1917, for a return showing:—1. Between what points on the Canadian Northern Railway Line west of Edmonton the rails are to be taken up to be placed on the Grand Trunk Pacific Line. 2. Between what points on the Grand Trunk Pacific Line west of Edmonton the rails of the Grand Trunk are to be replaced by rails of the Canadian Northern Railway. Presented June 14, 1917.—*Mr. Oliver* . . . . . *Not printed.*

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- 146b. Tabulated statement showing list of points on the Eastern Division of the National Transcontinental Railway from which rails were lifted for shipment overseas to France, mileage lifted at each point and replaced with rails from Intercolonial Railway (together with a map accompanying same). Presented by Hon. Mr. Cochrane, June 21, 1917. . . . .*Not printed.*
147. Return called for by Section 88, of Chapter 62, Revised Statutes of Canada, requiring that the Minister of the Interior shall lay before Parliament, each year, a return of liquor brought from any place out of Canada into the Territories by special permission in writing of the Commissioner of the Northwest Territories, for the year ending 31st December, 1916. Presented by Hon. Mr. Roche, May 11, 1917. . . . .*Not printed.*
148. Return to an Address to His Excellency the Governor General of the 30th April, 1917, for a copy of the application for Arbitration Boards made to the Labour Department by the Provincial Workman's Association or its officers and the United Mines Workmen of Nova Scotia or its officers. Also a copy of all letters, copies of letters and other documents relating to this matter, along with all letters, papers, other documents and Orders in Council relative to the appointment of a Commission to investigate labour and other conditions in the County of Cape Breton. Presented May 11, 1917.—*Mr. Kyle*. . . . .*Not printed.*
149. Return to an Order of the House of the 2nd May, 1917, for a copy of all letters, copies of letters, telegrams, reports and all other documents relative to the purchase of the two vessels, *A. J. McKee* and *T. J. Drummonds*, by the Railway Department under the Order in Council dated April 17, 1917. Presented May 14, 1917.—*Mr. Macdonald*. . . . .*Not printed.*
150. Return to an Order of the House of the 31st January, 1917, for a copy of all correspondence, telegrams, memoranda, etc., by and with the Department of Railways in connection with the naming of stations on the Halifax and Eastern Railway. Presented May 14, 1917.—*Mr. Maclean (Halifax)*. . . . .*Not printed.*
151. Return to an Order of the House of the 23rd April, 1917, for a copy of all statements, reports, evidence, letters and other papers and documents in the possession of the Department of Railways and Canals relating to a claim for a horse belonging to one Dan McFarlane, injured at Brinley Brook, N.S., by the Canadian Government Railway. Presented May 15, 1917.—*Mr. Sinclair*. . . . .*Not printed.*
152. Return to an Order of the House of the 25th April, 1917, for a copy of all documents, papers, correspondence and reports concerning the suspension of Polydore Lebel, engineer on the Intercolonial Railway at Rivière du Loup, as a result of a wreck in the year 1916. Presented May 15, 1917.—*Mr. Lapointe (Kamouraska)*. . . . .*Not printed.*
153. Return to an Order of the House, of the 31st January, 1917, for a copy of all letters, telegrams and other documents relative to the removal of Mr. Spenny as Trackmaster on the Short Line, so-called, of the Canadian Government Railway, and to the appointment of Henry Gray as his successor. Presented May 15, 1917.—*Mr. Macdonald*. . . . .*Not printed.*
154. Return to an Address to His Royal Highness the Governor General, of the 7th February, 1916, for a copy of all papers in connection with the appointment of Léon Roy as interpreter in the Department of the Interior; and also a copy of the Order in Council, documents and correspondence relating to his dismissal. Presented May 16, 1917.—*Sir Wilfrid Laurier*. . . . .*Not printed.*
155. Return to an Order of the House, of the 30th April, 1917, for a copy of all letters, papers, telegrams and other documents relative to the establishment of the Canadian Government *Railway Employees Magazine*, showing the circulation thereof, the cost of production, receipts, and the persons employed in connection therewith, giving a statement of the amount received by said persons from the Railway in any capacity. Presented May 21, 1917.—*Mr. Macdonald*. . . . .*Not printed.*

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156. Return to an Order of the House, of the 22nd March, 1916, for a Return showing:—1. The number of conductors, brakemen, drivers and firemen, respectively, who were on duty on the Canadian Government Railways between Moncton and Campbellton during the month of February, 1916. 2. The number of hours each of the above mentioned trainmen and enginemen were on duty each trip between said points during said month of February, 1916. Presented May 21, 1917.—*Mr. Copp.* . . . . . *Not printed.*
157. Report of Exchequer Court proceedings under Section 49A of the Indian Act, in respect to the removal of the Indians from Sydney Reserve, Nova Scotia. Presented by Hon. Mr. Roche, May 22, 1917. . . . . *Not printed.*
158. Report of the work of the Military Hospitals Commission from its inception to the present date. Presented by Sir Robert Borden, May 23, 1917. . . . . *Not printed.*
159. Copy of correspondence between Members of the Government and the Canadian Manufacturers Association respecting the purchase of supplies for the Canadian Expeditionary Forces in England and at the Front. Presented by Sir Robert Borden, May 23, 1917. . . . . *Not printed.*
160. Return to an Order of the House, of the 14th May, 1917, for a copy of the correspondence between the Prime Minister and the ex-Minister of Militia and Defence, which led to the latter's resignation or dismissal from the Government. Presented by Sir Robert Borden, May 23, 1917.—*Mr. Hughes (King's, P.E.I.)* . . . . . *Not printed.*
161. Return to an humble Address of the Senate to His Excellency the Governor General, dated the 26th day of January, 1917, for a statement showing the date and object of all commissions instituted by the Government of the day, since its accession to power in 1911, up to the present date; the number of days during which each of these commissions sat, giving the names of the individuals who formed part of such commissions, and what was the cost of each to the country. (*Senate.*) . . . . . *Not printed.*
- 161a. Part Return to an humble Address of the Senate, dated the 7th day of February, 1917, to His Excellency the Governor General, for:—A statement showing the date, the object and the personnel of all commissions instituted by the late Government from its accession to power in 1896, up to the accession to power of the present Government in 1911, the number of days during which each of these commissions sat, and what was the cost of each to the country. (*Senate.*) . . . . . *Not printed.*
162. Order in Council P.C. 1433, dated 24th May, 1917, containing regulations concerning the departure out of Canada of male persons who are liable to or capable of national service of a military or other character. Presented by Hon. Mr. Roche, May 29, 1917. . . . . *Not printed.*
163. Return to an Address to His Excellency the Governor General, of the 23rd May, 1917, for a copy of the Order in Council, if any, providing that preference in appointments to the Civil Service should be given to returned soldiers. Presented May 29, 1917.—*Mr. Houlay.* . . . . . *Not printed.*
164. Return to an Order of the House, of the 3rd February, 1917, for a copy of all reports, findings, evidence, memoranda, etc., in connection with the inquiry into the damage sustained by H.M.C.S. *Grise* en route from Halifax to Bermuda. Presented May 29, 1917.—*Mr. Maclean (Halifax)* . . . . . *Not printed.*
165. Return to an Order of the House, of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports in any way referring to the dismissal or retirement of D. McDermid, Superintendent of Fish Hatchery at East Margaree, and the appointment of his successor. Presented May 30, 1917.—*Mr. Chissey.* . . . . . *Not printed.*
166. Return to an Order of the House, of the 24th April, 1917, for a copy of all letters, telegrams, reports and other papers and documents relative to the application of Willie Kelzer of Hall's Harbour, King's County, N.S., for a license to operate a fishing weir at Square Cove, King's County, N.S. Presented May 30, 1917.—*Mr. Maclean (Halifax)* . . . . . *Not printed.*

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167. Return to an Address to His Excellency the Governor General, of the 23rd April, 1917, for a copy of all correspondence, memoranda, Orders in Council, etc., in reference to the dismissal of Moses H. Nickerson, as Inspector of Life-saving Stations in Nova Scotia Presented May 30, 1917.—*Mr. Maclean (Halifax)* . . . . . *Not printed.*
168. Copies of Pension Regulations with amendments and as amended to February 28, 1917, with copies of Orders in Council relating thereto. Presented by Sir Thomas White, May 30, 1917. . . . . *Printed for sessional papers only.*
- 168a. Copy of Order in Council, P.C. 277, dated 30th January, 1917, regarding pensions of officers or their dependants in respect of the exchange of officers between the Government of Canada and the Imperial Government. Presented by Sir Edward Kemp, August 20, 1917. . . . . *Not printed.*
169. Return to an Order of the House, of the 14th May, 1917, for a copy of all letters, correspondence, petitions, telegrams and reports between the Minister of Marine and Fisheries and any person or persons in any way referring to the removal of the salmon nets on that portion of the coast of Inverness extending east and west from the mouth of the Margaree River. Presented May 31, 1917.—*Mr. Chisholm*. . . . . *Not printed.*
170. Return to an Order of the House, of the 2nd May, 1917, for a copy of the report of the Commission appointed to investigate the condition of the Military Hospital at Halifax, with a copy of the evidence taken by said Commission at Halifax and all other documents in the possession of the Department of Militia and Defence in connection with such investigation. Presented May 31, 1917.—*Mr. Sinclair*. . . . . *Not printed.*
171. Return to an Order of the House, of the 7th May, 1917, for a return showing the amount paid or spent by the Department of Militia in advertising for recruits in Canada, showing the persons, firms and corporations to whom the payments were made, up to April 1, 1917. Presented May 31, 1917.—*Mr. Macdonald*. . . . . *Not printed.*
172. Finding of the Court of Inquiry appointed by the Adjutant-General by Orders dated the 1st May, 1917, for the purpose of collecting and recording evidence in connection with the allegations contained in several newspapers that Troop Trains had been stoned passing through Rivière-du-Loup, Quebec, and other places, and for the purpose of collecting and recording any other evidence which, in the opinion of the Members of the Court, in any way relates to or has a bearing on this matter. Presented by Sir Edward Kemp, May 31, 1917. . . . . *Not printed.*
173. Finding of the Court of Inquiry appointed by the Adjutant-General by Orders dated the 1st May, 1917, for the purpose of collecting and recording evidence in connection with the allegations contained in several newspapers accusing the citizens of Quebec of maltreating or allowing to be maltreated, soldiers returning from the War and passing through or sojourning in Quebec, and for the purpose of collecting and recording any other evidence which, in the opinion of the Members of the Court, in any way relates to or has a bearing on the matter. Presented by Sir Edward Kemp, May 31, 1917. . . . . *Not printed.*
174. Return to an Order of the House, of the 7th May, 1917, for a copy of all accounts, letters, claims, correspondence and other documents relating to the following amounts mentioned in the Report of the Auditor General 1916, Vol. 11, page L—11:—*Mr. Justice L. P. Pelletier, travelling expenses, \$877; Mr. Justice I. N. Belleau, travelling expenses, \$1,984.44; Mr. Justice T. H. Chauvin, travelling expenses, \$1,121.25; Mr. Justice B. LeTellier, travelling expenses, \$1,922.80.* Presented May 31, 1917.—*Mr. Lanctot*. . . . . *Not printed.*
175. Return to an Order of the House, of the 30th May, 1917, for a Return showing:—1. The number of persons appointed to permanent position on the Canadian Government Railways from January 1, 1916, to March 31, 1917, who were not previously employed on the said Railways. 2. Their names, salaries and the positions to which they were appointed. Presented May 31, 1917.—*Mr. Copp*. . . . . *Not printed.*



CONTENTS OF VOLUME 21—*Continued.*

176. Return to an Order of the House, of the 12th February, 1915, for a Return showing how many persons of German nationality are employed in the several Departments of the Federal Government, in what capacity and the salaries received respectively. Presented June 1, 1917.—*Mr. Delisle* . . . . . *Not printed.*
177. Return to an Order of the House, of the 1st May, 1916, for a copy of all correspondence and papers relating to the change in the location of the post office at Roseberg, Alberta. Presented June 1, 1917.—*Mr. Buchanan* . . . . . *Not printed.*
178. Return to an Order of the House, of the 8th May, 1916, for a copy of all correspondence, letters and telegrams relating to the dismissal of Augustin D. Lauteigne as Postmaster of Island River, Gloucester County, N.B. Presented June 1, 1917.—*Mr. Turgeon* . . . . . *Not printed.*
179. Return to an Order of the House, of the 31st January, 1917, for a copy of all letters and telegrams in the Post Office Department in reference to the removal of Pearson's Post Office, Township of Casey, in the Constituency of Nipissing, from where it was located to its present location. Presented June 1, 1917.—*Mr. Turbill* . . . . . *Not printed.*
180. Return to an Order of the House, of the 5th February, 1917, for a copy of all letters, reports, papers and other documents relative to the dismissal of John R. McIntosh as Postmaster of Cummings Mountain, Pictou County, and the appointment of James Cummings as his successor. Presented June 1, 1917.—*Mr. Macdonald* . . . . . *Not printed.*
181. Return to an Order of the House, of the 2nd May, 1917, for a Return showing—The gross amount paid by the Government since October, 1911, to H. P. Duhamel of Sydney, N.B., for services and disbursements under the Public Inquiries Act, or otherwise. Presented June 1, 1917.—*Mr. Sinclair* . . . . . *Not printed.*
182. Return to an Order of the House, of the 3rd February, 1917, for a copy of all correspondence, letters, telegrams and other documents concerning the proceeding by the Post Office Department of the rural mail contract granted to Hippolyte Lambert of St. Antoine, in the County of Lotbinière, Que. Presented June 1, 1917.—*Mr. Fortin* . . . . . *Not printed.*
183. Reports, pursuant to a Resolution of the House adopted on the 18th May, 1916, based on a recommendation of the Joint Committee of both Houses on Printing of Parliament, requesting information from the several Departments of Government with the view to effecting all possible economy in the matter of public printing and the distribution of public documents, and the extent, if any, to which such recommendations have been carried into effect. Presented by Hon. Mr. Patenaude, June 1, 1917. . . . . *Not printed.*
184. Return to an Order of the House, of 21st May, 1917, for a copy of all correspondence, reports and recommendations, if any, from the Grain Commission to the Department of Trade and Commerce or any other Department of the Government at Ottawa, following a meeting of the Grain Commissioners held in Lethbridge last year. Presented June 1, 1917.—*Mr. Buchanan* . . . . . *Not printed.*
185. Order in Council passed in conformity with provisions of the *George V. Chapter 36: 4-11 (C. N. Railway)*—(*The Senate*) . . . . . *Not printed.*
186. Return to an Order of the House of the 3rd February, 1917, for a Return showing the quantity and value of exports in following commodities for the last three months of present fiscal year:—Hides and manufactures of same, wheat, breadstuffs, oats and grain other than wheat, automobiles, bicycles, motorcycles and parts of same, including engines and tires; railway cars and parts, electric, motor and gas-turbines of same; cotton manufactures, explosives—iron and steel, and manufactures of same; firearms and magazines, leather and manufactures of same; wool and wooly products; alcohol, vegetable, dried and canned, lard, waxing, soaps of all kinds; kins and manufactures of same; paper and manufactures of same. Presented June 1, 1917.—*Mr. Maclean (Hull)* . . . . . *Printed on adjacent pages 101-102.*

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**CONTENTS OF VOLUME 21—Continued.**

187. Return to an Order of the House, of the 30th April, 1917, for a copy of all documents, correspondence, letters, telegrams, memoranda and reports exchanged between the Sergeant-at-Arms of the House of Commons and the Honourable Albert Sévigny; the Sergeant-at-Arms and the Justice Department, and between the Department of Justice and the Honourable Albert Sévigny, concerning certain effects, furniture and ornaments connected with the Speaker's Apartments. Also, copy of all accounts, receipts, bills of lading and transportation accounts concerning the said effects, furniture and ornaments. Presented June 5, 1917.—*Mr. Lanctot*... ..*Not printed.*
188. Copy of Order in Council P.C. 1457, dated the 29th May, 1917, respecting pay to members of the Civil Service who join the Military forces of Canada either by voluntary enlistment or otherwise from and after the date hereof. Presented by Sir Thomas White, June 6, 1917... ..*Not printed.*
189. Copy of General Reports of W. F. O'Connor, K.C., Acting Commissioner *re* Cost of Living, concerning the production, cost, selling prices, and distribution system of refined sugar. Presented by Hon. Mr. Crothers, June 6, 1917  
*Printed for distribution and sessional papers.*
190. Copy of Reports of W. F. O'Connor, on the subject of the Anthracite Coal business in Canada. Presented by Hon. Mr. Crothers, June 6, 1917.  
*Printed for distribution and sessional papers.*
191. Return to an humble Address of the Senate to His Excellency the Governor General, dated the 22nd of May last, showing a copy of:—All correspondence exchanged between the Government or its Ministers, the Minister of Militia, the Militia Council, Major-General F. L. Lessard, C.B., Inspector-General, or any other person, and Lieutenant-Colonel Armand Lavergne, O.C., the 61st Regiment or any other person, on the subject of the territorial defence of the Province of Quebec, as well as copy of all Orders in Council or documents relating to this subject.—(*Senate*)... ..*Not printed.*
192. Copy of Order in Council, P.C. 1579, dated 8th June, 1917, appointing a Fuel Controller for Canada. Presented by Sir George Foster, May 12, 1917.  
*Printed for sessional papers only.*
- 192a. Copy of Order in Council, P.C. 1460, dated 16th June, 1917, *re* the appointment of an Officer to be known as Food Controller for Canada, and specifying his powers and duties. Presented by Sir Robert Borden, June 19, 1917.  
*Printed for sessional papers only.*
193. Copy of Order in Council, P.C. 1601, dated 11th June, *re* the establishment of "The Board of Grain Supervisors of Canada." And also, Copy of Order in Council, P.C. 1605, dated 11th June, 1917, appointing certain persons as members of "The Board of Grain Supervisors of Canada." Presented by Sir George Foster, May 12, 1917.  
*Printed for sessional papers only.*
194. Copies of Census Statistics of male population of Canada, Census of 1911, between the ages of 20 and 45, both years inclusive, according to conjugal condition and nativity. Presented by Sir Edward Kemp, June 13, 1917.  
*Printed for sessional papers only.*
195. Copies of The King's Regulations and Orders for the Army, 1912, re-printed with amendments published in Army Orders up to 1st August, 1914. Presented by Sir Edward Kemp, June 13, 1917... ..*Not printed.*
196. Copies of Manual of Military Law, War Office, 1914. Presented Sir Edward Kemp, June 13, 1917... ..*Not printed.*
197. Copy of Order in Council, P.C. 987, dated 10th April, 1917, as amended by Order in Council No. 1151, dated 25th May, 1917: Regulations, being as Consolidation of and additions to various Orders in Council made in consequence of the War, the whole to be known as the "Defence of Canada Order, 1917." Presented by Hon. Mr. Hazen, June 13, 1917... ..*Not printed.*

## CONTENTS OF VOLUME 21—Continued.

198. Return to an Order of the House, of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports in any way referring to dismissal, retirement or resignation of John McDonald, as Janitor of public building at Inverness, and the appointment of his successor. Presented June 15, 1917.—*Mr. Chisholm*.  
Not printed.
199. Return to an Order of the House, of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports received by the Government since September, 1911, to the present day, in any way referring to the extension and repairs to McKay's Point Wharf, Inverness County. Presented June 15, 1917.—*Mr. Chisholm*.  
Not printed.
200. Return to an Order of the House, of the 7th May, 1917, for a copy of the minutes which the Government or the Department of Public Works sent to the Resident Engineer or other parties in answer to letters, telegrams, or reports in connection with the breakwater at Souris, P.E.I., during the years 1915 and 1916. Presented June 15, 1917.—*Mr. Hughes (King's, P.E.I.)*.  
Not printed.
201. Return to an Order of the House, of the 23rd May, 1917, for a copy of all correspondence, telegrams, recommendations and other communications relating to the dismissal of Hector Urquhart, as lineman on the Dominion Government telegraph line between Grand River and Enon, Cape Breton County, Nova Scotia, and relating to the appointment of Dan. A. McLennan to said position. Presented June 15, 1917.—*Mr. Kyte*.  
Not printed.
202. Return to an Order of the House, of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports received by the Government since September, 1911, to the present day, in any way referring to the extension and repairs to Craigsh Wharf. Presented June 15, 1917.—*Mr. Chisholm*. Not printed.
203. Return to an Order of the House, of the 3rd May, 1917, for a Return showing—1. The amount which has been paid for stenographic reporting for the different Committees or inquiries which have been held by the Government since November, 1911, to the present time. 2. The names of the persons to whom these amounts have been paid for stenography and the respective amounts paid to each of them. Presented June 15, 1917.—*Mr. Verville*.  
Not printed.
- 203a. Return to an Order of the House, of the 3rd May, 1917, for a Return showing—1. The amount which has been paid for stenographic reporting for the different Committees or inquiries which have been held by the Government since November, 1911, to the present time. 2. The names of the persons to whom these amounts have been paid for stenography and the respective amounts paid to each of them. Presented June 28, 1917.—*Mr. Verville*.  
Not printed.
204. Return to an Address to His Excellency the Governor General, of the 9th May, 1917, for a copy of all papers, petitions, telegrams and all other documents sent to the Government urging upon them the necessity of distributing the war clothing system in the camps overseas. Presented June 15, 1917.—*By Hon. Sec.*.  
Not printed.
205. Copies of all correspondence, memoranda or other documents received by or sent by the Right Honourable the Prime Minister and the Honourable the Minister of Trade and Commerce, concerning a project to advertise Canadian products by the organization of an exhibition train of sample goods in France. (Sented).  
Not printed.
- 205a. Supplementary Return to an Order of the Senate, dated the 10th June last, for a Return showing—Copies of all correspondence, memoranda or other documents received by or sent by the Right Honourable the Prime Minister and the Honourable the Minister of Trade and Commerce, concerning a project to advertise Canadian products by the organization of an exhibition train of sample goods in France. (The Senate).  
Not printed.

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**CONTENTS OF VOLUME 21—Continued.**

- 206.** Letter of the Honourable E. L. Patenaude, M.P., to the Right Honourable the Prime Minister, resigning his position as Secretary of State for Canada, and the letter of the Prime Minister in acknowledgment thereof. Presented by Sir Robert Borden, June 18, 1917. . . . . *Not printed.*
- 207.** Return to an Order of the House, of the 3rd May, 1917, for a Return showing:—1. How much merchandise has been exported from Canada into Foreign Countries since the first of August, 1914, to the present time? 2. How much of these goods have gone through the Port of Hamburg? 3. What countries have imported this merchandise from Canada, and the respective amounts for each of them? Presented June 18, 1917.—*Mr. Verville.* . . . . . *Not printed.*
- 208.** Return to an Order of the House, of the 3rd February, 1916, for a return showing the itemized disbursements of Ward Fisher, Inspector of Fisheries for Western Nova Scotia, for the year 1912, amounting to \$388.40, and the year 1913, amounting to \$1,009.84. Presented June 18, 1917.—*Mr. Lacombe.* . . . . . *Not printed.*
- 209.** Return to an Order of the House, of the 23rd April, 1917, for a copy of all papers, documents, petitions, memoranda, correspondence, etc., with the Government of British Columbia or any member thereof with the Fishery Officers of the Marine and Fisheries Department resident in said Province, and with any Company, person or persons relating to prohibition of the export of British Columbia salmon since January 20, 1913. Presented June 18, 1917.—*Mr. McKenzie.* . . . . . *Not printed.*
- 210.** Statement of Amount and Price of Commodities purchased and sold (including export and home consumption) by Cold Storage Companies in Canada from January 1 to December 1, 1916. Presented by Hon. Mr. Crothers, June 18, 1917. . . . . *Not printed.*
- 210a.** Report of W. F. O'Connor, K.C., Acting Commissioner *re* Cost of Living, concerning Cold Storage Conditions in Canada. Presented by Hon. Mr. Crothers, July 13, 1917. *Printed for distribution and sessional papers.*
- 210b.** Copy of Order in Council, P.C. 2021, dated 23rd July, 1917, recommending the further investigation into the premises, books, papers and records of the William Davies Company, Limited, and Matthews-Blackwell, Ltd., as disclosed by the report of W. F. O'Connor, Acting Commissioner on the Cost of Living, on the subject of cold storage conditions in Canada, and appointing G. F. Henderson, A. B. Brodie and Geoffrey Clarkson with all the powers of Examiners under Part I of the Inquiries Act to inquire into the books, papers, etc., of the said companies; also to recommend in writing to the Minister of Labour a standardized system of costs accounting applicable to the cold storage business by which the net profits of cold storage companies in Canada may from time to time be readily ascertained. Presented by Hon. Mr. Crothers, July 25, 1917. . . . . *Not printed.*
- 211.** Return to an Order of the House, of the 11th June, 1917, for a copy of all correspondence, telegrams, requests, petitions and other papers in the possession of the Department of Trade and Commerce relating to providing a supply of salt for the fisheries of the Maritime Provinces. Presented by Sir George Foster, June 22, 1917. *Not printed.*
- 212.** Copy of Order in Council, P.C. No. 1725, dated the 25th June, 1917, creating the position of Director of Coal Operations for the southeastern coal fields of the Province of British Columbia and the southwestern coal fields of the Province of Alberta, known as District 18. And also.—Copy of Order in Council, P.C. No. 1726, dated the 25th June, 1917, appointing W. H. Armstrong, of the City of Vancouver, Director of Coal Operations under the provisions of the above Order in Council, P.C. No. 1725, dated 25th June, 1917. Presented by Sir Robert Borden, June 25, 1917. . . . . *Not printed.*
- 212a.** Return to an Order of the House, of the 14th May, 1917, for a copy of all letters, reports, communications and documents passing between the Minister of Labour and the Department of Labour and the officials of District No. 18, United Mine Workers

CONTENTS OF VOLUME 21—*Continued.*

- of Alberta, and the officials of the Alberta and Eastern British Columbia Coal Operators' Association, concerning the requests made by the Miners for an increase in wages due to the increase in the cost of living, between September 1, 1916, and the present time. Presented July 12, 1917.—*Mr. Buchanan*... ..Not printed.
213. Return to an Order of the House, of the 13th June, 1917, for a Return showing:—1. How many battalions of infantry left Canada with the First Contingent? 2. The number, and the designations of the different units of artillery which left with the First Contingent? 3. The number and the designation of the different medical corps which left Canada with the First Contingent? 4. The number and the designation of all the other units which left with the First Contingent? 5. The names, rank and duties of the supernumerary officers who left with the First Contingent. Presented June 26, 1917.—*Mr. Lachance*... ..Not printed.
214. Return to an Address to His Excellency the Governor General, of the 30th May, 1917, for a copy of all correspondence, letters, cables and other documents exchanged between the Imperial Government or any of its members or officials with the Canadian Government or any of its members or officials, relative to the question of the proposed legislation by the Imperial Parliament to validate certain Acts and proceedings of the Legislature of British Columbia. Presented June 27, 1917.—*Mr. Macdonald*... ..Not printed.
215. Return to an Order of the House, of the 4th June, 1917, for a copy of all correspondence between the Chief of the *Hansard* Translation Staff of the House, the Clerk of the House and the Speaker, since April 19, 1917, to date. Presented June 28, 1917.—*Mr. Lemieux*... ..Not printed.
216. Return to an Order of the House, of the 27th March, 1916, for a return showing the amounts paid by the Federal Government from the 1st July, 1896, to the 1st October, 1911, to the following newspapers: *Le Canada, La Presse, La Patrie, Le Pays*, of Montreal, *La Vigie* and *Le Soleil*, of Quebec. Presented June 28, 1917.—*Mr. Boulay*... ..Not printed.
217. Return to an Order of the House, of the 3rd May, 1917, for a Return showing the number of employees of the following Departments after 1896, and after 1911, respectively, viz.:—Inland Revenue, Interior, Public Works, Marine and Fisheries, Militia and Defence, Labour and Department of Trade and Commerce. Presented June 28, 1917.—*Mr. Boulay*... ..Not printed.
218. Return to an Order of the House, of the 7th May, 1917, for a Return showing the number of returned soldiers who have been given employment in the various departments of the Government. Presented June 28, 1917.—*Mr. Lessore*... ..Not printed.
219. Return to an Order of the House, of the 25th June, 1917, for a copy of the reports made by the Penitentiary Surgeons in connection with the release from Penitentiary of Edward Levl Baugh. Presented July 4, 1917.—*Mr. Murphy*... ..Not printed.
220. Return to an Order of the House, of the 21st May, 1917, for a return giving the names and salaries of employees of the Interior and Indian Departments: (a) Inside Service and (b) Outside Service, who volunteered for overseas service and who were paid their full civil salary in addition to their military pay and allowances.  
Those who volunteered for overseas service and who were paid a sufficient portion of their civil salary in addition to their military pay and allowances to bring their pay up to the amount of their civil salary.  
Those who volunteered for overseas service and who received consideration (stating consideration) on account of their civil employment in addition to their military pay and allowances.  
Those who volunteered for overseas service and who do not receive any consideration on account of their civil employment in addition to their military pay and allowances. Presented July 5, 1917.—*Mr. Oliver*... ..Not printed.

CONTENTS OF VOLUME 21—*Continued.*

221. Report of Special Trade Commission to Great Britain, France and Italy, May-September, 1916. Presented by Sir George Foster, July 5, 1917... ..*Not printed.*
222. Return to an Order of the House, of the 13th June, 1917, for a Return showing:—1. The total expenditure connected with Agriculture by the Federal Government in each of the fiscal years from 1904-05 to 1916-17, inclusive. 2. How much money was set apart by the Agricultural Aid Act of 1912 to assist the Provincial Departments of Agriculture to improve and extend their work? 3. How much of above amount was given to each Province, and what was accomplished in each Province as a result of such assistance? 4. How much money was set apart by the Federal Government under the Agricultural Instructions Act of 1913, and under the provisions of the said Act what amounts were respectively allotted each year to the several Provinces? 5. What the general purpose of said Act is, and to what extent that purpose has been made effective in each Province. Presented July 5, 1917.—*Mr. Edwards.*  
*Printed for sessional papers only.*
223. Return to an Order of the House, of the 11th June, 1917, for a Return showing:—1. Whether Mr. Giard, ex-M.P.P. for Compton, is an employee of the Government? 2. If so, since when? 3. The number of employees under his orders and their respective names? 4. What salary does said Giard receive? 5. The salary of each employee under his charge? 6. Whether he has bought, for the Government, any animals for breeding purposes? 7. If so, how many, and the price paid for each? 8. Where these animals were bought? 9. How many of them have been rejected or returned to the Government or to Mr. Giard? 10. If any have been refused or returned, why? 11. Where the said breeding animals are at present? 12. What the Government or the Department of Agriculture intends to do with the animals so refused and returned to Mr. Giard? Presented July 5, 1917.—*Mr. Gauvreau* *Not printed.*
224. Return to an Address to His Excellency the Governor General, of the 31st January, 1917, for a copy of all documents, letters, messages, correspondence, reports and particularly an Order in Council dated 6th December, 1898, respecting the exemption from military service of the Doukhobors. Presented by Hon. Mr. Roche, July 9, 1917.—*Mr. McCrancy.*... ..*Not printed.*
225. Return to an Address to His Excellency the Governor General, of the 31st January, 1917, for a copy of all Orders in Council and other documents on file in the Department of Marine and Fisheries relating to the requisitioning of Canadian ships by the Canadian Government. Presented July 11, 1917.—*Mr. Sinclair.*... ..*Not printed.*
226. Return to an Order of the House of the 7th June, 1917, for a return showing the number of recruiting officers which have been appointed in the province of Quebec, with the names, addresses, nature of functions and salaries of the same. Presented July 11, 1917.—*Mr. Carvell.*... ..*Not printed.*
- 226a. Return to an Order of the House of the 18th June, 1917, for a return showing:—1. The names and addresses of the parties on Prince Edward Island who have been engaged or who are now engaged in recruiting for the army and navy or doing other work of a like military character, since August, 1914. 2. The remuneration or pay each of the said parties receives and the allowance given for travelling or other expenses. 3. The total amount each person has received up to the 1st of June, 1917. Presented July 31, 1917.—*Mr. Hughes (P.E.I.).*... ..*Not printed.*
227. Return to an Order of the House of the 12th April, 1916, for a return showing:—1. How many clerks there are in the Post Office Department who belong to and are paid from the outside service vote, and who work in the inside service. 2. The names of said clerks. 3. Salary paid to each. 4. How long each has been in the service of the Department. 5. If all or any of the clerks have passed any examination. If so, what examination, and on what date or dates. Presented July 14.—*Mr. Turriff.*... ..*Not printed.*
228. Copy of a memorandum presented by the Southern Slav Committee to the representatives of the British Dominions, setting forth the aims and aspirations of the Jugo-slavs (Serbs, Croats and Slovans) subject to Austro-Hungarian rule. Presented by Sir Robert Borden, July 20, 1917... ..*Not printed.*

CONTENTS OF VOLUME 21—*Continued.*

229. Claims made by Minister of Justice relating to payment of duties by certain provinces. (*Senate*) . . . . . *Not printed.*
230. Copy of Report of Honourable Sir Ezekiel McLeod, Chief Justice of the Province of New Brunswick, and the Honourable Louis Tellier, retired Judge of the Superior Court of the Province of Quebec, Commissioners appointed under the Inquiries Act of Canada, being Revised Statutes of Canada, 1906, Chapter 164 and Amending Acts, by virtue of an Order in Council passed on the 6th June, 1917, whereby the said Commissioners were empowered and directed to conduct an inquiry and investigation for the purpose of reviewing and considering the evidence taken by Mr. Justice Galt, a Commissioner appointed by the Lieutenant-Governor of Manitoba on the 15th day of July, 1916, to investigate and report upon certain matters of concern to the Local Government of the said province, in the execution of such Commission, and to review and consider his reports and findings on such evidence; and to report whether such evidence sustains or supports the findings of the said Commissioner, as set forth in such reports, in so far as they reflect upon or prejudicially affect the honour or integrity of the Hon. Robert Rogers or the honesty of his dealings or transactions. Presented by Hon. Mr. Doherty, July 27, 1917. . . . . *Printed for distribution—Members and Senators only.*
- 230*a*. Copy of evidence, exhibits, etc., in respect to the Report of Honourable Sir Ezekiel McLeod, Chief Justice of the Province of New Brunswick, and the Honourable Louis Tellier, retired Judge of the Superior Court of the Province of Quebec, Commissioners appointed under the Inquiries Act of Canada, being Revised Statutes of Canada, 1906, Chapter 164 and Amending Acts, by virtue of an Order in Council passed on the 6th June, 1917, whereby the said Commissioners were empowered and directed to conduct an inquiry and investigation for the purpose of reviewing and considering the evidence taken by Mr. Justice Galt, a Commissioner appointed by the Lieutenant-Governor of Manitoba on the 15th day of July, 1916, to investigate and report upon certain matters of concern to the Local Government of the said province, in the execution of such Commission, and to review and consider his reports and findings on such evidence; and to report whether such evidence sustains or supports the findings of the said Commissioner as set forth in such reports, in so far as they reflect upon or prejudicially affect the honour or integrity of the Hon. Robert Rogers, or the honesty of his dealings or transactions. Presented by Hon. Mr. Doherty, August 9, 1917. . . . . *Not printed.*
231. Return to an Order of the House of the 13th June, 1917, for a copy of all correspondence, letters, telegrams and other papers relating to a contract for carrying mails between Grand River and Fourchu, in the County of Richmond, Nova Scotia, in the years 1916 and 1917. Presented July 28, 1917—*Mr. Ryan*. . . . . *Not printed.*
232. Return to an Order of the House of the 30th April, 1917, for a copy of all papers, letters, telegrams and documents relative to the purchase of land in Vancouver, B.C., for the purpose of an Armoury, since January 1, 1917. Presented July 30, 1917.—*Mr. Macdonald*. . . . . *Not printed.*
233. Return to an Order of the House of the 1st February, 1917, for a return showing—1. The names and present rank of all appointments as Chief Recruiting Officers or as District or Special Recruiting Officers, not local or residential, made since the beginning of the war. 2. The dates of their respective appointments. 3. The ages and standing of respective appointees. 4. The name of military organization, if any, in which appointees had previously served. 5. The rank of appointees while serving in any military organization. 6. Whether the services of any of these appointees have been discontinued. 7. If so, their names, and dates on which they were retired. Presented July 31, 1917.—*Mr. Turiff*. . . . . *Not printed.*
234. Return to an Order of the House of the 31st January, 1917, for a return showing—1. The date of the last order given by the Government to the Ross Rifle Company. 2. The number of rifles ordered. 3. Whether a recommendation of the British Army Council for the utilization of existing Canadian facilities in manufacturing the new and improved Lee-Enfield was received by the Government. 4. The date of the recommendation, and when it was received. 5. Whether the recommendation has been acted upon. Presented July 31, 1917.—*Mr. Turiff*. . . . . *Not printed.*

CONTENTS OF VOLUME 21—*Continued.*

- 235.** Return to an Order of the House of the 20th June, 1917, for a return showing:—1. The names of the members of the military staff at North Vancouver. 2. Their respective duties or occupations. 3. The rank and rate of pay of each. 4. The amount that has been paid to each. 5. Upon what date or dates the members of the said staff enlisted, and how long they have been attached to the staff. Presented July 31, 1917.—*Mr. Murphy* . . . . . *Not printed.*
- 235a.** Return to an Order of the House of the 21st June, 1917, for a return showing the names, rank, pay, and nature and place of employment of all officers attached to headquarters at Halifax and the various departments of the military service or connected in any way with Military Division No. 6. Presented August 2, 1917.—*Mr. Tobin* . . . . . *Not printed.*
- 236.** Return to an Order of the House of the 18th July, 1917, for a return giving a list of the different Commissions created since the beginning of the war, concerning the soldiers, their pensions, hospitals, etc., showing the names of the various Commissioners who have comprised said Commissions. Presented July 31, 1917.—*Mr. Boulay* . . . . . *Not printed.*
- 237.** Copy of Financial Statements in respect to the Canadian Northern Railway System: 1. Balance Sheet, 30th June, 1916. 2. Statement of Securities Issued and Fixed Charges, 30th June, 1917. 3. Statement of Liabilities, 15th June, 1917. 3a. Statement of Equipment Account. 4. List of Securities for Loans. 5. Gross and Net Earnings, 30th June, 1917. 6. Comparison of Earnings, 1915, 1916 and 1917. 7. Statement *re* Capital Expenditure and Betterments, year ending 30th June, 1917. 8. Mileage. And also,—Statements showing bonds, etc., authorized, issued and outstanding, and net proceeds therefrom; interest payable during the period July 1, 1917, to June 30, 1918; and estimated cash requirements for period July 1, 1917, to June 30, 1918, in respect to the Grand Trunk Railway and Grand Trunk Pacific Branch Lines. Presented by Sir Robert Borden, July 20, 1917 . . . . . *Not printed.*
- 237a.** Copy of Mortgage Deed of Trust securing an issue of \$45,000,000 of Canadian Northern Railway securities, guaranteed by the Dominion Government, issued under the legislation of 1914. Also,—Copy of Mortgage Deed dated 26th June, 1916—The Canadian Northern Ontario Railway Company to His Majesty the King—securing certain advances from a loan of \$15,000,000 made by His Majesty to the Canadian Northern Railway Company. And also,—Copy of Audit of Revenue and Expenditure Accounts of the Canadian Northern Railway System for the months of May, June, July, August, September, October, November and December, 1916, and for January and February, 1917. Presented by Sir Thomas White, August 8, 1917 . . . . . *Not printed.*
- 237b.** Statement of amounts advanced by the Government of Canada to the Canadian Northern Railway Company on interest account to date. And also,—Financial Statements of the Canadian Northern Railway, as follows:—1. Interim Condensed Balance Sheet as at April 30, 1917. 2. Statement of estimate of cost to complete lines and terminals under construction and financial provision for same. 3. Statement of Contractors' and other Construction accounts outstanding, 30th June, 1917. 4. Memorandum *re* unsold lands. 5. Estimate of amount required for betterments and rolling stock for three years. Presented by Sir Thomas White, August 13, 1917 . . . . . *Not printed.*
- 238.** Copy of Order in Council, P.C. 1881, dated 19th August, 1916, recommending that in the case of officers, warrant officers and non-commissioned officers reverting to lower rank in order to proceed to the front, no reduction in separation allowance or pension shall be made. And also,—Copy of Order in Council, P.C. 2008, dated 20th July, 1917, cancelling Order in Council, P.C. 1615, dated 13th June, 1917, and amending Order in Council, P.C. 1881, dated 19th August, 1916, in respect to separation allowances and pensions to those reverting to lower rank, in order to proceed to the front. Presented by Sir Edward Kemp, August 2, 1917 . . . . . *Not printed.*
- 239.** Return to an Order of the House of the 30th July, 1917, for a copy of all correspondence exchanged between the Board of Trade of the City of Quebec and the Prime Minister on the subject of the Report of the Special Commission on Railways. Presented August 2, 1917.—*Sir Wilfrid Lawier* . . . . . *Not printed.*



CONTENTS OF VOLUME 21—*Continued.*

240. Return to an Order of the House of the 13th June, 1917, for a statement showing the travelling expenses of Maurice LeBlanc, general foreman of the Department of Public Works, Bonaventure County, since his appointment to date. Presented August 8, 1917.—*Mr. Marcell (Bonaventure)* . . . . . *Not printed*
241. Return to an Order of the House of the 30th April, 1917, for a copy of all letters, petitions, correspondence and telegrams exchanged between the Government, the resident engineer and all other persons concerning the dredging work done at Ste. Anne de Bellevue, Pointe Fortune, Ottawa River channel between Ile au Foin and Ile Paulin, Graham channel, Rigaud channel, Hudson Heights channel, Ile Perrot Church, Ile Perrot South wharf and Ile Perrot North wharf, since 1904. Also a statement showing the amounts paid to different persons or companies for such work, giving the dates of payment, along with a copy of the estimates already brought down at my request regarding the above, previous to 1904. Return to an Order of the House of the 20th April, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports exchanged between the Government, the resident engineer of the district, and all other persons, concerning the dredging work done since 1904 at the wharf of Ile Perrot North, South and the Church, Dorion Bay channel, Vaudreuil Village channel, Pointe Cavagnal, Como, Hudson Heights channel, Graham channel, Rigaud River channel, Ottawa River, Iles aux Poires channel, Pointe Fortune and Ste. Anne de Bellevue channel. Also a statement showing the amount of money paid to divers persons, companies, etc., for such works, along with copy of statements already presented at my request in connection with the same work, previous to 1904. Presented August 8, 1917.—*Mr. Boyer* . . . . . *Not printed*
242. Return to an Order of the House of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports received by the Government since September, 1911, to the present day, in any way referring to the extension and repairs to Pinlay Point wharf. Presented August 8, 1917.—*Mr. Chisholm* . . . . . *Not printed*
243. Return to an Order of the House of the 30th April, 1917, for a copy of all correspondence in the possession of the Department of Public Works bearing date after September 1, 1915, relating to wharves, breakwaters and other public works situated in the County of Antigonish, Nova Scotia. Presented August 8, 1917.—*Mr. Sinclair* . . . . . *Not printed*
244. Return to an Order of the House of the 7th May, 1917, for a copy of all documents, correspondence, reports, accounts, pay-lists, etc., in connection with the work done on the Government wharves at Cross Point, Miguasha, St. Omer and New Carleton, Quebec, since 1912. Presented August 8, 1917.—*Mr. Marcell (Bonaventure)* . . . . . *Not printed*
245. Return to an Order of the House of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports received by the Government since September, 1911, to the present day, in any way referring to the wharf at Marble Mountain. Presented August 13, 1917.—*Mr. Chisholm* . . . . . *Not printed*
246. Return to an Order of the House of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports received by the Government since September, 1911, to the present day, in any way referring to the extension of the pier at Margaree Harbour. Presented August 13, 1917.—*Mr. Chisholm* . . . . . *Not printed*
246. Return to an Order of the House of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports received by the Government since September, 1911, to the present day, in any way referring to the breakwater at Margaree Harbour. Presented August 13, 1917.—*Mr. Chisholm* . . . . . *Not printed*
247. Return to an Order of the House of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports received by the Government since September, 1911, to the present day, in any way referring to the Port Hood wharf. Presented August 13, 1917.—*Mr. Chisholm* . . . . . *Not printed*

CONTENTS OF VOLUME 21—*Continued.*

248. Return to an Order of the House of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports received by the Government since September, 1911, to the present time, in any way referring to the opening of Inverness Harbour. Presented August 13, 1917.—*Mr. Chisholm*. . . . .*Not printed.*
249. Return to an Order of the House of the 23rd April, 1917, for a copy of all papers, documents, petitions, memoranda, correspondence, etc., with reference to the Government of the Dominion of Canada building competing telephone lines in British Columbia paralleling lines already in operation of the Okanagan Telephone Company, Limited. Presented August 13, 1917.—*Mr. Carvell*. . . . .*Not printed.*
250. Return to an Order of the House of the 30th April, 1917, for a copy of all correspondence in the Department of Public Works bearing date after September 1, 1915, relating to wharves, breakwaters and other public works in the County of Guysborough, Nova Scotia. Presented August 13, 1917.—*Mr. Sinclair*. . . . .*Not printed.*
251. Return to an Order of the House of the 30th April, 1917, for a copy of all papers, records and other documents concerning the reference by the Dominion Government to the question relating to the exclusive right of fishing in the tidal waters of the province of Quebec. Presented August 15, 1917.—*Mr. Lemieux*. . . . .*Not printed.*
252. Return to an Order of the House of the 9th July, 1917, for a return showing the names of all persons employed in connection with the Office of the Commissioner of Live Stock in the Province of Saskatchewan, showing the salaries and expenses paid them; and also showing the number of stallions and bulls placed in Saskatchewan when the said office was established. Presented August 15, 1917.—*Mr. Thomson (Qu'Appelle)*.  
*Not printed.*
253. Return to an Order of the House of the 14th May, 1917, for a copy of all letters, telegrams and reports between the Department of the Naval Service of the Department of Marine and Fisheries, and any and all persons in connection with the seizure of certain fishery boats, fishing tackle and equipment being used in the illegal fishing of lobsters in the Straits of Northumberland in the fall of 1916, together with a copy of the evidence taken before one M. G. Teed, Esquire, acting as a commissioner to inquire into this matter, and his report and finding thereon. Presented August 16, 1917.—*Mr. Copp*.  
*Not printed.*
254. Return to an Order of the House of the 30th July, 1917, for a copy of all correspondence between the Department of Militia and Defence of Canada, the War Purchasing Commission of Canada, and the British War Office, concerning a target practice rod or the use of same by the Canadian Expeditionary Force. Presented August 20, 1917.—*Mr. Maclean (Halifax)*. . . . .*Not printed.*
255. Return to an Order of the House of the 7th June, 1917, for a return showing:—1. Whether the Department of Agriculture supply thoroughbred bulls for improvement of stock to applicants for the same. 2. If so, if any such bulls have been sent into the County of Dorchester, Quebec, and when. 3. At whose request these bulls were sent, and if they belonged to the Department of Agriculture. 4. If so, on what condition they were supplied. 5. From whom the department purchased the animals referred to. 6. The price paid. 7. If any official of the Department of Agriculture has made an investigation as to where these bulls are at the present time. 8. If so, the substance of their report. 9. Whether the said bulls are being used for the purpose for which they were intended. Presented August 21, 1917.—*Mr. Lanctôt*. . . . .*Not printed.*
256. Return to an Order of the House of the 1st August, 1917, for a return showing the amount which has been paid to the Sydney *Daily Post*, newspaper, by all the departments of the Government for printing and advertising, since the 1st of November, 1911. Presented August 21, 1917.—*Mr. Kyle*. . . . .*Not printed.*
257. Return to an Order of the House of the 1st August, 1917, for a return showing the gross amount paid to the Halifax *Herald*, the *Evening Mail*, Halifax, and the Royal Print and Lithographing Company, Halifax, by all the departments of the Government for printing, advertising and all other services since November 1, 1911. Presented August 21, 1917.—*Mr. Sinclair*. . . . .*Not printed.*

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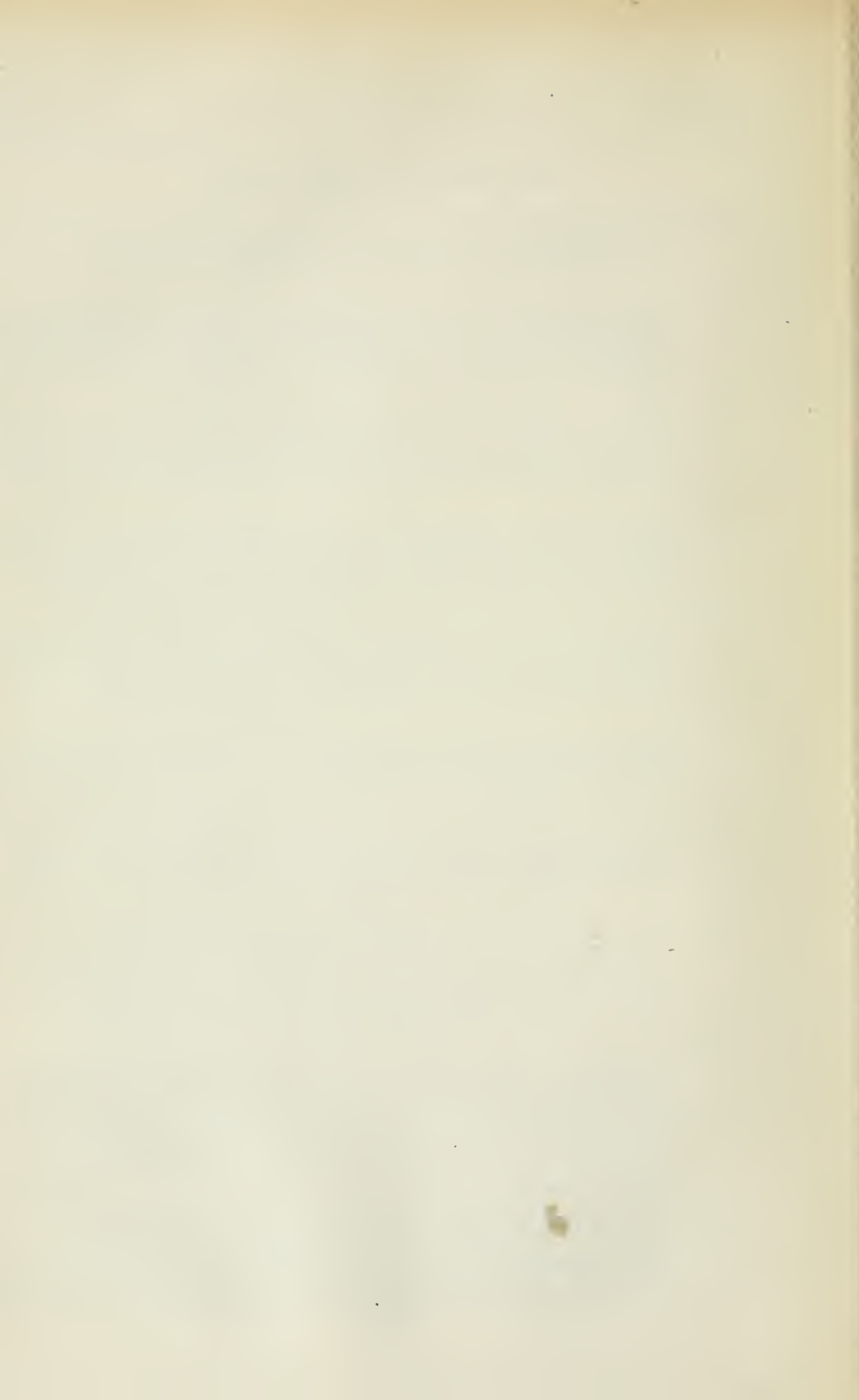
- 258.** Return to an Order of the House of the 18th June, 1917, for a copy of all accounts, papers, claims and correspondence regarding demands put forward by all persons who have claimed to have sustained loss or damage by the fire in the Parliament Buildings in February, 1916. Presented August 21, 1917.—*Mr. Lacombe* . . . . . *Not printed*
- 259.** Return to an Order of the House of the 14th May, 1917, for a copy of all communications, letters, reports, petitions and other documents on behalf of the Physicians and Medical Associations of this country, asking for the repeal of The Proprietary or Patent Medicine Act and the presentation of a new Act on the matter in order to render more efficient the control of these medicine preparations, and to add on the prohibition list such drugs or medicines as are generally dangerous to health and conducive to certain criminal practices. Presented August 21, 1917.—*Mr. Lapointe (Kalaraska)* . . . . . *Not printed*
- 260.** Copy of correspondence between the Honourable Robert Rogers and the Right Honourable Sir Robert Borden, Prime Minister, with reference to the resignation of the former as Minister of Public Works of Canada.—(*The Senate*) . . . . . *Not printed*
- 261.** Return to an Order of the Senate dated the 11th day of July, 1917, for a Statement showing the number of officers and men of the Canadian Expeditionary Force who have been classed as unfit for military service; whether the military authorities have given consideration to the possibility of utilizing the services of those men in a secondary capacity; whether those who have been classed as unfit continue to draw military pay; the number who have deserted from the various units between 18th October, 1914, and 1st June, 1917; and the number discharged from the various units since 1st October, 1914.—(*The Senate*) . . . . . *Not printed*
- 262.** Return to an Order of the Senate, dated 7th June last, for a return showing—1. The name and rank of each person who at the outbreak of the war in August, 1914, was an officer, commissioned or provisional, of the 78th Regiment (Highlanders) of Prince County, Nova Scotia. 2. The length of time each of such persons was attached to said regiment. 3. (a) The name of each of said officers who joined the Canadian Overseas Forces. (b) The unit to which he was attached. (c) The rank with which he was attached. (d) The date at which he was attached. 4. The name of each person who since the outbreak of war became attached as provisional officers to said 78th Regiment and the date at which such person became attached and his rank. 5. (a) The names of each of the officers referred to in paragraph 4 who joined the Canadian Overseas Forces. (b) The unit to which he was attached. (c) The rank with which he was attached. (d) The date at which he was attached. 6. The name of each of the officers referred to in each of the foregoing paragraphs who were in active service at the fighting front, the units with which they served, and the length of time they served. 7. Proclamations to each of the said officers showing where each one was on May 1, 1917, to what unit he was attached, and what his rank was at that time. 8. If any of the officers have gone to the fighting front since May 1, their name, unit, rank and date.—(*The Senate*) . . . . . *Not printed*
- 263.** Part return to an humble Address of the Senate to His Excellency the Governor General, dated the 8th instant, showing all the correspondence between the Georgetown and Millia and Deferre and Clarence J. McCreary, Ltd. between the date said one last Purchasing Committee appointed by Sir Robert Borden, of which the Honourable Robert Rogers was Chairman, and between the said Clarence J. McCreary and the Committee of which the Honourable Sir Edward Knollys was Chairman, or with any of the members of the said committee.—(*The Senate*) . . . . . *Not printed*
- 264.** Eighth Annual Report of the Commission of Conservation for the fiscal year ending 31st March, 1917. Presented by Hon. Mr. Burrell, September 1, 1917. . . . . *Not printed*
- 265.** Return to an Order of the House of the 30th August, 1917, for a return showing—1. The number of additional buildings and offices that have been rented by the various departments of the Government in the City of Ottawa during the calendar years, 1914, 1915, 1916 and 1917. 2. The names of the lessees, the length of the lease and the respective rentals of said buildings. 3. What Department in each case is occupying said premises. Presented September 3, 1917.—*Mr. Burrell* . . . . . *Not printed*

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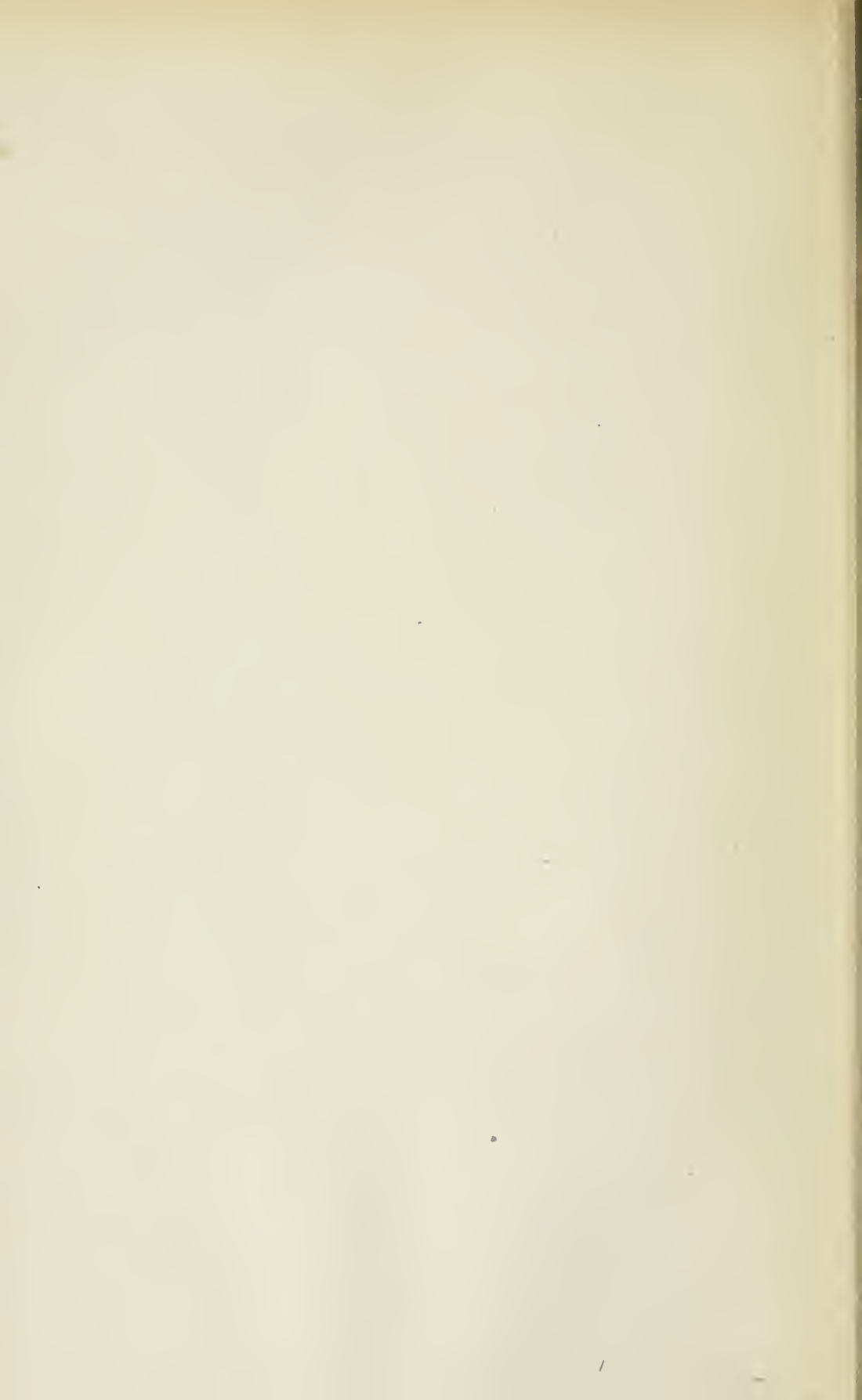
266. Return to an Order of the House of the 11th July, 1917, for a copy of all correspondence and other documents relating to the granting to beam trawlers registered in the United States the privilege of using ports in the Province of Nova Scotia for the purchasing of supplies, the shipping of men, etc., without license therefor as required under the *modus videndi*. Presented September 3, 1917.—*Mr. Kytic*. . . . . *Not printed.*
267. Copy of contract dated 8th March, 1917, between His Majesty the King and Wallace Shipyards, Limited, for the construction and delivery of one wooden auxiliary sailing ship. Also,—Copy of contract dated 1st June, 1917, between His Majesty the King and Lamond and Harrison for the construction and delivery of one wooden auxiliary sailing ship. Presented by Hon. Mr. Cochrane, September 3, 1917. . . . . *Not printed.*
268. Return to an Order of the Senate, dated the 15th day of June last, for a return made to an Order of the House of Commons, of the 7th February, 1916, for a copy of all correspondence and reports on the claims of Sealers of British Columbia under the last treaty with the American Republic, and all papers connected therewith.—(*The Senate.*)  
*Not printed.*
269. Copy of Order in Council, P.C. 2245, dated 3rd September, 1917, appointing the Deputy Minister of Justice, Oliver Mowat Biggar, of the City of Edmonton, John H. Moss, of the City of Toronto, Louis Loranger, of the City of Montreal, and Lt.-Col. H. A. C. Machin, of the Town of Kenora, Ont., a council to advise and assist in the administration and enforcement of the Military Service Act, 1917, to be known as the Military Service Council. Presented by Sir Robert Borden, September 4, 1917. . . . . *Not printed.*
270. Return to an Order of the House of the 21st May, 1917, for a copy of all reports, letters, telegrams, correspondence and any other papers in connection with the question of locating the 210th Battalion at Regina and Moosejaw respectively during the winter of 1916-17. Presented September 6, 1917.—*Mr. Knowles*. . . . . *Not printed.*
271. Return to an Order of the House of the 14th May, 1917, for a copy of all letters, correspondence, telegrams and reports received by the Government since September, 1911, to the present day, in any way referring to the appointment of a man in charge of the storm signals at Grand Etang and Margaree Harbour. Presented September 6, 1917.—*Mr. Chisholm*. . . . . *Not printed.*
272. Return to an Order of the House of the 7th May, 1917, for a return showing the different rural mail routes established in the constituency of Qu'Appelle since the 1st day of January, 1916, showing their location and date of establishment. Also, a list of all rural mail routes now being established or under consideration at the present time in the same constituency. Presented September 7, 1917.—*Mr. Thomson (Qu'Appelle)*.  
*Not printed.*
273. Return to an Order of the House of the 6th March, 1916, for a copy of all telegrams, letters, petitions and documents of all kinds in any way referring to the change in the Inverness-Margaree mail route from the west to the east of the Margaree river, from a point at Margaree Forks to Chapel Bridge. Presented September 7, 1917.—*Mr. Chisholm*. . . . . *Not printed.*
274. Copy of Order in Council, P.C. 2199, dated 10th August, 1917: Rules and Regulations enacted in lieu of the Classification, Rules and Regulations contained in Order in Council, P.C. 1296, of the 15th May, 1917, in respect to War badges for members of the Canadian Expeditionary Force. Presented by Sir Edward Kemp, September 13, 1917.  
*Not printed.*
275. Copy of Order in Council, P.C. 2552, dated 13th September, 1917, recommending that Certificates of Naturalization may be issued under the Naturalization Act, 1914, to alien enemies who have resided for many years in Canada, on its being shown that they are clearly in sympathy with the United Kingdom and its allies in the present war, and that they have no pro-German or other alien enemy affiliations or connections. Presented by Sir Robert Borden, September 14, 1917. . . . . *Not printed.*

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- 276.** Copy of *Canada Gazette* dated 12th September, 1917, containing a list and location of Local Tribunals established to hear and decide applications for certificates of exemption from Military Service. Presented by Hon. Mr. Doherty, September 14, 1917.  
*Not printed.*
- 277.** Copies of Orders in Council, dated 15th September and 17th September, 1917, respectively, appointing Registrars for the Provinces of British Columbia, New Brunswick, Quebec, Saskatchewan, Manitoba, Ontario, Alberta and Prince Edward Island, under the provisions and for the purposes of the Military Service Act, 1917. Presented by Sir Robert Borden, September 17, 1917. . . . .*Not printed.*
- 278.** Return to an Address to His Excellency the Governor General of the 2nd May, 1917, for a copy of all Orders in Council, letters, telegrams, etc., to or from any employee of the Government in reference to the improvement and equipment of the life-saving station at Whitehead, Guysborough County, N.S. Presented September 17, 1917.—*Mr. Maclean (Halifax)*. . . . .*Not printed.*
- 279.** Return to an Order of the House of the 14th May, 1917, for a copy of all letters, petitions, correspondence, telegrams and reports received by the Government since September, 1911, to the present day, in any way referring to the dredging and building of piers at Mabou Harbour. Presented September 19, 1917.—*Mr. Maclean (Halifax)*.  
*Not printed.*
- 280.** Return to an Order of the House of the 13th August, 1917, for a return showing—1. The different amounts paid for commissions and expenses in connection with the flotation of the different loans made by Canada since 1914. 2. The respective amounts paid in connection with each loan. Presented September 19, 1917.—*Mr. Mordacaid*.  
*Not printed.*
- 281.** Return to an Order of the House of the 5th September, 1917, for a copy of all correspondence, letters, telegrams, petitions, etc., in any way referring to an application for a public wharf at Chimney Corners, Inverness County, N.S. Presented September 19, 1917.—*Mr. Chisholm*. . . . .*Not printed.*
- 282.** Return to an Order of the House of the 29th August, 1917, for a return showing copies of all accounts, memoranda, vouchers, telegrams, letters, etc., in reference to payments to George H. Boyce, of Windsor, N.S., District Foreman of Public Works Department, since his appointment to office. Presented September 19, 1917.—*Mr. Maclean (Halifax)*.  
*Not printed.*
- 283.** Return to an Order of the Senate dated the 1st day of March, 1916, showing a copy of all correspondence between the Government and the British Columbia Boards of Trade, and also between the Government and the Canadian Manufacturers' Association, in reference to the request made by the British Columbia Boards of Trade for the appointment of a Dominion Customs Officer at the Port of New York.—(*Senate*)  
*Not printed.*
- 284.** Part return to an humble Address of the Senate, dated the 14th of August, 1917, to His Excellency the Governor General for a return showing the names of every judge of the Supreme, District and County Courts in all the provinces of Canada, for the year 1916, together with a statement of the money paid to each of such judges for that year for (a) salaries; (b) travelling expenses; (c) allowances of all kinds; (d) for services as Commissioners; (e) and any other payments; and also showing the names of judges who have performed services as Commissioners, or in any other public capacity without compensation.—(*Senate*) . . . . .*Not printed.*
- 285.** Return to an humble Address of the Senate dated the 9th August, 1917, to His Excellency the Governor General, showing all the documents relating to the purchase by the Militia Department of "Bonnie Bel Air" from W. T. Redfern Esq., a part of number nine (9) on the official plan and map of reference of the Parish of LaSalle, and specially the report of the lawyers who examined the title.—(*Senate*) . . . . .*Not printed.*









7 GEORGE V

SESSIONAL PAPER No. 12

A. 1917

REPORTS, RETURNS AND STATISTICS  
OF THE  
**INLAND REVENUES**

OF THE  
DOMINION OF CANADA

FOR THE FISCAL YEAR ENDED MARCH 31

1916

**PART I—EXCISE**

*PRINTED BY ORDER OF PARLIAMENT*



OTTAWA  
PRINTED BY J. DE L. TACHÉ  
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY  
1916



*To Field Marshal His Royal Highness Prince Arthur William Patrick Albert, Duke of Connaught and of Strathearn, K.G., K.T., K.P., etc., etc., Governor General and Commander in Chief of the Dominion of Canada.*

MAY IT PLEASE YOUR ROYAL HIGHNESS :

I have the honour to transmit to Your Royal Highness the RETURNS AND STATISTICS of Inland Revenue of the Dominion of Canada, for the year ended March 31, 1916, as prepared and laid before me by the Deputy Minister of Inland Revenue.

All of which is respectfully submitted.

E. L. PATENAUDE,

*Minister of Inland Revenue.*



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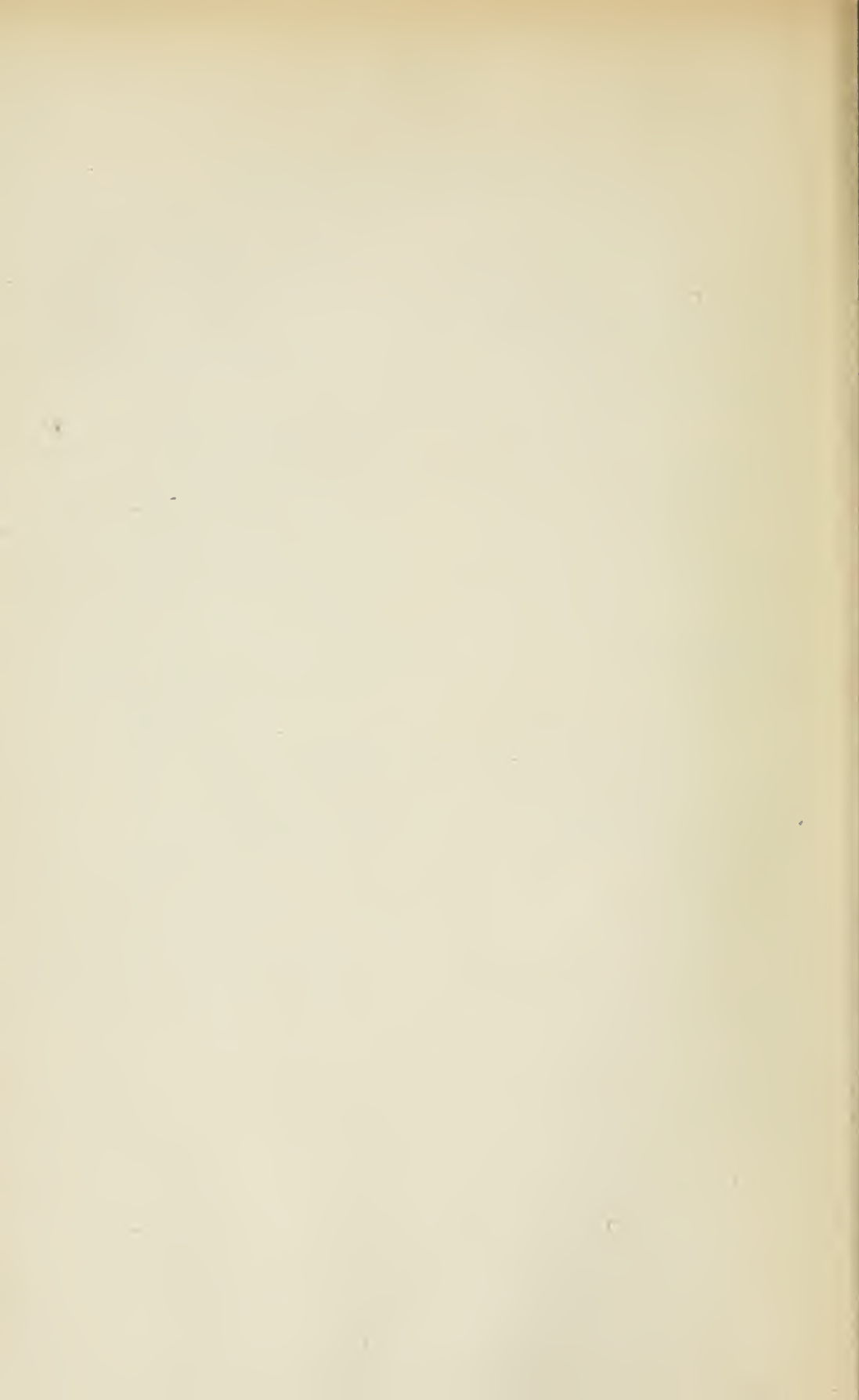
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## REPORT

OF THE

## DEPUTY MINISTER OF INLAND REVENUE

To the Hon. E. L. PATENAUDE,  
Minister of Inland Revenue.

SIR,—Herewith I have the honour to submit statements of the Inland Revenues collected by this department during the Fiscal Year ended March 31, 1916, with the usual information as to the cost of collections, and statistics respecting the sources whence these revenues were derived.

The following summary comparison shows the accrued revenue for the Fiscal Years ended March 31, 1912, 1913, 1914, 1915 and 1916.

	1912.	1913.	1914.	1915.	1916.
	\$	\$	\$	\$	\$
Excise .....	19,306,069	21,487,918	21,488,867	21,627,958	22,340,406
Ferry Licences .....	1,024	529	964	989	989
Weights and Measures, Gas and Law Stamps .....	163,958	171,569	185,834	172,740	169,454
Electric Light .....	66,060	74,833	80,470	82,565	70,862
Other Revenues .....	5,069	7,504	5,524	103,907	8,400
War Tax .....					1,550,488
Methylated Spirits .....	93,023	118,077	116,298	96,744	111,846
Totals .....	19,635,863	21,860,367	21,877,892	22,084,931	24,462,255

INLAND REVENUES

7 GEORGE V, A. 1917

DETAILS of Excise Revenue accrued during the undermentioned Fiscal Years:

	1	2	3	4	5
	1912.	1913.	1914.	1915.	1916.
	\$	\$	\$	\$	\$
Spirits.....	8,667,666	9,474,142	9,038,028	8,706,481	8,701,075
Malt liquor.....	86,756	149,437	161,416	142,903	97,779
Malt.....	1,716,547	1,864,525	2,012,301	2,616,288	2,689,300
Tobacco.....	8,130,776	9,192,181	9,489,426	3,352,881	10,422,784
Cigars.....	517,646	602,269	588,935	655,905	635,158
Acetic Acid.....	11,300	10,526	11,413	7,255	8,250
Manufactures in bond.....	84,720	91,460	92,160	94,904	105,812
Seizures.....	2,319	2,062	1,434	4,141	16,349
Other receipts.....	90,659	102,324	93,753	77,200	42,538
Methylated spirits.....	93,083	118,077	116,208	96,748	111,846
War Tax.....					1,550,488
Totals.....	19,401,472	21,607,003	21,605,074	21,754,706	24,175,379

The quantity of spirits produced during the Fiscal Year was 3,450,012 proof gallons, as compared with 6,116,580 proof gallons produced in the previous Fiscal Year. The raw material taken for use, in the production of spirits, during the Fiscal Year was as follows:—

	Lbs.
Malt .. . . .	4,863,855
Indian Corn .. . . .	33,006,091
Rye .. . . .	6,932,883
Wheat .. . . .	
Oats .. . . .	169,130
Barley .. . . .	
Rice .. . . .	
Molasses .. . . .	14,884,460

The transactions of the several distilleries will be found stated in detail in Appendix A (Statement No. 3), pages 74 and 75.

	Proof galls.
There was on April 1, 1915, in process of manufacture.....	445,351
Manufactured during the Fiscal Year.....	3,450,012
Returned to distilleries for redistillation—Duty paid..	184
“ “ “ In bond....	443,691
	443,875
Received into distilleries from other sources—Duty paid.....	5,997
“ “ “ In bond.....	
Total .. . . .	4,345,235

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This was disposed of as follows:—

	Proof galls.
Placed in warehouse . . . . .	3,941,105
Fusel oil written off. . . . .	17,333
Deficiency arising from rectification . . . . .	4,066
Remaining in process of manufacture March 31, 1916, by actual stock taking. . . . .	352,731
Total . . . . .	4,345,235

SPIRITS:—

The following statement shows the warehousing transactions in spirits during the Fiscal Year ended March 31, 1916, and the four preceding Fiscal Years.

Fiscal Years.	1	2	3	4	5	6	7	8	9
	In Warehouse at beginning of year, including transits.	Warehoused during the year. Ex distillery.	Otherwise Warehoused.	Taken for consumption.	Exported.	Used in Bonded Factories.	Otherwise accounted for.	For redistillation.	In Warehouse at end of year, including transits.
	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.
1911-1912 . . . . .	21,560,925	5,412,398	29,394	4,562,382	298,769	347,714	519,681	604,837	20,669,334
1912-1913 . . . . .	20,669,334	6,993,602	203	4,999,937	333,802	440,826	581,305	639,109	20,668,160
1913-1914 . . . . .	20,668,160	7,488,904	66,510	4,762,618	335,970	451,567	545,437	866,006	21,561,976
1914-1915 . . . . .	21,561,976	6,490,682	45,918	4,021,090	275,911	474,033	459,038	369,168	22,499,336
1915-1916 . . . . .	22,499,336	3,941,105	88,346	3,629,324	808,135	1,160,360	388,160	443,690	20,669,118
Totals . . . . .	84,460,395	26,385,586	142,025	18,346,027	1,244,452	1,714,140	2,105,461	2,179,120	85,338,806
Average . . . . .	21,115,099	6,596,396	35,506	4,586,507	311,113	428,535	526,366	544,780	21,349,701

The foreign demand for Canadian distillery products is greater than the average of the last four years, the quantities exported being as follows:—

	Proof galls.
1911-1912 . . . . .	298,769
1912-1913 . . . . .	333,802
1913-1914 . . . . .	335,970
1914-1915 . . . . .	275,911
1915-16 . . . . .	808,135

The following statement shows the entire quantities of spirits upon which duties were collected during the several Fiscal Years recited therein. To accord with the figures shown in Financial Statement No. 12, pages 22 and 23:—

Fiscal Years.	Canadian Spirits.		Imported Spirits used in Bonded Factories.	Total quantities upon which duty was collected.	Memorandum of Revenue accrue 1, including License Fees.
	Paid duty Ex-distillery.	Paid duty Ex-warehouse.			
	Pf. Gallons.	Pf. Gallons.	Pf. Gallons.	Pf. Gallons.	\$
1911-1912. ....	9,317	4,534,785	27,597	4,571,699	8,667,666
1912-1913. ....	2,508	4,998,937	.....	5,002,445	9,474,142
1913-1914. ....	2,001	4,762,618	66,497	4,831,116	9,638,028
1914-1915. ....	6,407	4,021,090	44,690	4,072,187	8,702,981
1915-1916. ....	4,066	3,629,324	85,954	3,719,344	8,701,075
Totals .....	20,233	18,318,430	138,784	19,477,447	35,882,817
Average .....	5,053	4,579,608	34,696	4,619,362	8,970,704

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MALT:

The following statement shows the transactions in Malt during the Fiscal Year ended March 31, 1916, and the four preceding Fiscal Years:—

Fiscal Years.	1	2	3	4	5	6	7	8	9
	In Warehouse at beginning of year including transits.	Manufactured during the year.	Imported.	Increased by absorption.	Taken for consumption.	Exported.	Otherwise accounted for.	In Warehouse at end of year, including transits.	Memorandum of Revenue accrued, including License Fees.
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
1911-1912	36,388,330	115,793,326	613,382	810,372	114,029,523	294,800	2,647,187	36,634,900	1,716,547
1912-1913	36,634,900	118,673,161	5,001,022	984,235	123,920,607	198,800	2,911,677	34,292,234	1,864,525
1913-1914	34,292,234	133,746,168	10,263,724	736,800	133,794,639	161,820	4,894,662	40,151,805	2,012,301
1914-15	40,151,805	119,917,181	3,363,587	713,406	111,037,743	228,180	3,453,416	49,426,640	2,616,288
Totals	147,438,959	488,123,836	19,241,715	3,244,813	482,782,512	883,600	13,906,942	160,475,579	8,209,661
Average	36,859,737	122,030,959	4,810,429	811,203	120,695,628	220,900	3,476,735	40,118,895	2,052,415
1915-1916	49,426,640	74,653,211	1,379,490	829,448	89,476,590	2,501,130	3,801,448	29,909,621	2,689,300

## TOBACCO :

The following statement shows the transactions during the Fiscal Year ended March 31, 1916, and the four preceding Fiscal Years, respectively, in Tobacco, Snuff and Cigarettes :—

Fiscal Years.	1	2	3	4	5	6	7	8	9	10	11
	In Warehouse beginning of year, including transits.	Manufactured during the year.	Taken for consumption.	Exported.	Otherwise accounted for.	In Warehouse at end of year, including transits.	Raw Leaf taken for consumption.	Canada Twist taken for consumption.	Total Tobacco taken for consumption.	Other Materials taken for consumption.	Duty collected thereon, including License Fees.
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	\$
1911-1912. ....	927,688	23,557,145	23,749,930	5,790	10,338	718,766	17,491,373	17,098	41,238,410	1,372,144	8,130,776
1912-1913. ....	718,766	23,703,480	25,287,332	4,519	26,630	1,103,765	19,232,231	17,535	44,537,098	1,615,596	9,192,181
1913-1914. ....	1,103,765	25,485,348	25,735,773	3,358	3,916	846,066	18,775,803	11,057	44,522,633	1,510,010	9,489,426
1914-1915. ....	846,065	24,216,866	24,444,380	10,094	44,764	563,694	15,753,329	6,855	40,174,564	1,280,589	9,352,891
Totals. ....	3,596,284	98,362,839	99,217,424	23,761	85,648	3,232,291	71,222,736	52,545	170,492,705	5,778,359	36,165,264
Average. ....	899,671	24,740,710	24,804,356	5,940	21,412	808,673	17,805,684	13,136	42,623,176	1,444,585	9,041,316
1915-1916. ....	563,694	25,390,672	23,937,785	723,632	380,055	912,994	16,571,311	7,430	40,516,526	1,365,175	10,222,784

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CIGARS

The following statement shows the transactions in Cigars during the Fiscal Year ended March 31, 1916, and the four preceding Fiscal Years:—

Fiscal Year.	1	2	3	4	5	6	7	8
	In Warehouse at beginning of year, including transits.	Manu- factured during the year.	Assessments to bring production up to Standard.	Taken for consumption	Exported.	Otherwise accounted for	In Warehouse at end of year, including transits.	Duty collected thereon including License Fees.
	No.	No.	No.	No.	No.	No.	No.	%
1911-1912	25,600,915	248,966,934	128,468	252,718,242	15,000	22,625	21,940,450	517,646
1912-1913	21,940,470	297,762,883	383,922	294,772,933	10,100	27,500	25,281,922	602,269
1913-1914	25,281,222	291,359,173	349,188	288,219,892	7,625	.....	28,762,166	588,965
1914-1915	28,762,166	226,147,875	1,304,626	236,866,542	16,100	30,000	19,362,025	625,905
Totals	101,614,753	1,091,164,365	2,166,201	1,072,577,609	48,725	75,125	95,285,863	2,334,755
Average	25,411,188	296,044,091	541,551	268,144,402	12,181	18,781	23,821,466	583,689
1915-1916	19,362,025	266,628,966	267,972	267,617,808	11,225	624,925	20,854,765	635,158

The revenue derived from goods manufactured in bond during the Fiscal Year ended March 31, 1916, and the four preceding Fiscal Years, was as follows:—

1911-1912 . . . . .	\$ 84,720
1912-1913 . . . . .	91,460
1913-1914 . . . . .	92,160
1914-1915 . . . . .	94,904
1915-1916 . . . . .	105,812

#### ACETIC ACID:

The revenue derived from Acetic Acid during the Fiscal Year ended March 31, 1916, and the four preceding Fiscal Years, was as follows:—

1911-1912 . . . . .	\$ 11,300
1912-1913 . . . . .	10,526
1913-1914 . . . . .	11,413
1914-1915 . . . . .	7,255
1915-1916 . . . . .	8,250

#### INSPECTION OF PETROLEUM:

The quantity of Petroleum and Naphtha inspected during the Fiscal Year was as follows:—

	Galls.
Petroleum . . . . .	34,775,554.81
Naphtha . . . . .	29,238,843.98
Total . . . . .	<u>64,014,398.79</u>

#### WEIGHTS AND MEASURES, GAS AND ELECTRIC LIGHT:

The usual special reports in relation to these services have been prepared, containing all statistical information.

The aggregate revenue accrued from these services was \$228,733.86, the cost of the three services being \$305,212.81.

#### PREVENTION OF ADULTERATION OF FOOD AND AGRICULTURAL FERTILIZERS:

The usual supplementary report in relation to this service will be submitted, containing details of the work done and the report of the chief analyst.

#### METHYLATED SPIRITS:

The quantity of methylated spirits manufactured during the Fiscal Year was 194,026.45 proof gallons, and the sales 201,420.22 proof gallons. A statement of details appears on pages 66, 67 and 116.

The price of this denatured alcohol is practically the actual cost of manufacture and is as follows:—

Grade No. 1 "Standard" and Grade No. 1 "Benzine."—When consigned to points east of Toronto and west of Quebec, both inclusive, 85 cents per Imperial gallon; when consigned to points beyond Toronto and Quebec, 83 cents per Imperial gallon.



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Grade No. 2 "Standard."—85 cents per Imperial gallon.

The increase in price is due to the enhanced cost of Alcohol and Wood Naptha.

APPENDIX A shows the consumption of and revenue derived annually from spirits, tobacco and other goods subject to Excise, and of similar goods subject to duties of Customs, per head of the population of the Dominion.

APPENDIX B contains, as usual, the details concerning illicit stills seized during the year.

APPENDIX C shows the amount of Excise Revenue collected at each Out-Office and under various headings, separately.

I have the honour to be, sir,

Your obedient servant,

J. V. VINCENT,  
*Deputy Minister*

ISLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

APPENDIX A.

TABLE showing the Annual Consumption, per head, of the undermentioned articles, paying Excise and Customs Duties, and Revenue, per head, derived annually.

Years.	Dominion of Canada.									
	Quantity.					Duty.				
	Spirits.	Beer.	Wines.	Tobacco.	Petroleum.	Spirits.	Beer.	Wines.	Tobacco.	Petroleum.
	Galls.	Galls.	Galls.	Lbs.	Galls.	\$	\$	\$	\$	\$
1869	1 124	2 290	115	1 755	575	761	092	037	193	041
1870	1 434	2 163	195	2 190	1 103	962	085	049	259	061
1871	1 578	2 490	239	2 052	1 591	1 059	095	056	336	077
1872	1 723	2 774	257	2 481	1 302	1 160	108	070	422	076
1873	1 682	3 188	238	1 999	1 387	1 135	120	066	350	084
1874	1 994	3 012	288	2 566	1 618	1 363	119	086	442	103
1875	1 394	3 091	149	1 995	1 589	1 127	114	069	428	098
1876	1 204	2 454	177	2 316	1 360	1 182	098	075	513	105
1877	975	2 322	095	2 051	1 103	949	109	057	446	084
1878	960	2 169	096	1 976	1 076	927	147	052	439	.....
1879	1 131	2 209	104	1 954	1 076	1 005	125	057	449	.....
1880	715	2 243	077	1 036	1 036	772	081	055	423	.....
1881	922	2 293	099	2 935	1 036	990	081	073	443	.....
1882	1 009	2 747	129	2 150	1 036	1 084	093	092	485	.....
1883	1 090	2 882	135	2 280	1 036	1 186	103	097	473	.....
1884	988	2 924	117	2 476	1 036	1 074	104	082	365	.....
1885	1 126	2 639	109	2 623	1 036	1 198	111	074	393	.....
1886	711	2 839	110	2 052	1 036	1 007	091	074	502	.....
1887	746	3 081	095	2 062	1 036	1 045	100	066	514	.....
1888	645	3 247	094	2 093	1 036	944	110	066	509	.....
1889	776	3 263	097	1 953	1 036	1 107	114	068	529	.....
1890	883	3 360	104	2 043	1 036	1 257	121	072	539	.....
1891	745	3 790	111	2 292	1 036	1 094	157	080	590	.....
1892	701	3 516	101	2 291	1 036	1 156	211	075	680	.....
1893	740	3 485	094	2 314	1 036	1 235	218	070	691	.....
1894	742	3 722	089	2 264	1 036	1 235	205	060	683	.....
1895	666	3 471	090	2 163	1 036	1 124	161	056	645	.....
1896	623	3 528	070	2 120	1 036	1 159	164	047	639	.....
1897	723	3 469	084	2 248	1 036	1 341	213	041	671	.....
1898	536	3 808	082	2 358	1 036	1 306	126	041	615	.....
1899	661	3 995	086	2 174	1 036	1 367	174	045	841	.....
1900	701	4 364	085	2 300	1 036	1 455	185	044	853	.....
1901	757	4 680	099	2 375	1 036	1 574	195	047	864	.....
1902	746	5 035	090	2 371	1 036	1 631	211	048	902	.....
1903	848	4 592	094	2 483	1 036	1 766	200	049	967	.....
1904	917	4 739	092	2 664	1 036	1 913	217	049	1 005	.....
1905	895	5 123	093	2 768	1 036	1 898	214	049	1 036	.....
1906	898	5 484	095	2 898	1 036	1 879	238	052	1 100	.....
*1907 (nine months)	977	5 765	095	3 048	1 036	2 035	257	054	1 317	.....
1908	939	6 146	102	3 066	1 036	1 965	268	057	1 194	.....
1909	860	5 708	091	3 105	1 036	1 794	241	050	1 101	.....
1910	883	5 713	105	3 183	1 036	1 843	242	057	1 059	.....
1911	948	5 999	114	3 323	1 036	1 988	257	059	1 157	.....
1912	1 030	6 598	114	3 679	1 036	2 170	288	063	1 336	.....
1913	1 112	7 005	131	3 818	1 036	2 340	320	076	1 462	.....
1914	1 061	7 200	124	3 711	1 036	2 249	328	069	1 438	.....
1915	872	6 071	095	3 427	1 036	2 086	379	051	1 361	.....
1916	745	4 950	062	3 329	1 036	1 951	362	033	1 454	.....
Average	962	3 969	117	2 460	.....	1 393	174	061	732	.....

APPENDIX B.

STATEMENT of seizures of illicit Manufactures for the year ended March 31, 1916.

Division	Number	Date	Names	Residence	Schedule Value	Remarks
		1915.			\$ cts.	
Perth	14	April 1	J. J. Flynn	Tinnas	11 00	Fine \$100, imposed and paid.
Toronto	429	Oct. 5	L. D. Corbin	Montreal	" 100	" "
Justice	144	April 22	N. Meunier	Pineourt	40 00	" 100 "
		1916.				
	146	Feb. 1	F. Laspante	"	8 00	No action taken.
		1915.				
Montreal	1226	May 1	B. J. Payer	Lachine Road	71 00	Fine \$100, imposed and paid.
	1305	29	M. Klein	Montreal	10 00	" 100 "
	1307	June 11	J. Krains	"	29 50	Serving three months in jail.
	1308	11	D. Coombs	"	2 00	Fine \$100, imposed and paid.
	1309	19	P. Gauthier	"	473 00	" 500 "
	1310	July 3	A. Pelletier alias A. Tanguay	"	255 00	" 100 "
	1311	3	A. Dubois, R. Dufresne and C. Gauthier	Viasville	146 60	" 400 "
	1312	June 22	J. T. Durbin	Montreal	427 00	Action pending.
	1313	July 7	A. Gelin	St. Pierre	21 40	Fine \$100, imposed and paid.
	1315	17	A. Bergoin	Montreal	231 00	" 100 "
	1316	17	J. Gresselin	St. Rose	151 75	" 200 "
	1357	Aug 27	M. Beaudoin, J. Sauriol and L. Macleod	Montreal	62 50	" 200 "
	1358	Sept. 6	J. Chartrand	"	23 60	" 100 "
	1359	19	A. Proulx	"	10 00	" 100 "
	1360	13	M. Vachon	"	50 00	" 50 "
	1361	23	L. Gauthier and A. Bergeron	St. Rose	30 70	Action dismissed.
	1362	25	L. Bartalini	Montreal	6 50	With Justice Department.
	1363	28	M. Smith	"	109 00	Fine \$250, imposed and paid.
	1364	28	Benjamin G. Lam	Montreal	7 61	" 100 "
	1365	Nov. 2	C. Gervais	Macarsenne	115 50	" 50 "
	1366	11	H. Raymond	Montreal	144 37	" 100 "
	1367	28	F. Levesque	"	14 50	" 100 "
	1368	28	A. Patis	Chambly-Bain	" 150 "	" "
	1369	Dec. 28	E. Desrosiers and P. Charbonneau	Montreal	100 00	" 330 "

APPENDIX B.—Concluded.

SUMMARY of seizures of illicit Manufactures for the year ended March 31, 1916—Concluded.

Divisions.	Number	Date.	Names.	Residence.	Schedule Value.	Remarks.
		1916.			\$ cts.	
Montreal	1350	Jan. 8.	S. Riagis.	Montreal.	30 00	Serving one month in jail.
"	1351	" 10.	A. Tolchinsky.	Lachine Road.	20 00	Fine \$200, imposed and paid.
"	1352	" 14.	J. Leclerc and B. J. Boyer.	Verdun.	125 00	" 100 "
"	1354	" 17.	S. Choenebolsky and J. Greenfield.	Montreal.	100 00	" 200 "
"	1355	" 19.	A. Millette.	"	9 60	" 50 "
"	1361	Feb. 3.	C. Dupont.	"	5 10	Action pending.
"	1362	" 18.	A. Proulx and E. Gaudet.	"	117 70	Fine \$200, imposed and paid.
"	1363	" 23.	Chas. Lippins.	"	10 00	" 100 "
"	1366	Mar. 1.	A. Paquette.	"	18 80	" 100 "
"	1367	" 3.	O. Belanger.	"	64 00	Action pending.
"	1373	" 25.	A. Quintal.	"	1 00	With Justice Department.
		1915.				
Quebec	651	Oct. 28.	E. Daigle.	St. Damase.	10 00	Serving six months in jail.
Sherbrooke.	219	May 31.	W. Pare.	"	"	" two "
Three Rivers.	117	Sept. 29.	A. Rousseau.	"	8 00	Defendant not yet located.
Halifax.	190	Nov. 24.	W. and M. Comeau.	Digby.	60 00	Fine \$200, imposed and paid.
Pictou.	120	Dec. 12.	Alex. Beaton.	Mabou Coal Mines.	5 00	Action pending.
		1916.				
"	121	Jan. 7.	Alex. Beaton.	"	20 00	Action pending.
"	122	" "	A. Cameron.	"	20 00	Defendant left the country.
		1915.				
Calgary.	4	Dec. 18.	A. Busse.	South Edmonton.	"	Fine \$150, imposed and paid.

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*





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Niagara-on-the-Lake	59 00	13,827 30							13,877 90
Port Colborne									
Port Dalhousie									
Shesapeake									
Toronto									
Welland	25 00			105 00			196 00		196 00
Stamford							195 00		325 00
First Hill							646 35		646 35
Goderich	50 00	153 25					90 50		90 50
Lakeside	100 00	3,356 14	1,734 04	1,752 30			1,303 22		1,506 60
Palmerston				163 65			1,486 62		8,429 10
St. Mary's	50 00		60 76				1,090 30		1,367 71
Seaforth							680 57		680 57
Marsden							373 15		373 15
London							735 40		735 40
Midland							422 13		422 13
McGowan							4 00	3,277 14	3,281 14
Barron									
Hornby									
Brillia	50 00								50 00
Sault Ste. Marie	300 00	17,355 63	459 20	664 35			2 00	2,823 96	54,242 41
Windsor	50 00						2 10	2,615 81	4,391 17
Chatham	250 00	40,390 78	1,557 86	824 90				2,297 90	45,781 45
Kingston	100 00		13,691 50	189 20			600 00	381 59	14,039 40
Leamington	125 00		1,541 17	212 18				590 17	8,464 48
Windsorburg	51 00		356 30						1,118 65
Berthier	250 00	11,313 83					13,376 50		24,940 33
L'Assomption									
L. Exploitation	200 00		1,500 80	7,041 69					9,274 69
St. Alphonse	50 00		532 20						1,555 50
St. Eustache			1,505 30						
St. Jean	150 00		214 50						361 50
St. Elizabeth	25 00								25 00
St. Lawrence	100 00		4,339 32	1,915 50					6,354 82
St. Roch	50 00		550 00	00					600 00
Rawdon	50 00								50 00
Champlain									
Carleton Place	100 00	14,463 85						592 10	15,155 95
St. Jerome									
St. Laurent									
St. Thome									
Valleyfield	150 00	8,100 00						1,528 34	86,749 87
Quintessence									
Praterville									
York	50 00	1,804 08						116 00	1,970 68
Levin	150 00	54,958 10	21,226 10	10,033 95				1,109 61	87,107 81
Perth									
Perthshire									
L. Assomption									

St. Hyacinthe

APPENDIX C—Continued.  
 STATEMENT showing the amount of Excise and other Revenue collected at each of the undermentioned Out-Offices during the year ended March 31, 1916—Concluded.

Divisions.	Out-Offices.	Licenses.	Spirits.	Malt Liquor.	Malt.	Tobacco.	Cigars.	Manu- factures in Bond.	Other Receipts.	Electric Light In- spec-tion Fees.	War Tax.	Totals.	
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
St. Hyacinthe	St. Cesaire.....	250 00	12,631 85			328 75	250 64		2 00		779 88	14,831 17	
	St. John.....					88 55							
	St. Ours.....	250 00	26,181 41			202 86	207 18		70		683 19	27,525 34	
	Sorel.....	175 00	28,039 33			64 40	225 90		340 65		361 86	29,207 14	
	Victoriaville.....	200 00				491,388 55	7,800 39		1,425 97			500,874 91	
	Three Rivers.....												
	Grand Mère.....												
	La Tuque.....	50 00	6,125 97			7,400 00						6,175 97	
	Louiseville.....	50 00										7,450 00	
	St. Boniface.....	50 00											
St. John	St. Tite.....	50 00										258 50	
	Baie Shawinigan.....	50 00					208 50					314 15	
	Notre-D. de Charrette.....	50 00				264 15							
	Andover.....												
	Bathurst.....												
	Campbellton.....												
	Campobello.....												
	Chatham.....												
	Clair.....												
	Dalhousie.....	50 00	3,245 23								336 09	3,631 32	
Halifax	Edmunston.....												
	Fredericton.....												
	Grand Falls.....												
	Moncton.....												
	Newcastle.....												
	Shediac.....												
	Sackville.....												
	St. Stephens.....	50 00	124 08						73 81		960 07	1,207 96	
	St. Andrews.....												
	Sussex.....												
Woodstock.....													
Amherst.....										1,303 65	1,473 03		



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Lenenburg										55 06
Parrsborough										157 50
Turo	50 00			3,761 70						1,339 95
Weymouth										228 88
Windsor										624 95
Yarmouth	50 00			230 44	687 53					471 90
Antigonish										319 13
New Glasgow	25 00									1,323 40
North Sydney	50 00	18,905 62								703 59
Sydney	200 00	16,615 78								1,267 68
Georgetown										18,083 46
Souris										
Summerside										
Alberton										
Cardigan										
Craiesad										
Murray Harbour										
Montague										
St. Peter's										
V. Guich.										
Brandon	425 00	56,143 06		1,212 40	1,225 72					5,339 33
Beausejour										140 00
Dauphin	100 00	19,397 86								2,228 69
Emerson										5 00
Gretna										12 00
Morden	100 00	6,862 67								442 84
Portage la Prairie										1,825 45
Saskik	50 00			49 98	30 15					71 35
Transcona										20 00
Warden										7 46
York Factory										10,352 98
Blainville										
Chapais	100 00	9,566 82		43 00						45 70
Edmonton	50 00	3,377 15								3,565 85
Fort Saskatchewan	50 00	3,969 52								397 45
High River	500 00	142,131 08		9,239 18	3,877 50	2,911 10	1,434 75			12,727 22
Innisbush										
Lacombe	50 00	1,315 80								559 55
Lehrsbidge	50 00	8,735 88								8,591 96
Medicine Hat	200 00	24,835 78		521 64	410 55					3,251 95
Prosser Creek	150 00	10,102 51		373 80	377 25					1,186 36
Red Deer										
Sisseton	50 00	1,786 41								1,886 41
Sutherland	150 00	721 54		14,801 01	5,973 92					504 22
Sturton										
Taber	50 00	2,536 66								47 10
Vermilion	50 00	2,174 49								519 70
Wetaskiwin	50 00	12,440 19								39 50
Fisher	100 00	2,681 63		27 72	46 50		2 32			875 70
Shell Lake										3,733 87
Manfred Brook										61 00
Manfred Brook										88 67



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Nanaimo.....	475 00	5,652 01	10,284 00	1,888 18	920 40	.....	.....	2,268 24	21,487 83
Sidney.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yukon.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dawson.....	14,940 50	1,630,965 62	11,608 35	477,193 63	597,426 84	58,814 89	11,481 01	64,009 95	119,552 70
									2,985,993 49

J. U. VINCENT,  
Deputy Minister.

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.



# FINANCIAL STATEMENTS, 1915-1916





DR.

## No. 2.—GENERAL EXPENDITURES FOR

Balances due to Collectors, etc., April 1, 1913.	Expenditures Authorized by the Department			Balances due by Collectors, etc., March 31, 1916.	Totals.	Services.
	Salaries.	Contingencies.	Seizures.			
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
49 08	491,336 90	242,342 57	1,313 81	343 98	735,386 34	Excise and Seizures, per Statement No. 4.....
.....	.....	.....	7,913 77	.....	7,913 77	Excise Seizures distributed per Appendix B, Statement No. 2.....
.....	2,911 56	14,331 67	.....	.....	17,243 23	Preventive Service, Statement No. 5.....
.....	3,836 72	39,479 09	.....	.....	43,315 81	Adulteration of Food, per Statement No. 6, and Appendix B, Statement No. 4.....
.....	.....	1,405 70	.....	.....	1,405 70	Sundry Minor Expenditures, per Statement No. 10.....
.....	130,404 28	19,797 05	.....	16 66	150,217 99	Departmental Expenditures, per Statement No. 16.....
.....	96,428 73	84,685 13	.....	3 70	181,117 56	Weights and Measures, per Statement No. 19A.....
.....	48,005 56	18,250 32	.....	212 88	66,468 46	Gas Inspection, per Statement No. 21.....
.....	21,893 60	35,952 47	.....	.....	57,846 07	Electric Light Inspection, per Statement No. 23.....
.....	.....	99,460 41	.....	.....	99,460 41	Methylated Spirits, per Statement No. 25.....
.....	.....	54,014 06	.....	.....	54,014 06	War Tax, per Statement No. 4 A.....
49 08	794,817 35	609,718 17	9,227 58	577 22	1,414,389 40	Totals.....

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.



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THE YEAR ENDED MARCH 31, 1916.

CR.

Balances due by Col- lectors, etc., March 31, 1915.	Amounts disbursed by the Receiver General, on requi- sition of the De- partment.	Deductions from Salaries.					Balances due to Col- lectors, etc., March 31, 1916.	Totals.
		Super- annuation.	Insurance.	Retirement.	Guarantee	Annuities.		
\$ cts	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts	\$ cts	\$ cts.
343 98	711,501 10	3,343 27	3,530 41	15,120 43	1,357 67	140 40	49 08	735,386 34
.....	7,913 77	.....	.....	.....	.....	.....	.....	7,913 77
.....	17,239 45	.....	.....	.....	3 78	.....	.....	17,243 23
.....	43,285 60	13 92	.....	.....	16 29	.....	.....	43,315 81
.....	1,405 70	.....	.....	.....	.....	.....	.....	1,405 70
16 66	144,380 22	491 41	754 49	4,575 21	.....	.....	.....	150,217 99
3 70	180,483 08	162 27	254 91	.....	213 60	.....	.....	181,117 56
212 88	66,027 79	15 72	.....	90 00	122 07	.....	.....	66,468 46
.....	57,774 52	.....	.....	9 96	58 89	.....	2 70	57,846 07
.....	99,460 41	.....	.....	.....	.....	.....	.....	99,460 41
.....	54,014 06	.....	.....	.....	.....	.....	.....	54,014 06
577 22	1,383,485 70	4,026 59	4,539 81	19,795 60	1,772 30	140 40	51 78	1,414,389 40

J. U. VINCENT,  
*Deputy Minister.*

Balances due April 1, 1915.	Amount accrued during Year, including License Fees.							
	Spirits.	Malt Liquor.	Malt.	Tobacco.	Cigars.	Acetic Acid.	Bonded Manufactures.	Seizures.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
172,277 15	50 00	31,253 30	1,000 08	474 80				
112 61	41,185 73	50 00	8,440 91	7,911 12	5,690 68		2,799 40	
	342,961 26	350 00	142,800 73	2,390 36	4,352 52			
	378,720 53	100 00	111,683 99	816,913 46	49,618 71	50 00	6,619 57	160 00
	74,573 38	100 00	9,211 44	10,690 96	6,892 94		3,681 09	
	87,256 31	200 00	124,044 61	149,896 88	91,076 10			305 00
	290,658 30	100 00	25,977 21	351 80	598 18		911 85	
	48 31	200 00	17,347 73	5,640 22	2,922 69		3,308 25	
	195,933 01	50 00	55,890 00	355 26	191 66		300 00	100 00
	3,947 28	50 00	11,676 20	584 36	457 75		50 00	
	107,792 00	150 00	26,269 20	36 12	126 24			
	201,721 44	150 00	65,139 98	947 36	1,383 40		300 00	55 00
	18,980 02	100 00	40,107 96	1,808 38	3,645 35			
	33,527 10	100 00	8,206 65	6,256 76	3,768 96		50 00	
	1,028,315 17	550 00	418,933 70	103,118 98	49,229 23		41,217 92	100 00
	473,665 01	100 00	62,137 01	22,881 71	5,860 35		6,167 52	
522 89								
635 50	3,451,562 00	2,400 00	1,162,180 62	1,139,783 81	225,289 56	50 00	65,405 60	720 00
1,036 08	82,001 13			12,201 51	14,684 23			266 09
524 89	2,278,842 06	27,499 95	747,018 71	7,905,259 62	300,291 62	8,200 14	11,161 15	7,677 46
	481,384 90	150 00	55,475 91	528,959 74	12,229 36		3,520 90	105 75
	136,667 72	50 00	17,230 65	506,285 19	17,837 41		300 00	
	164,651 73		2,390 40	31,539 62	22,364 83		200 00	924 19
54 27	65,216 27	50 00	4,938 00	9,535 73	2,005 76			
3,295 57								
4,916 81	3,208,763 81	27,749 95	827,053 67	8,993,781 41	369,416 27	8,200 14	15,182 05	8,973 49
	184,230 75	100 00	35,474 07	2,159 92	6,584 20		2,262 78	160 35
1,442 62								
1,442 62	184,230 75	100 00	35,474 07	2,159 92	6,584 20		2,262 78	160 35
	47,717 21	150 00	95,171 97	5,315 32	2,507 88			213 70
	35,521 40			2,040 19	592 70			
5,860 50								
5,860 50	83,238 61	150 00	95,171 97	7,355 51	3,190 58			213 70
	37 31			24,383 18				
	795,650 38	9,347 05	186,206 74	6,300 56	7,277 21		17,984 14	150 00
5,563 99	327,718 02	5,797 10	175,453 79	24,678 24	11,739 92		3,246 22	75 00
	287,641 21	2,956 25	20,731 20	648 48	606 53			

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1915-16.

IN ACCOUNT WITH REVENUES.

Sundries.	Total Duties accrued.	Total Debits.	Divisions.	Deposited to Credit of Receiver General.	Balances due March 31, 1916.	Total Credits.
§ cts.	§ cts.	§ cts.		§ cts.	§ cts.	§ cts.
763 40	208,818 73	208,818 73	Belleville .....	208,818 23	50	208,818 73
712 49	66,790 33	66,902 94	Brantford .....	66,790 33	112 61	66,902 94
1,844 80	494,699 67	494,699 67	Guelph .....	491,699 67		494,699 67
2,810 60	1,366,676 86	1,366,676 86	Hamilton .....	1,366,676 86		1,366,676 86
935 08	106,084 89	106,084 89	Kingston .....	106,084 89		106,084 89
437 25	453,216 15	453,216 15	London .....	453,216 15		453,216 15
454 00	319,051 34	319,051 34	Ottawa .....	319,051 34		319,051 34
602 00	30,069 20	30,069 20	Owen Sound .....	30,069 20		30,069 20
1,190 40	254,010 33	254,010 33	Perth .....	254,010 33		254,010 33
166 30	16,931 89	16,931 89	Peterborough .....	16,931 89		16,931 89
400 00	134,773 56	134,773 56	Port Arthur .....	134,773 56		134,773 56
991 40	270,688 58	270,688 58	Prescott .....	270,688 58		270,688 58
80 50	64,722 21	64,722 21	St. Catharines .....	64,722 21		64,722 21
131 70	52,101 17	52,101 17	Stratford .....	52,101 17		52,101 17
17,373 54	1,658,838 54	1,658,838 54	Toronto .....	1,658,838 54		1,658,838 54
17,864 51	588,675 11	588,675 11	Windsor .....	588,675 11		588,675 11
		522 89	Suspense Account .....		522 89	522 89
46,756 97	6,086,148 56	6,086,784 06	Ontario .....	6,086,148 06	636 00	6,086,784 06
13,015 00	122,167 96	123,204 04	Joliette .....	122,167 96	1,036 08	123,204 04
5,619 39	11,291,573 10	11,292,097 99	Montreal .....	11,291,568 01	739 98	11,292,097 99
1,358 20	1,083,184 76	1,083,184 76	Quebec .....	1,083,184 76		1,083,184 76
377 60	678,747 97	678,747 97	Sherbrooke .....	678,747 97		678,747 97
965 90	223,036 67	223,036 67	St. Hyacinthe .....	223,036 67		223,036 67
250 09	81,995 76	82,050 03	Three Rivers .....	81,995 76	54 27	82,050 03
		3,295 57	Suspense Account .....		3,295 57	3,295 57
21,585 49	13,480,706 22	13,485,617 03	Quebec .....	13,480,491 13	5,125 90	13,485,617 03
1,231 80	232,203 87	232,203 87	St. John .....	232,203 87		232,203 87
		1,442 62	Suspense Account .....		1,442 62	1,442 62
1,231 80	232,203 87	233,646 49	New Brunswick .....	232,203 87	1,442 62	233,646 49
306 20	151,382 28	151,382 28	Halifax .....	151,382 28		151,382 28
275 00	38,429 29	38,429 29	Pictou .....	38,429 29		38,429 29
		5,860 50	Suspense Account .....		5,860 50	5,860 50
581 20	189,811 57	195,672 07	New Scotia .....	189,811 57	5,860 50	195,672 07
	24,420 49	24,420 49	Charlottetown, P. E. I. .....	24,420 49		24,420 49
3,188 08	1,026,104 16	1,026,104 16	Winnipeg, Manitoba .....	1,026,104 16		1,026,104 16
3,154 70	551,862 97	557,420 98	Calgary, Alberta .....	551,862 97	5,558 00	557,420 98
878 80	313,462 47	313,462 47	Manitowish, Saskatchewan .....	313,462 47		313,462 47

Balances due April 1, 1915.	Amount accrued during Year, including License Fees.							
	Spirits.	Malt Liquor.	Malt.	Tobacco.	Cigars.	Acetic Acid.	Bonded Manufactures.	Seizures.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1,202 09	288,245 09	44,877 95	119,665 47	18,396 47	7,388 17	.....	1,731 45	56 85
.....	67,817 73	4,351 15	65,499 37	14,198 70	2,805 45	.....	.....	.....
1,202 09	356,062 82	49,229 10	185,164 84	32,595 17	10,143 62	.....	1,731 45	56 85
.....	6,169 77	50 00	1,862 73	97 50	.....	.....	.....	.....
19,615 51	8,701,074 68	97,779 45	2,689,299 63	10,222,783 78	635,157 83	8,250 14	105,812 24	10,349 39
.....	38,533 81	.....	179,798 90	3,097 07	107 99	.....	.....	.....
.....	8,662,540 87	97,779 45	2,509,500 73	10,219,686 71	635,049 83	8,250 14	105,812 24	10,349 39

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

1915-16.

IN ACCOUNT WITH REVENUES—*Concluded.*

Sundries.	Total Duties accrued.	Total Debits.	Divisions.	Deposited to Credit of Receiver General.	Balances due March 31, 1916.	Total Credits.
\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.
2,342 10	482,653 55	483,855 64	Vancouver .....	482,653 55	1,202 09	483,855 64
429 80	155,102 20	155,102 20	Victoria .....	155,102 20		155,102 20
2,771 90	637,755 75	638,957 84	British Columbia....	637,755 75	1,202 09	638,957 84
100 00	8,280 00	8,280 00	Yukon .....	8,280 00		8,280 00
80,248 94	22,550,756 08	22,570,371 59	Totals .....	22,550,510 49	19,831 10	22,570,371 59
2,008 10	223,545 87		Less refunds as per statements No. 15 .....			
78,240 84	22,327,210 21		Net Revenue .....			

J. U. VINCENT,  
Deputy Minister.

7 GEORGE V, A. 1917

## WAR TAX REVENUE, 1915-16.

No. 3 A.—Stamps, Embossing cheques, Transportation tickets, Telegrams, etc.

Divisions.	Amount of stamps sold by Collectors.	Transportation tickets, Telegrams, Embossing cheques, etc.	Fines.	Total Deposited to the credit of Receiver General.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Belleville.....	4,666 70			
Brandford.....	15,762 84			
Guelph.....	11,399 32			
Hamilton.....	27,501 37			
Kingston.....	4,683 43			
London.....	24,000 88			
Ottawa.....	26,528 74			
Owen Sound.....	4,453 18			
Perth.....	10,388 69			
Peterborough.....	9,180 39			
Port Arthur.....	7,965 92			
Prescott.....	3,853 89			
St. Catharines.....	13,192 80			
Stratford.....	7,638 39			
Toronto.....	158,428 46			
Windsor.....	24,815 24			
Ontario.....	354,460 24	78,848 01	438 00	433,746 25
Joliette.....	1,968 32			
Montreal.....	89,089 78			
Quebec.....	21,132 86			
St. Hyacinthe.....	3,861 48			
Sherbrooke.....	8,090 06			
Three Rivers.....	1,982 45			
Quebec.....	126,124 95	599,270 95	1,000 00	726,395 90
St. John.....New Brunswick.....	25,848 78	2,494 85		23,343 63
Halifax.....	22,368 56			
Pictou.....	5,892 60			
Nova Scotia.....	28,171 16	5,909 58		34,080 74
Charlottown.....Prince Edward Island.....	1,625 51	3,821 70		5,447 21
Winnipeg.....Manitoba.....	69,308 43	9,669 60	300 00	79,278 03
Calgary.....Alberta.....	42,847 91	742 42		43,590 33
Moosejaw.....Saskatchewan.....	40,735 22	81 00	50 00	40,866 22
Vancouver.....	43,712 13			
Victoria.....	21,463 16			
British Columbia.....	65,175 29	16,615 43	150 00	81,940 72

SESSIONAL PAPER No. 12

## WAR TAX REVENUE, 1915-16.

No. 3 A.—Stamps, Embossing cheques, Transportation tickets, Telegrams, etc.—*Concluded.*

Divisions.	Amount of stamps sold by Collectors.	Transportation tickets, Telegrams, Embossing cheques, etc.	Fines.	Total Deposited to the credit of Receiver General.
	§ cts.	§ cts.	§ cts.	§ cts.
Dawson.....Yukon .....	1,072 13	3,158 92	.....	4,231 05
General. U.S.A., etc.....	.....	72,568 27	.....	72,568 27
Less refunds as per statement No. 15.....	755,369 62	793,180 73	1,938 00	1,550,488 35
Net War Tax Revenue . . . . .	.....	.....	.....	11,761 39
				1,538,726 96

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.J. U. VINCENT,  
*Deputy Minister.*

7 GEORGE V, A. 1917

## EXCISE

DR.

No. 4.—COLLECTION DIVISIONS

Balances due by Collectors, April 1, 1915.	Amounts received from Department to meet Expenditures.	Deductions from Salaries for					Balances due to Collectors, March 31, 1916.	Totals.	Divisions.
		Super-annuation.	Insurance.	Annuities.	Retirement.	Guarantee.			
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
43 98	14,396 25	76 05	468 48	.....	584 37	37 20	.....	15,606 33	Belleville.....
.....	9,382 76	92 40	.....	.....	239 76	22 32	.....	9,737 24	Brantford.....
.....	23,432 32	256 40	.....	.....	378 20	51 12	.....	24,118 04	Guelph.....
.....	26,131 63	142 83	307 06	.....	903 67	74 88	.....	27,560 07	Hamilton.....
.....	8,297 27	66 99	.....	.....	151 02	25 20	.....	8,540 48	Kingston.....
.....	21,914 20	119 82	77 52	.....	625 33	50 52	.....	22,787 39	London.....
.....	11,082 17	24 00	.....	.....	367 72	27 84	.....	11,501 73	Ottawa.....
.....	7,588 06	55 92	.....	.....	120 00	15 84	.....	7,779 82	Owen Sound.....
.....	13,262 89	.....	96 36	.....	655 80	43 92	.....	16,058 97	Perth.....
.....	3,379 85	18 96	.....	.....	117 57	10 98	.....	3,527 36	Peterboro.....
.....	5,295 65	.....	.....	.....	231 76	12 24	.....	5,539 65	Port Arthur.....
.....	13,312 93	36 00	324 52	140 40	515 67	35 04	.....	14,384 56	Prescott.....
.....	6,647 94	.....	326 16	.....	219 77	23 52	.....	7,217 39	Stratford.....
.....	6,787 16	75 60	.....	.....	129 96	15 12	.....	7,007 84	St. Catharines.....
.....	55,038 58	325 60	393 88	.....	1,647 67	131 28	.....	57,537 01	Toronto.....
.....	36,590 62	213 38	265 20	.....	906 78	99 36	49 08	38,124 42	Windsor.....
.....	3,657 01	55 93	.....	.....	.....	9 00	.....	3,721 94	Kingston District.
.....	3,410 58	.....	.....	.....	.....	9 00	.....	3,419 58	Toronto "
.....	4,060 84	.....	.....	.....	.....	9 00	.....	4,069 84	Windsor "
43 98	275,668 71	1,559 88	2,279 18	140 40	7,795 05	703 38	49 08	288 239 66	Ontario.....
.....	13,643 05	42 49	169 20	.....	408 33	30 36	.....	14,293 43	Joliette.....
.....	73,805 56	502 07	292 24	.....	1,837 87	169 46	.....	76,607 50	Montreal.....
.....	30,332 17	146 05	81 69	.....	710 57	54 96	.....	31,325 44	Quebec.....
.....	9,569 02	77 88	.....	.....	252 24	24 48	.....	9,923 62	Sherbrooke.....
.....	17,334 37	42 00	120 10	.....	501 68	31 90	.....	18,030 05	St. Hyacinthe.....
.....	4,173 84	31 92	.....	.....	.....	3 60	.....	4,209 36	Three Rivers.....
.....	2,735 65	.....	.....	.....	121 24	9 00	.....	2,865 89	Montreal District.
.....	3,291 62	.....	.....	.....	139 92	9 00	.....	3,440 54	Quebec "
.....	154,885 58	842 41	663 23	.....	3,971 85	332 76	.....	160,695 83	Quebec.....
.....	13,293 22	131 88	.....	.....	345 20	36 00	.....	13,806 30	St. John.....
.....	3,159 02	.....	.....	.....	108 69	9 00	.....	3,276 71	Maritime District.
.....	16,452 24	131 88	.....	.....	453 89	45 00	.....	17,083 01	New Brunswick....
.....	12,114 82	155 65	.....	.....	56 88	33 11	.....	12,360 46	Halifax.....
.....	3,579 09	27 96	.....	.....	94 92	9 36	.....	3,711 33	Pictou.....
.....	15,693 91	183 61	.....	.....	151 80	42 47	.....	16,071 79	Nova Scotia.....
100 00	1,951 05	.....	.....	.....	96 55	5 76	.....	2,153 36	Charlottetown, P. E. I.....
200 00	24,514 05	124 22	180 12	.....	733 45	55 32	.....	25,812 16	Winnipeg.....
.....	3,635 81	48 00	.....	.....	.....	9 00	.....	3,692 81	District Inspector,
200 00	28,149 86	172 22	180 12	.....	733 45	61 32	.....	29,504 97	Manitoba.....
.....	17,148 49	.....	40 96	.....	338 58	19 44	.....	17,547 47	Calgary.....
.....	4,271 64	53 49	.....	.....	.....	9 00	.....	4,334 13	Calgary District..



SESSIONAL PAPER No. 12

1915-1916.

IN ACCOUNT WITH EXPENDITURES.

CR.

Balances due to Collectors, April 1, 1915.	Expenditures authorized by the Department.						Balances due by Collectors, March 31, 1916.	Totals.
	Salaries.	Seizures Expenditures.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	13,873 29		130 91		1,389 18	177 97	43 98	15,606 33
	8,272 18		834 75		369 80	269 51		9,737 24
	23,118 26		330 96	60 00	196 89	411 93		24,118 04
	26,422 43		800 00		83 90	253 74		27,500 07
	8,449 65				22 25	68 58		8,540 48
	19,838 58		2,191 84		305 15	451 82		22,787 39
	9,933 19		1,158 74		286 15	123 65		11,501 73
	6,999 96		399 96		255 85	124 95		7,779 82
	13,124 45	38 66	1,583 88	444 10	521 94	346 00		16,058 97
	3,303 95		60 00		38 15	125 26		3,527 36
	4,639 86		206 00		411 00	288 79		5,539 65
	13,122 11		1,073 58		23 65	165 22		14,384 56
	6,399 75		526 62		120 72	170 30		7,217 89
	6,699 72		60 00	60 00	55 65	132 47		7,007 84
	51,627 21		4,243 49		726 15	949 16		57,557 01
49 08	35,550 47		1,749 86	35 00	426 40	313 61		38,124 42
	2,799 94		48 00	200 00	602 20	71 80		3,721 94
	2,824 66				578 95	15 67		3,419 58
	2,974 98				739 55	355 31		4,060 84
49 08	259,974 94	38 60	15,392 59	799 10	7,135 53	4,895 84	43 98	288,299 66
	10,299 59	52 95	3,176 14		449 35	316 25		14,293 43
	57,258 95	891 86	15,557 64		1,567 50	1,331 55		76,007 50
	19,693 23	46 25	10,333 63		641 24	611 09		31,925 41
	8,949 60		72 00		542 95	359 07		9,923 62
	12,138 59	236 80	4,208 67	396 00	661 70	388 24		18,080 05
	1,599 96		2,408 95		92 85	107 60		4,209 86
	2,424 99				428 35	12 35		2,865 89
	2,799 96				531 63	108 95		3,440 54
	115,164 87	1,226 96	35,757 08	396 00	4,915 57	3,235 35		160,000 83
	13,514 49	17 90	120 00		36 84	117 07		13,800 30
	2,174 97				936 29	163 45		3,274 71
	15,689 46	17 40	120 00		973 13	282 52		17,083 01
	11,829 30	30 35	90 98		188 10	212 75		12,300 46
	3,299 88		30 00		169 80	151 65		3,711 33
	15,120 18	30 35	180 98		357 90	364 38		16,071 79
	1,931 91		60 00			61 45	100 00	2,153 36
	21,131 85		3,220 68	36 00	508 65	654 97	280 00	26,812 16
	2,400 00				1,193 95	98 80		3,692 81
	23,531 85		3,220 68	36 00	1,702 61	753 77	280 00	28,804 37
	4,774 81		8,237 94		1,621 75	312 97		11,947 47
	2,674 98				1,619 18	49 08		4,344 13

DR.

No. 4.—COLLECTION DIVISIONS

Balances due by Collectors, April 1, 1915.	Amounts received from Department to meet Expenditures.	Deductions from Salaries for					Balances due to Collectors, March 31, 1915.	Totals.	Divisions.
		Superannuation.	Insurance.	Annuities.	Retirement.	Guarantee.			
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
.....	21,420 13	53 49	40,96	.....	338 58	28 44	.....	21,881 60	.. Alberta .....
.....	8,647 52	.....	.....	.....	288 99	18 24	.....	8,954 75	.. Moosejaw, Saskatchewan....
.....	27,860 25	43 92	309 32	.....	1,070 57	76 38	.....	29,360 44	.. Vancouver .....
.....	9,982 41	144 84	57 60	.....	164 78	24 72	.....	10,374 35	.. Victoria .....
.....	4,843 17	60 00	.....	.....	.....	9 00	.....	4,912 17	.. British Columbia.
.....	42,685 83	248 76	366 92	.....	1,235 35	110 10	.....	44,646 96	.. British Columbia..
.....	942 84	.....	.....	.....	49 92	7 20	.....	999 96	.. Dawson.. .....
.....	393 64	.....	.....	.....	.....	.....	.....	393 64	.. Inspector of Bonded Factories...
.....	5,099 32	.....	.....	.....	.....	.....	.....	5,099 32	.. Inspector of Malt-houses and Breweries.....
.....	3,670 43	93 57	.....	.....	.....	.....	.....	3,764 00	.. Inspector of Distilleries.....
.....	3,586 59	57 45	.....	.....	.....	.....	.....	3,644 04	.. Inspector of Tobacco Factories.
343 98	579,247 66	3,343 27	3,530 41	140 40	15,120 43	1,357 67	49 08	603,132 89	.. Total of Divisions, etc .....
.....	7,492 82	.....	.....	.....	.....	.....	.....	7,492 82	.. General Expenditures.....
.....	1,744 15	.....	.....	.....	.....	.....	.....	1,744 15	.. Legal Expenses...
.....	7,585 61	.....	.....	.....	.....	.....	.....	7,585 61	.. Printing .....
.....	3,453 83	.....	.....	.....	.....	.....	.....	3,453 83	.. Stationery .....
.....	3,140 89	.....	.....	.....	.....	.....	.....	3,140 89	.. Commission to Customs Officers....
.....	15,281 16	.....	.....	.....	.....	.....	.....	15,281 16	.. Duty-pay to Officers in charge of most important establishments..
.....	10,042 04	.....	.....	.....	.....	.....	.....	10,042 04	.. Provisional Allowance.....
.....	83,512 95	.....	.....	.....	.....	.....	.....	83,512 95	.. Printing Tobacco Stamps.....
343 98	711,501 10	3,343 27	3,530 41	140 40	15,120 43	1,357 67	49 08	735,386 34	.. Grand Total ...

INLAND REVENUE DEPARTMENT,  
OTTAWA, JULY 1, 1916.

SESSIONAL PAPER No. 12

1915-1916—Concluded.

IN ACCOUNT WITH EXPENDITURES.

CR.

Balances due to Collectors, April 1, 1915.	Expenditures authorized by the Department.						Balances due by Collectors, March 31, 1916.	Totals.
	Salaries.	Seizures Expenditures.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
.....	9,449 79	.....	8,237 94	.....	3,240 90	952 97	.....	21,881 60
.....	5,783 05	.....	1,715 96	180 00	731 65	544 09	.....	8,954 75
.....	23,632 32	.....	3,564 18	216 00	937 00	1,010 94	.....	29,360 44
.....	8,299 74	.....	1,593 79	.....	99 70	381 12	.....	10,374 35
.....	3,000 00	.....	.....	.....	1,856 37	55 89	.....	4,912 17
.....	34,932 06	.....	5,157 97	216 00	2,893 07	1,447 86	.....	44,646 96
.....	999 96	.....	.....	.....	.....	.....	.....	999 96
.....	.....	.....	.....	.....	385 70	7 94	.....	203 64
.....	3,199 92	.....	.....	.....	1,828 10	71 30	.....	5,089 32
.....	2,674 98	.....	.....	.....	1,082 77	6 25	.....	3,764 00
.....	2,874 93	.....	.....	.....	733 86	35 25	.....	3,644 04
49 08	491,336 90	1,313 81	69,852 20	1,627 10	26,040 79	12,569 05	343 98	603,132 89
.....	.....	.....	.....	.....	.....	7,492 82	.....	7,492 82
.....	.....	.....	.....	.....	.....	1,744 15	.....	1,744 15
.....	.....	.....	.....	.....	.....	7,585 61	.....	7,585 61
.....	.....	.....	.....	.....	.....	3,453 87	.....	3,453 87
.....	.....	.....	.....	.....	.....	3,140 89	.....	3,140 89
.....	.....	.....	.....	.....	.....	15,281 16	.....	15,281 16
.....	.....	.....	.....	.....	.....	10,012 04	.....	10,012 04
.....	.....	.....	.....	.....	.....	8,312 95	.....	8,312 95
49 08	491,336 90	1,313 81	69,852 20	1,627 10	26,040 79	141,842 48	343 98	738,880 34

J. U. VINCENT,  
Deputy Minister

WAR TAX, 1915-16.

No. 4 A.—IN ACCOUNT WITH EXPENDITURES.

Dr.

Cr.

Amount received from Department to meet Expenditures.	Totals.		Divisions.				Expenditures authorized by the Department.			Totals.
	\$ cts.	\$ cts.		Special Assistance.		Travelling Expenses.	Sundries.		\$ cts.	
				\$ cts.	\$ cts.		\$ cts.	\$ cts.		
1,292 62	1,292 62		Bellefille.....	1,230 63	44 20	17 79		1,292 62		
130 30	130 30		Brantford.....		90 60	39 70		130 30		
6 52	6 52		Guelph.....		1 05	5 47		6 52		
16 45	16 45		Hamilton.....		7 50	8 95		16 45		
13 60	13 60		Kingston.....		4 00	9 60		13 60		
1,323 10	1,323 10		London.....	1,234 28	17 40	71 42		1,323 10		
6,189 10	6,189 10		Ottawa.....	5,030 43	778 91	379 76		6,189 10		
28 47	28 47		Owen Sound.....		3 00	25 47		28 47		
459 80	459 80		Perth.....	377 43	13 25	69 12		459 80		
376 43	376 43		Peterboro.....	300 00	4 20	72 23		376 43		
157 85	157 85		Port Arthur.....		126 85	31 00		157 85		
729 07	729 07		Prescott.....			5 97		729 07		
73 20	73 20		Stratford.....	716 10	21 90	51 30		73 20		
4 60	4 60		St. Catharines.....		35 25	8 13		4 60		
43 38	43 38		Toronto.....		1 70			43 38		
1 70	1 70		Windsor District.....					1 70		
10,839 19	10,839 19		Ontario.....	8,888 87	1,152 91	797 41		10,839 19		
1,442 68	1,442 68		Joliette.....	1,419 78		22 90		1,442 68		
7,915 91	7,915 91		Montreal.....	7,849 54		66 37		7,915 91		
2,459 95	2,459 95		Quebec.....	2,216 61	12 95	239 39		2,459 95		
27 50	27 50		Sherbrooke.....			27 50		27 50		
1,354 29	1,354 29		St. Hyacinthe.....	1,350 16		4 13		1,354 29		
604 19	604 19		Three Rivers.....	599 94		4 25		604 19		
13,804 52	13,804 52		Quebec.....	13,436 03	12 95	355 54		13,804 52		
338 42	338 42		St. John, New Brunswick.....		229 60	108 82		338 42		

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907 80	907 80	907 80	907 80	907 80	907 80
112 13	112 13	112 13	112 13	112 13	112 13
1,019 35	1,019 33	1,019 33	1,019 33	1,019 33	1,019 33
727 02	727 93	727 93	727 93	727 93	727 93
4 46	4 40	4 40	4 40	4 40	4 40
732 33	732 33	732 33	732 33	732 33	732 33
921 00	921 00	921 00	921 00	921 00	921 00
1,081 29	1,081 29	1,081 29	1,081 39	1,081 39	1,081 39
228 45	228 45	228 45	228 45	228 45	228 45
1,309 54	1,306 84	1,306 84	1,309 84	1,309 84	1,309 84
70 00	70 00	70 00	70 00	70 00	70 00
4 55	4 55	4 55	4 55	4 55	4 55
29,040 47	29,040 47	29,040 47	29,040 47	29,040 47	29,040 47
18,250 19	18,250 19	18,250 19	18,250 19	18,250 19	18,250 19
6,723 40	6,723 40	6,723 40	6,723 40	6,723 40	6,723 40
54,014 06	54,014 06	54,014 06	54,014 06	54,014 06	54,014 06

J. U. VINCENT,  
Deputy Minister.

ISLAND REVENUE DEPARTMENT.  
OTTAWA, JULY 1, 1916.

## PREVENTIVE SERVICE—1915-1916.

## No. 5.—IN ACCOUNT WITH EXPENDITURES.

DR.

Cr.

Amount received from Department to meet Expenditures.	Guarantee.	Totals.	Expenditures authorized by the Department.				Totals.
			Salaries.	Special Assistance.	Travelling Expenses.	Sundries.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
23 40		23 40			23 40		23 40
1,537 33	90	1,538 23	749 95	733 33	54 95		1,538 23
12 00		12 00			12 00		12 00
1,158 77	2 88	1,161 65	1,161 65				1,161 65
422 96		422 96		399 96	23 00		422 96
2,518 87		2,518 87		1,998 87	407 15	112 85	2,518 87
3,399 72		3,399 72		3,244 47	155 25		3,399 72
245 78		245 78		216 58	29 20		245 78
157 10		157 10			137 10		157 10
1,795 02		1,795 02			36 80		1,795 02
400 40		400 40					400 40
1,284 82		1,284 82			186 33	5 18	1,284 82
100 25		100 25					100 25
799 92		799 92					799 92
1,166 67		1,166 67				2 00	1,166 67
15,023 01	3 78	15,026 79	2,911 56	10,909 21	1,085 43	129 59	15,026 79
2,216 44		2,216 44				2,216 44	2,216 44
17,239 45	3 78	17,243 23	2,911 56	10,909 21	1,085 43	2,337 03	17,243 23

J. U. VINCENT,  
Deputy Minister.

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

FOOD INSPECTION, 1915-16.  
No. 6.—IN ACCOUNT WITH EXPENDITURES.

DR.

CR.

Amount received from Department Expenditures.	Superannuation.	Guarantee.	Totals.	Districts.	Expenditures authorized by the Department.						Totals.	
					Salaries.	Special Assistance.	Rent.	Travelling Expenses.	Supplies.	\$ cts.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
209 22			224 82	Hamilton	199 92			245 80	84 02		329 82	
431 98	1 08		431 98	Kingston	199 92			123 05	109 91		431 98	
431 24	1 08		432 32	London	199 92			143 45	108 95		452 32	
564 98			564 98	Toronto	199 92			197 51	168 33		565 76	
1,770 64		3 24	1,779 88	Ontario	599 76			709 81	470 31		1,779 88	
1,319 66	9 06	1 08	1,329 72	Montreal (J. J. Costigan)	469 92	30 00		552 14	248 66		1,330 72	
583 66		1 08	582 74	Quebec (D. J. Kearney)	369 96			121 90	160 88		682 74	
736 76		1 08	737 84	Quebec	300 00		120 00	160 50	156 97		737 47	
242 60		1 08	243 68	St. Hyacinthe	199 92			37 45	7 20		244 57	
2,381 22	3 50	4 22	2,389 94	Quebec	1,369 80	30 00	120 00	871 99	573 71		2,995 50	
963 98	3 90	1 08	968 96	St. John, N.B.	169 92			256 63	210 42		666 97	
556 98		1 08	557 16	Halifax	349 92			124 15	83 09		557 16	
214 96		1 08	215 08	Cape Breton	199 92				15 16		215 08	
759 08		2 10	772 24	New Scotia	549 84			124 15	98 25		772 24	
286 21		1 08	287 29	Charlottetown	187 55			28 98	72 76		289 29	
381 77		80	461 86	Winnipeg, Man.	09			331 35	220 42		551 86	
779 32		1 18	780 50	Calgary	300 00			276 75	182 25		759 00	
667 20		1 08	668 28	Edmonton	199 92			176 40	182 35		558 67	
380 62		1 08	381 70	Winnipeg	199 92			37 25	163 33		400 50	
381 70		1 08	382 78	Winnipeg	199 92			21 25	158 61		382 78	

FOOD INSPECTION, 1915-16.  
No. 6.—IN ACCOUNT WITH EXPENDITURES—Concluded.

DR.

CR.

Amount received from Department to meet Expenditures.	Superannuation.	Guarantee.	Totals.	Expenditures authorized by the Department.					Totals.	
				District.	Salaries.	Special Assistance.	Rent.	Travelling Expenses.		Sundries.
\$ cts.	\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1,338 71		3 21	1,341 95	..... British Columbia.....	599 76	1,095 16		237 90	504 29	1,341 95
3,106 95			3,106 95	Chief Analyst.....					2,011 79	3,106 95
222 62			222 62	Ottawa.....				68 70	153 92	222 62
249 59			249 59	Armagh.....		99 96		90 95	58 68	249 59
1,056 38			1,056 38	Joliette (St. Felix de Valois).....		399 96		510 80	145 62	1,056 38
287 73			287 73	Montmagny.....		99 96		143 15	44 62	287 73
813 23			813 23	Pierreville.....		774 92		30 15	8 16	813 23
25 84			25 84	Quebec (L. Hardy).....		8 20		8 20	17 64	25 84
763 09			763 09	St. Anselme.....		199 92		521 25	41 92	763 09
71 89			71 89	St. Fabien.....		44 88		16 80	11 21	71 89
302 42			302 42	St. Jerome.....		200 00		46 70	55 72	302 42
45 35			45 35	St. Octave.....		44 75			60	45 35
565 41			565 41	Ste. Perpetue.....		300 00		214 65	50 76	565 41
99 99			99 99	St. Philippe de Neri.....		99 99			99 99	99 99
175 79			175 79	Tracadie.....		99 96		38 00	37 33	175 79
738 60			738 60	Moosajaw.....		258 29		320 95	159 36	738 60
75 00			75 00	Regina.....		75 00			75 00	75 00
1,969 56			1,969 56	Halifax Laboratory.....		240 00		1,312 50	385 55	1,969 56
464 95			464 95	Winnipeg.....					464 95	464 95
837 58			837 58	Vancouver.....				111 50	726 08	837 58
20,908 45	13 92	16 29	21,028 66		3,836 72	4,062 75	1,432 50	4,990 37	6,706 32	21,028 66
10,797 77			10,797 77	General.....					10,797 77	10,797 77
10,519 02			10,519 02	Printing.....					10,519 02	10,519 02
970 36			970 36	Stationery.....					970 36	970 36
43,285 60	13 92	16 29	43,315 81	Grand Total.....	3,836 72	4,062 75	1,432 50	4,990 37	23,493 47	43,315 81

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.





7 GEORGE V, A. 1917

## DR. No. 9.—SUNDRY MINOR REVENUES, 1915--16. CR.

Accrued during the year ended March 31, 1916.	Totals.		Deposited to the Credit of the Receiver General.	Totals.
\$ cts.	\$ cts.		\$ cts.	\$ cts.
1,441 00	1,441 00	Registration of agricultural fertilizers fees \$905— Licenses \$415—Fines \$121 .....	1,441 00	1,441 00
4,284 08	4,284 08	Adulteration of food fees \$283—Penalties \$4,001.08 ..	4,284 08	4,284 08
248 78	248 78	Casual revenue .....	248 78	248 78
1,695 00	1,695 00	Patent medicine registration fees \$1,665—Fines \$30 ..	1,695 00	1,695 00
821 50	821 50	Commercial feeding stuffs fees \$171—Licenses \$495— Fines \$155.50 .....	821 50	821 50
8,490 36	8,490 36		8,490 36	8,490 36

J. U. VINCENT,  
*Deputy Minister.*

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

## DR. No. 10.—SUNDRY MINOR EXPENDITURES, 1915--16. CR.

Amounts received from the Department to meet Expenditures.	Total.		Printing and Stationery.	Contingencies.	Totals.
\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.
174 85	174 85	Sundries, minor expenditures .....		174 85	174 85
1 80	1 80	Printing .....	1 80		1 80
918 90	918 90	Patent Medicines Act .....		918 90	918 90
310 15	310 15	" Printing .....	310 15		310 15
1,405 70	1,405 70		311 95	1,093 75	1,405 70

J. U. VINCENT,  
*Deputy Minister.*

INLAND REVENUE DEPARTMENT.  
OTTAWA, July 1, 1916.

C.R.

No. 11.—FERRY LICENSES, REVENUE FOR 1915-1916.

D.R.

Balances due April 1, 1915	Accrued during the year ended March 31, 1916.	Totals	<i>Ferries.</i>	Deposited to the credit of the Receiver General.	Balance due March 31, 1916.	Totals.
\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.
20 00	15 00	15 00	Buckingham and Camberland	15 00		15 00
45 83	50 00	50 00	Buffalo and Point Abino	50 00		50 00
	10 00	45 83	Clair Station and Kent		45 83	45 83
	10 00	10 00	Courtright and St. Clair	10 00		10 00
	10 00	10 00	Cross Point and Campbellton	10 00		10 00
20 00	20 00	20 00	Edmundston and Maine	20 00	20 00	20 00
50 00	10 00	10 00	Fasset and St. Thomas d'Alfred	10 00		10 00
	50 00	100 00	Fort Erie and Buffalo Co.	100 00		100 00
1,736 79	25 00	25 00	Fort Frances	25 00		25 00
	6 00	6 00	Hull (old lease)		6 00	6 00
	30 00	30 00	Montebello and Alfred	30 00		30 00
	1 00	1 00	Nagara and Youngstown	1 00		1 00
	1 00	1 00	Detroit and Windsor	1 00		1 00
1 00			Pembroke and Allumette Island (old lease)		1 00	1 00
	130 00	130 00	Pembroke and Allumette Island (new lease)	130 00		130 00
	1 00	1 00	Prescott and Ogdensburg	1 00		1 00
	10 00	10 00	Quezon and Lewistown	10 00		10 00
	25 00	25 00	Rainy River	25 00		25 00
	510 00	510 00	Rockcliffe and Gatineau	510 00		510 00
	5 00	5 00	Sand Point and Norway Bay	5 00		5 00
	100 00	100 00	Sault Ste. Marie	100 00		100 00
20 00	30 00	30 00	St. Leonard and Van Huron	30 00	30 00	30 00
	1 00	1 00	Walkerville and Detroit	1 00		1 00
1,000 00	900 00	2,872 02		1,039 00	1,833 02	2,872 02

J. U. VINCENT,  
Deputy Minister.

ISLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

7 GEORGE V, A. 1917

No. 12.—STATEMENT showing the quantities of the several articles, subject to  
1914, 1915, 1916 and

Articles subject to Excise Duty.	1914.			Duty.	
	Quantities.				
	Ex-manu- factory.	Ex-ware- house.	Totals.	§	cts.
	Gallons.	Gallons.	Gallons.		
Spirits.....	2,001	4,762,618	4,764,619	9,014,579	05
		66,497	66,497	19,949	02
Totals.....	2,001	4,829,115	4,831,116	9,034,528	07
Malt Liquor, the duty being paid on malt.....	56,060,846	.....	56,060,846	155,566	07
	Lbs.	Lbs.	Lbs.		
Malt.....	1,000	133,793,639	133,794,639	2,007,250	77
Cigars—	No.	No.	No.		
Cigars from foreign leaf.....		16,500	16,500		99 00
Cigars.....	178,096,181	110,107,211	288,203,392	576,486	39
Totals.....	178,096,181	110,123,711	288,219,892	576,585	39
Cigarettes.....	1,126,442,320	39,580,850	1,166,023,170	2,809,347	02
	Lbs.	Lbs.	Lbs.		
Tobacco from foreign leaf.....					
Canada twist.....		11,057	11,057		552 85
Tobacco.....	13,865,155	7,777,801	21,642,956	1,082,148	12
Snuff.....	594,747		594,747	29,737	35
Totals.....	14,459,902	7,788,858	22,248,760	3,921,785	34
Raw leaf tobacco, foreign.....		18,775,803	18,775,803	5,322,240	99
Other materials.....		1,510,010	1,510,010	241,601	60
Total duties on tobacco and cigarettes.....				9,485,627	93
Vinegar.....				88,760	38
Acetic acid.....				11,337	59
Licenses, Spirits.....				3,500	00
" Malt Liquor.....				5,850	00
" Malt.....				5,050	00
" Cigars.....				12,350	00
" Tobacco.....				3,798	00
" Bonded Manufactures.....				3,400	00
" Acetic acid.....				75	00
Grand Total duty.....				21,393,679	20

\* Spirits imported for use in the manufacture of crude fulminate, on which duty, at the rate of 30 cents

INLAND REVENUE DEPARTMENT,

OTTAWA, July 1, 1916.

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Excise Duty, taken for consumption, during the fiscal years ended March 31, the duty accrued thereon.

1915.				1916.			
Quantities.			Duty.	Quantities.			Duty.
Ex-manu- factory.	Ex-ware- house.	Totals.		Ex-manu- factory.	Ex-ware- house.	Totals.	
Gallons.	Gallons.	Gallons.	\$ cts.	Gallons.	Gallons.	Gallons.	\$ cts.
6,407	4,021,090	4,027,497	8,689,574 23	4,066	3,629,324	3,633,390	8,671,538 55
	44,690	44,690	13,497 09		85,954	85,954	25,786 13
6,407	4,065,780	4,072,187	8,792,981 42	4,066	3,715,278	3,719,344	8,697,324 78
47,955,947	7,278	47,963,225	137,003 23	39,488,374	150,503	39,638,877	92,079 45
Lbs.	Lbs.	Lbs.		Lbs.	Lbs.	Lbs.	
	111,037,743	111,037,743	2,610,887 82	2,946	89,473,644	89,476,590	2,684,699 63
No.	No.	No.		No.	No.	No.	
	12,300	12,300	84 10	2,946	3,800	3,800	26 60
138,170,411	98,683,831	236,854,242	613,021 07	134,992,358	72,651,650	207,644,008	623,081 23
138,170,411	98,696,131	236,866,542	613,105 17	134,992,358	72,655,450	207,647,808	623,107 83
1,062,143,295	27,962,649	1,090,125,936	3,004,822 14	1,061,670,760	20,653,950	1,082,324,710	3,252,797 58
Lbs.	Lbs.	Lbs.		Lbs.	Lbs.	Lbs.	
	6,855	6,855	637 50		175	175	43 75
13,579,224	7,085,181	20,664,405	1,643,641 55	12,996,915	7,430	7,430	743 00
509,597		509,597	40,226 75	544,237	7,149,484	20,146,399	2,015,411 76
14,088,821	7,092,036	21,180,857	1,689,327 94	13,541,152	7,157,089	20,698,241	5,323,422 79
	15,723,329	15,723,329	4,454,283 52		16,571,311	16,571,311	4,676,757 99
	1,280,589	1,280,589	294,894 21		1,365,175	1,365,175	218,428 00
			9,348,505 70				10,218,608 78
			90,953 66				100,112 24
			7,155 48				8,150 14
			3,500 00				3,750 00
			5,900 00				3,700 00
			5,400 00				4,000 00
			12,800 00				12,000 00
			4,375 00				4,175 00
			3,950 00				5,700 00
			100 00				100 00
			21,546,917 48				23,400,167 79

per gallon, was collected and afterwards refunded, on the exportation of the foliunite

J. U. VINCENT,

Deputy Minister.

7 GEORGE V, A. 1917

## No. 13.—AMOUNTS deposited monthly to the credit of the Receiver General,

	Ontario.	Quebec.	New Brunswick.	Nova Scotia.
	§ cts.	§ cts.	§ cts.	§ cts.
<b>APRIL:—</b>				
Excise	410,952 71	752,063 48	16,932 27	9,969 91
" Seizures		210 00		
Ferries	245 00	10 00		
Weights and Measures Inspection	872 25	816 50		
Gas Inspection	947 05			
Electric Light Inspection	1,578 30	174 75		
Patent Medicines Fees	163 00	24 00	3 00	6 00
Fertilizers Fees	31 00	1 00	1 00	
" Fines	37 00			
Methylated Spirits	5,220 21	2,560 77	72 40	32 77
Commercial Feeding Stuffs	22 00	5 00		
" " Fines	37 50			
Adulteration of Food Fees	65 14	121 00		
War Tax Revenue Stamps	21,061 56	10,823 44	1,088 07	1,432 48
Totals	441,232 72	766,809 94	18,096 74	11,441 16
<b>MAY:—</b>				
Excise	492,951 57	1,065,162 60	17,492 59	13,659 44
" Seizures		261 92		
Ferries	161 00		10 00	
Weights and Measures Inspection	3,408 58	2,351 40	91 45	220 95
" " Seizures	2 00			
Gas Inspection	2,018 85	842 80	12 00	60 20
Electric Light Inspection	2,902 05	2,146 10	31 05	128 85
Law Stamps (Supreme Court)	409 30			
" " (Exchequer Court)	466 50			
" " (Yukon Territorial Court)				
Patent Medicines Fees	50 00	18 00	1 00	2 00
Fertilizers Fees	45 00	7 00		
" Fines	21 00	14 00	10 00	
Methylated Spirits	6,265 14	1,287 79	66 87	66 96
Commercial Feeding Stuffs	21 00			
" " " Fines				
Adulteration of Food Fees	43 00	5 00		
Electrical Standard of Laboratory				
Testing Milk Glasses	637 31			
War Tax Revenue Stamps	21,819 68	7,298 59	2,173 33	2,236 64
War Tax Fine	50 00			
Casual Revenue	83 18			
Totals	531,355 16	1,079,395 20	19,894 29	16,375 04
<b>JUNE:—</b>				
Excise	466,818 00	1,156,967 24	16,526 31	16,387 25
" Seizures	100 00	581 50		
Weights and Measures Inspection	3,592 25	3,084 05	155 25	199 80
" " Seizures	5 00			
Gas Inspection	3,846 70	2,124 60	76 60	69 00
Electric Light Inspection	3,439 50	1,303 20	70 50	199 95
Law Stamps (Supreme Court)	196 40			
" " (Exchequer Court)	345 00			
" " (Yukon Territorial Court)				
Patent Medicines Fees	29 00	16 00		5 00
Fertilizers Fees	20 00	1 00		
Methylated Spirits	6,957 34	1,412 99	59 26	108 29
Commercial Feeding Stuffs	16 00			
Adulteration of Food Fees	35 00	65 00		5 00
Electrical Standard of Laboratory	5 00			
Testing Milk Glasses	108 00			
War Tax Revenue Stamps	27,610 45	10,032 92	1,880 87	1,484 60
Casual Revenue	7 80			
Totals	513,131 44	1,175,588 50	18,768 79	18,458 89

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on account of Inland Revenues, during the year ended March 31, 1916.

Prince Edward Island.	Manitoba.	Alberta.	Saskatchewan.	British Columbia.	Yukon.	Totals.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1,479 16	71,108 37	40,855 23	10,346 54	42,696 23	154 80	1,356,558 70
						210 00
		115 60	28 50			255 00
				24 00		1,832 85
	6 00	1 00	2 00	4 00		971 05
11 00				25 00		1,753 05
	217 46					209 00
		2 00				44 00
						62 00
						8,103 61
						29 00
						37 50
119 30	3,643 43	2,053 41	967 15	4,504 06		186 14
						45,092 90
1,609 46	74,975 26	43,027 24	11,344 19	47,253 29	154 80	1,415,944 80
2,120 14	74,114 09	37,729 11	15,140 84	52,054 16	387 61	1,770,812 15
						261 92
						171 00
13 95	1,158 15	376 65	1,078 05	375 60		9,077 78
		10 00				12 00
	379 20	152 20		189 00		3,654 25
13 95	573 75	119 70	271 05	738 00		6,027 50
						400 30
						466 70
						152 70
	4 00	1 00	2 00	5 00		83 00
						32 00
						80 00
	718 65			72 64		8,478 02
						21 00
						14 00
						48 00
						1 00
						637 31
61 40	2,804 18	2,314 59	1,268 83	4,493 26	44 35	41,615 05
						50 00
			5 00			88 18
2,209 44	79,751 99	40,703 25	17,765 77	57,956 66	584 86	1,845,991 60
1,864 02	62,510 12	26,798 11	11,616 61	30,009 24	720 95	1,810,217 83
						681 50
14 50	729 00	761 75	837 60	308 25		9,792 00
		20 00				25 00
	225 80	79 80		188 80		6,011 30
	487 50	294 00	265 95	912 00		5,312 00
						100 40
						240 00
					180 65	180 65
	2 00	1 00		1 00		54 00
						21 00
	137 58			83 19		8,768 60
						16 00
						100 00
				7 30		12 70
						108 00
111 43	4,291 99	2,478 88	2,408 24	4,740 14	104 75	34,000 37
						7 30
1,989 95	68,383 09	30,133 54	14,848 40	56,263 22	1,015 30	1,898,918 17

## No. 13.—AMOUNTS deposited monthly to the credit of the Receiver General, on

	Ontario.		Quebec.		New Brunswick.		Nova Scotia.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.
<b>JULY:—</b>								
Excise	453,395	10	1,085,443	17	16,005	71	15,613	35
" Seizures			650	00	160	35		
Ferries			150	00				
Weights and Measures Inspection	6,508	12	3,936	40	49	80	652	65
Gas Inspection	1,915	05	1,292	70	45	80	63	20
Electric Light Inspection	2,868	20	2,182	60	109	80	161	20
Law Stamps (Supreme Court)	240	40						
" (Exchequer Court)	586	00						
" (Yukon Territorial Court)								
Patent Medicines Fees	25	00	10	00				
Fertilizers Fees	16	00						
Methylated Spirits	5,026	77	1,953	10	32	86		
Commercial Feeding Stuffs	22	00						
" " Fines			14	00				
Adulteration of Food Fees	95	00	34	00				
War Tax Revenue Stamps	28,056	17	10,655	74	2,600	37	3,560	61
War Tax Revenue, Transportation, &c.	672	40	14,737	60	156	95	125	36
War Tax Fine	10,550	48	v.s.					
Casual Revenue	3	00	10	00				
<b>Total</b>	<b>509,919</b>	<b>69</b>	<b>1,121,069</b>	<b>31</b>	<b>19,161</b>	<b>64</b>	<b>20,177</b>	<b>37</b>
<b>AUGUST:—</b>								
Excise	480,672	54	1,121,356	61	14,889	29	17,691	52
" Seizures			622	08				
Ferries			150	00				
Weights and Measures Inspection	4,674	33	3,940	95	385	80	248	05
" Seizures			25	00	5	00		
Gas Inspection	2,246	25	751	30	35	20	31	80
Electric Light Inspection	2,043	40	993	60	83	85	156	75
Law Stamps (Supreme Court)	215	75						
" (Exchequer Court)	589	00						
" (Yukon Territorial Court)								
Patent Medicines Fees	19	00	17	00	2	00	1	00
Fertilizers Fees	11	00	8	00				
Methylated Spirits	5,713	59	1,541	49	70	36	32	77
Adulteration of Food Fees	25	00						
Electric Standard of Laboratory	20	00						
Testing Milk Glasses	129	55						
War Tax Revenue Stamps	25,009	39	9,130	72	2,153	64	1,995	85
War Tax Revenue, Transportation, &c.	20,330	14	v.s.		164	85	1,137	59
War Tax Fine	3,631	00						
Casual Revenue	50	00						
	124	90						
<b>Total</b>	<b>545,689</b>	<b>84</b>	<b>1,254,259</b>	<b>28</b>	<b>17,784</b>	<b>99</b>	<b>21,295</b>	<b>33</b>
<b>SEPTEMBER:—</b>								
Excise	485,819	46	1,080,562	12	19,894	37	18,935	16
" Seizures			1,343	55				
Ferries			5	00				
Weights and Measures Inspection	3,992	15	2,832	45	116	55	487	50
" Seizures			45	00				
Gas Inspection	2,428	35	470	05	50	40	32	40
Electric Light Inspection	2,254	50	868	50	78	60	220	05
Law Stamps (Exchequer Court)	546	00						
" (Yukon Territorial Court)								
Patent Medicines Fees	23	00	4	00	1	00		
Fertilizers Fees	2	00	26	00			4	00
Methylated Spirits	5,296	85	2,072	66	69	02	75	37
Commercial Feeding Stuffs	20	00						
" " Fines	19	00	57	00				
Adulteration of Food Fees	155	65	122	66				
Electrical Standard Laboratory	13	00						
War Tax Revenue Stamps	25,838	46	14,229	20	2,070	08	2,151	73
War Tax Revenue, Transportation, &c.	1,007	81	1,846	00	10	30		
<b>Total</b>	<b>527,466</b>	<b>23</b>	<b>1,104,431</b>	<b>19</b>	<b>22,290</b>	<b>32</b>	<b>21,906</b>	<b>21</b>



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account of Inland Revenues, during the year ended March 31, 1916.—Continued.

Prince Edward Island.	Manitoba.	Alberta.	Saskatchewan.	British Columbia.	Yukon.	Totals.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
2,130 24	59,133 89	32,245 61	6,842 76	49,530 42	3,060 90	1,723,341 15
				2 35		812 70
						150 00
22 35	411 70	370 20	1,869 35	243 15		14,063 72
9 00	286 80	93 30		140 80		3,845 65
1 80	412 50	273 90	258 15	1,158 95		7,427 10
						240 40
						585 00
					144 60	141 60
	1 00		1 00	2 00		40 00
						16 00
				176 82		7,189 55
						22 00
	14 00					28 00
						129 00
74 28	5,278 90	4,124 18	4,435 83	4,661 53	103 50	63,551 11
100 30	728 00	429 40		1,379 60	63 65	28,943 74
						13 00
2,337 97	66,260 79	37,541 59	13,407 09	57,245 62	3,372 65	1,850,543 72
1,784 62	62,733 51	29,207 46	19,491 22	52,008 71	717 99	1,800,553 47
						632 08
						150 00
57 20	384 95	681 20	1,793 60	290 40		12,456 48
		25 00				55 00
	245 10	223 60		184 60		3,717 85
	344 10	432 45	131 25	792 80		4,978 20
						215 75
						589 00
	2 00		1 00	1 00	528 95	528 95
						43 00
	104 79			31 90		19 00
				10 00		7,494 90
						35 00
						20 00
226 23	5,054 31	3,136 19	3,332 04	4,983 09	171 63	129 35
	511 95	44 00	10 00	2,552 73		55,193 09
						144,274 79
				1 50		50 00
						126 40
2,068 05	69,380 71	33,749 90	24,759 11	60,806 73	1,418 57	2,031,292 54
1,908 78	71,737 99	44,334 95	23,376 24	57,471 07	667 92	1,864,648 07
				3 50		1,347 05
						5 00
48 80	1,365 80	719 95	1,746 65	368 50		11,678 35
						45 00
10 00	157 55	67 20		237 15		5,433 19
2 40	132 15	559 50	110 70	82 00		2,048 60
						646 00
		1 00		2 00	301 70	201 70
						31 00
	139 05					32 00
						7,693 93
				26 00		48 00
						76 00
			71 00	5 00		264 31
			3 75	3 75		18 75
67 76	5,713 11	3,228 98	2,761 36	5,518 64	67 76	61,668 98
	14 00	50 00	0 00	193 80		3,087 94
2,097 73	79,259 65	46,961 39	28,073 85	64,009 61	977 37	1,980,090 75

## No. 13—AMOUNTS deposited monthly to the credit of the Receiver General, on

	Ontario.	Quebec.	New Brunswick.	Nova Scotia.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<b>OCTOBER :—</b>				
Excise .....	499,142 97	1,097,731 35	18,827 84	15,029 26
" Seizures .....	100 00	583 07		
Weights and Measures Inspection .....	4,959 25	3,049 60	433 35	221 85
" Seizures .....	15 00			
Gas Inspection .....	2,426 50	474 60	45 20	54 45
Electric Light Inspection .....	2,478 90	1,015 95	89 85	116 55
Law Stamps (Supreme Court) .....	627 85			
" (Exchequer Court) .....	433 50			
" (Yukon Territorial Court) .....				
Patent Medicines Fees .....	7 00	12 00		
Fertilizers Fees .....	7 00	1 00	22 00	
Methylated Spirits .....	6,674 74	3,232 59	70 22	106 80
Commercial Feeding Stuffs .....	7 00			
Adulteration of Food Fees .....	5 00	137 00		50 00
Testing Milk Glasses .....	130 70			
War Tax Revenue Stamps .....	28,955 70	10,465 34	2,076 48	1,999 88
War Tax Revenue, Transportation, etc. ..	2,864 55	U.S. 69,495 41	271 85	247 90
War Tax Fine .....	16,736 88			
<b>Total .....</b>	<b>565,572 54</b>	<b>1,186,197 91</b>	<b>21,836 79</b>	<b>17,826 69</b>
<b>NOVEMBER :—</b>				
Excise .....	548,975 70	1,248,002 77	18,281 67	16,087 15
" Seizures .....		1,226 00		
Ferries .....	1 00			
Weights and Measures Inspection .....	3,441 32	2,369 55	389 15	311 80
" Seizures .....				
Gas Inspection .....	2,644 90	425 35	101 10	28 50
Electric Light Inspection .....	2,541 75	1,063 25	151 80	162 75
Law Stamps (Supreme Court) .....	113 10			
" (Exchequer Court) .....	455 50			
" (Yukon Territorial Court) .....				
Patent Medicines Fees .....	9 00	4 00	1 00	
Fertilizers Fees .....	156 00	5 00	25 00	5 00
Methylated Spirits .....	8,334 02	1,988 05	59 44	66 45
Commercial Feeding Stuffs .....	121 00	15 00		
Adulteration of Food Fees .....	46 25	14 00		23 00
Electrical Standard of Laboratory .....	7 25			
War Tax Revenue Stamps .....	32,278 71	10,659 97	2,164 05	2,385 23
War Tax Revenue, Transportation, &c. ..	13,161 45	139,826 66	31 10	2,278 44
War Tax Fines .....	9,447 95			
War Tax Fines .....	51 00			
Casual Revenue .....	7 00			
<b>Total .....</b>	<b>618,792 90</b>	<b>1,405,599 60</b>	<b>21,207 31</b>	<b>21,348 32</b>
<b>DECEMBER :—</b>				
Excise .....	575,312 17	1,362,851 22	23,718 86	18,225 94
" Seizures .....	150 00	852 45		213 70
Ferries .....	30 00			
Weights and Measures Inspection .....	3,896 93	1,093 75	272 45	76 35
" Seizures .....	10 00			
Gas Inspection .....	2,369 20	465 20	82 40	31 30
Electric Light Inspection .....	2,939 25	1,516 05	124 50	241 95
Law Stamps (Supreme Court) .....	200 80			
" (Exchequer Court) .....	1,106 50			
" (Yukon Territorial Court) .....				
Patent Medicines Fees .....	21 00	10 00	2 00	2 00
Fertilizers Fees .....	167 00	12 00	37 00	92 00
Methylated Spirits .....	5,501 87	2,003 18	102 59	109 69
Commercial Feeding Stuffs .....	114 00	17 00		7 00
Adulteration of Food Fees .....	188 00	241 75		8 00
Electrical Standard of Laboratory .....	11 25	2 00		
War Tax Revenue Stamps .....	41,052 45	15,443 43	2,695 13	3,029 73
War Tax Revenue, Transportation, etc. ..	18,288 06	6,530 70	12 45	75 10
War Tax Fine .....	120 00	50 00		
<b>Total .....</b>	<b>651,478 48</b>	<b>1,391,088 73</b>	<b>27,047 38</b>	<b>22,112 76</b>

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account of Inland Revenues, during the year ended March 31, 1916—Continued

Prince Edward Island.	Manitoba.	Alberta.	Saskatchewan.	British Columbia.	Yukon.	Totals.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
2,345 88	77,292 02	31,548 35	34,007 70	44,644 67	243 49	1,820,813 53
55 25	1,305 50	821 75	288 15	421 85		683 07
5 00	129 00	47 40		163 80		15 00
	342 15	279 45	321 00	573 40		3,345 95
						5,217 25
						627 85
						433 50
			2 00	1 00	225 95	225 95
	35 51					22 00
		9 00		104 87		30 00
5 00				19 00		10,224 73
				10 00		35 00
122 31	5,681 71	3,058 41	3,788 49	4,649 69	30 20	207 00
280 35	5,604 60	4 00	3 00	1,503 25		130 70
			50 00			60,828 21
						97,011 79
						50 00
2,813 79	90,390 49	35,768 36	38,460 34	52,091 53	499 64	2,011,458 08
2,316 62	111,219 30	55,089 45	49,379 23	56,928 92	586 07	2,106,866 88
70 30	1,550 85	684 95	999 85	407 70		1,226 00
5 25	229 50	11 00				1 00
37 05	318 30	101 60		206 15		10,225 47
		251 55	170 50	461 95		11 00
						3,742 35
						5,161 90
						113 10
						455 50
			1 00	1 00	318 90	318 90
5 00		5 00		10 00		16 00
	133 38					211 00
	5 00	5 00	5 00	7 00		10,581 34
	15 00	30 00				138 00
						128 25
95 49	6,978 33	4,351 77	5,182 09	5,190 88	80 00	7 25
	486 00	28 00	15 00	2,869 95	483 51	69,866 52
	250 00					165,628 06
	1 65					801 00
						8 65
2,829 71	121,187 31	60,558 32	55,752 67	66,083 55	1,468 48	2,374,528 17
2,284 55	131,474 04	73,695 98	53,423 55	60,567 19	241 81	2,311,795 81
		75 00		51 00		1,342 15
11 25	1,036 60	341 00	484 40	361 90	82 50	30 00
21 10	165 60	76 10		193 60		7,667 18
24 60	381 20	150 75	431 40	637 15		10 00
						3,401 50
						6,443 85
						260 80
						1,106 50
	1 00		1 00		250 65	250 65
	13 00					37 00
						346 00
	7 00	17 00	5 00	24 00		7,791 08
19 00	5 00		50 00	76 20		191 00
						503 95
						13 25
139 85	9,852 83	5,879 59	5,117 40	8,019 98	77 48	91,807 57
	12 00	60 02		2,842 00	3,611 76	30,411 00
	50 60					250 00
2,497 35	142,998 27	80,304 44	69,517 75	72,842 27	3,364 30	2,463,151 08

## No. 13.—AMOUNTS deposited monthly to the credit of the Receiver General, on

	Ontario.	Quebec.	New Brunswick.	Nova Scotia.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<b>JANUARY:—</b>				
Excise.....	489,702 39	973,231 63	20,288 26	17,419 37
" Seizures .....	305 00	737 90		
Ferries.....	211 00			
Weights and Measures Inspection.....	4,211 18	1,073 65	168 75	316 20
" Seizures.....				
Gas Inspection.....	2,454 35	405 75	39 00	42 80
Electric Light Inspection.....	2,447 40	1,324 85	110 85	366 15
Law Stamps (Supreme Court).....	66 70			
" (Exchequer Court).....	434 50			
Patent Medicines Fees.....	14 00	8 00		1 00
Fertilizers Fees.....	281 00	10 00	2 00	48 00
Methylated Spirits.....	6,769 20	1,884 78	34 11	36 98
Commercial Feeding Stuffs.....	53 00	10 00		
Adulteration of Food Fees.....	396 55	86 00		
Electrical Standard of Laboratory.....	25 25			
War Tax Revenue Stamps.....	33,148 66	10,655 08	2,111 14	2,623 81
War Tax Revenue, Transportation, etc..	7,483 31	58,417 37	154 05	325 84
War Tax Fine.....	10,484 67	100 00		
Totals.....	558,488 16	1,047,945 01	22,908 16	21,180 15
<b>FEBRUARY:—</b>				
Excise.....	512,841 57	1,085,425 43	20,794 38	14,227 49
" Seizures .....	55 00	858 17		
Ferries.....	60 00			
Weights and Measures Inspection.....	2,340 74	1,607 85	26 05	106 15
" Seizures.....				
Gas Inspection.....	2,004 30	420 55	47 80	41 10
Electric Light Inspection.....	2,169 85	880 20	128 70	219 15
Law Stamps (Supreme Court).....	308 90			
" (Exchequer Court).....	384 50			
" (Yukon Territorial Court).....				
Patent Medicines Fees.....	179 00	42 60	6 00	14 00
Fertilizers Fees.....	99 00	2 00	16 00	25 00
Methylated Spirits.....	7,783 35	3,383 53	103 13	
Commercial Feeding Stuffs.....	16 00	9 00		
Adulteration of Food Fees.....	654 63	88 00		
Electrical Standard of Laboratory.....				
Electric Light Export Licenses.....	200 00	75 00	25 00	
Testing Milk Glasses.....	164 70			
War Tax Revenue Stamps.....	30,254 72	10,241 03	2,064 46	2,120 74
War Tax Revenue, Transportation, etc..	17,176 54	123,524 95	318 70	1,435 40
War Tax Fine.....	15,107 29	200 00		
Totals.....	591,800 09	1,226,757 71	23,530 22	18,189 03
<b>MARCH:—</b>				
Excise.....	668,903 88	1,442,720 02	28,391 97	16,352 03
" Seizures .....		1,046 85		
Ferries.....		6 00		
Weights and Measures Inspection.....	4,775 05	2,346 30	227 55	67 35
Gas Inspection.....	4,735 65	964 55	79 40	106 00
Electric Light Inspection.....	5,020 10	2,346 90	597 15	251 25
Law Stamps (Supreme Court).....	424 80			
" (Exchequer Court).....	833 75			
" (Yukon Territorial Court).....				
Patent Medicines Fees.....	591 00	150 00	10 00	29 00
" Fines.....	30 00			
Fertilizers Fees.....	33 00	7 00	4 00	
Methylated Spirits.....	11,729 58	3,070 44	102 17	67 41
Commercial Feeding Stuffs.....	24 00			
Adulteration of Food Fees.....	334 25	227 00		210 00
Electrical Standard of Laboratory.....				2 00
War Tax Revenue Stamps.....	41,857 61	12,193 46	2,744 06	3,176 96
War Tax Revenue, Transportation, &c.	863 75	60,705 42	1,374 60	283 95
War Tax Fine.....	6,610 00	650 00		
Casual Revenue.....	167 00			
	4 75			
Totals.....	746,938 20	1,526,433 91	33,530 90	20,515 95

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account of Inland Revenues, during the year ended March, 31, 1916.—*Concluded.*

Prince Edward Island.	Manitoba.	Alberta.	Saskatchewan.	British Columbia.	Yukon.	Totals.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
2,237 54	108,602 34	66,424 48	35,683 85	43,042 93	239 83	1,756,872 62
						1,042 90
						211 00
22 55	168 80	301 95	1,313 45	165 40		7,741 93
		22 60				22 60
8 25	188 65	130 70		269 65		3,539 15
7 20	332 10	157 50	47 25	565 80		5,359 10
						66 70
						434 50
	1 00			3 00		27 00
	5 00			12 00		358 00
	100 29					8,825 86
	16 00			7 00		85 00
	5 00					487 55
				1 75		27 00
166 08	6,977 37	3,960 87	4,191 43	5,660 33	84 00	69,578 77
180 05	1,165 05	39 00	24 00	1,323 65		79,596 99
				50 00		150 00
2,621 07	117,561 60	71,037 10	41,259 98	51,101 51	323 83	1,934,427 17
	97,029 37	48,580 11	21,672 50	50,164 69	967 20	1,851,702 74
						913 17
						60 00
11 05	499 75	399 00	456 60	99 00		5,546 19
		10 00				10 00
5 50	183 10	54 10		171 20		2,927 05
20 10	268 50	147 00	60 15	443 65		4,397 30
						308 90
						384 50
					259 40	259 40
2 00	5 00	1 00	4 00	8 00		261 00
5 00						147 00
	68 03			32 69		11,370 13
		8 00				33 00
	15 00			168 00		925 63
				7 00		7 00
				100 00		400 00
						164 70
	5,077 48	3,963 09	2,934 28	5,770 34	136 72	62,559 86
	968 00	73 00	23 00	3,084 15		161,711 03
						200 00
43 65	104,114 23	53,235 30	25,147 53	60,048 12	1,363 32	2,104,229 20
3,948 94	98,999 12	65,279 14	22,481 43	78,580 67	351 43	2,426,068 63
	150 00					1,196 85
						6 00
16 10	1,029 45	203 30	473 20	186 00		9,325 29
11 00	383 15	147 85		394 40		6,822 00
61 20	360 45	354 30	297 30	1,198 65		10,487 30
						424 80
						823 75
					162 90	162 90
	19 00	7 00	4 00	32 00		842 00
						30 00
						44 00
	212 11			243 82		15,427 33
		5 00				29 00
	20 00	5 00		289 00		1,082 25
				3 75		5 75
431 39	7,956 69	4,597 95	4,105 08	7,025 49	119 30	84,825 22
3,261 00	180 00	6 00		936 30		74,294 02
				100 00		917 00
						4 75
7,749 63	109,309 97	70,606 54	27,361 04	89,390 98	623 83	2,622,099 46

7 GEORGE V, A. 1917

## RECAPITULATION of Statement No. 13 showing the

	Ontario.		Quebec.		New Brunswick.		Nova Scotia.		Prince Edward Island.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
Excise.....	6,085,428	06	13,471,517	64	232,043	52	189,597	87	21,420	49
"    Seizures.....	720	00	8,973	49	160	35	213	70		
Ferries.....	863	00	166	00	10	00				
Weights and Measures Inspection	46,672	15	28,502	45	2,319	15	2,931	20	320	75
"    "    Seizures.....	102	00	5	00						
Gas Inspection.....	30,037	15	8,637	45	614	90	560	75	75	10
Electric Light Inspection.....	32,683	20	15,815	95	1,582	65	2,224	60	165	30
Law Stamps (Supreme Court)...	2,804	00								
"    (Exchequer Court)...	6,180	75								
"    (Yukon Territorial Court).....										
Patent Medicines Fees.....	1,130	00	315	00	26	00	61	00	2	00
"    "    Fines.....	30	00								
Fertilizers Fees.....	868	00	80	00	107	00	174	00	21	00
"    "    Fines.....	58	00	14	00	10	00				
Methylated Spirits.....	81,272	66	26,391	37	842	43	703	49		
Commercial Feeding Stuffs.....	436	00	56	00			7	00		
"    "    Fines.....	56	50	71	00						
Adulteration of Food Fees.....	2,043	47	1,141	41			296	00	24	00
Electrical Standard of Laboratory	81	75	2	00			2	00		
Electric Light Export Licenses...	200	00	75	00	25	00				
Testing Milk Glasses.....	1,170	26								
War Tax Revenue Stamps,.....	354,460	24	126,124	95	25,848	78	28,171	16	1,625	51
Wax Tax Revenue Transportation, etc.....	78,848	01	599,270	95	2,494	85	5,909	58	3,821	70
War Tax Fine.....	438	00	1,000	00						
Casual Revenue.....	229	88	10	00						
Totals.....	6,729,296	43	14,288,169	66	266,084	63	236,829	80	30,498	40

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1st, 1916.

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Total Revenues for the Year ended March 31, 1916.

Manitoba.		Alberta.		Saskatchewan.		British Columbia.		Yukon.		General.		Totals.	
\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
1,025,954	16	551,787	99	313,462	47	637,698	90	8,280	00			22,540,191	10
150	00	75	00			56	85					10,349	39
9,640	55	5,777	30	11,389	40	3,228	75	82	55			110,864	25
		98	60									205	00
2,567	45	1,178	85			2,363	15					46,034	80
3,952	70	3,020	10	2,304	70	8,302	55					70,051	75
												2,804	00
												6,180	75
								2,535	40			2,535	40
41	00	12	00	18	00	60	00					1,665	00
												30	00
18	00	5	00			47	00					1,320	00
						39	00					121	00
1,866	82					769	55					111,846	35
28	00	46	00	10	00	83	00					666	00
14	00					14	00					155	54
60	00	35	00	126	00	558	20					4,284	08
						24	75					110	50
						100	00					400	00
69,308	43	42,847	91	40,735	22	65,175	29	1,072	13			1,170	26
												755,369	62
9,669	60	742	42	81	00	16,615	43	3,158	02	72,568	27	793,180	73
300	00			50	00	150	00					1,938	00
1	65			5	00	1	50					248	78
1,123,572	36	605,626	17	368,181	79	735,288	95	15,129	00	72,568	27	24,462,761	86

J. U. VINCENT,  
Deputy Minister.

7 GEORGE V, A. 1917

## EXCISE

## No. 14.—COMPARATIVE Statement

		April.	May.	June.	July.	August.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Spirits	{ 1914-15..... 1915-16.....	664,375 72 535,048 79	595,450 46 564,066 96	611,645 43 561,672 59	602,395 55 523,961 29	1,425,478 18 588,209 50
Increase	.....	.....	.....	.....	.....	.....
Decrease	.....	129,326 93	31,383 50	49,972 84	78,434 26	837,268 68
Malt Liquor	{ 1914-15..... 1915-16.....	20,054 10 13,545 95	12,591 78 9,252 70	14,518 80 9,338 90	13,617 70 7,427 15	12,476 45 10,639 80
Increase	.....	.....	.....	.....	.....	.....
Decrease	.....	6,508 15	3,339 08	5,179 90	6,190 55	1,836 65
Malt	{ 1914-15..... 1915-16.....	167,668 48 276,846 38	163,012 71 270,832 14	187,859 72 276,498 72	188,130 26 218,242 79	522,477 03 227,187 03
Increase	.....	.....	.....	.....	.....	.....
Decrease	.....	109,177 90	107,819 43	88,639 00	30,112 53	295,290 03
Tobacco	{ 1914-15..... 1915-16.....	843 567 79 739,502 08	774,722 05 866,222 37	805,811 55 901,712 73	841,260 26 914,467 30	1,090,422 43 873,903 94
Increase	.....	.....	91,500 32	95,901 18	73,207 04	.....
Decrease	.....	104,065 71	.....	.....	.....	216,518 49
Cigars	{ 1914-15..... 1915-16.....	54,713 22 49,537 05	47,305 31 48,300 62	45,555 15 51,967 67	50,311 50 54,693 72	77,466 28 55,341 18
Increase	.....	.....	995 31	6,412 52	4,382 22	.....
Decrease	.....	5,176 17	.....	.....	.....	22,125 10
Manufactures in Bond	{ 1914 15..... 1915-16.....	10,225 50 10,749 16	9,403 43 6,781 38	8,364 50 7,229 36	8,597 16 9,391 15	13,613 42 11,779 C9
Increase	.....	523 66	.....	.....	798 99	.....
Decrease	.....	.....	2,622 05	1,135 14	.....	1,834 33
Acetic Acid	{ 1914-15..... 1915-16.....	467 24 281 24	..... 386 58	358 44 453 04	1,428 18 1,013 59	1,062 16 969 61
Increase	.....	.....	386 58	94 60	.....	.....
Decrease	.....	186 00	.....	.....	414 59	92 55
Seizures	{ 1914-15..... 1915-16.....	50 00 296 92	275 00 475 00	96 40 506 50	..... 737 70	50 00 790 06
Increase	.....	246 92	200 00	410 10	737 70	740 06
Decrease	.....	.....	.....	.....	.....	.....
Other Receipts	{ 1914 15..... 1915-16.....	21,169 60 17,026 45	5,253 00 4,475 87	5,096 69 6,407 24	4,557 80 5,601 00	7,164 50 2,561 86
Increase	.....	.....	.....	1,310 55	1,043 20	.....
Decrease	.....	4,143 15	777 13	.....	.....	4,602 64
Total Revenue	{ 1914 15..... 1915-16.....	1,782,291 65 1,642,834 02	1,608,013 74 1,770,793 62	1,679,306 68 1,815,786 75	1,710,298 41 1,735,535 69	3,150,210 48 1,771,382 07
Total Increase	.....	.....	162,779 88	136,480 07	25,237 28	.....
" Decrease	.....	139,457 63	.....	.....	.....	1,378,828 41



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REVENUES

of Receipts for 1914-15 and 1915-16.

September.	October.	November.	December.	January.	February.	March.	Totals.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
421,690 29	607,112 92	680,135 51	992,142 12	800,865 19	814,114 22	491,075 83	8,796,481 42
684,848 63	732,593 24	906,863 '89	1,159,217 67	745,469 07	793,896 43	925,286 62	8,701,074 68
263,158 34	125,480 32	226,728 38	147,075 55	53,456 12	20,217 79	434,210 79	5,406 74
12,890 55	10,014 75	13,044 90	8,376 45	8,219 55	2,512 80	14,585 40	142,903 23
8,503 80	10,725 15	6,608 25	6,731 60	4,316 85	4,640 70	6,048 60	97,779 45
	710 40				2,127 90		
4,386 76	6,436 65	1,644 85	3,902 76		8,536 80		45,123 78
208,093 01	267,492 24	139,838 41	148,812 55	167,660 19	202,236 03	253,097 16	2,616,287 82
220,619 66	177,784 38	193,004 67	185,989 06	206,073 39	203,606 76	232,614 65	2,689,299 63
12,526 65	89,617 86	53,106 26	37,176 51	38,413 20	1,370 73	20,482 51	73,011 81
809,885 77	734,956 23	681,292 45	657,442 45	654,358 49	771,020 38	688,146 85	9,352,880 70
868,928 46	822,744 37	929,411 97	863,877 97	734,615 64	816,494 49	891,802 46	10,222,783 78
58,142 69	87,788 14	248,119 52	296,435 52	80,257 15	45,471 11	203,661 61	809,903 98
51,405 05	57,689 29	52,907 92	54,314 70	55,270 06	42,622 51	56,344 18	625,905 17
57,867 52	57,089 45	63,220 29	58,251 86	42,706 33	46,627 37	49,563 77	635,157 83
6,462 47	608 81	10,312 37	3,937 16	12,563 73	4,004 86	13,219 59	9,252 66
12,899 55	9,188 08	5,139 64	4,288 83	3,437 03	5,203 37	4,543 15	94,903 66
14,764 04	12,001 83	9,723 45	4,241 29	6,748 21	5,621 10	6,782 18	195,812 24
1,864 49	2,813 75	4,583 81	47 54	3,311 18	417 73	2,239 03	10,908 58
1,275 17	1,622 65	857 44	184 20				7,255 48
1,254 41	1,153 83	721 47	921 22		352 07	743 08	8,250 14
29 76	468 82	135 97	737 02		352 07	743 08	994 66
1,001 65	266 45	78 00	752 60	25 00	203 84	1,342 40	4,141 34
1,272 14	550 00	1,439 70	1,139 20	1,061 15	1,093 17	996 85	10,349 30
270 49	283 55	1,361 70	377 60	1,036 15	889 35	345 35	6,208 05
7,244 00	4,878 20	5,653 91	3,597 25	3,115 48	3,928 50	5,611 01	77,199 94
2,944 05	4,186 11	5,616 39	6,353 42	5,814 73	10,317 47	8,944 35	80,218 94
			2,826 17	2,699 25	6,388 97	3,333 34	3,049 00
4,299 95	692 09	37 52					
1,526,395 04	1,693,130 81	1,578,948 48	1,869,841 15	1,692,959 99	1,841,841 65	1,494,739 98	21,627,928 76
1,860,102 71	1,818,819 36	2,116,610 08	2,266,714 29	1,746,745 37	1,882,649 66	2,122,782 56	22,260,756 08
333,717 67	125,688 55	537,661 90	396,873 14	63,794 38	40,807 91	698,042 78	2,441,083 36
							1,948,286 94

J. U. VINCENT,  
Deputy Minister.

No. 15.—REFUNDS OF REVENUE DURING THE FISCAL YEAR ENDED MARCH 31, 1916.

EXCISE.

Articles.	To whom paid.	Date.	Divisions.	Under what Authority Refunded.	Amounts.		Totals.
					\$	cts.	
Spirits..	Henry, John J.	May 25, '15	Prescott.	Revised Statutes, Cap. 24, Sec. 92.	14,514	49	38,533 81
	Parke, Davis & Co.	June 7, '15	Windsor.	" " 24 " 92.	136	46	
	" "	" 21, '15	" "	" " 24 " 92.	123	18	
	Marceau & Cie, J. A.	July 12, '15	Montreal.	" " 24 " 92.	33	32	
	Parke, Davis & Co.	Aug. 6, '15	Windsor.	" " 24 " 92.	213	81	
	" "	" 25, '15	" "	" " 24 " 92.	180	38	
	" "	Oct. 5, '15	" "	" " 24 " 92.	385	63	
	Henry, J. J.	" 16, '15	Prescott.	" " 24 " 92.	9,688	14	
	Can. Bank of Commerce.	" 27, '15	Sherbrooke.	" " 24 " 92.	1,583	50	
	J. S. Hamilton & Co.	Nov. 12, '15	Brantford.	" " 24 " 92.	160	80	
	Parke, Davis & Co.	" 20, '15	Windsor.	" " 24 " 92.	365	76	
	N. C. Polson & Co.	Dec. 2, '15	Kingston.	" " 24 " 92.	80	55	
	J. S. Hamilton & Co.	Jan. 11, '16	Brantford.	" " 24 " 92.	74	50	
	N. C. Polson & Co.	" 24, '16	Kingston.	" " 24 " 92.	56	38	
	Parke, Davis & Co.	" 25, '16	Windsor.	" " 24 " 92.	411	60	
	" "	Feb. 25, '16	" "	" " 24 " 92.	110	81	
	N. C. Polson & Co.	" 25, '16	Kingston.	" " 24 " 92.	193	34	
	J. S. Hamilton & Co.	Mar. 3, '16	Brantford.	" " 24 " 92.	120	00	
	Parke, Davis & Co.	" 28, '16	Walkerville.	" " 24 " 92.	119	23	
	N. C. Polson & Co.	April 25, '16	Kingston.	" " 24 " 92.	92	61	
Parke, Davis & Co.	" 25, '16	Walkerville.	" " 24 " 92.	259	71		
J. J. Heney	May 10, '16	Prescott.	" " 24 " 92.	9,634	58		
Malt.....	Drewry, Ltd., E. I.	" 12, '25	Winnipeg.	" " 24 " 92.	216	00	
	The Hoesehen Wentzler Breweries Co., Ltd.	" 12, '15	Moosofaw.	" " 24 " 92.	216	00	
	The Lethbridge B. M. Co., Ltd.	" 12, '15	Calgary.	" " 24 " 92.	465	50	
	The National Breweries, Ltd., Reg. No. 7.	" 17, '15	Montreal.	" " 24 " 92.	351	00	
	Thos. F. White.	" 20, '15	St. Catharines.	" " 24 " 92.	478	72	
	Taylor & Bate	" 20, '15	" "	" " 24 " 92.	908	32	
	The Golden Lion Brewery Co.	" 20, '15	Montreal.	" " 24 " 92.	495	00	
	Frontenac Breweries, Ltd.	" 20, '15	" "	" " 24 " 92.	187	50	
	Herbert Molson	" 20, '15	" "	" " 24 " 92.	5,211	29	
	The National Breweries, Ltd., " Ekers B."	" 20, '15	" "	" " 24 " 92.	120	85	

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The National Breweries, Ltd.	"	20, '15	"	"	"	24	"	92	120 12
The National Breweries, Ltd., "Union Brew."	"	20, '15	"	"	"	24	"	92	2,337 92
The Nat. Breweries, Ltd., "Dawson"	"	20, '15	"	"	"	24	"	92	118 63
The National Breweries, Ltd., "Ibaw."	"	20, '15	"	"	"	24	"	92	5,004 85
The Canada Maltng Co., Ltd.	"	20, '15	"	"	"	24	"	92	13,715 61
Fernis, Fort Steele Brewing Co., Canadian Brewing and Maltng Co., Ltd.	"	22, '15	Vancouver	"	"	24	"	92	777 90
"	"	26, '15	"	"	"	24	"	92	368 04
Keith, D.	June 4, '15	Halifax	"	"	"	24	"	92	300 00
Frontenac Breweries, Ltd.	" 11, '15	Montreal	"	"	"	24	"	92	47 25
"	" 14, '15	"	"	"	"	24	"	92	1,206 00
The Nat. Breweries, Ltd., Reg. No. 7.	" 14, '15	"	"	"	"	24	"	92	234 00
Nels, Nelson	" 14, '15	Vancouver	"	"	"	24	"	92	54 00
Canadians B. & M. Co., Ltd.	" 18, '15	"	"	"	"	24	"	92	786 00
The National Breweries, Ltd.	" 21, '15	Montreal	"	"	"	21	"	92	4 44
Frontenac Breweries, Ltd.	" 21, '15	"	"	"	"	24	"	92	74 52
The Kakaska Falls Brewing Co., Ltd.	" 28, '15	Port Arthur	"	"	"	24	"	92	30 00
The Lakewood Brewing Co.	" 28, '15	"	"	"	"	24	"	92	7 20
The Diamond Brew. Co., Ltd.	" 28, '15	"	"	"	"	24	"	92	31 46
Keith, D.	" 29, '15	Halifax	"	"	"	24	"	92	297 61
Hauer, A.	July 8, '15	Calcutta	"	"	"	24	"	92	167 40
The Hoeschen Wentzler Brewery Co., Ltd.	Jan. 14, '16	Moose Jaw	"	"	"	24	"	92	54 00
"	" 14, '16	Victoria	"	"	"	24	"	92	216 00
The Victoria Phoenix Br. Co.	" 17, '16	Vancouver	"	"	"	24	"	92	688 00
Canadian B. & M. Co., Ltd.	" 18, '16	Prescott	"	"	"	24	"	92	102 23
McCarthy, T. C.	" 21, '16	Montreal	"	"	"	24	"	92	180 00
The Nat. Breweries, Ltd., Reg. No. 3.	" 27, '16	Moose Jaw	"	"	"	24	"	92	87 12
The Golden Lion Brewing Co.	Feb. 3, '16	Vancouver	"	"	"	24	"	92	71 55
Canadian B. & M. Co., Ltd.	" 11, '16	Winnipeg	"	"	"	24	"	92	432 00
Purvey, Ltd., E. L.	" 16, '16	Montreal	"	"	"	24	"	92	351 00
The Nat. Breweries, Ltd., Reg. No. 7.	" 18, '16	Toronto	"	"	"	24	"	92	18 90
Malt Products Co. of Canada, Ltd.	" 19, '16	Vancouver	"	"	"	24	"	92	54 00
Nels, Nelson	" 19, '16	Calgary	"	"	"	24	"	92	93 00
The Phoenix B. & M. Co., Ltd.	" 19, '16	Windsor	"	"	"	24	"	92	1,539 48
The Can. Pabst Central Co., Ltd.	Mar. 13, '16	Saskatoon	"	"	"	24	"	92	54 00
Hoschen Wentzler Brewing Co., Ltd.	" 14, '16	New Westminster	"	"	"	24	"	92	54 00
Westminster Brewing, Ltd.	" 14, '16	Montreal	"	"	"	24	"	92	351 00
The Nat. Breweries, Ltd., Reg. No. 7.	Apr. 5, '16	Vancouver	"	"	"	24	"	92	666 00
Canadian B. & M. Co., Ltd.	" 7, '16	Waterloo	"	"	"	24	"	92	84 00
A. Janser	" 19, '16	Halifax	"	"	"	24	"	92	52 26
Gayard & Son, Ltd.	" 15, '16	"	"	"	"	24	"	92	55 44
C. Keith	" 19, '16	Vancouver	"	"	"	24	"	92	840 00
Can. B. & M. Co., Ltd.	" 19, '16	New Westminster	"	"	"	24	"	92	162 00
Nels, Nelson	" 19, '16	Victoria	"	"	"	24	"	92	216 00
The Victoria Phoenix Brewing Co., Ltd.	" 25, '16	Montreal	"	"	"	24	"	92	270 00
The Nat. Breweries, Ltd., Reg. No. 3.	" 25, '16	"	"	"	"	24	"	92	468 00
Phaid & Son, Ltd.	" 27, '16	Halifax	"	"	"	24	"	92	118 11
Mac A. Ray	May 2, '16	Bellefleur	"	"	"	24	"	92	227 28

No. 15.—REFUNDS OF REVENUE DURING THE FISCAL YEAR ENDED MARCH 31, 1916.

EXCISE—Continued.

Articles.	To whom paid.	Date.	Divisions.	Under what Authority Refunded.	Amounts.		Totals.	
					§	cts.	§	cts.
Malt—Continued.	H. Corby Distillery Co., Ltd.	May	16 Thurlow	Revised Statutes, Cap.	24	sec. 92		
	A. Bixel	"	16 Brantford	"	24	" 92	1,482 60	
	The Canada Melting Co.	"	16 Dundas	"	24	" 92	419 55	
	The Hamilton Brewing Assn., Ltd.	"	16 Hamilton	"	24	" 92	216 76	
	Grant's Spring Brewing Co., Ltd.	"	16 "	"	24	" 92	2,835 00	
	Robt. Stevenson	"	16 "	"	24	" 92	2,514 87	
	John Fisher	"	16 Kingston	"	24	" 92	240 00	
	Jos. Hamilton	"	16 Portsmouth	"	24	" 92	220 57	
	T. H. Carling	"	16 London	"	24	" 92	145 91	
	Estates John Labatt	"	16 "	"	24	" 92	2,653 38	
	Geo. Cloos	"	16 St. Thomas	"	24	" 92	2,811 50	
	The Capital Brewing Co., Ltd.	"	16 Ottawa	"	24	" 92	468 00	
	Blake & Dunne	"	16 "	"	24	" 92	1,147 21	
	Sudbury B. & M. Co., Ltd.	"	16 Sudbury	"	24	" 92	125 40	
	The Calcult Brewing & Malting Co.	"	16 Peterborough	"	24	" 92	2,790 00	
	Diamond Brewing Co., Ltd.	"	16 Port Arthur	"	24	" 92	581 25	
	The Kakabeka Falls Brewing Co., Ltd.	"	16 Port William	"	24	" 92	630 —	
	The Lakewood Brewery Co.	"	16 Kenora	"	24	" 92	33 66	
	J. P. Wisser & Sons, Ltd.	"	16 Prescott	"	24	" 92	269 81	
	St. Lawrence Brewery, Ltd.	"	16 Cornwall	"	24	" 92	662 45	
	John Watson	"	16 Listowel	"	24	" 92	162 80	
	F. Devlin	"	16 Stratford	"	24	" 92	250 52	
	See Falls Brewing Co., Ltd.	"	16 Sault Ste Marie	"	24	" 92	867 78	
	The Kormann Brewery, Ltd.	"	16 Toronto	"	24	" 92	144 57	
	E. Reinhardt	"	16 "	"	24	" 92	1,687 20	
	Copland Brewing Co., Ltd.	"	16 "	"	24	" 92	3,290 40	
	The Dominion Brewery Co., Ltd.	"	16 Toronto	"	24	" 92	3,849 17	
	The Cosgrove Brewery Co., Ltd.	"	16 "	"	24	" 92	4,217 10	
	The O'Keefe Brewery Co., Ltd.	"	16 "	"	24	" 92	5,931 00	
	Hiram Walker & Sons, Ltd.	"	16 Walkerville	"	24	" 92	550 50	
	The Walkerville Brewing Co., Ltd.	"	16 "	"	24	" 92	1,455 04	
	A. L. Iron	"	16 Windsor	"	24	" 92	1,012 50	
	The Independent Brewery Co., Ltd.	"	16 Montreal	"	24	" 92	866 40	
	Frontenac Breweries, Ltd.	"	16 "	"	24	" 92	405 00	
	Golden Lion Brewery, Ltd.	"	16 Valleyfield	"	24	" 92	1,529 30	
	The National Breweries, Ltd.	"	16 Lachine	"	24	" 92		

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National Breweries, Ltd., Wm. Dow Co.	"	"	"	"	16	Montreal	"	"	24	"	92	5,130 32
Herbert M. Lion	"	"	"	"	16	"	"	"	24	"	92	9,657 58
The Canada Maltng Co., Ltd.	"	"	"	"	16	"	"	"	24	"	92	19,084 37
The National Breweries, Ltd., Boswells Brewery	"	"	"	"	16	Quebec	"	"	24	"	92	255 29
La Bienerie Clamplain, Ltd.	"	"	"	"	16	"	"	"	24	"	92	2,511 00
St. Hyacinthe Distilling Co., Ltd.	"	"	"	"	16	St. Hyacinthe	"	"	24	"	92	2,119 52
La Brasserie J. M. Stenard, Ltd.	"	"	"	"	16	Three Rivers	"	"	24	"	92	246 90
Sauvage, James, Ltd.	"	"	"	"	16	St. John	"	"	24	"	92	480 00
Roady's Breweries, Ltd.	"	"	"	"	16	Fairville	"	"	24	"	92	1,200 00
Clax & Son, Ltd.	"	"	"	"	16	Halifax	"	"	24	"	92	1,729 00
Halifax Breweries, Ltd.	"	"	"	"	16	"	"	"	24	"	92	1,351 27
D. K. B.	"	"	"	"	16	"	"	"	24	"	92	2,673 00
The Hamilton Brewing Co., Ltd.	"	"	"	"	16	Brandon	"	"	24	"	92	377 10
The Future Brewing Co., Ltd.	"	"	"	"	16	"	"	"	24	"	92	527 30
The Kinn Maltng Co. of Canada	"	"	"	"	16	"	"	"	24	"	92	571 32
The Canadian Temperance Brewing Co., Ltd.	"	"	"	"	16	St. Boniface	"	"	24	"	92	
E. L. DREWRY, Ltd.	"	"	"	"	16	Winnipeg	"	"	24	"	92	4 55
The Canada Maltng Co., Ltd.	"	"	"	"	16	"	"	"	24	"	92	308 33
McLaughlin B. & M. Co., Ltd.	"	"	"	"	16	Meesejaw	"	"	24	"	92	7,465 24
McAlister Brewng Co., Ltd.	"	"	"	"	16	Prince Albert	"	"	24	"	92	307 80
Regina Brewing Co., Ltd.	"	"	"	"	16	"	"	"	24	"	92	233 76
The Hamilton Wentzler Bg. Co., Ltd.	"	"	"	"	16	Regina	"	"	24	"	92	240 00
John Wm. Brown Co., Ltd.	"	"	"	"	16	Saskatoon	"	"	24	"	92	955 00
Montreal Spring Brewing Co., Ltd.	"	"	"	"	16	Calgary	"	"	24	"	92	207 00
Canada Maltng Co., Ltd.	"	"	"	"	16	"	"	"	24	"	92	806 33
Calgary B. & M. Co., Ltd.	"	"	"	"	16	"	"	"	24	"	92	1,037 47
The Robertson B. & M. Co., Ltd.	"	"	"	"	16	Edmonton	"	"	24	"	92	4,065 09
La Saskatchewan B. & M. Co., Ltd.	"	"	"	"	16	"	"	"	24	"	92	600 00
The Leithbridge B. & M. Co., Ltd.	"	"	"	"	16	Leithbridge	"	"	24	"	92	705 50
Medicine Hat Brewing Co., Ltd.	"	"	"	"	16	Medicine Hat	"	"	24	"	92	1,155 00
The Berlin Beer Brewery, Ltd.	"	"	"	"	16	Berlin	"	"	24	"	92	191 25
W. G. H. Lutz	"	"	"	"	16	Calat	"	"	24	"	92	1,379 10
Joe Schmitt	"	"	"	"	16	Chelph	"	"	24	"	92	121 79
W. R. Haidley	"	"	"	"	16	"	"	"	24	"	92	37 50
Mary Bain	"	"	"	"	16	"	"	"	24	"	92	38 10
E. F. Bernards	"	"	"	"	16	New Hamburg	"	"	24	"	92	757 76
J. E. Cassidy	"	"	"	"	16	Preston	"	"	24	"	92	241 40
A. Jones	"	"	"	"	16	Waterloo	"	"	24	"	92	256 80
Whites Lake Pablg Co., Ltd.	"	"	"	"	16	"	"	"	24	"	92	153 81
J. E. Watt & Sons, Ltd.	"	"	"	"	16	Toronto	"	"	24	"	92	4,113 03
The Ontario Brewery Co., Ltd.	"	"	"	"	16	Prescott	"	"	24	"	92	1,000 54
St. Lawrence Brewery, Ltd.	"	"	"	"	16	Toronto	"	"	24	"	92	820 89
The National Brewery Ltd., Reg. No. 1	"	"	"	"	16	Sherbrooke	"	"	24	"	92	197 70
The National Brewery, Ltd., Reg. No. 2	"	"	"	"	16	Montreal	"	"	24	"	92	861 53
The National Brewery, Ltd., Reg. No. 3	"	"	"	"	16	Montreal	"	"	24	"	92	270 00
	"	"	"	"	16	"	"	"	24	"	92	351 00

No. 15.—REFUNDS OF REVENUE—Continued.

EXCISE—Continued.

Articles.	To whom paid.	Date.	Divisions.	Under what Authority Refunded.	Amounts.		Totals.	
					§	cts.	§	cts.
Malt—Continued.								
Drewry, Ltd., E. L.		July 19, '16	Winnipeg	Revised Statutes, Cap. 24	432	00		
Hoeschen Wentzler Brewing Co., Ltd.		" 19, '16	Moose Jaw	" " 21	162	00		
Nels, Nelson		" 19, '16	Vancouver	" " 24	60	00		
The Victoria Phoenix Brewing Co., Ltd.		" 19, '16	Victoria	" " 24	342	00		
Canada B. & M. Co.		" 31, '16	Vancouver	" " 24	1,065	46		
Frontenac Brewing Co.		" 31, '16	Montreal	" " 24	2	28		
Frontenac Breweries, Ltd.		Aug. 13, '16	"	" " 24	62	40		
Keith, D.		" 20, '16	Halifax	" " 24	4	41		
Keith, D.		" 20, '16	"	" " 24	15	67		
Oland & Son.		" 20, '16	"	" " 24	28	08		
The National Breweries, Ltd., Reg. No. 7		" 20, '16	Montreal	" " 24	351	00		
Drewry Ltd., E. L.		" 20, '16	Winnipeg	" " 24	216	00		
The Hoeschen Wentzler Brewing Co., Ltd.		" 20, '16	Moose Jaw	" " 24	54	00		
Canadian B. & M. Co., Ltd.		" 20, '16	Vancouver	" " 24	813	09		
Nels, Nelson		" 20, '16	"	" " 24	30	00		
Frontenac Breweries, Ltd.		" 25, '16	Montreal	" " 24	4	35		
"		" 30, '16	"	" " 24	31	05		
The Berlin Lion Brewery, Ltd.		Sept. 7, '16	Guelph	" " 24	235	26		
The National Breweries, Ltd., Reg. No. 3		" 14, '16	Montreal	" " 24	270	00		
The National Breweries, Ltd., Reg. No. 7		" 14, '16	"	" " 24	468	00		
Drewry, E. L.		" 14, '16	Winnipeg	" " 24	432	00		
The Hoeschen Wentzler Brew. Co., Ltd.		" 14, '16	Moose Jaw	" " 24	48	00		
Canadian B. & M. Co., Ltd.		" 20, '16	Vancouver	" " 24	1,371	81		
Carling, F. H.		" 21, '16	London	" " 24	88	71		
Keith, D.		" 21, '16	Halifax	" " 24	4	89		
The National Breweries Ltd., Reg. No. 3		" 24, '16	Montreal	" " 24	90	00		
Diamond Brewing Co., Ltd.		" 4, '16	Port Arthur	" " 24	84	00		
The Lethbridge B. & M. Co., Ltd.		Oct. 12, '16	Calgary	" " 24	1,110	00		
Nels, Nelson		" 13, '16	Vancouver	" " 24	30	00		

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Canadian B. & M. Co., Ltd	"	16, '16	"	"	"	24	"	92	504 00
Kath & Son, A	"	20, '16	"	"	"	24	"	92	11 97
National Breweries, Ltd	"	20, '16	"	"	"	24	"	92	234 00
Victoria Phoenix Brewing Co.	"	20, '16	"	"	"	21	"	92	324 00
Phoenix Brewing Co.	Nov.	12, '16	"	"	"	24	"	92	72 54
Kath, D	"	12, '16	"	"	"	24	"	92	2 67
National Breweries Co., Ltd.	"	22, '16	"	"	"	24	"	92	90 00
"	"	22, '16	"	"	"	24	"	92	90 00
"	"	22, '16	"	"	"	24	"	92	585 00
Drewry, Ltd., E. L.	"	22, '16	"	"	"	24	"	92	216 00
The Heacleten Wentzler Brewery Co.	"	22, '16	"	"	"	24	"	92	54 00
Nels, Nelson	"	22, '16	"	"	"	24	"	92	54 00
Canadian B. & M. Co., Ltd.	"	22, '16	"	"	"	24	"	92	2,011 59
The Mal; Products Co. of Can., Ltd.	Dec.	6, '16	"	"	"	24	"	92	50 00
Canadian B. & M. Co., Ltd.	"	10, '16	"	"	"	24	"	92	98 40
The National Breweries, Ltd., Reg.	"	17, '16	"	"	"	24	"	92	351 00
Drewry, Ltd., E. L.	"	17, '16	"	"	"	24	"	92	216 00
Nels, Nelson	"	17, '16	"	"	"	24	"	92	108 00
Canadian B. & M. Co., Ltd	"	17, '16	"	"	"	24	"	92	924 00
Drewry, Ltd., E. L.	Jan.	12, '16	"	"	"	24	"	92	216 00
William Lyall Badgerow Co., Ltd.	"	14, '16	"	"	"	24	"	92	1,058 08
The National Breweries, Ltd., Reg.	"	14, '16	"	"	"	24	"	92	468 00
The Empire Tob. Co., of Imperial Tob. Co., Ltd	June	2, '15	"	"	"	24	"	92	142 10
Merchant's Storage Co., Ltd	"	4, '15	"	"	"	24	"	92	1 00
The Empire Tob. Co., Brch. of Imperial	"	5, '15	"	"	"	24	"	92	112 77
Imperial Tob. Co. of Canada, Ltd	"	12, '15	"	"	"	24	"	92	264 59
Imperial Tobacco Co	July	31, '15	"	"	"	24	"	92	22 00
Imperial Tob. Co. of Canada, Ltd	Aug.	12, '15	"	"	"	24	"	92	173 77
The Empire Tob. Co., Brch. of Imperial	Sept.	7, '15	"	"	"	24	"	92	217 63
"	"	10, '15	"	"	"	24	"	92	84 00
Imperial Tob. Co., Ltd	"	14, '15	"	"	"	24	"	92	17 82
The Empire Tob. Co., Brch. of Imperial	Oct.	4, '15	"	"	"	24	"	92	90 36
M. McEachern & Co., Ltd.	"	5, '15	"	"	"	24	"	92	18 04
Imperial Tob. Co., Ltd	"	5, '15	"	"	"	24	"	92	75 81
"	"	14, '15	"	"	"	24	"	92	46 10
Imperial Tobacco Co	Nov.	12, '15	"	"	"	24	"	92	84 00
The Empire Tob. Co., Brch. of Imperial	Dec.	1, '15	"	"	"	24	"	92	176 60
Imperial T. Co., Ltd	"	16, '15	"	"	"	24	"	92	55 54
The Empire Tob. Co., Brch. of Imperial	"	23, '15	"	"	"	24	"	99	204 96
M. McEachern & Co., Ltd	Jan.	12, '16	"	"	"	24	"	92	12 81
Imperial Tob. Co., Ltd	"	12, '16	"	"	"	24	"	92	124 02
The Empire Tob. Co., Brch. of Imperial	"	24, '16	"	"	"	24	"	92	204 87
The Dominion Tobacco Co.	Feb.	24, '15	"	"	"	24	"	92	9 00
"	Mar.	17, '16	"	"	"	24	"	92	20 80
Imperial Tob. Co., of Canada, Ltd	"	17, '16	"	"	"	24	"	92	21 78

Tobacco

173,798 90

No. 15.—REFUNDS OF REVENUES—Continued.

EXCISE—Continued.

Articles.	To whom paid.	Date.	Divisions.	Under what Authority Refunded.		Totals.	
				Revised Statutes, Cap.	Sec. 92.		
				\$	cts.	\$	cts.
Tobacco—Continued.	The Empire Tob. Co., Brch. of Imperial	Mar. 28, '16	Granby.	"	24	838	74
	Imperial Tob. Co., of Canada, Ltd.	April 10, '16	Montreal.	"	24	23	08
	The Empire Tob. Co., Brch. of Imperial	" 13, '16	Granby.	"	24	54	88
Cigars.	Imperial Tob. Co., Ltd.	July 16, '15	Montreal.	"	24	3	00
	"	Aug. 12, '15	"	"	24	0	75
	Geo. F. Dwyer.	Sept. 10, '15	London.	"	24	33	33
	The Victor Cigar Co.	Oct. 21, '15	Port Arthur.	"	24	1	50
	Geo. F. Dwyer.	Nov. 12, '15	Toronto	"	24	41	66
	Imperial Tob. Co., Ltd.	Dec. 16, '15	Montreal.	"	24	27	75
Officer's Salary	Taylor & Pringle Co., Ltd.	May 25, '16	Owen Sound.	"	24	250	00
	The British Columbia Distillery Co., Ltd.	" 17, '16	Vancouver.	"	24	300	00
	S. Allen, Ltd.	" 17, '16	Norwich.	"	24	300	00
	Dominion Vinegar Works Co.	" 17, '16	Hamilton.	"	21	300	00
	Thos. McCreaney & Son, Ltd.	" 17, '16	St. John.	"	24	300	00
Sundries	National Drug & Chemical Co., Ltd.	July 19, '15	Montreal.	"	24	4	00
	J. Mueller.	Oct. 29, '15	Moosejaw.	"	24	25	00
	Jas. A. Smith	" 29, '15	"	"	24	29	16
	Dangerfield & Sons.	" 29, '15	"	"	24	92	00
	Moosejaw Liquor Store.	" 29, '15	"	"	24	29	16
	Gold Coin Liquor Store.	" 29, '15	"	"	24	29	16
	The Western Commercial Co., Ltd.	" 29, '15	"	"	24	92	00
	"	" 29, '15	"	"	24	29	16
	Saskatoon Liquor Co.	" 29, '15	"	"	24	29	16
	E. Foret.	" 29, '15	"	"	24	33	33
	Wm. Paterson.	" 29, '15	"	"	24	92	00
	Bertin & Webster	" 29, '15	"	"	24	33	33
	H. M. Hillman	" 29, '15	"	"	24	33	33
	Prince Albert Liquor Co., Ltd.	" 29, '15	"	"	24	33	33
	Robinson & Walsh.	" 29, '15	"	"	24	33	33
	Wesley Rowsont.	" 29, '15	"	"	24	37	50
						3,097	70
						107	99
						1,450	00



SESSIONAL PAPER No. 12

558 10

John Sears	"	29, '15	"	"	"	92	37 50
Canadian Explosives, Ltd.	Jan. 11, '16	Montreal	"	"	"	92	25 00
	Mar. 3, '16	"	"	"	"	92	25 00
W. A. D. Eady	July 13, '15	Hamilton	"	"	"	92	25 00
Ottawa Wine Vaults Co., Ltd.	Aug. 9, '15	Ottawa	"	"	"	92	13 74
M. Cummings	9, '15	Hamilton	"	"	"	92	25 20
Jas. Turner & Co., Ltd.	9, '15	"	"	"	"	92	7 80
J. J. Walsh	9, '15	"	"	"	"	92	9 89
John O. Carpenter	9, '15	Halifax	"	"	"	92	5 60
Kelly & Glassco	9, '15	"	"	"	"	92	8 60
Pacific Liqueur Co.	9, '15	Vancouver	"	"	"	92	9 60
British Columbia Wine Co., Ltd.	9, '15	"	"	"	"	92	8 60
Hughes Bros.	9, '15	"	"	"	"	92	8 60
United Brothers Ass., Ltd.	9, '15	Brantford	"	"	"	92	42 80
F. H. Drake	9, '15	London	"	"	"	92	17 60
Scandrett Bros.	9, '15	"	"	"	"	92	39 10
Donald Fraser	9, '15	Brantford	"	"	"	92	2 20
J. S. Hamilton & Co.	9, '15	"	"	"	"	92	51 00
C. R. Sutton	9, '15	Montreal	"	"	"	92	17 30
E. Hebert	9, '15	"	"	"	"	92	63 95
Maurice Darnac	9, '15	"	"	"	"	92	9 60
Gravel Freres	9, '15	"	"	"	"	92	28 20
Pilote Viger Hotel	9, '15	"	"	"	"	92	10 00
John Allan & Co.	9, '15	"	"	"	"	92	1 00
O. Desjardins	9, '15	"	"	"	"	92	4 00
Jessiman & Co.	9, '15	"	"	"	"	92	8 00
J. R. Lefebvre	9, '15	"	"	"	"	92	7 85
S. H. Townsend	9, '15	"	"	"	"	92	4 90
J. C. Beaudry	9, '15	"	"	"	"	92	3 60
James Garrity	9, '15	"	"	"	"	92	1 40
A. Maradeas	9, '15	Victoria	"	"	"	92	10 60
Hudson Bay Co.	9, '15	Winnipeg	"	"	"	92	63 70
	9, '15	Calgary	"	"	"	92	67 90
	9, '15	Victoria	"	"	"	92	7 30
Vancouver Import, Wine & Liqueur Co., Ltd.	9, '15	Victoria	"	"	"	92	8 40
Dorman & Gray	9, '15	Winnipeg	"	"	"	92	8 70
Bedford & Co.	11, '15	"	"	"	"	92	52 80
Winnipeg Wine Co.	11, '15	"	"	"	"	92	39 45
W. J. Starnes	11, '15	Hamilton	"	"	"	92	49 10
John O. Carpenter	11, '15	"	"	"	"	92	5 80
Henry Taylor	11, '15	Winnipeg	"	"	"	92	38 40
A. Baran	11, '15	Vancouver	"	"	"	92	7 20
British Columbia Wine Co., Ltd.	11, '15	London	"	"	"	92	5 80
Hughes Bros.	11, '15	Ottawa	"	"	"	92	4 30
O. Martens	11, '15	Winnipeg	"	"	"	92	18 30
Manitoba Liqueur House	11, '15	"	"	"	"	92	8 00
Paul Sells	11, '15	"	"	"	"	92	8 85
Beppetti & Co.	11, '15	"	"	"	"	92	16 00

No. 15.—REFUNDS OF REVENUE—Continued.

EXCISE—Continued.

Articles.	To whom paid.	Date.	Division.	Under what Authority.	Returned.	Amounts.		Totals.
						₹	cts.	
War Tax—Con.				Revised Statutes, Cap.	24, Sec. 92	5 50		
	The National Drug & Chemical Co.	Aug. 11, '15	Winnipeg.	"	"	23 50		
	Weslake & Hirabi.	" 11, '15	"	"	"	7 90		
	A. Ruszko.	" 11, '15	"	"	"	24 65		
	Quality Liquor Store.	" 11, '15	"	"	"	7 50		
	E. J. Peltier.	" 11, '15	"	"	"	8 40		
	L. S. Guay.	" 12, '15	Montreal.	"	"	7 20		
	McCaug & Campbell.	" 12, '15	Winnipeg.	"	"	18 40		
	F. L. Newman.	" 12, '15	"	"	"	4 00		
	Thos. Jordan.	" 12, '15	"	"	"	38 80		
	Buchwald & Gorman.	" 12, '15	"	"	"	8 00		
	J. W. Handley.	" 12, '15	Halifax.	"	"	31 60		
	Kelly & Glassey.	" 12, '15	"	"	"	8 00		
	W. L. Roy.	" 12, '15	Toronto.	"	"	7 30		
	F. H. Schmidt.	" 12, '15	"	"	"	5 65		
	Victoria Vanconver Island Wine Co.	" 12, '15	Victoria.	"	"	26 20		
	Pacific Liquor Co.	" 12, '15	Vancouver.	"	"	14 75		
	M. Cummings.	" 12, '15	Hamilton.	"	"	8 00		
	J. O. Patterson.	" 12, '15	Toronto.	"	"	38 90		
	Canadian Wine Co.	" 12, '15	"	"	"	21 60		
	Nectar Mfg. Co.	" 12, '15	Winnipeg.	"	"	20 20		
	Thos. Jordan.	" 13, '15	Toronto.	"	"	233 00		
	Niagara Falls Wine Co.	" 12, '15	Joliette.	"	"	124 00		
	Magnan & Chevalier.	" 12, '15	"	"	"	714 45		
	Chevalier Poulhot & Co.	" 12, '15	Montreal.	"	"	132 60		
	Niagara Falls Wine Co.	" 12, '15	"	"	"	59 00		
	Hudson & Osali, Ltd.	" 12, '15	"	"	"	7 60		
	T. G. Bright & Co.	" 12, '15	St. Catharines.	"	"	15 00		
	P. H. Throet.	" 12, '15	Montreal.	"	"	25 20		
	Fraser, Viger & Co., Ltd.	" 12, '15	"	"	"	5 20		
	Gillespie & Co.	" 12, '15	"	"	"	40 65		
	Wine & Spirits Vaults, Ltd.	" 12, '15	Winnipeg.	"	"	222 90		
	Buchwald & Gorman.	" 12, '15	"	"	"	3 40		
	T. G. Bright & Co.	" 12, '15	St. Catharines.	"	"	16 00		
	E. J. Butler.	" 12, '15	London.	"	"	11 20		
	Hudson's Bay Co.	" 12, '15	Winnipeg.	"	"	11 80		
	H. Dionne Fils & Co.	" 12, '15	Montreal.	"	"			

SESSIONAL PAPER No. 12

1	A. Allan & Co.	"	12	15	"	92	17 20
	Hudson Helbert & Co., Ltd.	"	12	16	"	92	6 00
	J. B. Lavigne	"	12	13	"	92	6 80
	D. G. Barber	"	12	13	Hamilton	92	5 76
	Fred. B. Herbert	"	12	15	"	92	4 20
	Fraser, Viger & Co., Ltd.	"	12	15	Montreal	92	6 90
	Manitoba Club	"	12	15	"	92	7 20
	Niagara Falls Wine Co.	"	12	15	Toronto	92	2,000 00
	The Horse & Brick Co., Ltd.	"	12	15	Vancouver	92	6 00
	Azima Co.	"	12	15	"	92	103 00
	Pacific Lathing Works Co.	"	12	15	"	92	168 00
	Kwon Man Sang Co.	"	12	15	"	92	45 00
	Mitschen Gieski Kaisha.	"	12	15	"	92	79 20
	Grim Lee Yuen & Co.	"	12	15	"	92	45 00
	Kwang Fung	"	12	15	"	92	24 00
	Nan-shon Gieski Kaisha	"	12	15	"	92	10 00
	P. H. Thivert	"	12	15	Montreal	92	3 80
	Barnett & Breslar	"	12	15	St. Hyacinthe	92	1 15
	L. H. Major & J. Soubliers, Ltd.	"	12	15	Ottawa	92	1 80
	Wine & Spirits Sales Co.	"	12	15	Winnipeg	92	1 20
	Victoria Vancouver Wine Imp't Co.	"	12	15	Victoria	92	96 00
	Mazodiers Club	"	28	15	Montreal	92	0 65
	L. C. Sajept Fish & Cie, Ltd.	Sept	10	15	"	92	425 85
	Stanford Park Wine Co.	Oct	21	15	St. Catharines	92	29 20
	J. Prevot	"	21	15	Montreal	92	2 50
	Wes Bushop	"	21	15	Port Arthur	92	44 20
	Dun H. Ross & Co.	"	21	15	Victoria	92	17 10
	Kelly Glassov, Ltd.	"	21	15	Halifax	92	16 80
	W. J. Shearman	"	21	15	Winnipeg	92	11 60
	Jas. Hougren	"	21	15	Hamilton	92	8 30
	Saskirk Wine & Spirt. Co.	"	21	15	Winnipeg	92	8 00
	Hutchins & Day Co.	"	21	15	"	92	7 45
	Polivanti & Co.	"	21	15	"	92	37 30
	H. Jones & Day Co.	"	21	15	Victoria	92	17 20
	J. D. McKenzie	"	21	15	Brantford	92	56 00
	Norfolk West Supply Co.	"	21	15	Calgary	92	7 60
	R. J. Walsh	"	21	15	Halifax	92	7 90
	Peterboro Liqueur Store.	"	21	15	Peterboro	92	1 80
	Mackin & Lathimour	"	21	15	Moose-Jaw	92	13 05
	A. W. Saults	"	21	15	"	92	11 00
	Prince Albert Liqueur Co., Ltd.	"	21	15	"	92	33 10
	E. R. R. Prangins	"	21	15	"	92	2 10
	J. Mackling	"	21	15	"	92	19 35
	Geary & Co.	"	21	15	"	92	82 00
	Chrysler Pottery	"	21	15	"	92	3 00
	Windsor Commercial Co., Ltd.	"	21	15	"	92	439 35
	S. Fisher	"	21	15	"	92	5 10
	A. Leves	"	21	15	"	92	10 00
	S. Haldal	"	21	15	"	92	11 60
	Seaboardway Hotel	"	21	15	"	92	212 45

No. 15—REFUNDS OF REVENUE—Continued.

EXCISE—Continued.

Articles.	To whom paid.	Date.	Divisions.	Under what Authority Refunded.		Amounts.		Totals.	
				Revised Statutes, Cap.	24, Sec. 92.	¢	cts.	¢	cts.
War Tax—Con.	Chas. E. White.	Oct. 21, '15	Moose-Jaw.	"	"	11	20		
	J. H. Abush.	" 21, '15	"	"	"	2	05		
	Bertin & Webster.	" 21, '15	"	"	"	57	00		
	Braithwaite & Steele.	" 21, '15	"	"	"	1	20		
	J. Maguire & Sons.	" 21, '15	"	"	"	6	25		
	P. H. Green.	" 21, '15	"	"	"	2	40		
	Sutherland & Wate.	" 21, '15	"	"	"	0	40		
	W. Rowson.	" 21, '15	"	"	"	6	00		
	Anglo Canadian Hotels, Ltd.	" 21, '15	"	"	"	81	95		
	G. H. Kingsley.	" 21, '15	"	"	"	4	90		
	Dangerfield & Sons	" 21, '15	"	"	"	33	05		
	J. Hohsels.	" 21, '15	"	"	"	5	15		
	W. G. Pearce.	" 27, '15	"	"	"	25	00		
	Corporal Howard.	Nov. 19, '15	"	"	"	25	00		
	The Stamford Park Wine Co., Ltd.	Dec. 6, '15	St. Catharines.	"	"	341	00		
	R. Watson.	" 6, '15	Brantford.	"	"	18	00		
	Chas. Gaultson.	" 6, '15	"	"	"	27	40		
	E. C. Andrick.	" 6, '15	"	"	"	14	90		
	Jas. McPharland.	" 6, '15	Kingston.	"	"	17	60		
	John F. Mallon.	" 6, '15	Toronto.	"	"	10	20		
	J. B. Milligan.	" 6, '15	"	"	"	7	60		
	J. M. Givin, Ltd.	" 6, '15	"	"	"	8	20		
	Kelly & Glassy.	Dec. 6, '15	Halifax.	"	"	5	60		
	Quality Liquor Store.	" 6, '15	Winnipeg.	"	"	8	20		
	Perelles & Genask.	" 6, '15	"	"	"	26	90		
	Beliveau & Co.	" 6, '15	"	"	"	15	10		
	Selkirk Wine & Spirit Co.	" 6, '15	"	"	"	8	00		
	Belliveau & Coy.	" 6, '15	"	"	"	21	15		
	Hudson's Bay Co.	" 6, '15	Victoria.	"	"	3	50		
	W. Beatty.	" 6, '15	Moose-Jaw.	"	"	2	80		
	Sam Lakofsky.	" 6, '15	"	"	"	2	65		
	Hotel Kennedy.	" 6, '15	"	"	"	15	55		
	H. Broufman.	" 6, '15	"	"	"	15	90		
	The Avenue Hotel.	" 6, '15	"	"	"	7	95		
	J. L. Leman.	" 6, '15	"	"	"	1	00		

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E. Fane	"	"	"	"	92	41 45
W. E. Koser	"	6 15	"	"	92	1 50
Geo. W. Edwards	"	6 15	"	"	92	7 40
Hanaran Hotel Coy., Ltd.	"	6 15	"	"	92	18 66
Chas. Stearns	"	6 15	"	"	92	4 00
Windsor Hotel	"	6 15	"	"	92	7 50
Mooslaw Liquor Co.	"	6 15	"	"	92	1 20
John Klauitz	"	6 15	"	"	92	4 25
Western Trust Co.	"	6 15	"	"	92	33 65
Ben Treasurer Can. Pat. Fund.	Jan.	12 16	Vancouver,	"	92	26 58
Ottawa Terminal Ry. Co.	Jan. 12 16	Vancouver,	"	"	92	50 00
S. Canard & Co.	Feb.	3 16	Ottawa	"	92	1,084 80
The White Star Line	"	3 16	Halifax	"	92	6 00
A. J. White & Co., Ltd.	"	19 16	Montreal	"	92	6 00
McAulay & Powers	"	19 16	Prosscott	"	92	6 20
Marshall Hotel Coy., Ltd.	"	21 16	Mooselaw	"	92	7 70
J. Mueller	"	21 16	"	"	92	44 00
A. A. Chappie	"	21 16	"	"	92	6 00
W. M. MacFayre	"	21 16	"	"	92	4 00
John Sears	"	21 16	"	"	92	7 00
W. Keay	"	21 16	"	"	92	6 00
Robison & Walsh	"	21 16	"	"	92	4 00
M. Duggan	"	21 16	Montreal	"	92	11 40
Quality Lumber Store	"	21 16	Winnipeg	"	92	8 80
W. J. Kelly	"	21 16	Toronto	"	92	8 35
A. P. Robart	"	21 16	"	"	92	9 00
Canadian Lumber Co., Ltd.	"	21 16	"	"	92	7 90
Thos. Bourne	"	21 16	"	"	92	3 59
E. J. Carney	"	21 16	Winnipeg	"	92	39 70
Quality Lumber Store	"	21 16	"	"	92	8 10
W. J. Sheehan	"	21 16	"	"	92	15 00
Indurain & Co.	"	21 16	Ottawa	"	92	17 25
A. S. Peard & Son	"	21 16	Toronto	"	92	32 30
I. O. Patterson	"	21 16	Brantford	"	92	23 00
Isk. Anandall	"	21 16	Peterboro	"	92	22 30
Howe & Son	"	21 16	Toronto	"	92	16 30
J. W. Ryan	"	21 16	Montreal	"	92	7 40
Portland Cement	"	21 16	"	"	92	65 80
Ishtar & Co.	"	21 16	Winnipeg	"	92	99 40
Quality Lumber Store	"	21 16	"	"	92	24 40
The South West & Blythe Co.	"	21 16	Montreal	"	92	12 00
J. H. Gault	"	21 16	Winnipeg	"	92	57 50
Parkman & Cochrane	"	21 16	"	"	92	22 50
W. W. Zoske	"	21 16	"	"	92	35 30
Arthur Smith	"	21 16	Montreal	"	92	6 80
H. Sweeney	March 3 16	"	"	"	92	1,768 31
The B. C. Packers Coy., Ltd.	" 3 16	New Westminster	"	"	92	7 40
A. W. H. Booth	" 3 16	Dawson	"	"	92	
K. F. Parkman	April 7 16	Vancouver	"	"	92	75 00

No. 15.—RETURNS OF REVENUE—Concluded.

EXCISE—Concluded.

Articles.	To whom paid.	Date.	Division.	Under what Authority Refunded.	Amounts.	Totals.
					\$ cts.	\$ cts.
War Tax—Con.	Comsau & Sheeham.....	April 13 '16	St. John.....	Revised Statutes, Cap. 21 Sec. 92.....	87 20	
	White Star Dominion Line .....	" 13 '16	Montreal.....	" 24 " 92.....	5 00	11,761 39
W. & M. Inspection Fees.....	J. W. Costello.....	May 25 '16	Calgary .....	" 24 " 92.....	7 00	7 00
Gas .....	H. Fraser for T. Rork.....	Nov. 22 '16	Peterborough.....	" 21 " 92.....	3 00	3 00
						235,317 26

RECAPITULATION.

EXCISE REFUNDS.

Spirits .....	\$ 38,533 81
Malts .....	179,798 90
Tobacco.....	3,097 07
Cigars.....	107 99
Officer's Salary.....	1,450 00
Sundries .....	558 10
War Tax.....	\$ 223,545 87
W. & M.....	11,761 39
Gas.....	7 00
	3 00
Grand Total.....	\$ 235,317 26

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.

DR. No. 16.—DEPARTMENTAL EXPENDITURES FOR 1915-1916. Cr.

Paid by sundry persons, April 1, 1915.	Disbursed by persons, April 1, 1915.			Deductions for			Totals.	Salaries.	Contingen- ctes.	Due by sundry persons, March 31, 1916.	Totals.
	\$	cts.	cts.	\$	cts.	cts.					
	7,000 00						7,000 00	7,000 00			7,000 00
	117,583 17			491 41	754 49	4,575 21	123,404 28	123,404 28			123,404 28
	438 73						438 73	438 73			438 73
	4,037 14						4,037 14	4,037 14			4,037 14
	429 88						429 88	429 88			429 88
	995 80						995 80	995 80			995 80
	3,574 03						3,574 03	3,574 03			3,574 03
	4,471 21						4,471 21	4,471 21			4,471 21
	5,850 26						5,850 26	5,850 26			5,850 26
16 06							16 66			16 66	16 66
18 06	144,389 22			491 41	754 49	4,575 21	\$ 150,217 99	\$ 130,404 28	\$ 19,797 05	\$ 16 66	\$ 150,217 99

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.

WEIGHTS AND MEASURES, GAS, ELECTRIC LIGHT AND LAW STAMPS.

No. 17.—STATEMENT showing amount of Revenue accrued during the year ended March 31, 1916.

Dr.

	Weights and Measures Stamps.		Gas Stamps.		Electric Light Stamps.		Law Stamps.			Totals.				
	\$	cts.	\$	cts.	\$	cts.	Supreme Court.	Exchequer Court.	Territorial Court.					
The amount of stamps in the hands of distributors, April 1, 1915.....	157,449	40	77,188	00	126,739	10	53	05	88	00	7,008	20	368,525	75
To stamps issued by the Inland Revenue Department during the year ended March 31, 1916.....	107,125	00	45,885	00	53,710	00	2,900	00	6,197	75	2,000	00	217,817	75
Totals .....	264,574	40	123,073	00	180,449	10	2,953	05	6,285	75	9,008	20	586,343	50

Cr.

By amount of stamps destroyed and returned by distributors.....	104	55	4,263	55	3	00	...	...	105	00	...	...	4,311	10
By stamps remaining in the hands of distributors, March 31, 1916.....	153,739	05	72,834	65	110,394	35	149	05	...	...	6,472	80	343,694	90
By balance being the revenue during the year ended March 31, 1916.....	110,730	80	46,034	80	70,051	75	2,804	00	6,180	75	2,535	40	238,337	50
Totals .....	264,574	40	123,073	00	180,449	10	2,953	05	6,285	75	9,008	20	586,343	50

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.



WEIGHTS AND MEASURES, 1915-16.

DR.

No. 18 (A).—INSPECTION DIVISIONS in Account with Revenue.

Cr.

Balances due by Inspectors, April 1, 1915.		Balances due by Inspectors, March 31, 1916.		Deposited to Credit of Receiver (General).	Returned Damaged Stamps.	Divisions.	Totals.	Sizures and Penalties.	Other Receipts.	Stamps issued to Inspectors.	Totals.	Totals.	Totals.
Stamps on hand.	Cash on hand.	Stamps on hand.	Cash on hand.										
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
4,345 85		7,749 25	0 80	3,398 80		Halifax	11,198 85		18 00	6,830 00	5 00	17,035 50	17,035 50
6,272 45	108 10	6,388 20		10,642 30		Montreal	17,035 50		2 00	10,645 00		17,035 50	17,035 50
1,067 00		414 60		3,489 45		Quebec	3,904 05			2,895 00		3,904 05	3,904 05
2,801 75		8,173 30		9,777 45		Sherbrooke	18,256 75			5,355 00		18,256 75	18,256 75
8,080 30		6,930 85		7,600 15		St. Hyacinthe	14,5 4 30		15 00	7,820 00		14,5 4 30	14,564 30
8,713 15		5,457 15		11,806 00	33 30	Three Rivers	17,353 15		80 00	10,338 00		17,353 15	17,353 15
31,329 50	108 10	35,471 35	0 80	46,774 15	33 30	Ontario	82,282 60	102 00	18 00	47,115 00		82,282 60	82,282 60
65,128 10		57,506 15	1 00	12,922 95		Montreal	70,430 10		2 00	5,309 00		70,430 10	70,430 10
3,870 70		4,220 90		5,608 65		Quebec	9,829 70	5 00		5,903 00		9,829 70	9,829 70
4,770 50		6,742 20		5,678 30	0 15	Sherbrooke	12,420 50			7,650 00		12,420 50	12,420 50
4,301 00		2,834 30		1,697 60		St. Hyacinthe	4,531 90			150 00		4,531 90	4,531 90
3,213 20		2,358 25		2,569 95		Three Rivers	4,358 20			1,745 00		4,358 20	4,358 20
51,809 40		73,661 80	1 00	28,507 45	0 15	Quebec	102,170 40	5 00	2 00	29,819 00		102,170 40	102,170 40
605 70		594 55		2,319 15		St. John, N.B.	2,613 70			2,519 00		2,613 70	2,613 70
3,207 70	36 00	2,603 35	36 00	4,189 35		Halifax	3,828 70			253 00		3,828 70	3,828 70
2,800 00		2,707 85	0 50	1,719 30		Pictou	4,127 65		8 00	1,500 00		4,127 65	4,127 65
6,267 30	36 00	5,311 20	36 50	2,908 65		Nova Scotia	8,256 35		8 00	1,833 00		8,256 35	8,256 35
608 20		502 50	2 50	343 30		Charlottetown, P.E.I.	1,248 30			600 00		1,248 30	1,248 30
12,864 70		6,330 70		9,640 55	0 45	Winnipeg, Man.	15,971 70			3,000 00		15,971 70	15,971 70

WEIGHTS AND MEASURES, 1915-16.  
No. 18 (A.)—INSPECTION DIVISIONS in Account with Revenue.

Cr.

Balances due by Inspectors, April 1, 1914.		Stamps issued to Inspectors.	Other Receipts.	Seizures and Penalties.	Totals.	Divisions.	Damaged Stamps.	Deposited to Credit of Receiver General.	Balance Due by Inspectors, March 31, 1916.		Totals.		
Stamps on hand.	Cash on hand.								Stamps on hand.	Cash on hand.			
\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.		
7,756	25	8,940	00		8,940	Regina.....	64	1,845	55	7,994	45	8,940	00
7,756	25	3,395	00		17,333	Saskatoon.....	64	9,543	85	7,714	65	17,333	40
		18,535	00		26,293	Saskatchewan.....	64	11,389	40	14,839	10	26,293	40
5,286	20	7,950	00	98	13,334	Calgary, Alta.....	4	5,875	50	7,454	30	13,334	80
2,156	85	1,585	00		3,741	Nelson.....	1	1,043	30	2,697	40	3,741	85
3,963	40	2,875	00		7,838	Vancouver.....		2,185	45	4,652	95	6,838	40
6,120	25	4,460	00		10,580	British Columbia.....	1	3,228	75	7,350	35	10,580	25
1,902	75				1,902	Dawson, Yukon.....		82	55	1,820	20	1,902	75
157,449	40	107,125	00	30	264,954	Total.....	104	111,069	85	153,739	05	264,954	25
				205	1,170	Milk test glassware.....						1,170	26
					266,124	Less Refunds as per Statement No. 15.....						266,124	51
				7	7	Grand total.....	104	112,233	11	153,739	05	266,117	51

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.

SESSIONAL PAPER No. 12

WEIGHTS AND MEASURES, 1915-16.

No. 18 (B).—DEPUTY INSPECTORS of Old Divisions in Account with Revenue.

DR.

CR.

Balances due April 1, 1915. — Cash on hand.		Totals.	Divisions.	Balances due March 31, 1916. — Cash on hand.	Totals.
§ cts.	§ cts.	§ cts.		§ cts.	§ cts.
87 10	87 10	87 10	..... Essex, Ont.....	87 10	87 10
5 62	5 62	5 62	..... Hull, Que.....	5 62	5 62
92 72	92 72	92 72		92 72	92 72

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

WEIGHTS AND MEASURES, 1915-1916.

Dr.

No. 19 (A).—Inspection Divisions in Account with Expenditures.

Cr.

Balances due by Inspectors April 1, 1915.	Amounts received from Department to meet expenditures.		Deductions from Salaries for		Totals.	Divisions.	Expenditures authorized by the Department.					Balances due by Inspectors, March 31, 1916.
	§ cts.	§ cts.	Superannuation.	Insurance.			Guarantee.	Salaries.	Special Assistance.	Rent.	Travelling Expenses.	
5,553 86	9 00	5,562 86				Belle-ville.....	3,499 68	78 00	622 00	1,114 32	248 86	5,562 86
10,411 38	16 20	10,427 58				Hamilton.....	8,069 52			2,144 23	183 83	10,427 58
4,431 69	7 20	4,461 89				Kingston.....	2,639 88	675 20		1,925 16	60 65	4,461 89
9,863 05	11 32	9,874 37				London.....	5,455 21	878 03	144 00	3,174 83	222 30	9,874 37
15,774 84	14 45	15,822 29				Ottawa.....	6,580 78	7,393 46		1,723 36	124 69	15,822 29
10,581 05	14 10	10,619 15				Toronto.....	7,749 81	949 95		1,831 22	88 17	10,619 15
56,638 87	57 00	56,768 14				Ontario.....	34,084 88	9,974 64	766 00	11,014 12	928 50	56,768 14
19,810 03	6 99	19,839 47				Montreal.....	12,543 76	3,600 96	975 01	2,473 91	245 83	19,839 47
15,837 13	38 40	15,983 38				Quebec.....	5,374 80	3,857 34	400 00	3,179 85	171 39	15,983 38
5,711 56	45 15	5,762 41				Sherrbrooke.....	2,299 86	1,999 39	375 00	1,006 39	81 30	5,762 41
5,001 80	6 60	5,008 40				St. Hyacinthe.....	2,569 96	1,665 67		729 67	43 19	5,008 40
5,764 32	66 90	5,836 32				Three Rivers.....	2,249 88	1,939 80		1,475 56	111 08	5,836 32
52,124 84	45 39	52,429 98				Quebec.....	28,038 26	13,123 03	1,750 01	8,865 38	652 70	52,429 98
5,276 20		5,287 00				St. John, N.B.....	4,749 84	32 00		410 66	94 50	5,287 00
4,301 39	5 70	4,307 09				Halifax.....	1,830 03	1,259 92	597 36	587 47	122 31	4,307 09
3,943 11	27 96	3,978 30				Pictou.....	3,199 80	48 00		651 60	78 90	3,978 30
8,244 53	27 96	8,285 39				Nova Scotia.....	5,029 83	1,307 92	597 36	1,239 47	201 21	8,285 39
2,206 99	5 40	2,212 39				Charlottetown, P.E.I.....	1,949 88	79 35		167 43	15 73	2,212 39
12,029 53	13 87	12,043 40				Winnipeg, Man.....	6,576 46	924 93	866 64	3,358 65	316 72	12,043 40
7,903 33	31 92	7,949 85				Calgary, Alberta.....	4,599 96	18 00	240 00	2,834 07	257 82	7,949 85
3,414 06	2 56	3,416 62				Regina.....	1,283 36	1,005 10		819 81	308 41	3,416 62
12,752 24	7 80	12,763 74				Saskatoon.....	3,966 56	3,388 78	180 00	5,032 14	192 56	12,763 74

SESSIONAL PAPER No. 12

3 70	16,166 34	10 26	16,180 36	Saskatchewan	5,249 86	4,393 88	180 00	5,851 95	500 97	3 70	16,180 36
	4,178 26	3 60	4,180 19	Nelson	1,249 92	825 00	180 00	1,811 22	111 05		4,180 19
	3 164 8	7 20	3,128 21	Vancouver	2,399 88	40 00		241 15	444 18		3,128 21
	7,241 44	10 80	7,308 40	British Columbia	3,649 80	865 00	180 00	2,058 37	555 23		7,308 40
	1 039 60	3 00	1,039 60	Dawson	999 96				39 64		1,039 60
	97 48		97 48	Chief Inspector					97 48		97 48
	2,122 54	3 00	2,125 54	Inspector of Elevator Scales	1,500 00			447 95	177 59		2,125 54
3 70	171,003 05	213 70	171,227 53	General Contingencies	96,428 73	30,719 35	4,490 01	36,247 65	3,838 09	3 70	171,227 53
	2,416 79		2,416 79	Printing					2,416 79		2,416 79
	2,557 61		2,557 61	Stationery					2,557 61		2,557 61
	485 59		485 59	Provisional Allowance					485 59		485 59
	3,493 91		3,493 91	International Bureau W. & Measures					3,493 91		3,493 91
	436 10		436 10	Grand Totals	96,428 73	30,719 35	4,490 01	36,247 65	436 10		436 10
3 70	181,483 08	213 60	181,117 56		96,428 73	30,719 35	4,490 01	36,247 65	13,228 12	3 70	181,117 56

INLAND REVENUE DEPARTMENT,

OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.

## WEIGHTS AND MEASURES, 1915-16.

DR. No. 19 (B).—OLD INSPECTION DIVISIONS in Account with Expenditures. CR.

Balances due by sundry persons, April 1, 1915.	Totals.	Divisions.	Balances due by sundry persons, March 31, 1916.	Totals.
§ cts.	§ cts.		§ cts.	§ cts.
39 56	39 56	Essex	39 56	39 56
33 53	33 53	Waterloo	33 53	33 53
73 09	73 09	Ontario	73 09	73 09
0 33	0 33	Drummond	0 33	0 33
41 45	41 45	Laval	41 45	41 45
26 88	26 88	Montmorency	26 88	26 88
27 51	27 51	Richelieu	27 51	27 51
96 17	96 17	Quebec	96 17	96 17
24 00	24 00	Lunenburg, Nova Scotia	24 00	24 00
193 26	193 26	Totals	193 26	193 26

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.J. U. VINCENT,  
Deputy Minister.

SESSIONAL PAPER No. 12

GAS INSPECTION, 1915--16.

No. 20.—INSPECTION DISTRICTS in Account with Revenue.

Dr.

Cr.

Balances due by Inspectors April 1, 1915. — Stamps on Hand.	Stamps issued to Inspectors	Totals.	Districts.	Returned Damaged Stamps.	De. posited to Credit of Receiver General.	Balances due by Inspectors Mar. 31, 1916. — Stamps on Hand.	Totals.
\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.	\$ cts.
3,311 65	600 00	3,911 65	Belleville .....	90 00	1,612 00	2,209 65	3,911 65
3,516 20	6,600 09	10,116 29	Hamilton .....	298 50	6,895 45	2,922 25	10,116 20
7,072 50	4,800 09	11,872 59	London .....	540 00	7,546 15	3,786 35	11,872 50
2,712 35	4,625 00	7,337 35	Ottawa .....		2,635 65	4,701 70	7,337 35
3,947 50	15,225 00	19,172 50	Toronto .....	537 00	11,347 90	7,287 60	19,172 50
20,560 20	31,850 00	52,410 20	Ontario .....	1,465 50	30,037 15	20,907 55	52,410 20
3,122 00	6,200 00	9,322 00	Montreal .....		7,470 45	1,851 55	9,322 00
2,050 90	300 00	2,350 90	Quebec .....	135 50	870 30	1,344 10	2,350 90
820 80		820 80	Sherbrooke .....	24 00	186 10	610 70	820 80
652 00		652 00	t. Hyacinthe .....	122 55	110 60	418 85	652 00
6,645 70	6,500 00	13,145 70	Quebec .....	28 65	8,637 45	4,225 20	13,145 70
1,655 80	500 00	2,155 80	St. John, N.B. ....	57 60	614 90	1,483 90	2,155 80
804 60	85 00	889 60	Halifax, N.S. ....		560 75	328 85	889 60
1,363 65		1,363 65	Charlottetown, P.E.I.	70 50	75 10	1,218 05	1,363 65
34,431 05	1,290 00	35,631 05	Winnipeg, Man. ....	211 50	2,567 45	32,852 10	35,631 05
7,005 20	1,300 00	8,305 20	Calgary .....	100 50	1,178 85	7,025 85	8,305 20
2,015 50		2,015 50	Edmonton .....	2,015 50		2,015 50	2,015 50
9,020 70	1,300 00	10,320 70	Alberta .....	2,116 00	1,178 85	7,025 85	10,320 70
1,798 40	3,700 00	5,498 40	Vancouver .....		1,804 75	3,093 65	5,498 40
907 90	750 00	1,657 90	Victoria .....		558 40	1,099 50	1,657 90
2,706 30	4,450 00	7,156 30	British Columbia ..		2,363 15	4,793 15	7,156 30
77,188 00	45,885 00	123,073 00	Totals .....	4,203 55	46,034 80	72,834 00	123,073 00
		3 00	Less refunds .....		3 00		3 00
		123,073 00	Grand Totals .....	4,203 55	46,031 80	72,834 00	123,070 00

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.

Dr.

No. 21.—INSPECTION DISTRICTS IN

Balance due by Inspectors, April 1, 1915.	Amounts received from Department to meet expendi- tures.	Deductions from Salaries for			Totals.	Districts.
		Super- annuation.	Retirement.	Guarantee.		
§ cts.	§ cts.	§ cts.	§ cts.	§ cts.	§ cts.	
	724 93	1 92		1 80	728 65	.. Belleville. ....
	5,773 48			10 80	5,784 28	.. Hamilton. ....
	6,249 02			15 15	6,264 17	.. London. ....
	8,107 33			10 26	8,117 59	.. Ottawa. ....
	12,480 00	7 92	90 00	25 05	12,602 97	.. Toronto. ....
	33,334 76	9 84	90 00	63 06	33,497 66	.. Ontario. ....
	8,516 95			14 76	8,531 71	.. Montreal. ....
	496 32			3 60	499 92	.. Quebec. ....
	490 56	3 96		5 40	499 92	.. Sherbrooke. ....
	9,503 83	3 96		23 76	9,531 55	.. Quebec. ....
	98 16			1 80	99 96	.. Fredericton. ....
	2,226 45			4 65	2,231 10	.. St. John. ....
	2,324 61			6 45	2,331 06	.. New Brunswick. ....
	2,898 12	1 92		7 20	2,907 24	.. Halifax. ....
12 88					12 88	.. Pictou. ....
12 88	2,898 12	1 92		7 20	2,920 12	.. Nova Scotia. ....
	496 32			3 60	499 92	.. Charlottetown, P. E. I.
	6,892 61			12 60	6,905 21	.. Winnipeg, Man. ....
	332 13				332 13	.. Calgary, Alberta. ....
	27 00				27 00	.. Vancouver. ....
	1,504 78			5 40	1,510 18	.. Victoria. ....
	1,531 78			5 40	1,537 18	.. British Columbia. ....
	430 05				430 06	.. Insp. of Eastern Dom.
	735 54				735 54	.. " Western "
12 88	58,479 75	15 72	90 00	122 07	58,720 43	.. General Contingencies.
2 90 00	1,991 09				2,191 09	.. Printing. ....
	1,458 04				4,458 04	.. Stationery. ....
	1,098 90				1,098 90	.. Stationery. ....
212 88	66,027 79	15 72	90 00	122 07	66,468 46	.. Grand Total. ....

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.



SESSIONAL PAPER No. 12  
INSPECTION, 1915-16

ACCOUNT WITH EXPENDITURES.

CR.

Expenditures authorized by the Department.					Balances due by Inspectors, March 31, 1916.	Totals.
Salaries.	Special. Assistance.	Rent.	Travelling Expenses.	Sundries.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
99 96	81 00	200 00	272 25	75 44		728 65
3,949 92	958 00	120 00	570 15	186 21		5,784 28
5,493 68	84 00		557 55	128 94		6,264 17
4,599 72	3,033 02	429 90		54 95		8,117 59
11,724 48	180 00	165 00	269 80	263 69		12,602 97
25,867 76	4,336 02	914 90	1,669 75	709 23		33,497 66
7,899 84	66 00	400 00	58 20	107 67		8,531 71
499 92						499 92
499 92						499 92
8,899 68	66 00	400 00	58 20	107 67		9,531 55
99 96						99 96
1,988 60	20 00		179 40	43 10		2,231 10
2,088 56	20 00		179 40	43 10		2,331 06
2,399 88		507 36				2,907 24
					12 88	12 88
2,399 88		507 36			12 88	2,920 12
499 92						499 92
6,749 88				155 33		6,905 21
	61 32		153 65	117 16		332 13
				27 00		27 00
1,499 88			10 30			1,510 18
1,499 88			10 30	27 00		1,537 18
			407 30	22 76		430 06
	166 66		485 30	83 58		735 54
48,005 56	4,650 00	1,822 26	2,963 90	1,265 83	12 88	58,720 43
				1,991 09	200 00	2,191 09
				4,458 04		4,458 04
				1,098 90		1,098 90
48,005 56	4,650 00	1,822 26	2,963 90	8,813 86	212 88	66,468 46

J. U. VINCENT,  
Deputy Minister.

## ELECTRIC LIGHT INSPECTION 1915-1916.

## No. 22.—INSPECTION DISTRICTS in Account with Revenue.

DR.

CR.

Balances due by Inspectors April 1, 1915		Stamps issued to Inspectors	Totals.	Districts.	Returned Damaged Stamps.	Deposited to Credit of Receiver General.	Balances due by Inspector Mar. 31, 1916	Totals.					
Stamps on Hand.							Stamps on hand.						
§	cts.	§	cts.	§	cts.	§	cts.	§	cts.				
6,018	40	1,800	00	7,818	40	Belleville .....	2,186	30	5,632	05	7,818	40	
1,770	70	300	00	2,070	70	Fort William .....	518	35	1,552	35	2,070	70	
2,686	05	4,450	00	7,136	05	Hamilton .....	5,476	95	1,659	10	7,136	05	
6,004	70	4,700	00	10,704	70	London .....	6,715	35	3,989	35	10,704	70	
2,082	30	6,750	00	8,832	30	Ottawa .....	4,771	95	4,060	35	8,832	30	
.....	.....	3,280	00	3,280	00	Sudbury .....	565	95	2,714	05	3,280	00	
7,064	80	8,930	00	15,994	80	Toronto .....	12,448	20	3,546	50	15,994	80	
25,626	95	30,210	00	55,836	95	Ontario .....	32,683	20	23,153	75	55,836	95	
11,367	40	7,950	00	19,317	40	Montreal .....	11,219	20	8,098	20	19,317	40	
1,100	45	1,950	00	3,050	45	Quebec .....	1,907	65	1,142	80	3,050	45	
1,568	95	.....	.....	1,568	95	Sherbrooke .....	832	50	736	45	1,568	95	
1,570	15	400	00	1,970	15	Sr. Hyacinthe .....	3 00	900	60	1,066	55	1,970	15
651	70	1,100	00	1,751	70	Three Rivers .....	956	00	795	79	1,751	70	
16,258	65	11,400	00	27,658	65	Quebec .....	3 00	15,815	95	11,839	70	27,658	65
760	70	1,940	00	2,700	70	St. John, N. B. ....	.....	1,582	65	1,118	05	2,700	70
1,811	25	2,050	00	3,861	25	Halifax, N. S. ....	.....	2,224	60	1,636	65	3,861	25
1,897	05	.....	.....	1,897	05	Charlottetown, P. E. I. ....	.....	165	39	1,731	75	1,897	05
49,869	60	.....	.....	49,869	60	Winnipeg, Man. ....	.....	3,952	70	45,916	90	49,869	60
6,916	75	.....	.....	6,916	75	Regina, Sask. ....	.....	2,304	70	4,612	05	6,916	75
8,940	50	550	00	9,490	50	Calgary .....	.....	2,129	70	7,360	80	9,490	50
5,970	80	.....	.....	5,970	80	Edmonton .....	.....	890	40	5,080	50	5,970	80
14,941	40	550	00	15,461	40	Alberta .....	.....	3,020	10	12,441	30	15,461	40
4,698	20	6,000	00	10,698	20	Vancouver .....	.....	6,948	95	3,749	25	10,698	20
2,638	55	1,560	00	4,198	55	Victoria .....	.....	1,353	60	2,844	95	4,198	55
7,336	75	7,560	00	14,896	75	British Columbia ..	.....	8,302	55	6,594	20	14,896	75
1,350	00	.....	.....	1,350	00	Dawson .....	.....	.....	.....	1,350	00	1,350	00
126,739	10	53,710	00	180,449	10	Totals .....	3 00	70,051	75	110,394	35	180,449	10
.....	.....	400	00	400	00	Export of Electric Power Licenses .....	.....	400	00	.....	.....	400	00
.....	.....	110	50	110	50	Electrical Standard Laboratory Fees .....	.....	110	50	.....	.....	110	50
.....	.....	180,959	10	180,959	10	Grand Totals .....	3 00	70,562	25	110,394	35	180,959	10

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916J. U. VINCENT,  
Deputy Minister.

ELECTRIC LIGHT INSPECTION, 1915-1916.  
No. 23.—ACCOUNT WITH EXPENDITURES.

Cr.

Amount received from Department Expenditures	Induction from salaries for		Totals.	Expenditure authorized by the Department.						Totals.
	Rate	Guarantee		Salaries.	Special Assistance	Rent.	Travelling Expenses.	Sundries.	Balance due by Inspectors, March 31, 1916.	
4,296 74	4 95		2,346 73	1,930 45	36 00		365 40	14 88		2,346 73
1,877 09	3 00		1,880 00	1,339 92	20 00		183 35	77 42		1,680 69
529 80			529 80				539 80			539 80
724 58			724 55				533 85	125 70		724 55
664 80			754 90		75 00		554 90			554 90
729 30	1 30		724 00				307 80	40 80		731 60
957 64			827 64	386 09			845 75	51 89		887 64
1,428 20	1 80		1,425 00	1,425 00						1,425 00
8,037 56	10 74		8,054 00	5,141 46	131 00		3,350 85	310 69		8,931 00
1,859 72			1,959 72				148 95	35 75		1,950 72
3,352 90			3,352 90				2,276 63	600 00		3,356 69
344 13			181 11				175 61	8 50		184 11
820 75	3 00		829 05	550 00			276 05	3 00		829 05
601 05	3 65		604 67	490 92			195 00	15 80		605 67
7,108 64	6 00		7,205 54	1,049 92	4,042 65		989 36	328 61		7,245 54
962 61			960 61							960 61
1,203 27			1,203 27		12 00		265 12	26 49		1,305 61
124 77			124 77		60 00		1,033 50	271 77		1,365 27
1,377 06			1,377 06		60 00		41 95	22 82		1,474 77
2,678 44	4 65		2,681 00				201 70	775 96		1,577 66
1,713 54	3 66		1,719 41		21 00		361 45	98 64		2,081 09
6,007 28	8 28		6,000 00				343 65	105 80		1,719 41
					21 00		675 10	204 44		4,400 50

## ELECTRIC LIGHT INSPECTION, 1915-1916.

## No. 23.—ACCOUNT WITH EXPENDITURES.

DR.

CR.

Amount received from Department to meet Expenditure	Deduction from salaries for		Totals.	Districts.	Expenditure authorized by the Department.					Totals.	
	Retirement.	Guarantee.			Salaries.	Special Assistance	Rent.	Travelling Expenses.	Sundries.		Balance due by Inspectors, 31, 1916.
\$ cts.	\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
4,357 31	9 96	5 40	4,362 71	..... <i>Regina, Sask.</i> .....	2,499 96	.....	1,680 00	182 75	.....	4,362 71	
8,041 02	9 96	14 40	8,065 38	..... <i>Vancouver</i> .....	6,599 76	.....	309 53	256 09	.....	8,065 38	
255 58	.....	.....	255 58	..... <i>Victoria</i> .....	48 00	.....	123 50	84 08	.....	255 58	
8,296 60	9 96	14 40	8,320 96	..... <i>British Columbia</i> .....	6,599 76	.....	433 03	340 17	.....	8,320 96	
496 32	.....	3 60	499 92	..... <i>Dawson</i> .....	499 92	.....	.....	.....	.....	499 92	
376 02	.....	.....	376 02	..... <i>Chief Electrical Engineer</i> .....	.....	.....	4 00	372 02	.....	376 02	
90 25	.....	.....	90 25	..... <i>Inspector of Eastern Dominion</i> .....	.....	.....	82 55	5 00	.....	97 25	
3,932 37	.....	3 60	3,935 97	..... <i>Inspector of Western Dominion</i> .....	2,599 92	.....	833 30	461 50	.....	3,935 97	
41,428 33	9 96	58 89	41,497 18	..... <i>Totals for Districts, etc.</i> .....	21,890 90	6,107 95	1,395 00	3,302 22	2 70	41,497 18	
13,512 29	.....	.....	13,512 29	..... <i>General contingencies</i> .....	.....	.....	.....	13,512 29	.....	13,512 29	
98 75	.....	.....	98 75	..... <i>Printing</i> .....	.....	.....	.....	98 75	.....	98 75	
141 40	.....	.....	141 40	..... <i>Stationery</i> .....	.....	.....	.....	141 40	.....	141 40	
400 00	.....	.....	400 00	..... <i>International Electro technical Commission</i> .....	.....	.....	.....	400 00	.....	400 00	
2,152 35	.....	.....	2,152 35	..... <i>Provincial Allowance</i> .....	.....	.....	.....	2,152 35	.....	2,152 35	
44 10	.....	.....	44 10	..... <i>Export of Electric Power</i> .....	.....	.....	.....	44 10	.....	44 10	
57,777 22	9 96	58 89	57,846 07	..... <i>Grand Total</i> .....	21,890 90	6,107 95	1,395 00	19,651 11	2 70	57,846 07	

J. U. VINCENT,  
Deputy Minister.INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

No. 24.—STATEMENT showing the Amounts voted and the Expenditures for each service for the year ended March 31, 1916.

Services.	Grants.		Expenditures.		Over Expenditures.		Under Expenditures.		
	§	cts.	§	cts.	§	cts.	§	cts.	
Minister's salaries.....	7,000	00	7,000	00					
Departmental salaries.....	144,312	50	123,404	28			20,908	22	
"    contingencies.....	20,000	00	19,797	05				202	
Excise salaries.....	570,825	00	491,536	90			79,488	10	
"    contingencies.....	130,000	00	130,171	43		171	43		
War Tax contingencies.....	175,000	00	47,484	76			127,515	24	
Special War Act.....	6,723	40	6,723	40					
Duty pay at large distilleries and other factories.....	15,000	00	13,881	16			1,118	84	
"    other than special survey.....	1,500	00	1,400	00			100	00	
Preventive service salaries and contingencies.....	19,000	00	17,243	23			1,756	77	
Tobacco stamps.....	130,000	00	83,512	95			46,487	05	
Excise commission to customs officers.....	5,000	00	3,140	89			1,859	11	
Tobacco stamps Commission.....	100	00					100	00	
Provisional allowance, Excise.....	11,000	00	10,042	04			957	96	
"    "    Weights and Measures.....	4,000	00	3,493	91			506	09	
"    "    Gas and Electric Light.....	4,000	00	2,152	35			1,847	65	
Methylated Spirits contingencies.....	110,000	00	99,460	41			10,539	59	
Minor expenditure.....	500	00	176	65			323	35	
Weights and Measures, salaries.....	112,600	00	96,428	73			16,171	27	
"    "    contingencies.....	101,000	00	80,755	12			20,244	88	
Gas and Electric Light, salaries.....	83,150	00	69,596	46			13,553	54	
"    "    contingencies.....	65,000	00	51,606	04			13,393	96	
Adulteration of Food, salaries and contingencies.....	51,000	00	43,315	81			7,684	19	
Export of Electric Power.....	1,000	00	44	10			955	90	
International Bureau of Weights and Measures.....	800	00	436	10			363	90	
International Electro-Technical Commission.....	400	00	400	00					
Proprietary or Patent Medicines.....	1,500	00	1,220	05			270	95	
Total.....	1,775,410	90	1,404,532	82		171	43	371,049	51

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*



SESSIONAL PAPER No. 12

<p>Glassware 45 7 at 20c., 88 14 at 21c., 97 51 at 22c., 46 3 at 24c., 46 2 at 25c., 46 3 at 26c., 47 5 at 31c., 46 1 at 32c., 56 2 at 33c. (less returns) \$7 50</p> <p>To Barrels, 1,562 at \$4; Drums, 398 at \$10</p> <p>Special assistance 1,081 23</p> <p>Freight 3,493 50</p> <p>Salaries 1,126 89</p> <p>Printing 11 30</p> <p>Stationery 10 48</p> <p>Loss cartage and freights</p> <p>To other expenses as follows—                  Salaries paid from Civil Government Vote                  Salaries paid from Civil Government Contin-                  (contingent)                  Salary of J. B. Larocque, replacing a French resur-                  vant                  Salary as before of J. B. Champlacne</p> <p>Methylated spirits manufactured during the                  year—14,025 45 gallons</p>	<p>140 62</p> <p>83,644 68</p> <p>10,348 00</p> <p>5,723 49</p> <p>99,716 17</p> <p>255 76</p> <p>99,460 41</p> <p>5,359 60</p> <p>637 50</p> <p>785 00</p> <p>600 00</p> <p>7,372 50</p> <p>118,800 20</p>	<p>Barrels, 168 at \$4; Drums, 11 at \$10</p> <p>Stock on hand March 31, 1916.                  Grain Alcohol 6,740 26 Proof gal. at 40 cents...                  Wood Alcohol 1,213 31 Std. gal. at 87 3/4 cents...                  Methylated Spirits, Special 212 34 Std. gals.                  at 50 cents.....                  Methylated Spirits, Special 662 99 Std. gals.                  at 85 cents.....                  Barrels, 144 at \$4; Drums, 2 at \$10.....</p> <p>Grand Total.....                  By Profit and Loss.....</p> <p>Alcohol used in manufacture 161,044 11 Proof gal.                  Wood Naphthia used in manufacture 31,937 Proof gal.</p>	<p>782 00</p> <p>2,696 10</p> <p>1,061 65</p> <p>106 17</p> <p>563 54</p> <p>396 00</p> <p>5,023 46</p> <p>116,869 81</p> <p>1,930 39</p> <p>118,800 20</p>
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INLAND REVENUE DEPARTMENT,  
 (OTTAWA, JULY 1, 1916.)

J. U. VINCENT,  
 Deputy Minister.





**APPENDIX A.**

**STATISTICS**

## No. 1.—RETURN of Manufactures for

Divisions.	Licenses.		Materials Taken for Use.				
	No.	Fees.	Grain.				
			Malt.	Indian Corn.	Rye.	Oats.	Wheat.
		\$	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Belleville, Ont. ....	1	250	908,003	13,464,710	904,906		
Guelph " .....	1	250	61,920	900,535	234,665	6,880	
Hamilton " .....	1	250	50,960	1,019,200	87,360	7,280	
Perth " .....	3	625	5,845				
Prescott " .....	1	250	132,526	2,710,098	423,091	15,120	
Toronto " .....	2	500	310,891	4,996,800	822,259	86,750	
Windsor " .....	1	250	365,950	6,268,800	1,192,450	53,100	
Totals .....	10	2,375	1,866,095	29,360,143	3,664,731	169,130	
Joliette, Que. ....	1	250	2,920,800	2,668,968	3,168,602		
Montreal " .....	2	500					
St. Hyacinthe " .....	2	375	76,960	976,980	99,550		
Totals .....	5	1,125	2,997,760	3,645,948	3,268,152		
Vancouver, B C .....	1	250					
Grand Totals .....	16	3,750	4,863,855	33,006,091	6,932,883	169,130	

## No. 2.—COMPARATIVE Statement of Manufactures for

1915.							
	No.	Fees.	Malt.	Indian Corn.	Rye.	Oats.	Wheat.
		\$	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Ontario .....	10	2,500	3,950,309	56,682,138	10,972,897	574,059	4,620
Quebec .....	3	750	2,747,042	4,223,010	2,855,648		
British Columbia .....	1	250	63,991		20,890	8,015	1,176,350
Totals .....	14	3,500	6,761,342	60,905,148	13,859,435	582,074	1,180,970
1916.							
Ontario .....	10	2,375	1,866,095	29,360,143	3,664,731	169,130	
Quebec .....	5	1,125	2,997,760	3,645,948	3,268,152		
British Columbia .....	1	250					
Totals .....	16	3,750	4,863,855	33,006,091	6,932,883	169,130	

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

SPIRITS.

the Fiscal Year ended March 31, 1916.

Total Grain.	Molasses.	Used in Spirits Manufactured.		Proof Spirits Manufactured.	Duty Collected ex-manu- factory, on Deficiencies and Assessments.		Total Duty Collected ex-manu- factory, in- cluding License Fees.
		Grain.	Molasses.		Galls.	\$ cts.	
Lbs.	Lbs.	Lbs.	Lbs.	Galls.	Galls.	\$ cts.	\$ cts.
15,277,619	3,334,166	14,933,219	3,334,166	1,125,308 31			250 00
1,204,000		1,316,000		81,730 82	202 93	487 03	737 03
1,164,800		1,254,400		76,626 12	809 14	1,941 94	2,191 94
5,845		9,845		534 96	54 32	131 45	756 45
3,280,835		3,275,235		199,063 65			250 00
6,216,700		6,714,700		420,632 46	346 63	831 91	1,331 91
7,880,300		8,350,700		497,261 92	1,921 61	4,611 86	4,801 86
35,060,099	3,334,166	33,854,099	3,334,166	2,401,258 24	3,334 63	8,004 19	10,379 19
8,758,370	11,550,294	8,789,200	11,550,294	434,116 28			250 00
1,153,490		1,170,290		550,221 21			500 00
				64,415 82			375 00
9,911,860	11,550,294	9,959,490	11,550,294	1,048,753 31			1,125 00
					731 12	1,754 69	2,004 69
44,971,959	14,884,460	45,813,589	14,884,460	3,450,011 55	4,065 75	9,758 88	13,508 88

the Fiscal Years ended March 31, 1915 and 1916.

72,184,023	5,720,023	72,606,551	5,720,023	4,746,643 73	6,406 74	12,174 06	14,674 06
9,825,700	14,867,580	9,795,360	14,867,580	1,234,294 25			776 00
1,279,246		1,301,646		85,642 18			250 00
84,288,969	20,587,603	83,703,557	20,587,603	6,116,580 16	6,406 74	12,174 06	15,674 06
35,060,099	3,334,166	33,854,099	3,334,166	2,401,258 24	3,334 63	8,004 19	10,379 19
9,911,860	11,550,294	9,959,490	11,550,294	1,048,753 31			1,125 00
					731 12	1,754 69	2,004 69
44,971,959	14,884,460	45,813,589	14,884,460	3,450,011 55	4,065 75	9,758 88	13,508 88

J. U. VINCENT,  
Deputy Minister

7 GEORGE V, A. 1917

## APPENDIX A.—

## No. 3.—STATEMENT showing the transactions in the Distilleries in the

Divisions.	In Process, including Deficiencies brought forward.	Manufactured, including Surpluses.	Returned to Distillery for Redistillation.	
			Duty Paid.	In Bond.
	Galls.	Galls.	Galls.	Galls.
Belleville, Ont. ....	53,329·31	1,125,308·31		8,957·84
Guelph " .....	20,948·20	81,730·82		143·26
Hamilton " .....	12,001·22	76,626·12		48,901·01
Perth " .....	256·36	534·96		
Prescott " .....	18,394·43	199,063·65		3,174·94
Toronto " .....	164,581·82	420,632·46	184·34	233,407·88
Windsor " .....	108,803·21	497,361·92		47,658·23
Totals.....	378,314·55	2,401,258·24	184·34	342,243·16
Joliette, Que.....	16,246·80	434,116·28		12,306·08
Montreal " .....	24,672·94	550,221·21		79,790·81
St. Hyacinthe, Que.....	23,990·70	64,415·82		414·26
Totals .....	64,910·44	1,048,753·31		92,511·15
Vancouver, B. C.....	2,125·94			8,936·00
Grand Totals .....	445,350·93	3,450,011·55	184·34	443,690·31

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

SPIRITS—Continued.

Dominion of Canada, during the Fiscal Year ended March 31, 1916.

Received from Other Sources, Duty Paid.	Totals.	Warehoused.	Fusel Oil. Written off.	Deficiencies, on which Duty was Collected.	In Process, including Deficiencies, carried forward.	Totals.
Galls.	Galls.	Galls.	Galls.	Galls.	Galls.	Galls.
.....	1,187,595·46	996,855·93	3,375·27	.....	187,364·26	1,187,595·46
970·30	103,792·58	99,844·18	1,296·35	202·93	2,449·12	103,792·58
1,476·63	139,091·98	137,319·20	219·65	809·14	656·98	139,091·98
.....	791·32	615·90	.....	54·32	121·10	791·32
1,215·26	221,818·28	163,564·63	683·67	.....	57,599·98	221,818·28
1,124·68	819,931·18	789,113·15	4,541·65	346·63	25,920·74	819,931·18
499·16	654,322·52	632,499·34	.....	1,921·61	19,901·57	654,322·52
5,286·03	3,127,286·32	2,819,812·33	10,116·61	3,334·63	294,022·75	3,127,286·32
.....	462,669·16	452,827·37	.....	.....	9,841·79	462,669·16
156·76	654,841·72	590,803·70	6,922·61	.....	57,115·41	654,841·72
115·77	88,936·55	69,413·76	233·31	.....	19,289·48	88,936·55
272·53	1,206,447·43	1,113,044·83	7,155·92	.....	86,246·68	1,206,447·43
438·94	11,500·88	8,247·63	60·29	731·12	2,461·84	11,500·88
5,997·50	4,345,231·63	3,911,104·79	17,332·82	4,065·75	382,731·27	4,345,231·63

J. U. VINCENT,  
Deputy Minister.



## APPENDIX A—SPIRITS—Continued.

## No. 4—Warehouse Return for the Fiscal Year ended March 31, 1916.

Ca.

Divisions	Remaining in Warehouse from last Year.	Warehoused.	Imported.	Received from other Divisions			Entered for consumption.		Removed to other Divisions.			Free.		Exported.	Used in Bonded Factories	Remain in Warehouse	Total
				Removed during Year.	In Transit last Year.	Totals.	Quantity.	Duty.	Warehoused in Divisions to which Removed.	In Transit.	Taken for Re-distillation.	Legal Allowance.	Other.				
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	\$ cts.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Ga.
Bellefleur, Ont.	1,420,086 70	996,835 93		12,673 57	2,429,022 29	79,614 77	172,027 15		776,559 33	76,815 80	8,957 84	11,748 30		239,369 87		1,245,016 22	2,420,022 29
Bramford	1,284 53			32,544 39	151 63	36,977 46	41,185 73									3,991 85	36,977 45
Quebia	1,783,829 98	99,844 18		44,719 46	105 68	1,928,499 30	342,224 23		77,281 21	3,010 87	143 26	32,630 23	1,006 54	28,430 07		1,643,419 63	1,928,499 30
Hamilton	854,075 28	137,319 20	130 91	117,863 86	144 87	1,109,536 12	158,070 37		376,528 59	55,475 65	5,629 27	48,901 01	13,992 00	1,235 87	148,555 77	24,204 09	1,109,536 12
Kingston	2,916 26			53,430 72	104 76	56,451 74	30,821 78		74,573 38						12,621 84	13,968 12	56,451 74
London	5,347 27			31,960 06		37,307 33	36,184 55		87,256 31			322 67				791 72	37,307 32
Ottawa	28,011 80			116,329 12	3,906 03	142,245 95	129,964 18		299,508 30					374 40	8 39	20,967 57	142,245 95
Government Warehouse Department Laboratory	6,380 60			161,412 02		167,792 62									8 25	*161,044 11	6,740 26
Down Sound, Ont.	818 19			16,793 88		17,612 07	20 13		48 21							18,926 28	17,612 07
Perth	79,972 65	615 90		137,042 13	1,503 95	219,134 68	83,622 15		195,176 56	5,536 93		1,219 52	554 13		77 20	97,081 67	219,134 68
Peterborough			480 52	2,423 29		2,961 81	2,773 72		3,947 28							128 06	2,961 81
Port Arthur	11,943 58			38,238 14	450 85	53,632 57	44,899 12		107,792 00							8,699 37	53,632 57
Prescott	1,106,245 55	163,564 63	80,675 43	10,984 33		1,361,469 94	73,869 34		201,471 44	233,169 93	16,799 05	3,174 94	4,123 18	2,239 66	8,874 76	80,675 43	1,361,469 94
St. Catharines	567 19			7,728 50		8,295 69	7,908 29		18,980 02							387 49	8,295 69
Stearford	2,146 37			12,989 90	90 68	15,226 95	14,107 54		33,557 10							1,119 41	15,226 95
Toronto	5,913,179 29	789,113 15	340 34	575,893 67	425 03	7,178,951 47	437,516 35		1,026,383 26	966,549 82	29,218 36	233,407 88	28,416 65	6,102 72	532,347 90	4,943,674 96	7,178,951 47
Windsor	8,106,845 07	682,499 34		31,974 51	557 27	8,791,876 19	188,258 15		468,803 15	528,433 66	14,544 29	47,658 23	112,440 74	512 19	376,091 93	40,418 25	7,473,518 75
Totals	19,229,647 28	2,819,812 33	81,627 20	1,418,445 48	7,439 67	23,556,971 96	1,439,365 49	3,441,182 81	2,642,989 31	146,559 83	342,243 16	203,935 23	6,031 39	507,359 69	*161,044 11 747,284 89	17,060,167 89	23,556,971 96
Joliette, Que.	858,426 48			452,837 37 *13 98		29,067 78	1,340,335 61	33,995 31	81,751 13	298,859 86	11,693 83	12,306 08	2,161 94			981,318 59	1,340,335 61
Montreal	1,441,585 05	590,803 70	11,426 27	791,885 18	9,565 47	2,935,265 67	953,986 40	2,278,342 06	572,949 62	10,116 99	79,790 81	4,703 53	288 86	32 54	148,102 96	1,663,253 99	2,935,265 67
Quebec	24,890 42			234,251 92	1,460 31	260,662 65	200,275 02	481,384 90	313 61			1,636 80			262 31	48,815 31	260,662 65
St. Hyacinthe	320,485 18	69,413 76		187,710 63		577,609 57	68,145 15	164,276 90	77,065 29	444 24	414 26	1,048 65				335,762 81	577,609 57
Sherbrooke	6,743 58		5,278 33	129,389 46	634 90	135,266 07	56,235 00	136,667 72								94,399 23	135,266 07
Three Rivers	3,818 41			23,163 93	188 10	27,170 44	27,141 87	65,216 27								65,999 69	27,170 44
Totals	2,656,948 92	*13 98 1,113,044 83	11,426 27 5,278 33	1,356,668 90	11,868 78	5,174,250 01	1,339,778 75	3,207,638 51	949,188 29	22,255 06	92,511 15	7,914 12	1,993 38	294 85	323,063 79	2,437,256 62	5,174,250 01
St. John, N. B.	19,847 20			89,622 22	1,763 38	111,232 80	76,698 78	184,230 75					71 44		11,611 73	22,580 55	111,232 80
Halifax, N. S.	5,151 77			20,665 88		25,217 65	19,873 78	47,717 21	188 42						316 14	4,589 31	25,217 65
Port	452 27			15,638 20	275 71	15,386 18	14,798 07	35,521 49								588 11	15,386 18
Totals	5,604 04			34,724 08	275 71	40,603 83	34,671 85	83,238 61	188 42						316 14	5,427 42	40,603 83
Charlottetown, P. E. I.								37 31									
Winnipeg, Man.	61,272 25			370,532 11	16,819 48	448,623 84	332,483 68	795,650 38	12,510 57	464 33			88 61		51,200 23	51,870 42	448,623 84
Moosajaw, Sask.	19,378 28			108,372 12	343 59	128,093 99	119,778 19	287,641 21	1,038 01							7,277 79	128,093 99
Calgary, Alberta	44,707 55			134,791 94	3,517 16	183,016 65	136,481 79	327,718 02	2,172 97						18,939 79	25,428 10	183,016 65
Vancouver, B. C.	392,173 42	8,247 63		51,485 79	1,508 88	453,415 72	119,243 61	286,240 40	10,284 95		8,936 00	3,210 46	1,800 93		71 72	8,268 52	453,415 72
Victoria	16,105 56			23,956 23	1,165 23	41,227 02	28,248 51	67,817 73		34 68			69 05		10 17	9,976 46	41,227 02
Totals	408,278 98	8,247 63		75,442 02	2,674 11	494,432 74	147,432 12	354,058 13	13,082 10	34 68	8,936 00	5,210 46	1,869 98	172 89	8,268 52	309,575 99	494,432 74
Dawson, Y. T.	1,336 80			2,576 80		3,913 60	2,570 75	6,169 77								1,842 55	3,913 60
Sunbeams	8,612 54					8,612 54										8,612 54	8,612 54
Grand Totals	22,454,633 84	*13 98 3,941,104 79	11,426 27 86,505 53	3,621,175 67	44,791 88	30,149,961 96	3,629,324 40	8,687,565 80	3,621,175 67	169,313 90	443,690 31	217,059 61	10,654 80	808,134 57	*161,044 11 1,160,359 92	19,929,804 47	30,149,961 96

\* Surplus in bottling room.

† Seizure.

\* Use in the manufacture of Methylated Spirits at the Government Warehouse, Ottawa.

APPENDIX A—SPIRITS.—Concluded.

No. 5.—COMPARATIVE STATEMENT of Warehouse Returns for the Fiscal Years ended March 31, 1915 and 1916.

Dr.

Cr.

Province	Remaining in Warehouse from last Year.	Warehoused.	Imported.	Received from other Divisions.			Entered for Consumption.		Removed to other Divisions.			Free.		Exported.	Used in Bonded Factories.	Remaining in Warehouse.	Totals.
				Removed during Year.	In Transit last Year.	Totals.	Quantity.	Duty.	Warehoused in Divisions to which removed.	In Transit.	Taken for Redistillation.	Legal Allowance.	Other.				
1915.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	\$ cts.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
Ontario	18,639,781.72	5,111,204.23	33,165.54	958,096.74	12,659.83	24,754,908.06	1,670,558.81	3,584,681.34	2,480,093.27	37,166.82	366,469.47	283,512.14	6,436.49	275,681.73	155,807.29	19,229,647.28	24,754,908.06
Quebec	2,246,884.64	1,283,426.62	12,314.66	1,299,187.25	14,408.57	4,856,659.40	1,399,281.04	3,011,521.97	663,866.87	6,985.29	419.75	7,867.98	541.57	436.86	121,311.12	2,635,948.92	4,856,659.40
New Brunswick	11,250.28			94,566.76	2,563.60	108,370.64	79,990.93	176,894.77							8,532.51	19,847.29	108,370.64
Nova Scotia	3,922.26			23,999.68	3,111.10	31,033.04	25,214.07	54,998.93		185.39					29.54	5,604.04	31,033.04
Prince Edward Island				252.46		252.46	252.46	511.68									252.46
Manitoba	73,683.17			478,876.31	17,824.76	570,383.24	421,259.13	925,993.38		20,182.19	343.59				67,326.08	61,272.25	570,383.24
Saskatchewan	25,335.16			69,142.23	4,599.52	96,036.91	79,458.06	177,491.71		260.57					19,375.28	59,699.91	96,036.91
Alberta	52,957.16			152,870.70	3,477.72	209,368.63	170,843.59	335,037.90		519.33					13,275.05	44,707.35	209,368.63
British Columbia	428,590.81	96,051.69		106,672.57	11,348.49	642,573.56	190,535.17	415,514.10		22,585.17	206.18	2,278.81	4,385.40	487.50	362.59	13,453.76	408,278.98
Yukon Territory	1,035.08			4,039.09		5,074.17	3,737.37	8,161.58							1,336.80	5,074.17	5,074.17
Sundries	8,612.54					8,612.54									8,612.54		8,612.54
Totals	21,491,982.79	6,490,682.54	45,480.20	3,187,692.79	69,993.59	31,286,269.57	4,021,090.63	8,690,807.36	3,187,692.79	44,701.88	369,168.03	295,765.52	7,463.56	275,910.72	155,807.29	22,454,633.84	31,286,269.57
1916.																	
Ontario	19,229,647.28	2,819,812.33	81,627.20	1,418,445.48	7,439.67	23,556,971.96	1,439,365.49	3,441,182.81	2,642,989.31	146,559.83	342,243.16	203,935.23	6,031.39	807,350.69	161,044.11	17,090,167.89	23,556,971.96
Quebec	2,655,948.92	1,113,044.83	5,278.33	1,386,068.90	11,868.78	5,174,250.01	1,399,778.75	3,267,638.81	949,188.29	22,255.06	92,511.15	7,914.12	1,993.38	294.85	323,663.79	2,457,250.62	5,174,250.01
New Brunswick	19,847.20			89,622.22	1,763.38	111,232.80	76,698.78	184,230.75						71.44	11,611.73	22,850.85	111,232.80
Nova Scotia	5,604.04			34,724.68	275.71	40,603.83	24,671.85	83,238.61		188.42				316.14	5,427.42	40,603.83	
Prince Edward Island							37.31										
Manitoba	61,272.25			370,532.11	16,819.48	448,623.84	332,483.68	795,650.38		12,516.57	464.33			88.61	51,200.23	51,870.42	448,623.84
Saskatchewan	19,375.28			108,372.12	343.59	128,069.99	119,778.19	287,641.21		1,038.01						7,277.79	128,069.99
Alberta	44,707.35			134,791.94	3,517.16	183,016.65	136,484.79	327,718.02		2,172.97					18,930.79	25,428.10	136,016.65
British Columbia	408,278.98	8,247.63		75,442.62	2,674.11	494,642.74	147,492.12	354,058.13		13,082.10	34.68	8,936.00	5,210.46	1,899.48	8,268.52	309,579.99	494,642.74
Yukon Territory	1,336.80			2,776.80		3,913.60	2,570.75	6,169.77							1,342.88	3,913.60	3,913.60
Sundries	8,612.54					8,612.54									8,612.54		8,612.54
Totals	22,454,633.84	3,941,104.79	113.98	3,621,175.67	44,701.88	30,149,961.96	3,629,324.40	8,687,565.80	3,621,175.67	169,313.90	443,690.31	217,039.81	10,054.80	808,134.57	161,044.11	19,029,804.47	30,149,961.96

\* Surplus in bottling room.

† Seizure.

\* Used in the manufacture of Methylated Spirits at Government Warehouse, Ottawa.

Total duty collected ex-manufactory and ex-warehouse	1915.	1916.
	\$8,702,981.42	\$8,697,324.68
License fees	3,500.00	3,750.00
	\$8,706,481.42	\$8,701,074.68

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. E. VINCENT,  
Deputy Minister.





## APPENDIX A—Continued—MALT.

No. 6.—RETURN of Manufactures for the Fiscal Year ended March 31, 1916.

Divisions.	Licenses.		Grain Steeped.	Grain used in Malt Manufactured.	Malt.			Total Duty Collected ex-manu- factory, including Li- cense Fees.
	No.	Fees.			Manufactured.	Paid Duty.	Ware- housed.	
		\$	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	\$ cts.
Belleville, Ont.	1	50	166,717	166,717	130,355	.....	130,355	50 00
Brantford, "	1	50	282,000	282,000	225,009	.....	225,009	50 00
Guelph, "	5	550	5,025,998	4,776,959	3,781,635	627	3,781,008	568 81
Hamilton, "	2	350	2,915,940	2,904,370	2,310,790	40	2,310,750	351 20
London, "	2	400	3,940,200	4,124,475	3,223,715	.....	3,223,715	400 00
Owen Sound, "	1	200	1,142,060	1,427,000	1,130,010	.....	1,130,010	200 00
Peterborough, "	1	50	304,667	304,667	233,898	40	233,858	51 20
Prescott, "	1	50	24,243	42,925	34,207	.....	34,207	50 00
Toronto, "	3	600	10,670,620	10,936,300	8,413,868	340	8,413,528	610 20
Windsor, "	1	200	.....	.....	.....	.....	.....	200 00
Totals . . . . .	18	2,500	24,472,385	24,965,413	19,483,487	1,047	19,482,440	2,531 41
Montreal, Que. . . . .	4	800	36,211,300	36,695,300	29,021,670	.....	29,021,670	800 00
Quebec, " . . . . .	1	150	122,520	211,141	170,197	.....	170,197	150 00
Totals . . . . .	5	950	36,333,820	36,906,441	29,191,867	.....	29,191,867	950 00
Winnipeg, Man. . . . .	3	550	19,631,675	19,701,275	15,999,787	1,899	15,997,888	606 97
Calgary, Alta . . . . .	3	500	12,721,800	11,542,000	9,378,070	.....	9,378,070	500 00
Victoria, B.C. . . . .	1	100	.....	.....	.....	.....	.....	100 00
Grand Totals	30	4,600	93,159,680	93,115,129	74,053,211	2,946	74,050,265	4,688 33

J. U. VINCENT,  
Deputy Minister.

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

APPENDIX A.—MALT—Continued.

No. 7.—COMPARATIVE STATEMENT of Manufactures for the Fiscal Years ended March 31, 1915 and 1916.

Provinces.	Licenses.		Grain Steeped.	Grain used in Malt Manufactured.	Malt.			Total Duty Collected ex-manufactory, including License Fees.
	No.	Fees.			Manufactured.	Paid Duty.	Warehoused.	
1915.		\$	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	\$ cts.
Ontario.....	24	2,950	30,839,372	31,611,233	25,338,245	.....	25,338,245	2,950 00
Quebec.....	5	1,350	47,245,229	47,279,818	37,957,558	.....	37,957,558	1,350 00
Manitoba.....	3	500	40,662,429	40,874,589	33,270,155	.....	33,270,155	500 00
Alberta.....	3	500	26,977,700	27,429,400	22,721,820	.....	22,721,820	500 00
British Columbia	1	100	470,943	517,944	421,411	.....	421,411	100 00
Totals.....	36	5,400	145,295,673	147,712,984	119,709,189	.....	119,709,189	5,400 00
1916.								
Ontario.....	18	2,590	24,472,385	24,965,413	19,483,487	1,047	19,482,440	2,531 41
Quebec.....	5	950	36,333,820	36,906,441	29,191,867	.....	29,191,867	950 00
Manitoba.....	3	550	19,631,675	19,701,275	15,999,787	1,899	15,997,888	606 97
Alberta.....	3	500	12,721,800	11,542,000	9,378,070	.....	9,378,070	500 00
British Columbia	1	100	.....	.....	.....	.....	.....	100 00
Totals.....	30	4,600	93,159,680	93,115,129	74,053,211	2,946	74,050,265	4,688 38

J. U. VINCENT,  
Deputy Minister.

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

DR.

No. 8.—WAREHOUSE RETURN for

Remaining in Warehouse from last year.	Warehoused.	In-creases.	Received from other Divisions.		Imported.	Totals.	Divisions.
			Removed during year.	In Transit last year.			
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	
135,961	130,355	2,249	988,400			1,256,965	Belleville, Ont. ....
216,659	225,009	2,711				444,379	Brantford, " ....
2,384,537	3,781,008	75,063	1,891,545	151,000	40,000	8,323,153	Guelph, " ....
1,633,801	2,310,750	34,923	2,258,000	90,000		6,327,471	Hamilton, " ....
		1,228	334,000			335,228	Kingston, " ....
2,461,416	3,223,715	40,414	428,000		68,953	6,222,498	London, " ....
11,875		932	781,600	54,000	17,500	865,907	Ottawa, " ....
1,292,161	1,130,010	58,128	466,600			2,946,899	Owen Sound " ....
11,228		10	1,740,000	120,000	3,000	1,874,238	Perth, " ....
7,823	233,858	3,817	240,000			485,498	Peterborough, " ....
31,040			800,000	60,000	2,160	893,200	Port Arthur, " ....
58,909	34,207	1,580	2,024,970	50,000		2,169,666	Prescott, " ....
20,930		2,570	1,363,432	40,000		1,426,932	St. Catharines, " ....
			311,338			311,338	Stratford, " ....
6,637,809	8,413,528	91,541	4,828,927	90,000	22,612	20,084,417	Toronto, " ....
952,385		4,940	1,805,028	40,000	413,860	3,216,213	Windsor, " ....
15,856,534	19,482,440	320,106	20,261,840	695,000	568,085	57,184,005	... Totals. ....
57,617		15,235	2,880,000	40,000		2,992,852	Joliette, Que... ..
13,159,384	29,021,670	252,637	3,622,320		266,001	46,322,012	Montreal, " ....
	170,197		1,614,000	60,000		1,844,197	Quebec, " ....
			64,680	35,000		99,680	St. Hyacinthe, " ....
3,455			550,000	50,000		603,455	Sherbrooke, " ....
			164,600			164,600	Three Rivers, " ....
13,220,456	29,191,867	267,872	8,895,600	185,000	266,001	52,026,796	... Totals. ....
			1,080,000	100,000	2,469	1,182,469	St. John, N.B. ....
63,500			3,084,089	54,000	3,550	3,205,139	Halifax, N.S. ....
12,458,303	15,997,888	177,723	1,479		17,440	28,652,833	Winnipeg, Man. ....
63,840			620,000	40,000		723,840	Moose Jaw, Sask. ....
6,231,506	9,378,070	60,748	660,000	60,000	7,600	16,397,924	Calgary, Alta. ....
231,793			3,656,000	84,213	242,896	4,214,902	Vancouver, B.C. ....
			1,930,000	80,000	209,979	2,219,979	Victoria, B.C. ....
231,793			5,586,000	164,213	452,875	6,434,881	... Totals. ....
2,495		2,999			61,470	66,964	Dawson, Y.T. ....
48,128,427	74,050,265	829,448	40,189,008	1,298,213	1,379,490	165,874,851	... Grand Totals. ....

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

MALT—Continued.

the Fiscal Year ended March 31, 1916.

CR.

Entered for Consumption.		Removed to other Divisions.		Exported.	Free.	Written off.	Remain- ing in Ware- house.	Totals.
Quantity.	Duty.	Warehoused in Divisions to which Removed	In Transit.					
Lbs.	§ cts.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
1,140,110	34,203 30						116,855	1,256,965
279,697	8,390 91						164,682	444,379
3,741,064	142,231 92	1,130,027				618	2,451,444	8,323,153
3,711,093	111,332 79	1,742,300	90,800				783,281	6,327,474
307,048	9,211 44						28,180	335,228
4,121,487	123,644 61						2,101,011	6,222,498
865,907	25,977 21							865,907
571,591	17,147 73	2,362,508					12,800	2,946,899
1,863,000	55,890 00				5,845	5,393		1,874,233
387,500	11,625 00						97,988	485,488
875,640	26,269 20						17,560	893,200
2,161,666	65,089 98							2,169,666
1,336,932	40,107 96						90,000	1,426,932
275,555	8,266 65						35,783	311,338
13,929,042	418,323 50	240,000			278,023		5,037,352	20,084,417
2,064,244	61,937 01				503,271		588,690	3,216,213
38,639,576	1,159,649 21	5,474,835	90,800		847,147	6,011	12,125,636	57,184,005
24,873,957	746,218 71	14,101,600	390,000	2,466,800	2,920,800		72,052	2,922,853
1,844,197	55,325 91					27,490	4,462,075	46,322,012
79,680	2,390 40						20,000	1,844,197
574,355	17,230 65						29,100	59,680
164,600	4,938 00							603,455
								164,600
27,536,789	826,103 67	14,101,600	390,000	2,466,800	2,920,800	27,490	4,583,227	52,026,796
1,182,469	35,474 07							1,182,469
3,172,399	95,171 97			32,040			700	3,205,139
6,186,659	185,599 77	14,765,028	924,000				6,777,146	28,692,893
601,040	20 731 20						32,800	723,840
5,831,793	174,953 79	5,757,545	1,140,000	2,200			3,666,386	16,397,924
3,990,849	119,665 47	50,000					174,000	4,214,902
2,179,979	65,399 37	40,000						2,219,979
6,170,828	185,064 84	90,000					174,000	6,434,883
62 091	1,862 73						4,875	66,964
89,473,644	2,684,611 25	40,189,608	2,544,800	2,501,130	3,767,947	33,501	27,364,821	100,874,881

J. U. VINCENT,  
Deputy Minister

7 GEORGE V, A. 1917

APPENDIX A.—

## DR. No. 9.—COMPARATIVE STATEMENT of Warehouse Returns

Remaining in Warehouse from last year.	Ware- housed.	In- creases.	Received from other Divisions.		Imported.	Totals.	Provinces.
			Removed during year.	In Transit last year.			
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	1915.
	*88,919						
17,806,783	25,338,245	308,064	21,473,763	948,158	1,369,660	67,333,592	.. Ontario .....
9,063,601	37,957,558	121,349	7,088,446	760,000	539,515	55,530,469	.. Quebec .....
			740,000	60,000	4,056	804,056	.. New Brunswick .....
49,180			2,910,000	54,000	1,700	3,014,880	.. Nova Scotia .....
	*119,073						
7,400,670	33,270,155	119,090			131,614	41,040,602	.. Manitoba .....
63,200			1,660,000		9,100	1,732,300	.. Saskatchewan .....
3,282,267	22,721,820	164,548	2,062,600	60,000	444,916	28,736,151	.. Alberta .....
150,975	421,411	355	6,665,928	397,727	863,026	8,499,422	.. British Columbia .....
55,244						55,244	.. Yukon Territory .....
	*207,992						
37,871,920	119,709,189	713,406	42,600,737	2,279,885	3,363,587	206,746,716	..... Totals .....
							1916.
15,856,534	19,482,440	320,106	20,261,840	695,000	568,085	57,184,005	.. Ontario .....
13,220,456	29,191,867	267,872	8,895,600	185,000	266,001	52,026,796	.. Quebec .....
			1,080,000	100,000	2,469	1,182,469	.. New Brunswick .....
			3,084,089	54,000	3,550	3,205,139	.. Nova Scotia .....
12,458,303	15,997,888	177,723	1,479		17,440	28,652,833	.. Manitoba .....
63,840			620,000	40,000		723,840	.. Saskatchewan .....
6,231,506	9,378,070	60,748	660,000	60,000	7,600	16,397,924	.. Alberta .....
231,793			5,586,000	164,213	452,875	6,434,881	.. British Columbia .....
2,495		2,999			61,470	66,964	.. Yukon Territory .....
48,128,427	74,050,265	829,448	40,189,008	1,298,213	1,379,490	165,874,851	..... Totals .....

\* Otherwise warehoused.

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

MALT—Continued.

for the Fiscal Years ended March 31, 1915 and 1916.

CR.

Entered for Consumption.		Removed to other Divisions.		Exported.	Free.	Written off	Remain- ing in Ware- house.	Totals.
Quantity.	Duty.	Warehoused in Divisions to which Removed.	In Transit.					
Lbs.	\$ cts.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
44,378,291	1,011,454 64	5,936,409	240,000	54,400	853,357	14,601	15,856,534	67,333,592
28,048,155	678,898 32	11,131,400	393,000	152,000	2,585,458		13,220,456	53,530,469
804,056	17,221 68							804,056
2,929,600	70,678 50			21,750			63,500	3,014,850
11,969,299	280,803 15	16,163,000	450,000				12,458,303	41,040,602
1,668,460	38,291 10						63,840	1,732,300
13,057,645	330,616 03	9,276,000	171,000				6,231,566	28,736,151
8,129,488	192,013 24	93,928	44,213				231,793	8,499,422
52,749	911 16						2,495	55,244
111,037,743	2,610,887 82	42,600,737	1,298,213	228,180	3,438,815	14,601	48,128,427	206,746,716
38,639,576	1,159,649 21	5,474,835	90,800		847,147	6,011	12,125,636	57,184,005
27,536,789	826,103 67	14,101,600	390,000	2,466,890	2,920,800	27,490	4,583,227	52,026,796
1,182,469	35,474 07							1,182,469
3,172,399	95,171 97			32,040			700	3,205,139
6,186,659	185,599 77	14,765,028	924,000				6,777,146	28,652,833
691,040	20,731 20						32,800	723,840
5,831,793	174,953 79	5,757,545	1,140,000	2,200			3,666,386	16,397,924
6,170,828	185,064 84	90,000					174,053	6,434,881
62,091	1,862 73						4,873	66,964
89,473,644	2,684,611 25	40,189,008	2,544,800	2,501,130	3,767,947	33,501	27,364,821	165,874,851

	1915.	1916.
Total duty collected ex-manufactory and ex-warehouse...	\$2,610,887 82	\$2,684,699 63
License fees.....	5,400 00	4,600 00
	<u>\$2,616,287 82</u>	<u>\$2,689,299 63</u>

J. U. VINCENT,  
Deputy Minister.

## APPENDIX A—Continued—MALT LIQUOR.

No. 10.—RETURN of Manufactures for the Fiscal Year ended March 31, 1916.

Divisions.	Licenses.		Malt used.	Other Commodities used.	Malt Liquor manufactured.	Malt Liquor warehoused.	Malt Liquor exported, and used by H.M. Army and Navy.	Total Duty collected ex-manufactory including License Fees.
	No.	Fees.						
		\$	Lbs.	Lbs.	Galls.	Galls.	Galls.	\$
Belleville, Ont.....	1	50	159,594		71,809			50 00
Brantford, ".....	1	50	329,964		141,530			50 00
Guelph, ".....	7	350	4,585,698		2,380,560			350 00
Hamilton, ".....	2	100	3,628,092		1,792,104			100 00
Kingston, ".....	2	100	337,537		131,550			100 00
London, ".....	4	200	4,021,507		1,639,825		1,252	200 00
Ottawa, ".....	2	100	1,339,342		703,450			100 00
Owen Sound, ".....	4	200	502,995		215,720			200 00
Perth, ".....	1	50	1,842,000		911,924			50 00
Peterborough, ".....	1	50	389,700		144,001			50 00
Port Arthur, ".....	3	150	896,093		435,460			150 00
Prescott, ".....	3	150	2,008,960		972,948			150 00
St. Catharines, ".....	2	100	1,317,500		627,850			100 00
Stratford, ".....	2	100	278,538		142,200			100 00
Toronto, ".....	11	550	14,090,124		6,424,055			550 00
Windsor, ".....	2	100	1,663,336		860,853			100 00
Totals.....	48	2,400	37,390,980		17,595,839		1,252	2,400 00
Montreal, Que.....	9	450	21,247,405	117,710	9,682,287		4,411½	27,499 95
Quebec, ".....	3	150	4,067,198		1,720,065			150 00
Sherbrooke ".....	1	50	574,505		330,384			50 00
Three Rivers.....	1	50	169,058		71,000			50 00
Totals.....	14	700	26,058,166	117,710	11,803,736		4,411½	27,749 95
St. John, N.B.....	2	100	1,097,208		427,816			100 00
Halifax, N.S.....	3	150	3,167,115		1,091,450		7,946	150 00
Winnipeg, Man.....	8	400	5,600,558	41,800	2,658,488			9,347 05
Moose Jaw, Sask.....	4	200	745,486	11,000	376,625			2,956 25
Calgary, Alta.....	7	350	5,105,285	18,000	2,534,350			5,797 10
Vancouver, B.C.....	19	950	4,047,539	278,100	2,128,649	114,706	78	22,302 50
Victoria ".....	8	400	2,218,919	19,225	954,982			4,351 15
Totals.....	27	1,350	6,266,458	297,325	3,083,631	114,706	78	26,653 65
Dawson, Y.T.....	1	50	70,591		31,145			50 00
Grand Totals.....	114	5,700	85,501,847	485,835	39,603,080	114,706	13,687½	75,204 00

INLAND REVENUE DEPARTMENT  
OTTAWA, JULY 1, 1916.J. U. VINCENT,  
Deputy Minister.



SESSIONAL PAPER No. 12

APPENDIX A.—MALT LIQUOR—Continued.

No. 11.—COMPARATIVE Statement of Manufactures for the Fiscal Years ended March 31, 1915 and 1916.

Provinces.	Licenses.		Malt used.	Other Commodities used.	Malt Liquor manufactured.	Malt Liquor warehoused.	Malt Liquor exported, and used by H.M. Army and Navy.	Total Duty collected, ex-manufactory, including License Fees.
	No.	Fees.						
1915.		\$	Lbs.	Lbs.	Galls.	Galls.	Galls.	\$ cts.
Ontario.....	51	2,550	44,555,185	76,055	20,829,318		6,683	2,940 00
Quebec.....	15	750	27,820,265	117,600	12,633,459			22,676 55
New Brunswick.....	2	100	1,148,857		472,004			100 00
Nova Scotia.....	3	150	3,302,430		1,095,450		3,978	150 00
Manitoba.....	7	350	9,521,467	35,910	4,359,030			9,649 50
Saskatchewan.....	4	200	1,725,440	64,225	876,572			12,465 00
Alberta.....	7	350	7,662,381	146,250	3,458,052			27,707 55
British Columbia.....	28	1,400	8,542,622	518,970	4,276,077	57,872		66,072 93
Yukon Territory.....	1	50	52,749		23,618			50 00
Totals.....	118	5,900	104,331,396	959,010	48,023,580	57,872	9,761	141,811 53
1916.								
Ontario.....	48	2,400	37,300,980		17,595,839		1,252	2,400 00
Quebec.....	14	700	26,058,166	117,710	11,803,736		4,411½	27,749 95
New Brunswick.....	2	100	1,097,208		427,816			100 00
Nova Scotia.....	3	150	3,167,115		1,091,450		7,946	150 00
Manitoba.....	8	400	5,600,558	41,800	2,658,488			9,347 05
Saskatchewan.....	4	200	745,486	11,000	376,625			2,956 25
Alberta.....	7	350	5,105,285	18,000	2,534,350			5,797 10
British Columbia.....	27	1,350	6,266,458	297,325	3,083,631	114,706	78	26,633 65
Yukon Territory.....	1	50	70,591		31,145			50 00
Totals.....	114	5,700	85,501,847	485,835	39,603,080	114,706	13,687½	75,204 00

	1915.	1916.
	Galls.	Galls.
Exported.....	9,761	3,950
H.M. Army and Navy.....		10,637½
	9,761	13,687½

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

7 GEORGE V, A. 1917

APPENDIX A.—MALT LIQUOR—*Continued.*

No. 12.—WAREHOUSE RETURN for the Fiscal Year ended March 31, 1916.

Remaining in Warehouse from Last Year.	Ware- housed.	Total.	Division.	Entered for Consumption.		Ex- ported.	Remaining in Warehouse.	Total.
				Quantity.	Duty.			
Galls.	Galls.	Galls.		Galls.	\$ cts.	Galls.	Galls.	Galls.
50,594	114,706	165,300	Vancouver, B.C.	150,503	22,575 45	3,955	10,842	165,300

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

SESSIONAL PAPER No. 12

APPENDIX A.—MALT LIQUOR—*Concluded.*

No. 13.—COMPARATIVE Statement of Warehouse Returns for the Fiscal Years ended March 31, 1915 and 1916.

Remaining in Warehouse from Last Year.	Warehoused.	Total.	Province.	Entered for Consumption.		Ex-ported.	Remaining in Warehouse.	Total.
				Quantity.	Duty.			
Galls.	Galls.	Galls.	1915.	Galls.	\$ cts.	Galls.	Galls.	Galls.
.....	57,872	57,872	British Columbia	7,278	1,001 70	.....	50,594	57,872
			1916.					
50,594	114,706	165,300	British Columbia	150,503	22,575 45	3,955	10,842	165,300

	1915.	1916.
Total duty collected ex-manufactury and ex-warehouse. ....	\$137,003 23	\$ 92,079 45
License fees.....	5,900 00	5,700 00
	<u>\$142,903 23</u>	<u>\$ 97,779 45</u>

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

7 GEORGE V, A. 1917

## APPENDIX A.—

## No. 14.—Return of Manufactures for

Divisions.	Licenses.		Total Weight of Raw Leaf Tobacco and other Materials actually used.	Tobacco at 10c. per lb.		
	No.	Fees.		Manu- factured.	Paid Duty.	Ware- housed.
Hamilton, Ont. ....	1	50 00	1,722,490 $\frac{1}{2}$	1,622,395	584,573	1,037,822
Perth, " .....			6 $\frac{3}{4}$			
Toronto, " .....	3	150 00	151,388 $\frac{3}{4}$	155,677 $\frac{3}{4}$	25,499 $\frac{3}{4}$	130,178
Windsor, " .....	3	150 00	158,257	158,781 $\frac{1}{2}$	158,781 $\frac{1}{2}$	
Totals .....	7	350 00	2,032,142 $\frac{3}{4}$	1,936,854	768,854	1,168,000
Joliette, Que .....	9	450 00	80,959	81,959	81,939	20
Montreal, " .....	39	1,950 00	13,497,049 $\frac{3}{4}$	11,056,393 $\frac{3}{4}$	4,504,314	6,552,079 $\frac{1}{2}$
Quebec, " .....	6	300 00	3,565,507	3,642,263 $\frac{1}{2}$	3,603,482	38,781 $\frac{1}{2}$
St. Hyacinthe, Que .....	5	250 00	12,889	13,338	13,338	
Sherbrooke, " .....	1	50 00	3,547,505	3,708,522	3,690,290 $\frac{1}{2}$	18,231 $\frac{1}{2}$
Three Rivers, " .....	4	200 00	89,108	85,451 $\frac{1}{2}$	85,451 $\frac{1}{2}$	
Totals .....	64	3,200 00	20,793,017 $\frac{3}{4}$	18,587,927 $\frac{1}{2}$	11,978,815	6,609,112 $\frac{1}{2}$
Pictou, N.S. ....	1	50 00	4,769 $\frac{1}{2}$	5,963 $\frac{1}{2}$	5,963 $\frac{1}{2}$	
Charlottetown, P.E.I. ....	4	200 00	197,926	232,276	231,497	779
Winnipeg, Man. ....	2	75 00	462 $\frac{1}{2}$	348	348	
Calgary, Alta. ....	3	150 00	9,395	9,395	9,395	
Vancouver, B.C. ....	2	100 00	5,923	2,382 $\frac{1}{2}$	2,042	340 $\frac{1}{2}$
Grand Totals.....	83	4,125 00	23,043,636 $\frac{1}{2}$	20,775,146 $\frac{1}{2}$	12,996,914 $\frac{1}{2}$	7,778,232

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

TOBACCO.

the Fiscal Year ended March 31, 1916.

Cigarettes at \$3.00 per M.			Cigarettes at \$8 per M.			Snuff at 10c. per lb.			Total Duty Collected ex-manufactory, including License Fees.
Manufactured.	Paid Duty.	Warehoused.	Manufactured.	Paid Duty.	Warehoused.	Manufactured.	Paid Duty.	Warehoused.	
No.	No.	No.	No.	No.	No.	No.	No.	No.	\$ cts.
59,387,620	35,862,150	23,525,470							166,093 75
3,000	3,000								9 00
169,800	169,800								3,209 35
									16,028 15
59,560,420	36,034,950	23,525,470							185,340 25
									8,643 90
1,294,057,955	1,022,896,500	271,161,455	1,215,660	1,162,760	52,900	508,877	508,127	750	3,581,185 68
576,750	511,750	65,000				36,110	36,110		365,794 45
									1,583 80
									369,079 05
									8,745 15
1,294,634,705	1,023,408,250	271,226,455	1,215,660	1,162,760	52,900	544,987	544,237	750	4,335,032 03
									646 35
									23,349 70
62,200	62,200								296 40
									1,089 50
1,372,450	1,001,950	370,500	650	650					3,315 28
1,355,629,775	1,060,507,350	295,122,425	1,216,310	1,163,410	52,900	544,987	544,237	750	4,549,069 51

J. U. VINCENT,  
Deputy Minister.

7 GEORGE V, A. 1917

APPENDIX A.—

## No. 15.—COMPARATIVE STATEMENT of Manufactures for

Provinces.	Licenses.		Total Weight of Raw Leaf Tobacco and other Materials actually used.	Tobacco at 10c. per lb.		
	No.	Fees.		Manu- factured.	Paid Duty.	Ware- housesl.
		\$ cts.	Lbs.	Lbs.	Lbs.	Lbs.
1915.						
Ontario.....	10	500 00	1,531,606 $\frac{1}{4}$	1,496,342 $\frac{1}{2}$	775,590 $\frac{1}{2}$	720,752
Quebec.....	64	3,100 00	20,444,444 $\frac{1}{2}$	18,679,978 $\frac{1}{2}$	12,542,620 $\frac{1}{2}$	6,137,358
Nova Scotia.....	1	50 00	13,757	13,409 $\frac{1}{2}$	10,050 $\frac{1}{2}$	3,359
Prince Edward Island.....	4	200 00	205,341	236,629 $\frac{1}{2}$	236,629 $\frac{1}{2}$	.....
Manitoba.....	2	75 00	978	588	588	.....
Alberta.....	3	150 00	10,125	10,196	10,196	.....
British Columbia.....	5	250 00	5,250	3,548 $\frac{3}{4}$	3,548 $\frac{3}{4}$	.....
Totals.....	89	4,325 00	22,211,501 $\frac{3}{4}$	20,440,692 $\frac{3}{4}$	13,579,223 $\frac{3}{4}$	6,861,469
1916.						
Ontario.....	7	350 00	2,032,142 $\frac{3}{4}$	1,936,854	768,854	1,168,000
Quebec.....	64	3,200 00	20,793,017 $\frac{3}{4}$	18,587,927 $\frac{1}{2}$	11,978,815	6,609,112 $\frac{1}{2}$
Nova Scotia.....	1	50 00	4,769 $\frac{1}{2}$	5,963 $\frac{1}{2}$	5,963 $\frac{1}{2}$	.....
Prince Edward Island.....	4	200 00	197,926	232,276	231,497	779
Manitoba.....	2	75 00	462 $\frac{1}{2}$	348	348	.....
Alberta.....	3	150 00	9,395	9,395	9,395	.....
British Columbia.....	2	100 00	5,923	2,382 $\frac{1}{2}$	2,042	340 $\frac{1}{2}$
Totals.....	83	4,125 00	23,043,636 $\frac{1}{2}$	20,775,146 $\frac{1}{2}$	12,996,914 $\frac{1}{2}$	7,778,232

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

TOBACCO—Continued.

the Fiscal Years ended March 31, 1915, and 1916.

Cigarettes at \$3 per M.			Cigarettes at \$8 per M.			Snuff at 10c. per lb.			Total Duty Collected ex-Manufactory, including License Fees.
Manu- factured.	Paid Duty.	Ware- housed.	Manu- factured.	Paid Duty.	Ware- housed.	Manu- factured	Paid Duty.	Ware- housed.	
No.	No.	No.	No.	No.	No.	Lbs.	Lbs.	No.	\$ cts.
23,174,820	27,989,570	185,250							142,144 91
1,058,879,346	1,032,425,036	26,454,310	960,330	947,330	13,000	509,597	509,597		3,898,900 36
									782 16
									20,002 58
186,209	186,200								656 88
657,960	595,160	62,800							975 85
									2,361 65
1,087,898,326	1,061,195,966	26,702,360	960,330	947,330	13,000	509,597	509,597		4,065,824 39
59,560,420	36,054,950	23,525,470							185,340 25
1,294,634,705	1,023,408,250	271,226,455	1,215,660	1,162,760	52,900	544,987	544,237	750	4,335,032 03
									646 35
									23,349 70
62,200	62,200								296 40
									1,089 50
1,372,450	1,001,950	370,509	650	650					3,315 28
1,355,629,775	1,060,507,350	295,122,425	1,216,310	1,163,410	52,900	544,987	544,237	750	4,549,069 51

J. U. VINCENT,  
Deputy Minister.

7 GEORGE V, A. 1917

APPENDIX A.—TOBACCO—*Continued*—MANUFACTURED BEFORE  
JUNE 1, 1908.No. 16.—WAREHOUSE RETURN for the Fiscal Year ended  
Dr. March 31, 1916. Cr.

Remaining in Warehouse from last year.	Totals.	Divisions.	Entered for Consumption.		Ship's Stores.	Remaining in Warehouse.	Totals.
			Quantity.	Duty.			
lbs.	lbs.		lbs.	\$ cts.	lbs.	lbs.	lbs.
461	461	St. John, N.B. ....				461	461
3,919½	3,919½	Victoria, B.C. ....	175	43 75	372½	3,372	3,919½
19,719½	19,719½	Sundries .....				19,719½	19,719½
24,100	24,100	Totals .....	175	43 75	372½	23,552½	24,100

INLAND REVENUE DEPARTMENT.  
OTTAWA, July 1, 1916.J. U. VINCENT,  
*Deputy Minister.*APPENDIX A.—TOBACCO—*Continued*—MANUFACTURED BEFORE  
JUNE 1, 1908.No. 17.—COMPARATIVE STATEMENT of Warehouse Returns for the Fiscal Years  
Dr. ended March 31, 1915 and 1916. Cr.

Remaining in Warehouse from last year.	Totals.	Provinces.	Entered for Consumption.		Ship's Stores.	Remaining in Warehouse.	Totals.
			Quantity.	Duty.			
lbs.	lbs.	1915.	lbs.	\$ cts.	lbs.	lbs.	lbs.
461	461	New Brunswick, ..				461	461
3,999½	3,999½	British Columbia ..			80	3,919½	3,999½
19,719½	19,719½	Sundries .....				19,719½	19,719½
24,180	24,180	Totals .....			80	24,100	24,180
		1916.					
461	461	New Brunswick, ..				461	461
3,919½	3,919½	British Columbia ..	175	43 75	372½	3,372	3,919½
19,719½	19,719½	Sundries .....				19,719½	19,719½
24,100	24,100	Totals .....	175	43 75	372½	23,552½	24,100

INLAND REVENUE DEPARTMENT.  
OTTAWA, July 1, 1916J. U. VINCENT,  
*Deputy Minister.*



APPENDIX A.—TOBACCO—Continued.

No. 18.—Warehouse Return for the Fiscal Year ended March 31, 1916.

Dr.

Cr.

Remaining in Warehouse from last year.	Warehouse	Received from other Divisions.					Totals					Division.	Entered for Consumption.					Removed to other Divisions.				Exported.		Army, Navy, and Ship		Tobacco	Free and written off	Taken for re-working	Remaining in Warehouse		Totals						
		Tobacco		Cigarettes		Over-weight Cigarettes	Tobacco		Cigarettes		Overweight Cigarettes		Tobacco		Cigarettes		Overweight Cigarettes	Sonff.		Tobacco	Cigarettes	Tobacco	Cigarettes	Tobacco	Cigarettes				Tobacco	Cigarettes	Tobacco	Cigarettes	Overweight Cigarettes	Tobacco	Cigarettes	Overweight Cigarettes	
		Removed during year.	In Transit last year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	In Transit last year.	Removed during year.	Removed during year.	Removed during year.		Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.				Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	Removed during year.	
		No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.		Lbs.	No.	\$ cts	Lbs.	Lbs.	No.	No.	No.	No.	Lbs.	Lbs.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.			
129,660			1,980		1,980		1,980		1,980		1,980	Hell Gate, Ont	1,980		199 00																						
			23,120		23,120		23,120		23,120		23,120	Hamilton, "	23,120		2,312 00	4,348	2,271,010	208,000					8,633	16,221,370	5,430	2,144,900											
			1,000		1,000		1,000		1,000		1,000	Owen Sound, Ont	1,000		100 00																						
			27,000		27,000		27,000		27,000		27,000	Perth, "	27,000		2,062 40																						
			16,151		16,151		16,151		16,151		16,151	Stratford, "	16,151		12,830 00																						
			69,341		69,341		69,341		69,341		69,341	Toronto, "	69,341		111,624 30	4,348	2,271,000	208,000					128	12,044	13,703,740												
			15,502,750		15,502,750		15,502,750		15,502,750		15,502,750	Totals	15,502,750		46,500	111,624 30	4,348	2,271,000	208,000				83,781	16,221,370	17,402	10,838,070											
			5,118		5,118		5,118		5,118		5,118	Belleville, Que	5,118		511 80	12,868	12,868	2,373,700	2,000	2,500	600	100	173,443	137,074,050	20	44,833,195											
			3,107		3,107		3,107		3,107		3,107	Montreal, "	3,107		310 70	12,868	12,868	2,373,700	2,000	2,500	600	100	173,443	137,074,050	20	44,833,195											
			7,289,000		7,289,000		7,289,000		7,289,000		7,289,000	Quebec, "	7,289,000		728 90	12,868	12,868	2,373,700	2,000	2,500	600	100	173,443	137,074,050	20	44,833,195											
			4,969,500		4,969,500		4,969,500		4,969,500		4,969,500	Shedbrooke, Que	4,969,500		496 95	12,868	12,868	2,373,700	2,000	2,500	600	100	173,443	137,074,050	20	44,833,195											
			12,915		12,915		12,915		12,915		12,915	Totals	12,915		1,291 50	12,868	12,868	2,373,700	2,000	2,500	600	100	173,443	137,074,050	20	44,833,195											
			4,748		4,748		4,748		4,748		4,748	Halifax, N.S.	4,748		474 80																						
			12,250,000		12,250,000		12,250,000		12,250,000		12,250,000	Charlottetown, P.E.I.	12,250,000		1,225 00																						
			25,500		25,500		25,500		25,500		25,500	Winnipeg, Man	25,500		2,550 00																						
			7,440,000		7,440,000		7,440,000		7,440,000		7,440,000	Calgary, Alberta	7,440,000		744 00																						
			1,064,000		1,064,000		1,064,000		1,064,000		1,064,000	Vancouver, B.C.	1,064,000		106 40																						
			8,500,000		8,500,000		8,500,000		8,500,000		8,500,000	Victoria	8,500,000		850 00																						
			975		975		975		975		975	Totals	975		97 50																						
			47,679,750		47,679,750		47,679,750		47,679,750		47,679,750	Dawson, Y.T.	47,679,750		4,767 97																						
			6,504,000		6,504,000		6,504,000		6,504,000		6,504,000	Grand Totals	6,504,000		650 40																						

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.





7 GEORGE V, A. 1917

## APPENDIX A.—RAW LEAF TOBACCO, INCLUDING

DR.

No. 20.—WAREHOUSE RETURN for the

Divisions.		Remaining in Warehouse from last year.	Imported.	Warehoused ex-Factory.	Received from other Divisions.		Totals.
					Removed during year.	In transit last year.	
		Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.
Belleville, Ont.		674	2,114	628	707		4,123
Brantford		18,815	18,747	888	1,146		39,596
Guelfh		10,340	5,140				15,480
Hamilton		2,647,224½	2,036,556	195,761	151		4,879,692½
Kingston		39,023	28,903	5,327	1,930		75,183
London		300,656½	433,531	20,677	8,054 <sup>7</sup> / <sub>10</sub>		762,919½
Ottawa		121	1,043		120		1,284
Owen Sound		3,864	7,333		152		11,349
Perth		2,034½	807			291½	3,133
Peterborough		652	1,183		1,043		2,878
Port Arthur		144				125	269
Prescott		2,442	1,356		153	74	4,025
St. Catharines		6,704	5,567			662	12,733
Stratford		11,860	10,041		455		22,356
Toronto		241,238	595,987½	19,348	5,792½		862,365½
Windsor		10,939	29,645	1,896	9,336		51,816
Totals		3,296,731½	3,177,753½	244,525	29,039 <sup>8</sup> / <sub>10</sub>	1,152½	6,749,202 <sup>8</sup> / <sub>10</sub>
Joliette, Que.		14,603 <sup>4</sup> / <sub>5</sub>	6,531		3,747		24,881½
Montreal		7,877,072½	15,770,322 <sup>3</sup> / <sub>10</sub>	102,602 <sup>3</sup> / <sub>4</sub>	64,992½	3,890	23,818,879 <sup>1</sup> / <sub>10</sub>
Quebec		63,061	600,164	8,583	14,656½		686,464½
St. Hyacinthe		44,060½	109,865½	39,587	22,808 <sup>7</sup> / <sub>10</sub>	8,933	225,254 <sup>7</sup> / <sub>10</sub>
Sherbrooke		301,754	434,857	8,612	21,196		766,419
Three Rivers		2,284	2,021½				4,305½
Totals		8,302,834 <sup>3</sup> / <sub>5</sub>	16,923,760 <sup>1</sup> / <sub>10</sub>	159,384 <sup>3</sup> / <sub>4</sub>	127,400 <sup>7</sup> / <sub>10</sub>	12,823	25,526,203 <sup>7</sup> / <sub>10</sub>
St. John, N. B.		12,528	5,705				18,233
Halifax, N. S.		564	3,569		937		5,070
Pictou		6,719	1,945				8,664
Totals		7,283	5,514		937		13,734
Charlottetown, P. E. I.		21,254	2,290				23,544
Winnipeg, Man.		14,369	20,406	3,312	133		38,220
Moose Jaw, Sask.		2,362	1,057				3,419
Calgary, Alberta		22,012	78,676	67	672		101,427
Vancouver, B. C.		41,072	30,995	2,151	721		74,939
Victoria		10,009	9,775	4,975	1,864		26,623
Totals		51,081	40,770	7,126	2,585		101,562
Grand Totals		11,730,455 <sup>3</sup> / <sub>5</sub>	20,255,932 <sup>7</sup> / <sub>10</sub>	414,414 <sup>3</sup> / <sub>4</sub>	160,767 <sup>3</sup> / <sub>10</sub>	13,975½	32,575,545 <sup>3</sup> / <sub>10</sub>

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

STEMS, SCRAPS, AND CUTTINGS.

Fiscal Year ended March 31, 1916.

CR.

Entered for Consumption.		Removed in Bond to other Divisions.		Ex-ported.	De-royed.	Entered for Manu- facture, free.	Remain- ing in Ware- house.	Totals.
Quantity.	Duty.	Warehoused in divisions to which removed.	In Transit.					
Std. lbs.	§ cts	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.
2,861	801 08			628			634	4,123
23,254	7,911 12	432	1,225	888			8,797	39,596
8,145	2,390 36	839					6,496	15,480
1,986,872	556,798 76	1,862		359,745	75	161,065	2,370,073½	4,879,692½
38,038	10,690 96	1,102		5,327			30,716	75,183
501,164½	149,896 88	7,619 <sup>75</sup>	288	40,121			213,726	762,919½
1,035	289 80						249	1,284
8,994	3,328 22						2,348	11,349
879½	246 26	117½	75	2,061				3,133
2,087	584 36						791	2,878
129	36 12	149						269
3,024	857 36						1,001	4,025
6,450	1,808 38	304		137	33		5,809	12,733
12,837	3,594 36						9,519	22,356
394,240½	87,579 03	62,666		73,967	2,665		418,827½	892,365½
23,484	6,846 56	3,154	4,003	2,295	414		18,556	51,816
2,928,494½	833,660 21	78,236½	5,591	485,079	3,194	161,065	3,087,543	6,740,222½
12,090½	3,557 61		138				12,652½	24,881½
12,273,300 <sup>76</sup>	3,437,151 71	65,737½	1,549	260,345	5,225½	570,052	10,642,670	23,818,879½
574,823	160,950 44			8,583			103,058½	686,464½
104,388 <sup>76</sup>	29,955 82	13,710 <sup>76</sup>	1,856	39,587			65,711½	225,234½
489,616	137,188 94	618		14,377			261,808	766,419
2,823½	790 58						1,482	4,305½
13,457,041½	3,789,595 10	80,066 <sup>76</sup>	3,543	322,892	5,225½	570,052	11,087,382½	25,526,203½
7,659	2,159 92						10,574	18,233
3,801	1,109 22						1,266	5,070
4,978	1,393 84	110	129				3,447	8,604
8,782	2,563 06	110	129				4,713	13,734
3,091	1,033 48						19,853	23,544
20,614	5,914 16			3,454	78		14,074	38,220
2,306	648 48	398			35		680	3,419
83,485	23,688 74			2,653	211		13,078	101,427
45,779	13,463 24	1,750		3,701	62		23,647	74,989
13,459	4,191 60	297		5,838	29		7,090	26,623
59,238	17,654 84	1,957		9,639	91		30,737	101,562
16,571,311½	4,676,757 99	160,767½	9,263	823,617	8,834½	731,117	14,970,644½	32,583,341½

J. U. VINCENT,  
Deputy Minister.

7 GEORGE V, A. 1917

## APPENDIX A.—RAW LEAF TOBACCO, INCLUDING

DR. No. 21.—COMPARATIVE STATEMENT of Warehouse Returns

Provinces.	Remaining in Ware- house from last year.	Imported.	Warehoused ex- Factory.	Received from other Divisions.		Totals.
				Removed during the year.	In Transit last year.	
1915	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.
Ontario.....	2,914,125	3,088,016 <sup>9</sup> / <sub>10</sub>	269,379	47,871 <sup>3</sup> / <sub>4</sub>	505 <sup>1</sup> / <sub>2</sub>	6,319,898
Quebec.....	6,584,617 <sup>3</sup> / <sub>4</sub>	14,492,156 <sup>1</sup> / <sub>4</sub>	133,745	128,091 <sup>1</sup> / <sub>2</sub>	13,228 <sup>1</sup> / <sub>2</sub>	21,351,839 <sup>1</sup> / <sub>2</sub>
New Brunswick.....	14,846	12,341	.....	.....	.....	27,187
Nova Scotia.....	3,919	13,437	1,037	1,022	.....	19,415
Prince Edward Island.....	24,399	.....	.....	.....	.....	24,399
Manitoba.....	20,981	27,314	.....	2,216	833 <sup>1</sup> / <sub>2</sub>	51,344 <sup>1</sup> / <sub>2</sub>
Saskatchewan.....	4,547	4,847	.....	438	.....	9,832
Alberta.....	41,007	57,800	.....	688	460	99,955
British Columbia.....	61,541	74,884	4,038	1,641	.....	142,104
Totals.....	9,669,982 <sup>3</sup> / <sub>4</sub>	17,770,796 <sup>1</sup> / <sub>10</sub>	408,199	181,968 <sup>1</sup> / <sub>10</sub>	15,027 <sup>1</sup> / <sub>2</sub>	28,045,973 <sup>1</sup> / <sub>10</sub>
1916.						
Ontario.....	3,296,731 <sup>1</sup> / <sub>2</sub>	3,177,753 <sup>1</sup> / <sub>2</sub>	244,525	29,039 <sup>1</sup> / <sub>10</sub>	1,152 <sup>1</sup> / <sub>2</sub>	6,749,202 <sup>3</sup> / <sub>10</sub>
Quebec.....	8,302,834 <sup>3</sup> / <sub>10</sub>	16,923,760 <sup>1</sup> / <sub>10</sub>	159,384 <sup>3</sup> / <sub>4</sub>	127,400 <sup>7</sup> / <sub>10</sub>	12,823 <sup>1</sup> / <sub>2</sub>	25,526,203 <sup>1</sup> / <sub>10</sub>
New Brunswick.....	12,528	5,705	.....	.....	.....	18,233
Nova Scotia.....	7,283	5,514	.....	937	.....	13,734
Prince Edward Island.....	21,254	2,290	.....	.....	.....	23,544
Manitoba.....	14,369	20,406	3,312	133	.....	38,220
Saskatchewan.....	2,362	1,057	.....	.....	.....	3,419
Alberta.....	22,012	78,676	67	672	.....	101,427
British Columbia.....	51,081	40,770	7,126	2,585	.....	101,562
Totals.....	11,730,455 <sup>3</sup> / <sub>10</sub>	20,255,932 <sup>7</sup> / <sub>10</sub>	414,414 <sup>3</sup> / <sub>10</sub>	160,767 <sup>1</sup> / <sub>10</sub>	13,975 <sup>1</sup> / <sub>2</sub>	32,575,545 <sup>3</sup> / <sub>10</sub>

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

STEMS, SCRAPS, AND CUTTINGS—*Concluded.*

for the Fiscal Years ended March 31, 1915 and 1916.

CR.

Entered for Consumption.		Removed in Bond to other Divisions.		Ex-ported.	Des-royed.	Entered for Manu-facture, Free.	Remain-ing in Ware-house.	Totals.
Quantity.	Duty.	Warehoused in divisions to which removed.	In Transit.					
Std. lbs.	\$ cts.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.	Std. lbs.
2,722,770½	786,195 02	108,032	4,629	187,735	.....	.....	3,296,731½	6,319,898
12,770,886½	3,600,998 12	69,202½	9,346½	173,303½	26,266	.....	8,302,834½	21,351,839½
14,495	4,658 60	.....	.....	164	.....	.....	12,528	27,187
11,095	3,139 78	.....	.....	1,037	.....	.....	7,283	19,415
3,077	861 56	.....	.....	.....	68	.....	21,254	24,399
36,413½	11,133 36	562	.....	.....	.....	.....	14,369	51,344½
6,122	1,736 28	914	.....	.....	434	.....	2,362	9,832
74,308	21,090 58	1,776	.....	1,675	184	.....	22,012	99,955
84,162	25,070 22	1,482	.....	4,699	680	.....	51,081	142,104
15,723,329½	4,454,283 52	181,968½	13,975½	368,613½	27,632	.....	11,730,455½	28,045,973½
2,928,494½	833,660 21	78,236½	5,591	485,079	3,194	161,065	3,087,543	6,749,202½
13,457,041½	3,789,595 10	80,066½	3,543	322,892	5,225½	570,052	11,087,382½	25,526,203½
7,659	2,159 92	.....	.....	.....	.....	.....	10,574	18,233
8,782	2,503 06	110	129	.....	.....	.....	4,713	13,734
3,691	1,033 48	.....	.....	.....	.....	.....	19,833	23,544
20,614	5,914 16	.....	.....	3,454	78	.....	14,074	38,220
2,306	648 48	398	.....	.....	35	.....	680	3,419
83,485	23,588 74	.....	.....	2,653	211	.....	15,078	101,427
59,238	17,654 84	1,957	.....	9,639	91	.....	30,737	101,962
16,671,311½	4,676,757 99	160,767½	9,263	823,617	8,834½	731,117	14,270,634½	32,575,543½

J. U. VINCENT,  
Deputy Minister.

7 GEORGE V, A. 1917

## APPENDIX A.—OTHER MATERIALS.

No. 22.—WAREHOUSE RETURN for the Fiscal Year ended March 31, 1916.

DR. CR.

Remaining in Warehouse from last year.	Warehoused	Totals.	Divisions.	Entered for Consumption.		Remaining in Warehouse.	Totals.
				Quantity.	Duty.		
Lbs.	Lbs.	Lbs.		Lbs.	\$ cts.	Lbs.	Lbs.
99,319	2,182,604	2,281,923	Montreal, Que.	1,365,175	218,428 00	916,748	2,281,923
99,319	2,182,604	2,281,923	.... Totals ....	1,365,175	218,428 00	916,748	2,281,923

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.J. U. VINCENT,  
*Deputy Minister.*APPENDIX A.—OTHER MATERIALS—*Concluded.*

No. 23.—COMPARATIVE Statement of Warehouse Returns for the Fiscal Years ended March 31, 1915 and 1916.

DR. CR.

Remaining in Warehouse from last year.	Warehoused.	Totals.	Provinces.	Entered for Consumption.		Remaining in Warehouse.	Totals.
				Quantity.	Duty.		
Lbs.	Lbs.	Lbs.	1915.	Lbs.	\$ cts.	Lbs.	Lbs.
67,444	1,312,464	1,379,908	Quebec .....	1,280,589	204,894 24	99,319	1,379,908
99,319	2,182,604	2,281,923	Quebec .....	1,365,175	218,428 00	916,748	2,281,923

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.J. U. VINCENT,  
*Deputy Minister.*



SESSIONAL PAPER No. 12

APPENDIX A.—CANADA TWIST TOBACCO.

No. 24.—STATEMENT of Revenue collected from Canada Twist Tobacco for the Fiscal year ended March 31, 1916.

Divisions.	Licenses.		Canada Twist, at 10 cts. per lb.	Total Duty Collected including License Fees.
	No.	Fees.		
		\$	Lbs.	\$ cts. -
Ottawa, Ont. ....	4	8	540	62 00
Prescott, " ....	1	2	880	90 00
Windsor, " ....	1	2	50	7 00
Totals .....	6	12	1,470	159 00
Montreal, Que. ....	19	38	5,960	634 00
Grand Totals .....	25	50	7,430	793 00

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

APPENDIX A.—CANADA TWIST TOBACCO—*Concluded*

No. 25.—COMPARATIVE STATEMENT for the Fiscal Years ended March 31, 1915 and 1916.

Provinces.	Licenses.		Canada Twist, at 10 cts. per lb.	Total Duty Collected including License Fees.
	No.	Fees.		
1915.		\$	Lb.	\$ cts.
Ontario. ....	4	8	550	63 00
Quebec. ....	21	42	6,305	624 50
Totals .....	25	50	6,855	687 50
1916				
Ontario. ....	6	12	1,470	159 00
Quebec. ....	19	38	5,960	634 00
Totals .....	25	50	7,430	793 00

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

APPENDIX A.—CIGARS.  
No. 26.—RETURN of Manufactures for the Fiscal Year ended March 31, 1916.

Divisions.	Licenses.		Total Raw Leaf Tobacco and other materials actually used.	Deficiencies Paying Duty.		Cigars at \$4.00 per thousand.				Cigars at \$3.00 per thousand.				Total Duty collected excluding manufactory, including License Fees.
	No.	Fees.		Cigars.	No.	Manufactured.	Paid Duty.	Warehoused.	No.	Manufactured.	Paid Duty.	Warehoused.	No.	
Belleville, Ont	1	50 00	2,422	.....	.....	.....	.....	.....	128,050	61,600	66,450	234 80		
Brantford, "	5	250 00	39,782	.....	.....	1,020	.....	.....	1,944,560	516,200	1,428,360	1,802 68		
Guelph, "	7	350 00	24,620	.....	.....	.....	.....	.....	1,282,850	662,700	620,150	2,338 09		
Hamilton, "	10	500 00	331,673	3,120	1,050	.....	.....	.....	14,036,055	4,698,615	9,337,440	14,605 20		
Kingston, "	3	125 00	47,248	.....	.....	2,535	.....	.....	2,381,650	996,600	1,385,050	3,124 94		
London, "	35	1,650 00	596,760	45,622	12,000	.....	.....	.....	29,772,185	25,226,485	4,545,700	77,511 40		
Ottawa, "	1	50 00	3,363	.....	.....	.....	.....	.....	182,725	182,725	.....	598 18		
Owen Sound, "	2	100 00	17,402	939	.....	.....	.....	.....	894,525	462,700	431,825	1,490 94		
Perth, "	2	100 00	100 00	.....	.....	.....	.....	.....	50,550	20,550	30,000	161 66		
Peterborough, "	2	100 00	2,452	.....	.....	.....	.....	.....	119,250	119,250	.....	457 75		
Port Arthur, "	1	50 00	548	2,659	.....	.....	.....	.....	22,250	22,250	.....	126 24		
Prescott, "	2	100 00	7,870	.....	.....	.....	.....	.....	410,350	337,600	72,750	1,112 80		
St. Catharines, "	9	425 00	17,622	.....	.....	.....	.....	.....	1,023,450	993,450	30,000	3,465 35		
Stratford, "	4	200 00	21,974	100	1,500	1,500	.....	.....	1,136,315	770,240	366,075	2,517 05		
Toronto, "	23	1,150 00	310,135	64,127	.....	.....	.....	.....	16,173,830	10,316,030	5,857,800	32,290 75		
Windsor, "	7	350 00	39,956	.....	.....	.....	.....	.....	1,899,150	1,649,400	249,200	5,298 25		
Totals.....	114	5,550 00	1,434,728	116,467	18,105	17,055	1,050	.....	71,457,745	47,036,305	24,420,800	147,079 08		
Joliette, Que.	7	350 00	80,159	.....	15	.....	.....	.....	4,995,875	3,635,220	1,360,655	11,255 72		
Montreal, "	45	2,150 00	1,790,576	39,515	14,385	.....	.....	.....	99,048,850	61,603,630	37,443,220	187,143 17		
Quebec, "	2	100 00	92,500	.....	.....	.....	.....	.....	4,729,545	2,690,815	2,038,730	8,172 45		
St. Hyacinthe, "	10	475 00	173,149	2,195	69,006	62,706	6,300	.....	10,433,130	6,740,105	4,193,025	20,925 73		
Sherbrooke, "	7	351 00	112,738	.....	675	675	.....	.....	6,093,680	3,324,450	2,769,230	10,326 61		
Three Rivers, "	4	200 00	9,736	.....	300	300	.....	.....	537,770	427,820	109,950	1,484 66		
Totals.....	75	3,625 00	2,258,858	41,710	84,331	78,081	6,300	.....	126,338,850	78,424,040	47,914,810	239,335 34		

SESSIONAL PAPER No. 12

St. John, N.B.	2	100 00	35,345							2,004,100	163,000	1,841,100	589 00
Halifax, N.S.	3	150 00	13,712							753,570	541,160	212,410	1,773 48
Pictou	1	50 00	3,894							180,900	166,400	14,500	549 20
Totals	4	200 00	17,046							934 470	707,560	226,910	2,322 68
Winnipeg, Manitoba	12	600 00	41,773	20,880						2,058,465	1,642,715	415,750	5,590 83
Montreal, Saskatchewan	4	200 00	3,003	14,009						121,500	121,500		606 53
Calgary, Alberta	8	400 00	77,758	6,692	3,600	3,600				3,768,485	3,751,485	17,000	11,688 92
Vancouver, B.C.	17	850 00	40,606	7,914	2,100	2,100				2,077,005	2,077,005		7,113 17
Victoria	11	525 00	14,754							760,150	760,150		2,805 45
Totals	28	1,375 00	55,800	7,914	2,100	2,100				2,837,155	2,837,155		9,918 62
Grand Totals	247	12,050 00	3,924,632½	207,672	108,186	100,836	7,350	209,520,770	{ 134,688,850 *550 }	74,836,370			417,131 00

\*Deducted by five.

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.

APPENDIX A.—CIGARS—Continued.  
 No. 27.—COMPARATIVE STATEMENT of Manufactures for the Fiscal Years ended March 31, 1915 and 1916.

Provinces.	Licenses.		Total Raw Leaf Tobacco and other materials actually used.	Deficiencies Paying Duty.		Cigars at \$4 per thousand.			Cigars at \$3 per thousand.			Total Duty collected ex-manufactory, including License Fees.
	No.	Fees.		Cigars.	Manufac-tured.	Paid Duty.	Ware-housed.	Manufac-tured.	Paid Duty.	Ware-housed.		
		\$ cts.	Lbs.	No.	No.	No.	No.	No.	No.	No.	No.	\$ cts.
1915.												
Ontario.....	116	5,700 00	1,637,827 $\frac{3}{4}$	242,678	183,060	.....	82,127,565	51,154,510	30,973,655	139,798 65		
Quebec.....	71	3,400 00	2,284,847 $\frac{1}{2}$	955,249	26,490	615	128,140,505	73,937,335 } * 30,000 }	54,173,170	200,817 60		
New Brunswick.....	3	150 00	53,807	.....	.....	.....	3,062,600	448,400	2,614,200	1,296 05		
Nova Scotia.....	5	250 00	21,769	.....	.....	.....	1,164,155	660,910	503,245	2,004 76		
Manitoba.....	12	600 00	66,664	.....	.....	.....	3,374,800	2,408,035	966,705	6,860 51		
Saskatchewan.....	7	325 00	6,642	.....	.....	.....	349,040	349,040	.....	1,217 96		
Alberta.....	12	600 00	71,231	.....	.....	.....	3,374,105	3,374,105	.....	9,233 88		
British Columbia.....	36	1,775 00	81,497	80,724	.....	.....	4,345,000	4,323,900	21,100	13,046 21		
Totals.....	262	12,800 00	4,226,285 $\frac{1}{4}$	1,304,626	210,105	615	225,937,770	136,656,295 } * 30,000 }	89,251,475	374,275 62		

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1916.																					
Ontario	114	5,500 00	1,434,728 $\frac{3}{4}$	116,467	18,105	17,055	1,050	71,457,745	47,026,395 $\frac{5}{8}$	24,420,800	147,079 08										
Quebec	75	3,625 00	2,258,588 $\frac{3}{4}$	41,710	84,381	78,081	6,300	126,398,850	78,424,040	47,914,810	239,385 34										
New Brunswick	2	100 00	35,545					2,004,100	163,000	1,841,100	589 06										
Nova Scotia	4	200 00	17,666					934,470	707,500	226,910	2,322 68										
Manitoba	12	600 00	41,773	20,880				2,058,465	1,642,715	415,750	5,590 83										
Saskatchewan	4	200 00	3,003	14,009				121,500	121,500		606 53										
Alberta	8	400 00	77,758	6,692	3,600	3,600		3,768,485	3,751,485	17,000	11,688 92										
British Columbia	28	1,375 00	55,390	7,914	2,100	2,100		2,837,155	2,837,155		9,918 62										
Totals	247	12,050 00	3,424,652 $\frac{3}{4}$	297,672	108,186	100,836	7,350	209,520,770	134,683,850 $\frac{5}{8}$	74,886,370	417,131 00										

\* Illustrated by fire.

Memo

Total number of cigars manufactured—

1915	226,147,875
1916	209,628,956

ISLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.



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166,342	212,418	578,755	N.S.	244,800	734 40	800	133,155	378,755
	14,500	14,500	"	14,500	43 50			14,500
166,342	226,910	393,255	Totals	259,300	777,90	800	133,155	393,255
208,525	415,750	694,275	Winnipeg	562,125	1,686 38	60,850	71,300	694,275
	17,000	17,000	Calgary	17,000	51 00			17,000
86,100	65,000	151,100	Vancouver	75,000	225 00	44,300	23,800	151,100
	8,000	8,000	Victoria			3,400	4,600	8,000
86,100	73,000	159,100	Totals	75,000	225 00	47,700	23,400	159,100
19,122,225	74,843,720	98,639,045	Grand Totals	72,655,450	218,026 83	624,375	11,125	98,639,045

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.

APPENDIX A.—CIGARS—Concluded.  
 Dr. No. 29.—COMPARATIVE STATEMENT OF Warehouse Returns for the Fiscal Years ended March 31, 1915 and 1916. Cr.

Remaining in Warehouse from last year.	Warehoused.	Received from other Divisions.		Totals.	Provinces.	Entered for Consumption.		Removed to other Divisions.		Army, Navy, and Ship's Stores.	Exported.	Remain- ing in Ware- house.	Totals.
		Removed during the year.	In Transit last year.			Quantity.	Duty.	Ware- housed in Divisions to which Removed.	In Transit.				
10,013,840	30,973,055	2,069,050	No.	43,055,945	1915.	No.	\$ cts. <td>No.</td> <td>No.</td> <td>No.</td> <td>No.</td> <td>No.</td> <td>No.</td>	No.	No.	No.	No.	No.	No.
17,313,246	54,173,785	2,885,025	117,500	74,489,556	Ontario.....	34,257,045	88,456 92	907,050	.....	5,000	7,886,850	43,055,945	
773,000	2,614,290			3,387,290	Quebec.....	60,344,676	152,781 29	4,047,025	109,800	9,000	9,979,055	74,489,556	
134,605	503,245			637,850	New Brunswick.....	2,521,850	6,386 03				865,350	3,387,290	
344,375	966,705			1,311,080	Nova Scotia.....	469,405	1,144 87			2,100	186,345	637,850	
65,000	21,100			86,100	Manitoba.....	1,103,155	2,860 44				298,525	1,311,080	
28,644,656	89,252,090	4,954,075	117,500	122,968,331	British Columbia.....						86,100	86,100	
					Totals.....	98,696,131	251,629 55	4,954,075	109,800		16,100	19,192,225	122,968,331
					1916.								
7,886,850	24,421,850	1,508,000		33,814,700	Ontario.....	26,398,390	79,210 48	84,000	6,000	313,075	11,125	7,004,110	33,816,760
9,979,055	47,921,110	2,833,300	109,800	60,843,255	Quebec.....	43,345,235	130,080 87	4,392,300	151,650	197,950		12,756,130	60,843,255
865,350	1,841,100			2,706,450	New Brunswick.....	1,998,400	5,995 20			4,000		704,050	2,706,450
166,345	226,910			393,255	Nova Scotia.....	299,300	777 90			800		133,155	393,255
208,525	415,750	70,000		694,275	Manitoba.....	562,125	1,686 38			60,850		71,300	694,275
	17,000			17,000	Alberta.....	17,000	51 00					17,000	17,000
		73,000		159,100	British Columbia.....	75,000	225 00	8,000		47,700		28,400	159,100
19,152,225	74,843,720	4,484,300	109,800	98,630,045	Totals.....	72,655,450	218,026 83	4,484,300	157,650	624,375	11,125	20,637,145	98,630,045

	1915.	1916.
Total duty collected, ex-manufactory and ex-warehouse.....	\$ 613,105 17	\$ 623,107 83
License fees.....	12,800 00	12,050 00
Totals.....	\$ 625,905 17	\$ 635,157 83

INLAND REVENUE DEPARTMENT,  
 OTTAWA, July 1, 1916.  
 J. U. VINCENT,  
 Deputy Minister.



SESSIONAL PAPER No. 12

APPENDIX A.—INSPECTION OF PETROLEUM.

No. 30.—RETURN of Inspected Petroleum and Naphtha shipped from Refineries, during the Fiscal Year ended March 31, 1916.

Divisions.	Licenses.		Petroleum.	Naphtha.	Totals.
	No.	Fees.			
		\$	Gallons.	Gallons	Gallons
London, Ont.....	3	3	30,773,387 11	21,107,425 88	51,880,812 99
Toronto ".....	2	2	2,360,506 00	3,463,122 00	5,823,628 00
Totals.....	5	5	33,133,893 11	24,570,547 88	57,704,440 99
Vancouver, B.C.....	1	1	1,641,661 70	4,668,296 10	6,309,957 80
Grand Totals.....	6	6	34,775,554 81	29,238,843 98	64,014,398 79

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

APPENDIX A.—INSPECTION OF PETROLEUM—*Concluded.*

No. 31.—COMPARATIVE Statement of Inspected Petroleum and Naphtha shipped from Refineries during the Fiscal Years ended March 31, 1915 and 1916.

Provinces.	Licenses.		Petroleum.	Naphtha.	Totals.
	No.	Fees.			
		\$	Gallons.	Gallons	Gallons
1915.					
Ontario.....	5	5	30,948,769 08	15,265,380 01	46,214,149 09
British Columbia.....	1	1	168,636 00		168,636 00
Totals.....	6	6	31,117,405 08	15,265,380 01	46,382,785 09
1916.					
Ontario.....	5	5	33,133,893 11	24,570,547 88	57,704,440 99
British Columbia.....	1	1	1,641,661 70	4,668,296 10	6,309,957 80
Totals.....	6	6	34,775,554 81	29,238,843 98	64,014,398 79

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

7 GEORGE V, A. 1917

APPENDIX A.—

## No. 32.—RETURN of Manufactures for

Divisions.	Licenses.		Materials used.			
	No.	Fees.	Spirits.	Beer, Wine, etc.	Nitric Acid.	Mercury.
		\$ cts.	Gallons.	Gallons.	Lbs.	Lbs.
Brantford, Ont.....	1	50 00	9,828 04	144 00	*	
Hamilton, ".....	4	500 00	24,204 09	250 80		
Kingston, ".....	2	100 00	12,621 84	157 72		
Ottawa, ".....						
Owen Sound, ".....	1	50 00	15,926 28	148 80		
Perth, ".....	4	300 00	31,063 03			
Peterborough ".....	1	50 00				
Prescott, ".....	1	300 00	80,675 43		402,342	43,397
Stratford, ".....	1	50 00				
Toronto, ".....	17	1,075 00	532,547 90	1,869 00		
Windsor, ".....	11	550 00	40,418 25	221 52		
Totals .....	43	3,025 00	747,284 86	2,647 84 144 00	402,342 *	43,397
Montreal, Que.....	18	1,400 00	148,102 96	255 91 385 50	†	
Quebec, ".....	1	50 00	14,561 91	386 00		
St. Hyacinthe, ".....	2	200 00	94,399 23			
Sherbrooke, ".....	1	300 00	65,999 69		301,275	40,125
Totals.....	22	1,950 00	323,063 79	255 91 771 50	* 301,275	40,125
St. John, N.B.....	2	100 00	11,611 73	50 10 164 61	†	
Winnipeg, Man.....	9	450 00	51,200 23	26 90 925 71	†	
Calgary, Alta.....	3	125 00	18,930 79	371 30 704 95	†	
Vancouver, B.C.....	1	50 00	8,268 52	78 00		
Grand Totals .....	80	5,700 00	1,160,359 92	144 00 3,945 64 2,051 18	* 703,617 †	83,522

\* Malt extract. † Vinegar.

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

MANUFACTURES IN BOND.

the Fiscal Year ended March 31, 1916.

Manufactured.		Paid duty ex-manufactory.		Warehoused.		Total Duty Collected ex-manufactory, including License Fees.
Vinegar.	Crude Fulminate.	Vinegar.	Duty.	Vinegar.	Crude Fulminate.	
Gallons.	Lbs.	Gallons.	\$ cts.	Gallons.	Lbs.	
57,974 47		57,974 47	2,319 09			2,369 09
160,110 26		62,414 91	2,496 58	97,695 35		2,996 58
84,189 21		5,701 70	228 07	78,487 51		328 07
			890 91			890 91
86,126 65		77,062 21	3,082 53	9,064 44		3,132 53
						300 00
						50 00
	77,847				77,847	300 00
						50 00
885,328 21		117,197 68	4,687 91	768,130 53		5,762 91
224,449 43		134,650 60	5,386 00	89,798 83		5,936 00
1,498,178 23	77,847	455,001 57	19,091 09	1,043,176 66	77,847	22,116 09
237,713 47		191,176 00	7,647 04	46,537 38		9,047 04
90,839 77		67,017 82	2,680 72	23,821 95		2,730 72
	46,452				46,452	200 00
						300 00
328,553 24	46,452	258,193 91	10,327 76	70,359 33	46,452	12,277 76
54,069 26		54,069 26	2,162 78			2,262 78
317,096 39		260,561 87	12,872 91	56,534 52		13,322 91
84,473 92		77,531 30	3,101 22	6,942 62		3,226 22
42,036 58		42,036 58	1,681 45			1,731 45
2,324,407 62	124,299	1,147,394 49	49,237 21	1,177,013 13	124,299	54,937 21

J. U. VINCENT,  
Deputy Minister

## No. 33.—COMPARATIVE STATEMENT of Manufactures for

Provinces.	Licenses.		Materials used.			
	No.	Fees.	Spirits.	Beer, Wine, etc.	Nitric Acid.	Mercury.
1915.		§ cts.	Gallons.	Gallons.	Lbs.	Lbs.
Ontario.....	39	2,200 00	250,134 76	122 70 } * 2,456 88 } 272 95 } †	161,132	17,485
Quebec.....	15	975 00	121,311 12	925 00	254,299	33,450
New Brunswick.....	2	100 00	8,532 51	37 20		
Manitoba.....	10	475 00	67,326 08	779 53 } † 4 40 }		
Alberta.....	3	150 00	13,275 08	409 07 } 295 90 }		
British Columbia.....	1	50 00	13,453 76	156 20		
Totals.....	79	3,950 00	474,033 31	122 70 } * 1,461 55 } 3,875 58 } †	415,431	50,935
1916.						
Ontario.....	43	3,025 00	747,284 86	144 00 } * 2,647 84 } 255 91 } †	402,342	43,397
Quebec.....	22	1,950 00	323,063 79	771 50	301,275	40,125
New Brunswick.....	2	100 00	11,611 73	164 61 } † 50 10 }		
Manitoba.....	9	450 00	51,200 23	925 71 } † 26 90 }		
Alberta.....	3	125 00	18,930 79	704 95 } † 371 30 }		
British Columbia.....	1	50 00	8,268 52	78 00		
Totals.....	80	5,700 00	1,160,359 92	144 00 } * 2,051 18 } 3,945 64 } †	703,617	83,522

\* Malt extract. † Vinegar.

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

MANUFACTURES IN BOND—Continued.

the Fiscal Years ended March 31, 1915 and 1916.

Manufactured.		Paid Duty ex-Manufactory.		Warehoused.		Total Duty Collected ex-Manufactory including License fee.
Vinegar.	Crude Fulminate.	Vinegar.	Duty.	Vinegar.	Crude Fulminate.	
Gallons.	Lbs.	Gallons.	\$ cts.	Gallons.	Lbs.	\$ cts.
1,339,642·79	31,258	442,515·31	17,700 71	897,127 48	31,258	19,900 71
337,196·85	38,481	269,392·45	10,775 69	67,804 40	38,481	11,750 69
36,386 96	.....	33,656·65	1,346 29	2,730 31	.....	1,446 29
349,752 20	.....	246,591·24	9,863 65	103,160 96	.....	10,338 65
56,380 31	.....	56,380·31	2,255 19	.....	.....	2,405 19
80,061·61	.....	80,061·61	3,202 49	.....	.....	3,252 49
2,199,420 72	69,739	1,128,597·57	45,144 02	1,070,823 15	69,739	49,694 02
1,498,178 23	77,847	455,901·57	19,091 09	1,043,176 66	77,847	22,116 09
328,558 24	46,452	258,193 91	10,327 76	70,359 33	46,452	12,277 76
54,069 26	.....	54,069 26	2,162 78	.....	.....	2,262 78
317,096 39	.....	260,561 87	12,872 91	56,534 52	.....	13,322 91
84,473 92	.....	77,531 30	3,101 22	6,942 62	.....	3,286 22
42,036,58	.....	42,036 58	1,681 45	.....	.....	1,781 45
2,324,407 62	124,299	1,147,394 49	49,237 21	1,177,013 18	124,299	54,807 21

J. U. VINCENT,  
Deputy Minister.

DR.

No. 34.—WAREHOUSE RETURN for the

Remaining in Warehouse from last year.	Warehoused.		Received from other Divisions.	Totals.		Divisions.
	Vinegar.	Crude Fulminate.	Vinegar.	Vinegar.	Crude Fulminate.	
	Galls.	Lbs.	Removed during the year.	Galls.	Lbs.	
			10,757·63	10,757·63		Brantford, Ont. ....
25,527·54	97,695·35			123,222·89		Hamilton " .....
20,381·74	78,487·51			98,869·25		Kingston, " .....
523·60				523·60		Ottawa, " .....
	9,064·44			9,064·44		Owen Sound, " .....
		77,847			77,847	Prescott, " .....
243,465·20	768,130·53			1,011,595·73		Toronto, " .....
	89,798·83			89,798·83		Windsor, " .....
289,898·08	1,043,176·66	77,847	10,757·63	1,343,832·37	77,847	..... Totals .....
48,408·09	46,537·38			94,945·47		Montreal, Que. ....
14,836·27	23,821·95			38,658·22		Quebec, " .....
		46,452			46,452	Sherbrooke, " .....
63,244·36	70,359·33	46,452		133,603·69	46,452	..... Totals .....
83,507·76	56,534·52		7,495·17	147,537·45		Winnipeg, Man .....
	6,942·62			6,942·62		Calgary, Alta. . . . .
436,650·20	1,177,013·13	124,299	18,252·80	1,631,916·13	124,299	..... Grand Totals. . . . .

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 12

MANUFACTURES IN BOND—Continued.

Fiscal Year ended March 31, 1916.

CR.

Entered for Consumption.		Removed to other Divisions.	Vinegar.	Exported.	Remaining in Warehouse.	Totals.	
Vinegar.	Duty.	Vinegar.				Free.	Crude Fulminate.
Galls.	§ cts.	Warehoused in Divisions to which removed.	Galls.	Lbs.	Galls.	Galls.	Lbs.
10,757·63	430 31					10,757 63	
90,574·47	3,622 99	3,702 86			28,945 56	123,222 89	
83,825·26	3,353 02				15,043 99	98,869 25	
523·60	20 94					523 60	
4,392·89	175 72				4,671 55	9,064 44	
				77,847			77,847
886,374·72	35,455 01	14,549 91			110,671 07	1,011,595 73	
5,787·99	231 52				84,010 84	89,798 83	
1,082,236 56	43,289 51	18,252 80		77,847	243,343 01	1,343,832 37	77,847
52,852 32	2,114 11				42,093 15	94,945 47	
19,754 30	790 18				18,903 92	38,658 22	
				46,452			46,452
72,606 62	2,904 29			46,452	60,997 07	133,603 69	46,452
116,530 89	4,661 23		3,702 86		27,303 70	147,537 45	
500 00	20 00				6,442 62	6,942 62	
1,271,874 07	50 875 03	18,252 80	3,702 86	124,299	338,086 40	1,631,916 13	124,299

J. U. VINCENT,  
Deputy Minister.

## DR. No. 35.—COMPARATIVE STATEMENT of Warehouse Returns

Remaining in Warehouse from last year.	Warehoused.		Received from other Divisions.	Totals.		Provinces.
	Vinegar.	Crude Fulminate.	Vinegar.	Vinegar.	Crude Fulminate.	
Vinegar.	Vinegar.	Crude Fulminate.	Removed during the year.	Vinegar.	Crude Fulminate.	
Galls.	Galls.	Lbs.	Galls.	Galls.	Lbs.	1915.
360,975·27	897,127·48	31,258	11,143·39	1,269,246·14	31,258	Ontario.....
66,531·31	67,804·40	33,481	.....	134,335·71	33,481	Quebec.....
23,864·15	2,730·31	.....	.....	26,594·46	.....	New Brunswick.....
59,699·24	103,160·96	.....	.....	162,860·20	.....	Manitoba.....
511,069·97	1,070,823·15	69,739	11,143·39	1,593,036·51	69,739	..... Totals.....
						1916.
289,898·08	1,043,176·66	77,847	10,757·63	1,343,832·37	77,847	Ontario.....
63,244·36	70,359·33	46,452	.....	133,603·69	46,452	Quebec.....
83,507·76	56,534·52	.....	7,495·17	147,537·45	.....	Manitoba.....
.....	6,942·62	.....	.....	6,942·62	.....	Alberta.....
436,650·20	1,177,013·13	124,299	18,252·80	1,631,916·13	124,299	..... Totals.....

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.



SESSIONAL PAPER No. 12

MANUFACTURES IN BOND—*Concluded.*

for the Fiscal Years ended March 31, 1915 and 1916.

CR.

Entered for Consumption.		Removed to other Divisions.	Vinegar.	Exported.	Remaining in Warehouse.	Totals.	
Vinegar.	Duty.	Warehoused in Divisions to which removed.	Free.	Crude Fulminate.	Vinegar.	Vinegar.	Crude Fulminate.
Galls.	\$ cts.	Galls.	Galls.	Lbs.	Galls.	Galls.	Lbs.
968,204 67	38,728 12	11,143 39		31,258	289,898 08	1,269,246 14	31,258
71,091 35	2,843 65			38,481	63,244 36	134,335 71	38,481
26,594 46	1,063 80					26,594 46	
79,352 44	3,174 07				83,507 76	162,860 20	
1,145,242 92	45,809 64	11,143 39		69,739	436,650 20	1,503,036 51	69,739
1,082,236 56	43,289 51	18,252 80		77,847	243,343 01	1,313,832 27	77,847
72,666 62	2,904 29			46,452	60,997 07	133,663 69	46,452
116,530 89	4,661 23		3,702 86		27,303 70	147,537 48	
500 00	20 00				6,442 62	6,942 62	
1,271,874 07	50,875 03	18,252 80	3,702 86	124,299	338,086 44	1,631,916 13	124,299

	1915	1916.
Total duty collected, ex-manufactory and ex-warehouse...	\$ 90,953 66	\$ 100,112 24
License fees .....	3,950 00	5,700 00
Totals .....	\$ 94,903 66	\$ 105,812 24

J. U. VINCENT,  
*Deputy Minister*

## APPENDIX A.—ACETIC ACID.

No. 36.—RETURN of Manufactures for the Fiscal Year ended March 31, 1916.

Divisions.	Licenses.		Manufac- tured.	Paid Duty ex-Manufactory.		Ware- housed.	Total Duty Collected ex- manufactory including License Fees.
	No.	Fees.	Acetic Acid.	Acetic Acid.	Duty.	Acetic Acid.	
		\$ cts.	Galls.	Galls.	\$ cts.	Galls.	\$ cts.
Hamilton, Ont. ....	1	50 00	306,267 42	.....	.....	306,267 42	50 00
Montreal, Que. ....	1	50 00	203,753 12	203,753 12	8,150 14	.....	8,200 14
Totals. ....	2	100 00	510,020 54	203,753 12	8,150 14	306,267 42	8,250 14

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.J. U. VINCENT,  
*Deputy Minister.*APPENDIX A.—ACETIC ACID—*Continued.*No. 37.—COMPARATIVE STATEMENT of Manufactures for the Fiscal Years ended  
March 31, 1915 and 1916.

Provinces.	Licenses.		Manufac- tured.	Paid Duty ex-Manufactory.		Ware- housed.	Total Duty Collected ex- manufactory including License Fees.
	No.	Fees.	Acetic Acid.	Acetic Acid.	Duty.	Acetic Acid.	
		\$ cts.	Galls.	Galls.	\$ cts.	Galls.	\$ cts.
1915.		\$ cts.	Galls.	Galls.	\$ cts.	Galls.	\$ cts.
Ontario. ....	1	50 00	60,646 48	.....	.....	60,646 48	50 00
Quebec. ....	1	50 00	178,887 43	178,887 43	7,155 48	.....	7,205 48
Totals. ....	2	100 00	239,533 91	178,887 43	7,155 48	60,646 48	7,255 48
1916.							
Ontario. ....	1	50 00	306,267 42	.....	.....	306,267 42	50 00
Quebec. ....	1	50 00	203,753 12	203,753 12	8,150 14	.....	8,200 14
Totals. ....	2	100 00	510,020 54	203,753 12	8,150 14	306,267 42	8,250 14

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.J. U. VINCENT,  
*Deputy Minister.*

SESSIONAL PAPER No. 12

APPENDIX A.—ACETIC ACID—*Continued.*

No. 38.—WAREHOUSE RETURN for the Fiscal Year ended March 31, 1916.

DR. CR.

Warehoused	Total.	Divisions.	Exported	Total.
Acetic Acid.	Acetic Acid.		Acetic Acid.	Acetic Acid.
Galls.	Galls.		Galls.	Galls.
306,267 42	306,267 42	Hamilton. . . . .	306,267 42	306,267 42

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

APPENDIX A.—ACETIC ACID—*Concluded.*

No. 39.—COMPARATIVE STATEMENT of Warehouse Returns for the Fiscal Years ended March 31, 1915 and 1916. CR.

Warehoused	Totals.	Provinces.	Exported	Totals.
Acetic Acid.	Acetic Acid.		Acetic Acid.	Acetic Acid.
Galls.	Galls.	1915.	Galls.	Galls.
60,646 48	60,646 48	Ontario. . . . .	60,646 48	60,646 48
		1916.		
306,267 42	306,267 42	Ontario . . . . .	306,267 42	306,267 42
			1915.	1916.
Total duty collected on ex manufactory . . . . .			8 00	9 00
License fees . . . . .			7,155 48	8,150 14
			100 00	100 00
			7,255 48	8,250 14

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

7 GEORGE V, A. 1917

(A)

## METHYLATED SPIRITS.

No. 40.—STATEMENT showing the quantity of Raw Materials on hand on April 1, 1915, and March 31, 1916, and brought in during the year ended March 31, 1916.

DR.

CR.

Names of Articles.	Stock on hand April 1, 1915.	Brought in during the year.	Total to be Accounted for.	Used in manufacture of Methylated Spirits.	Sold.	Stock on hand March 31, 1916.	Total Accounted for.
	Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.
Alcohol.....	6,380·60	161,412·02	167,792·62	161,014·11	8·25	6,740·26	167,792·62
Wood Naphtha.	1,191·15	35,824·32	37,015·47	34,977·11	.....	2,038·36	37,015·47

(B)

STATEMENT showing the quantity of Raw Materials used, and Methylated Spirits produced therefrom.

DR.

CR.

Alcohol used Statement (A) above.	Wood Naphtha used Statement (A) above.	Gasoline used Statement (A) above.	Total to be Accounted for.	Methylated Spirits produced.	Lost in Manufacture.		Total Accounted for
Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.	p. c.	Pr'f galls.
161,044·11	34,977·11	.....	.....	194,026·45	1,994·77	1·02	196,021·22

(C)

STATEMENT showing the quantity of Methylated Spirits on hand April 1, 1915, and March 31, 1916, quantity manufactured, sold and otherwise accounted for during the year ended March 31, 1916.

DR.

CR.

Stock on hand April 1, 1915.	Manufactured as per Statement (B) above.	Brought in during the year.	Total to be Accounted for.	Sold.	Re-used in manufacture.	Stock on hand March 31, 1916.	Total Accounted for.
Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.	Pr'f galls.
8,843·21	194,026·45	.....	202,869·66	201,420·22	.....	1,449·44	202,869·66

**APPENDIX B.**

EXPENDITURES, Etc.



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Troy.		Hamilton.	
Salary as Collector for the year	39 96	256 40	51 12
Deputy Collector Class "A" for the year	43 92		1,006 30
Special Class Excise man for the year	36 00		
Accountant for the year	30 00		
1st Class Excise man for the year	17 50		
"	24 96		
"	52 44		
2nd			
1st	11 62		
3rd			
"			
1st	75 00		
"	71 14		
1st	74 72		
1st	71 14		
Thomas, F. W.	47 50		
Uchelman, A.			
Fink, L.	38 70		
Salaries	256 40	378 20	22,432 51
Contingencies			1,006 30
			23,438 81
Salary as collector for the year	98 82		14 40
Deputy collector Class "A" for the year	39 96		7 20
Accountant for the year	33 00		4 32
"	32 43		4 32
Special Class Excise man for the year	65 28		4 32
1st Class Excise man for the year	79 92		2 88
"	75 00		2 88
"	75 00		2 88
"	73 68		2 88
"	71 14		2 88
"	32 20		2 88
"	63 35		2 88
"	63 35		2 88
"	27 96		2 88
"	60 35		2 88
"	51 06		2 88
"	53 91		2 88
"	51 06		2 88
"	49 92		2 88
"	49 92		2 88
"	39 96		2 88
Salaries	142 83	1,210 73	71 88
Contingencies			24,993 99
			1,154 09

26,148 08

APPENDIX B.—No. 1.—Details of Excise Expenditures for the Year ending March 31, 1916—Continued.

To whom paid.	Service.	Deduction for				Amounts paid.	Total amounts paid.
		Superannuation.	Retirement.	Guarantee.			
				\$	cts.		
		\$	cts.	\$	cts.	\$	cts.
<i>Kingston.</i>							
Grimason, T.	Salary as Collector for the year	39 96			7 20	1,952 76	
Hanley, A.	Deputy Collector Class "A" for the year	8 61	62 40		3 60	1,414 29	
Montgomery, W. H.	2nd Class Excise-man for the year				2 88	1,184 64	
O'Donnell, J.	Messenger	18 42			2 88	977 16	
Fahay, E.	3rd Class Excise-man for the year		49 92		2 88	997 08	
Hogan, J.	" " " "		38 70		2 88	947 16	
Frizell, W.	" " " "				2 88	733 35	
	Salaries	66 99	151 02	25 20		8,206 44	
	Contingencies					104 43	
8,310 87							
<i>London.</i>							
Davis, T. G.	Salary as Collector for the year		77 52		7 20	2,292 72	
Thrasher, W. A.	Deputy Collector Class "A" for the year		99 96		3 60	1,818 84	
Webbe, C. E. A.	1st Class Excise-man for the year	31 92			3 60	1,564 44	
Coles, F. H.	Accountant from March 31 April 15 to May 1, 1915.				0 36	149, 64	
Lee, E.	1st Class Excise-man from April 1, 15 to July 1, 1915; superannuated July 1	7 50			0 72	366 78	
Foster, H.	1st " " " " for the year	52 44			2 88	1,441 68	
Whitehead, J. P.	Deputy Collector Class "B" for the year		47 50		2 88	899 61	
Pleasance, W.	2nd Class Excise-man for the year		51 06		2 88	968 52	
Robinson, J. T.	" " " " from April 1, to Nov. 15: Accountant Nov. 1, 15.		46 67		3 00	883 66	
Talbot, J.	3rd Class Excise-man for the year		49 92		2 88	347 16	
Farnworth, F. H.	" " " "		49 15		2 88	930 89	
Hicks, W. H.	Deputy Collector Class "B" for the year	27 56			2 88	1,369 08	
Cousins, T.	" " " "		60 00		2 88	1,137 12	
Piddes, J.	" " " "		39 96		2 88	757 08	
Luton, A. A.	" " " "		56 66		2 88	1,073 78	
Tytler, J. M.	Stenographer and Typewriter for the year		34 92			665 04	
Pringle, H. H.	3rd Class Excise-man from 1 Oct. 15 to March 31, 1916		32 46		1 92	615 50	
Granger, F. V.	" " " " from Jan. 1, 16 to March 31, 1916		24 16		1 44	457 73	
Dean, J. C.	" " " " from March 1, 16 to March 31, 1916		17 91		1 44	338 98	



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Thomas, W. R.	3rd	from Jan. 1, 16 to March 31, 1916	7 50	0 48	142 02
Lindsay, W. A. C.	3rd	"	7 50	0 48	142 02
Salaries			702 85	50 52	18,965 39
Contingencies			119 82		4,271 91
					23,237 30
<i>Ottawa.</i>					
Friedland, A.		Salary as Collector from March 31, 1915 to Dec 1, 15: Died 3 Nov. 15.	66 64	4 80	1,261 84
McGuire, T.		Deputy Collector Class "A" for the year.	75 00	3 60	1,421 84
F. L. T.		1st Class Excise-man from March 31, 1915 to Feb. 29, 16: superannuated.		2 64	1,372 36
Levesque, J.		Deputy Collector Class "B" for the year.	64 92	2 88	1,232 16
Lapierre, G.		"	21 00	2 88	1,173 12
N. Leitch, J. M.		2nd Class Excise-man for the year.	49 92	2 88	947 16
Chapman, J. A.		"	46 24	2 88	875 87
Ludlow, F.		Deputy Collector Class "B" for the year.	15 00	2 88	282 12
Fraser, F. W.		2nd Class Excise-man from June 1, 1915 to March 31, 1916.	50 00	2 10	947 60
Salaries			367 72	27 84	9,513 63
Contingencies			24 00		7,757 64
					17,271 27
<i>Open Sound.</i>					
Grubbins, W. J.		Salary as Collector for the year.	30 00	3 60	1,796 40
J. Moore, J. J.		1st Class Excise-man for the year.		2 88	1,467 12
Charlton, W. N.		Deputy Collector Class "A" for the year.	23 92	3 60	1,270 44
Hugh, A.		1st Class Excise-man for the year.	75 00	2 88	1,422 12
Creighton, C. W.		Deputy Collector Class "B" for the year.	45 00	2 88	852 12
Salaries			120 00	15 84	6,808 20
Contingencies			65 92		808 33
					7,616 53
<i>Perth.</i>					
Smith, C. F.		Salary as Collector for the year.	33 00	7 20	1,598 51
Stewart, H. T.		Deputy Collector Collector Class "A" for the year.	86 22	3 60	1,358 04
Stewart, J. W.		Special Class Excise-man for the year.	75 00	4 32	1,990 68
Armstrong, T. E.		"	105 00	2 88	947 46
Miller, H. M.		"	49 92	2 88	923 40
McIntosh, H. S.		"	48 63	2 88	733 35
McIntosh, H. S.		"	38 70	2 88	733 35
MacMurtrei, A. G.		"	38 70	2 88	892 12
Clayton, T.		Deputy Collector Class "B" for the year.	45 00	2 88	667 12
Burton, M. E.		"	39 96	3 60	766 36
Boyd, D.		"	24 46	2 88	472 08
George, J.		"	21 36	2 88	472 08
Murphy, K.		"			

APPENDIX B.—No. 1.—Details of Excise Expenditures for the year ending March 31, 1916—Continued.

To whom paid.	Services.	Deduction for			Amounts paid.	Total amounts paid.
		Super-annuation.	Retire-ment.	Guar-antee.		
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<i>Perth—Con.</i>						
McNaughton, J. C.	Salary as 3rd Class Exciseman from July 1, 15 to March 31, 1916; transf. from Perthborough.		48 69	2 16	924 12	
	Salaries.....		752 16	43 12	12,328 37	
	Contingencies.....				3,394 32	15,722 69
<i>Peterborough.</i>						
McNaughton, J. C.	Salary as Collector from April 1, to July 1, 1915; transferred to Perth.....	18 96	16 23	0 90	307 86	
Bickle, J. W.	" Deputy Collector Class "B" for the year.....			2 88	928 08	
Buller, W. H.	" Collector from July 1, 1915, to March 1, 1916.....		61 38	3 60	1,164 14	
Parker, W. R.	" Deputy Collector Class "B" for the year.....		39 96	3 60	756 36	
	Salaries.....	18 96	117 57	10 98	3,156 41	3,756 28
	Contingencies.....				599 84	
<i>Port Arthur.</i>						
Bridgman, M. W.	Salary as Collector for the year.....		90 00	3 60	1,705 40	
Smith, B. H.	" 2nd Class Exciseman for the year.....		59 44	2 88	1,127 96	
Barnes, G.	" Deputy Collector Class "B" for the year.....		32 40	2 88	614 64	
Wink, J. C.	" 3rd Class Exciseman.....		49 92	2 88	947 16	
	Salaries.....		231 76	12 24	4,395 86	5,453 50
	Contingencies.....				1,057 64	
<i>Prescott.</i>						
Melville, T. R.	Salary as Collector for the year.....		129 96	7 20	2,462 76	
White, J. B.	" Deputy Collector Class "A" for the year.....		171 00	3 60	1,701 72	
Murray, D.	" Special Class Exciseman.....	36 00	140 40	4 32	1,755 68	
McPherson, E. A.	" 1st Class.....		74 78	2 88	1,190 13	
Granton C.	" 3rd ".....		51 18	2 88	570 89	
McNally, E.	" ".....		84 24	2 88	815 37	
	" ".....		47 49			

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Byrne, W. P.	"	947 16	2 88	49 92	2 88	947 16
Wood, J. A.	Deputy Collector Class "B"	907 08	2 88	.....	2 88	907 08
Denzin, W. H.	"	756 36	3 60	39 96	3 60	756 36
Wood, C. E.	3rd Class Excise-man from July 1, 1915, to March 31, 1916.	449 33	1 92	23 74	1 92	449 33
	Salaries.....	12,050 48	35 04	1,000 59	35 04	12,050 48
	Contingencies.....	1,984 52	.....	.....	.....	1,984 52
		14,035 00	.....	.....	.....	14,035 00
<i>Stratford.</i>						
Reeves, G.	Salary as Collector for the year.....	1,992 72	7 20	75 00	7 20	1,992 72
Tobin, T. S.	Deputy Collector Class "A" for the year.....	1,196 76	3 60	229 64	3 60	1,196 76
		.....	.....	75 00	.....	.....
Jeffrey, A. J.	Accountant for the year.....	1,129 20	4 32	101 52	4 32	1,129 20
Dalton, M. J.	Deputy Collector Class "B" for the year.....	946 44	3 60	64 92	3 60	946 44
Bullard, W.	"	170 54	3 60	49 92	3 60	170 54
Barnford, V. C. F.	" " from November 1, 1915, to March 31, 1916.	394 64	1 20	9 12	1 20	394 64
	Salaries.....	5,830 30	23 52	20 81	23 52	5,830 30
	Contingencies.....	890 84	.....	.....	.....	890 84
		6,721 14	.....	.....	.....	6,721 14
<i>St. Catharines.</i>						
Hewson, C. A.	Salary as Collector for the year.....	1,564 44	3 60	.....	3 60	1,564 44
Johannes, H. J.	Deputy Collector Class "A" for the year.....	1,042 08	2 88	54 96	2 88	1,042 08
Milne, E.	2nd Class Excise-man	1,247 04	2 88	.....	2 88	1,247 04
Schuman, R. L. H.	"	1,203 36	2 88	.....	2 88	1,203 36
Stimpson, W. A.	1st Class	1,422 12	2 88	75 00	2 88	1,422 12
	Salaries.....	6,479 04	15 12	129 96	15 12	6,479 04
	Contingencies.....	312 72	.....	.....	.....	312 72
		6,791 76	.....	.....	.....	6,791 76
<i>Toronto.</i>						
Frostland, H. B.	Salary as Collector for the year.....	2,532 60	14 40	113 04	14 40	2,532 60
MacKinnon, J. H.	Special Class Excise-man for the year.....	1,896 36	3 60	139 92	3 60	1,896 36
Brown, J. B.	Accountant for the year.....	1,774 68	4 32	99 96	4 32	1,774 68
Reardon, Hugh	Deputy Collector Class A for the year.....	1,417 80	7 20	75 00	7 20	1,417 80
Genovese, Charles	Special Class Excise-man	2,195 64	4 32	.....	4 32	2,195 64
Jackson, B. C.	"	1,565 64	4 32	39 96	4 32	1,565 64
Graham, W. T.	"	1,563 72	4 32	31 92	4 32	1,563 72
Lynch, R. J.	"	1,563 72	4 32	31 92	4 32	1,563 72
Harris, L. B.	"	1,515 72	4 32	31 92	4 32	1,515 72
Bradley, A. L.	"	1,515 72	4 32	79 92	4 32	1,515 72
Boyer, B. J.	"	1,515 72	4 32	79 92	4 32	1,515 72
Chandler, A.	Accountant	1,311 68	2 88	49 92	2 88	1,311 68
Duggan, H. J.	Deputy Collector Class B	947 16	2 88	.....	2 88	947 16
Hollowell, H. K.	1st Class Excise-man	1,407 12	2 88	.....	2 88	1,407 12
		.....	.....	30 00	.....	.....

APPENDIX B.—No. 1.—Details of Excise Expenditures for the Year ending March 31, 1916—Continued.

To whom paid.	Service.	Deductions for			Amounts paid.	Total amounts paid.	
		Superannuation.	Retirement.	Guarantee.			
		\$	cts.	\$	cts.	\$	cts.
	<i>Toronto—Con.</i>						
Falconer, K. H.	Salary as 1st Class Exciseman for the year.		75 00		1,422 12		2 88
Gillies, A. L.	" "		{ 76 44		1,344 68		2 88
	" "		{ 75 00				
Young, R. E.	" "		{ 74 16		1,347 96		2 88
Walsh, W. H.	" "		{ 75 00		1,422 12		2 88
Spence, F. H.	" "		{ 75 00		1,467 12		2 88
Dunbar, G. E.	" "	30 00			1,327 08		2 88
Oliver, J. T.	" "		{ 69 96		1,152 52		2 88
	" "		{ 63 35				
Abbott, H. F.	" "		{ 59 62		1,131 17		2 88
Barber, J. S.	2nd Class	14 56			1,232 48		2 88
Sykes, W. J.	" "		{ 62 40		1,184 64		2 88
Young, J. J.	1st Class		{ 19 92		1,143 29		2 88
	" "		{ 61 33				
Johnstone, E. J. A.	" "		{ 63 35		1,202 44		2 88
Shorey, A. B.	2nd Class		{ 51 06		968 52		2 88
MacKay, J. C.	" "		{ 39 84		857 42		2 88
	" "		{ 47 32				
Jones, A.	3rd Class	19 92			977 16		2 88
Eakins, G. G.	" "		{ 49 92		947 16		2 88
Mather, A. P.	" "		{ 40 92		947 16		2 88
Shanacy, M.	Deputy Collector Class B.	21 96			1,075 08		2 88
	" "		{ 14 16				
Elliott, T. H.	" "		{ 69 96		1,312 92		2 88
Hall, W. H.	" "		{ 60 00		1,137 12		2 88
Fielding, L. G.	Stenographer and Typewriter		{ 34 92		665 04		2 88
Sloan, J. B.	Messenger for the year.		{ 39 96		757 08		2 88
Kinnear, W. J.	3rd Class Exciseman from April 1, 1915, to March 31, 1916		{ 5 40		610 20		1 92
	" "		{ 32 46				
Songhurst, J. R.	" " Jan. 1, "		{ 7 50		142 02		48
	Salaries.	325 60	2,041 55	131 28	49,128 78		
	Contingencies				5,953 18		
					55,081 96		





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Bclair, A. P.	3rd	"	19 92	977 16	2 88	977 16
Dareley, J. P.	3rd	"	24 96	473 58	1 44	473 58
Moran, N. A.	3rd	from April 15 to September 15, died	4 96	78 93	24	78 93
Martin, L. H.	3rd	from April 1, to May 1, 1915, died	49 92	947 16	2 88	947 16
Cervet, J. H.	3rd	for the year	49 92	947 16	2 88	947 16
Thurber, G.	3rd	"	49 92	947 16	2 88	947 16
Graveline, D. P.	3rd	"	33 12	914 04	2 88	914 04
Gervais, J. A.	3rd	"	49 92	947 16	2 88	947 16
Rehallard, G. A.	3rd	"	49 92	852 12	2 88	852 12
Mantha, J. A.	3rd	"	45 00	899 64	2 88	899 64
Wanher, A.	3rd	"	47 46	780 84	2 88	780 84
Leibert, P. E. C.	3rd	"	41 21	780 84	2 88	780 84
Prout, J. O.	3rd	"	41 21	757 08	2 88	757 08
Prout, J. H.	3rd	"	39 96	738 36	2 88	738 36
Roux, G.	3rd	"	42 48	738 36	2 88	738 36
Besselin, R.	3rd	"	41 21	738 36	2 88	738 36
Hedrick, L. C.	3rd	"	38 70	1,132 80	7 20	1,132 80
Chapman, C. F.	Deputy Collector Class "B" for the year	"	60 00	1,120 58	3 60	1,120 58
Leblond, A.	"	"	59 15	898 92	3 60	898 92
Papazian, C. E. A.	"	"	47 40	471 36	3 60	471 36
St. Michel, F. X.	"	"	24 96	581 87	2 88	581 87
Vanoy, A.	Stenographer and Typewriter	"	30 62	527 08	7 20	527 08
O'Donnell, M. J.	Messenger	"	39 96	1,663 47	3 60	1,663 47
Benoit, A. H.	Deputy Collector Class "B"	"	34 16	987 77	3 60	987 77
Benoit, L. V.	Deputy Collector Class "B"	from September 1, 1915, to March 31, 1916.	53 86			
Salaries.				2,130 11	169 46	54,437 31
Contingencies				502 07		27,273 46
						81,730 77
<i>Quebec.</i>						
Arsene, D.	Salary as Collector for the year.	"	139 92	2,652 84	7 20	2,652 84
Toussaint, R.	Deputy Collector Class "A" for the year	"	88 42	1,474 89	5 40	1,474 89
Lacoste, J.	"	"	30 37	1,482 98	5 40	1,482 98
Berger, R. L.	Assistant for the year	"	45 45	1,274 35	4 32	1,274 35
Calonne, J. J.	1st Class Examman for the year.	"	69 59	1,407 12	2 88	1,407 12
Morin, G. A.	1 <sup>st</sup> Class Examman for the year.	"	30 00	947 16	2 88	947 16
Forsyth, W.	1st Class Examman for the year	"	49 92	1,292 41	2 88	1,292 41
Prout, J. H.	2nd	"	63 35	970 90	2 88	970 90
Levesque, J. F.	3rd	"	51 12	962 16	2 88	962 16
Martineau, O. F. A.	1st	"	36 24	1,166 20	2 88	1,166 20
Labrie, A.	Deputy Collector Class "B" for the year.	"	63 35	1,395 60	3 60	1,395 60
Boisjoly, O. E.	1st Class Examman for the year	"	60 00	1,137 12	2 88	1,137 12
Coyle, J.	Deputy Collector Class "B" for the year	"	49 92	946 44	3 60	946 44
Francois, J. Y. K.	Deputy Collector Class "B" for the year	"	49 92	946 44	1 32	946 44

APPENDIX B.—No. 1.—Details of Excise Expenditures for the year ending March 31, 1916—Continued.

To whom paid.	Service.	Deductions for.				Amounts paid.	Total Amounts paid.
		Super-annuation.	Retirement.	Guarantee.			
		\$	cts.	\$	cts.	\$	cts.
<i>Quebec.—Con.</i>							
Hardy, Léon	Salary as 3rd Class Excise man from Nov. 15 to March 31, 1916	146 05		25 00	0 96	18,699 96	474 04
	Salaries			792 26	54 96	14,092 16	
	Contingencies						
<i>Sherbrooke.</i>							
Simpson, A. F.	Salary as Collector for the year	45 96			7 20	2,246 76	
Chartier, E.	Deputy Collector Class "A" for the year		84 96		3 60	1,611 36	
Quinn, J. D.	Special Class Excise man for the year	31 92			4 32	1,563 72	
de Grosbois, C. B.	2nd Class Excise man for the year		62 40		2 88	1,184 64	
Bowen, F. C.	3rd "		49 92		2 88	947 16	
Rousseau, E. H.	Deputy Collector Class "B"		54 96		3 60	1,941 36	
	Salaries	77 88		232 24	24 48	8,595 00	
	Contingencies					1,779 94	
<i>St. Hyacinthe.</i>							
Benoit, L. V.	Salary as Collector from March 31, to Sept. 15, 1915: transf. to Montreal Dep. Col.		24 40		3 32	848 37	
MacDonald, A. B.	Special Class Excise man for the year	42 00			4 32	2,653 68	
Langelier, Franç.	Deputy Collector Class "A" for the year		75 00		3 60	1,421 40	
Archambault, F. X.	" " " " " " " " " "		45 00		2 88	852 12	
Dumaine, J. D.	1st Class Excise man from April 1, to July, 1915		13 62		0 72	341 91	
	" " " " " " " " " "		18 75				
Rouveau, J. C.	" " " " " " " " " "		82 08		2 88	1,340 04	
Gauvin, E.	Deputy Collector Class "B" for the year		75 00		2 88	1,403 16	
François, A.	Deputy Collector Class "B" from April 1 to Sept. 17, 1915: Collector to March 31, 1916.		49 92		2 88	947 16	
Carbier, A. P.	" " " " " " " " " "		78 04		5 54	1,477 99	
De Billy, F. X.	Deputy Collector Class "B" for the year	42 00		621 78	2 88	757 08	
	Salaries				31 90	11,442 91	
	Contingencies					7,445 75	
						32,792 12	
							10,374 94
							18,088 66





APPENDIX B.—No. 1.—Details of Excise Expenditures for the Year ending March 31, 1916—Continued.

To whom paid.	Service.	Deductions for				Amounts paid.	Total amounts paid.	
		Super-annuation.		Retirement.				Guarantee.
		\$	cts.	\$	cts.			
<i>Charlottetown.</i>								
Weeks, W. A.	Salary as Deputy Collector Class "A" for the year.		51 56	2 88	977 47			
Doyle, S. F.	" 3rd Class Exciseman for the year.		44 99	2 88	852 13			
	Salaries.....		96 55	5 76	1,829 60			
	Contingencies.....				121 45		\$1,951 05	
<i>Winnipeg.</i>								
Cosnell, T. S.	Salary as Collector for the year.	61 23				7 20	2,792 76	
Verner, T. H.	Deputy Collector Class "B" for the year.		77 52			4 32	1,606 92	
Long, W. H. A.	Accountant for the year.		90 00			4 32	1,705 68	
Lariviere, A. C.	"	62 96				4 20	1,732 81	
Hammond, T. W.	1st Class Exciseman for the year.		63 36			2 88	1,202 44	
Forsyth, D.	"		67 18			2 88	1,273 61	
Currie, W. W.	"		59 62			2 88	1,131 17	
Greig, W. G.	"		102 60			2 88	1,028 57	
Fegan, P. J.	2nd Class Exciseman for the year.		46 60			2 88	882 98	
Morris, T. H.	3rd Class		49 32			2 88	947 16	
Nicholl, F. A.	"		49 92			2 88	947 16	
Ivey, W. J.	"		49 92			2 88	947 16	
Earl, R. W.	Deputy Collector Class "B" for the year.		75 00			2 88	1,422 12	
Sparling, J. W.	"		54 96			2 88	1,042 08	
Barrett, J. F.	"		52 44			3 60	993 96	
McNiven, J. D.	"		19 92			2 88	377 16	
	Salaries.....	124 22	918 57	55 32	20,033 74			
	Contingencies.....				5,208 24		\$25,241 98	
<i>Calgary.</i>								
Fletcher, R. W.	Salary as Collector for the year.		98 70	3 60	1,872 63			
Richardson, W.	Deputy Collector Class "B" for the year.		65 04	2 88	1,222 04			
Wood, C. I.	"		60 00	3 60	1,136 40			





SESSIONAL PAPER No. 12

APPENDIX B.—No. 1.—Details of Excise Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Service.	Deductions for			Amounts paid.	Total amounts paid.
		Superannuation.	Retirement.	Guarantee		
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<b>DISTRICT INSPECTORS.</b>						
<i>Ontario.</i>						
Gow, John E. ....	Salary as Inspector of Bonded Factories for the year.	55 93	.....	9 00	2,735 01	
	Contingencies .....				922 00	3,657 01
Miller W. F. ....	Salary for the year .....			9 00	2,815 96	
	Contingencies .....				594 62	3,410 58
Powell, J. B. ....	Salary for the year .....			9 00	2,965 98	
	Contingencies .....				1,096 56	4,062 54
<i>Quebec.</i>						
Bernier, J. A. ....	Salary for the year .....		121 24	9 00	2,294 75	
	Contingencies .....				440 90	2,735 65
Dumontier, J. A.	Salary for the year .....		139 92	9 00	2,651 04	
	Contingencies .....				640 58	3,291 62
<i>New Brunswick.</i>						
McDonald, J., jr.	Salary for the year .....		108 69	9 00	2,057 28	
	Contingencies .....				1,101 74	3,159 02
<i>Manitoba.</i>						
Code, A .....	Salary for the year .....	48 00	.....	9 00	2,348 00	
	Contingencies .....				1,297 21	3,645 21
<i>Alberta.</i>						
Saucier, X. ....	Salary for the year .....	53 49	.....	9 00	2,612 49	
	Contingencies .....				1,639 15	4,251 64
<i>British Columbia.</i>						
Miller, J. E. ....	Salary for the year .....	60 00	.....	9 00	2,031 00	
	Contingencies .....				1,912 17	3,943 17
<i>Inspector of Tobacco Factories</i>						
Caven, W. ....	Salary for the year .....	57 45	.....		2,817 48	
	Contingencies .....				769 11	3,586 59

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APPENDIX B.—No. 1.—Details of Excise Expenditures for the Year ended  
March 31, 1916—Continued.

To whom paid.	Service.	Deductions for.			Amounts paid.	Total amounts Paid.
		Superannuation.	Retirement.	Guarantee.		
		% cts.	% cts.	% cts.	\$ cts.	\$ cts.
	DISTRICT INSPECTORS.					
	<i>Inspector of Distilleries.</i>					
Brain, A. F. ....	Salary for the year. ....	93	57		2,581 41	3,670 43
	Contingencies. ....				1,089 02	
	<i>Inspector of Malt Houses and Breweries.</i>					
Barrett, J. K. ....	Salary for the year. ....				3,199 92	5,103 87
	Contingencies. ....				1,903 95	

RECAPITULATION.

Excise Salaries. ....	\$ 491,336 90
" Contingencies. ....	138,399 35
Balances due to Collectors April 1, 1915. ....	49 08
" by Collectors March 31, 1916. ....	343 98
	\$ 630,129 31
Excise War Tax Contingencies. ....	4,843 88
	\$ 634,973 19

See Financial Statement No. 4, and 4A.

SESSIONAL PAPER No. 12

APPENDIX B.—No. 1.—Details of Excise Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Service.	Amounts paid.	Total amounts paid.
<i>General Excise Contingencies.</i>		\$ cts.	\$ cts.
British American Bank Note Co.	To pay for bottling labels supplied.	5,645 00	
Oertling Co.	" iron locks and brass labels	66 00	
Hugh Carson & Co., Ltd.	" 3 special trunks	66 00	
Lymans, Ltd.	" hailing tubes and bottles	75 81	
The Pritchard — Andrews Co., Ltd.	" tobacco rollers, stamps and daters.	239 35	
J. A. Desrivieres	" lumber	60 50	
Charlotte Scales	" vaults and store rooms, cleaning	314 00	
P. A. Hughes	" petty cash charges	145 34	
Registrar Exchequer Court.	" writ of assistance	23 05	
L. G. Roy	" postage stamps	30 00	
A. A. Taillon	" special translation	1 35	
Graydon & Graydon	" professional services	25 00	
Gurney Scale Co.	" tobacco scales repaired	1 85	
The Dominion Warehousing Co., Ltd.	" freight storage	2 03	
E. J. Leacy	" re O'Brien explosives manufacturing	53 85	
L. Laframboise	" special translation	45 24	
M. Morisset	" "	16 20	
Hughes Electric Heating Co., Chicago.	" electrical articles	14 25	
<i>Excise Examinations.</i>			
J. A. Bernier	In connection with special class	107 12	
W. Caven	" "	88 75	
A. P. Bravin	" "	224 23	
J. E. Gow	" "	108 35	
J. B. Powell	" "	26 50	
John McDonald, jr.	" "	120 00	
J. T. Oliver	Attending special class examination	2 00	
A. Uffelman	" "	2 05	
G. E. Dunbar	" "	2 00	
E. J. A. Johnston	" "	2 00	
S. A. McPherson	" "	6 40	
C. Granton	" "	6 40	
E. McNally	" "	6 40	
E. Gauvin	" "	2 05	
Total			7,882 05
<i>Late Costs.</i>			
J. A. Piette	Late costs Rev 12 N. Meunier	10 00	
R. Ducharme	" " M. Duranseau	105 65	
Landry & Landry	" " Edmonton Vinegar Works	101 10	
Rainville & Gagnon	" " G. Brunet	20 00	
J. Bruno Nantel	" " S. Egger	24 00	
" " " " " " A. Boucher	" " " " " " I. Corbier	41 00	
W. F. McKau	" " " " " " John McKenna	26 00	
A. A. Macdonald	" " " " " " W. Paré	22 00	
A. F. Simpson	" " " " " " H. Boyer	29 25	
Fauteux & Fauteux	" " " " " " Eagle Cigarettes Co.	20 00	
" " " " " " J. Dufrenoy	" " " " " " J. Dufrenoy	20 00	
" " " " " " Grains Co.	" " " " " " Grains Co.	2 00	
" " " " " " C. Gauthier	" " " " " " C. Gauthier	10 00	
" " " " " " J. Sauriol	" " " " " " J. Sauriol	10 00	
" " " " " " Beaudin	" " " " " " Beaudin	10 00	

APPENDIX B.—No. 1.—Details of Excise Expenditures for the Year ended  
March 31, 1916—Continued.

To whom paid.	Service.	Amounts paid.		Total amounts paid.	
		\$	cts.	\$	cts.
Fauteux & Fauteux—Con....	Law costs Rex vs. Chartrand. ....	20	50		
	" " M. Voskolovich. ....	10	00		
	" " L. Plamondon. ....	10	00		
	" " L. Mailloux. ....	20	50		
	" " A. Pelletier. ....	10	00		
	" " H. Barbe. ....	24	00		
	" " Fontaine. ....	20	00		
	" " Rosine. ....	20	50		
	" " S. Langlois. ....	20	50		
	" " T. Derome. ....	24	00		
	" " A. Derome. ....	24	00		
	" " F. de Blance. ....	10	00		
	" " Biagis. ....	10	00		
	" " Herman. ....	10	00		
	" " Folchinsky. ....	10	00		
	" " Chenevolsky. ....	10	00		
	" " Greenfield. ....	10	00		
	" " Bourassa. ....	10	00		
	" " A. Proulx. ....	10	00		
	" " E. Gaudet. ....	10	00		
	" " N. Daoust. ....	10	00		
	" " B. J. Boyer. ....	10	00		
	" " C. Lippens. ....	10	00		
	" " N. Lalonde. ....	12	00		
W. Laliberté . . . . .	" " A. Senecal. ....	85	60		
Leblanc, Brossard, Forest & Lalonde. . . . .	" " L. Charbonneau. ....	20	00		
	" " A. Charbonneau. ....	20	00		
	" " G. L. J. Tremblay. ....	20	00		
A. Leblanc. . . . .	" " A. Theriault. ....	30	00		
	" " A. Petit. ....	15	00		
	" " A. Colette. ....	14	00		
J. A. Grierson. . . . .	" " W. Comeau. ....	54	70		
M. Rousseau . . . . .	" " E. Daigle. ....	55	60		
W. J. Baird. . . . .	" " Wong Sam. ....	5	00		
" " " " " " " " " "	" " N. A. Pappas. ....	40	00		
Meredith & Meredith. . . . .	" " A. H. Brenner. ....	50	00		
W. J. Kidd . . . . .	" " N. Drizen. ....	40	00		
O. Gagnon. . . . .	" " J. Winthand. ....	10	00		
	" " J. Therien. ....	10	00		
	" " M. Slodick. ....	20	00		
	" " J. P. Parman. ....	10	00		
	" " Gibouleau. ....	40	00		
	" " Mount Royal Liquor Grocery. .	20	00		
	" " R. Jacobson. ....	20	00		
	" " B. Lipson. ....	20	00		
	" " S. Feldman. ....	20	00		
	" " Abrahamson & Co. ....	20	00		
	" " F. Miller. ....	40	00		
	" " A. Paquette. ....	10	00		
	" " Lipson. ....	26	60		
	" " Bergeron. ....	39	90		
	" " " " " " " " " "	24	10		
	" " " " " " " " " "	24	20		
	" " " " " " " " " "	24	80		
	" " " " " " " " " "	38	30		
					1,704 90
American Bank Note Co. . . . .	To pay for stamps and labels supplied. . . . .				9,236 97
					83,512 95
	Total. . . . .				92,749 92



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APPENDIX B.—No. 1.—Details of Excise Expenditures for the year ended March 31, 1916—Continued.

To whom paid.	Service.	Amounts paid.	Total amounts paid.
		\$ cts	\$ cts.
<i>Excise Provisional Allowance.</i>			
Gosnel, F. S. Winnipeg.	To pay Code, A	99 96	
	" Verner, T. H.	99 96	
	" Long, W. H. A.	99 96	
	" Latvière, A. C.	99 96	
	" Sparling, J. W.	124 92	
	" Earl, R. W.	124 92	
	" Hammond, T. W.	124 92	
	" Morris, T. H.	124 92	
	" Forsyth, D.	124 92	
	" Nicholl, F. A.	124 92	
	" Currie, W. W.	124 92	
	" Ivey, W. J.	124 92	
	" Greig, W. G.	124 92	
	" Barrett, J. P.	124 92	
	" McNiven, J. D.	49 92	
	" Fegan, P. J.	143 73	
	" Ashton, H.	150 00	
	" Davis, T. J.	150 00	
" Pelanger, A.	150 00		
" Miller, J. C.	150 00		
" Johnson, J. D.	150 00		
" Cosgrove, J. B.	100 00		
			2,692 69
Fletcher, R. W. Calgary.	" Foucar, H.	54 13	
	" M. Kenty, J.	54 13	
	" Sobey, R. E.	54 13	
	" Gray, W. B.	54 13	
	" Barnard, A. H.	81 25	
	" Fletcher, R. W.	100 00	
	" Markley, A. W. R.	125 00	
	" Wood, C. T.	135 49	
	" Richardson, W.	135 49	
	" Davies, W. E.	162 50	
	" Dalgetty, Jas.	150 00	
	" Joughin, W. J. C.	150 00	
	" Pierce, A. H.	150 00	
	" Richards, D. H.	150 00	
" Fiddler, H.	162 50		
" Fiddler, E.	162 50		
" Farrell, W. G.	162 50		
" McKibbin, W. S.	162 50		
" Prince, A.	162 50		
			2,368 75
Conklin, W. M. Moosejaw.	" Bell, W. H.	150 00	
	" Hall, L. H.	150 00	
	" Anderson, J. H.	150 00	
	" Campbell, T. N.	150 00	
	" Goudie, D. A.	125 00	
	" Scott, J. O.	125 00	
	" Conklin, W. M.	100 00	
	" Panton, A. M.	6 25	
	" McGowan, W. J. H.	50 00	
" Hayes, F. C.	45 76		
			1,025 01
Parkinson, E. B. Vancouver.	" Grantham, A.	127 46	
	" McSpadden, M.	150 00	
	" Quinn, T.	150 00	
	" Gibson, J. V.	150 00	
	" McLachlan, P.	150 00	
	" Morgan, E. J.	124 92	
	" Doely, F.	118 68	
	" Simpson, G.	124 92	
	" MacDonald, G.	124 92	
" Curran, R. C.	124 92		

APPENDIX B.—No. 1.—Details of Excise Expenditures for the year ended March 31, 1916—*Continued.*

To whom paid.	Service.	Amounts paid.		Total amounts paid.	
		\$	cts.	\$	cts.
	<i>Excise Provisional Allowance—Con.</i>				
Parkinson, E. B. Vancouver— <i>Con.</i>	To pay Carmichael, D. " Wolfenden, W. " Sutherland, W. " Gray, R. S. " Scanlan, T. J. " Thorburn, Jas. " Allen, G. A. " Chilver, F. W. " Grigor, R. W. " Howell, T. " Atkins, B. R. " Parkinson, E. B. " Delahay, Wm. " Hambley, S. E. " Leishman, A. " Glenday, D.	124 92 124 92 124 92 124 92 124 92 99 96 99 96 99 96 75 60 75 00 75 00 99 96 50 04 50 04 50 01 33 21	150 00 150 00 150 00 125 00 125 00 100 00 100 00 100 00 150 00	2,778 59	
Jones, R. Victoria.				1,150 00	
	Total provisional allowance.....			10,042 04	

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APPENDIX B.—No. 1.—Details of Excise Expenditure for the Year ended March 31, 1916—Continued.

To whom paid.	Place of Residence.	Service.	Amounts paid.	Total Amounts paid.
<i>Commissions to Customs Officers.</i>			\$ cts	\$ cts
Hastie, J. W.	Fort Frances	From Nov. 1, 1914, to March 31, 1915	103 17	
Jackson, H. B.	Rainy River	" April 1, 1913 " 1914	246 40	
Porter, A. R.	Melville	" " 1915 " 1916	37 72	
Munro, H. P.	Taber	" " " " "	213 57	
Sanborn, J. B.	Vermilion	" " " " "	75 74	
Dayton, G. F.	St. John	" " " " "	146 91	
Halliwell, H. T.	Estevan	" " 1915 " 21	140 12	
Porter, N.	Simcoe	" " " " 31, 1916	346 40	
Thomson, J. M.	Napanee	" " " " "	13 65	
Jackson, H. B.	Rainy River	" " " " "	246 40	
Hastie, J. W.	Fort Frances	" " " " "	146 40	
Kavanagh, A. J.	Gaspé	" " " " "	92 44	
Dayton, Geo. F.	Edmundston	" " " " "	146 40	
Ratchford, C. E.	Amherst	" " " " "	14 85	
Ball, J. A.	Dauphin	" " " " "	446 40	
McMillan, D. N.	Morden	" " " " "	246 40	
Hodson, F. H.	Rosthern	" " " " 3.	107 75	
Pidgeon, P.	Red Deer	" " " " "	88 22	
Sanborn, J. B.	Vermilion	" " " " "	107 62	
Grubb, W. B.	Faber	" " " " "	49 32	
Employers' Liability Association Corporation Limited.	Montreal	Guarantee from Apr. 1, '15, to Mar. 31, '16		3,015 80
Gilluly, H. R.	Winnipeg	" " " "	3 60	
McMillan, D. N.	"	" " " "	3 60	
Grubb, W. B.	Calgary	" part of year	1 05	
Munro, H. P.	"	" " " "	2 55	
Ball, J. A.	Winnipeg	" for the year	3 60	
Porter, A. R.	Moose Jaw	" part of year	0 60	
Halliwell, J.	"	" " " "	2 60	
Sanborn, J. B.	Calgary	" for the year	3 60	
Hodson, F. M.	Moose Jaw	" part of year	3 30	
Fowle, E. A.	"	" " " "	3 30	
Pidgeon, P.	Calgary	" for the year	3 60	
London Guarantee & Accident Association Co.	Toronto	Guarantee for the year		32 40
Boyd, A.	Pictou	" " " "	3 60	
Carr, A. J.	St. John	" " " "	3 60	
Kirk, J. F.	"	" " " "	3 60	
McDonald, J. F.	Pictou	" " " "	3 60	
McPherson, E.	"	" " " "	3 60	
Park, W. A.	St. John	" " " "	3 60	
Ratchford, C. E.	Halifax	" " " "	3 50	
Watt, G.	St. John	" " " "	3 60	
Dayton, G. F.	"	" " " "	3 60	
Dominion of Canada Guarantee & Accident Co.	Toronto	" " " "		32 40
Brown, G.	Owen Sound	" " " "	3 60	
Daly, J. A.	Peterborough	" " " "	3 60	
Jackson, H. B.	Port Arthur	" " " "	3 60	
Macpherson M. J.	Owen Sound	" " " "	3 60	
Porter, N.	Brantford	" " " "	3 60	
Tyson, A. M.	Owen Sound	" " " "	3 60	
Glass, J. J.	Peterborough	" " " "	3 60	
Pierce, H. A.	Port Arthur	" " " "	3 60	
Hastie, J. W.	"	" " " "	3 60	
Railway Passengers Assurance Co.	Toronto	" " " "		14 00
Thomson, J. M.	Kingston	" " " "	3 60	
Britton, W. H.	Prescott	" " " "	3 60	
Ross, W. T.	Belleville	" " " "	3 60	

APPENDIX B.—No. 1.—Details of Excise Expenditure for the Year ended  
March 31, 1916—*Continued.*

To whom paid.	Place of Residence.	Service.	Amounts paid.	Total Amounts paid.
		<i>Commissions to Customs Officers—Con.</i>	\$ cts.	\$ cts.
Valleau, A. S. ....	Belleville.....	Guarantee for the year.....	3 60	
Polley, W. H. ....	" .....	" .....	3 60	
Imperial Guarantee & Accident Co. ....	Toronto .....	" .....		7 20
Blair, A. ....	Quebec.....	" .....	3 60	
Kavanagh, A. J. ....	" .....	" .....	3 60	
Guarantee Co. of North America.....	Montreal.. .....	" .....		3 60
Martel, L. ....	St. Hyacinthe. ....	" .....	3 60	
		Total.....		3,140 89

SESSIONAL PAPER No. 12

APPENDIX B.—No. 1.—Details of Excise Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Service.	Amounts paid.		Total amounts paid.	
		\$	cts.	\$	cts.
	<i>Duty-pay.</i>				
Abbott, F. H.	From January 28 to March 31, 1916	26	61		
Abbott, H. F.	April 1, 1915 to January 27, 1916	123	39		
Adam, A. R.	" " to March 31, 1916	150	00		
Allen, G. A.	" " "	300	00		
Amor, Wm.	" " "	200	00		
Bayard, G. A.	" " "	150	00		
Bergeron, R. J.	" " "	150	00		
Berry, H. L.	" " "	200	00		
Bousquet, J. O.	" " to Nov. 22 and Nov. 29, to March 31, 1916	146	62		
Bouteiller, G.	" April 1, 1915 to March 31, 1916	300	00		
Boyd, J. F. S.	" " "	150	00		
Brennan, J.	" " "	150	00		
Brossard, W.	" July 2, 1915 to August 24, 1915	14	52		
Brown, W. J.	" April 1, 1915 to March 31, 1916	100	00		
Byrne, W. P.	" " "	150	00		
Cahill, J. W.	" " "	150	00		
Champagne, A.	" " "	116	54		
Champagne, O.	" Nov. 1, 1915 to March 31, 1916	41	67		
Charput, N. J.	" April 1, 1915 to March 31, 1916	150	00		
Cheseldine, J. H.	" " "	156	40		
Chilver, F. W.	" " "	200	00		
Cole, W. J.	" April 13, 1915 to March 31, 1916	96	07		
Coleman, J. J.	" April 1, 1915 to March 31, 1916	300	00		
Corriveau, O.	" " "	100	00		
Cummiford, F. D.	" " "	150	00		
Dalgetty, J.	" " "	100	00		
Davidson, J. Est. of late.	" " to May 23, 1915	21	77		
Davis, T. J.	" " to March 31, 1916	100	00		
Denis, J. L.	" " "	150	00		
Desaulniers, J. E. A.	" " "	132	76		
Doyle, B. J.	" " "	150	00		
Doyle, P. P.	" Nov. 16, 1915 to Feb. 1, 1916	21	12		
Eakins, G. G.	" April 1, 1915 to March 31, 1916	150	00		
Egener, A.	" " "	150	00		
Elliott, W. J.	" " "	150	00		
Fairley, W.	" " "	100	00		
Falconer, J. E.	" " "	150	00		
Feik, L.	" " "	150	00		
Gariepy, L. N.	" " "	150	00		
Gauthier, W.	" August 2, 1915 to Aug. 22, 1916	5	64		
Gauvin, E. A.	" April 1, 1915 to March 31, 1916	200	00		
Gerald, C.	" " "	300	00		
Gerald, W. H.	" " "	300	00		
Graham, A. L.	" " "	200	00		
Granton, Chas.	" " "	150	00		
Gray, R. S.	" " "	150	00		
Hulley, W. J.	" Oct. 1, 1915 to March 31, 1916	75	00		
Hardy, W. A. G.	" April 1, 1915 to "	134	54		
Helliwell, H. N.	" " "	150	00		
Howe, A.	" " "	150	00		
Hughes, M.	" Oct. 1, 1915 to "	75	00		
Horst, L. B.	" April 1, 1915 to "	200	00		
Jamieson, R. C.	" " "	300	00		
Jones, A.	" " "	150	00		
Johnson, J. J.	" " "	100	00		
Keogh, P. M.	" " "	100	00		
Lally, J. E.	" " "	150	00		
Lamoureux, J.	" Nov. 22, 1915 to "	71	64		
Lano, T. M.	" April 1, 1915 to "	200	00		
Langevin, H. H.	" " "	116	54		
Lapointe, J.	" Oct. 1, 1915 to "	50	00		
Lyons, E.	" April 1, 1915 to "	150	00		
McArthur, G. H.	" " "	300	00		
McLoughlan, P. H.	" " "	135	80		

APPENDIX B.—No. 1.—Details of Excise Expenditures for the year ended  
March 3, 1916—*Concluded.*

To whom paid.	Service.	Amounts paid.		Total amounts paid.	
		\$	cts.	\$	cts.
	<i>Duty-pay—Con.</i>				
McMartin, A. G. ....	From April 1, 1915 to March 31, 1916. ....	150	00		
McNally, E. ....	" " " " .....	150	00		
McPherson, E. A. ....	" " " " .....	200	00		
MacDonald, A. B. ....	" " " " .....	250	00		
Marin, L. ....	" August 18, 1915 to " .....	94	36		
Martin, N. ....	" April 1, 1915 to " .....	200	00		
Miller E. ....	" April 1, 1915 to Sept. 30, 1916. ....	75	00		
Millier, E. ....	" Oct. 15 1915 to March 31, 1916. ....	87	50		
Milot, J. F. ....	" Sept. 19, 1915 to " .....	196	11		
Monforton, E. R. ....	" April 1, 1915 to " .....	100	00		
Morris, T. H. ....	" " " " .....	100	00		
Murray, D. ....	" " " " .....	300	00		
Niven, T. D. ....	" " " " .....	150	00		
Normandin, G. ....	" " " " .....	300	00		
O'Brien, J. F. ....	" " " " .....	250	00		
Olivier, H. ....	" " " " .....	150	00		
Olivier, J. A. ....	" " " " .....	200	00		
O'Neil, G. ....	" " " " .....	150	00		
Panneton, G. E. ....	" " " " .....	100	00		
Poitras, W. ....	" " " " .....	100	00		
Quinn, J. D. ....	" " " " .....	212	50		
Rogers, H. A. ....	" April 1, to April 12 1915. ....	3	33		
Rousseau, E. H. ....	" Oct. 1, 1915 to March 31, 1916. ....	50	00		
Shorey, A. B. ....	" April 1, 1915 to March 21 1916. ....	150	00		
Smith, D. L. ....	" Sept. 9, to Sept. 26, 1915. ....	3	89		
Snowden, J. W. ....	" April 1, 1915 to March 31, 1916. ....	300	00		
Sprague, F. W. ....	" " " " .....	200	00		
Sutherland, W. ....	" " " " .....	150	00		
Tellier, J. O. ....	" " to Sept. 30, 1915. ....	50	00		
Thomas, F. W. ....	" " to March 31, 1916. ....	150	00		
Thomas, R. ....	" " " " .....	150	00		
Thurber, Geo. ....	" May 25 1915 to " .....	85	21		
Treverton, C. B. ....	" April 1, 1915 to " .....	116	67		
Uffelman, A. ....	" " " " .....	150	00		
Walsh, D. J. ....	" " " " .....	300	00		
Walsh, W. H. ....	" " " " .....	150	00		
Wilson, H. R. ....	" " to October 31, 1915. ....	75	00		
Wood, C. E. ....	" " to March 31, 1916. ....	109	27		
Young, J. J. ....	" " " " .....	150	00		
	Total. ....			15,281	16

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APPENDIX B.—No. 1.—Details of General War Tax Expenditure for the year ended March 31, 1916—Continued.

To whom paid.	Service	Amounts paid.	Total amounts paid.
		\$ cts.	\$ cts.
<i>General War Tax Contingencies.</i>			
Laroche, J. B.	Work at Methylated Warehouse	7 85	00
American Bank Note Co.	Stamps supplied	17,247	54
Timmons, R.	Travelling Expenses	20	95
Munro, H. P.	Commission	30	
Livernois, J. E.	Express charges	65	
18,054 44			
<i>Late costs.</i>			
Seguin, C. A.	Rex vs F. O. Rossini	20	00
"	" O. Gravelle	20	00
Champagne, N.	" D. Duval	10	00
"	" W. Sarrazin	60	00
"	" W. Sarrazin	50	00
"	" W. Sarrazin	5	00
"	" E. Lachance	10	00
"	" A. Foran	15	00
Thurston & Co.	" Cunningham	10	00
Baird, W. J.	" Chim Ying Yon	10	00
"	" C. Chew	26	70
"	" Long Wong	44	00
"	" Wong Yet Him	45	80
Leblanc, Brossard and Forest	" J. H. Therien	20	00
Fauteux, P.	" E. Quevillon	10	00
Fleming, Drake and Foster	" Booster Co., Ltd	20	00
Fauteux & Fauteux	" Hodgson	10	00
	" Goyer	10	00
	" Arcand	20	00
	" Mattichs	10	00
	" Sicard	10	00
	" Sokoransky	10	00
	" Miller & Burwasser	10	00
	" Laubick	20	00
	" Daigle	10	00
	" Lacon de	10	00
	" Vidricaire	10	00
	" St. Cerny & Chapdelaine	10	00
	" Lanctot Ltd	10	00
	" E. Pepin	20	00
	" Dufour	10	00
	" Richard	10	00
	" F. H. Vanaltan	20	00
	" A. Schmeer	14	00
	" W. Chamberland	14	00
	" Larose	10	00
	" Corfsky	14	00
	" A. Bernbe	14	00
	" Sweet House Palace	14	00
	" F. St. Vincent Ltd	14	00
	" A. E. Gadsbald	14	00
	" F. St. Pierre	14	00
	" J. P. Leduc	14	00
	" A. Morin	14	00
	" Cafe Chateaubriand	14	00
	" R. Lusser	14	00
	" E. Ethier	14	00
	" O. Gibean	14	00
Hammond, J. H.	" F. M. Haffey	20	00
Lowell, J. R.	" S. A. Murphy	20	00
Morand, L.	" J. A. Ross	10	00
"	" A. Beaulieu	20	00
"	" E. Bergson	20	00
"	" F. Deriansky	20	00
"	" S. Deshaie	20	00
Leblanc, A.	" P. Lapierre	14	00
"	" J. Lapierre	14	00
Gagnon, O.	Hillman	20	00

## APPENDIX B.—No. 2.—Distribution of Seizures for the year ended March 31, 1916.

Division.	To whom paid.	Service.	Amounts paid.		Total amounts paid.	
			\$	cts.	\$	cts.
Sherbrooke.	A. F. Simpson.	To pay informer $\frac{1}{2}$ penalty in seizure No.	278	2	50	
Montreal.	J. D. Fox	" " " "	1295	200	00	
"	"	" " " "	1294	25	00	
St. Hyacinthe.	A. P. Cartier.	" " " "	87	12	50	
Montreal.	J. D. Fox.	" " " "	1301	25	00	
"	"	" " " "	1302	25	00	
"	"	" " " "	1303	50	00	
"	"	" " " "	1304	25	00	
Perth.	C. F. Stone.	" " " "	14	50	00	
Montreal.	J. D. Fox.	" " " "	1299	50	00	
Joliette.	C. P. Mainville.	" " " "	144	50	00	
Montreal.	J. D. Fox.	" " " "	1300	25	00	
"	"	" " " "	G5491	100	00	
"	"	" " " "	1306	50	00	
"	"	" " " "	1315	50	00	
"	"	" " " "	1316	100	00	
St. Hyacinthe	A. P. Cartier.	" " " "	87	12	50	
Quebec.	D. Arcand.	" " " "	650	12	50	
Montreal.	J. D. Fox.	" " " "	1314	25	00	
"	"	" " " "	1319	50	00	
"	"	" " " "	1321	25	00	
"	"	" " " "	1292	25	00	
"	"	" " " "	1307	50	00	
"	"	" " " "	1311	50	00	
"	"	" " " "	1324	25	00	
"	"	" " " "	1326	25	00	
"	"	" " " "	1313	50	00	
"	"	" " " "	1327	100	00	
"	"	" " " "	1328	50	00	
"	"	" " " "	1330	25	00	
Perth.	E. Floody.	For his share of seizure	14	11	40	
Joliette.	G. N. Brabant.	" " " "	144	33	75	
"	D. J. Kearney	" " " "	144	33	75	
Montreal.	J. Comte.	" " " "	1206	1	50	
"	J. A. Lesperance.	" " " "	1206	1	50	
"	G. N. Brabant.	" " " "	1260	56	75	
"	"	" " " "	1262	46	01	
"	"	" " " "	1265	2	73	
"	"	" " " "	1269	10	00	
"	"	" " " "	1270	72	08	
"	"	" " " "	1271	3	75	
"	"	" " " "	1273	3	62	
"	"	" " " "	1285	0	15	
"	"	" " " "	1287	8	16	
"	"	" " " "	1289	47	88	
"	"	" " " "	1290	8	53	
"	"	" " " "	1291	1	39	
"	"	" " " "	1294	6	09	
"	"	" " " "	1295	266	45	
"	"	" " " "	1297	25	00	
"	"	" " " "	1298	5	59	
"	"	" " " "	1299	51	75	
"	"	" " " "	1300	10	50	
"	"	" " " "	1301	11	75	
"	"	" " " "	1302	11	62	
"	"	" " " "	1303	22	00	
"	"	" " " "	1304	11	75	
"	"	" " " "	1306	23	50	
"	"	" " " "	5491a	50	00	
"	D. J. Kearney	" " " "	1258	0	20	
"	"	" " " "	1262	46	01	
"	"	" " " "	1265	2	72	
"	"	" " " "	1269	10	00	
"	"	" " " "	1270	72	07	
"	"	" " " "	1271	3	75	
"	"	" " " "	1273	3	63	
"	"	" " " "	1285	0	15	
"	"	" " " "	1287	8	17	



SESSIONAL PAPER No. 12

APPENDIX B.—No. 2.—Distribution of Seizures for the year ended March 31, 1916.

Divisions.	To whom paid.	Service.		Amounts paid.		Total amounts paid.	
				\$	cts.	\$	cts.
Montreal	D. J. Kearney	For his share of seizure	No. 1289	47	87		
"	"	"	" 1290	8	53		
"	"	"	" 1291	1	38		
"	"	"	" 1294	6	08		
"	"	"	" 1295	266	45		
"	"	"	" 1297	25	00		
"	"	"	" 1298	5	60		
"	"	"	" 1299	51	75		
"	"	"	" 1300	10	50		
"	"	"	" 1301	11	75		
"	"	"	" 1302	11	63		
"	"	"	" 1304	11	75		
"	"	"	" 1306	23	50		
"	"	"	" 5491a	50	00		
"	J. D. Fox	"	" 1287	8	17		
"	"	"	" 1290	8	54		
"	"	"	" 1291	1	38		
"	"	"	" 1294	6	08		
"	"	"	" 1303	22	00		
"	J. A. Bernier	"	" 1258	0	20		
"	J. J. Costigan	"	" 1258	0	20		
"	C. Navert	"	" 1298	5	60		
St. Hyacinthe	G. N. Brabant	"	" 86	3	15		
"	D. J. Kearney	"	" 86	3	15		
"	J. D. Dunnaine	"	" 87	1	38		
"	A. Galipeau	"	" 87	1	37		
Sherbrooke	J. A. Lamoureux	For his share of seizure No. 218	"	2	50		
Montreal	J. D. Fox	To pay informer's penalty in seizure No.	No. 1317	25	00		
"	"	"	" 1320	25	00		
"	"	"	" 1311	50	00		
St. Hyacinthe	A. P. Cartier	"	" 88	12	50		
"	"	"	" 89	12	50		
Montreal	J. D. Fox	"	" 1323	25	00		
"	"	"	" 1311	100	00		
St. Hyacinthe	A. P. Cartier	"	" 93	5	00		
Montreal	J. D. Fox	"	" 1319	50	00		
"	"	"	" 1335	100	00		
St. Hyacinthe	A. P. Cartier	"	" 94	5	00		
"	"	"	" 95	5	00		
"	"	"	" 96	5	00		
Montreal	J. D. Fox	"	" 1318	35	00		
"	"	"	" 1329	50	00		
"	"	"	" 1337	5	00		
"	"	"	" 1338	12	50		
"	"	"	" 1342	25	00		
"	"	"	" 1343	200	00		
St. Hyacinthe	A. P. Cartier	"	" 92	5	00		
"	"	"	" 98	5	00		
"	"	"	" 99	12	50		
"	"	"	" 97	5	00		
"	"	"	" 91	12	50		
"	"	"	" 90	12	50		
"	"	"	" 82	5	00		
Joliette	J. P. Manville	"	" 145	12	50		
Montreal	J. D. Fox	"	" 1330	50	00		
"	"	"	" 1340	12	50		
Quebec	D. Arcand	"	" 652	12	50		
St. Hyacinthe	A. P. Cartier	"	" 100	25	00		
Halifax	T. C. James	"	" 190	100	00		
Vancouver	E. B. Parkinson	"	" 72	25	00		
Montreal	J. D. Fox	"	" 5857	75	00		
St. Hyacinthe	A. P. Cartier	"	" 101	12	50		
"	"	"	" 102	12	50		
"	"	"	" 103	25	00		
"	"	"	" 104	12	50		
"	"	"	" 105	12	50		
"	"	"	" 107	12	50		
"	"	"	" 108	12	50		

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## APPENDIX B.—No. 2.—Distribution of Seizures for the year ended March 31, 1916.

Divisions.	To whom paid.	Service.	Amounts paid.		Total amounts paid.
			\$	cts.	\$ cts.
Montreal.	J. D. Fox.	To pay informer $\frac{1}{2}$ penalty in seizure No.	1354	100	00
"	"	" " " " " "	1336	12	50
"	"	" " " " " "	1358	25	00
"	"	" " " " " "	1360	25	00
"	"	" " " " " "	1362	100	00
"	"	" " " " " "	1363	50	00
"	"	" " " " " "	1366	50	00
"	"	" " " " " "	1344	50	00
"	"	" " " " " "	1348	5	00
"	"	" " " " " "	1350	25	00
"	"	" " " " " "	1351	100	00
St. Hyacinthe.	A. P. Cartier.	" " " " " "	109	25	00
"	"	" " " " " "	110	12	50
"	"	" " " " " "	111	12	50
"	"	" " " " " "	112	12	50
"	"	" " " " " "	114	12	50
"	"	" " " " " "	115	12	50
"	"	" " " " " "	118	12	50
"	"	" " " " " "	120	12	50
"	"	" " " " " "	121	12	50
"	"	" " " " " "	122	12	50
Quebec.	D. Arcand.	" " " " " "	651	25	00
"	"	" " " " " "	No. L139431	12	50
"	"	" " " " " "	No. 654	12	50
Montreal.	D. J. Kearney.	For his share of seizure No.	144	2	80
"	"	" " " " " "	1287	1	41
"	"	" " " " " "	1292	13	70
"	"	" " " " " "	1293	16	00
"	"	" " " " " "	1294	6	06
"	"	" " " " " "	1295	28	10
"	"	" " " " " "	1296	3	84
"	"	" " " " " "	1297	1	01
"	"	" " " " " "	1307	17	35
"	"	" " " " " "	1309	25	00
"	"	" " " " " "	1310	118	57
"	"	" " " " " "	1311	107	05
"	"	" " " " " "	1312	43	37
"	"	" " " " " "	1313	15	00
"	"	" " " " " "	1314	8	42
"	"	" " " " " "	1315	132	13
"	"	" " " " " "	1316	86	60
"	"	" " " " " "	1317	11	90
"	"	" " " " " "	1318	16	80
"	"	" " " " " "	1319	19	70
"	"	" " " " " "	1320	12	50
"	"	" " " " " "	1321	11	52
"	"	" " " " " "	1323	11	82
"	"	" " " " " "	1324	12	50
"	"	" " " " " "	1326	11	87
"	"	" " " " " "	1327	55	62
"	"	" " " " " "	1328	14	83
"	"	" " " " " "	1329	17	50
Montreal.	D. J. Kearney.	For his share of seizure No.	1330	56	25
"	"	" " " " " "	1335	44	00
Hamilton.	M. C. Beasley.	" " " " " "	50	80	00
"	W. A. D. Baby	" " " " " "	51	80	00
Montreal.	D. J. Kearney	" " " " " "	1301	0	45
"	"	" " " " " "	1302	0	52
"	"	" " " " " "	1304	0	12
"	"	" " " " " "	1306	0	20
"	"	" " " " " "	1338	4	37
"	"	" " " " " "	1339	23	37
"	"	" " " " " "	1340	8	68
"	"	" " " " " "	1342	36	32
"	"	" " " " " "	1343	138	80
"	"	" " " " " "	82	2	50
"	"	" " " " " "	84	2	50
"	"	" " " " " "	98	6	00

SESSIONAL PAPER No. 12

APPENDIX B.—No. 2.—Distribution of Seizures for the year ended March 31, 1916.

Divisions.	To whom paid.	Service.	Amounts paid.		Total amounts paid.	
			\$	cts.	\$	cts.
Montreal.....	D. J. Kearney ...	For his share of seizure No. 99 .....	2	68		
" .....	G. N. Brabant ...	" " " 144 .....	2	79		
" .....	" .....	" " " 1254 .....	45	75		
" .....	" .....	" " " 1287 .....	1	42		
" .....	" .....	" " " 1292 .....	13	70		
" .....	" .....	" " " 1293 .....	16	00		
" .....	" .....	" " " 1294 .....	6	06		
" .....	" .....	" " " 1295 .....	28	11		
" .....	" .....	" " " 1296 .....	3	83		
" .....	" .....	" " " 1297 .....	1	01		
" .....	" .....	" " " 1303 .....	6	50		
" .....	" .....	" " " 1307 .....	17	35		
" .....	" .....	" " " 1309 .....	25	00		
" .....	" .....	" " " 1310 .....	118	58		
" .....	" .....	" " " 1311 .....	107	05		
" .....	" .....	" " " 1312 .....	43	38		
" .....	" .....	" " " 1313 .....	15	00		
" .....	" .....	" " " 1314 .....	8	43		
" .....	" .....	" " " 1315 .....	132	14		
" .....	" .....	" " " 1316 .....	86	61		
" .....	" .....	" " " 1317 .....	11	90		
" .....	" .....	" " " 1318 .....	16	80		
" .....	" .....	" " " 1319 .....	19	70		
" .....	" .....	" " " 1320 .....	12	50		
" .....	" .....	" " " 1321 .....	11	53		
" .....	" .....	" " " 1323 .....	11	83		
" .....	" .....	" " " 1324 .....	12	50		
" .....	" .....	" " " 1326 .....	11	88		
" .....	" .....	" " " 1327 .....	55	63		
" .....	" .....	" " " 1328 .....	14	83		
" .....	" .....	" " " 1329 .....	17	50		
" .....	" .....	" " " 1330 .....	56	55		
" .....	" .....	" " " 1335 .....	41	00		
" .....	" .....	" " " 1301 .....	0	45		
" .....	" .....	" " " 1302 .....	0	53		
" .....	" .....	" " " 1304 .....	0	13		
" .....	" .....	" " " 1306 .....	0	20		
" .....	" .....	" " " 1338 .....	4	38		
" .....	" .....	" " " 1339 .....	23	28		
" .....	" .....	" " " 1340 .....	8	60		
" .....	" .....	" " " 1342 .....	36	31		
" .....	" .....	" " " 1343 .....	138	80		
" .....	" .....	No. 45357 .....	75	00		
" .....	" .....	No. 82 .....	2	50		
" .....	" .....	" " 84 .....	2	50		
" .....	" .....	" " 98 .....	0	00		
" .....	" .....	" " 99 .....	2	68		
" .....	J. D. Fox .....	" " " 1287 .....	1	42		
" .....	" .....	" " " 1293 .....	16	00		
" .....	" .....	" " " 1294 .....	6	06		
" .....	" .....	" " " 1303 .....	6	00		
" .....	" .....	" " " 1310 .....	118	58		
" .....	" .....	" " " 1313 .....	15	00		
" .....	" .....	" " " 1328 .....	14	84		
Joliette, .....	J. A. Lambert .....	" " " 114 .....	10	12		
" .....	A. Roy .....	" " " 146 .....	10	13		
St. Hyacinthe	J. D. Dumaine .....	" " " 87 .....	1	88		
" .....	A. Galtman .....	" " " 87 .....	3	86		
" .....	J. A. Gervais .....	" " " 88 .....	4	46		
" .....	" .....	" " " 89 .....	4	46		
" .....	" .....	" " " 92 .....	1	00		
" .....	" .....	" " " 93 .....	1	00		
" .....	" .....	" " " 94 .....	1	00		
" .....	" .....	" " " 95 .....	1	00		
" .....	" .....	" " " 96 .....	1	00		
" .....	J. A. Cadotte .....	" " " 88 .....	4	47		
" .....	" .....	" " " 89 .....	4	40		
" .....	" .....	" " " 90 .....	1	00		

7 GEORGE V, A. 1917

## APPENDIX B.—No. 2.—Distribution of Seizures for the year ended March 31, 1916.

Division.	To whom paid.	Service.	Amounts paid.		Total amounts paid.	
			\$	cts.	\$	cts.
St. Hyacinthe..	J. A. Cadotte. ....	For his share of seizure No. 91.....	1	26		
" ..	" ..	" " " 92.....	1	05		
" ..	" ..	" " " 93.....	1	05		
" ..	" ..	" " " 94.....	1	05		
" ..	" ..	" " " 95.....	1	05		
" ..	" ..	" " " 96.....	1	05		
" ..	" ..	" " " 100.....	23	00		
" ..	J. C. Raymond.....	" " " 90.....	1	27		
" ..	" ..	" " " 91.....	1	26		
" ..	" ..	" " " 100.....	23	00		
St. John.....	J. T. Kelly.....	" " " 188.....	37	80		
Halifax.....	C. W. Blethen.....	" " " 190.....	83	35		
Vancouver.....	Jas. Thorburn ..	" " " 69.....	2	35		
" ..	" ..	" " " 72.....	24	00		

## RECAPITULATION.

Ontario.....	\$ 221 40
Quebec.....	7,419 87
New Brunswick.....	37 80
Nova Scotia.....	183 35
British Columbia.....	51 35
	<u>\$ 7,913 77</u>

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
Deputy Minister.

SESSIONAL PAPER No. 12

## APPENDIX B—Continued.

No. 3.—DETAILS of Sundry Minor Expenditures for the Year ended  
March 31, 1916.

To whom Paid.	Service.	Amounts paid.		Total amounts paid.	
		\$	cts.	\$	cts.
	<i>Proprietary or Patent Medicine Act.</i>				
Rudoff, Dr. R. D . . . . .	For consultation as expert . . . . .	400	00		
Blackader, Dr. A. D . . . . .	" " . . . . .	400	00		
Dufresne, J. A. . . . .	Travelling expenses . . . . .	83	90		
Stewart, H. A. . . . .	Law costs Rex vs. Capsuloid Co . . . . .	15	00		
Thurston & Co . . . . .	" " D. B. Munro . . . . .	20	00		
	Printing . . . . .				915 90
	Total . . . . .				310 15
					1,229 05

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.J. U. VINCENT,  
Deputy Minister.

## APPENDIX B.

Details of Adulteration of Food Expenditure for the year ended March 31, 1916.

To whom paid.	Service.	Deductions for		Amounts paid.	Total amounts paid.
		Superannuation.	Guarantee		
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
	<i>Kingston.</i>				
Hogan, J . . . . .	Salary as Inspector for the year . . . . .		1 08	198 84	
	<i>London.</i>				
Talbot, J . . . . .	Salary as Inspector for the year . . . . .		1 08	198 84	
	<i>Toronto.</i>				
Dager, H. J . . . . .	Salary as Inspector for the year . . . . .		1 08	198 84	
	<i>Montreal.</i>				
Kearney, D. J . . . . .	Salary as Inspector for the year . . . . .		1 08	398 88	
Costigan, J. J . . . . .	" " " " . . . . .	9 96	1 08	488 88	
	Salaries . . . . .	9 96	2 16	887 76	
	<i>Quebec.</i>				
Béland F. X. W. E. . . . .	Salary as Inspector for the year . . . . .		1 08	298 92	
	<i>St. Hyacinthe.</i>				
Rouleau, J. C. . . . .	Salary as Inspector for the year . . . . .		1 08	198 81	
	<i>St. John.</i>				
Ferguson, J. C. . . . .	Salary as Inspector for the year . . . . .	3 96	1 08	194 88	
	<i>Halifax.</i>				
Waugh, K. J. . . . .	Salary as Inspector for the year . . . . .		1 08	348 84	
	<i>Charlottetown.</i>				
Weeks, W. A . . . . .	Salary as Inspector from April 1, 1915 to March 10, 1916. . . . .		1 08	186 47	
	<i>Winnipeg.</i>				
Larivière, A. C. . . . .	Salary as Inspector from April 1, to May 1, 1915. . . . .		0 09	-	
	<i>Calgary.</i>				
Markley, A. W. R . . . .	Salary as Inspector for the year . . . . .		1 08	298 92	
	<i>Vancouver.</i>				
Morgan, E. J . . . . .	Salary as Inspector for the year . . . . .		1 08	198 84	
	<i>Victoria.</i>				
O'Sullivan, D. . . . .	Salary as Inspector for the year . . . . .		1 08	198 84	
	<i>Cape Breton Island.</i>				
MacKeen, E. T. . . . .	Salary as Inspector for the year . . . . .		1 08	198 84	
	<i>Rocky Mountains.</i>				
Parker, Thos . . . . .	Salary as Inspector for the year . . . . .		1 08	198 84	
		13 92	16 29	3,806 51	3,836 72

SESSIONAL PAPER No. 12

No. 4.—DETAILS of Adulteration of Food Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Service.	Amounts paid.	Total amounts paid.
	ADULTERATION OF FOOD.		
	<i>General Contingencies.</i>	\$ cts.	\$ cts.
McGill, for the Ottawa Laboratory	Special Assistance .....	1,095 16	
	Sundries.....	2,011 79	
Forward, for the Halifax Lab'ry.	Special assistance.....	240 00	3,106 95
	Sundries.....	1,729 56	
Forster, for the Winnipeg Lab'ry	" .....	464 95	1,969 56
Dawson, for the Vancouver Lab'y	" .....	837 58	837 58
..... Hamilton, Ont.	Travelling expenses and purchases of samples.....	329 82	
Hogan, J., Kingston, Ont. ....	" .....	232 06	
Talbot, J. London, Ont. ....	" .....	252 40	
Dager, H. J., Toronto, Ont. ....	" .....	365 84	
Costigan, J. J., Montreal, Que..	" .....	830 80	
Kearney, D. J., Montreal, Que..	" .....	282 78	
Beland, F. X. W. E., Quebec, Que.	" .....	437 47	
Rouleau, J. C., St. Hyacinthe, Q.	" .....	44 65	
Ferguson, J. C., St. John, N.B....	" .....	467 05	
Waugh, R. J., Halifax, N.S.....	" .....	207 24	
Weeks, W. A., Charlottetown, P.E.I.....	" .....	161 74	
Larivière, A. C., Winnipeg, Man.	" .....	551 77	
Markley, A. W. R., Calgary, Alta.	" .....	459 00	
Parker, T. Nelson, B.C.....	" .....	358 75	
Morgan, E. J. Vancouver, B.C....	" .....	200 58	
O'Sullivan, D., Victoria, B.C.....	" .....	182 86	
Mackeen, E. T., Cape Breton....	" .....	15 16	
			5,319 97
Brochu, O., Armagh, Que. ....	Special assistance and travelling expenses, etc. ....	249 59	
Lavallée, V. P., Joliette, Que....	" .....	1,056 38	
Gendreau, T., Montmagny, Que..	" .....	287 73	
Cadioux, N., St. Jerome, Que....	" .....	302 42	
Pelletier, A., Ste Perpetue, Que.	" .....	367 41	
Roy, F. X., St. Philippe de Néri, Que. ....	" .....	91 99	
Audet, J. E., St. Anacrine, Que..	" .....	763 09	
Blondin, E., Pierreville, Que....	" .....	813 23	
Doschenes, E., St. Octave, Que....	" .....	45 35	
Hardy, L., Quebec, Que. ....	" .....	25 84	
Rions, J. H., St. Fédien, Que....	" .....	71 89	
Petipas, W. A., Tracadie .....	" .....	175 79	
Scott, J. O., Regina, Sask. ....	" .....	75 00	
Hall, L. H., Moosejaw, Sask. ....	" .....	738 00	
Rickey, J. A., Ottawa, Ont. ....	" .....	222 62	
			5,462 93
Ellis, Dr. W. H., .....	Retaining fees as member of advisory board of Food Standards .....	400 00	
Donald, Dr. J. T., .....	" .....	400 00	
			800 00
McKenzie, Prof. J. J., .....	Travelling expenses re Board of Examiners .....	147 19	
Choquette, Rev. C. P. ....	" .....	185 25	
Gridwood, Dr. G. P., .....	" .....	150 00	
			482 45
Tailon, A. A. ....	Special translation .....	25 00	
Nantel, L. ....	" .....	8 25	
Fisaut, J. A. ....	" .....	70 00	
Morinast, M. ....	" .....	17 25	
			121 00
Hughes, P. A. ....	petty expenses .....	3 30	
Collector of Customs .....	Duty on imported goods .....	1 80	
Chester, A. W. ....	Fertiliser testers .....	40 00	
Emmer & Amend .....	Italian asbestos .....	15 27	
Fritchard, Andrews Co., Ltd. ....	Stamps and repairs .....	20 20	
Alexander & Campbell .....	Construction of storage rooms and fixing cupboards .....	331 55	
Hague, J. ....	Erecting shelving .....	30 00	
			800 78

No. 4.—DETAILS of Adulteration of Food Expenditures for the Year ended  
March 31, 1916—Continued.

To whom paid.	Service.	Amounts paid.	Total amounts paid.
ADULTERATION OF FOOD.			
<i>General Contingencies.</i>			
LAW COSTS.			
Ross, W. L.	Law costs re <sup>x</sup> 2s. H. W. Eaton	55 52	
"	" W. Jones	25 00	
"	" H. W. Eaton	53 93	
"	" Bennett & Son	15 52	
"	" Hamilton Bridging Assn.	14 07	
Cr. R. G. for D. Arcand	Deposited to credit of excise seizures	45 67	
Plante, A.	Law costs re <sup>x</sup> 2s. Montreal Cotton Co.	10 00	
"	" T. S. Montgomery	12 00	
Blewett, F. R.	" J. Walsh	25 00	
"	" Nectar Mfg. Co.	139 39	
Hartley, J. C.	" Bern & Turney	20 00	
"	" G. W. Boyer	10 00	
Langlois, J. C.	" Capleton Fertilizer Co.	5 00	
Bérubé, Leo.	" J. L. Pronlx	52 50	
Innes & Mackay	" Edmunds	20 06	
"	" G. O. Werrett	10 05	
"	" O. R. Hanset	20 06	
Légaré, Thos.	" G. A. Coderre	25 75	
"	" P. Lapointe	48 20	
Leclerc, F.	" D. Hebert	16 80	
Drew, J. J.	" J. B. Broadfoot	21 00	
Carbould, Grant & McColl.	" T. A. Muir	10 00	
Smith, A. L.	" Alguire	20 00	
"	" R. Murdock	10 00	
"	" R. Runions	20 00	
Smith, A. L.	" Casselman Bros.	5 00	
Webster, Chas. R.	" F. Walker	49 50	
Bolduc, R.	" C. Berberie	44 55	
Wilson, N. C.	" D. Sampson	25 41	
Barnet, J.	" O. C. Lapps	45 00	
Robertson, N. G. M.	" R. E. Broadfoot	50 00	
Macdonald & Costello.	" J. A. McDonald	10 00	
Cowan, J. E.	" W. C. Broadbent	10 00	
"	" J. W. Philips	10 00	
Campbell & Pitblads Co.	" F. C. Fraser	10 00	
Benson, B. S.	" W. H. G. Gibbs	20 00	
Morand & Savard.	" O. Pamalon	10 00	
"	" E. Lacasse	10 00	
"	" B. Lacroix	10 00	
"	" A. Bilo-jeau	10 00	
"	" J. Labonte	10 00	
"	" A. Fournier	10 00	
Jermyn, J. W.	" F. R. Bailey	10 75	
"	" Central Drug Store	10 34	
Aikman, J. A.	" D. H. Ross & Co.	60 00	
"	" W. Diver	10 00	
"	" G. A. Fraser & Co.	10 00	
"	" National Drug Co.	20 00	
Pincott, C. F. R.	" Co-operative Italian Assn.	25 25	
"	" E. W. Hazelwood	25 75	
"	" Trail grocery	20 00	
"	" Hunter Bros.	20 00	
"	" T. Lauriente, Ltd.	25 75	
Tweedie, McGillivray & Barron.	" Bow Marsh	10 00	
"	" N. S. Piette	15 00	
"	" Allen & Allen	15 00	
"	" R. Wright	15 00	
"	" M. Nagler	15 00	
"	" G. W. Piette	15 00	
"	" B. I. Callaghan	15 00	
"	" G. W. Young	15 00	



SESSIONAL PAPER No. 12

No. 4.—DETAILS of Adulteration of Food Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Service.	Amounts paid.	Total amounts paid.
		\$ cts.	\$ cts.
<b>ADULTERATION OF FOOD—Con.</b>			
<i>General Contingencies—Con.</i>			
Tweedie, McGillivray & Baron..	Law costs Rex vs. P. I. Moirow.....	15 00	
" "	" Simington & Co., Ltd.....	15 00	
Maulson & Horrison.....	" R. W. Hutton.....	20 00	
Temple, F.....	" Hudson's Bay Co.....	21 52	
Harris, W. H.....	" Chs. McArthur.....	10 00	
Kidd, W. J.....	" Jos. Grant.....	20 00	
Ruttan, G. F.....	" Lovelace.....	45 85	
Rigney, T. J.....	" R. W. Marshall.....	10 00	
" "	" Dr. A. P. Chown.....	10 00	
Robertson & McNab.....	" N. Oppcitschauser.....	15 00	
" "	" Bourgenan.....	11 50	
" "	" A. Fedy.....	8 00	
Fortin, G.....	" P. J. Keyv.....	10 00	
" "	" A. Alexander.....	10 00	
Henson, R. B.....	" E. G. Hoben.....	10 00	
O'Brian, C. G.....	" J. Miron.....	23 00	
Bell, M. L.....	" A. Davies.....	25 90	
Chisholm, D. H.....	" W. D. Stephens.....	10 00	
Harrison, V. B.....	" W. Reynolds.....	10 00	
" "	" L. Gronhel.....	20 00	
Stewart, H. A.....	" Nappy.....	5 00	
" "	" Clifford.....	5 00	
" "	" W. C. Johnston.....	5 00	
Livernois, L. S.....	" W. H. Parr.....	10 00	
Duchemin, H. P.....	" E. S. Auld.....	10 00	
Landry & Landry.....	" Hudson's Bay Co.....	10 00	
Wallace, E. E.....	" R. H. Mason.....	21 80	
Clarke, A. S.....	" J. S. Ireland.....	10 00	
Armstrong, A. J.....	" O. G. Johns.....	10 00	
" "	" A. J. Gauld.....	20 00	
" "	" W. H. A. Semple.....	20 00	
Smith, W. A.....	" M. Wyle.....	10 00	
" "	" T. J. Salmom.....	10 00	
Chisholm, W. A.....	" B. H. Walsh.....	10 00	
Morand, L.....	" E. Robitaille.....	20 00	
Taché, D.....	" J. A. Provencher.....	72 10	
Bernier, H.....	" J. Samson.....	20 00	
" "	" H. Torgson.....	20 00	
" "	" O. Cote.....	49 45	
" "	" E. Juneau.....	117 01	
Gosselin, J.....	" P. Dumas.....	45 10	
Moore, W. H.....	" A. J. Johnstone.....	20 00	
" "	" J. Douras.....	20 00	
McGarry & Costello.....	" H. Brydgo.....	10 00	
" "	" P. J. Froot.....	10 00	
Fauteux, Fauteux.....	" Canada Maple Ex. Co.....	24 00	
		2 980 26	
Ruttan, G. F.....	Law Costs Rex vs Silver.....	46 45	
McCullough & Britton.....	" A. Lewis.....	15 00	
" "	" I. Russell.....	15 00	
Amyot, W.....	" C. Beaudoin.....	22 00	
" "	" A. Fradette.....	22 00	
" "	" F. X. Balduc.....	22 00	
" "	" G. Samson.....	27 40	
" "	".....	25 00	
Marquis, A. W.....	" M. Gilmore.....	11 01	
" "	" J. Becker.....	3 00	
" "	" Bentham & Bradley.....	15 00	
Curran, F. J.....	" Canada Flour Mills Co.....	20 00	

No. 4.—DETAILS of Adulteration of Food Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Service.	Amounts paid.	Total amounts paid.
		\$ cts.	\$ cts.
<b>ADULTERATION OF FOOD.</b>			
<i>General Contingencies.</i>			
Curran, F. J.	Law Costs Rex vs. E. J. Quinn	10 00	
"	" J. J. Bowen	10 00	
"	" J. Goodman	0 00	
Macdonald & Drew	" "	20 53	
Piette, J. A.	" A. Beaubien	36 80	
Coffin, H. E.	" T. Bolton	10 00	
Hammond, J. H.	" J. H. Wilson & Son	10 00	
"	" Playfair & Preston Co.	12 25	
Turnbull & McCausland	" C. A. Stewart	20 00	
Carnew, W.	" The Hawley Metterville Co.	10 00	
"	" Belleville Pharmacy Co.	10 00	
Graham, J. W.	" A. Deviney	20 00	
Graydon & Graydon	" H. Baren	20 00	
"	" R. W. James	20 00	
J. Bruno Nantel	" J. A. Fournelle	34 00	
Murray & Mackinnon	" Cahill & Co	10 00	
"	" S. Smith & Son	10 00	
"	" Bauld Bros., Ltd.	10 00	
"	" Coleman & Eisener	10 00	
"	" Knock & Nicolle	10 00	
"	" W. P. Meyer	10 00	
"	" Wentzells Ltd.	10 00	
Mulcaster, R.	" Mainville & Co.	5 00	
Thurston & Co.	" W. W. Hall	20 00	
"	" R. P. Weeks	10 00	
"	" The Loblaw Stores	10 00	
"	" J. C. Sharpe	10 00	
"	" J. J. Coyle	10 00	
"	" J. D. Cassie	10 00	
"	" C. B. Shields	20 00	
"	" M. Watson	10 00	
The Ontario Hughes Owens Co., Ltd.	Supplies and apparatus for laboratory	615 66	
Lymans Limited	" " "	230 17	
Hull Medical Hall	" " "	71 10	
Gooderham & Worts, Ltd.	Alcohol for laboratory	35 19	
Guinond, Mrs.	For cleaning laboratory	203 00	
Dessaint, Mrs.	" "	480 00	
Paulin E.	" "	278 00	
Gauthier, C.	" "	131 00	
Turpin, A.	" "	314 00	
Lafleur, E.	" "	314 00	
Gingras, D.	" "	26 00	
Farmer, C.	" "	268 00	
2,014 00			
<b>EQUIPMENT FOR LABORATORIES.</b>			
The Ontario Hughes Owens Co., Ltd.	Apparatus for Halifax	97 12	
Lymans Limited	" "	185 86	
The Topley Co.	" "	104 24	
Thornton & Truman	" "	103 75	
The Ontario Hughes Owens Co., Ltd.	" Winnipeg	578 76	
Lymans Limited	" "	271 98	
Gooderham & Worts, Limited	Alcohol	38 41	
Thornton & Truman	Apparatus	103 75	
The Ontario Hughes Owens Co., Ltd.	" Vancouver	100 92	
Lymans Limited	" "	443 70	

SESSIONAL PAPER No. 12

No. 4.—DETAILS of Adulteration of Food Expenditures for the Year ended March 31, 1916—*Concluded.*

To whom paid.	Service.	Amounts paid.	Total amounts paid.
	ADULTERATION OF FOOD— <i>Con.</i>	\$ cts.	\$ cts
	<i>General Contingencies—Con.</i>		
The Topley Co.....	Apparatus Vancouver.....	130 11	
Johnson Matthey Co., Ltd.....	" " .....	838 27	
Thornton & Truman .....	" " .....	103 75	
The British Columbia Distilling Co.....	Alcohol " .....	9 10	3,109 72
	Total.		
	Printing .....	10,514 64	
	Stationery .....	970 36	11,485 00

RECAPITULATION.

Food salaries.....	\$ 3,836 72
" contingencies.....	39,337 47
Special translation.....	121 62
	\$ 43,315 81

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

APPENDIX B—No. 5—Details of Departmental Expenditures for the year ended March 31, 1916.

Names.	Division.	Rank.		Salary.	Period.	Deduction for			Amounts paid.	Total amount paid.	
		Sub-Div.	Division.			Superannation.	Retirement.	Insurance.			
				£		%	cts.	%	cts.	£	cts.
Blondin, Hon. P. E.				7,000	From April 1 to Oct. 6, 1915					3,594 07	
Patenaude, Hon. E. L.				7,000	From Oct. 1915 to March 31, 1916						3,405 93
Vincent, J. U.				5,000	For the year		250 00			4,750 00	5,000 00
Taylor, G. W.	1		A	3,400	"		67 00			3,253 00	3,350 00
Magnan, J. A.				3,300	From Feb. 23 to Mar. 31 1916			17 07		3,24 31	341 38
Valin, J. E.	1		A	3,100	"					3,025 00	3,025 00
Shaw, J. F.	1		A	2,900	"					2,900 00	2,900 00
Doyon, J. A.	1		B	2,800	"		32 66			2,767 34	2,800 00
Catellier, C. L.	1		B	2,100	"		105 00			2,013 19	2,118 19
Westman, T.	1		B	2,600	"		52 00			2,548 00	2,600 00
Quain, R.	1		B	2,400	"		6 00		61 92	2,332 08	2,400 00
Fowler, G.	1		B	2,400	"					2,400 00	2,400 00
Lafamme, J. L. K.	1		B	2,400	"					1,638 06	1,708 06
Gallagher, M. F.	1		B	2,100	From April 1 to Nov. 1, 1915			70 00		1,081 25	1,125 00
Brodreur, P. E. S.	2		A	1,850	From Nov. 1 to Mar. 31, 1916		6	43 75		1,757 50	1,850 00
Hughes, P. A.	2		A	1,800	For the year		33 00	92 50		1,691 08	1,800 00
McCollough A.	2		A	1,800	"		65 00		55 92	1,764 00	1,800 00
Halliday, W. A.	2		A	1,750	"		1 25			1,688 75	1,750 00
Roy, L. G.	2		A	1,750	"		61 25			1,688 75	1,750 00
Lemay, A.	2		A	1,750	"				11 96	1,458 16	1,547 97
Laliberte, J. A.	2		A	1,600	From May 3 to Mar. 31, 1916			72 90		1,385 16	1,458 06
Gervais, J. H.	2		B	1,600	For the year			80 00		1,520 00	1,600 21
Snyth, P. J.	2		B	1,300	From May 10 to Mar. 31, 1916			58 04		1,102 17	1,160 00
Teevens, L. P.	2		B	1,150	For the year			57 50	47 28	1,045 22	1,150 00
Allen, A. T.	2		B	1,150	"			57 50		1,028 40	1,150 00
Furlong, C. J.	3		A	1,200	"			60 00	111 60	1,200 00	1,200 00
Lawless, E. M.	3		A	1,200	"			60 00		1,140 00	1,200 00
Hagerty, B.	3		A	1,200	"			60 00		1,140 00	1,200 00
Doyle, E. F.	3		A	1,200	"			60 00		1,140 00	1,200 00
Goodhue, M. L. E. B.	3		A	1,200	"			60 00		1,140 00	1,200 00
Trumppour, G.	3		A	1,200	"			60 00		1,140 00	1,200 00
Evans, C. J.	3		A	1,200	"			60 00	41 04	1,098 96	1,200 00
Beard, M. H.	3		A	1,200	"			60 00		1,140 00	1,200 00
Lewis, H. B.	3		A	1,200	"			59 38		1,128 12	1,157 50
Lyon, A. V.	3		A	1,200	"			59 38		1,128 12	1,187 50

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Yetta, E. P	3	A	1,150	"	"	40 25	1,109 75	1,150 00
Robert, A	3	A	1,100	"	"	55 00	1,045 00	
Cantin, J. W. Z	3	A	1,100	"	"	55 00	1,100 00	
M. Kell, M. E. E	3	A	950	"	"	46 25	1,091 96	
Lalmer, M. A. L.	3	B	800	"	"	40 00	878 75	
O'Connor, M. E.	3	B	700	"	"	35 00	760 00	
Trumbull, J.	3	B	600	"	"	30 00	743 00	
Rayburn, E.	3	B	800	"	"	40 00	700 00	
Ray, L.	3	B	800	"	"	40 00	800 00	
Macrosbes, L.	3	B	750	"	"	36 25	800 00	
McGill, A	1	A	3,600	"	For the year.	72 00	725 00	
Lezcano, A	1	B	2,000	"	"	108 75	3,528 00	
Vain, J. G.	1	B	2,200	"	"	108 75	2,066 25	
Forster, E. L. C.	1	B	2,200	"	"	108 75	1,970 25	
Forward, C. C.	1	B	2,200	"	"	108 75	2,066 25	
Dawson, J. A. M.	1	B	2,200	"	"	108 75	2,066 25	
Kiba, W. J.	2	A	1,750	"	"	86 88	2,175 00	
Crestere, A. P.	2	A	1,650	"	"	64 37	1,650 02	
Kirwan, P.	2	B	1,300	"	From April 1 to Jan. 15, 1916.	1,222 72	1,287 09	
Lantry, A. J.	2	B	1,300	"	For the year.	21 60	1,213 40	
Collier, F. C.	2	B	1,300	"	"	65 00	1,300 00	
Cook, S. J.	2	B	1,300	"	"	65 00	1,300 00	
Davison, W. A.	2	B	1,300	"	"	65 00	1,300 00	
Westman, L. E.	2	B	1,300	"	"	32 50	617 50	
Reber, J. A.	3	A	1,200	"	From Oct. 1 to Mar. 31, 1916.	60 00	1,064 64	
Wright, S. E.	3	A	1,200	"	For the year.	60 00	1,140 00	
Ladouceur, J.	3	A	1,200	"	"	60 00	1,200 00	
Leclerc, T. L.	3	B	800	"	"	40 00	1,064 88	
Javas, J. H.	3	B	600	"	"	4 16	760 00	
Archer, W.	1	B	2,300	"	From April 1 to June 1, 1915.	115 00	83 32	
Parson, F.	3	A	1,200	"	For the year.	60 00	2,185 00	
Rusca, Y.	L.	G	650	"	"	32 50	1,140 00	
Charney, E.	L.	G	650	"	"	32 50	617 50	
Irwin, J. F.	L.	G	650	"	"	27 50	650 00	
Hughes, O.	L.	G	650	"	"	170 00	522 50	
Leahy, A. B.	1	A	3,400	"	"	130 00	3,230 00	
Dyers, H. A.	1	B	2,600	"	"	113 75	2,464 15	
Reidinger, P. B.	1	B	2,300	"	"	80 00	2,275 00	
Cole, S. R.	1	A	1,600	"	"	60 00	1,520 00	
Malone, E. D. K.	2	A	1,200	"	"	52 50	1,140 00	
Grubb, M. L.	3	A	1,050	"	"	60 00	997 50	
Wray, E. O.	3	A	1,200	"	"	145 00	1,140 00	
Osgood, L. B.	1	A	2,900	"	"	80 00	2,755 00	
Watson, V. M.	1	B	1,000	"	"	60 00	1,520 00	
Parsons, I.	3	A	1,200	"	"	40 00	1,140 00	
Duques, T.	3	B	1,000	"	"	50 00	760 00	
Osborne, E.	L.	C	650	"	"	31 88	950 10	
						491 41	605 62	
						4,076 21	124,583 17	
						754 49	130,404 28	

## APPENDIX B.—No. 5.—Details of Department Expenditures for the Year ended March 31, 1916.

Names.	Service.	Amounts paid.		Total amounts paid.
		\$	cts.	
Cyr, H.	Salary as extra clerk for the year.	637	50	
Montrenil, J. A.	" messenger from April 1st to 30th, 1915.	41	66	
Seguin, J. R.	" extra clerk for the year.	500	00	
Ethier, J. P.	" " " "	574	98	
Kirwan, P. T.	" " from April 1 to 15, 1915.	54	17	
Cook, S. J.	" " " 1 to 20, 1915.	72	22	
Davidson, W. A.	" " " 1 to 20, 1915.	72	22	
Landry, A. J.	" " " 1 to 19, 1915.	68	61	
Westman, L. E.	" " " 1 to Sept. 30, 1915.	650	00	
Charland, Dr. L. C.	" " " 1 to June 30, 1915.	300	00	
Johnston, R.	" " from May 3 to Oct. 27, 1915.	241	90	
Rooney, E. A.	" " " Sept. 13, 1915 to March 13, 1916.	400	00	
Chenier, G. J.	" " " July 1 to Aug. 31, 1915.	90	00	
Deguire, A. L.	" " " Nov. 8 to March 31, 1916.	317	75	
Beaudet, P. A.	" messenger, Mar. 20, 1916 to 31, 1916.	16	13	
C. R. G. for King's Printer	Printing.	4,471	21	4,037 14
" " "	Parliamentary publications.	995	80	
Cr. R. G. for Cont. of Stationery	Stationery and books.	3,574	03	
C.P.R. Telegraph Co.	Telegrams.	334	21	9,041 04
G.N.W. Telegraph Co.	"	95	67	
Blondin, Hon. P. F.	Travelling expenses.	900	00	429 88
Patenaude, E. L.	" "	700	00	
" "	Sundry	7	50	
Vincent, J. U.	Travelling	143	85	
McGill, A.	"	308	57	
Higman, O.	"	85	07	
Laflamme, J. L. K.	"	450	00	
Way, E. O.	"	192	00	
Taylor, G. W.	"	33	05	
Catellier, C. L.	"	539	90	
Rutledge, P. R.	"	454	63	
Rickey, J. A.	"	256	15	
Valin, J. A. G.	"	41	70	
Lambe, A. B.	"	104	80	
Lemay, A.	"	10	95	
The Bell Telephone	Messages.	766	70	4,228 17
The Ottawa Wine Vaults Co.	Distilled Water.	143	60	766 70
R. Robert.	Washing towels.	97	50	
Ottawa Electric Ry.	Tickets.	50	00	
Postmaster	Stamps.	128	00	
American Express Co.	Express.	70		
Dominion Express Co.	"	2	20	
Canadian Express Co.	"	5	62	
The Plaunt Hardware Co.	Hardware.	20		
Stromberg Electric Co.	Repairs to electric time clock.	4	44	
Mrs. M. J. O'Connor	Sundries.	3	00	
Post Office Department	Stamps.	8	28	
M. Lepine	Cartage.	3	00	
Collector of Inland Revenue	War Tax Stamps.	3	50	
Mahoney, J.	Cartage.	28	25	
Bryson-Graham Co., Ltd.	Towels, etc.	29	70	
Landreville, M.	Cartage.	50		
Thornton & Truman.	Repairs to locks and keys.	57	55	
Clairoux, O.	Cartage.	247	50	
	Carried forward.			18,502 93

SESSIONAL PAPER No. 12

APPENDIX B.—No. 5.—Details of Department Expenditures for the Year ended March 31, 1916—Continued.

Names.	Service.	Amounts paid.		Total amounts paid.
		\$	cts.	\$ cts.
	Brought forward . . . . .			18,502 93
R. H. Pringle . . . . .	Brokerage . . . . .	22	00	
Birkett & S n . . . . .	Hardware . . . . .		20	
Murphy-Gamble Co. . . . .	Brushes, etc. . . . .	1	75	
Mahlig, F. W. . . . .	Gift . . . . .	1	00	
Auger, B. . . . .	" . . . . .	1	00	
Canadian Pacific Ry. Telegraph Co.	Messages . . . . .	6	00	
Great North Western Telegraph Co.	" . . . . .	4	25	
W. Straclian Co. . . . .	Cuspidor . . . . .		65	
				855 89
Mercantile Agency, Toronto . . . . .	Subscription . . . . .	75	00	
The Daily Journal, Calgary . . . . .	" . . . . .	3	00	
The Citizen, Vancouver . . . . .	" . . . . .	1	00	
Vancouver Daily Province . . . . .	" . . . . .	3	00	
The Colonist, " . . . . .	" . . . . .	5	00	
The Week, Victoria . . . . .	" . . . . .	2	00	
Le Manitoba, St. Boniface . . . . .	" . . . . .	1	00	
North West Review, Winnipeg . . . . .	" . . . . .	1	50	
The Telegram, Winnipeg . . . . .	" . . . . .	3	00	
The World, Chatham, N.B. . . . .	" . . . . .	2	00	
L'Evangeline, Moncton, N.B. . . . .	" . . . . .	1	00	
The Globe, St. John, N.B. . . . .	" . . . . .	5	00	
Bridgewater Bulletin, Bridgewater	" . . . . .	1	00	
The Herald, Halifax . . . . .	" . . . . .	7	50	
Windsor Tribune, Windsor, N.S. . . . .	" . . . . .	1	00	
The Intelligencer, Belleville . . . . .	" . . . . .	3	00	
The Planet, Chatham, Ont . . . . .	" . . . . .	4	00	
Guelph Herald, Guelph . . . . .	" . . . . .	4	00	
The Herald, Hamilton . . . . .	" . . . . .	3	00	
Daily Spectator, " . . . . .	" . . . . .	3	00	
The Labor News " . . . . .	" . . . . .	1	00	
The Farmers' Advocate, London . . . . .	" . . . . .	1	50	
Free Press, London . . . . .	" . . . . .	3	00	
The Journal, Ottawa . . . . .	" . . . . .	14	40	
Citizen " . . . . .	" . . . . .	24	00	
Free Press " . . . . .	" . . . . .	11	40	
Le Temps " . . . . .	" . . . . .	3	00	
The United Canada, Ottawa . . . . .	" . . . . .	1	50	
The Times, Peterborough . . . . .	" . . . . .	5	00	
The Standard, St. Catharines . . . . .	" . . . . .	3	00	
The Standard Empire, Toronto . . . . .	" . . . . .	0	00	
Saturday Night " . . . . .	" . . . . .	9	00	
Toronto Daily Star " . . . . .	" . . . . .	2	00	
Globe Printing Co. " . . . . .	" . . . . .	2	00	
Mail and Empire " . . . . .	" . . . . .	3	00	
The News " . . . . .	" . . . . .	6	00	
The Canadian Mining Journal, Toronto	" . . . . .	4	00	
Daily World, Toronto . . . . .	" . . . . .	10	00	
Catholic Register and Canadian Expansion, Toronto . . . . .	" . . . . .	1	00	
Evening Telegram, Toronto . . . . .	" . . . . .	3	00	
Freemason " . . . . .	" . . . . .	1	00	
Financial Post " . . . . .	" . . . . .	0	00	
The Express, Woodstock . . . . .	" . . . . .	1	00	
The Charlottetown Examiner, Charlottetown . . . . .	" . . . . .	2	50	
Bulletin des recherches historiques, Beauceville . . . . .	" . . . . .	2	00	
Le Progrès du Saguenay, Chicoutimi . . . . .	" . . . . .	1	00	
L'Action Canadienne, Fraserville . . . . .	" . . . . .		100	
	Carried forward			19,358 82

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## APPENDIX B.—No. 5.—Details of Departmental Expenditure for the Year ended March 31, 1916—Continued.

Names.	Service.	Amounts paid.		Total amounts paid.
		\$	cts.	\$ cts.
	Brought forward.....			19,358 32
La Semaine, Grand'Mère.....	Subscription.....	1	00	
L'Etoile du Nord, Joliette.....	".....	0	75	
La Presse, Montreal.....	".....	7	00	
The Gazette ".....	".....	18	00	
La Patrie ".....	".....	7	00	
Herald Printing Co., Montreal.....	".....	6	00	
Montreal Star ".....	".....	6	00	
Le Devoir ".....	".....	15	00	
Revue Trimestrielle Canadienne, Montreal.....	".....	4	00	
Le Pays, Montreal.....	".....	3	00	
Le Nationaliste, Montreal.....	".....	4	00	
L'Action, Montreal.....	".....	4	00	
Le Moniteur du Commerce, Montreal.....	".....	2	00	
La Revue Canadienne, Montreal.....	".....	6	00	
Le Peuple, Montmagny.....	".....	1	00	
Printing Chr nicle, Quebec.....	".....	3	00	
La Vérité ".....	".....	2	00	
L'Evènement ".....	".....	3	00	
L'Action Sociale ".....	".....	6	00	
La Nouvelle-France ".....	".....	3	00	
La Semaine Commerciale, Québec.....	".....	2	00	
Société de Géographie ".....	".....	2	00	
Le Progrès du Golfe, Rimouski.....	".....	1	00	
L'Eveil, Sorel.....	".....	1	00	
Le Sorelois, Sorel.....	".....	1	00	
La Tribune, St. Hyacinthe.....	".....	1	00	
Courrier de St. Hyacinthe, St. Hyacinthe.....	".....	2	21	
Le Canada Français, St-Jean.....	".....	2	00	
Le Bien Public, Trois-Rivières.....	".....	1	00	
Journal de Waterloo, Waterloo.....	".....	1	00	
Le Patriote, Prince Albert, Sask.....	".....	1	00	
American Food Journal, Chicago.....	".....	2	50	
Scientific American, New York.....	".....	8	25	
Tobacco World Printing Co., Philadelphia.....	".....	2	00	
Bulletin de la Canadienne, Paris, France.....	".....	4	00	
Canada News paper Co., London, Eng.....	".....	7	00	
Jones Farrell, London, Eng.....	Subscription.....	17	03	
Journal of Gas Lighting Co., London, Eng.....	".....	6	69	
Les Cloches de St. Boniface, St. Boniface.....	".....	1	00	
Le Droit, Ottawa.....	".....	6	00	
Le Moniteur Acadien, Shediac, N.B.....	".....	1	00	
				438 73
	Total.....			\$19,797 05

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.J. U. VINCENT,  
Deputy Minister



SESSIONAL PAPER No. 12

APPENDIX B.—No. 6.—Details of Weights and Measures Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Service.	Deductions for			Amounts paid.	Total amounts paid.
		Superannuation.	Retirement.	Guarantee		
		% cts.	% cts.	% cts.	\$ cts.	\$ cts.
<i>Belleville.</i>						
Diamond, F. D.	Salary as Inspector for the year			3 60	1,096 32	
Kylie, R.	" Asst. Inspector for the year			1 80	798 12	
Howson, G. H.	" " "			1 80	798 12	
Worrell, Jos.	" " "			1 80	798 12	
	Salaries			9 00	3,490 68	
	Contingencies				2,063 18	
						5,553 86
<i>Hamilton.</i>						
Sealey, J. C.	Salary as Inspector for the year			3 60	1,396 32	
Fitzgerald, E. W.	" Asst. Inspector for the year			1 80	998 16	
Wheatley, A. C.	" " "			1 80	1,098 12	
Laidman, R. H.	" " "			1 80	1,098 12	
Clegg, Jas.	" " "			1 80	898 20	
Brick, J. H.	" " "			1 80	998 16	
Von Newbroun, A.	" " "			1 80	798 12	
Pryke, John	" " "			1 80	798 12	
	Salaries			16 20	8,083 32	
	Contingencies				2,328 06	
						10,411 38
<i>Kingston.</i>						
Gallagher, T.	Salary as Inspector for the year			3 60	1,196 40	
MacLean, C. E.	" Asst. Inspector for the year			1 80	798 12	
Davis, M. J.	" " "			1 80	698 16	
	Salaries			7 20	2,692 68	
	Contingencies				1,762 00	
						4,454 68
<i>London.</i>						
Hughes, R. A.	Salary as Inspector for the year			3 60	1,396 32	
Coughlin, D.	" Asst. Inspector from April 1 to Sept. 15, 1915			82	454 71	
Thomas, J. S.	" Asst. Inspector for the year			1 80	998 16	
Liddle, D.	" " "			1 80	998 16	
Cole, T. A.	" " "			1 80	798 12	
Webbe, S. A.	" Inspector from July 1, 1915, to March 31, 1916			1 25	598 74	
Porter, A.	" " "			30	199 08	
	Salaries			11 25	5,443 89	
	Contingencies				4,419 10	
						9,863 09
<i>Ottawa.</i>						
Hinchey, E. H.	Salary as Inspector for the year	33 00		3 00	1,613 40	
Brown, John	" Asst. Inspector for the year			1 80	1,098 12	
Hodgins, J. C. G.	" " "			1 80	798 12	
Trimpour, F. T. T.	" " "			1 10	698 47	
Church, G. C.	" " "			1 80	798 12	
Grignon, E. S.	" " from April 1 to June 1, 1915; transferred to Montreal			30	155 49	
Mattice, A. E.	" " from July 1, 1915, to March 31, 1916			1 80	298 74	







SESSIONAL PAPER No. 12

APPENDIX B.—No. 6.—Details of Weights and Measures Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Districts.	Deduction for			Amounts paid.	Total amounts paid.
		Superannuation.	Retirement.	Guarantee.		
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Suttie, T. C. ....	Salary as Asst. Inspector from Jan. 1, to March 31, 1916 .....			60	466 04	
	Salaries .....			2 56	1,280 74	
	Contingencies .....				2,133 32	
	<i>Vancouver.</i>					3,414 06
Dutton, A. H. ....	Salary as Inspector for the year .....			3 60	1,196 40	
Harris, W. H. ....	" as Asst. Inspector for the year .....		56 16	1 80	792 00	
Shaw, John ....	" " " " .....			1 80	348 12	
	Salaries .....		56 16	7 20	2,336 52	
	Contingencies .....				728 33	3,064 85
	<i>Nelson.</i>					
Parker, Thos. ....	Salary as Inspector for the year .....			3 60	1,246 32	
	Salaries .....			3 60	1,246 32	
	Contingencies .....				2,930 27	4,176 59
	<i>Special Elevator Scales Inspector.</i>					
Fyfe, G. D. ....	Salary as Inspector from April 1, 1915, to Jan. 16, 1916 .....			3 00	1,497 00	
	Contingencies .....				625 54	2,122 54
	<i>Yukon</i>					
Stingle, Jas. ....	Salary as Inspector for the year .....			3 60	996 36	
	Contingencies .....				39 64	1,036 00
	<i>Special Elevator Scale Inspector.</i>					
Way, E. O. ....	Salary as Chief Inspector .....				97 48	97 48
	Contingencies .....	162 27	254 91	213 60	95,797 98	
	Contingencies .....				76,098 02	172,893 75

No. 6.—DETAILS of Weights and Measures Expenditures for the Year ended  
March 31, 1916—Continued.

To whom paid.	Service.	Amounts paid.	Total amounts paid.
		\$ cts.	\$ cts.
WEIGHTS AND MEASURES.			
<i>Provisional Allowance.</i>			
R. McKay, Winnipeg.....	To pay R. McKay.....	114 51	
" ".....	" W. F. Gilby.....	137 50	
" ".....	" H. Spicer.....	137 50	
" ".....	" D. J. McLean.....	68 33	
" ".....	" C. D. Grant.....	137 50	
" ".....	" J. B. Attridge.....	137 50	
" ".....	" W. J. Field.....	137 50	
" ".....	" J. McKay.....	137 50	
" ".....	" S. Harper.....	62 46	
Thos. Parker, Nelson.....	" F. Williamson.....	150 00	1,070 30
" ".....	" Thos. Parker.....	124 92	
C. W. Johnston, Saskatoon.....	" G. D. Fyfe.....	49 98	274 92
" ".....	" W. R. Welch.....	150 00	
" ".....	" R. Wallace.....	150 00	
" ".....	" S. H. Wood.....	87 50	
" ".....	" A. I. Shaw.....	82 66	
" ".....	" J. T. Greig.....	150 00	
" ".....	" T. H. Fleming.....	147 50	
" ".....	" C. W. Johnston.....	99 96	
" ".....	" W. N. Courtney.....	68 70	
" ".....	" C. W. Underhill.....	52 08	1,038 38
D. J. McLean, Regina.....	" D. J. McLean.....	54 42	
" ".....	" Thos. C. Suttie.....	72 87	
" ".....	" A. I. Shaw.....	67 34	
" ".....	" Jas. Eadie.....	43 17	237 80
A. H. Dutton, Vancouver.....	" A. H. Dutton.....	122 49	
" ".....	" W. H. Harris.....	150 00	272 49
J. W. Costello, Calgary.....	" G. D. Fyfe.....	50 02	
" ".....	" J. W. Costello.....	100 00	
" ".....	" N. F. Macleod.....	150 00	
" ".....	" J. C. McDougall.....	150 00	
" ".....	" C. Gibson.....	150 00	750 02
Total Provisional Allowance.....			3,493 91
GENERAL WEIGHTS AND MEASURES.			
<i>Contingencies.</i>			
Hughes, P. A.....	Petty expenses.....	38 68	
Guimond, Mrs. U.....	Salary as charwoman.....	111 00	
Dufresne, Mrs.....	".....	174 00	
The Pritchard-Andrews Co., Ltd.	Rubber stamps repaired.....	595 72	
Hugh Carson Co., Ltd.....	Leather cases.....	184 00	
Canadian General Electric Co.	100 flashlights.....	66 00	
Eclipse Plating Co.....	Nickle plating set scales.....	9 50	
The Burrows Stewart Milne Co.	For 400 test weights.....	720 00	
American Bank Note Co.....	Stamps supplied.....	55 00	
Ottawa Transportation Co., Ltd.	Cartage.....	2 15	
Alfred, J. H.....	Medical fees.....	4 00	
Ottawa Electric Co.....	Electric current.....	125 00	
The Plaunt Hardware Co.....	Batteries.....	6 24	
J. A. Desrivieres.....	24 kit boxes.....	90 50	
			2,181 79

SESSIONAL PAPER No. 12

No. 6.—DETAILS of Weights and Measures Expenditures for the Year ended March 31, 1916—*Continued.*

To whom paid.	Service.	Amounts paid.		Total amounts paid.
		\$	cts	\$ cts.
	<i>Law Costs.</i>			
Herrington, W. S. ....	Rex vs. H. W. Huff .....	10	00	
Thurston & Co. ....	" C. Taylor .....	10	00	
" .....	" R. Lawson .....	20	00	
" .....	" J. Badame .....	20	00	
" .....	" F. Aitcheson .....	10	00	
" .....	" W. S. Moulds .....	10	00	
" .....	" W. J. Simon .....	40	00	
Champagne, N. ....	" Sheekoolsky .....	20	00	
Smith, R. A. ....	" Tai You Youg .....	10	00	
Clark, A. S. ....	" John Steele .....	30	00	
Mahaffy & Blackstock .....	" H. C. Wooden .....	10	00	
Hatton, G. W. ....	" Fair & Spence .....	20	00	
Davidson, A. A. ....	" S. Miller .....	15	00	
McDonald & McBride .....	" Godfrey .....	10	00	
				235 00
				2,416 79

## APPENDIX B.—No. 7—Details of Gas Inspection Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Service.	Deductions for			Amounts paid.	Total amounts paid.	
		Superannuation.	Retirement.	Guarantee			
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
<i>Belleville.</i>							
Bickle, W. J. ....	Salary as Inspector for the year .....	1 92		1 80	96 24	724 93	
	Contingencies .....				628 69		
<i>Hamilton.</i>							
Lutz, H. ....	Salary as Inspector for the year .....			3 60	1,496 40	5,778 48	
Lovell, E. ....	Asst. Inspector for the year .....			1 80	998 16		
Smith, W. A. ....	" " " " .....			1 80	998 16		
Dennis, W. A. ....	" " " " .....			1 80	148 20		
Powell, J. B. ....	" " " " .....			1 80	298 20		
	Salaries .....			10 80	3,939 12		
	Contingencies .....				1,834 36		
<i>London.</i>							
Nash, A. F. ....	Salary as Inspector for the year .....			3 60	1,796 40		6,249 02
Skelton, A. R. ....	Asst. Inspector for the year .....			1 80	998 16		
Elliott, G. H. ....	" " " " .....			1 80	692 16		
Thrasher, W. A. ....	" " " " .....			1 80	198 12		
Rennie, Geo. ....	" " " " .....			1 80	198 12		
Orr, H. N. ....	" " " " .....			1 80	198 12		
Hillis, Jas. ....	" " " " .....			1 80	898 20		
Jones, B. B. ....	" " " " for the year .....						
	" " " " from Nov. 1 to .....						
	March 31, 1916: transf. .....			75	499 25		
	Salaries .....			15 15	5,478 53		
	Contingencies .....				770 49		
<i>Ottawa.</i>							
Morrison, A. C. ....	Salary as Inspector for the year .....			3 60	1,396 32	8,107 33	
Bond, M. B. ....	Asst. Inspector for the year .....			2 88	1,097 04		
Roche, W. J. ....	" " " " July 1, 1915 to .....						
	March 31, 1916 .....			1 98	1,097 94		
Chevrier, R. J. ....	Asst. Inspector for the year .....			1 80	998 16		
	Salaries .....			10 26	4,589 46		
	Contingencies .....				3,517 87		
<i>Toronto.</i>							
Stiver, J. L. ....	Salary as Inspector for the year .....		90 00	3 60	1,796 40	12,480 00	
Pape, J. ....	Asst. Inspector for the year .....			1 80	1,448 16		
Reesor, M. W. ....	" " " " .....			1 80	1,298 16		
Renahan, M. J. ....	" " " " .....			1 80	998 16		
Ogden, G. J. ....	" " " " .....			1 80	948 12		
Clark, H. M. ....	" " " " .....			1 80	998 16		
Johnstone, S. F. ....	" " " " .....			1 80	998 16		
Wilson, H. H. ....	" " " " .....			1 80	998 16		
Mills, A. E. ....	" " " " from April 1, .....						
	1915 to March 1, 1916, died .....			1 65	823 35		
	February 8. ....						
Hacker, A. N. ....	Asst. Inspector for the year .....			1 80	798 12		
Shanacy, M. ....	" " " " .....	1 92		1 80	96 24		
Broadfoot, S. ....	" " " " .....	6 00		1 80	292 20		
Graham, J. M. ....	" " " " .....			1 80	198 12		
	Salaries .....	7 92	90 00	25 05	11,601 51		
	Contingencies .....				878 49		





APPENDIX B.—No. 7.—Details of Gas Inspection Expenditures for the Year ended March 31, 1916—*Continued.*

To whom paid.	Service.	Deductions for.			Amounts paid.	Total amounts paid.
		Superannuation.	Retirement.	Guarantee		
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	<i>Calgary.</i>					
Kyle, W. P. . . . .	Contingencies. . . . .				332 13	332 13
	<i>Victoria.</i>					
Dresser, F. . . . .	Salary as Inspector for the year. . . . .			3 60	1,396 32	
Shaw, J. . . . .	" Asst. Inspector for the year. . . . .			1 80	98 16	
	Salaries . . . . .			5 40	1,494 48	
	Contingencies . . . . .				10 30	1,504 78
	<i>Vancouver.</i>					
Stott, Jas. . . . .	Contingencies. . . . .				27 00	27 00
	<i>Eastern Dominion Inspector.</i>					
Lambe, A. B. . . . .	Contingencies. . . . .				430 06	430 06
	<i>Western Dominion Inspector.</i>					
Higman, O. Jr. . . . .	Contingencies. . . . .				735 54	735 54
	Grand Total. . . . .	{ 15 72	{ 90 00	{ 122 07	{ 47,777 77	{ 58,720 43
					{ 10,714 87	

RECAPITULATION.

Superannuation. . . . .	\$ 15 72
Retirement. . . . .	90 00
Guarantee. . . . .	122 07
Salaries . . . . .	47,777 77
Contingencies. . . . .	10,714 87
Total . . . . .	\$58,720 43

APPENDIX B.

No. 7.—Details of Gas Inspection Expenditures for the year ended March 31, 1916---*Included.*

To whom paid.	Service.	Amounts paid.	Total amounts paid.
<i>General Gas Contingencies.</i>		\$ cts.	\$ cts.
Hughes, P. A. ....	Petty expenses .....	3 35	
Pritchard-Andrews Co., Ltd. . .	Stamps repaired .....	44 98	
Collector of Customs .....	Duty on goods .....	177 36	
Canadian Consolidated Rubber Co., Ltd. ....	Rubber tubing, etc. ....	183 06	
The Shaffer & Buckenberg Mfg., Co. ....	12 Gauges .....	72 50	
Parkinson & W. B. Cowan, Ltd..	Test holders complete for Ottawa & Vancouver Laboratories .....	1,080 84	
Lymans, Ltd. ....	11 doz. Accts of Card. books, etc .....	19 69	
The Standard Meter Co., Ltd.. .	1 Meter Power Bell Complete for Toronto office..	68 50	
A. Wright Co., Ltd. ....	Gas apparatus .....	245 56	
American Bank Note Co .....	Stamps supplied .....	25 00	
Equitable Meter Co. ....	1 Meter outfit .....	50 25	
Graydon & Graydon .....	Law costs Rex vs City Gas of London .....	20 00	
	Printing .....	4,458 04	1,991 09
	Stationery .....	1,098 90	5,566 94
			7,548 03

## APPENDIX B.

No. 8.—Details of General Electric Light Expenditures for the year ended March 31, 1916---Continued.

To whom paid.	Service.	Amounts paid.	Total amounts paid.
<i>General Electric Light Contingencies.</i>		\$ cts.	\$ cts.
Hughes, P. A. ....	Petty expenses .....	3 25	
Smith, Mrs. I. ....	Cleaning Electrical Laboratory. ....	314 00	
Phillips Elec. Works, Ltd. ....	Covered wire, &c. ....	20 15	
The Synchronome Co., Ltd. ....	1 Regulator, &c. ....	598 75	
Nesbitt, A. H. ....	Commission on storage. ....	35 19	
Edison Storage Battery Co. ....	Sundry. ....	262 60	
Collector of Customs. ....	Duty on goods. ....	1,432 14	
Sterling Rubber Co., Ltd. ....	Rubber Gloves &c. ....	60 00	
Alex Wright, Co., Ltd. ....	Electrical apparatus. ....	1,155 37	
Pringle & Co., R. H. ....	" " .....	49 10	
Superintendent of Documents. Washington. ....	3 Compte. sets research works, &c. ....	45 25	
Lymans, Ltd. ....	Electrical supplies. ....	91 45	
Canadian Consolidated Rubber Co.	Rubber tubing. ....	61 26	
Canadian Westinghouse Co., Ltd.	Electrical apparatus. ....	74 44	
Crompton Co., Ltd. ....	" " .....	1,698 29	
O'Leary Co., M. J. ....	Storage battery, &c. ....	735 40	
Standard Underground Cable Co., Ltd. ....	Copper cable. ....	75 16	
The States Co., Hartford. ....	Electrical apparatus. ....	1,535 05	
Canadian General Electric Co., Ltd. ....	1 Fan motor. ....	704 10	
Kelwin Bottomley & Baird, Ltd..	Electrical apparatus. ....	298 42	
H. Tinsley & Co. ....	Oscillograph and accessories. ....	1,455 79	
Weston Elec. Instrument Co. ....	Electrical apparatus. ....	828 46	
Thomas Meadows & Co. ....	" " .....	21 78	
Ottawa Electric Co. ....	Electric current for the year. ....	250 00	
Bank of Montreal. ....	Draft on London, Eng. ....	141 07	
The Topley Co. ....	Oscillograph and accessories. ....	889 20	
The Lawson & Sons Ltd. ....	Electrical apparatus. ....	50 00	
Canada Wire & Cable Co. ....	Duplex wire. ....	16 22	
American Bank Note Co. ....	Stamps supplied. ....	30 00	
Biddle J. G. ....	4 Rheostats. ....	36 16	
Northern Electric Co. ....	Telephone apparatus. ....	36 14	
Tweedies McGillivray Barron & Oldham. ....	Low cost Rex rs J. E. Maberley. ....	104 10	
Watts & Son, Ltd., E. R. ....	3 Sets Testing apparatus. ....	235 00	
Seaton, T. J. ....	Repairing 4 timers. ....	23 00	
Kyle's Cabinet Works. ....	24 birch boxes. ....	126 00	
	Stationery. ....	141 40	13,512 29
	Printing. ....	98 75	240 15
			13,753 44

APPENDIX B.

No. 8.—Details of Gas and Electricity Expenditures for the year ended March 31, 1916—Continued.

To whom paid.	Service.	Amounts paid.	Total amounts paid.
	<i>Gas &amp; Electric Light Provisional Allowance.</i>	\$ cts.	\$ cts.
R. Hamilton—Winnipeg	To pay R. Hamilton	99 96	
"	" F. C. Babington	124 92	
"	" G. F. Pankurst	124 92	
"	" W. A. Ross	150 00	
"	" Henry Hood	150 00	
"	" Louis Weber	124 92	774 72
W. P. Kyle—Calgary	" W. P. Kyle	100 00	
"	" B. B. Jones	72 87	
"	" R. C. Jackson	6 04	
"	" A. J. Cantin	125 00	303 91
Jas. Scott—Vancouver	" Jas. Scott	99 96	
"	" W. A. Templeton	124 92	
"	" O. S. Power	124 92	
"	" G. T. Scouler	124 92	
"	" J. J. McNiven	124 92	
"	" J. W. Costello	98 96	690 00
F. Dresser—Victoria	" F. Dresser	124 92	124 92
W. Hunter—Regina	" W. M. Hunter	124 60	
"	" S. N. Hart	124 60	249 20
	Total Provisional Allowance		2,152 35

## APPENDIX B—Continued.

No. 8.—Details of Electric Light Inspection Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Service.	Deductions for guarantee.	Amounts paid.	Total amounts paid.
		\$ cts.	\$ cts.	\$ cts.
	<i>Belleville.</i>			
Fraser, H. ....	Salary as Inspector for the year .....	7 20	1,092 72	
Diamond, F. D. ....	" Asst. Inspector for the year .....	1 80	298 20	
Cruthers, W. M. ....	" " " from Sept. 20, 1915, to March 31, 1916. ....	95	529 58	
	Salaries .....	9 95	1,920 50	
	Contingencies .....		416 28	2,336 78
	<i>Hamilton.</i>			
Lutz, H. ....	Contingencies .....		539 80	539 80
	<i>London.</i>			
Nash, A. F. ...	Contingencies .....		754 55	754 55
	<i>Ottawa.</i>			
Morrison, A. C. ....	Contingencies .....		554 90	554 90
	<i>Toronto.</i>			
Stiver, J. L. ...	Contingencies .....		897 64	897 64
	<i>Port William.</i>			
Little, E. ....	Salary as Inspector for the year .....	3 60	1,396 32	
	Contingencies .....		280 77	1,677 09
	<i>Montreal.</i>			
Aubin, A. ....	Contingencies .....		1,950 72	1,950 72
	<i>Quebec.</i>			
Béland, F. X. W. E.	Contingencies .....		3,356 99	3,356 99
	<i>Sherbrooke.</i>			
Simpson, A. F. ...	Contingencies .....		184 11	184 11
	<i>St. Hyacinthe.</i>			
Provost, I. E. ....	Salary as Inspector for the year .....	3 30	546 70	
	Contingencies .....		279 05	825 75
	<i>Three Rivers.</i>			
Olivier, A. ....	Salary as Inspector for the year .....	3 60	496 32	
	Contingencies .....		384 75	881 07
	<i>St. John.</i>			
Wilson, John E. ...	Contingencies .....		303 61	303 61
	<i>Halifax.</i>			
Toale, John. ....	Contingencies .....		1,365 27	1,365 27

APPENDIX B—Continued.

No. 8.—Details of Electric Light Inspection Expenditures for the Year ended March 31, 1916—Continued.

To whom paid.	Service.	Deductions for guarantee.	Amounts paid.	Total amounts paid.
		§ cts.	§ cts.	§ cts.
	<i>Charlottetown.</i>			
Bell, J. H. ....	Contingencies.....		124 77	124 77
	<i>Winnipeg.</i>			
Hamilton, R. ....	Contingencies.....		1,577 66	1,577 66
	<i>Calgary.</i>			
Kylie, W. P. ....	Salary as Inspector for the year .....	3 60	1,496 40	
Jones, B. B. ....	Asst. Inspector from April 1, 1915 to Nov. 1, 1915; Transferred to London .....	1 05	698 95	
	Salaries .....	4 65	2,195 35	
	Contingencies.....		481 09	2,676 44
	<i>Regina.</i>			
Hunter, W. M. ....	Salary as Inspector for the year.....	3 66	1,296 36	
Hart, S. N. ....	" Asst. Inspector for the year .....	1 80	1,198 20	
	Salaries .....	5 40	2,494 56	
	Contingencies.....		1,862 75	4,357 31

## APPENDIX B—Continued.

No. 8.—Details of Electric Light Inspection Expenditures for the Year ended March 31, 1916—Concluded.

To whom paid.	Service.	Deductions for			Amounts paid.	Total amounts paid.
		Superannuation.	Retirement.	Guarantee.		
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	<i>Vancouver.</i>					
Stott, Jas. ....	Salary as Inspector for the year			3 60	1,796 40	
Templeton, W. A. ....	Asst. Inspector for the year.			1 80	1,246 32	
Power, O. S. ....	" " "			1 80	1,148 16	
Schuler, G. T. ....	" " "			1 80	1,198 20	
McNiven, J. J. ....	" " "			1 80	998 16	
Wolfenden, Wm. ....	" " "	9 96		1 80	188 16	
	Salaries.....	9 96		14 40	6,575 40	
	Contingencies.....				1,465 62	
						8,041 02
	<i>Victoria.</i>					
Dresser, F. ....	Contingencies.....				255 58	255 58
	<i>Edmonton.</i>					
Cantin, A. J. ....	Salary as Inspector for the year.			3 60	1,296 36	
	Contingencies.....				419 45	1,715 81
	<i>Dawson.</i>					
Stingle, J. W. ....	Salary as Inspector for the year.			3 60	496 32	496 32
Kinsman, E. A. ....	" " "			1 80	1,423 20	1,423 20
	<i>Eastern Dominion Inspection.</i>					
Lambe, A. B. ....	Contingencies.....				87 55	87 55
	<i>Western Dominion Inspector.</i>					
Higman, O., jr. ....	Salary as Inspector for the year.			3 60	2,596 32	
	Contingencies.....				1,336 05	3,932 37
	<i>Chief Engineer.</i>					
Higman, O., sr. ....	Contingencies.....				376 02	376 02
	<i>Sudbury.</i>					
Code, A. G. ....	Salary as Inspector for the year.			1 39	384 70	
	Contingencies.....				348 60	733 30
	Total .....	9 96		58 89		



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APPENDIX B—*Continued.*

STATEMENT No. 9.—Showing the Amount Paid during the Year 1915-16 to different Companies for guaranteeing Outside Officers of the Inland Revenue Department.

	Amounts paid.	
	\$	cts.
Railway Passengers Assurance Co. ....	234	42
The Imperial Guarantee and Accident Insurance Co., of Canada.....	533	52
The Dominion of Canada Guarantee and Accident Insurance Co.....	436	98
The Guarantee Co., of North America .....	531	12
London Guarantee and Accident Co. ....	185	90
The Employers Liability Assurance Corporation Ltd .....	506	20
Total . . . . .	2,428	14

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.

J. U. VINCENT,  
*Deputy Minister.*

## APPENDIX B—Continued.

No. 10.—Statement showing the number of parties under Licenses for the Year 1915-16.

Divisions.	Distillers.		Brewers and Malsters.		Tobacco Manufacturers.	Cigar Manufacturers.	Bonded Warehouses.	Manufacturers in Bond (Vinegar).	Manufacturers in Bond (Laminant).	Chemical Still.	Manufacturers of Stills.	Acetic Acid Manufacturers.	M'rs. of Pharmaceutical Preps.	Manufacturers of Perfumes.	Petroleum Refiners.	Wood Alcohol Manufacturers.	Manufacturers in Bond (Sundries).	Malt Vinegar Brewers.
	Brewers.	Malsters.	Brewers.	Malsters.														
Belleville, (Distillery at Thurlow Tp.) H. Corby...	1	1				1	3											
Brantford.....	1	1				5	2	1										
Guelph, (Distillery at Waterloo) Jos. E. Seagram..	1	3	4	2		3	3											
Hamilton, Hamilton Distillery Co., Ltd.	1	1	1	1	1	10	3	1		4	1						2	
Kingston.....		2	2			3	4	1		1		1						
London.....		2	2			34	5			3					3			
Ottawa.....		2	2			1	6			3						1		
Owen Sound.....			4	1		2		1								1		
Perth—Spaldings Stewart—John S. McLaren Estate O'Brien Munitions, Ltd.....	3	1				2	10			2		1	1				2	
Peterborough.....		1	1			2	1			1						1	1	
Port Arthur.....			3			1	8											
Prescott, J. P. Wiser & Sons, Ltd.....	1		3	1		2	1										1	
St. Catharines.....			2			9	1			1								
Stratford.....			2			4	2							1				
Toronto, Gooderham & Worts, Ltd.—The General Distillery Co., Ltd.....	2	3	7		3	23	13	2		29	3	2	5	2	2	4	11	1
Windsor, Hiram Walker & Sons, Ltd.....	1		2	1	3	7	4	1		4			5	2		1		
Ontario.....	10	11	36	7	7	113	66	8	1	48	3	1	9	9	5	7	18	1
Joliette, The Melcher Gin & Spirits Distillery Co., Ltd.....	1				9	7	3			1								
Montreal, The Montreal Products Co., Ltd, Cana- dian Explosions Ltd.....	2	3	3	1	38	44	20	2		21		1	5	6		2	4	
Quebec.....	1	1			6	2	15	1										
St. Hyacinthe, The St. Hyacinthe Distillery Co., Ltd.....	1				5	9	10							1			1	
Sherbrooke.....			1		1	7	5									2	1	
Three Rivers.....			1		4	4	5											
Quebec.....	4	4	6	1	163	73	58	3		22		1	5	7		4	6	
St. John, New Brunswick.....			2			2	7	2		1								
Halifax.....			3			3	6											
Pictou.....					1	1	5			1								
Nova Scotia.....			3		1	4	11			1								
Charlottetown, Prince Edward Island.....					4													
Winnipeg, Man.....		2	6	2	2	12	26	2		11			3	2			2	
Moosejaw, Sask.....			4			4	17			1								
Calgary, Alta.....		2	5	1	3	8	2	3		10				1				
Vancouver.....	1	19			2	17	23	2		13					1			
Victoria.....		1	6			11	7			3								
British Columbia.....	1	1	25		2	28	30	2		16					1			
Dawson, Yukon Territory.....			1				2											
Grand Total.....	15	20	88	11	82	214	246	20	1	110	3	2	17	19	6	11	26	1

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APPENDIX B—Continued.

No. 11.—Summary statement showing the number of permanent officers employed in the different services of the Inland Revenue Department during the year ended March 31, 1916.

DEPARTMENT OF OTTAWA.

	Number of Officers employed.
Inside service.....	80

EXCISE (Outside Service).

DIVISIONS.	PROVINCES.	Number of Officers employed.
Belleville.....	Ontario.....	11
Brantford.....	".....	6
Guelph.....	".....	15
Hamilton.....	".....	19
Kingston.....	".....	7
London.....	".....	21
Ottawa.....	".....	9
Owen Sound.....	".....	5
Perth.....	".....	13
Peterborough.....	".....	4
Port Arthur.....	".....	4
Prescott.....	".....	10
St. Catharines.....	".....	5
Stratford.....	".....	6
Toronto.....	".....	38
Windsor.....	".....	26
Joliette.....	Quebec.....	9
Montreal.....	".....	50
Quebec.....	".....	15
St. Hyacinthe.....	".....	10
Sherbrooke.....	".....	6
Three Rivers.....	".....	1
St. John's.....	New Brunswick.....	11
Halifax.....	Nova Scotia.....	10
Pictou.....	".....	3
Charlottetown.....	Prince Edward Island.....	2
Winnipeg.....	Manitoba.....	16
Calgary.....	Alberta.....	6
Moosajaw.....	Saskatchewan.....	6
Vancouver.....	British Columbia.....	22
Victoria.....	".....	7
Dawson.....	Yukon Territory.....	1

District Inspectors.

District Inspector and Inspector of Bonded Factories.....	Ontario.....	1
District Inspectors.....	".....	2
".....	Quebec.....	2
".....	New Brunswick.....	1
Dominion District Inspector of Malt Houses and Breweries District Inspector.....	Dominion of Canada.....	1
District Inspector.....	Manitoba.....	1
".....	Alberta.....	1
".....	British Columbia.....	1
Inspector of Distilleries.....	Dominion.....	1
Inspector of Tobacco Factories.....	".....	1
	Grand total for excise.....	88

## APPENDIX B—Continued.

No. 11.—Summary statement showing the number of permanent officers—*Con.*

## WEIGHTS AND MEASURES. (Outside Service.)

Districts.	Provinces.	Number of Officers employed.
Belleville.....	Ontario.....	4
Hamilton.....	".....	8
Kingston.....	".....	3
London.....	".....	7
Ottawa.....	".....	8
Toronto.....	".....	8
Montreal.....	Quebec.....	11
Quebec.....	".....	11
St. Hyacinthe.....	".....	3
Sherbrooke.....	".....	3
Three Rivers.....	".....	4
St. John.....	New Brunswick.....	5
Halifax.....	Nova Scotia.....	3
Pictou.....	".....	3
Charlottetown.....	Prince Edward Island.....	2
Winnipeg.....	Manitoba.....	9
Calgary.....	Alberta.....	4
Saskatoon.....	Saskatchewan.....	4
Saskatchewan.....	".....	1
Nelson.....	British Columbia.....	3
Dawson.....	Yukon Territory.....	1
	Grand total for Weights and Measures...	105

## GAS. (Outside Service.)

Districts.	Provinces.	Number of Officers employed.
Belleville.....	Ontario.....	4
Hamilton.....	".....	5
London.....	".....	8
Ottawa.....	".....	5
Toronto.....	".....	13
Montreal.....	Quebec.....	6
Quebec.....	".....	1
Sherbrooke.....	".....	2
St. Hyacinthe.....	".....	1
Fredericton and St. John.....	New Brunswick.....	3
Halifax.....	Nova Scotia.....	3
Charlottetown.....	Prince Edward Island.....	1
Winnipeg.....	Manitoba.....	6
Victoria.....	".....	2
	Grand total for gas.....	60

SESSIONAL PAPER No. 12

APPENDIX B—Continued.

No. 11.—Summary statement showing the number of permanent officers—Con.

ELECTRIC LIGHT (Outside service.)

Districts.	Provinces.	Number of Officers employed.
Belleville .....	Ontario .....	1
Port William .....	" .....	1
Sudbury .....	" .....	1
London .....	" .....	
Ottawa .....	" .....	1
Toronto .....	" .....	
" .....	" .....	
Montreal .....	Quebec .....	
Quebec .....	" .....	
Sherbrooke .....	" .....	
St. Hyacinthe .....	" .....	
Three Rivers .....	" .....	1
St. John .....	New Brunswick .....	
Halifax .....	" .....	
Charlottetown .....	" .....	
Winnipeg .....	" .....	
Calgary .....	Alberta .....	2
Edmonton .....	" .....	1
Regina .....	Saskatchewan .....	2
Vancouver .....	British Columbia .....	6
Dawson .....	Yukon Territory .....	1
Dominion .....		
Western Dominion .....		1
	Grand total for electric .....	18

ADULTERATION OF FOOD (Outside Service.)

Residences.	Provinces.	Number of Officers employed.
Kingston .....	Ontario .....	1
London .....	" .....	1
Toronto and Hamilton .....	" .....	1
Montreal .....	Quebec .....	2
Quebec .....	" .....	1
St. Hyacinthe .....	" .....	1
St. John .....	New Brunswick .....	1
Halifax .....	Nova Scotia .....	1
Charlottetown .....	Prince Edward Island .....	1
Sydney .....	Cape Breton .....	1
Calgary .....	Alberta .....	1
Vancouver .....	British Columbia .....	1
Victoria .....	" .....	1
Winnipeg .....	Manitoba .....	1
Rocky Mountains .....		1
		16

APPENDIX B—*Concluded.*No. 11.—Summary statement showing the number of Permanent Officers—*Concluded.*

## PREVENTIVE SERVICE.

Divisions.	Provinces.	Number of Officers employed.
Ottawa.....	Ontario.....	1
Toronto.....	".....	1
St. John.....	New Brunswick.....	1
	Total.....	3

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Excise and Gas.....	12
Excise and Food.....	13
Excise and Electric Light.....	1
Weights and Measures.....	101
Weights and Measures and Food.....	2
Weights and Measures and Gas.....	1
Weights and Measures and Electric Light.....	1
Gas.....	59
Gas and Food.....	1
Electric Light.....	15
Preventive Service.....	3
Grand total of employees.....	649

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916

J. U. VINCENT,  
*Deputy Minister.*

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REPORT, RETURNS, AND STATISTICS

OF THE

# INLAND REVENUES

OF THE

DOMINION OF CANADA

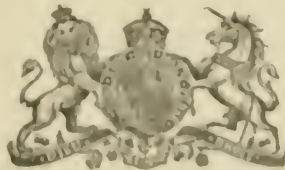
FOR THE FISCAL YEAR ENDED MARCH 31

## 1916

PART II

## WEIGHTS AND MEASURES, GAS AND ELECTRICITY

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OTTAWA

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1916



# REPORT

OF THE

## DEPUTY MINISTER OF INLAND REVENUE

OF THE

### INSPECTION OF WEIGHTS AND MEASURES, GAS AND ELECTRICITY.

To the Honourable

The Minister of Inland Revenue.

Sir.—I have the honour to submit my annual report on the inspection of weights and measures, gas and electricity, with the usual statements in connection therewith for the fiscal year ended March 31, 1916.

1. The total revenue collected during the year for the inspection of weights and measures was \$112,136.81 as against \$106,111.20 collected during the twelve months ended March 31, 1915.

2. The total expenditure was \$181,113.86 as against \$164,604.93 expended during the year ended March 31, 1915.

3. Appendix "A" gives a summary statement of the receipts and expenditures at each inspection division.

4. In Appendices "B", "C", and "D" will be found a detailed statement of weights, measures and weighing machines presented for verification, verified and rejected during the year. The number of all descriptions may be summarily stated as follows:—

	Presented.	Verified.	Rejected.	Percentage of Rejections.
Weights	64,073	63,683	488	7.63
Measures of capacity	145,225	144,790	434	2.98
" length	9,154	9,053	101	1.10
Balance, equal arms	11,394	11,174	220	1.93
" steelyards	7,479	7,342	137	1.83
" platform scales	33,146	30,780	2,366	7.14
" computing, automatic, etc.	18,668	18,051	617	3.30

The revenue collected represents 61.9 per cent of the expenditures, as against 64.6 per cent last year.

7 GEORGE V, A. 1917

The increase in expenditure is mainly due to the following causes, increase of work done, increased travelling, increase of staff, and increase in the capacity of scales. The latter, together with the introduction of labour saving, automatic weighing machines, necessarily follows commercial development. As a result, the demand for ability and technical knowledge on the part of inspecting officers becomes yearly more insistent, whilst the increased capacity of scales greatly multiplies the physical exertion, and the cost and difficulty of transporting the larger number of government test weights necessary to make reliable inspections. To-day the service has in use some (7,000) seven thousand 50 pounds test weights.

To meet the very important work of grain elevator scale inspection in the West, the two divisions of Saskatchewan and Alberta have each been divided into two. The division of Saskatoon remains for the northern half of Saskatchewan, the southern half being constituted the new division of Regina. Likewise Calgary division remains for the southern half of Alberta, the northern half being constituted the new division of Edmonton.

The percentage of rejected weighing machines in general is still very low, being only 2.6 per cent. In the important work of grain elevator scales, however, the percentage is 10.75 per cent, a considerable improvement over past years. Both percentages would undoubtedly be higher, but for the fact that officers adjust incorrect scales, etc., whenever they can.

Important activities have also been directed to dairy cans and milk bottles, all importations of both being inspected for accuracy of contents before distribution or use is permitted. This keeps out all short American wine-measure bottles and the American 40-quart can, the latter being one Dominion quart larger, but indistinguishable from the regular Dominion 8 gallon or 32 quart can.

In further connection with dairy work, the Standards Branch during the year has tested 23,989 metric babcock milk cream test bottles and pipettes, of which 23,405 have been verified and stamped, producing a revenue of \$1,170.26.

During the year 186 seizures of incorrect and improper weights and measures have been made, most of which were confiscated without legal proceedings.

Only twenty-one prosecutions took place, convictions being secured in every case, fines and costs to the extent of \$205.60 being inflicted.

With the exception of one case of obstruction, and two cases of using false measures, all the prosecutions were for the use of an unstamped scale or measure.

#### THE METRIC SYSTEM.

The question of the compulsory adoption of the metric system has been given increased importance by the war.

The system has long been permissive and legal for trade in Canada, but outside scientific work and the Babcock butter-fat test, as practised by the dairy industry, it is not much used.

The British Imperial Council of Commerce has recently passed a resolution urging the adoption of a uniform decimal system of weights and measures throughout the Empire. At the same time there is a Bill before the United States Congress to make the metric system compulsory in 1924.

## SESSIONAL PAPER No. 13

The department is continuing its educational work by the distribution of an explanatory pamphlet and chart on the metric system, thirty-three of the latter being distributed to schools and colleges in the past year.

To fulfil Canadian obligations as a Contracting State to the International Metric Convention, the Honourable the Minister of Inland Revenue was empowered by Act of Parliament in the session of 1914 to procure copies of the International Metre and Kilogram as the Primary Metric Standards of the Dominion. The war, however, has temporarily suspended this activity.

## DOMINION STANDARDS.

I have also to report that with the recent destruction of Parliament buildings by fire was destroyed the two sets of Primary Dominion Standards of Weight and Measure, marked respectively "B" and "C", and deposited in 1875 in the keeping of the Honourable the Speaker of the House of Commons and of the Senate, respectively.

These standards are described in schedule 1, Part 11, of the Weights and Measures Act, chap. 52 R.S. 1906, and must be restored as required by section 8 thereof.

## INSPECTION OF GAS.

The total revenue collected during the twelve months ended March 31, 1916, for the inspection of gas and gas meters was \$46,034.80, as compared with \$56,841.30 collected during the year ended March 31, 1915. The total expenses were \$66,255.58, as against \$62,188.40 expended during the year ended March 31, 1915.

Since making my last report changes of a somewhat radical nature have been introduced in the Gas Inspection service. Prior to July 1, 1915, the gas companies were required to produce gas having an illuminating power of 16 candles. Owing to the changes that have taken place in the methods of using gas, this standard had become obsolete. Less than 5 per cent of the gas manufactured was used in naked flame burners for lighting purposes; the remainder, or over 95 per cent being used in appliances which depended on the heating value rather than the illuminating power of the gas. This being the case, obviously the only course for the department to pursue was to substitute a calorific standard in place of the candle-power standard. This change was made by Order in Council, dated June 26, 1915, and the following regulations, in respect of manufactured gas, became effective from the 1st of July, 1915:—

## REGULATIONS.

These regulations are to be construed as subject in all respects to the provisions of the Act, and the several words, terms and expressions to which by the Act meanings are assigned shall have herein the same respective meanings.

1. British Thermal Unit (B.T.U.) means the quantity of heat required to raise the temperature of one pound avoirdupois of water from 60 to 61 degrees Fahrenheit.

2. There shall be provided and maintained in proper working order by the department at each departmental testing place suitable apparatus for testing the

calorific power of manufactured gas supplied at such testing place, and such apparatus and the method of making the test shall be such as shall from time to time be determined by the minister

3. The following provisions shall apply with respect to the testings of calorific power made with the apparatus and at the test places provided in accordance with the requirements of the preceding section:—

- (a) Any inspector of gas appointed under the Act may by means of the apparatus provided as aforesaid test at the prescribed testing place at any reasonable hour the calorific power of the gas supplied at such testing place, but not more than one testing for calorific power shall be made on any one day except in the event mentioned in subsection (f) of this section.
- (b) The undertaker may if he so desires on any occasion of the testing of the gas under the provisions of this section be present, either in person or represented by some officer whom he may appoint; such representative, however, shall not interfere with the testing.
- (c) The Calorimeter shall be so used as to yield the total heat which shall be developed by the complete combustion in moist (saturated) air of moist (saturated) gas and the products of combustion shall leave the calorimeter at approximately the temperature of the inlet water.
- (d) Subject to the provisions of the next preceding subsection the testing shall be made in the manner and under the conditions for the time being prescribed by the minister.
- (e) The result obtained by means of such testing shall be expressed in terms of British Thermal Units per cubic foot of gas and shall be corrected for a temperature of 60 degrees Fahrenheit and a pressure balanced by a column of 30 inches of mercury at the same temperature. The corrected result shall be the calorific power of the gas determined by the testing.
- (f) In the event of the calorific power, on any testing, being found to be below the standard calorific power, the undertaker shall be immediately notified in writing and a second testing shall be made on the same day but at an interval of not less than one hour from the time of serving the notice on the undertaker, and the average of the two testings shall be the calorific power of the gas on that day.
- (g) Any party may, at any reasonable time, after depositing the fee, demand a test of the calorific power of the gas supply. In the event of the calorific power determined by the test being below the standard, the cost of the test shall be paid by the undertaker, if at or above the standard, by the party demanding the test.
- (h) The inspector shall, not later than the day following that on which any testing has been made under this section, make and cause to be delivered to the undertaker a report of the results of his testing, and such report shall be received as *prima facie* evidence of the facts therein contained.

## SESSIONAL PAPER No. 13

## THE STANDARD OF CALORIFIC POWER.

4. The standard calorific power of the gas supplied by the undertaker at the prescribed testing place shall be five hundred and twenty British Thermal Units per cubic foot of saturated gas when burned in saturated air and the volume of gas corrected for a temperature of 60 degrees Fahrenheit and a pressure balanced by a column of 30 inches of mercury at the same temperature.

Provided that the undertaker shall not be liable for more than one penalty in respect of a deficiency of calorific power of the gas at any testing place on any one day.

## PENALTIES FOR DEFICIENCY OF CALORIFIC POWER.

5. If on any day the calorific power of the gas tested in accordance with the provisions of these regulations is below the standard calorific power prescribed, the undertaker shall be liable to the following penalties:—

- (a) Companies having over ten thousand (10,000) meters, eighty dollars for the first offence and double this penalty for each subsequent offence.
- (b) Companies having five thousand and one to ten thousand (5,001 to 10,000) meters, sixty dollars for the first offence and double this penalty for every subsequent offence.
- (c) Companies having two thousand and one to five thousand (2,001 to 5,000) meters, forty dollars for the first offence, and double this penalty for every subsequent offence.
- (d) Companies having one thousand and one to two thousand (1,001 to 2,000) meters, twenty dollars for the first offence and double this penalty for every subsequent offence.
- (e) Companies having one thousand (1,000) meters and under, ten dollars for the first offence and double this penalty for every subsequent offence.

## SAVING CLAUSE AS TO PENALTIES.

6. Notwithstanding anything contained in these regulations, no penalty shall be incurred by the undertaker for any deficiency in calorific power in the gas tested in accordance with the provisions herein contained in respect of which the inspector reports, or it is proved, that such deficiency was produced by any circumstance beyond the control of the undertaker; provided that want of sufficient funds shall not be held to be a circumstance beyond the control of the undertaker.

## PROCEDURE.

7. All penalties imposed under the authority of these regulations shall be recoverable on summary conviction in accordance with the provisions of sections 62, 63 and 65 of the Gas Inspection Act, Chapter 87, R.S.

8. These regulations shall come into force and be operative from and after the first day of July, 1915.

9. All previous Orders in Council and regulations relating to the testing of the illuminating power of gas and in respect of sulphur and ammonia tests are hereby repealed.

A statement of average calorific values and of purity tests for the nine months ending March 31, 1916 will be found in appendix "F."

## CARBON MONOXIDE IN ILLUMINATING GAS.

A communication has been received from the Royal Society of Canada in relation to the poisonous element of carbon monoxide in illuminating gas, and requesting that quantitative tests be made and published by the department with the view to warning the public as to the poisonous nature of the gas containing the element named. The correspondence follows:—

THE ROYAL SOCIETY OF CANADA,  
OTTAWA, November 23, 1915.

DEAR SIR,—At the annual meeting of the Royal Society of Canada, held in Ottawa in May last, an important report was submitted containing information as to the dangers to life arising from the presence of carbon monoxide in ordinary illuminating gas.

I am sending herewith a copy of this report, and I am asked to direct your attention to recommendation No. 2 on page 6, which reads as follows:—

“That the Department of Inland Revenue be requested to instruct their gas inspectors to determine the percentage of carbon monoxide in illuminating gas at the same time as they make the examination for sulphuretted compounds.”

I shall be pleased to know if your department will undertake to issue the instructions to inspectors referred to therein.

Yours very truly,

DUNCAN E. SCOTT,  
*Honorary Secretary.*

JOSEPH ULRIC VINCENT, Esq.,  
Deputy Minister of Inland Revenue,  
Ottawa, Ont.

REPORT OF THE COMMITTEE APPOINTED IN 1914 TO OBTAIN FULL INFORMATION AS TO THE DANGERS ARISING FROM THE PRESENCE OF CARBON MONOXIDE IN ORDINARY ILLUMINATING GAS.

The report of the committee appointed in 1914 to obtain full information as to the dangers to life arising from the presence of carbon monoxide in ordinary illuminating gas was presented for Dr. Girdwood, chairman, by Dr. Ruttan. The report was as follows:—

*Mr. President and Fellows of The Royal Society:*

GENTLEMEN,—At the last meeting of this society held in Montreal, in the month of May last, you did us the honour of appointing us a committee for the purpose of collecting information upon the use of water gas in illuminating gas. We thank you for that honour, and now have pleasure in submitting our report as follows:—



## SESSIONAL PAPER No. 13

The conditions of war in Europe have so interfered with postal arrangements that we have been unable to obtain any information from the continent of Europe, and the information we have been able to obtain has been from the United Kingdom, the United States, and Canada.

Throughout Great Britain, in the early part of the last century, coal gas was introduced as a means for lighting the houses and streets. The gas originally used was made by the distillation of soft coal, of which material an ample supply was obtainable.

Ordinary coal gas thus obtained consists chiefly of lighter hydrocarbons with hydrogen, and carries also about 6 per cent of carbon monoxide and gaseous sulphur compounds.

These sulphur compounds must be almost completely removed from the gas before it is distributed.

True coal gas, unlike water gas, has a very distinct odour, and hence its presence even in small quantity in a room can be immediately detected. It is not toxic in the true sense; but in large quantity it suffocates by replacing the oxygen of the air in a room. Unlike the victims of poisoning by water gas or illuminating gas carrying a high percentage of carbon monoxide, persons rendered unconscious by true coal gas can usually be quickly and completely restored to consciousness through artificial respiration, when removed to pure air.

Later on, water gas was introduced as an illuminant, and was adopted largely in the United States in preference to soft-coal gas.

Most gas companies in the United Kingdom have a coal-gas plant and an auxiliary water-gas plant for use when the coal supply is stopped by reason of strikes among the miners.

Water gas is manufactured by throwing steam into a retort full of red-hot coal or carbon, by which the steam is decomposed into hydrogen, the oxygen of the water combining with the carbon of the coal to form carbon monoxide. This gas has heating power, but little illuminating quality, and therefore it is necessary to carburet it, which is done by the addition of a sufficient quantity of carburetting material of the benzene series.

This water gas is highly poisonous; it contains, when carburetted, about 40 per cent carbon monoxide, and if it escapes unburnt and is taken into the lungs the actively poisonous carbon monoxide combines with the haemoglobin of the blood, with which it remains firmly fixed, and prevents the absorption of atmospheric oxygen, thus rapidly causing asphyxiation. It is this carbon monoxide which is the poisonous element in the deadly after-damp which occurs in coal mine explosions.

An excellent account of the effects produced by carbon monoxide is given by Dr. Ivor J. Davies in an article in the *British Medical Journal* of July 11, 1914, wherein he described the effects of poisoning by carbon monoxide in the terrible explosion in the South Wales colliery, Senghennydd mine, in which 440 men were killed. He treated thirty-six cases of poisoning, eighteen of which recovered; the others died.

Numerous evidences of the poisonous character of this gas are to be found in newspaper reports of firemen being overcome by smoke.

At the present day, water gas is also supplied for cooking purposes. When used for illuminating purposes it is burned more generally in burners carrying mantles of

earthly material, rather than in open burners. These mantles become incandescent by the heat of the burning gas, so that the heat qualities are of more importance than candle power, and we are given to understand that the Government is proposing to abandon the standard of candle power and substitute the calorific power as a standard.

In the houses of the poorer classes, where the gas cooking stove is very often in the sleeping room, the flame may be extinguished by a draught from an open window, or by various other causes; this is a constant menace to human life.

The danger of using this water gas is shown by a case which occurred in the city by inhaling the gas which was escaping from two unlighted burners. A man going into the house found the place full of gas fumes, and the people insensible; assistance was sent for, consciousness restored and the people recovered.

The danger of using this gas is also shown in a newspaper clipping sent us by Dr. Mills from London, England, wherein the death of a man, his wife, and two children is recorded. Their deaths were due to an escape of gas from the main in the street through the ground into the basement of the house in which they lived.

We have found the records in the registry offices, both in Great Britain and in Canada, almost valueless for giving us the number of deaths due to this gas. In Montreal we have been able to obtain the following:—

DEATHS FROM POISONING BY GAS IN MONTREAL.

Reported from Health Department . . . . .	by Dr. C. B. Ward.
“ Morgue . . . . .	by Dr. Mactaggart.
“ Royal Victoria Hospital . . . . .	by Dr. H. B. Cushing.
“ Notre Dame Hospital . . . . .	by Dr. Hingston.
“ Hotel Dieu Hospital . . . . .	by Dr. Hingston.
“ Montreal General Hospital . . . . .	by Dr. Bourne.

Year.	Accident.	Suicide.	Total.
1907 . . . . .	3		
1908 . . . . .	10		
1909 . . . . .	11		
1910 . . . . .	28		
1911 . . . . .	11	1	
1912 . . . . .	19	3	
1913 . . . . .	8	2	
1914 . . . . .	9		
	99	6	105

Reported from Western Hospital, Montreal—by Dr. R. R. Scott.  
 1914—5 cases C.O. poisoning, all recovered.  
 1915—(so far) One case,—died from accompanying burns.

DEATHS FROM POISONING BY GAS IN THE CITY OF NEW YORK.

Reported by Dr. Wm. H. Guilfoxy, Department of Health.

Year.	Accident.	Suicide.	Total.
1909 . . . . .	244	319	
1910 . . . . .	257	274	
1911 . . . . .	282	256	
1912 . . . . .	312	311	
1913 . . . . .	259	328	
	1,354	1,488	2,842

## SESSIONAL PAPER No. 13

Report of W. T. Sedgwick and F. Schneider, jr., of Institute of Technology, Boston, of deaths in the state of Massachusetts from gas, increasing in accordance with the increased use of C.O. (Water-gas).

Year.	Percentage of			Total.
	Water-gas in Total Gas.	Accidental Deaths.	Suicidal Deaths.	
1886-7.. . . . .	1.01	5	2	7
1888.. . . . .	1.56	7	1	8
1889.. . . . .	2.43	2	2	4
1890.. . . . .	6.34	5	2	7
1891.. . . . .	22.20	18	1	19
1892.. . . . .	36.60	9	12	21
1893.. . . . .	40.80	7	9	16
1894.. . . . .	55.00	14	15	29
1895.. . . . .	61.00	28	17	45
1896.. . . . .	62.00	20	13	33
1897.. . . . .	65.40	47	16	63
1898.. . . . .	64.60	48	29	77
1899.. . . . .	63.80	35	35	70
1900.. . . . .	51.40	35	15	50
1901.. . . . .	32.30	11	26	37
1902.. . . . .	37.70	9	39	48
1903.. . . . .	38.40	47	30	77
1904.. . . . .	42.30	29	35	64
1905.. . . . .	41.30	41	23	74
1906.. . . . .	30.70	35	30	74
1907.. . . . .	44.70	41	51	92
1908.. . . . .	44.50	55	93	148
1909.. . . . .	48.60	66	102	168

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## DEATHS FROM POISONING BY GAS IN SAN FRANCISCO.

According to reports lately received from the Department of Public Health and Public Works, no records of death are available. The report of the Departmental Committee on Water-gas and other gases to the Houses of Parliament in London for 1899, page 118, shows that in San Francisco in a period of twenty-five years:—

Year.	Accident.	Suicide	Homicide	Total
1872-3 to 1896-7.. . . . .	233	136	6	375

From the principal cities of Canada we have not been able to obtain any records.

There is a general complaint regarding the lack of registration returns in Great Britain and Canada on this subject, no reliable data being obtainable.

In the United States the same deplorable condition exists, with the exception of New York, the states of Massachusetts and Rhode Island. The information we have obtained from Boston is chiefly contained in a lecture delivered by Dr. Sedgwick before the Medical Society of New York. From that lecture we learn that during the last twenty years, in the state of Massachusetts, there has been an increase in the number of deaths from suffocation by illuminating gas from seven deaths per annum (in 1886-7) to 168 in 1909, and during that time water gas has been increasingly used. More than half of these 168 cases were due to suicide. There is no mention of any homicidal cases that we can find, except in San Francisco. As this poisonous gas is generally supplied and readily obtainable, there is danger of its increased use for homicidal purposes.

From these reports we can see how deaths have increased since the use of water gas, and how necessary it is to have some legal regulation as to its use in illuminating gas.

We would suggest that some more careful method of registration should be adopted, so that the actual cause of death and the number of deaths occurring through-

out the country from this cause should be readily obtainable at least every year. We would also suggest that a daily record of the carbon monoxide contents of all gas supplies be taken by the gas inspector, and that the companies supplying this gas shall keep a record of the percentage of carbon monoxide gas supplied to the public daily.

We would advise the careful perusal of the report of the chemist of the London County Council on water gas in the London gas supply, and the report of the Departmental Committee in the British Parliament on the manufacture and use of water gas; also of the lecture by Professors Sedgwick and Schneider on the relation of illuminating gas to the public health, from the Sanitary Research Laboratory, Mass., Institute of Technology, Boston.

We beg to make the following recommendations:—

1. Your committee desire to place on record their dissatisfaction with the vital statistics of the various provinces in regard to deaths from carbon monoxide poisoning. Your committee would therefore suggest that the secretary of the Royal Society be instructed to write to the registrars general of the different provinces, and request that, if possible, more accurate record be kept of deaths from gas poisoning by their division registrars.

2. That the Department of Inland Revenue be requested to instruct their gas inspectors to determine the percentage of carbon monoxide in illuminating gas at the same time as they make the examination for sulphuretted compounds.

We have found that on account of the war it has not been possible to obtain the European statistics; your committee therefore wishes to submit this report merely as a report of progress, and asks permission to continue its work for another year.

In conclusion we wish to return our sincere thanks to all those who have so kindly and promptly responded to our requests for information on this most important subject.

Appended is a list of the cities from which we have received information as to the use of carbon monoxide in their gas supplies. There are very few records to be had of deaths by asphyxiation from this gas, either accidental or suicidal, but there are several parliamentary papers and pamphlets, obtained from many sources, accompanying this report.

List of cities to the mayors of which we applied for information and received replies: Aberdeen, Birmingham, Boston, Bristol, Derby, Edinburgh, Glasgow, Leeds, Liverpool, London, Montreal, Newcastle, New York, Ottawa, Philadelphia, Quebec, San Francisco, Swansea, Toronto, Vancouver, Washington.

List of papers accompanying this report:—

Parliamentary Report of Water Gas Committee London County Council on Water Gas:—

Gas Undertakings return No. 137.

Gas Undertakings return No. 138.

British Medical Journal No. 2793.

Circular Bureau of Standards U.S.A.

Inland Revenue Canada Gas Inspection Act.

Report Department of Labour No. 36, 1914.

## SESSIONAL PAPER No. 13

Haematology of Carbon Monoxide poisoning, Toronto.

Lecture by Professor Sedgwick and F. Schneider of Institute of Technology,  
Boston.

J. P. GIRDWOOD, *Chairman.*

R. F. RUTTAN,

JOHN J. MACKENZIE,

T. G. RODDICK.

OTTAWA, February 22, 1916.

Mr. DUNCAN E. SCOTT,

Honorary Secretary, The Royal Society of Canada,  
Ottawa, Ontario.

DEAR MR. SCOTT,—I beg to include herein a copy of a report from our Chief Engineer of Gas and Electricity, in reference to the matter on which I had the pleasure of a communication from you some time ago.

If there is anything further which I can do, I will be only too glad to communicate with you.

Yours very truly,

J. U. VINCENT,

*Deputy Minister.*

OTTAWA, February 21, 1916.

J. U. VINCENT, Esq.,

Deputy Minister of Inland Revenue,  
Ottawa.

SIR,—Referring to the letter of the secretary of the Royal Society of Canada on the subject of carbon monoxide in fuel gases and the accompanying report of the society on this question; I beg to report as follows:—

With regard to the report itself there is nothing contained therein to which much objection can be taken. There has been from the beginning and will be to the end, carbon monoxide in fuel gases, varying in quantity from 10 to 30 per cent, according to the method of manufacture. With reference to the statistics and the number of deaths occasioned by the inhaling of such gases, I might suggest that the heading "accidental" be replaced by the word "ignorance" or "carelessness." Even if all the carbon monoxide were removed from the gas there would still remain deleterious elements sufficient to cause death by suffocation, if enough of it were inhaled. The use of gas for domestic purposes can hardly be made fool proof, but doubtless something might be done to lessen the dangers arising therefrom.

Manufactured gas is not the only gas that contains carbon monoxide. Natural gas, of which infinitely larger quantities are used than of manufactured gas, contains high percentages of carbon monoxide and in some instances hydrogen sulphide, which is more subtle, for the reason that the poison is not destroyed during the process of combustion, as is the case with carbon monoxide. Is it contended that these poisonous elements should be removed from the gas? Such a course is altogether impracticable. We might as well contend for the removal of poisonous elements

during combustion from anthracite coal. The writer is aware of an instance where, through the misarrangement of a furnace damper a whole family was rendered helpless through the inhaling of escaping gases, and had the discovery of the condition been delayed but a very short time, the incident would have been attended with fatal results. This may have been due to "accident" or "carelessness," but in either case the element of danger is there. It will not help us very much to know whether the gas contains 10 per cent or 30 per cent of poisonous elements. The proper thing to do, in my opinion, would be to label it "POISON," and treat it accordingly.

It may be of interest to know what the Washington Bureau of Standards report (Circular 32) says on the subject:—

"A large proportion of the cases of death or illness caused by gas poisoning are suicidal, or are due to irresponsible conditions such as drunkenness, or to gross ignorance; and in the majority of these cases the character of the gas would perhaps have only a small influence upon the seriousness of the result. A smaller number of deaths and cases of gas poisoning are due, not to the illuminating gas itself, but to the carbon monoxide formed by combustion of the gas with insufficient supply of air, due to a faulty appliance or to an appliance improperly set or connected with insufficient or improper flues. These matters all have an important bearing upon the subject, and it is possible that the protection of the public from danger will be found to lie rather along lines of regulation of appliance form and setting and general education of gas users as to proper precautions than in the limitation of the carbon monoxide content of the gas itself."

The request made to this department is that our inspectors be instructed to test the gas for the quantity of carbon monoxide present when the test for sulphuretted hydrogen is being made. It may be stated that there is no similarity or relation between the two tests. In the case of sulphuretted hydrogen, the test is made simply by suspending a strip of litmus paper in a vessel through which the gas passes, and if there is any discoloration of the paper it shows that sulphuretted hydrogen is present. On the other hand, in order to give the percentage of carbon monoxide present it would be necessary to make a quantitative test with special apparatus, and would also involve the training of our men as to how the test should be made.

The difficulties complained of might be very largely eliminated by the use of proper appliances and a close inspection of the plumbing by the municipalities. For cooking purposes the gas might be used in inclosed ranges properly connected with ample flues to the chimney, and for lighting purposes by fittings that would admit of a sufficient quantity of air being mixed with the gas at the point of combustion.

These are matters of local concern and belong exclusively to the provincial legislatures and the municipalities. This department is concerned only with the weights and measures aspect of the case, that is, the accurate measurement of the gas through the meters and a determination as to whether or not the quantity of heat units are present. The question as to whether the gas is good or bad for the health of the users is one that rests with the provincial rather than with the federal authorities.

I remain, sir, your obedient servant,

ORMOND HIGMAN,  
*Chief Engineer.*

SESSIONAL PAPER No. 13

THE ROYAL SOCIETY OF CANADA,  
OTTAWA, February 25, 1916.

DEAR MR. VINCENT,—Please accept my thanks for your letter of the 22nd instant, inclosing copy of a report from your Chief Engineer of Gas and Electricity in reference to the memorandum of the committee of the Royal Society.

I am transmitting a copy of this report to the chairman of the committee.

Yours very truly,

DUNCAN E. SCOTT,  
*Honorary Secretary.*

JOSEPH ULRIC VINCENT, Esq.,  
Deputy Minister of Inland Revenue,  
Ottawa, Ont.

At a subsequent meeting of the committee of the Royal Society the following report on the subject was made:—

“From a report obtained by the honorary secretary of the Royal Society and forwarded to us from the Deputy Minister of Inland Revenue, it is evident that the inspection and control of gas supplies from a hygienic point of view lies with the municipalities and the Provincial Governments. The Dominion Government controls only the calorific power of the gas.

It is further evident that gas for illumination purposes is largely being replaced even in the smaller towns by electricity.

Owing to the impossibility of obtaining proper statistics of deaths and injury from the use of the gas carrying a high percentage of carbon monoxide, and the increased development of its employment as a source of heat and power where the products of combustion and leakage are removed by pipes and chimneys, we consider that it is unwise at present to ask for legislative interference with its use.

Your committee is nevertheless fully convinced of the danger to the community arising from the use of water gas and similar gases carrying a large quantity of the poisonous carbon monoxide, and even if the amount of this poison in the gas cannot be controlled by law, every municipality should be informed by frequent analyses of the degree of danger from this source to which its inhabitants are exposed in using the public gas supply.”

G. P. GARDWOOD, *Chairman.*  
T. G. RODDICK,  
R. F. RUTAN.

#### ELECTRICITY INSPECTION.

The total revenue collected for meter inspection, etc., during the year ended March 31, 1914, was \$70,051.75, as compared with \$82,504.95 collected in the previous year. The total expenditures, including cost of inspection and maintenance of equipment, were \$57,843.37 as compared with \$62,048.06 for the year ended March 31, 1914.

The combined services of electricity and gas, the duties connected with which are performed largely by one set of officers, shows the following financial results:—

Revenue.. . . . .	\$116,086.55
Expenditure.. . . . .	124,098.95
Deficit.. . . . .	8,012.40

The somewhat serious falling-off in revenue from both branches of the service is due, partly by the dislocation of social conditions resulting from heavy enlistments for the war and the consequent closing out of meters from a large number of homes, and partly from certain companies taking advantage of war conditions to postpone the testing of their meters until some future date.

A comparative statement of revenue and expenditure for the combined services during the past ten years is as follows:—

Years.	Gas and Revenue.	Electricity. Expenditure.
1906-07.. . . . .	\$ 57,868 18	\$ 30,793 84
1907-08.. . . . .	86,552 20	48,831 75
1908-09.. . . . .	92,450 21	54,018 71
1909-10.. . . . .	100,647 20	55,514 14
1910-11.. . . . .	112,150 25	63,385 03
1911-12.. . . . .	117,917 45	80,537 87
1912-13.. . . . .	138,090 95	93,000 83
1913-14.. . . . .	143,386 40	113,014 76
1914-15.. . . . .	139,403 25	124,233 49
1915-16.. . . . .	116,086 55	124,098 95

A statement showing the quantities of electrical energy generated or produced for export and for consumption in Canada by certain hydro-electric companies under the authority of the Electricity and Fluid Exportation Act will be found in Appendix "J."

The growing and somewhat insistent demand for power on the part of the municipalities of Ontario for industrial and domestic purposes has brought the question of a reduction of the export quantities granted by license to the hydro-electric companies at Niagara Falls before the department for revision. The Electricity Exportation Act provides that licenses to export "shall be revocable upon such notice to the licensee as the Governor in Council deems reasonable in each case." Under the circumstances a yearly reduction in the quantities to be exported might be deemed a reasonable method of putting an end to the export.

A list of electric light and power companies registered under the provisions of the Electricity Inspection Act, with certain statistics connected with their operation will be found in Appendix "K."

Electrical standardizing laboratories have been established at Ottawa and Vancouver, where the substandards used by the inspectors are adjusted and standardized periodically, also such electrical instruments as may be presented by the general public.

The equipment for another similar laboratory at Winnipeg has been provided, and awaits suitable accommodation for the installation thereof.

I have the honour to be, sir,  
Your obedient servant,

J. U. VINCENT,  
*Deputy Minister.*



**APPENDIX A.**

STATEMENT of Weights and Measures Expenditures and Revenues for the Fiscal Year ended March 31, 1916.

Inspection Divisions.	Inspectors.	EXPENDITURES.						Revenue.
		Salaries.	Special Assist- ance.	Rent.	Travel- ing Expenses.	Sundries.	Total.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
Belleville.....	Diamond, F. D.	3,499 65	75 00	622 00	1,114 32	248 56	5,562 53	3,300 80
Hamilton.....	Sealey, J. C.	5,099 52			2,144 23	183 83	1,427 58	10,642 30
Kingston.....	Gallagher, T.	2,699 88	675 24		1,025 16	60 65	4,461 8	3,480 45
London.....	Hughes, R. A.	5,355 21	875 03	144 00	3,174 80	222 3	9,874 37	9,777 45
Ottawa.....	Hinchey, E. H.	6,550 75	7,393 45		1,723 30	124 00	15,882 2	7,500 15
Toronto.....	McConvey, J. J.	7,749 81	949 95		1,831 21	88 17	10,619 15	11,800 00
Ontario.....		34,054 88	9,974 64	766 00	11,014 12	928 50	56,768 14	44,774 15
Montreal.....	Archambault, J. E.	12,543 75	3,600 96	975 01	2,473 91	245 80	19,839 47	12,322 05
Quebec.....	Roy, Chs. E.	8,374 80	3,857 34	490 00	3,179 87	171 20	15,883 45	5,008 87
Sherbrooke.....	Delorme, O. C.	2,299 86	1,999 85	375 00	1,006 90	81 00	7,724 4	5,878 90
St. Hyacinthe.....	Morin, J. P.	2,509 96	1,665 67		729 67	43 10	5,008 4	1,607 00
Three Rivers.....	Lessard, A.	2,240 58	1,999 80		1,475 50	111 08	5,806 72	2,500 00
Quebec.....		28,038 26	13,123 63	1,750 01	8,897 38	652 7	51,429 88	28,307 47
St. John, N.B. ....	Barry, Jas.	4,740 84	32 00		410 66	94 5	5,287 05	2,700 10
Halifax.....	O'Brien, Wm.	1,830 03	1,259 92	507 30	587 47	122 31	4,307 00	1,180 20
Pictou.....	Dustan, W. M.	3,139 80	48 00		851 00	78 00	7,977 5	1,714 20
Nova Scotia.....		5,029 83	1,307 92	507 30	1,238 07	201 21	8,285 26	2,888 67
Charlottetown,	Davy, E.	1,940 88	79 37		167 43	15 7	2,212 06	341 00
Winnipeg, Man.	McKay, R.	6,576 40	924 93	896 64	3,458 00	318 72	12,043 4	9,000 00
Regina.....	McLean, D. J.	1,283 30	1,065 10		810 81	200 41	3,419 62	1,840 50
Saskatoon.....	Johnston, Chs. W.	3,966 50	3,888 78	180 00	5,002 14	182 00	12,730 04	5,540 80
Saskatchewan.....		5,240 8	4,993 88	180 00	5,851 00	500 67	16,176 00	11,380 40
Calgary, Alta.....	Costello, J. W.	4,590 90	18 00	240 00	2,804 97	267 80	7,844 60	4,875 00
Nelson.....	Parker, Theo.	1,249 80	820 00	180 00	514 20	111 00	4,100 10	1,040 00
Vancouver.....	Dutton, A. H.	2,399 88	40 00		344 10	444 18	5,138 21	2,100 00
British Columbia.....		3,640 80	665 00	180 00	2,088 27	662 20	7,206 40	3,070 70
Dawson, Yukon.....	Stingle, J. W.	900 90				80 00	1,000 00	20 00
Chief Inspector						82 4	87 40	
Inspector of Elevator	Scobie	1,500 00			447 00	177 00	2,124 00	
Total for Divisions.....		91,413 7	80,710 85	4,400 01	38,247 60	3,808 90	171,722 50	111,900 00
Milk Testing Glasses								1,500 00
General Contingencies						2,418 70	2,418 70	
Printing						2,007 00	2,007 00	
Stationery						400 00	400 00	
Provisional Allowance						5,400 00	5,400 00	
International Bureau of Weights and Measures						400 00	400 00	
Grand Totals		96,430 7	80,710 85	4,400 01	38,247 60	10,223 12	181,111 00	113,400 00

## APPENDIX

RETURN of Weights and Measures inspected during the Fiscal Year ended and Rejected for each Division, for each

Inspection Office.	Weights.									Measures of Capacity.					
	Dominion.			Troy.			Miscellaneous.			Dominion.			Miscellaneous.		
	Brought for Verification.	Verified.	Rejected.	Brought for Verification.	Verified.	Rejected.	Brought for Verification.	Verified.	Rejected.	Brought for Verification.	Verified.	Rejected.	Brought for Verification.	Verified.	Rejected.
Belleville.....	1,383	1,333	56	.....	.....	.....	2	2	.....	929	929	.....	2,785	2,785	.....
Hamilton.....	7,956	7,921	35	.....	.....	.....	989	989	.....	8,294	8,294	.....	870	849	21
Kingston.....	917	917	.....	.....	.....	.....	8	8	.....	3,456	3,451	5	137	137	.....
London.....	2,727	2,725	2	.....	.....	.....	9	9	.....	24,193	24,193	.....	4,612	4,606	6
Ottawa.....	3,437	3,430	7	.....	.....	.....	1	1	.....	1,527	1,523	4	2,795	2,561	234
Toronto.....	3,950	3,950	.....	11	11	.....	14	14	.....	26,991	26,991	.....	7,155	7,151	4
Ontario.....	20,370	20,276	94	11	11	.....	1,023	1,023	.....	65,390	65,381	9	18,354	18,089	265
Montreal.....	11,433	11,291	142	53	53	.....	516	515	1	26,414	26,413	1	3,785	3,771	14
Quebec.....	7,003	6,772	231	.....	.....	.....	139	134	5	6,860	6,849	11	214	210	4
Sherbrooke.....	11,896	11,882	14	9	9	.....	397	397	.....	879	879	.....	209	207	2
St. Hyacinthe.....	1,042	1,042	.....	.....	.....	.....	.....	.....	.....	1,172	1,172	.....	67	38	29
Three Rivers.....	2,349	2,342	7	.....	.....	.....	7	7	.....	1,542	1,542	.....	80	80	.....
Quebec.....	33,723	33,329	394	62	62	.....	1,059	1,053	6	36,867	36,855	12	4,355	4,306	49
t. John, N.B....	2,076	2,076	.....	.....	.....	.....	.....	.....	.....	2,923	2,923	.....	4,682	4,689	3
Halifax.....	765	765	.....	.....	.....	.....	4	4	.....	466	466	.....	339	337	2
Pictou.....	1,040	1,040	.....	.....	.....	.....	4	4	.....	720	720	.....	238	218	20
Nova Scotia...	1,805	1,805	.....	.....	.....	.....	8	8	.....	1,185	1,186	.....	577	555	22
Charlottetown, P. E. I.	243	243	.....	.....	.....	.....	.....	.....	.....	80	80	.....	15	15	.....
Winnipeg, Man..	3,350	3,350	.....	9	9	.....	167	167	.....	7,292	7,289	3	1,927	1,891	36
Regina.....	166	166	.....	.....	.....	.....	.....	.....	.....	46	45	1	952	944	8
Saskatoon.....	533	533	.....	.....	.....	.....	.....	.....	.....	170	170	.....	139	132	7
Saskatchewan..	699	699	.....	.....	.....	.....	.....	.....	.....	216	215	1	1,091	1,076	15
Calgary, Alta...	664	664	.....	.....	.....	.....	8	8	.....	4	4	.....	135	126	9
Nelson.....	414	414	.....	.....	.....	.....	1	1	.....	62	62	.....	22	22	.....
Vancouver.....	362	362	.....	.....	.....	.....	.....	.....	.....	9	9	.....	16	16	.....
Br. Columbia..	776	776	.....	.....	.....	.....	1	1	.....	71	71	.....	38	38	.....
Dawson, Yukon..	105	105	.....	.....	.....	.....	37	37	.....	8	8	.....	2	2	.....
Totals.....	63,991	63,503	488	82	82	.....	2,303	2,297	6	114,037	114,012	25	31,186	30,787	399

SESSIONAL PAPER No. 13

**B**

March 31, 1916, showing the Total Number brought for Verification, Verified Province, and for the whole Dominion.

Measures of Length.			Balances, etc											
			Equal Armed.			Steelyards.			Platform Scales, Weight Bridges, etc.			Miscellaneous.		
Brought for Verification.	Verified.	Rejected.	Brought for Verification.	Verified.	Rejected.	Brought for Verification.	Verified.	Rejected.	Brought for Verification.	Verified.	Rejected.	Brought for Verification.	Verified.	Rejected.
68	68	...	330	329	1	44	41	3	1,588	1,561	27	375	373	2
1,341	1,284	53	1,800	1,717	83	3,530	3,489	41	7,546	7,076	470	468	398	69
273	273	...	234	237	1	33	35	...	2,098	2,036	62	386	385	1
3,098	3,098	...	570	564	6	262	257	5	3,565	3,382	183	2,819	2,759	60
337	303	34	611	602	9	27	26	1	1,913	1,873	40	4,284	4,260	24
855	855	...	929	898	31	1,223	1,196	27	6,369	6,216	153	2,073	1,984	89
5,972	5,885	87	4,478	4,347	131	5,119	5,042	77	23,079	22,144	935	10,405	10,160	245
708	708	...	2,444	2,405	39	734	720	14	6,059	5,789	270	1,917	1,850	67
1,132	1,123	9	1,079	1,058	21	275	268	7	2,643	2,579	64	350	341	9
128	128	...	1,162	1,161	1	290	288	2	6,374	6,353	21	313	312	1
118	118	...	234	229	5	89	85	4	910	843	67	101	93	8
84	80	4	397	395	2	44	39	5	1,676	1,642	34	202	197	5
2,170	2,157	13	5,316	5,248	68	1,432	1,400	32	17,662	17,206	456	3,083	2,991	92
2	2	...	435	435	...	34	32	2	961	934	27	318	316	2
33	32	1	179	179	...	8	8	...	556	546	10	249	247	2
33	32	1	168	167	1	28	28	...	646	638	8	206	206	...
33	32	1	347	346	1	36	36	...	1,202	1,184	18	445	433	12
2	2	...	57	57	...	23	23	...	232	232	...	24	24	...
807	807	...	521	514	7	207	200	7	3,287	3,145	142	1,823	1,699	124
78	78	...	37	35	2	99	99	...	659	531	128	156	139	17
58	58	...	80	79	1	316	298	18	3,394	2,819	575	621	562	59
136	136	...	117	114	3	415	397	18	4,033	3,380	703	777	731	46
			74	74		50	29	1	1,142	1,075	67	411	386	25
32	32		98	98		74	74		78	78		319	310	9
			81	81		109	109		950	905	45	1,011	1,002	9
32	32		179	179		183	183		1,738	1,713	25	1,386	1,320	66
9,151	9,063	101	11,524	11,314	210	7,479	7,342	137	33,146	30,783	2,363	18,027	18,081	66

J. U. VINCENT,  
Deputy Minister.

7 GEORGE V, A. 1917

## APPENDIX

RETURN showing the Number of Dominion Weights and Lineal Measures of  
during the Fiscal Year

Inspection Division.	Dominion														
	Avoir-														
	60 lbs.	50 lbs.	30 lbs.	25 lbs.	20 lbs.	10 lbs.	5 lbs.	4 lbs.	3 lbs.	2 lbs.	1 lb.	8 ozs.	4 ozs.	2 ozs.	
Belleville .....		32	32	..	..	2	56	69	153	318	290	104	97	89	
Hamilton.....		874	38	..	7	26	447	60	1,182	1,745	1,786	579	328	246	
Kingston.....						13	32	63	95	281	227	70	53	43	
Lon lon.....			3	..	2	10	77	79	246	577	533	261	259	250	
Ottawa.....						4	91	47	195	392	315	410	350	374	
Toronto.....		41				126	200	351	242	1,089	880	212	196	194	
Ontario.....		947	73	..	9	181	993	669	2,113	4,402	4,031	1,639	1,323	1,196	
Montreal.....		265	1	..	5	247	809	674	1,144	2,285	2,004	1,117	942	812	
Quebec.....		97	13	3	13	53	379	498	517	1,054	998	899	877	763	
Sherbrooke.....		1,940	..	1	113	279	54	1,927	93	1,878	1,446	723	513	483	
St. Hyacinthe.....						1	68	29	161	211	196	144	90	60	
Three Rivers.....		79					152	73	370	403	372	284	259	171	
Quebec.....		2,381	14	4	131	580	1,462	3,101	2,285	5,831	5,016	3,167	2,681	2289	
St. John, N. B.....		80				21	104	114	179	495	418	218	163	133	
Halifax.....		40				10	25	58	56	236	147	69	50	41	
Pictou.....		298	1	3	1	5	17	46	129	201	151	49	45	37	
Nova Scotia.....		338	1	3	1	15	42	104	185	437	298	118	95	78	
Charlottetown, P. E. I.....						2	9	22	22	75	54	16	15	13	
Winnipeg, Man.....		918	34	9	67	79	112	189	141	625	520	193	152	143	
Regina.....							5	1	9	30	27	22	18	18	
Saskatoon.....		4	6	4	6	4	11	16	26	18	92	80	53	41	
Saskatchewan.....		4	6	4	6	4	11	21	27	123	107	75	62	58	
Calgary, Alta.....		22	102	3	14	23	49	47	32	110	90	22	22	22	
Nelson.....						1	12	14	36	97	71	46	42	40	
Vancouver.....		1	10	1	5	16	11	26	17	165	80	24	25	12	
British Columbia.....		1	10	1	5	17	23	40	53	202	151	70	67	52	
Dawson, Yukon.....							12	3	18	31	25	16	.....	.....	
Totals.....		4	4,693	338	26	261	929	2,827	4,310	5,055	12,330	10,710	5,534	4,580	3984

INLAND REVENUE DEPARTMENT.  
OTTAWA, July 1, 1916.

SESSIONAL PAPER No. 13

**C**

each Denomination presented for Verification in each Inspection Division ended March 31, 1916.

Weights.							Total Number.	Troy Weights.	Miscellaneous Weights.	Lineal Measures.									
dupois.										6 feet.	5 feet.	1 yard.	3/4 yard.	2 feet.	1 foot.	3/4 foot.	100 feet chains.	66 feet chains.	Tape or ribbon.
1 oz.	8 drs.	4 drs.	2 drs.	1 dr.	1/2 dr.														
83	37	15	1	1	....	1,383	...	2											68
249	211	147	19	10	2	7,956	...	989		12	1,339								1,341
25	8	4	2	1	...	917	...	8			273								273
249	135	44	6	2	...	2,727	...	9			3,095								3,095
359	328	506	11	11	4	3,437	...	1			337								337
182	47	28	31	37	3	3,950	11	14			875								875
1,139	766	748	70	62	9	20,370	11	1,023		2	5,970								5,972
625	278	136	96	88	3	11,433	53	516			70								70
576	134	105	16	7	1	7,003	...	139			1,132								1,132
500	538	445	337	322	304	11,896	9	397			128								128
37	22	9	10	3	1	1,012	...	...			118								118
103	50	32	1	...	...	2,349	...	7			84								84
1,811	1,022	727	462	420	309	33,723	62	1,059			2,170								2,170
88	4	11	4	2	1	2,076	...	...			2								2
23	10	...	...	...	...	765	...	1											1
25	16	10	4	1	1	1,949	...	3			75								75
48	26	10	4	1	1	1,805	...	8			49								49
6	...	5	1	...	...	243	...	...			2								2
134	101	72	27	14	...	3,530	9	167			87								87
15	10	8	2	1	...	156	...	...			77								77
41	38	31	15	9	1	533	...	...											
56	48	39	17	10	1	609	...	...			136								136
21	20	16	13	6	...	604	...	8											8
38	10	6	1	...	...	414	...	1											1
10	10	7	2	...	...	362	...	...											
48	20	13	3	...	...	776	...	...											
						195	...	35											35
3,381	2,048	1,611	601	515	321	63,991	82	2,800		2	9,132								9,134

J. U. VINCENT,  
Deputy Minister

7 GEORGE V, A. 1917

## APPENDIX

RETURN showing the Number of Dominion Weights and Lineal Measures of each March

Inspection Division.	Dominion													
	Avoir													
	60 lbs.	50 lbs.	30 lbs.	25 lbs.	20 lbs.	10 lbs.	5 lbs.	4 lbs.	3 lbs.	2 lbs.	1 lb.	8 ozs.	4 ozs.	2 ozs.
Belleville.....		32	32			2	54	67	145	301	271	102	97	89
Hamilton.....		874	38		7	26	447	60	1,182	1,745	1,786	573	322	240
Kingston.....						13	32	63	95	281	227	70	53	43
London.....			3		2	10	77	79	246	577	533	263	258	250
Ottawa.....						4	91	47	195	392	315	408	389	373
Toronto.....		41				126	290	351	242	1,989	880	212	196	194
Ontario.....		947	73		9	181	991	667	2,105	4,385	4,012	1,628	1,315	1,189
Montreal.....		265	1		5	213	800	569	1,134	2,262	1,976	1,087	926	758
Quebec.....		97	13	3	13	49	362	474	496	1,014	967	866	848	740
Sherbrooke.....		1,940		1	113	279	53	1,925	91	1,875	1,443	722	512	482
St Hyacinthe.....						1	68	29	161	211	196	144	90	60
Three Rivers.....		79					152	71	370	401	370	283	250	171
Quebec.....		2,381	14	4	131	572	1,435	3,068	2,252	5,763	4,952	3,102	2,635	2,251
St. John, N.B.....		80				21	104	114	179	495	418	218	163	133
Halifax.....		40				10	25	58	56	236	147	69	50	41
Pictou.....		298	1	3	1	5	17	46	129	501	151	49	45	37
Nova Scotia.....		338	1	3	1	15	42	104	185	437	298	118	95	78
Charlottetown, P.E.I.....						2	9	22	22	75	51	16	15	13
Winnipeg, Man.....		918	34	9	67	79	112	189	141	625	520	193	152	143
Regina.....							5	1	9	30	27	22	18	18
Saskatoon.....	4	6	4	6	4	11	16	20	18	92	80	53	44	40
Saskatchewan.....	4	6	4	6	4	11	21	21	27	122	107	75	62	58
Calgary, Alta.....		22	102	3	44	23	49	47	32	110	90	22	22	22
Nelson.....						1	12	14	36	97	71	46	42	40
Vancouver.....		1	10	1	5	16	11	26	17	105	80	24	25	12
British Columbia.....		1	10	1	5	17	23	40	53	202	151	70	67	52
Dawson, Yukon.....							12	3	18	31	25	16		
Totals.....	4	4,693	238	26	261	921	2,798	4,275	5,014	12,245	10,627	5,458	4,526	3,939

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C--Continued.

Denomination Verified in each Inspection Division during the Fiscal Year ended 31, 1916.

Weights.							Total Number.	Troy Weights.	Miscellaneous Weights.	Lineal Measures.								Total Number.	Miscellaneous Measures.		
dupois.										6 feet.	5 feet.	1 yard.	½ yard.	2 feet.	1 foot.	½ foot.	100 feet chains.			66 feet chains.	Tape or ribbon.
1 oz.	8 drs.	4 drs.	2 drs.	1 dr.	½ dr.																
83	37	19	1	1	...	1,333	...	2	...	68	...	...	...	...	...	...	...	...	...	68	...
243	205	143	18	10	2	7,921	...	989	...	1,288	...	...	...	...	...	...	...	...	...	1,288	...
25	8	4	2	1	...	917	...	8	...	273	...	...	...	...	...	...	...	...	...	273	...
240	135	44	6	2	...	2,725	...	9	...	3,008	...	...	...	...	...	...	...	...	...	3,008	...
358	327	505	11	11	4	3,430	...	1	...	303	...	...	...	...	...	...	...	...	...	303	...
183	47	28	31	37	3	3,950	...	11	...	855	...	...	...	...	...	...	...	...	...	855	...
1,132	759	743	69	62	9	20,276	...	11	1,023	5,885	...	...	...	...	...	...	...	...	...	5,885	...
623	277	136	98	88	3	11,291	...	53	515	708	...	...	...	...	...	...	...	...	...	708	...
568	133	105	16	7	1	6,772	...	134	...	1,123	...	...	...	...	...	...	...	...	...	1,123	...
500	538	445	337	322	304	11,882	...	9	397	128	...	...	...	...	...	...	...	...	...	128	...
37	22	9	10	3	1	1,042	...	...	...	118	...	...	...	...	...	...	...	...	...	118	...
103	50	32	1	...	...	2,342	...	7	...	80	...	...	...	...	...	...	...	...	...	80	...
1,831	1,020	727	462	420	309	33,329	...	62	1,053	2,157	...	...	...	...	...	...	...	...	...	2,157	...
88	12	11	4	2	1	2,076	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...
23	10	...	...	...	...	765	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...
25	16	10	4	1	1	1,040	...	4	...	32	...	...	...	...	...	...	...	...	...	32	...
48	26	10	4	1	1	1,805	...	8	...	32	...	...	...	...	...	...	...	...	...	32	...
6	3	5	1	...	...	243	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...
134	101	72	27	14	...	3,530	...	9	167	807	...	...	...	...	...	...	...	...	...	807	...
15	10	8	2	1	...	166	...	...	...	78	...	...	...	...	...	...	...	...	...	78	...
41	38	31	15	9	1	533	...	...	...	58	...	...	...	...	...	...	...	...	...	58	...
56	48	39	17	10	1	699	...	...	...	136	...	...	...	...	...	...	...	...	...	136	...
21	20	16	13	6	...	664	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...
38	10	6	1	...	...	414	...	1	...	32	...	...	...	...	...	...	...	...	...	32	...
10	10	7	2	...	...	362	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
48	20	13	3	...	...	776	...	1	...	32	...	...	...	...	...	...	...	...	...	32	...
...	...	...	...	...	...	106	...	37	...	...	...	...	...	...	...	...	...	...	...	...	...
2,304	2,039	1,639	600	515	321	63,503	...	82	2,297	9,053	...	...	...	...	...	...	...	...	...	9,053	...

J. U. VINCENT,  
Deputy Minister.

APPENDIX

RETURN showing the Number of Dominion Weights and Lineal Measures of each March

Inspection Division.	Dominion													
	Avoir													
	60 lb.	50 lb.	30 lb.	25 lb.	20 lb.	10 lb.	5 lb.	4 lb.	3 lb.	2 lb.	1 lb.	8 oz.	4 oz.	2 oz.
Belleville.....							2	2	8	17	19	2		
Hamilton.....												6	6	6
Kingston.....														
London.....												1	1	
Ottawa.....												2	1	1
Toronto.....														
Ontario.....							2	2	8	17	19	11	8	7
Montreal.....						4	9	5	10	23	28	30	16	14
Quebec.....						4	17	24	21	40	31	33	29	23
Sherbrooke.....							1	2	2	8	3	1	1	1
St. Hyacinthe.....														
Three Rivers.....										2	2	1		
Quebec.....						8	27	33	33	68	64	65	46	38
St. John, N B.....														
Halifax.....														
Pictou.....														
Nova Scotia.....														
Charlottetown, P.E.I.....														
Winnipeg, Man.....														
Regina.....														
Saskatoon.....														
Saskatchewan.....														
Calgary, Alta.....														
Nelson.....														
Vancouver.....														
British Columbia.....														
Dawson, Yukon.....														
Totals.....						8	29	35	41	85	83	76	51	45





## APPENDIX

RETURN showing the number of Dominion Measures of Capacity, Balances and Inspection Division, during the

Inspection Division.	Measures of Capacity.										Total Num-ber.	Miscel-laneous.
	Dominion.											
	Bushel.	$\frac{1}{2}$ Bushel.	Peck.	Gallon.	$\frac{1}{2}$ Gallon.	Quart.	Pint.	$\frac{1}{2}$ Pint.	Gill.	$\frac{1}{2}$ Gill.		
Belleville.....	5	7	33	220	221	289	149	3	2	.....	929	2,785
Hamilton.....	497	307	853	1,475	1,089	2,049	1,599	413	11	1	8,294	870
Kingston.....	6	362	227	572	783	841	589	75	1	.....	3,456	137
London.....	420	924	557	3,597	4,352	8,060	5,761	522	.....	.....	24,193	4,612
Ottawa.....	.....	2	18	234	454	531	249	39	.....	.....	1,527	2,795
Toronto.....	439	1,989	1,720	5,756	3,399	7,883	5,302	503	.....	.....	26,991	7,155
Ontario.....	1,360	3,591	3,388	11,854	10,298	19,653	13,649	1,555	14	1	65,390	18,354
Montreal.....	4	918	1,548	3,935	4,638	6,473	6,607	2,057	191	43	26,414	3,785
Quebec.....	.....	123	217	1,479	1,884	1,790	1,018	312	37	.....	6,860	214
Sherbrooke.....	.....	19	19	207	250	240	125	19	.....	.....	879	209
St. Hyacinthe.....	.....	17	32	236	236	295	174	66	15	1	1,172	67
Three Rivers.....	.....	8	15	294	472	407	256	80	10	.....	1,542	80
Quebec.....	4	1,085	1,831	6,151	7,480	9,205	8,180	2,534	253	44	36,867	4,355
St. John, N.B.....	.....	110	135	513	731	722	656	53	3	.....	2,923	4,692
Halifax.....	3	9	7	114	182	106	37	4	3	1	466	339
Pictou.....	.....	1	1	139	280	215	84	.....	.....	.....	720	238
Nova Scotia.....	3	10	8	253	462	321	121	4	3	1	1,186	577
Charlottetown, P.E.I.....	.....	.....	.....	1	8	45	25	1	.....	.....	80	15
Winnipeg, Man.....	85	.....	1	1,580	1,550	2,469	1,514	90	3	.....	7,292	1,927
Regina.....	.....	.....	.....	18	16	5	7	.....	.....	.....	46	952
Saskatoon.....	.....	.....	.....	75	46	30	16	3	.....	.....	170	139
Saskatchewan.....	.....	.....	.....	93	62	35	23	3	.....	.....	216	1,091
Calgary, Alta.....	.....	.....	.....	1	1	.....	2	.....	.....	.....	4	135
Nelson.....	.....	.....	.....	22	21	14	4	1	.....	.....	62	22
Vanconver.....	.....	.....	1	1	.....	2	4	1	.....	.....	9	16
British Columbia.....	.....	.....	1	23	21	16	8	2	.....	.....	71	38
Dawson, Yukon.....	.....	.....	.....	2	2	2	2	.....	.....	.....	8	2
Grand total.	1,452	4,793	5,364	20,471	19,884	32,468	24,180	4,242	273	88	114,037	31,186

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**D**

Weighing Machines of each Denomination presented for verification, in each Fiscal Year ended March 31, 1916.

Balances.

With Equal Arms.				Steel Yards with Divided Arms.				Weigh Bridges or Platform Scales.						Total.	Miscellaneous.
25 lbs. and under.	26 lbs. to 50 lbs.	51 lbs. to 100 lbs.	101 lbs. and upwards.	500 lbs. and under.	501 lbs. to 1,000 lbs.	1,001 lbs. to 2,000 lbs.	2,001 lbs. and upwards.	250 lbs. and under.	251 lbs. to 500 lbs.	501 lbs. to 2,000 lbs.	2,001 lbs. to 4,000 lbs.	4,001 lbs. to 6,000 lbs.	6,001 lbs. and upwards.		
186	112	32	....	39	3	2	....	442	97	613	131	24	281	1,962	375
1,775	3	....	22	3,495	33	2	....	5,135	138	1,446	293	126	408	12,876	468
237	1	....	....	31	2	....	....	525	121	1,265	55	38	144	2,369	386
564	4	1	1	259	3	....	....	269	117	1,737	290	96	696	4,397	2,819
605	6	....	....	25	1	1	....	620	137	823	61	57	215	2,551	4,284
905	19	5	....	1,191	7	25	....	4,291	101	1,302	216	69	390	8,521	2,073
4,272	145	38	23	5,040	49	30	....	11,652	711	7,126	1,046	410	2,134	32,676	10,405
2,097	340	4	3	717	12	3	2	2,044	1,154	2,096	225	116	424	9,237	1,917
839	184	2	13	242	16	4	3	893	749	779	59	67	96	3,997	650
830	218	49	15	269	8	5	8	1,154	713	1,001	128	158	219	7,826	313
234	....	....	....	88	....	1	....	432	305	20	57	83	15	1,233	101
395	2	....	....	44	....	....	....	459	469	666	15	21	46	2,117	202
4,486	744	55	31	1,360	46	13	13	7,982	3,389	4,562	484	445	800	24,410	3,083
434	1	....	....	33	1	....	....	341	155	313	36	13	103	1,430	318
176	3	....	....	7	1	....	....	232	52	149	14	14	95	743	249
162	3	....	3	28	....	....	....	259	89	138	15	12	133	842	206
338	6	....	3	35	1	....	....	491	141	287	29	26	228	1,585	465
56	1	....	....	22	1	....	....	64	21	115	4	9	19	312	24
485	11	....	25	204	2	1	....	505	168	730	251	467	1,076	4,017	1,825
37	....	....	....	91	7	1	....	77	7	99	21	149	306	795	150
80	....	....	....	312	4	....	....	373	12	246	34	833	1,836	3,796	921
117	....	....	....	493	11	1	....	450	19	345	115	982	2,142	4,788	577
62	2	1	9	15	11	4	....	223	14	290	20	111	475	1,246	411
98	....	....	....	41	12	26	1	250	17	205	19	7	82	740	314
76	....	1	4	20	31	37	21	318	32	422	53	18	96	1,140	1,011
174	....	1	4	61	43	57	22	585	49	654	72	25	172	1,880	1,380
10,424	910	95	95	7,473	165	106	35	22,383	4,667	14,407	2,667	2,488	7,149	72,149	18,028

J. U. VINCENT,  
Deputy Minister.

## APPENDIX

RETURN showing the Number of Dominion Measures of Capacity, Balances and during the Fiscal Year

Inspection Division.	Measures of Capacity.											
	Dominion.											
	Bushel.	Half bushel.	Peck.	Gallon.	Half gallon.	Quart.	Pint.	Half pint.	Gill.	Half gill.	Total number.	Miscellaneous.
Belleville.....	5	7	33	220	221	289	149	3	2		929	2,785
Hamilton.....	497	307	853	1,475	1,089	2,049	1,599	413	11	1	8,294	849
Kingston.....	6	362	227	570	782	840	588	75	1		3,451	137
London.....	420	924	557	3,597	4,352	8,060	5,761	522			24,193	4,606
Ottawa.....		2	18	233	451	531	249	39			1,523	2,561
Toronto.....	439	1,989	1,720	5,756	3,399	7,883	5,302	503			26,991	7,151
Ontario.....	1,367	3,591	3,408	11,851	10,294	19,652	13,648	1,555	14	1	65,581	18,989
Montreal.....	4	918	1,548	3,934	4,638	6,473	6,607	2,057	191	43	26,413	3,771
Quebec.....		123	217	1,475	1,881	1,786	1,918	312	37		6,849	210
Sherbrooke.....		19	19	297	250	240	125	19			879	207
St. Hyacinthe.....		17	32	236	336	295	174	66	15	1	1,172	38
Three Rivers.....		8	15	294	472	407	256	80	10		1,542	80
Quebec.....	4	1,085	1,831	6,146	7,577	9,291	8,180	2,534	253	44	36,855	4,306
St. John, N.B.....		110	135	513	731	722	656	53	3		2,925	4,689
Halifax.....	3	9	7	114	182	106	37	4	3	1	446	337
Pictou.....		1	1	139	280	215	84				729	218
Nova Scotia.....	3	10	8	253	462	321	121	4	3	1	1,186	555
Charlottetown, P.E.I.....				1	8	45	25	1			80	15
Winnipeg, Man.....	85		1	1,580	1,550	2,466	1,514	90	3		7,289	1,891
Regina.....				18	15	5	7				45	944
Saskatoon.....				75	46	30	16	3			170	132
Saskatchewan.....				93	61	35	23	3			215	1,076
Calgary, Alta.....				1	1		2				4	126
Nelson.....				22	21	14	4	1			62	22
Vancouver.....				1	1	2	4	1			9	16
British Columbia.....				1	23	21	16	8	2		71	38
Dawson, Yukon.....				2	2	2	2				8	2
Totals.....	1,459	4,796	5,384	20,463	29,707	32,460	24,179	4,242	276	40	114,012	39,787

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D—Continued.

Weighing Machines of each Denomination verified, in each Inspection Division, ended March 31, 1916.

Balances.													Total.	Miscellaneous.	
With equal arms.				Steel yards with divided arms.				Weigh Bridges or Platform Scales.							
25 lbs. and under.	26 lbs. to 50 lbs.	51 lbs. to 100 lbs.	101 lbs. and upwards.	500 lbs. and under.	501 lbs. to 1,000 lbs.	1,001 lbs. to 2,000 lbs.	2,001 lbs. and upwards.	250 lbs. and under.	251 lbs. to 500 lbs.	501 lbs. to 2,000 lbs.	2,001 lbs. to 4,000 lbs.	4,001 lbs. to 6,000 lbs.	6,001 lbs. and upwards.		
186	111	32	...	36	3	2	....	437	95	604	129	22	274	1,931	373
1,692	3	...	22	3,154	33	2	....	5,076	116	1,241	254	111	278	12,282	309
236	1	...	...	31	2	...	....	724	112	1,167	54	34	146	2,306	385
558	4	1	1	254	3	...	....	605	113	1,666	28	89	629	4,203	2,759
596	6	...	...	24	1	1	....	612	133	804	66	55	211	2,501	4,260
874	19	5	...	1,161	7	25	....	4,253	89	1,251	199	47	377	8,310	1,984
4,142	144	38	23	4,963	49	39	...	11,512	658	6,733	976	356	1,969	31,533	10,160
2,066	332	4	3	703	12	3	2	1,996	1,107	1,972	213	107	466	8,914	1,870
862	181	2	13	237	24	4	3	879	734	757	57	63	89	3,907	541
879	218	49	15	267	8	5	8	4,149	710	993	127	157	217	7,802	312
229	...	...	...	84	...	1	...	406	274	19	52	77	15	1,157	93
363	2	...	...	59	...	...	...	452	457	654	13	20	46	2,676	195
4,429	733	55	31	1,330	44	13	13	7,876	3,282	4,395	462	424	767	23,854	2,901
436	1	...	...	31	1	...	...	338	150	303	31	12	97	1,401	316
176	3	...	...	7	1	...	...	232	52	146	14	14	88	733	247
161	3	...	3	28	...	...	...	258	89	137	14	10	131	833	206
337	6	...	3	35	1	...	...	490	141	283	27	21	219	1,786	413
56	1	...	...	22	1	...	...	64	21	115	4	3	19	312	24
180	11	...	23	197	2	1	...	580	160	700	243	49	1,002	3,836	1,060
35	...	...	...	91	7	1	...	63	6	79	14	13	257	60	130
77	...	...	...	294	4	...	...	363	12	27	80	700	1,362	8,126	205
112	...	...	...	385	11	1	...	426	18	306	103	838	1,099	1,836	731
62	2	1	10	14	14	4	...	214	14	283	29	168	498	1,175	366
98	...	...	...	41	19	20	1	270	17	298	19	7	82	720	310
76	1	1	...	26	31	37	21	331	29	113	62	18	80	1,370	1,002
174	1	4	...	64	44	57	27	781	49	641	71	35	174	1,876	1,430
10,228	898	96	93	7,038	163	106	35	22,681	4,497	13,714	1,946	2,316	6,222	68,466	13,691

J. U. VINCENT  
Deputy Minister.

## APPENDIX

RETURN showing the Number of Dominion Measures of Capacity, Balances and during the Fiscal Year

Inspection Division.	Measures of Capacity.											
	Dominion.											
	Bushel.	Half Bushel.	Peck.	Gallon.	Half Gallon.	Quart.	Pint.	Half Pint.	Gill.	Half Gill.	Total Number.	Miscellaneous.
Belleville .....												21
Hamilton .....				12	1	1	1				5	
Kingston .....												6
London .....				1	3						4	234
Ottawa .....												4
Toronto .....												
Ontario .....				3	4	1	1				9	265
Montreal .....				1							1	14
Quebec .....				4	3	4					11	4
Sherbrooke .....												2
St. Hyacinthe .....												29
Three Rivers .....												
Quebec .....				5	3	4					12	49
St. John, N.B. ....												3
Halifax .....												2
Pictou .....												20
Nova Scotia .....												22
Charlottetown, P.E.I. ....												
Winnipeg, Man. ....						3					3	36
Regina .....					1						1	8
Saskatoon .....												7
Saskatchewan .....					1						1	15
Calgary, Alberta .....												9
Nelson .....												
Vancouver .....												
British Columbia .....												
Dawson, Yukon .....												
Totals .....				8	8	8	1				25	399

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D—Concluded.

Weighing Machines of each Denomination Rejected in each Inspection Division, ended March 31, 1916.

Balances.															
With Equal Arms.				Steel Yards with Divided Arms.				Weigh Bridges or Platform Scales.						Total.	Miscellaneous.
25 lbs. and under.	26 lbs. to 50 lbs.	51 lbs. to 100 lbs.	101 lbs. and upwards.	500 lbs. and under.	501 lbs. to 1,000 lbs.	1,001 lbs. to 2,000 lbs.	2,001 lbs. and upwards.	250 lbs. and under.	251 lbs. to 500 lbs.	501 lbs. to 2,000 lbs.	2,001 lbs. to 4,000 lbs.	4,001 lbs. to 6,000 lbs.	6,001 lbs. and upwards.		
.....	1	.....	.....	3	.....	.....	.....	5	2	9	2	2	7	31	2
83	.....	.....	.....	41	.....	.....	.....	59	22	205	39	15	130	594	69
1	.....	.....	.....	.....	.....	.....	.....	6	9	38	1	4	4	63	1
5	1	.....	.....	5	.....	.....	.....	24	4	71	10	7	67	194	60
9	.....	.....	.....	1	.....	.....	.....	8	4	19	1	4	4	50	24
31	.....	.....	.....	27	.....	.....	.....	38	12	51	17	22	13	211	89
129	2	.....	.....	77	.....	.....	.....	140	53	393	70	54	225	1,143	245
31	8	.....	.....	14	.....	.....	.....	54	47	124	12	9	24	323	67
18	3	.....	.....	5	2	.....	.....	14	15	22	2	4	7	92	9
1	.....	.....	.....	2	.....	.....	.....	5	4	8	1	1	2	24	1
5	.....	.....	.....	4	.....	.....	.....	26	29	1	5	6	.....	76	8
2	.....	.....	.....	5	.....	.....	.....	7	12	12	2	1	.....	41	7
57	11	.....	.....	30	2	.....	.....	106	107	167	22	21	33	556	92
.....	.....	.....	.....	2	.....	.....	.....	3	5	10	2	1	6	29	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	7	10	2
1	.....	.....	.....	.....	.....	.....	.....	1	.....	1	2	2	2	9	.....
1	.....	.....	.....	.....	.....	.....	.....	1	.....	4	2	2	9	19	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	.....	.....	2	7	.....	.....	.....	15	8	30	8	8	73	156	126
2	.....	.....	.....	.....	.....	.....	.....	14	1	20	7	17	66	130	17
1	.....	.....	.....	18	.....	.....	.....	10	19	19	5	67	474	894	29
3	.....	.....	.....	18	.....	.....	.....	24	1	39	12	84	543	724	46
.....	.....	.....	.....	1	.....	.....	.....	9	.....	16	.....	5	37	66	25
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	4	.....	9	1	.....	1	12	8
.....	.....	.....	.....	.....	.....	.....	.....	4	.....	9	1	.....	1	15	9
195	13	.....	2	136	2	.....	.....	302	174	608	117	175	925	2,719	467

J. U. VINCENT,  
Deputy Minister.

## APPENDIX E.

STATEMENT of Gas Inspection Expenditures and Revenues for the Fiscal Year ended March 31, 1916.

Districts.	Inspectors.	Expenditures.						Revenues.
		Salaries.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	Total.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Belleville .....	Fraser, H. ....	99 96	81 00	200 00	272 25	75 41	728 65	1,612 00
Hamilton .....	Lutz, H. ....	3,949 92	958 00	120 00	570 15	186 21	5,784 28	6,895 45
London .....	Nash, A. F. ....	5,493 68	84 00	.....	557 55	128 94	6,264 17	7,546 15
Ottawa .....	Morrison, A. C. ..	4,599 72	3,033 02	429 90	.....	54 95	8,117 59	2,635 65
Toronto .....	Stiver, J. L. ....	11,724 48	180 00	165 00	269 80	263 69	12,602 97	11,347 90
	Ontario .....	25,867 76	4,336 02	914 90	1,669 75	709 23	33,497 66	30,037 15
Montreal .....	Aubin, A. ....	7,899 84	66 00	400 00	58 20	107 67	8,531 71	7,470 45
Quebec .....	Cantin, J. A., Act'g	499 92	.....	.....	.....	.....	499 92	870 30
Sherbrooke .....	Simpson, A. F. ....	499 92	.....	.....	.....	.....	499 92	186 10
St. Hyacinthe .....	Aubin, A., Act'g ..	.....	.....	.....	.....	.....	.....	110 60
	Quebec .....	8,899 68	66 00	400 00	58 20	107 67	9,531 55	8,637 45
Fredericton .....	Wilson, J. E., Act'g	99 96	.....	.....	.....	.....	99 96	.....
St. John .....	Wilson, J. E. ....	1,938 60	20 00	.....	179 40	43 10	2,231 10	614 90
	New Brunswick ..	2,088 56	20 00	.....	179 40	43 10	2,331 06	614 90
Halifax, N.S. ....	Toale, John. ....	2,399 88	.....	507 36	.....	.....	2,907 24	560 75
Charlottetown, P.E.I. ....	Bell, J. H. ....	499 92	.....	.....	.....	.....	499 92	75 10
Winnipeg, Man .....	Hamilton, R. ....	6,749 88	.....	.....	.....	155 33	6,905 21	2,567 45
Calgary, Alb. ....	Kyle, W. P. ....	.....	61 32	.....	153 65	117 16	332 13	1,178 85
Vancouver .....	Stott, John. ....	.....	.....	.....	.....	27 60	27 00	1,804 75
Victoria .....	Dresser, F. ....	1,499 88	.....	.....	10 30	.....	1,510 18	558 40
	British Columbia ..	1,499 88	.....	.....	10 30	27 00	1,537 18	2,363 15
	Inspector of Eastern Dominion ..	.....	.....	.....	407 30	22 76	430 06	.....
	Inspector for Western Dominion ..	.....	166 66	.....	485 30	83 58	735 54	.....
	Totals for Inspectors ..	48,005 56	4,650 00	1,822 26	2,963 90	1,265 83	58,707 55	46,034 80
General Contingencies .....	.....	.....	.....	.....	.....	1,991 09	1,991 09	.....
Printing .....	.....	.....	.....	.....	.....	4,458 04	4,458 04	.....
Stationery .....	.....	.....	.....	.....	.....	1,098 90	1,098 90	.....
Grand Totals .....	.....	48,005 56	4,650 00	1,822 26	2,963 90	8,813 86	66,255 58	46,031 80



APPENDIX F.

7 GEORGE V, A. 1917

**APPENDIX**

## RETURN of the Coal and Water Gas Companies registered and

NOTE: Calorimetric Regulations

Company.			
Location.	Name.	Kind of Gas.	Number of Meters.
Barrie, Ont.....	Barrie Gas Co .....	Carburetted Water Gas	631
		"	
		"	
		"	
Belleville, Ont.....	Corporation of Belleville. ....	Carburetted Water Gas	1405
		"	
		C. W. G. and Coal Gas..	
		"	
		"	
		"	
Berlin, Ont.....	Corporation of Berlin. ....	Coal Gas.	2827
		"	
		"	
		"	
		"	
		"	
		"	
		"	
Brockville, Ont.....	Corporation of Brockville....	Carburetted Water Gas	1627
		"	
		"	
		"	
		"	
		"	
		"	
Charlottetown, P.E.I....	Charlottetown Light and Power Co .....	Coal Gas.	96
		"	
		"	
		"	
		"	
		"	
		"	
Cobourg, Ont .....	Cobourg Gas Light and Water Co.....	Coal Gas.	423
		"	
		"	
		"	
		"	
		"	
		"	
		"	

\* Testing apparatus not installed till November.

† Testing apparatus not installed till October.

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## F.

Calorimetric Tests made during the Fiscal Year ended March 31, 1916.

not established till July 1, 1915.

Calorimetric Values—Standard 520 British Thermal Units.

Month.	Number of Tests.		Highest B.T.U.	Lowest B.T.U.	Average B.T.U.		Readings below Standard.
	Prescribed.	Made.			Monthly.	Yearly.	
Nov., 1915*	2	2	619	580	600		0
Dec., 1915..	3	3	596	582	589		0
Jan., 1916.	2	2	576	544	570		0
Feb., 1916	2	2	607	595	601		0
Mar., 1916..	2	3	589	582	586	589	0
Oct., 1915†	4	4	536	496	520		486
Nov., 1915..	4	4	586	504	538		504
Dec., 1915..	5	5	517	513	535		513
Jan., 1916.	4	4	533	523	526		0
Feb., 1916..	4	4	548	480	518		480
Mar., 1916.	5	5	540	521	532	528	0
July, 1915..	8	8	566	539	553		0
Aug., 1915..	8	8	602	535	564		0
Sept., 1915..	10	10	567	520	540		0
Oct., 1915..	8	8	552	525	529		0
Nov., 1915	8	8	589	529	537		0
Dec., 1915	10	10	602	523	535		0
Jan., 1916	8	8	570	523	535		0
Feb., 1916	8	8	552	524	539		0
Mar., 1916.	10	10	544	521	531	541	0
July 1915	4	4	620	598	609		0
Aug., 1915	4	4	634	589	607		0
Sept., 1915	5	5	607	596	600		0
Oct., 1915	4	4	630	573	604		0
Nov., 1915	4	4	595	571	581		0
Dec., 1915	5	5	589	564	581		0
Jan., 1916	4	4	582	559	575		0
Feb., 1916	4	4	594	523	561		0
Mar., 1916	5	5	540	544	548	584	0
July, 1915	2	2	764	746	755		0
Aug., 1915	2	2	705	685	695		0
Sept., 1915	2	2	710	698	704		0
Oct., 1915	2	2	688	664	676		0
Nov., 1915	2	2	714	704	709		0
Dec., 1915	3	3	714	685	705		0
Jan., 1916	2	2	731	693	713		0
Feb., 1916	2	2	722	711	717		0
Mar., 1916	2	2	710	703	707	710	0
July, 1915	2	2	676	667	671		0
Aug., 1915	2	2	613	598	606		0
Sept., 1915	2	2	567	567	567		0
Oct., 1915	2	2	579	573	574		0
Nov., 1915	2	2	605	594	599		0
Dec., 1915	3	3	637	617	626		0
Jan., 1916	2	2	638	631	635		0
Feb., 1916	2	2	628	626	627		0
Mar., 1916	2	2	609	605	607	607	0

7 GEORGE V, A. 1917

## RETURN of the Coal and Water Gas Companies registered and

NOTE:—Calorimetric Regulations

Company.			
Location.	Name.	Kind of Gas.	Number of Meters.
Cornwall, Ont.....	Stormont Electric Light and Power Co.....	Carburetted Water Gas	306
		"	
		"	
		"	
		"	
Deseronto, Ont....	Corporation of Deseronto.....	Carburetted Water Gas	134
		"	
		"	
		"	
		"	
Guelph, Ont.....	Corporation of Guelph.....	C.W.G. and Coal Gas..	2925
		"	
		Coal Gas.	
		"	
		"	
Halifax, N.S.....	Halifax Electric Tramway Co.....	Coal Gas.	1457
		"	
		"	
		"	
		"	
Hamilton, Ont. ....	United Gas & Fuel Co.....	Coal Gas	552
		"	
		"	
		"	
		"	
Kingston, Ont.....	Corporation of Kingston. ....	Carburetted Water Gas	2723
		"	
		"	
		"	
		"	

† Testing apparatus not installed till August.

## SESSIONAL PAPER No. 13

## Calorimetric Tests made during the Fiscal Year ended March 31, 1916.

not established till July 1, 1915.

## Calorimetric Values—Standard 520 British Thermal Units.

Month.	Number of Tests.		Highest B. T. U.	Lowest B. T. U.	Average B. T. U.		Readings below Standard.
	Prescribed.	Made.			Monthly.	Yearly.	
Aug., 1915††	2	2	635	531	583		0
Sept., 1915..	2	2	624	597	611		0
Oct., 1915..	2	2	616	559	588		0
Nov., 1915..	2	2	555	540	548		0
Dec., 1915..	3	2	582	563	575		0
Jan., 1916..	2	2	565	555	560		0
Feb., 1916..	2	2	562	544	553		0
Mar., 1916..	2	2	637	602	620	580	0
Aug., 1915††	2	2	683	617	650		0
Sept., 1915..	2	3	690	574	637		0
Oct., 1915..	2	2	659	659	659		0
Nov., 1915..	2	2	655	595	625		0
Dec., 1915..	3	2	620	552	586		0
Jan., 1916..	2	2	654	620	637		0
Feb., 1916..	2	2	599	551	575		0
Mar., 1916..	2	3	644	570	601	621	0
July, 1915..	8	6	630	577	609		0
Aug., 1915..	8	10	632	564	590		0
Sept., 1915..	10	10	683	595	622		0
Oct., 1915..	8	8	661	612	636		0
Nov., 1915..	8	8	632	596	623		0
Dec., 1915..	10	10	638	576	610		0
Jan., 1916..	8	8	637	576	611		0
Feb., 1916..	8	8	626	586	606		0
Mar., 1916..	10	10	637	605	620	614	0
July, 1915..	4	4	578	574	576		0
Aug., 1915..	4	4	578	570	576		0
Sept., 1915..	5	5	597	574	583		0
Oct., 1915..	4	4	579	565	572		0
Nov., 1915..	4	4	585	566	578		0
Dec., 1915..	5	5	597	583	589		0
Jan., 1916..	4	4	600	564	588		0
Feb., 1916..	4	4	613	564	576		0
Mar., 1916..	5	4	578	550	564	578	0
July, 1915..	2	2	540	522	531		0
Aug., 1915..	2	2	538	525	532		0
Sept., 1915..	2	3	540	520	530		0
Oct., 1915..	2	2	558	535	547		0
Nov., 1915..	2	2	534	534	534		0
Dec., 1915..	3	2	525	520	523		0
Jan., 1916..	2	2	534	531	533		0
Feb., 1916..	2	2	540	530	535		0
Mar., 1916..	2	3	534	530	533	533	0
July, 1915..	8	8	650	604	637		0
Aug., 1915..	8	8	684	615	647		0
Sept., 1915..	10	10	700	606	647		0
Oct., 1915..	8	8	682	598	636		0
Nov., 1915..	8	8	620	586	604		0
Dec., 1915..	10	10	615	595	607		0
Jan., 1916..	8	8	642	587	610		0
Feb., 1916..	8	8	614	590	605		0
Mar., 1916..	10	10	611	577	599	621	0

7 GEORGE V, A. 1917

RETURN of the Coal and Water Gas Companies registered and

NOTE:—Calorimetric Regulations

Company.			
Location.	Name.	Kind of Gas.	Number of Meters.
London, Ont.....	City Gas Co.....	C. W.G. and Coal Gas.	9269
		"	
		"	
		"	
		"	
Montreal, P.Q.....	Montreal Light Heat & Power Co.....	C.W.G. and Coal Gas..	98264
		"	
		"	
		"	
		"	
Nanaimo, B.C.....	Nanaimo City Gas Co.....	Coal Gas	450
		"	
		"	
		"	
		"	
Napanee, Ont.....	Napanee Gas Co.....	Coal Gas	388
		"	
		"	
		"	
		"	
New Westminster, B.C.	New Westminster Gas Co.....	Coal Gas	382
		"	
		"	
		"	
		"	
Oshawa, Ont.....	City Gas Co.....	Carburetted Water Gas	987
		"	
		"	
		"	
		"	

SESSIONAL PAPER No. 13

Calorimetric Tests made during the Fiscal Year ended March 31, 1916.

not established till July 1, 1915.

Calorimetric Values—Standard 520 British Thermal Units.

Month.	Number of Tests.		Highest B. T. U.	Lowest B. T. U.	Average B. T. U.		Readings below Standard.
	Prescribed.	Made.			Monthly.	Yearly.	
July, 1915..	12	12	573	545	561		0
Aug., 1915..	12	12	594	542	568		0
Sept., 1915..	15	12	617	571	594		0
Oct., 1915..	12	15	619	557	560		0
Nov., 1915..	12	12	622	547	570		0
Dec., 1915..	15	12	631	543	572		0
Jan., 1916..	12	15	593	542	563		0
Feb., 1916..	12	12	607	550	578		0
Mar., 1916..	15	15	592	533	563	570	0
July, 1915..	26	26	543	522	532		0
Aug., 1915..	26	26	562	521	542		0
Sept., 1915..	25	25	540	521	530		0
Oct., 1915..	25	25	544	521	532		0
Nov., 1915..	26	26	551	522	537		0
Dec., 1915..	26	26	541	522	531		0
Jan., 1916..	25	25	533	520	527		0
Feb., 1916..	25	25	538	521	529		0
Mar., 1916..	26	27	562	522	542	534	0
July, 1915	2	1	554	551	554		0
Aug., 1915	2	2	571	559	569		0
Sept., 1915	2	2	567	534	551		0
Oct., 1915	2	2	561	532	547		0
Nov., 1915	2	2	487	573	580		0
Dec., 1915	3	2	593	579	586		0
Jan., 1916	2	2	565	557	561		0
Feb., 1916	2	2	579	573	576		0
Mar., 1916	2	2	579	530	555	563	0
July, 1915	2	2	593	543	568		0
Aug., 1915	2	2	580	546	568		0
Sept., 1915	2	3	559	543	553		0
Oct., 1915	2	2	554	551	553		0
Nov., 1915	2	2	552	510	552		510
Dec., 1915	3	2	527	511	521		511
Jan., 1916	2	2	579	504	542		504
Feb., 1916	2	2	533	523	528		0
Mar., 1916	2	3	545	512	529	517	512
July, 1915	2	2	610	615	611		0
Aug., 1915	2	2	615	581	598		0
Sept., 1915	2	2	631	624	628		0
Oct., 1915	2	2	646	620	633		0
Nov., 1915	2	2	655	634	646		0
Dec., 1915	3	2	674	633	644		0
Jan., 1916	2	2	631	578	606		0
Feb., 1916	2	2	608	608	608		0
Mar., 1916	2	2	610	641	645	620	0
July, 1915	2	2	587	532	559		0
Aug., 1915	2	2	534	485	510		485
Sept., 1915	2	4	580	528	554		0
Oct., 1915	2	2	567	551	559		0
Nov., 1915	2	2	588	578	583		0
Dec., 1915	3	2	537	626	582		0
Jan., 1916	2	2	595	644	620		0
Feb., 1916	2	2	531	517	524		0
Mar., 1916	2	3	544	497	520	509	0

7 GEORGE V, A. 1917

## RETURN of the Coal and Water Gas Companies registered and

NOTE: Calorimetric Regulations

Company.			
Location.	Name.	Kind of Gas.	Number of Meters.
Ottawa, Ont.....	Ottawa Gas Co.....	Coal Gas	11349
		"	
		"	
		"	
		"	
*Owen Sound, Ont.....	Corporation of Owen Sound.....	Coal Gas.	1024
		"	
		"	
		"	
		"	
Peterboro, Ont.....	Peterboro Light and Power Co.....	Carburetted Water Gas	1889
		"	
		"	
		"	
		"	
Port Hope, Ont.....	Port Hope Gas Co.....	Coal Gas.	407
		"	
		"	
		"	
		"	
Quebec, P.Q.....	Quebec Railway Light, Heat and Power Co.	Carburetted Water Gas	4937
		"	
		"	
		"	
		"	
St. Catharines, Ont.....	Corporation of St. Catharines.....	Coal Gas.	483
		"	
		"	
		"	
		"	

\* Testing apparatus not installed till October.



SESSIONAL PAPER No. 13

Calorimetric Tests made during the Fiscal Year ended March 31, 1916.

not established till July 1, 1915.

Calorimetric Values—Standard 520 British Thermals Units.

Month.	Number of Tests.		Highest B.T.U.	Lowest B.T.U.	Average B.T.U.		Readings below Standard.
	Prescribed.	Made.			Monthly.	Yearly.	
July, 1915..	26	26	545	521	531		0
Aug., 1915..	26	26	577	508	543		508-515
Sept., 1915..	25	27	561	531	551		0
Oct., 1915..	25	23	561	523	539		0
Nov., 1915..	25	23	578	522	548		0
Dec., 1915..	26	27	572	520	542		0
Jan., 1916..	25	23	564	514	534		514-517
Feb., 1916..	25	24	555	523	538		0
Mar., 1916	26	23	558	524	540	541	0
July, 1915..	4	2	661	635	648		0
Aug., 1915..	4	5	652	589	610		0
Sept., 1915..	5	5	610	598	600		0
Oct., 1915..	4	4	647	589	607		0
Nov., 1915..	4	4	603	551	578		0
Dec., 1915..	5	5	611	577	597		0
Jan., 1916..	4	4	627	569	592		0
Feb., 1916..	4	4	630	581	609		0
Mar., 1916..	5	5	605	567	587	603	0
July, 1915..	4	2	582	553	568		0
Aug., 1915..	4	4	621	560	591		0
Sept., 1915..	5	5	634	544	596		0
Oct., 1915..	4	4	572	546	534		0
Nov., 1915..	4	4	557	528	544		0.
Dec., 1915..	5	5	600	522	551		0
Jan., 1916..	4	4	560	531	549		0
Feb., 1916..	4	4	574	525	547		0
Mar., 1916..	5	5	552	519	537	557	519
Oct., 1915*	2	1	628	628	628		0
Nov., 1915..	2	2	691	627	659		0
Dec., 1915..	3	2	638	589	614		0
Jan., 1916..	2	2	638	632	635		0
Feb., 1916..	2	2	626	611	619		0
Mar., 1916..	2	3	656	634	646	633	0
July, 1915..	8	9	595	567	578		0
Aug., 1915..	8	8	584	566	575		0
Sept., 1915..	10	9	567	549	568		0
Oct., 1915..	8	8	574	541	561		0
Nov., 1915..	8	9	576	550	563		0
Dec., 1915..	10	9	587	550	571		0
Jan., 1916..	8	8	598	542	570		0
Feb., 1916..	8	8	587	556	572		0
Mar., 1916..	10	10	596	567	581	570	0
July, 1915..	2	2	661	639	660		0
Aug., 1915..	2	2	661	641	651		0
Sept., 1915..	2	3	615	586	600		0
Oct., 1915..	2	2	666	656	666		0
Nov., 1915..	2	2	653	642	648		0
Dec., 1915..	3	2	638	627	633		0
Jan., 1916..	2	2	640	636	638		0
Feb., 1916..	2	2	644	621	633		0
Mar., 1916..	2	3	659	637	645	591	0

7 GEORGE V, A. 1917

## RETURN of the Coal and Water Gas Companies registered and

NOTE :—Calorimetric Regulations

Company.			
Location.	Name.	Kind of Gas.	Number of Meters.
St. Hyacinthe, P.Q. ....	La Cie. de Gaz, Electricité et Pouvoir .....	Carburetted Water Gas	533
		"	
		"	
		"	
		"	
		"	
St. John, N.B. . . . . .	St. John Railway Co. . . . . .	Coal Gas.	1841
		"	
		"	
		"	
		"	
		"	
St. Thomas, Ont. ....	Corporation of St. Thomas .....	Coal Gas.	3204
		"	
		"	
		"	
		"	
		"	
		"	
Sherbrooke, P.Q. ....	Corporation of Sherbrooke .....	Carburetted Water Gas	780
		"	
		"	
		"	
		"	
		"	
		"	
Stratford, Ont. ....	Stratford Gas Co. ....	Coal Gas.	1353
		"	
		"	
		"	
		"	
		"	
		"	
		"	
Toronto, Ont. ....	Consumers Gas Co. ....	C.W.G. and Coal Gas.	101056
		"	
		"	
		"	
		"	
		"	

SESSIONAL PAPER No. 13

Calorimetric Tests made during the Fiscal Year ended March 31, 1916.

not established till July 1, 1915.

Calorimetric Values—Standard 520 British Thermal Units.							
Month.	Number of Tests.		Highest B.T.U.	Lowest B.T.U.	Average B.T.U.		Readings below Standard.
	Prescribed.	Made.			Monthly.	Yearly.	
July, 1915..	2	2	574	529	552		0
Aug., 1915..	2	2	560	524	542		0
Sept., 1915..	2	2	573	511	542		511
Oct., 1915..	2	2	563	529	541		0
Nov., 1915..	2	2	532	510	521		510
Dec., 1915..	3	2	529	518	524		518
Jan., 1916..	2	2	495	492	494		492-495
Feb., 1916..	2	2	531	527	529		0
Mar., 1916..	2	2	550	536	543	532	0
July, 1915..	4	4	640	592	621		0
Aug., 1915..	4	4	660	576	620		0
Sept., 1915..	5	4	590	575	580		0
Oct., 1915..	4	4	609	564	584		0
Nov., 1915..	4	4	597	557	572		0
Dec., 1915..	5	4	601	578	592		0
Jan., 1916..	4	4	576	562	569		0
Feb., 1916..	4	4	581	550	569		0
Mar., 1916..	5	4	606	585	596	589	0
July, 1915..	8	7	684	600	613		0
Aug., 1915..	8	8	674	615	636		0
Sept., 1915..	10	8	700	631	662		0
Oct., 1915..	8	10	653	613	634		0
Nov., 1915..	8	8	642	609	619		0
Dec., 1915..	10	8	625	578	607		0
Jan., 1916..	8	10	610	568	591		0
Feb., 1916..	8	8	604	573	612		0
Mar., 1916..	10	10	610	573	598	622	0
July, 1915..	2	2	688	662	675		0
Aug., 1915..	2	2	682	638	660		0
Sept., 1915..	2	2	687	622	655		0
Oct., 1915..	2	2	665	618	642		0
Nov., 1915..	2	2	628	618	650		0
Dec., 1915..	3	2	689	685	687		0
Jan., 1916..	2	2	589	585	587		0
Feb., 1916..	2	2	616	591	604		0
Mar., 1916..	2	2	616	587	602	629	0
July, 1915..	4	4	611	560	605		0
Aug., 1915..	4	4	650	602	626		0
Sept., 1915..	5	4	675	594	607		0
Oct., 1915..	4	5	668	585	629		0
Nov., 1915..	4	4	620	579	607		0
Dec., 1915..	5	4	645	568	605		0
Jan., 1916..	4	5	630	597	615		0
Feb., 1916..	4	4	624	596	615		0
Mar., 1916..	5	5	609	582	596		0
July, 1915..	26	26	594	554	574	617	0
Aug., 1915..	25	23	590	545	567		0
Sept., 1915..	25	23	580	548	561		0
Oct., 1915..	25	29	591	551	571		0
Nov., 1915..	26	24	611	574	598		0
Dec., 1915..	25	26	620	567	598		0
Jan., 1916..	26	24	604	560	580		0
Feb., 1916..	25	24	597	569	580		0
Mar., 1916..	26	24	610	569	595	671	0

7 GEORGE V, A. 1917

RETURN of the Coal and Water Gas Companies registered and

NOTE: Calorimetric Regulations

Company.			
Location.	Name.	Kind of Gas.	Number of Meters.
Vancouver, B.C.....	Vancouver Gas Co.....	Coal Gas.	14334
		"	
		"	
		"	
		"	
Victoria, B.C.....	Victoria Gas Co.....	Coal Gas.	3645
		"	
		"	
		"	
		"	
Waterloo, Ont.....	Corporation of Waterloo.....	Carburetted Water Gas	649
		"	
		"	
		"	
		"	
Winnipeg, Man .....	Winnipeg Electric Railway Co. ....	Coal Gas.	18009
		"	
		"	
		"	
		"	
Yarmouth, N.S.....	Yarmouth Gas Light Co .....	Coal Gas.	275
		"	
		"	
		"	
		"	

## SESSIONAL PAPER No. 13

## Calorimetric Tests made during the Fiscal Year ended March 31, 1916.

not established till July 1, 1915.

## Calorimetric Values—Standard 590 British Thermal Units.

Month.	Number of Tests.		Highest B.T.U.	Lowest B.T.U.	Average B.T.U.		Readings below Standard.
	Prescribed.	Made.			Monthly.	Yearly.	
July, 1915..	26	24	556	507	535		507
Aug., 1915..	25	24	575	520	541		0
Sept., 1915..	25	23	590	512	540		512
Oct., 1915..	25	23	583	533	535		0
Nov., 1915..	26	24	603	534	556		0
Dec., 1915..	26	28	587	527	550		0
Jan., 1916..	26	24	560	520	543		0
Feb., 1916..	25	24	567	463	540		463-512
Mar., 1916..	26	30	579	504	542	545	504
July, 1915..	8	9	555	523	535		0
Aug., 1915..	8	8	558	520	536		0
Sept., 1915..	10	9	549	524	537		0
Oct., 1915..	8	8	563	530	547		0
Nov., 1915..	8	8	561	530	544		0
Dec., 1915..	10	9	552	520	545		0
Jan., 1916..	8	8	578	526	539		0
Feb., 1916..	8	9	564	525	544		0
Mar., 1916..	10	8	551	529	530	541	0
July, 1915..	2	2	570	568	560		0
Aug., 1915..	2	2	572	570	571		0
Sept., 1915..	2	3	539	525	534		0
Oct., 1915..	2	2	569	560	560		0
Nov., 1915..	2	2	573	522	548		0
Dec., 1915..	3	2	601	551	576		0
Jan., 1916..	2	2	564	537	551		0
Feb., 1916..	2	2	571	506	564		0
Mar., 1916..	2	3	568	552	557	558	0
July, 1915..	26	20	598	527	560		0
Aug., 1915..	26	25	581	532	556		0
Sept., 1915..	25	27	591	537	560		0
Oct., 1915..	25	23	612	536	572		0
Nov., 1915..	26	24	596	541	560		0
Dec., 1915..	26	29	586	541	564		0
Jan., 1916..	25	23	565	520	543		0
Feb., 1916..	25	30	597	521	549		0
Mar., 1916..	26	26	576	528	563	567	0
July, 1915..	2	2	645	620	642		0
Aug., 1915..	2	2	618	605	607		0
Sept., 1915..	2	2	621	612	617		0
Oct., 1915..	2	2	623	628	631		0
Nov., 1915..	2	2	579	558	560		0
Dec., 1915..	3	3	670	563	616		0
Jan., 1916..	2	2	601	601	601		0
Feb., 1916..	2	2	606	591	599		0
Mar., 1916..	2	2	601	594	597	603	0

RETURN of the Natural Gas Companies Registered during the Fiscal Year  
ended March 31, 1916.

Location.	Name.	Number of Meters.
Brantford, Ont.....	Brantford Gas Co.....	4662
Bridgeburg, Ont.....	Provincial Natural Gas and Fuel Co.....	596
Cainsville, Ont.....	Standard Natural Gas Co.....	100
Caledonia, Ont.....	Port Colborne-Welland Natural Gas and Oil Co.....	451
Calgary, Alta.....	Calgary Gas Co.....	6646
Castor, Alta.....	Corporation of Castor.....	40
Chatham Ont.....	Chatham Gas Co.....	2939
Dellhi, Ont.....	Enterprise Gas Co.....	234
Dundas, Ont.....	Dominion Natural Gas Co.....	1000
Dunnville, Ont.....	Dominion Natural Gas Co.....	1775
Ford, Ont.....	Windsor Gas Co.....	275
Port Erie, Ont.....	Provincial Natural Gas & Fuel Co.....	440
Port Erie, Ont.....	Lake Shore Natural Gas Co.....	235
Galt, Ont.....	Dominion Natural Gas Co.....	1827
Haldimand County, Ont.....	Midfield Natural Gas Co.....	37
Hamilton, Ont.....	Manufacturers Natural Gas Co.....	149
Hamilton, Ont.....	United Gas and Fuel Co.....	15189
Ingersoll, Ont.....	Ingersoll Gas Light Co.....	868
Medicine Hat, Alta.....	Corporation of Medicine Hat.....	2560
Moncton, N.B.....	Moncton Tramways Electricity & Gas Co.....	2106
Niagara Falls, Ont.....	Provincial Natural Gas & Fuel Co.....	3235
Paris, Ont.....	Dominion Natural Gas Co.....	775
Port Colborne, Ont.....	Stirling Gas Co.....	934
Port Colborne, Ont.....	Welland County Lime Works Co.....	81
Port Dover, Ont.....	Norfolk Gas Co.....	396
Port Rowan, Ont.....	Port Rowan Natural Gas Co.....	189
Redcliff, Alta.....	Redcliff Light and Power Co.....	366
Ridgeway, Ont.....	Bertie Natural Gas Co.....	189
St. Catharines, Ont.....	United Gas Companies.....	2470
St. Williams, Ont.....	Port Rowan Natural Gas Co.....	100
Sandwich, Ont.....	Windsor Gas Co.....	280
Sandwich East, Ont.....	Windsor Gas Co.....	20
Sandwich West, Ont.....	Windsor Gas Co.....	100
Sarnia, Ont.....	Sarnia Gas & Electric Light Co.....	2946
Simcoe, Ont.....	Dominion Natural Gas Co.....	2100
Suffield, Alta.....	Southern Alberta Gas Co.....	52
Southern Alberta.....	Canadian Western Natural Gas, Light, Heat and Power Co.....	1119
Thorold, Ont.....	United Gas Companies.....	800
Walkerville, Ont.....	Windsor Gas Co.....	855
Welland, Ont.....	Industrial Natural Gas Co.....	101
Welland, Ont.....	Provincial Natural Gas & Fuel Co.....	2115
Windsor, Ont.....	Windsor Gas Co.....	4970
Woodstock, Ont.....	Woodstock Gas Light Co.....	1668

ORMOND HIGMAN,

*Chief Engineer, Gas and Electricity  
Inspection, Inland Revenue Dept.*

J. U. VINCENT,

*Deputy Minister.*

July 1, 1916.

SESSIONAL PAPER No. 13

**APPENDIX G.**

STATEMENT showing the number of Gas Meters Presented for Verification, Verified, Rejected and Verified after first Rejection, for the Fiscal Year ended March 31, 1916.

Districts.	Presented for Verification.	Kind.		Verified as coming within the error tolerated by law.			Rejected.			Verified after first Rejection.			Totals.	
		Wet.	Dry.	Correct.	Fast.	Slow.	Unsound.	Fast.	Slow.	Correct.	Fast.	Slow.	Verified.	Rejected.
Belleville .....	1,254	1,254	302	212	702	..	20	18	..	..	..	1,216	38	
Hamilton .....	9,231	9,231	5,110	729	3,392	..	..	..	..	..	..	9,231	..	
London .....	10,054	10,054	2,407	1,515	6,105	..	16	11	..	..	..	10,027	27	
Ottawa .....	3,019	3,019	652	279	2,087	..	..	1	..	..	..	3,018	1	
Toronto .....	16,292	16,292	5,469	1,378	9,344	..	55	46	..	..	..	16,191	101	
Montreal .....	10,913	10,913	2,292	3,421	5,065	23	81	31	..	..	..	10,778	135	
Quebec .....	804	804	496	31	277	..	..	..	..	..	..	804	..	
Sherbrooke .....	207	207	93	54	60	..	..	..	..	..	..	207	..	
St. Hyacinthe .....	79	79	19	14	43	..	1	2	..	..	..	76	3	
St. John .....	626	626	334	21	271	..	..	..	..	..	..	626	..	
Halifax .....	574	574	238	62	274	..	..	..	..	..	..	574	..	
Charlottetown .....	21	21	4	9	6	..	..	3	..	..	..	19	5	
Winnipeg .....	2,958	2,958	1,605	862	481	..	7	1	1	1	..	2,948	10	
Calgary .....	1,588	1,588	185	91	1,282	..	30	..	..	..	..	1,588	30	
Vancouver .....	1,592	1,592	460	485	631	1	7	8	..	..	..	1,576	16	
Victoria .....	388	388	113	134	141	..	..	..	..	..	..	388	..	
Totals .....	59,603	59,603	19,779	9,297	30,161	24	219	121	1	1	..	59,257	366	

## APPENDIX H.

STATEMENT of Electric Light Expenditures and Revenues for the Fiscal Year ended March 31, 1916.

Districts.	Inspectors.	Expenditures.						Revenues.
		Salaries.	Special Assistance.	Rent	Travelling Expenses.	Sundries.	Total.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Belleville.....	Fraser, H.....	1,930 45	36 00		365 40	14 88	2,346 73	2,186 35
Fort William..	Little, E.....	1,399 92	20 00		183 35	77 42	1,680 69	518 35
Hamilton.....	Lutz, H.....				539 80		539 80	5,476 95
London.....	Nash, A. F.....		75 00		553 85	125 70	754 55	6,715 35
Ottawa.....	Morrison, A. C.....				554 90		554 90	4,771 95
Sudbury.....	Code, A. G.....	386 09			307 80	40 86	734 69	565 95
Toronto.....	Stiver, J. L.....				845 75	51 89	897 64	12,448 30
Special.....	Kinsman, E. A.....	1,425 00					1,425 00	
	Ontario.....	5,141 46	131 00		3,350 85	310 69	8,944 00	32,683 20
Montreal.....	Aubin, A.....		1,766 02		148 95	35 75	1,950 72	11,219 20
Quebec.....	Cantin, J. A., Actg.....		2,276 63	600 00	214 80	265 56	3,356 99	1,907 65
Sherbrooke.....	Simpson, A. F.....				175 61	8 50	184 11	832 50
St. Hyacinthe..	Aubin, A. Actg.....	550 00			276 05	3 00	829 05	900 60
Three Rivers..	Olivier, A.....	499 92		195 00	173 95	15 80	884 67	956 00
	Quebec.....	1,049 92	4,042 65	795 00	989 36	328 61	7,205 54	15,815 95
St. John, N.B..	Wilson, J. E.....		12 00		265 12	26 49	303 61	1,582 65
Halifax, N.S..	Toale, John.....		60 00		1,033 50	271 77	1,365 27	2,224 60
Charlottetown, P.E.I. ....	Bell, J. H.....		60 00		41 95	22 82	124 77	165 30
Winnipeg, Man	Hamilton, R.....			600 00	201 70	775 96	1,577 66	3,952 70
Regina, Sask..	Hunter, W. M.....	2,499 96			1,680 00	182 75	4,362 71	2,304 70
Calgary.....	Kyle, W. P.....	2,200 00	21 00		361 45	98 64	2,681 09	2,129 70
Edmonton.....	Cantin, A. J.....	1,299 96			313 65	105 80	1,719 41	890 40
	Alberta.....	3,499 96	21 00		675 10	204 44	4,400 50	3,020 10
Vancouver....	Stott, John.....	6,599 76	900 00		309 53	256 09	8,065 38	6,948 95
Victoria.....	Dresser, F.....		48 00		123 50	84 08	255 58	1,353 60
	British Columbia	6,599 76	948 00		433 03	340 17	8,320 96	8,302 55
Yukon.....	Stingle, J. W.....	499 92					499 92	
Chief Electrical Engineer.....					4 00	372 02	376 02	
Inspector of Eastern Division.....					82 55	5 00	87 55	
" Western ".....		2,599 92	833 30		41 25	461 50	3,935 97	
Total for Inspectors.....		21,890 90	6,107 35	1,395 00	8,798 41	3,302 22	41,494 48	70,051 75



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APPENDIX H.—*Concluded.*STATEMENT of Electric Light Expenditures and Revenues for the Fiscal Year ended March 31, 1916—*Concluded.*

	Expenditures.						Revenues.	
	Salaries.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	Total.		
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
General Contingencies . . . . .					13,512 29	13,512 29		
Printing . . . . .					98 75	98 75		
Stationery . . . . .					141 40	141 40		
International Electro-Technical Commission . . . . .					400 00	400 00		
Provisional allowance . . . . .					2,152 35	2,152 35		
Export of Electric Power . . . . .					44 10	44 10	400 00	
Electric Laboratory . . . . .							110 50	
Grand totals . . . . .	21,890 90	6,107 95	1,395 00	8,798 41	19,651 11	57,843 37	70,562 25	

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.J. U. VINCENT,  
*Deputy Minister.*

## APPENDIX I.

STATEMENT showing the number of Electric Meters Presented for Verification, Verified, Rejected and Verified after first Rejection, for the fiscal year ended March 31, 1916.

Districts.	Presented for Verification.	Verified as coming within the error tolerated by law.			Rejected.			Verified after first Rejection.			Totals.	
		Correct.	Fast.	Slow.	Unsound.	Fast.	Slow.	Correct.	Fast.	Slow.	Verified.	Rejected.
		Bellefleur . . . . .	3,403	525	1,788	1,090	1					
Fort William . . . . .	819	55	501	167	5	1					813	6
Hamilton . . . . .	8,901	6,644	487	1,770							8,901	
London . . . . .	10,656	3,585	3,300	3,365	1	1					10,651	5
Ottawa . . . . .	7,792	1,057	3,793	2,928	2	2					7,748	4
Sudbury . . . . .	914	248	282	381		3					911	3
Toronto . . . . .	19,001	11,896	4,380	2,713	5	10					18,989	12
Montreal . . . . .	18,485	11,081	1,159	3,242							18,485	
Quebec . . . . .	3,133	2,301	492	280							3,133	
Sherbrooke . . . . .	1,351	355	310	675		4					1,346	4
St. Hyacinthe . . . . .	1,181	506	433	419	1	2					1,178	3
Three Rivers . . . . .	1,575	1,177	66	40		2					1,175	2
St. John . . . . .	2,606	1,168	701	729	6	2					2,568	8
Halifax . . . . .	3,661	2,312	779	521	24	28					3,612	32
Charlottetown . . . . .	270	110	60	97	1	2					267	3
Winnipeg . . . . .	6,230	1,782	4,015	411	1	1					6,229	2
Regina . . . . .	3,812	466	2,586	720	5	25					3,773	39
Calgary . . . . .	3,478	1,581	1,616	257	6	18					3,464	24
Edmonton . . . . .	1,449	512	896	96	7	8					1,441	16
Vancouver . . . . .	11,337	3,981	5,954	1,411	13	11					11,317	24
Victoria . . . . .	2,139	677	938	593	1						2,138	1
Totals . . . . .	112,462	62,832	37,512	21,886	82	130					112,260	212

INLAND REVENUE DEPARTMENT,  
OTTAWA, July 1, 1916.J. U. VINCENT,  
*Deputy Minister.*

## APPENDIX J.

STATEMENT showing amount of Electrical Energy, Gas or Fluid generated or produced for export and for consumption in Canada, under the authority of the Electricity and Fluid Exportation Act, for the year ending March 31st, 1916.

Name of Contractor and Place of Business.	Month.	Units Produced for export.		Units Produced for use in Canada.		Total Output of Generating Station or other Source.		
		K. W. Hours.	H. P. Years.	K. W. Hours.	H. P. Years.	K. W. Hours.	H. P. Years.	
Canadian Niagara Power Company, Niagara Falls, Ont.	April .....	30,071,552	4,601·64	709,448	108·56	30,781,000	4,710·20	
	May.....	31,427,736	4,809·17	649,264	99·35	32,077,000	4,908·52	
	June.....	29,807,321	4,561·21	717,679	109·82	30,525,000	4,671·03	
	July.....	31,294,785	4,788·84	842,215	128·86	32,137,000	4,917·70	
	August.....	32,350,500	4,950·38	919,500	140·70	33,270,000	5,091·08	
	September.....	34,805,076	5,325·98	772,924	118·28	35,578,000	5,444·26	
	October.....	36,536,514	5,590·93	797,486	122·03	37,334,000	5,712·96	
	November.....	35,721,276	5,466·19	951,724	145·63	36,673,000	5,611·82	
	December.....	35,516,986	5,434·92	1,263,014	193·27	36,780,000	5,628·19	
	January.....	35,846,332	5,485·32	1,224,668	187·40	37,071,000	5,672·72	
	February.....	33,552,908	5,134·37	1,197,092	183·18	34,750,000	5,317·65	
	March.....	33,590,104	5,140·06	1,133,896	173·51	34,724,000	5,313·57	
	Totals..		400,521,090	61,289·01	11,178,910	1,710·59	411,700,000	62,999·60
	Electrical Development Company, Niagara Falls, Ont. Leased by Toronto Power Company.	April .....			25,681,650	3,929·89	25,681,650	3,929·89
May.....				24,972,650	3,821·39	24,972,650	3,821·39	
June.....				24,545,000	3,755·95	24,545,000	3,755·95	
July.....				23,985,700	3,670·37	23,985,700	3,670·37	
August.....				23,981,800	4,669·77	23,981,800	3,669·77	
September.....				24,154,600	3,696·12	24,154,900	3,696·12	
October.....		2,030,000	310·64	25,329,600	3,876·01	27,389,600	4,186·65	
November.....		5,816,000	889·58	57,253,300	8,761·08	63,069,300	9,651·06	
December.....		6,898,000	1,041·78	41,420,000	6,353·52	48,328,000	7,395·30	
January.....		6,479,000	991·44	41,930,900	6,416·40	48,409,900	7,407·84	
February.....		6,617,000	1,012·55	39,674,000	6,071·04	46,291,000	7,083·59	
March.....		6,902,000	1,056·17	42,317,000	6,475·48	49,219,000	7,531·65	
Totals..			34,652,000	5,302·56	395,346,500	60,497·02	429,998,500	65,799·58
Ontario Power Company, Niagara Falls, Ontario.		April.....	12,734,320	1,948·49	39,035,580	5,973·35	51,768,900	7,921·84
	May.....	14,768,300	2,259·89	45,004,700	6,886·76	59,773,000	9,146·65	
	June.....	16,317,940	2,497·02	43,372,760	6,637·34	59,690,700	9,134·06	
	July.....	17,316,400	2,649·81	46,641,300	7,137·20	63,957,700	9,787·01	
	August.....	20,453,900	3,129·92	47,441,000	7,259·57	67,894,900	10,389·49	
	September.....	22,506,260	3,443·98	50,271,740	7,692·74	72,778,000	11,136·72	
	October.....	18,557,660	2,829·74	54,983,040	8,413·66	73,540,700	11,253·40	
	November.....	17,801,980	2,724·12	52,696,020	8,063·71	70,498,000	10,787·83	
	December.....	17,645,700	2,700·20	59,517,400	9,107·54	77,163,100	11,807·74	
	January.....	12,117,160	1,854·21	58,608,640	8,968·47	70,725,800	10,822·68	
	February.....	13,318,640	2,038·06	57,314,860	8,770·50	70,633,500	10,808·56	
	March.....	15,597,960	2,386·84	61,947,400	9,479·39	77,545,300	11,866·23	
	Totals..		199,135,160	30,472·28	616,834,440	94,389·93	815,969,600	124,862·21

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## APPENDIX J.—Continued

STATEMENT showing amount of Electrical Energy, Gas or Fluid generated, etc.—Continued.

Name of Contractor and Place of Business.	Month.	Units Produced for Export.		Units Produced for use in Canada.		Total Output of Generating Station or Other Source.	
		K. W. Hours.	H. P. Years.	K. W. Hours.	H. P. Years.	K. W. Hours.	H. P. Years.
Ontario and Minnesota Power Co., Fort Frances, Ont.	April.....	883,370	135.17	822,720	125.90	1,706,090	261.07
	May.....	928,930	142.15	748,660	114.56	1,677,590	256.71
	June.....	701,950	107.41	875,130	133.92	1,577,080	241.33
	July.....	1,003,460	153.55	948,030	145.07	1,951,490	298.62
	August.....	1,309,410	200.37	948,340	145.12	2,257,750	345.49
	September..	1,140,120	174.46	881,892	134.95	2,022,012	309.41
	October.....	1,029,370	157.52	938,818	143.66	1,968,188	301.18
	November..	1,004,120	153.65	956,934	146.43	1,961,054	300.08
	December..	1,286,080	196.80	1,105,640	169.19	2,391,720	365.99
	January....	1,328,340	203.27	1,221,880	186.97	2,550,220	390.24
	February..	1,241,910	190.94	1,144,580	175.15	2,386,490	365.19
	March.....	1,287,010	196.94	1,196,910	183.16	2,483,920	380.10
	Totals..		13,144,070	2,011.33	11,789,534	1,804.08	24,933,604
Cedar Rapids Power Co., Montreal, Quebec.	April.....	21,381,000	3,271.79	1,287,000	196.94	22,668,000	3,468.73
	May.....	27,052,000	4,139.58	Nil.	Nil.	27,052,000	4,139.58
	June.....	27,177,000	4,158.71	178,000	27.24	27,355,000	4,185.95
	July.....	28,880,000	4,419.31	Nil.	Nil.	28,880,000	4,419.31
	August.....	28,223,000	4,318.77	4,106,000	628.31	32,329,000	4,947.08
	September..	33,932,000	5,192.38	6,285,000	901.75	40,217,000	6,154.13
	October....	36,019,000	5,511.74	5,241,000	801.99	41,260,000	6,312.73
	November..	35,664,000	5,457.42	7,568,000	1,158.08	43,232,000	6,615.50
	December..	35,983,000	5,506.23	10,804,000	1,653.26	46,787,000	7,159.49
	January....	27,259,000	4,171.26	7,375,000	1,128.54	34,634,000	5,299.80
	February..	27,200,000	4,162.23	4,945,000	736.70	32,145,000	4,918.93
	March.....	29,983,000	4,588.09	8,242,000	1,261.22	38,225,000	5,849.31
	Totals..		358,753,000	54,897.51	56,031,000	8,574.00	414,784,000
Sherbrooke Railway & Power Co., Sherbrooke, Que.	April.....	18,800	2.88	685,000	104.82	703,800	107.70
	May.....	18,600	2.85	745,000	114.00	763,600	116.85
	June.....	16,200	2.48	682,800	104.48	699,000	106.96
	July.....	15,720	2.41	608,400	96.87	714,120	109.28
	August.....	18,600	2.84	710,000	108.00	728,600	111.40
	September..	16,700	2.40	703,000	107.38	719,700	109.88
	October....	19,000	2.94	725,000	110.94	744,000	113.88
	November..	19,200	2.94	740,000	113.24	759,200	116.18
	December..	22,400	3.40	776,000	118.74	798,400	122.17
	January....	21,400	3.27	703,000	107.88	724,400	111.15
	February..	21,700	3.32	670,000	102.50	691,700	105.87
	March.....	24,500	3.60	763,000	117.00	787,500	120.00
	Totals..		230,820	35.48	8,008,200	1,310.70	8,239,020

## APPENDIX J.—Continued.

STATEMENT showing amount of Electrical Energy, Gas, or Fluid generated, etc.—Continued.

Name of Contractor and Place of Business.	Month.	Units Produced for Export.		Units Produced for use in Canada.		Total Output of Generating Station or Other Source.	
		K. W. Hours.	H. P. Years.	K. W. Hours.	H. P. Years.	K. W. Hours.	H. P. Years.
Maine and New Brunswick Power Co., Aroostook Falls, N. B.	April.....	239,411	36·64	18,889	2·89	258,300	39·53
	May.....	229,502	35·12	16,998	2·60	246,500	37·72
	June.....	224,020	34·28	17,680	2·71	241,700	36·99
	July.....	224,077	34·29	19,023	2·91	243,100	37·20
	August.....	200,662	30·71	18,238	2·79	218,900	33·50
	September...	256,324	39·22	20,203	3·09	276,527	42·31
	October.....	284,952	43·00	19,548	2·99	304,500	46·59
	November...	273,281	41·82	22,519	3·44	2,5,800	45·26
	December...	290,607	44·47	22,293	3·41	312,900	47·88
	January....	298,950	45·75	22,350	3·42	321,300	49·17
	February....	269,499	41·24	21,501	3·29	291,000	44·53
	March.....	284,608	43·55	23,195	3·55	307,803	47·10
	Totals....		3,075,893	470·69	242,437	37·0	3,318,330
Western Canada Power Co., Vancouver, B. C.	April.....	995,400	152·32	4,926,210	753·82	5,921,610	906·14
	May.....	1,493,960	228·60	5,378,830	823·09	6,872,730	1,051·69
	June.....	602,100	92·14	5,006,330	766·08	5,608,430	858·22
	July.....	418,000	63·96	5,238,770	801·65	5,656,770	865·61
	August.....	815,100	124·73	5,055,740	773·64	5,870,840	898·37
	September...	1,559,100	238·57	5,124,360	784·15	6,683,460	1,022·72
	October.....	1,852,400	283·46	5,199,850	795·70	7,053,250	1,079·16
	November...	1,304,600	199·63	4,901,520	750·05	6,266,120	949·68
	December...	987,300	151·08	5,056,510	773·76	6,043,810	924·84
	January....	1,329,100	203·38	5,035,210	770·50	6,364,310	973·88
	February....	303,600	46·46	4,584,290	701·50	4,887,890	747·96
	March.....	277,100	42·40	4,960,400	759·06	5,237,500	801·46
	Totals....		11,937,700	1,826·73	63,468,020	9,253·00	72,405,720
British Columbia Electric Railway Co., Vancouver, B. C.	April.....	23,290	3·56	5,064,910	775·05	5,088,200	778·61
	May.....	20,960	3·21	4,929,340	754·30	4,950,300	757·51
	June.....	20,394	3·12	4,711,106	720·91	4,731,500	724·03
	July.....	22,477	3·44	4,785,820	732·34	4,808,300	735·78
	August.....	30,914	4·74	5,270,456	806·50	5,301,400	811·24
	September...	29,635	4·53	5,329,780	815·59	5,359,415	820·12
	October.....	33,991	5·20	5,992,006	917·68	6,031,000	922·83
	November...	34,025	5·21	6,433,870	984·53	6,467,900	989·74
	December...	35,090	5·35	6,916,200	1,058·34	6,951,200	1,063·69
	January....	30,457	4·66	6,479,243	991·47	6,509,700	996·13
	February....	23,195	3·86	6,101,905	933·73	6,127,100	937·59
	March.....	24,255	3·71	6,451,045	987·16	6,475,300	990·87
	Totals ...		330,626	50·59	68,470,689	10,477·60	68,801,315

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APPENDIX J—*Concluded.*

## RECAPITULATION.

Name of Contractor and Place of Business.	Units Produced for Export.		Units Produced for use in Canada.		Total Output of Generating Station or other Source.	
	K.W. Hours.	H.P. Years.	K.W. Hours.	H.P. Years.	K.W. Hours.	H.P. Years.
Canadian Niagara Power Co. ....	400,521,090	61,289.01	11,178,910	1,716.59	411,700,000	62,999.60
Electrical Development Co. ....	34,652,000	5,302.56	395,316,500	60,497.02	429,998,500	65,799.58
Ontario Power Co. ....	193,135,160	30,472.28	616,834,440	94,389.93	815,969,600	124,862.21
*International Railway Co. ....						
Ontario and Minnesota Power Co.	13,114,070	2,011.33	11,789,534	1,804.08	24,933,604	3,815.41
Cedar Rapids Power Co. ....	358,753,000	54,897.51	56,031,000	8,574.05	414,784,000	63,471.54
Sherbrooke Railway and Power Co. ....	239,820	35.33	8,605,200	1,316.79	8,836,020	1,352.12
Maine and New Brunswick Power Co. ....	3,075,893	470.69	242,437	37.09	3,318,330	507.78
Western Canada Power Co.	11,937,700	1,825.73	60,468,070	9,253.00	72,405,770	11,079.73
British Columbia Electric Rail- way Company. ....	330,626	50.53	68,470,689	10,477.60	68,801,315	10,528.19
Totals .....	1,021,780,359	156,356.03	1,228,966,730	188,060.13	2,250,747,089	344,416.16

\* This Company's load is used for Electric Railway supply, chiefly on Canadian side of boundary.

J. U. VINCENT,  
*Deputy Minister.*

ELECTRICAL BRANCH,  
INLAND REVENUE DEPARTMENT,

ORMOND HIGMAN,  
*Chief Engineer.*

OTTAWA, July 1, 1916.

## APPENDIX K.

List of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act, during the Fiscal Year ended March 31, 1916.

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Frequency of System.	Generator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS.	
			Type.	Horse Power.				Power.	Lighting.	Power.	Lighting.
Belleville, Ont..	Brockville Light Commissioners	Brockville .....	Steam .....	1,000	3	60	2,200	550	110	28	1,080
	Benjamin Wheel Company..	Yarker.....	Water.....	40	.....	.....	125	.....	125	.....	.....
	Board of Water, Light and Power Comm.	Fenelon Falls .....	Water .....	600	3	60	550	550	110	.....	.....
	Campbellford Water and Light Comm.	Campbellford .....	Water .....	3,450	3	60	2,400	2,200	110	.....	1
	Cardinal Electric Company Limited.	Cardinal.....	.....	165	3	60	240	240	110	.....	50
	Central Ontario Power Company.	Millbrook .....	Purchased..	.....	3	60	.....	220	110	2	98
	Cobourg Water and Electric Company.	Cobourg.....	Purchased..	.....	3	60	.....	220	110	25	531
	Electric Light Commission...	Bobcaygeon.....	Water .....	200	3	60	2,200	.....	110	.....	.....
	Frankford Electric Light Company.	Frankford .....	Water .....	150	2	60	2,000	.....	110	.....	79
	Fair & Mullet .....	Bancroft.....	Steam .....	75	.....	.....	125	125	125	.....	.....
	Fowlds Company Limited .....	Hastings .....	Water .....	100	2	60	2,200	.....	110	.....	6
	J. H. Goodrich.....	Warkworth.....	Water .....	80	2	60	2,200	110	110	.....	.....
	Gananoque Electric Light Company.	Gananoque .....	Water .....	500	.....	.....	250	250	115	.....	26
	W. C. Harrison.....	Norwood.....	Steam.....	75	1	133	1,000	.....	110	.....	.....
	Havelock Electric Light Company.	Havelock.....	Water.....	135	3	60	4,400	.....	110	.....	.....
	Kemptville Milling Company Limited.	Kemptville.....	.....	300	3	60	10,000	220	110	.....	.....
Light, Heat and Power Company.	Lindsay .....	Water .....	1,500	3	60	550	220	110	3	1,125	
Light and Water Commission.	Picton.....	Steam .....	300	2	60	2,200	220	110	5	594	
Light, Heat and Power Department.	Kingston.....	Steam .....	1,800	3	60	2,300	220	110	102	1,846	
Lakefield Electric Light Company.	Lakefield.....	Water.....	125	3	60	2,200	550	110	1	.....	

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Marmora Electric Light Plant	Water	100	1	60	1,000	110	1
Municipality of Madoc Village	Purchased Gas	15	3	DC	500	250	3
W. P. Niles, Limited	Water	900	3	60	6,000	110	8
Ottumwa Power Company, Limited	Purchased		3	60		550	1,140
Oshawa Electric Light Company	Purchase 1		3	60		110	138
J. M. Peebles	Water	220	3	60	2,200	550	665
Port Hope Electric Light Company	Purchased		3	60		550	2,600
Peterborough Utilities Company	*H.E.P.		3	60		220	400
Peterborough Electric Company	Water	90	3	DC	350	220	1
Prescott Hydro-Electric Company	Trans. Line		3	60		220	111
W. G. Stephenson	Purchased	240	1	60		240	
Seymour Power and Electric Company	Trans. Line		3	60		220	
Starling Corporation of Ontario	Steam	300	3	60	2,300	550	600
Seymour Power and Electric Company	Trans. Line		3	60		550	620
Seymour Power and Electric Company	Trans. Line		3	60		220	134
Seymour Power and Electric Company	Water	5,000	3	60	6,000	220	600
Thames Electric and Water Company	Trans. Line		3	60		240	
Thames Electric and Water Company	Trans. Line		3	60		220	1,405
Thames Electric and Water Company	Trans. Line		3	60		550	160
Thames Electric and Water Company	Water	125	1	133	2,080	550	185
Dryden Traction and Power Company, Ltd.	Water	2,000	3	60	600	110	
Dryden Municipality of Dryden	Purchased	1,750	3	60		550	
Fort William Light Department	Water		3	60		250	4,243
Fort Frances Corporation of Ontario	Water	6,800	3	60	6,000	110	430
Kanawana Power Company, Limited	Water	25,000	3	60	4,400	2,200	
Kemora Corporation of Ontario	Water	3,296	3	60	2,400	220	291
H. C. McMahon & Company, Limited	Oil	6	3	DC	70	50	

\*Hydro-Electric Power

Fort William Ont.

## APPENDIX K.

List of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act, etc.—Continued

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Pre-frequency of System.	Generator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS	
			Type.	Horse Power.				Power.	Lighting.	Power.	Lighting.
Fort William, Ont.—(con.)	Ontario and Minnesota Power Co., Ltd.	Fort Frances	Water	6,800	3	60	6,600	6,600	110	6	.....
	Public Utilities Commission Rainy River Electric Light and Power Co.	Port Arthur Rainy River	H.E.P. Steam	3,000 150	3 2	60 133	..... 2,080	2,200 104	110 104	16	3,450 200
Hamilton, Ont.	Acton, Corporation of	Acton	H.E.P.	240	3	25	.....	2,200	110	4	206
	Ayr Hydro-Electric System.	Ayr	H.E.P.	.....	3	25	.....	220	110	1	103
	Berlin Light Commissioners.	Berlin	H.E.P.	2,240	3	25	.....	550	110	136	2,293
	Baden, Police Village of	Baden	H.E.P.	240	3	25	.....	2,200	110	8	78
	Brantford Hydro-Electric Commission.	Brantford	H.E.P.	1,600	3	25	.....	220	110	12	1,643
	Canadian Niagara Power Company.	Niagara Falls	Water	75,000	3	25	11,000	2,200	110	55	233
	Caledonia, Village of	Caledonia	H.E.P.	480	3	25	.....	550	110	3	53
	Delhi Light and Power Company, Ltd.	Delhi	Water	325	3	60	2,300	2,200	110	4	104
	Dunnville Electric Light Company.	Dunnville	Water	125	3	.....	2,080	.....	104	.....	75
	Dundas Hydro-Electric System.	Dundas	H.E.P.	480	3	25	.....	550	110	36	846
Dundas Electric Company, Limited.	Dundas	Purchased	1,300	3	66.6	.....	.....	220	112	6	11
Elmira Public Utilities Commission.	Elmira	H.E.P.	287	3	25	.....	550	550	110	8	207
Electric Power and Manufacturing Co.	Hamilton	Purchased	.....	3	66.6	.....	.....	.....	112	.....	10
Galt, Hydro-Electric Commission.	Galt	H.E.P.	480	3	25	.....	550	550	110	70	2,130
Hydro-Electric Department	Georgetown	H.E.P.	500	3	25	.....	220	220	110	16	338
Hydro-Electric Commission	Hamilton	H.E.P.	2,000	3	25	.....	.....	550	110	350	9,500
Hamilton Carac Power, Light and Traction Co.	Grimsbury	Purchased	.....	3	66.6	.....	.....	220	112	15	372
Hagersville, Corporation of	Hagersville	H.E.P.	240	3	25	.....	.....	2,200	110	3	165



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Hamilton Cataract Power, Beanville.....	Purchased...	540	3	66.6	.....	220	112	3	30
Light and Traction Co.									
Hamilton Cataract Power, Burlington.....	Purchased...	1,080	3	66.6	.....	220	112	16	111
Light and Traction Co.									
Hamilton Electric Light and Hamilton .....	Purchased...	4,300	3	66.6	.....	220	112	60	5,000
Power Co.									
Hamilton Cataract Power, Hamilton.....	Water .....	46,200	3	66.6	.....	220	112	396	60
Light and Traction Co.									
Lancaster Electric Light and St. Catharines.....	Purchased	1,280	3	66.6	.....	220	110	100	1,800
Power Co.									
Macedon Electric Light and Niagara Falls.....	Purchased...	.....	3	25	.....	440	110	8	1,947
Power Plant.									
Milton Hydro-Electric System, Milton.....	H. E. P. ....	800	3	25	.....	550	110	6	235
Mosely Hydro-Electric System, Hesler .....	H. E. P. ....	365	3	25	.....	550	110	15	350
Merritt Electric Light and Merritt .....	Purchased...	430	3	25	.....	220	110	1	130
Power Plant.									
Municipal Electric Light and Niagara-on-the-Lake.	Purchased	160	3	25	.....	220	110	.....	220
Power Plant.									
New Hamburg Electric De- New Hamburg .....	H. E. P. ....	300	3	25	.....	550	110	4	264
partment									
Oakville Water and Light Oakville .....	Purchased...	645	3	66.6	.....	2,400	120	12	681
Company.									
Ontario Power Company, Niagara Falls.....	Water .....	100,000	3	25	12,000	12,000	110	27	201
Hydro-Electric Co., Ltd., Niagara Falls.....	H. E. P. ....	1,360	3	25	.....	440	220	4	122
Power Light and Water Com- Prael n .....	H. E. P. ....	600	3	25	.....	550	110	27	803
pany.									
Pure Hydro-Electric Com- Paris.....	H. E. P. ....	80	3	25	.....	550	110	4	500
pany.									
Stoney Hydro-Electric Sys- Stoney.....	H. E. P. ....	500	3	25	.....	550	110	1	39
tem.									
St. Catharines Hydro-Electr St. Catharines .....	H. E. P. ....	125,000	3	25	12,000	12,000	115	27	1,131
ic Company.									
Toronto Power Company, Toronto.....	Water .....	370	1	60	2,200	2,200	110	.....	338
Limited.									
Thornhill Corporation of Thornhill .....	H. E. P. ....	965	3	25	.....	550	110	50	607
Water, Water and Light Waterloo .....	H. E. P. ....	400	3	25	.....	220	110	25	600
Company.									
Welland Hydro-Electric Com- Welland .....	Water .....	.....	3	60	2,200	2,200	110	.....	2
pany.									
Welland Commercial Company, Welland .....	H. E. P. ....	.....	3	25	.....	220	110	.....	25
Waterford Hydro-Electr Waterford .....	H. E. P. ....	2,800	3	66.6	.....	220	110	110	2,200
ic System.									
Waterford Commercial Com- Waterford I .....	Purchased...	50	3	25	.....	550	110	6	104
pany.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	200	1	60	1,150	.....	104	.....	300
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120	110	.....	5
System.									
Waterford Hydro-Electr Waterford .....	H. E. P. ....	50	3	25	.....	120</			

## APPENDIX K.

List of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act, etc.—Continued.

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Frequency of System.	Generator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS.	
			Type.	Horse Power.				Power.	Lighting.	Power.	Lighting.
London, Ont. —Con.	Blyth, Corporation of	Blyth	Steam	60	1	133	1,140	110	.....	.....	75
	Board of Water, Light and Heat Commission.	St. Marys	Steam	250	3	60	2,200	110	550	32	490
	Blenheim, Corporation of	Blenheim	Steam	65	1	133	2,200	110	.....	.....	150
	H. W. Baird, Son & Co	Park Hill	Steam	100	.....	D.C.	220	220	.....	.....	65
	Bothwell, Corporation of	Bothwell	Steam	50	.....	D.C.	110	110	110	.....	.....
	Chesley Electric Light Company.	Chesley	.....	160	1	.....	2,080	104	.....	.....	5
	Chatham Gas Company	Chatham	Steam	970	2	60	2,300	110	410	57	1,436
	Geo. Coultie & Son	Thedford	Steam	65	1	133	1,100	110	.....	.....	54
	Clinton Public Utilities Commission.	Clinton	H.E.P.	600	3	25	.....	110	550	5	290
	Cargill, Limited	Cargill	Water	175	.....	D.C.	250	110	220	.....	.....
	Geo. Chambers	Watford	Steam	107	.....	D.C.	250	230	.....	.....	52
	Dutton Electric Light Company.	Dutton	Steam	90	1	60	1,040	104	.....	.....	11
	Dresden, Corporation of	Dresden	Steam	150	1	133	1,040	104	.....	.....	75
	Dorchester Electric Company.	Dorchester	.....	25	.....	.....	2,300	110	2,200	.....	70
	Essex County Light and Power Co., Ltd.	Leamington	Steam	1,000	3	60	2,300	108	220	21	1,075
Exeter Electric Light and Power Co.	Exeter	Steam	150	1	125	1,150	110	.....	.....	175	
Forest, Corporation of	Forest	Steam	118	3	25	2,200	110	.....	.....	300	
J. G. Field	Tavistock	Steam	100	1	133	1,000	110	.....	.....	70	
Goderich Water and Light Commission.	Goderich	H.E.P.	1,000	3	25	.....	550	550	6	557	
Glencoe Electric Light Commission.	Glencoe	Gas	96	3	60	2,200	110	.....	.....	85	
Green Swift, Ltd.	London	Steam	100	.....	D.C.	500	110	500	.....	6	
Helena Costume Co., Ltd.	London	Steam	500	.....	D.C.	230	115	230	8	60	
Ingersoll Water, Light and Sewer Commission.	Ingersoll	H.E.P.	1,005	3	25	.....	2,200	2,200	50	600	
Kincardine Water and Electric Commission.	Kincardine	Steam	300	1	60	2,300	104	.....	.....	125	

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London Electric Company, London Limited.	Steam.....	2,300	1	60	2,300	500	115	200	1,800
Lastowal Water and Light Commission.	Steam.....	150	3	60	2,200	550	110	3	294
Mitchell Light and Water Commission.	.....	125	2	60	1,100	550	110	6	170
Mildmay Electric Light Co., Ltd.	Purchased..	50	2	60	.....	220	110	.....	37
James McHardy	Gas.....	50	.....	D.C.	110	.....	110	.....	9
Norwich Corporation of	H.E.P.....	160	3	60	2,200	.....	110	4	237
Newbury, Corporation of	Steam.....	45	.....	D.C.	140	.....	110	.....	.....
Plattsbury, Police Village	H.E.P.....	100	3	25	.....	550	110	4	60
Public Utilities Commission	H.E.P.....	300	3	25	2,300	2,300	110	365	7,374
Petrolia Utilities Co., Ltd	Gas.....	300	2	60	1,100	220	110	.....	335
John Passmore.	Hensall. Steam.	160	1	125	1,100	.....	110	.....	54
Port Stanley Hydro-Electric Dept.	H.E.P.....	.....	3	25	2,200	2,200	110	1	175
Paisley Electric Light Company.	Water.....	137	2	133	2,080	104	104	.....	5
Palmerston Electric Light Department.	Steam.....	125	2	60	2,300	.....	104	.....	168
Water Race.	Steam.....	103	2	133	1,100	.....	110	.....	85
Ridgeway Water and Light Commission.	Steam.....	100	1	133	2,000	.....	108	.....	176
Rock Glen Power Company, Ltd.	Water.....	120	3	60	2,200	2,200	110	3	48
Tilbury Hydro-Electric System.	H.E.P.....	400	3	25	.....	220	110	.....	141
St. Thomas Light, Heat and Power Dept.	H.E.P.....	960	3	25	.....	550	110	84	1,883
Stratford Light and Heat Commission.	H.E.P.....	960	3	25	.....	550	110	75	1,690
Water Stewart and Son	Steam.....	100	.....	D.C.	125	.....	115	.....	15
Sandwich, Windsor and Amherstburg Ry.	Steam.....	750	3	60	2,300	220	110	82	1,800
Strathroy Public Utilities Commission.	H.E.P.....	300	3	25	.....	550	110	1	340
Sarnia Gas and Electric Light Co., Ltd.	Steam.....	2,300	3	60	2,300	220	110	49	1,664
Seagrave Electric Light and Power Co., Ltd.	Water.....	265	3	60	6,600	440	110	.....	70
Sable Falls Light and Power Company.	Water.....	220	3	60	6,600	220	110	.....	66
Thamesford Hydro-Electric Plant.	H.E.P.....	125	3	25	.....	550	110	3	85
Tillamook Water and Light Co.	H.E.P.....	240	3	25	.....	550	110	15	460
Thamesville Electric Light Plant.	Steam.....	90	1	133	1,150	.....	115	.....	135

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## APPENDIX K.

List of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act, etc—Continued.

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Frequency of System.	Generator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS.		
			Type.	Horse Power.				Power.	Lighting.	Power.	Lighting.	
London, Ont —Con.	West Lorne Electric Light Company.	West Lorne.	Gas.	65	.....	DC.	125	.....	110	.....	.....	
	Wingham, Corporation of.	Wingham	Water.	550	3	60	2,300	550	110	7	326	
	Wroxeter, Corporation of.	Wroxeter	Steam.	50	1	133	100	.....	100	.....	38	
	Walkerville Hydro-Electric System.	Walkerville.	H.E.P.	.....	3	25	.....	550	110	75	988	
	Wallaceburg Hydro-Electric System.	Wallaceburg.	H.E.P.	480	3	25	.....	4,000	110	.....	500	
	Water, Light and Sewer Commission.	Seaforth.	H.E.P.	480	3	25	.....	2,200	110	13	316	
	Woodstock Water and Light System.	Woodstock.	Steam.	400	3	60	22,000	550	110	25	1,275	
	J. A. Williams.	Zurich.	Steam.	15	.....	3	115	.....	110	.....	.....	
	Walkerton Electric Light and Power Co.	Walkerton.	Water.	385	3	60	2,300	550	110	5	201	
	Marven White.	Wheatley.	Gas.	53	.....	.....	125	.....	125	.....	.....	
	Ottawa, Ont.	Alexandria, Corporation of.	Alexandria, Ont.	H.E.P.	140	2	60	.....	.....	110	.....	130
		Almonte Electric Light Commission.	Almonte, Ont.	Water.	300	.....	DC.	220	.....	110	.....	6
		H. Brown & Son.	Carleton Place, Ont.	Water.	525	3	60	2,200	2,200	108	91	465
		Compagnie Electrique Manitowaki.	Maniwaki, Que.	Water	160	3	60	2,300	220	110	3	4
Canadian Electric and Water Power Co.		Perth, Ont.	Water	500	2	133	2,200	550	110	4	325	
Chesterville, Corporation of.		Chesterville, Ont.	H.E.P.	.....	3	60	.....	.....	.....	1	115	
Charlton Englehart Light and Power Co.		Englehart, Ont.	Water.	1,080	3	60	2,300	2,200	110	3	160	
F. F. Cross.		Farm Point, Que.	Water	200	3	60	4,400	4,400	110	.....	16	
Elk Lake Power Company.		Elk Lake, Ont.	Water	140	3	60	600	.....	110	.....	251	
Galatta Electric Power and Milling Co.		Arnprior, Ont.	Water.	700	3	60	2,300	2,200	110	.....	67	
Hawkesbury Electric Light and Power Co.	Hawkesbury, Ont.	Water	1,700	3	60	10,000	550	110	.....	.....		
Hull Electric Co.	Hull, Que.	Water.	980	3	60	2,200	550	115	29	1,237		

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Iroquois, Corporation of, Iroquois, Ont.	77	2	60	2,406	110	110	2
Morrisburg Electric Light and Power Co., Morrisburg, Ont.	215	3	60	2,200	110	110	2
Albert MacLaren, Buckingham, Que.	530	2	60	2,300	110	110	7
Mattawa Electric Light and Power Co., Mattawa, Ont.	250	3	60	2,200	104	104	7
North Bay Light, Heat and Power Co., Ltd., North Bay, Ont.	1,200	3	60	2,200	104	104	2,224
Northern Ontario Light and Power Co., Golden City, Ont.	4,600	3	25	12,000	110	110	35
Northern Ontario Light and Power Co., Timmins, Ont.	4,600	3	25	12,000	110	110	374
Northern Ontario Light and Power Co., New Liskeard, Ont.	400	3	60	2,500	110	110	392
Northern Ontario Light and Power Co., South Porcupine, Ont.	4,600	3	25	12,000	110	110	220
Northern Ontario Light and Power Co., Sturgeon Falls, Ont.	2,500	3	60	2,200	110	110	367
Northern Ontario Light and Power Co., Cochrane, Ont.	400	3	60	2,200	110	110	310
Northern Ontario Light and Power Co., Hailu-bury, Ont.	400	3	60	2,200	110	110	658
Northern Ontario Light and Power Co., Cobalt, Ont.	.....	3	60	.....	110	110	1,200
Northern Ontario Light and Power Co., Cobalt, Ont.	3,750	3	60	.....	110	110	8
Northern Ontario Light and Power Co., Cobalt, Ont.	3,500	3	60	.....	110	110	7
Northern Ontario Light and Power Co., Cobalt, Ont.	8,550	3	60	.....	110	110	10
Municipal Electric Department, Ottawa, Ont.	.....	2	60	.....	108	108	7,270
Ottawa Electric Company, Ottawa, Ont.	17,000	2	60	2,300	107	107	15,822
Pembroke Electric Light Company, Pembroke, Ont.	1,800	3	60	2,250	110	110	500
Papineauville Electric Co., Papineauville, Que.	.....	3	60	2,300	110	110	7
Rushville Power Company, Morrisburg, Ont.	500	3	60	2,300	.....	.....	160
Renfrew Electric Company, Renfrew, Ont.	50	2	60	.....	110	110	290
Renfrew Electric Company, Renfrew, Ont.	1,000	2	60	2,300	110	110	1
Renfrew Flour Mills Limited, Palenham, Ont.	60	2	60	.....	110	110	.....
Shawville Electric Department, Shawville, Que.	20	.....	D.C.	65	65	65	75
Stonewall Electric Light and Power Co., Stonewall, Ont.	200	1	133	1,100	110	110	749
Stoddard Falls Electric Power Co., Stoddard Falls, Ont.	1,100	3	60	2,200	110	110	350

## APPENDIX K.

LIST of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act, etc.—Continued.

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Pre- quency of System.	Generator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS.	
			Type.	Horse Power.				Power.	Lighting.	Power.	Lighting.
Ottawa, Ont., —Con.	St. Lawrence Power Company, Limited.	Cornwall, Ont.	Water.	2,500	3	60	2,200	550	110	2	97
	Vankleek Hill Electric Co., Limited.	Vankleek Hill, Ont.	Purchased					240	118		30
	Winchester Hydro-Electric System.	Winchester, Ont.	H.E.P.	160	3	60			110		150
	Alliston Electric Light Company.	Alliston	Water.	150	2	133	1,100		110		100
Toronto, Ont.	Aurora Electric Department.	Aurora.	Purchased		3	25		550	110	8	330
	Beaverton Hydro-Electric Co.	Beaverton	Water	1,200	3	60	2,200	220	110	4	117
	Barrie Electric Light Department.	Barrie.	H.E.P.	450	2	60		2,300	110	14	1,000
	Brechin Hydro Electric Department.	Brechin.	H.E.P.	1,200	3	60		220	110	1	26
	Board of Light and Water Commissioners.	Guelph.	H.E.P.	1,500	3	60		550	110	80	2,014
	Bracebridge Electric Department.	Bracebridge.	Water.	1,850	2	60	2,200	2,200	110		15
	Geo. Clendenan	Clark'sburg.	Water	150	3	60	2,300	2,200	110		14
	Canadian Copper Company.	Copper Cliff.	Water	12,800	3	25	2,400	2,200	110	50	
	Cremona Electric Department.	Cremona.	Purchased		3	60		220	110	1	100
	Cannington Electric Department.	Cannington.	H.E.P.		3	60		220	110	2	106
	Coldwater Electric Department.	Coldwater	Purchased	300	3	60		550	110	2	101
	Canada Velling Company.	Toronto	Purchased		3	25		250	110	5	7
	Chapleau Electric Light and Power Co.	Chapleau	Water	400	3	60	2,300		110		9
Catawact Electric Company, Limited.	Orangeville	Water	200	3	60	2,500	220	110	2	250	
A. & C. Dike.	Mt. Albert.	Gas.	65			250		250			
Drayton Mills Limited.	Drayton	Water	125	3	60	2,200		110		17	
Dundalk Electric Light Plant.	Dundalk	Steam.	60	2	133	2,400		110		67	

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Fred Deagle, Electric Light and Water Commission.	Blind River.	Water.	3	60	2,400	2,200	110	29
Elora Hydro-Electric Com- mission.	Gravenhurst.	Water.	3	60	6,600	2,200	110	115
Elora Hydro-Electric Com- mission.	Elora.	H.E.P.	3	25	.....	550	110	1
Electric Light Department.	Beeton.	Steam.	1	60	1,000	.....	120	60
Emvale Trusts.	Elmhurst.	H.E.P.	3	60	.....	920	110	118
Fergus Hydro-Electric De- partment.	Fergus.	H.E.P.	3	25	.....	550	110	180
Georgian Bay Milling and Power Co., Ltd.	Meaford.	Water.	3	60	2,300	2,300	110	310
J. W. Gault	Uxbridge.	Water.	1	125	1,100	.....	104	93
Hawker Electric Light and Power Co.	Mustard.	Water.	3	60	2,300	110	104	20
Hawker Electric Light and Power Co.	Hanover.	Water.	3	60	2,300	119	104	200
Hydro-Electric Department	Brampton.	H.E.P.	3	25	.....	550	110	750
Huntsville Electric Depart- ment.	Huntsville.	Steam.	1	125	1,010	.....	106	275
Hamilton Electric Department	Hamilton.	Steam.	3	60	2,200	.....	110	148
Intercolon Electric Company	Toronto.	Water.	3	25	2,200	2,200	110	230
Kent Investments Limited.	Toronto.	Purchased.	3	25	.....	250	115	57
Kingstons Co., Ltd.	Barks Falls.	Water.	1	125	1,100	500	104	13
Little Current Electric De- partment.	Little Current.	Steam.	3	60	2,500	2,300	110	50
A. J. Lewis & Son	Sutton West.	Water.	.....	P.C.	220	.....	220	.....
Markham Electric Depart- ment.	Markham.	Steam.	2	125	1,200	.....	110	92
Markdale Hydro-Electric Com- mission.	Markdale.	Steam.	3	60	2,300	.....	110	15
Moscow Supply Company, Limited.	Mimico.	H.E.P.	3	25	.....	550	110	600
Mount Pleasant Water and Light Commission.	Toronto.	Steam.	.....	P.C.	250	250	110	53
New Toronto Electric Depart- ment.	Mount Forest.	Steam.	1	133	1,150	.....	110	250
New Toronto Electric Depart- ment.	New Toronto.	H.E.P.	3	25	.....	.....	115	2
Nijmwing Power Co., Ltd.	Powassan.	Trans. Line.	3	60	.....	2,200	110	81
Northumberland Electric De- partment.	Newmarket.	Steam.	2	133	2,200	.....	110	422
Orillia Water, Light and Power Co.	Orillia.	Water.	2	66.6	1,200	2,200	110	240
Owen Sound Electric Depart- ment.	Owen Sound.	Steam.	3	60	2,200	560	110	1,740
Parry Sound Electric Depart- ment.	Parry Sound.	Water.	3	60	2,400	550	113	647
Parry Sound Electric Depart- ment.	Parry Sound.	H.E.P.	3	25	.....	550	110	160
Part McNicol Electric Depart- ment.	Part McNicol.	H.E.P.	3	60	.....	.....	115	63

APPENDIX K.  
List of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act, etc.—Continued.

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Frequency of System.	Generator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS.	
			Type.	Horse Power.				Power.	Lighting.	Power.	Lighting.
Toronto, Ont., —Con.	Penetanguishene Water and Light Comm.	Penetanguishene	H.E.P.	800	3	60		2,200	110	14	246
	Port Perry Electric Department.	Port Perry	Steam	75	1	133	1,100		110		100
	John Philip	Grand Valley	Steam	150	2	60	2,200	220	104		160
	Pine River Light and Power Company, Ltd.	Orangeville	Water	800	3	60	2,200		110	1	342
	Rockwood Electric Department.	Rockwood	H.E.P.	50	3	25		550	116	3	74
	Richmond Hill Electric Department.	Richmond Hill	Purchased		3	25		550	110	6	120
	F. W. Starr	Toronto	Steam	75		3	220		110		
	Sunderland Electric Department.	Sunderland	H.E.P.	100		3	60	550	110		52
	South River Electric Company.	South River	Water	100	3	60	2,300	4,400	110		3
	Sudbury Electric Department.	Sudbury	Purchased	600	2	60		220	110		1,250
	Steelton Electric Department.	Steelton	Purchased	300	3	60		220	110		435
	Stayner Electric Department.	Stayner	Purchased	400	3	60		220	110	2	112
	Stouffville Electric Light Plant.	Stouffville	Steam	125	1	60	1,100		110		115
	Toronto Township Electric Department.	Toronto Township	H.E.P.	200	3	25		550	110	3	135
	Tottenham Electric Department.	Tottenham	Steam	60			110		110		2
	Toronto Electric Commission.	Toronto	H.E.P.	30,000	3	25		550	115	1,003	34,323
Toronto Suburban Railway Company.	Toronto	Purchased		3	25		550	110	50	425	
Toronto Electric Light Co., Ltd.	Toronto	Purchased	18,000	3	25			2,300	110	6,000	20,215
Toronto and York Radial Railway Co.	Toronto	Purchased	2,500	3	25			4,100	110	13	107
Thornbury Electric Light Plant.	Thornbury	Water	75	1	125	1,040			104		110



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Thessalon Electric Depart.	Thessalon	Steam	80	1	125	1,040	104	104	143
Wabigoon Power Company, Limited.	Sudbury	Water	5,000	3	60	2,500	2,300	110	.....
Woodville Electric Depart.	Woodville	H.E.P.	.....	3	60	.....	220	110	3
Wessex Mailing Company	Ayton	Water	10	.....	100	112	.....	110	1
Western Water, Power and Light Commission.	Ayton and Western	H.E.P.	200	3	25	.....	550	110	425
Woodbridge Hydro-Electric Commission.	Woodbridge	H.E.P.	300	3	25	.....	550	110	65
Waukenaugh Electric Depart.	Waukenaugh	H.E.P.	66	3	60	.....	220	115	1
Water and Light Commission.	Collingwood	H.E.P.	700	3	60	.....	2,200	110	22
Water and Light Commission.	Midland	H.E.P.	.....	3	60	.....	220	110	35
Water and Light Commission.	Wentley	Purchased.	.....	3	60	.....	550	108	13
Water and Light Commission.	Sault Ste. Marie	Purchased.	.....	3	60	.....	208	104	75
Bentley's Electric Car	Beauharnois	Purchased.	1,200	3	60	.....	220	110	.....
Beauharnois Light and Power Company.	Montreal	Water	31,300	3	60	2,200	.....	110	12
Laclaire Light, Heat and Power Co.	Laclaire and Montreal	Purchased.	129,000	3	60	.....	550	110	25
Montreal Public Service Car	Montreal	Water	24,000	3	60	.....	12,600	110	1,937
Pointe-Claire Corporation of St. Agathe, Corporation of St. Lambert	Pointe-Claire, St. Agathe, St. Lambert	Purchased.	.....	3	60	2,200	2,200	110	.....
Verdon Corporation of Verdun	Verdon	Purchased.	600	3	60	2,200	550	110	6
Verdon Corporation of Verdun	Verdon	Steam	.....	3	60	2,200	550	110	5
Verdon Corporation of Verdun	Verdon	Purchased.	.....	3	60	.....	2,200	110	2
Westmont Corporation of Westmont	Westmont	Steam	1,450	3	60	2,300	550	110	.....
Windsor Electric Power Co.	Windsor	Water	150	3	.....	2,200	550	110	50
Windsor Electric Power Co.	Windsor	Water	.....	3	.....	.....	550	110	163
Windsor Electric Power Co.	Windsor	Water	.....	1	60	2,200	110	104	175
Windsor Electric Power Co.	Windsor	Water	350	3	60	2,000	.....	104	.....
Windsor Electric Light Co.	Windsor	Water	4,800	3	60	11,500	2,200	110	40
Windsor Electric Light Co.	Windsor	Water	.....	2	.....	2,080	.....	110	4
Windsor Electric Light Co.	Windsor	Water	75	3	60	2,300	500	110	15
Windsor Electric Light Co.	Windsor	Water	40	3	63	2,200	550	110	2,700
Windsor Electric Light Co.	Windsor	Water	2,000	3	63	.....	.....	110	.....
Windsor Electric Light Co.	Windsor	Water	300	2	133	2,400	.....	104	480

Montreal, Que.

Quebec, Que.

## APPENDIX K.

List of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act, etc.—Continued.

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Fre- quency of System.	Generator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS.	
			Type.	Horse Power.				Power.	Lighting.	Power.	Lighting.
Quebec, Que- Com.	La Cie d'Electricité de Rober- val	Roberval	.....	300	1	.....	.....	2,040	104	.....	4
	Le Crédit Municipal Canadien	Rimouski.	Water	550	2	60	2,200	500	110	.....	27
	La Société d'Éclairage & D'É- nergie Electrique du Sague- may.	Chicoutimi.	.....	2,400	3	60	220	550	110	.....	20
	Municipalité Village St. Ray- mond.	St. Raymond.	.....	.....	.....	133	104	.....	104	.....	.....
	Nain Falls Power and Pulp Co., Ltd.	La Malbaie	.....	.....	3	60	4,400	250	110	.....	.....
	Quebec Ry. Light, Heat and Power Co.	Quebec	Water.	9,000	3	64	5,500	550	104	215	8,200
Sherbrooke, Que.	Brome Lake Electric Power Company.	Waterloo.	Water.	300	1	60	2,080	.....	104	.....	205
	A. G. Hurd	Sawerville.	Water	100	1	125	2,080	.....	110	.....	39
	D. C. Horner & Son	West Sheffield	Water	100	1	133	1,040	.....	110	.....	13
	Lennoxville Light and Power Company.	Lennoxville.	Purchased	.....	.....	.....	.....	2,200	110	7	225
	La Corporation De La Ville De Magog.	Magog.	Water.	1,800	2	60	2,400	2,200	108	.....	.....
	La Compagnie Champlain.	Distréli	Water	100	1	60	2,000	.....	110	.....	.....
	Municipal Electric Light and Power Dept.	Coaticook	Water	650	3	60	2,200	2,200	110	.....	385
	W. M. Pike & Son.	Rock Island	Water	33	.....	DC.	110	110	110	.....	.....
	Richmond Electric Company	Richmond	Water	360	2	133	2,300	.....	110	.....	360
	Scotstown Electric Light and Power Co.	Scotstown	Water	250	3	60	2,200	550	110	.....	.....
	Sutton Electric Department.	Sutton	Purchased	5,200	3	60	.....	6,600	115	.....	200
Sherbrooke Electric Depart- ment.	Sherbrooke	Water.	5,200	3	60	6,600	550	108	26	2,657	
Shipton Power Co.	Shipton	Water.	360	1	60	2,080	.....	104	.....	102	
Sherbrooke Ry. and Power Company.	Sherbrooke	Water.	4,000	3	60	2,200	2,200	110	15	475	

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Two Mills Falls Water Power Woodon Centre... Company	Purchased...	330	3	60	2,200	110	9
Windsor Electric Light and Cookshire Power Co.	Water	250	3	60	3,000	104	225
Windsor Electric Light & Windsor power Co.	Purchased...	210	3	...	2,400	110	...
Acadiana Water and Power Victoriaville Company	Purchased...	...	3	30	...	110	219
Nelson Electric St. John's	Water	70	3	60	2,200	110	1
A. N. Cornwall & Son St. Cosaire	Water	31	...	100	110	110	...
Parham, Town of St. John's	Water	1,630	2	60	2,200	110	5
P. Overton St. John's	Water	50	3	60	2,800	110	370
La Cite Electric Power St. John's	Trans. Line	400	3	30	2,080	104	25
La Compagnie Electric de St. John's	Purchased...	87	3	30	7,300	110	176
La Cite de Gas, Electric et St. John's	Water	300	3	60	220	110	85
Municipal Light, Heat and St. John's	Steam	75	3	60	6,000	101	831
St. Francis Water Power Com Drummondville	Water	3,000	3	80	2,300	110	140
Southern Quebec Power Com St. John's	Water	100	3	60	15,000	110	...
St. John Electric Light Com St. John's	Purchased...	...	3	60	2,200	110	230
Sorel Light and Power Com St. John's	Purchased	1,000	3	60	2,200	110	625
Woodford Mines Electric Com Woodford	Purchased...	250	3	30	220	110	700
La Corporation De La Ville Joliette	Water	300	2	60	500	110	100
St. John's St. John's	Water	1,250	3	60	...	104	500
St. John's St. John's	Water	...	3	60	2,500	110	530
St. John's St. John's	Purchased	...	3	30	220	110	230
St. John's St. John's	Purchased	...	3	60	...	110	...
St. John's St. John's	Purchased	...	3	60	...	110	112
St. John's St. John's	Purchased	...	3	60	...	110	140
St. John's St. John's	Water	1,000	3	60	6,000	110	140
St. John's St. John's	Water	375	2	60	1,180	110	345
St. John's St. John's	Gas	500	3	60	2,300	110	530
St. John's St. John's	Gas	125	3	60	2,200	110	83
St. John's St. John's	Steam	75	1	60	2,000	104	113

St. John's  
Que.

St. John's  
Que.

St. John's  
Que.

## APPENDIX K.

List of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act. etc.—*Con.*

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Frequency of System.	Generator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS.	
			Type.	Horse Power.				Power.	Lighting.	Power.	Lighting.
St. John, N.B., — <i>Con.</i>	Edmunston Electric Department	Edmunston.....	Water.....	500	1	60	2,200	2,200	110	.....	123
	Frederickton Gas Light Company.	Frederickton.....	Steam.....	1,000	2	60	2,300	220	110	16	670
	Grand Falls Electric Light Dept.	Grand Falls.....	Purchased.....	.....	.....	.....	.....	220	110	2	107
	Keuf Electric Co., Ltd.	Richibucto.....	Steam.....	120	1	123	2,200	.....	110	.....	36
	King Lumber Company	Chipman.....	Steam.....	70	.....	DC.	125	110	110	2	18
	A. & R. Loggie Company, Limited.	Loggieville.....	Steam.....	65	.....	DC.	110	110	110	.....	.....
	Maine and New Brunswick Electric Power Co.	Aroostook Junction.	Water.....	3,500	3	60	11,000	500	110	1	37
	Moncton Tramways Electric and Gas Co.	Moncton.....	Steam.....	900	2	60	1,100	500	110	36	1,316
	Newcastle Electric Department.	Newcastle.....	Steam.....	325	2	60	2,300	2,300	110	.....	300
	Port Elgin Electric Light Company.	Port Elgin.....	Steam.....	50	.....	DC.	220	220	220	.....	45
	Saint John Railway Company.	St. John.....	Steam.....	7,000	3	60	2,300	250	107	314	5,741
	C. M. Sherwood, Limited.	Centreville.....	Water.....	160	.....	DC.	.....	.....	110	.....	.....
	Sussex Manufacturing Company.	Sussex.....	Steam.....	200	2	133	2,000	.....	110	.....	269
	Shediac Electric Light and Power Co.	Shediac.....	Water.....	108	3	60	2,300	250	110	1	79
St. Leonard Electric Company Limited.	St. Leonard.....	Purchased.....	.....	.....	.....	.....	.....	110	2	44	
St. Stephen Electric Light Company.	St. Stephen.....	Water.....	600	3	60	2,300	220	110	6	321	
Sackville Electric Light Company.	Sackville.....	Steam.....	375	3	60	2,300	220	110	3	200	
Woodstock Electric Railway, Light and P.	Woodstock.....	Water.....	500	3	60	2,300	2,300	110	2	500	
Halifax, N.S.	Antigonish Electric Company.	Antigonish.....	Steam.....	100	.....	DC.	230	.....	115	.....	101
	Annapolis Royal, Town of....	Annapolis Royal.....	Water.....	245	2	66	2,200	.....	104	.....	3

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	4,000	3	50	3,150	526	110	8	6
Acadia Coal Company, Lim-Stellation	4,000	3	50	3,150	526	110	8	6
Acadia Electric Light Com-pany	174	3	60	2,300	.....	110	.....	214
Bridgetown Electric Light and Power Co	175	1	60	2,300	.....	110	.....	.....
Bear River and Digby Elect-ric Co	60	3	60	2,200	.....	110	.....	.....
Cape Breton Electric Light and Power Co	2,745	2	60	2,300	2,300	110	64	2,005
Quebec Electric Light and Power Co	500	.....	DC	125	220	110	26	592
County Electric Company, Annapolis	3,000	3	60	11,000	2,200	110	29	813
Gas, Town of	95	3	60	2,300	220	110	.....	80
Digby	150	.....	.....	.....	.....	104	.....	108
Dartmouth Light and Power Co	300	3	60	2,200	.....	110	.....	461
Donnan	35	3	25	.....	2,200	110	.....	108
Dartmouth	50	3	60	2,200	.....	110	.....	.....
Gloucester	600	2	60	2,200	.....	104	.....	543
Springfield	500	2	60	2,080	.....	104	.....	73
Hantsport	75	3	60	2,200	2,000	110	.....	58
Halifax	5,052	3	60	2,200	550	110	264	1,128
Inverness	75	.....	DC	125	.....	115	.....	.....
Kentville	120	.....	DC	150	.....	110	.....	131
Leeds	35	3	60	125	.....	112	.....	.....
Leeds	40	3	60	3,500	.....	104	.....	21
Leeds	65	3	60	2,300	.....	110	.....	130
Leeds	80	1	60	2,250	220	110	.....	21
Leeds	65	2	60	2,400	.....	110	.....	25
Leeds	1,125	3	60	2,300	220	108	54	1,143
Leeds	140	2	133	2,200	.....	104	.....	65
Leeds	125	3	60	2,200	.....	110	.....	27
Leeds	100	3	60	2,300	220	110	.....	.....
Leeds	75	2	60	2,200	220	220	3	300
Leeds	60	3	60	2,300	110	110	.....	51
Leeds	75	3	60	2,000	.....	110	.....	3
Leeds	280	2	66 1/2	1,710	220	165	1	330



SESSIONAL PAPER No. 13

Selkirk Electric Department.	Selkirk	Purchased.	3	60	550	110	17	383
Winnipeg Light and Power Department.	Winnipeg	Water	3	47,660	550	110		32,768
Winnipeg Electric Railway Company.	Winnipeg	Water	3	40,000	550	110	883	15,107
Arcola Light and Power Company, Limited.	Arcola	Oil	1	44	1,100	110		116
Broadview Electric Department.	Broadview	Gas		75	2,200	110		90
Harbord Electric Department.	Harbord	Purchased.	3		220	110	10	260
Canara Electric Department.	Canara	Oil	3	92	110	110	1	120
Carlyle Electric Department.	Carlyle	Steam	3	52	60	110		51
Davidson Electric Department.	Davidson	Gas	3	50	2,200	110		89
James Arthur Daniels Electric Light and Power Company.	East View	Oil.		15	115	115		43
	Rosetown	Steam.	3	100	2,300	110	1	
Electric Light and Power Company.	Lumsden	Oil	3	40	2,200	110		84
Estevan Electric Department.	Estevan	Steam	3	350	2,200	100	8	355
Fort Qu'Appelle Power Company.	Fort Qu'Appelle	Oil	3	25	2,200	110	1	46
H. A. Giesch	Morse	Steam.	3	68	2,300	110	1	22
Gravel Electric Department.	Govan	Oil		20	115	110		36
Gravel Electric Department.	Grenfell	Gas	3	78	2,200	125		103
Joe H. Johnson	Gull Lake	Gas	3	64	2,300	115	1	102
Humboldt Electric Department.	Humboldt	Steam	3	200	220	110	2	160
Indian Head Electric Department.	Indian Head	Steam.	3	225	2,200	104		240
W. Johnson & Son	Lloydminster	Gas		100	220	220	1	123
H. M. Klumpp	Herbert	Gas	3	64	115	115	1	99
Kanasko Electric Department.	Kanasko	Gas	3	300	2,300	110		75
Kendall Electric Department.	Kendall	Steam	3	125	2,200	110	1	137
Langham Electric Department.	Langham	Gas	3	50	2,200	110		73
London Power Company.	Regina	Gas	3	100	220	110		6
Maple Creek Light, Power and Milling Co.	Maple Creek	Steam.	3	100	2,200	110		100
Melville Electric Department.	Melville	Oil	3	150	2,200	110	1	150
McIntosh & Coyle	Bertha	Gasoline		12	110	110		
McIntosh Hill & Company.	Regina	Steam		375	220	110	1	55
Williams W. Morrison	LaSalle	Oil		25	110	110		20
Woods Corporation of Moose Jaw, City of	Medicine Hat	Gas	3	282	220	110		300
Woods Corporation of Moose Jaw, City of	Moose Jaw	Steam	3	4,500	220	110	170	2,956
Woods Corporation of North Battleford.	North Battleford	Steam	3	1,000	220	110	35	700
Woods, Terry & Co.	North Battleford	Gas	3	75	2,200	110	1	100

Regina, Sask.

## APPENDIX K.

List of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act, etc.—Continued

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Fre- quency of System.	Generator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS.	
			Type.	Horse Power.				Power.	Lighting.		
Regina, Sask. —Cont.	Prince Albert Electric Light Plant.	Prince Albert.	Steam.	1,600	3	60	2,200	550	110	47	1,539
	Portia Power Company.	North Portal.	Trans. Line	90		DC.	220	440	220		19
	Qu'Appelle Electric Light Company.	Qu'Appelle.	Gas.			DC.	220				65
	Regina, Light and Power Department.	Regina.	Steam.	10,900	3	60	2,200	2,200	110	249	5,410
	Rouleau, Town of.	Rouleau.	Gas.	175	3	60	2,300	115	115		133
	Radisson Iron and Electric Works.	Radisson.	Gasoline.			DC.	115				17
	Strassburg, Corporation of.	Strassburg.	Steam.	50	3	60	2,200				100
	Swift Current, City of.	Swift Current.	Steam.	295	3	60	2,300	220	110	21	619
	Saltcoats, Town of.	Saltcoats.	Steam.	40	3	60	2,200	110	110		82
	Saskatoon, Corporation of.	Saskatoon.	Steam.	7,973	2	60	2,400	2,200	110	323	4,229
	Scott, Town of.	Scott.	Oil.	100	3	60	2,200	220	110	1	65
	L. Spitzer & P. Leasch.	Semans.	Oil.	9	9	DC.	116				
	Arthur Townsend.	Milestone.	Gas.	26	2	DC.	220				
Tisdale Trading and Milling Company.	Tisdale.	Steam.	125	3	60	550	220	110		39	
Weyburn, Corporation of.	Weyburn.	Steam.	500	3	60	2,300	220	110	42	660	
Wadena Light and Power Plant.	Wadena.	Gas.	61	3	60	2,300				78	
Watrous Electric Light, Power and Traction.	Watrous.	Gas.	90	3	60	2,200	220	110		140	
Wilcox Hotel.	Wilcox.	Gasoline.	9		DC.		115	110			
Wilkie, Town of.	Wilkie.	Oil.	100	8	60	2,200	220	110	2	125	
Wolseley Light and Power Plant.	Wolseley.	Gas.	110	3	60	2,300	110	110	2	138	
Yorkton, Town of.	Yorkton.	Oil.	550	3	60	2,200	550	110	13	380	
Yellow Grass, Town of.	Yellow Grass.	Oil.	25	2	DC.	120	110	110		61	
Albtra Electric Company Limited.	Bassano.	Steam.	75	3	60	2,200	2,200	120		121	
Bankhead Mines Limited.	Bankhead.	Steam.	500	3	60	2,200	550	210	1	321	



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Business Improvement Com-pany.	Calgary	Gas	350	3	60	2,200	220	110	2	6
City of Calgary, Corporation	Carlston	Steam	100	2	60	2,200	220	110	722	150
Canada West Coal Company, Ltd.	Calareholm	Steam	290	3	60	2,300	220	110	1	128
Canada West Coal Company, Ltd.	Talor	Steam	175	3	60	2,300	116	110		126
City of Calgary, Corporation	Calgary	Steam	75	3	D.C.	220		110		20
City of Calgary, Corporation	Calgary	Water	31,800	3	60	12,000	12,000	110		1,800
City of Calgary, Corporation	Calgary	Steam	2,875	3	60	2,200	210	105	40	
City of Calgary, Corporation	Calgary	Steam	100	3	60	2,200	220	110	1	112
City of Calgary, Corporation	Punchet Creek	Steam	275	3	60	2,250		110		225
City of Calgary, Corporation	Frank	Steam	750	3	60	2,200	440	110		
City of Calgary, Corporation	Colenan	Steam	1,050	3	60	2,200	2,200	250		8
City of Calgary, Corporation	Raymond	Steam	75	3	60	2,200		110		
City of Calgary, Corporation	Lethbridge	Steam	3,000	2	60	2,200	220	110	100	1,715
City of Calgary, Corporation	High River	Steam	160	3	60	2,200	220	110		215
City of Calgary, Corporation	Medicine Hat	Steam	2,400	3	60	2,300	550	110	76	999
City of Calgary, Corporation	Macleod	Steam	600	3	60	2,300	220	110		100
City of Calgary, Corporation	Nanton	Steam	100	3	60	2,200		110		101
City of Calgary, Corporation	Blainiere	Steam	150	3	60	2,300	2,300	110		
City of Calgary, Corporation	Okotoks	Gas	125	3	60	2,200	110	110		3
City of Calgary, Corporation	Edmonton	Steam	10		D.C.			110		
City of Calgary, Corporation	Narderg	Steam	250	3	60	2,300	140	110		11
City of Calgary, Corporation	Canora	Steam	235	3	60	2,300	220	120	7	313
City of Calgary, Corporation	Edmonton	Steam	1,300	3	60	2,300	550	110	524	11,411
City of Calgary, Corporation	Fort Saskatchewan	Steam	50	2	60	2,200		110		122
City of Calgary, Corporation	Edmonton	Steam	250		D.C.	230	220	110	1	1
City of Calgary, Corporation	Prochanta	Steam	306	3	60	500	440	110	6	190
City of Calgary, Corporation	Prochanta	Water	125	3	60	7,600		110		190
City of Calgary, Corporation	Mountain Park	Steam	500		D.C.	250	250	250	1	1
City of Calgary, Corporation	Prochanta	Purchased	75	60	60			110		111
City of Calgary, Corporation	Prochanta	Steam	187	3	60	2,300		110		330
City of Calgary, Corporation	Prochanta	Gas	62		D.C.	440		220		75
City of Calgary, Corporation	Wetaskwin	Steam	740	2	60	2,300	220	110	17	385
City of Calgary, Corporation	Calgary	Steam	60		D.C.	125		125		

## APPENDIX K.

List of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act, etc.—(Continued).

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Fre- quency of System.	Gen- erator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS.	
			Type.	Horse Power.				Power.	Lighting.		
Vancouver, B. C.	Ashcroft Water, Electric and Improvement Co.	Ashcroft.	Gas.	100	3	60	2,300	110	.....	141	
	Adams River Lumber Company Limited.	Chase.	Steam	75	1	125	1,100	110	.....	40	
	Armstrong Electric Department.	Armstrong.	Water.	300	3	60	2,200	110	2,000	3	200
	Anglesey Estates.	Walhachin.	Oil	15	.....	.....	150	110	.....	.....	.....
	Britannia Mining and Smelting Co. Ltd.	Britannia Beach.	Water.	1,975	.....	3	60	6,000	220	.....	35
	British Columbia Electric Railway Co.	Vancouver.	Steam	18,000	.....	3	60	2,200	2,200	1,569	38,516
	Cascade Water Power and Light Co. Ltd.	and Rossland.	Water.	1,000	.....	3	60	2,000	20,000	.....	4
	Canadian Western Lumber Company Ltd.	Fraser Mills.	Steam	3,000	.....	3	60	500	500	35	.....
	Crows Nest Pass Electric Light and Pr.	Coal Creek.	Steam	275	.....	.....	.....	220	.....	.....	.....
	Crows Nest Pass Electric Light and Pr.	Michel.	Steam	400	.....	.....	.....	220	.....	.....	.....
	Denver Light and Power Company Limited.	New Denver.	Water	55	.....	3	60	2,300	110	.....	2
	Daly Reduction Company Limited.	Hedley.	Water.	1,800	.....	3	60	6,000	2,200	.....	3
	Fernie Electric Department.	Fernie.	Steam.	250	.....	2	60	2,300	220	12	528
	Granby Consolidated Min. and Pr. Co.	Auyox.	Water.	3,000	.....	3	60	2,200	2,200	4	8
	Cranbrook Electric Light Company Ltd.	Cranbrook.	Steam.	500	.....	2	60	2,200	220	8	625
	Grand Forks Electric Department.	Grand Forks.	Purchased.	.....	.....	3	60	.....	2,200	11	375
Greenwood City Waterworks Company.	Greenwood.	Water.	200	.....	3	60	4,400	220	.....	3	
Kaslo Electric Department.	Kaslo.	Water.	250	.....	2	60	1,100	1,100	.....	2	
Kelowna Electric Department.	Kelowna.	Steam	620	.....	3	60	2,300	220	32	515	

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Kamloops Electric Depart.	Kamloops	Water	4,000	3	60	2,200	2,200	110	30	1,125
Mission Water, Light and Mission Power Co. Ltd.	Mission	Water	90	3	60	250	250	110	.....	34
Merritt Electric Department.	Merritt	Steam	210	3	60	2,200	2,200	110	.....	250
Northern Telephone and Power Co. Ltd.	Princes George	Steam	126	3	60	2,300	2,300	110	.....	58
New Westminster Electric Dept.	New Westminster	Purchased.	2,000	3	60	.....	.....	110	2	3,200
Nelson Electric Department.	Nelson	Water	3,300	3	60	12,000	2,200	110	50	700
Okanagan Saw Mills Limited.	Enderby	Steam	75	1	60	2,300	.....	110	.....	186
Okanagan Trust Company.	Nanaimo	Water	60	3	60	2,000	.....	110	.....	23
Penticton Electric Department.	Penticton	Oil	200	3	60	4,600	230	110	1	380
Prince Rupert Electric Dept.	Prince Rupert	Water	2,150	3	60	2,500	250	110	38	760
Powell River Company Ltd.	Powell River	Water	9,000	3	50	600	600	110	.....	22
Phoenix Electric Company.	Phoenix	Purchased.	.....	3	60	250	250	110	1	8
Revelstoke Electric Dept.	Revelstoke	Water	1,650	3	60	2,300	220	110	19	725
Roadland Water and Light Company.	Roadland	Purchased.	.....	3	60	.....	110	110	.....	101
Squamish Electric Light Company.	Squamish	Purchased.	.....	3	60	.....	110	110	1	12
Sumas Electric Dept.	Sumas	Water	45	2	60	2,200	.....	110	.....	118
Sussex Electric Dept.	Sussex	Purchased.	.....	3	60	.....	.....	110	.....	.....
Sussex Electric Dept.	Sussex	Water	175	3	100	120	120	110	.....	.....
Sussex Electric Dept.	Sussex	Oil	150	3	60	2,200	.....	110	.....	91
Sussex Electric Dept.	Sussex	Water	725	3	60	2,200	220	110	18	630
Sussex Electric Dept.	Sussex	Water	0,200	3	60	2,200	.....	110	.....	.....
Sussex Electric Dept.	Sussex	Water	20,000	3	60	2,500	65,000	110	21	.....
Sussex Electric Dept.	Sussex	Water	26,000	3	60	1,400	60,000	115	100	1,275
Victoria Electric Dept.	Victoria	Purchased.	.....	3	60	.....	.....	110	.....	50
Victoria Electric Dept.	Victoria	Trans. Line	2,500	3	60	.....	2,200	110	122	12,887
Victoria Electric Dept.	Victoria	Water	12,000	3	25	13,200	2,200	110	.....	134
Victoria Electric Dept.	Victoria	Water	.....	3	.....	.....	.....	110	.....	77

WATER

APPENDIX K.  
List of Electric Light and Power Companies Registered under the Provisions of the Electricity Inspection Act, etc.—Continued

District.	Company.	Address.	PRIME MOVER.		Phases of System.	Frequency of System.	Generator Voltage.	SERVICE VOLTAGES.		NUMBER OF METERS.	
			Type.	Horse Power.				Power.	Lighting.		
Victoria, B.C. — <i>Con.</i>	Cumberland Electric Light Company Ltd.	Cumberland	Purchased.		3	25		115		500	
	Duncan Electric Power and Lighting Plant.	Duncan	Oil	200	3	60	2,200	229	2	60	
	Nanaimo Elect. Light, Fr. and Heating Co.	Nanaimo	Water	900	3	60	2,300	2,300	10	1,560	
	Port Alberni Electric Department	Victoria, Port Alberni	Steam	113		3	110	110	3	16	
			Oil	150			2,300	110		109	
	J. A. Seward	Victoria	Purchased.	25,500	3	60		500	6	14	
	Vancouver Island Power Company.	Victoria	Trans. Line		3	60					
	Vancouver Island Power Company.	Victoria	Trans. Line.	6,000	3	60					
	Victoria Electric Company	Victoria	Purchased.		3	60			110		35

J. U. VINCENT,  
*Deputy Minister*

INLAND REVENUE DEPARTMENT,  
ELECTRICAL BRANCH,

ORMOND HIGMAN,  
*Chief Engineer.*

OTTAWA, July 1, 1916.

REPORTS, RETURNS, AND STATISTICS  
OF THE  
INLAND REVENUES  
OF THE  
DOMINION OF CANADA

FOR THE FISCAL YEAR ENDED MARCH 31

1916

PART III

ADULTERATION OF FOOD

*PRINTED BY ORDER OF PARLIAMENT*



OTTAWA  
PRINTED BY J. DE L. TACHÉ,  
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY  
1916



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## REPORT

OF THE

## DEPUTY MINISTER OF INLAND REVENUE

August 16, 1916.

To the Honourable E. L. PATENAUDE,  
Minister of Inland Revenue,  
Ottawa, Ontario.

HONOURABLE SIR,—I have the honour to herewith submit to you a report of the work performed by the Laboratory of the Inland Revenue Department during the fiscal year ending on the 31st of March, 1916.

This report is prefaced by a general review from the Chief Analyst of the labour performed by Dr. McGill and his assistants. It is therefore unnecessary for me to go into the matter more fully.

I may, however, be permitted to remark that this year's experience has conclusively proven the wisdom of the establishment of branch laboratories. This move was in accord with the needs of the country. The work of the laboratory is assuming each year greater importance. The public is relying more and more upon the publication of our standards and bulletins as guides towards the acquisition and consumption of pure foods and drugs.

In fact, under present conditions, the Laboratory can hardly keep pace with public requirements.

The Department has been endeavouring to secure the services of an additional number of analysts, but without success, and I am afraid the remuneration at present paid to analysts is insufficient to induce them to enter the Government Service. Better salaries seem to be available in the industrial fields.

The demand for good analysts at a high salary is growing very fast, more especially since the beginning of the war. This is due to the fact that many enterprising Canadians have endeavoured to establish in this country manufactories of articles which were previously imported.

I am, therefore, of the opinion, that the Department will have to be prepared to pay higher salaries to analysts, if it would be sufficiently equipped and manned in proportion to the amount of work to be done.

Sometime ago I suggested to the Chief Analyst that a material saving could be effected in the printing of the Annual Report by eliminating therefrom that part of each bulletin in which is contained the list of the samples and the results of their analysis. There is no practical advantage in including those lists in the Report. The Department always keeps a large stock of bulletins on hand, which are distributed among the parties interested, or sent to them upon request. I am glad to see that the Chief Analyst has agreed with this view.

I have the honour to be, Honourable Sir,

Yours very truly,

J. U. VINCENT,  
*Deputy Minister of Inland Revenue.*

OTTAWA, July 20, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue,  
Ottawa, Ont.

SIR,—I beg to report as follows upon the work of these laboratories for the fiscal year ending 31st March, 1916.

In my report of last year I gave an account of certain important changes contemplated and partly effected in the organization of the Laboratory Branch of this department. These consist essentially in the establishment of branch laboratories or so-called sub-laboratories, at various important commercial centres. The sub-laboratories in question are to be regarded as parts of a system of which the central laboratory at Ottawa is the head. The work done at the sub-laboratories is identical in kind with that performed at Ottawa and is reported to the department through the chief analyst, who is responsible for its amount and character.

Because of this fact, it is desirable that the analysts in charge of the sub-laboratories should be men who have had experience at Ottawa, and who possess the confidence of the chief analyst.

Three sub-laboratories are now in working order, namely, at Halifax, Winnipeg, and Vancouver. It is to be expected that others will be established at the more important points, in the not distant future. Many advantages should manifest themselves consequent upon a system which comprehends at the same time centralization, in the sense of control at Ottawa, and localized activity. Canada is a country of so wide extent that great delays are inevitable, and much expense involved, when all samples of foods, drugs, and fertilizers are analysed at Ottawa. Many articles of a more or less perishable nature cannot be effectively inspected from a single centre.

The following synopsis of work done at our sub-laboratories during the first year of their existence will be found interesting:—

*Halifax.*—The laboratory is temporarily located at 48-50 Bedford Row. Mr. C. C. Forward was placed in charge in December, 1914, and Mr. A. J. Landry was sent out as his assistant in September, 1915. Both of these gentlemen had been, for some years, on the staff at Ottawa. This was the first of the sub-laboratories to be put into commission; and Mr. Forward was without assistance until September, 1915. He reported 144 samples of various character, up to the 31st March, 1915.

The record of samples worked at Halifax during the fiscal year covered by the present report (1st April, 1915, to 31st March, 1916) is as follows:—

Samples worked under instructions from Ottawa . . . . .	842
For local excise . . . . .	21
Various local samples . . . . .	28
Total . . . . .	<u>891</u>

In addition to the above, five Winchesters of Normal Soda were supplied to the excise service.

*Winnipeg.*—The laboratory is situated in the upper flat of the post office building at the corner of Magnus avenue and Main street. Mr. E. L. C. Forster was placed in charge in April, 1915, with Mr. W. A. Davidson, as assistant, in September, 1915, both gentlemen having been members of the staff at Ottawa. This sub-laboratory reports as follows for the fiscal year ending March 31, 1916:—

Samples worked under instructions from Ottawa . . . . .	474
Local samples . . . . .	10
Total . . . . .	<u>484</u>

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In addition to the above, twenty-two samples of standard solutions were supplied to the excise service.

*Vancouver.*—The laboratories are temporarily located at 249 Hastings street. Mr. J. A. Dawson was placed in charge in February, 1915, with Mr. P. T. Kirwan, as assistant, in August, 1915, both gentlemen having been on the staff at Ottawa. The following work is reported for the year ending March 31, 1915:—

Samples worked under instructions from Ottawa . . . . . 765

In addition, five standard solutions were prepared for use in Excise service.

When it is remembered that all these sub-laboratories have been but recently equipped; that the equipment is more or less incomplete, even now; that the technical staffs have no clerical or other assistance, and in two cases occupy temporary quarters, necessarily more or less ill-suited to laboratory purposes, I regard the above records as highly creditable, and I have much pleasure in presenting them to you.

The manning of these sub-laboratories by men drafted from the technical staff at Ottawa has seriously reduced this staff, and made necessary the appointment of additional analysts. My last report included a statement of our technical staff as organized in March, 1915 (see departmental letter No. 126722 of file 108043).

The personnel of this staff was then as follows:—

TECHNICAL STAFF of Laboratory Branch at March 31, 1915.

	Title.	Name.
At Ottawa . . . . .	1 Chief Analyst . . . . .	A. McGill.
	2 Deputy " . . . . .	A. Lemoine.
	3 First Assistant Analyst . . . . .	A. Valin.
	4 Second " . . . . .	V. Kitter.
	5 Third " . . . . .	E. Forster.
	6 Fourth " . . . . .	A. Couture.
	7 Fifth " . . . . .	P. Kirwan.
	8 Sixth " . . . . .	A. Landry.
	9 Seventh " . . . . .	S. J. Cook.
	10 Eighth " . . . . .	W. Davidson.
	11 Ninth " . . . . .	P. Calher.
At Halifax . . . . .	12 Laboratory Assistant . . . . .	Miss Wright.
	13 In charge . . . . .	C. Forward.
At Winnipeg . . . . .	14 Assistant . . . . .	Vacant.
	15 In charge . . . . .	
At Vancouver . . . . .	16 Assistant . . . . .	
	17 In charge . . . . .	J. Dawson.
	18 Assistant . . . . .	Vacant.

The following changes were made during the year 1st April, 1915, to 31st March, 1916:—

Mr. E. L. C. Forster, Third Assistant Analyst, was sent to Winnipeg, in charge of the sub-laboratory at that place, in April, 1915.

Mr. A. P. Couture, Fourth Assistant Analyst, resigned in January, 1916.

Mr. P. T. Kirwan, Fifth Assistant Analyst, was sent as assistant at Vancouver, in August, 1915.

Mr. A. J. Landry, Sixth Assistant Analyst, was sent as assistant to Halifax in September, 1915.

Mr. W. A. Davidson, Eighth Assistant Analyst, was sent as assistant to Winnipeg in September, 1915.

The following shows the personnel of the Technical staff, as it existed on 31st March, 1916:—

	Title.	Name.
At Ottawa .....	1 Chief Analyst.....	A. McGill.
	2 Deputy ".....	A. Lemoine.
	3 First Assistant Analyst.....	A. Valin.
	4 Second ".....	V. Kitto.
	5 Third ".....	S. J. Cook.
	6 Fourth ".....	F. Collier.
	7 Fifth ".....	L. Westman.
	8 Sixth ".....	Vacant.
	9 Seventh ".....	"
	10 Eighth ".....	"
	11 Ninth ".....	"
	12 Laboratory Assistant.....	Miss Wright.
At Halifax .....	13 In charge.....	C. C. Forward.
	14 Assistant.....	A. J. Landry.
At Winnipeg.....	15 In charge.....	E. L. C. Forster.
At Vancouver .....	16 Assistant.....	W. A. Davidson.
	17 In charge.....	J. A. Dawson.
	18 Assistant.....	P. T. Kirwan.

Mr. L. E. Westman was appointed as Fifth Assistant Analyst in April, 1915.

It will be seen that five vacancies on the Ottawa staff remained unfilled for the following periods:—

1. By removal of Mr. Forster to Winnipeg, from April, 1915—eleven months.
2. By removal of Mr. Kirwan to Vancouver, from August, 1915—seven months.
3. Removal of Mr. Landry to Halifax, from September, 1915—six months.
4. Removal of Mr. Davidson to Winnipeg from September, 1915—six months.
5. By resignation of Mr. A. P. Couture, from January, 1916—two months.

A total of thirty-two months. To compensate this reduction of the Ottawa staff, we have one appointment (Mr. Westman) in April, 1915, eleven months. Thus the Ottawa staff has been below normal during the past fiscal year, by a quantity which may be stated as the work of an analyst for twenty-one months.

It is hoped that, during the year now current, the vacancies above indicated will be filled; and additional technical assistance furnished.

During the fiscal year covered by this report, the following analyses have been made upon samples collected under the provisions of the Adulteration Act, and the results have been published in Bulletin form:—

Number of Bulletin.	Subject.	Number of Samples.	Number of Bulletin.	Subject.	Number of Bulletin.
310	Milk in smaller towns and villag.	205	325	Maple syrup.....	243
311	Shorts or middlings.....	189	326	Malt extract.....	152
312	Molasses.....	140	327	Bleaching powder.....	101
313	Vinegar.....	245	328	Salad oil.....	159
314	White pepper.....	387	329	Pot and Pearl barley.....	191
315	Tincture of opium.....	127	330	Breakfast foods.....	33
316	Native wine.....	187	331	Turpentine.....	212
317	Fertilizers as sold.....	420	332	Linseed oil.....	210
318	Milk in smaller towns and villag.	209	333	Formalin.....	68
319	Chop feed.....	149	334	Butter.....	138
320	Table syrups other than maple..	200	335	Cream of tartar.....	180
321	Lime juice.....	83	336	Tincture of ginger.....	65
322	Maple confections.....	58	337	Lemon flavouring extract.....	223
323	Saltpetro.....	166			
324	Maple sugar.....	234		Total.....	4,974

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The Bulletins above enumerated, in continuance of a custom which has been observed since 1887, are reprinted with this report. I would respectfully advise that the practice referred to be discontinued, in the interest of economy. Sufficiently large editions are always published in the first instance, to meet normal demands; and it would but little increase the cost of publication were sufficiently large first editions printed to enable us to hold over a surplus, in case of unusual demand. In my opinion, a brief synopsis of their contents would prove sufficient for the purposes of the annual report.

In addition to the work above referred to, 682 samples of various kinds were analysed in the laboratories at Ottawa. These are enumerated below:

Acetic acid.....	67	Maple sugar.....	71
Acetone.....	1	Maple syrup.....	64
Alcohol.....	3	Mass wine.....	1
Allspice.....	1	Malt extract.....	1
Amyl acetate.....	1	Medicine.....	1
Aspirin.....	5	Methyl alcohol.....	1
Baking powder.....	2	Methylated spirits.....	1
Beer.....	29	Middlings.....	4
Benzine.....	1	Milk.....	2
Benzol.....	5	Milk powders.....	4
Brandy.....	1	Nitre.....	2
Bread improver.....	1	Oil.....	1
Butter.....	52	Oil of lux.....	1
Calf meal.....	1	Olive oil.....	1
Cheese.....	4	Paint.....	30
Chloroform.....	11	Pepper.....	17
Cider.....	1	Pepper shells.....	1
Clarine tablets.....	1	Pills.....	1
Coffee.....	4	Reservaline.....	4
Cream of tartar.....	3	Rope.....	2
Denatured alcohol.....	2	Saltpetre.....	1
Disinfectants.....	4	Sausages.....	2
Dubbin.....	6	Sea water.....	1
Ether.....	7	Screenings.....	1
Evap. rated apples.....	2	Shortening.....	4
Feed.....	1	Shorts.....	2
Feed barley.....	1	Soap.....	2
Fertilisers.....	20	Spice.....	5
Fish biscuits.....	2	Spirits.....	71
Flour.....	6	Strawberries.....	1
Fusel oil.....	19	Sugar.....	2
Gasoline.....	2	Tablets.....	3
Ginger.....	1	Table syrup.....	1
Headlight oil.....	1	Tartaric.....	1
Honey.....	4	Tea.....	2
Insecticide.....	1	Temperature.....	1
Iodine.....	1	Tincture of opium.....	1
Jam.....	87	Turpentine.....	1
Katalys powder.....	1	Vanilla extract.....	2
Ketchup.....	2	Vinogar.....	4
Kreol.....	1	Water.....	17
Lemon extract.....	1	Whiskey.....	1
Liver oil.....	1	Wine.....	1
Mace.....	2	Wood alcohol.....	2
Malt liquors.....	4	Wood spirit.....	12
Maltzymors.....	1		
Maple confections.....	4	Total.....	682

At Ottawa, 205 samples of vinegar were tested for excess purpura, and the following solutions supplied:—

Normal soda.....	1	Witchammony.....	1
" sulphuric acid.....	2	".....	2
" acetic acid.....	4	".....	4
Solution phenolphthalein.....	5	".....	5
Total.....	12	".....	12

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Standards for fruit and fruit products as fixed by Order in Council of 17th October, 1912 (see G. 1044) were amended as regards the moisture limit for evaporated apples, by Order in Council of 16th March, 1916 (see G. 1238). The limit for moisture is reduced from 27 per cent to 25 per cent.

A great deal of work has been done in connection with the standardization of various classes of foods; but although this has resulted in the accumulation of much valuable data, our acquisitions are not sufficiently complete to justify definite recommendation, having legislation in view.

I have the honour to be, Sir,

Your obedient servant,

A. MCGILL,

*Chief Analyst*

## APPENDIX A.

## BULLETIN No. 310—MILK, IN SMALLER TOWNS AND VILLAGES.

OTTAWA, April 12, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue,

SIR,—I have the honour to hand you a report upon two hundred and eight (208) samples of milk as purchased by our inspectors in smaller towns and villages of Canada. This report may be regarded as a continuation of the work published as Bulletin No. 298—and will be continued, from time to time.

The samples now reported were procured in January, February and March of this year and were taken in hand immediately on receipt at the laboratory, so that no allowance can be made for alteration of the article, except in the cases especially mentioned, (3956, 3957 and 3958), where, through some error on the part of the inspector, the samples were received in spoiled state.

The results of inspection are thus summarized ;—

Samples found genuine.....	168
“ doubtful.....	16
“ not up to standard.....	21
“ spoiled when received.....	3
Total.....	<u>208</u>

As regards the fat content of the two hundred and five samples analyzed, the following is of interest :—

Fat above 5.0 per cent in.....	23	samples
“ 4.5 “.....	22	“
“ 4.0 “.....	43	“
“ 3.5 “.....	53	“
“ 3.25 “.....	32	“
Fat below 3.25 “.....	32	“
Total.....	<u>205</u>	“

It is quite apparent that our standard of 3.25 per cent fat is a very reasonable minimum fat requirement, since it is found in 173 samples out of 205, or in 85 per cent of the total collection.

I beg to recommend publication of this report as Bulletin No. 310.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NOVA SCOTIA—

1915.							
Mar. 11	Milk.....	64146	R. H. Means, Winsdor, N.S.	1 qt.	7	Vendor.....	
" 11	" .....	64147	R. Redder, "	1 "	7	" .....	
" 11	" .....	64148	T. H. Curry, "	1 "	7	" .....	
" 12	" .....	64149	Acadia Dairy Co., Wolfville, N.S.	1 "	nil.	Geo. Sheam, Grand Pre., N.S.	
" 12	" .....	64150	Wm. Regan, "	1 "	8	Vendor .....	
" 16	" .....	64151	A. Young, New Town, Lunenburg, N.S.	1 "	7	" .....	
" 16	" .....	64152	J. D. Selig, "	1½ pts.	4	" .....	
" 16	" .....	64153	Paul Mosher, "	1 qt.	7	" .....	
" 18	" .....	64154	A. J. Keddy, Dartmouth, N.S.	1 "	9	" .....	
" 18	" .....	64155	H. E. Walker, "	1 "	9	T. Ritchie, Gaston Rd., Coal Harbour, N.S.	

## DISTRICT OF NEW BRUNSWICK—

Feb. 16	Milk.....	65901	Cliff Thompson, St. Stephen, N.B.	1 qt.	10	Vendor.....	
" 16	" .....	65902	Byron Hayman "	1 "	nil.	" .....	
" 16	" .....	65903	J. R. Waller "	1 "	10	" .....	
" 22	" .....	65904	Chas. A. Peabody, Woodstock, N. B.	1 "	10	" .....	
" 22	" .....	65905	Peabody Bros., "	1 "	10	" .....	
" 22	" .....	65906	Geo. W. Boyer, "	1 "	nil.	" .....	
" 24	" .....	65907	Nap. Turcotte, River Bank, Grand Falls, N.B.	1 "	15	" .....	
Mar. 2	" .....	65908	Maritime Dairy Co, Sussex, N.B.	1 "	10	Robt. Shannon, Sussex, N.B.	
" 2	" .....	65909	Sussex Cheese and Butter Co., "	1 "	6	.....	King's County Farmers.
" 2	" .....	65910	T. H. Brown, "	1 "	10	Freeze Brothers, Sussex, N.B.	

## DISTRICT OF QUEBEC CITY—

Jan. 28	Milk.....	56304	S. F. Fleury, Tifford.....	1 qt.	15	.....	F. F. Flury.....
" 28	" .....	56305	Thon. Ward, Tifford. ....	1 "	10	Vendor .....	
" 28	" .....	56306	T. Dacre, Tifford .....	1 "	10	" .....	



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MILK.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Sp. Gr.	Total Solids.	Fat.	Non-fat Solids.		

R. J. WAUGH, INSPECTOR.

		p. c.	p. c.	p. c.		
.....	1·0312	12·22	3·64	8·58	64146	Genuine.
.....	1·0312	12·83	4·18	8·65	64147	"
.....	1·0261	10·28	3·09	7·19	64148	Below standard in fat and solids.
.....	1·0332	12·96	4·05	8·91	64149	Genuine.
.....	1·0277	12·60	4·70	7·90	64150	Non-fat solids low. Pass.
.....	1·0324	13·00	4·16	8·84	64151	Genuine.
.....	1·0288	15·40	7·05	8·35	64152	"
.....	1·0274	11·75	4·14	7·61	64153	Non-fat solids low.
.....	1·0348	12·15	2·81	9·34	64154	Fat too low.
.....	1·0274	10·25	2·80	7·45	64155	Fat and total solids low.

JOHN C. FERGUSON, INSPECTOR.

.....	1·0321	12·71	4·05	8·66	65901	Genuine.
.....	1·0315	11·77	3·38	8·39	65902	"
.....	1·0321	12·72	4·08	8·64	65903	"
.....	1·0331	13·33	4·27	9·06	65904	"
.....	1·0314	11·71	3·27	8·44	65905	"
.....	1·0360	12·33	2·78	9·55	65906	Fat too low.
.....	1·0310	13·04	4·43	8·61	65907	Genuine.
.....	1·0320	12·80	3·70	8·74	65908	"
.....	1·0333	13·60	4·55	9·05	65909	"
.....	1·0336	12·80	3·74	9·06	65910	"

F. X. W. E. BELAND, INSPECTOR.

.....	1·035	13·89	4·46	9·43	66304	Genuine.
.....	1·029	13·10	5·16	7·94	66305	Non-fat solids low. Pass.
.....	1·033	14·89	5·96	8·93	66306	Genuine.

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Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC CITY—

1915.							
Jan.	28	Milk..	56307	J. Brown, Tifford.....	1 qt..	10	Vendor .....
"	28	"	56308	N. Roy, Tifford.....	1 "	10	" .....
"	27	"	60799	L. Begin, 2ème Ave., Stada- cona.	1 "	10	" .....
"	27	"	60800	F. X. Turgeon, 2ème Ave., Stadacona.	1 "	10	" .....
"	27	"	57301	A. Dorion, Gros Pin, Charles bourg.	1 "	10	" .....
"	27	"	57302	N. Dorion, Gros Pin, Charles bourg.	1 "	10	" .....
"	27	"	56303	T. Conway, Gros Pin, Charlesbourg.	1 "	10	" .....

## DISTRICT OF QUEBEC PROVINCE—

Jan.	19	Milk..	3748	W. Garneau, Thetford Mines.	1 qt..	15	.....
"	19	"	3749	J. A. Cyr, Robertsonville, Megantic.	1 "	15	.....
"	21	"	3752	David Aubert, St. Lewis...	1 "	15	Vendor.....
"	22	"	3753	Alphonse Layeux, St. Joseph de Lévis.	1 "	15	" .....
"	23	"	3754	Olivier Samson, St. Joseph de Lévis.	1 "	15	" .....
"	28	"	3769	Oscar Côté, St. Joseph de Lévis.	1 "	15	" .....
"	29	"	3772	E. Juneau, St. Joseph Malo.	1 "	15	" .....
Feb.	5	"	3785	A. Drolet, Ancienne Lorette.	1 "	15	" .....
"	5	"	3786	F. X. Latulippe, Charles- bourg.	1 "	15	" .....
"	12	"	2596	Antoine Marceau, Armagh.	1 "	6	.....
"	12	"	2597	Charle Bernard, Armagh...	1 "	6	.....
"	12	"	2598	Exavier Boulanger, Armagh	1 "	6	.....
"	12	"	2599	André Audet, Armagh.....	1 "	6	.....
"	10	"	3527	Alfred Roy " .....	1 "	6	.....
"	11	"	3528	Louis Leblond, St. Neri....	1 "	6	.....
"	8	"	3505	Joseph Fortier, St. Lazare..	1 "	6	.....
"	9	"	3515	Alfred Ruelle, St. Charles..	1 "	6	.....
"	9	"	3516	Joseph Couture, " .....	1 "	6	.....
"	10	"	3521	Joseph Vaillere, St. Michel.	1 "	6	.....

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MILK.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. Gr.	Total Solids.	Fat.	Non-fat Solids.		

*Concluded.*

		p. c.	p. c.	p. c.		
.....	1 034	15.21	5.68	9.53	56307	Genuine.
.....	1 033	12.28	3.56	8.72	56308	"
.....	1 034	14.37	5.10	9.27	60799	"
.....	1 033	13.60	4.23	9.37	60800	"
.....	1 033	13.60	4.52	9.08	57301	"
.....	1 035	13.36	4.23	9.13	57302	"
.....	1 033	13.47	4.47	9.00	56303	"

J. E. AUDET, O. BROCHU, N. CADIEUX, TEMPORARY INSPECTORS.

.....	1 033	12.62	3.66	8.96	3748	Genuine.
.....	1 033	13.54	4.84	8.70	3749	"
.....	1 031	12.45	4.38	8.08	3752	Non fat solids low. Pass.
.....	1 032	15.72	6.96	8.76	3753	Genuine.
.....	1 034	13.63	4.76	8.87	3754	"
.....	1 032	17.31	8.29	9.02	3769	"
.....	1 035	13.38	4.19	9.19	3772	"
.....	1 034	12.38	3.33	9.05	3788	"
.....	1 033	13.40	4.21	9.19	3786	"
.....	1 036	14.31	4.93	9.38	2596	"
.....	1 030	16.01	7.20	8.81	2597	"
.....	1 032	14.31	5.08	8.63	2598	"
.....	1 036	13.17	4.06	9.11	2599	"
.....	1 032	13.12	4.46	8.66	3527	"
.....	1 034	15.71	6.43	9.28	3528	"
.....	1 035	13.08	4.05	9.03	3535	"
.....	1 035	12.59	3.75	8.84	3515	"
.....	1 030	14.06	4.11	8.95	3516	"
.....	1 036	13.96	4.63	9.33	3521	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC PROVINCE—

1915.							
Jan. 21	Milk. ....	249	Maurice Durand, St. Jerome, P. Q.	24 oz.	5		
" 21	" .....	250	Paul E. Leclair, "	24 "	5		
" 21	" .....	251	Gilbert Pelletier, "	24 "	5		
" 21	" .....	252	Charlemange Taillon, "	24 "	7		
" 21	" .....	253	François Lecomte "	24 "	5		
Feb. 2	" .....	255	J. A. Fournelle, St. Agathe des Monts.	24 "	5		
" 2	" .....	265	Jules Gundon, "	24 "	5		
" 10	" .....	266	Maurice Durand, St. Jerome.	24 "	7		

## DISTRICT OF EAST QUEBEC—

Jan. 26	Lait.....	56428	Joseph Gazè, Montmagny.	1 pt.	10	Vendor.....	
" 26	" .....	56429	Joseph Baumont, Mont- magny.	1 "	10	" .....	
" 26	" .....	56430	Eugene Bernachez, Mont- magny.	1 "	10	" .....	
" 27	" .....	56431	Louis Tetu, Montmagny. .	1 "	10	" .....	
" 29	" .....	56432	H. Lebel, Rivière du Loup.	1 "	10	" .....	
" 29	" .....	56433	C. Paradis, Rivière du Loup	1 "	10	" .....	
" 29	" .....	56434	Benjamin Michaud, Rivière du Loup.	1 "	10	" .....	
" 29	" .....	56435	Etienne Roy, Rivière du Loup.	1 "	10	" .....	
" 29	" .....	56436	Jos. Rousselle, Rivière du Loup.	1 "	10	" .....	
" 29	" .....	56437	Jos. Belanger, Rivière du Loup.	1 "	10	" .....	

## DISTRICT OF THREE RIVERS—

Jan. 22	Milk.....	3955	Luc. Charette, L'Assomp- tion.	1½ pt.	6	Vendor .....	
" 25	" .....	3956	J. B. Renaud, St. Paul....	1½ "	8	" .....	
" 25	" .....	3957	A. Pelland, St. Elizabeth..	1½ "	8	" .....	
" 25	" .....	3958	J. Latour, "	1½ "	8	" .....	
" 26	" .....	3959	Narcisse Joly, St. Felix Valois.	1½ "	8	" .....	

SESSIONAL PAPER No. 14

MILK.

Inspector's Report, (Is not an expression of opinion).	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. Gr.	Total Solids.	Fat.	Non-fat Solids.		

*Concluded.*

		p. c.	p. c.	p. c.		
.....	1.036	12.83	3.99	8.84	249	Genuine.
.....	1.034	13.51	4.17	9.34	250	"
.....	1.033	14.59	4.72	9.87	251	"
.....	1.033	13.66	3.97	9.69	252	"
.....	1.035	14.00	4.29	9.71	253	"
.....	1.023	9.34	2.97	6.37	255	Solids and fat too low
.....	1.034	12.99	3.92	9.07	265	Genuine.
.....	1.035	13.17	4.21	8.96	266	"

ALF. PELLETIER, TEMP. INSPECTOR.

.....	1.033	12.91	3.68	9.23	56428	Genuine.
.....	1.034	12.09	3.24	8.85	56429	"
.....	1.034	12.31	3.44	8.87	56430	"
.....	1.032	16.91	8.12	8.79	56431	"
.....	1.034	12.87	3.80	9.07	56432	"
.....	1.033	12.19	3.54	8.65	56433	"
.....	1.036	13.91	4.77	9.14	56434	"
.....	1.035	13.87	4.52	9.35	56435	"
.....	1.036	13.72	4.50	9.22	56436	"
.....	1.034	13.12	3.98	9.14	56437	"

D. V. P. LAVALLEE, INSPECTOR.

.....	1.032	12.07	3.37	8.70	3955	Genuine.
.....	Sour.	-	-	-	3956	Not worked.
.....	"	-	-	-	3957	"
.....	"	-	-	-	3958	"
.....	1.035	13.44	4.14	9.30	3959	Genuine.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer of Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF THREE RIVERS—

1915.							
Jan. 26	Milk .....	3960	Henri Laferrière, St. Felix Valois.	1½ pt.	8	Vendor .....	
" 27	" .....	3961	Nap. Coutu, Joliette. ....	1½ "	5	" .....	
" 27	" .....	3962	Ludger Peltier, Joliette....	1½ pt.	8	" .....	
" 27	" .....	3963	Jos. Coderre, Joliette ....	1½ "	8	" .....	
Feb. 8	" .....	3924	Elie Laferiere, St. Pierre...	1½ "	10	" .....	
" 8	" .....	3925	Jos. Desrosiers, St Cecile .	1½ "	10	" .....	
" 8	" .....	3926	Jos. Beausoleil, St. Felix Valois.	½ "	5	" .....	

## DISTRICT OF EASTERN TOWNSHIPS—

Feb. 9	Milk. ....	1677	H. Cole, Richmond East...	1 qt.	7	Vendor .....	
" 9	" .....	1678	W. H. McLaughlin, Richmond East.	1 "	7	" .....	
" 9	" .....	1679	J. C. Martin, Richmond East.	1 "	7	" .....	
" 10	" .....	1680	Eugene Pellerin, Victoriaville.	1 "	8	" .....	
" 10	" .....	1682	P. Coulombe, Victoriaville	1 "	8	Unknown.....	
" 11	" .....	1684	A. F. Andrews, Coaticook..	1 "	7	Vendor .....	
" 11	" .....	1685	V. Davignon " ..	1 "	7	" .....	
" 12	" .....	1686	E. St. Laurent, Thetford...	1 "	8	" .....	
" 12	" .....	1687	F. Daudier, Thetford Mines	1 "	8	" .....	
" 16	" .....	1688	L. Wheeler, Windsor Mills	1 "	7	" .....	

## DISTRICT OF MONTREAL—

Feb. 1	Milk .....	62681	A. Laliberte, 23E Hickson ave., Verdun.	1½ pt.	8	G. W. Rush, Verdun.	
" 1	" .....	62682	C. Trepanier, 235 Ethel st., Verdun.	1½ "	9	Unknown .....	
" 1	" .....	62683	D. Emond, 311 Gertrude street, Verdun.	1½ "	8	A. Martin, Verdun	
" 1	" .....	62684	R. W. Hadley, 35 Gordon ave., Verdun.	1½ "	8	J. A. Monteith...	
" 2	" .....	62685	Dionne & Dionne, 4120 St. Catherine st. W., Westmount.	1½ "	9	A. D. Buchanan, Westmount.	

SESSIONAL PAPER No. 14

MILK.

Inspector's Report. Is not an expression of opinion.	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Lp. gr.	Total solids.	Fat.	Non-fat solids.		

*Concluded.*

		p. c.	p. c.	p. c.		
.....	1 035	13.30	4.05	9.25	3960	Genuine.
.....	1 035	13.46	4.11	9.35	3961	"
.....	1 030	11.05	3.10	7.96	3962	Solids and fat too low. Pass.
.....	1 033	13.95	4.73	9.22	3963	Genuine.
.....	1 029	17.37	9.02	8.35	3924	"
.....	1 035	12.60	3.57	9.03	3925	"
.....	1 033	15.03	6.07	8.96	3926	"

J. C. ROULEAU, INSPECTOR.

.....	1 030	14.35	5.68	8.67	1677	Genuine.
.....	1 031	15.44	7.08	8.36	1678	"
.....	1 033	12.97	4.13	8.84	1679	"
.....	1 032	11.39	2.92	8.47	1680	Fat too low.
.....	1 023	9.50	2.81	6.24	1682	Fat and solids too low.
.....	1 035	11.92	3.06	8.86	1684	Fat below standard. Pass.
.....	1 031	11.66	3.83	7.83	1685	Solids below standard. Pass.
.....	1 034	13.02	3.85	9.17	1686	Genuine.
.....	1 034	12.39	3.25	9.14	1687	"
.....	1 034	12.66	3.87	8.79	1688	"

D. P. KEARNEY, INSPECTOR.

.....	1 034	12.72	3.90	8.82	62681	Genuine
.....	1 035	12.19	3.48	8.71	62682	"
.....	1 033	11.79	3.60	8.19	62683	Non-fat solids low. Pass.
.....	1 034	12.31	3.61	8.70	62684	Genuine.
.....	1 034	11.76	2.81	8.94	62685	Fat too low.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MONTREAL—

1915.							
Feb. 2	Milk . . . . .	62686	E. J. Quinn, 4201 St. Catherine st. W., Westmount.	1½ lbs.	9	Geo. A. West . . . . .	
" 3	" . . . . .	62687	Dane N. Dupuis, 94 Notre Dame st., Lachine.	1½ "	9	X. Belanger, Lachine.	
" 3	" . . . . .	62688	J. Culos, 78b Notre Dame St., Lachine.	1½ "	10	Unknown. . . . .	
" 3	" . . . . .	62689	John Philips & Co., 78 Notre Dame st., Lachine.	1½ "	10	G. W. Dagenais, Lachine.	
" 3	" . . . . .	62690	P. Colaris, 70 Notre Dame st., Lachine.	1½ "	15	Unknown. . . . .	

DISTRICT OF VALLEYFIELD—

Feb. 9	Milk . . . . .	58236	S. Langlois, St. John, P.Q.	1 qt.	10		
" 9	" . . . . .	58237	Gustave Poirier, "	1 "	10		
" 9	" . . . . .	58238	Joseph Poirier, "	1 "	10		
" 9	" . . . . .	58239	Jerme Bechard, "	1 "	10		
" 9	" . . . . .	58240	William Copping, "	1 "	10		
" 9	" . . . . .	58241	O. Depelteau, "	1 "	10		
" 9	" . . . . .	58242	E. Senecal, "	1 "	10		
" 17	" . . . . .	58243	John Cassidy, Masson. . . . .	1 "	10		
" 17	" . . . . .	58244	H. F. Cosgrove, Bucking- ham.	1 "	10		
" 17	" . . . . .	58245	W. H. Connolly, Bucking- ham.	1 "	10		

DISTRICT OF OTTAWA—

Jan. 23	Milk . . . . .	63475	A. W. Wright, Almonte. . . . .	1 qt.	10	Vendor . . . . .	
" 23	" . . . . .	63476	John Andrews, " . . . . .	1 "	10	" . . . . .	
" 23	" . . . . .	63477	Wm. Robertson, " . . . . .	1 "	10	Unknown. . . . .	Unknown. . . . .
" 23	" . . . . .	63478	W. J. Coutanche, " . . . . .	1 "	10		Farmers . . . . .
" 26	" . . . . .	63479	Wm. Brady, Perth, Ont. . . . .	1 "	10	Vendor . . . . .	
" 26	" . . . . .	63480	Ed. Watt, Perth, Ont. . . . .	1 "	10	" . . . . .	
" 26	" . . . . .	63481	H. E. Chaplin, Perth, Ont. . . . .	1 "	10	" . . . . .	
" 26	" . . . . .	63482	M. Dodds, Perth, Ont. . . . .	1 "	10	" . . . . .	



## SESSIONAL PAPER No. 14

## MILK.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr.	Total solids.	Fat.	Non fat solids.		

*Concluded.*

		p.c.	p.c.	p.c.		
.....	1.035	10.40	2.08	8.32	62686	Fat and solids low.
.....	1.034	12.52	3.75	8.77	62687	Genuine.
.....	1.036	11.27	2.46	8.81	62688	Fat too low.
.....	1.035	12.15	2.99	9.16	62689	Fat too low—pass.
.....	1.036	14.41	4.79	9.62	62690	Genuine.

## J. J. COSTIGAN, ACTING INSPECTOR.

.....	1.035	14.14	4.65	9.49	58236	Genuine.
.....	1.035	12.55	3.28	9.27	58237	"
.....	1.035	13.13	3.76	9.37	58238	"
.....	1.034	13.72	4.44	9.28	58239	"
.....	1.034	12.39	3.33	9.05	58240	"
.....	1.035	12.89	3.70	9.19	58241	"
.....	1.031	12.42	3.60	8.82	58242	"
.....	1.036	12.74	3.58	9.16	58243	"
.....	1.033	11.63	3.31	8.32	58244	Solids slightly low—Pass
.....	1.034	13.86	4.53	9.33	58245	Genuine.

## J. A. RICKLEY, INSPECTOR.

.....	1.035	12.15	2.91	9.24	63476	Fat too low—Doubtful
.....	1.030	11.29	3.48	7.81	63477	Non fat solids low—Doubtful
.....	1.033	12.99	4.03	8.96	63477	Genuine.
.....	1.034	12.50	3.38	9.12	63478	"
.....	1.033	12.27	3.66	8.61	63479	"
.....	1.034	13.60	3.87	9.13	63480	"
.....	1.034	12.97	3.73	8.84	63481	"
.....	1.034	12.73	3.92	8.81	63482	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF OTTAWA—

1915.							
Jan. 28	Milk .....	63482	Jas. Small, Prescott.....	1 qt.	10	Vendor .....	.....
" 29	" .....	63484	J. Adams, Prescott.....	1 "	10	" .....	.....
" 30	" .....	63485	Wm. Ward, Prescott.....	1 "	10	" .....	.....
" 30	" .....	63486	P. A. Munroe, Maxville....	1 "	10	" .....	.....

## DISTRICT OF KINGSTON—

Feb. 8	Milk .....	66501	J. Shibley, Harrowsmith...	1 qt	5	Vendor .....	.....
" 8	" .....	66502	F. Walker, Harrowsmith	1 "	5	" .....	.....
" 8	" .....	66503	B. W. Ruttan, Harrowsmith	1 "	5	" .....	.....
" 8	" .....	66504	L. H. " Harrowsmith.	1 "	5	" .....	.....
" 9	" .....	66505	F. Redmond, Sydenham....	1 "	5	" .....	.....
" 9	" .....	66506	E. B. Sills, Sydenham. ...	1 "	6	" .....	.....
" 9	" .....	66507	W. Trovsdale, Sydenham...	1 "	5	" .....	.....
" 9	" .....	66508	W. Hobbs, Sydenham. ...	1 "	6	" .....	.....
" 9	" .....	66509	J. W. Davis, Sydenham....	1 "	5	" .....	.....
" 9	" .....	66510	J. Foxton, jr., Sydenham...	1 "	5	" .....	.....

## DISTRICT OF TORONTO—

Feb. 16	Milk. ....	64665	Horner Br.s., Richmond Hill.	1 qt..	7	Vendors.....	.....
" 16	" .....	64666	W. M. Watson, Aurora....	1 "	8	.....	Farmer .....
" 16	" .....	64667	Thos. Grimshaw, Aurora..	1 "	8	.....	" .....
" 16	" .....	64668	Theo. Bolton, Newmarket..	1 "	7	.....	E. N. Primrose..
" 16	" .....	64669	J. T. Wright, Newmarket..	1 "	8	.....	A. Robinson....
" 17	" .....	64670	W. M. McKay, Sutton.....	1 "	7	Vendor .....	.....
" 17	" .....	64671	A. Carpenter, Sutton.....	1 "	6	" .....	.....
" 18	" .....	64672	O. Bennett, Oshawa.....	1 "	7	.....	George Reason Oshawa.
" 18	" .....	64673	Geo. Hart, Oshawa.....	1 "	7	.....	Farmers.....
" 18	" .....	64674	Wm. Henderson, Cederdale.	1 "	7	.....	" .....

SESSIONAL PAPER No. 14

MILK.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. Gr.	Total Solids.	Fat.	Non-Fat Solids.		

Concluded.

.....	1.035	p. °c 11.97	p. c. 3.25	p. c. 8.72	63483	Genuine.
.....	1.034	13.24	4.04	9.20	63484	"
.....	1.035	12.76	3.91	8.85	63485	"
.....	1.035	12.64	3.76	8.88	63486	"

JAS. HOGAN, INSPECTOR.

.....	1.035	12.00	3.06	8.94	66501	Genuine.
.....	1.033	10.29	2.28	8.01	66502	Solids and fat low.
.....	1.035	13.51	4.30	9.21	66503	Genuine.
.....	1.035	14.31	4.96	9.35	66504	"
.....	1.036	13.80	4.75	9.05	66505	"
.....	1.033	12.93	3.94	8.99	66506	"
.....	1.036	14.06	4.34	9.72	66507	"
.....	1.033	13.10	4.02	9.08	66508	"
.....	1.033	15.31	6.26	9.05	66509	"
.....	1.035	13.84	4.28	9.56	66510	"

H. J. DAGGER, INSPECTOR.

.....	1.034	12.73	3.90	8.83	64665	Genuine.
.....	1.033	11.58	3.02	8.56	64666	Fat slightly low. Pass
.....	1.034	12.91	4.07	8.84	64667	Genuine.
.....	1.034	11.42	2.74	8.67	64668	Fat too low
.....	1.033	12.12	3.14	8.98	64669	Genuine.
.....	1.041	15.13	4.72	10.41	64670	"
.....	1.037	13.11	3.77	9.34	64671	"
.....	1.036	12.43	3.33	9.10	64672	"
.....	1.034	13.82	4.77	9.05	64673	"
.....	1.036	12.59	3.28	9.31	64674	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF HAMILTON—

1915.							
Mar. 2	Milk.....	66814	W. Oliver, No. 1 Route, Branchton.	1 qt..	7	Vendor and other sources.	
" 2	" .....	66815	I. G. Good, Preston.....	1 " ..	7	Farmers .....	
" 2	" .....	66816	Wm. Parr, Hespler.....	1 " ..	7	" .....	
" 3	" .....	66817	M. Dubrich, Waterloo....	1 " ..	7	" .....	
" 3	" .....	66818	J. G. Main, Berlin.....	1 " ..	8	Vendor and other sources.	
" 10	" .....	66819	R. C. Mills, Burford.....	1 " ..	7	Farmers.....	
" 11	" .....	66820	M. Gilmore, Grimsby... ..	1 " ..	8	" .....	
" 11	" .....	66821	J. E. Lawson, Grimsby....	1 " ..	8	" .....	
" 12	" .....	66822	W. G. Passmore, Dundas... ..	1 " ..	8	" .....	
" 12	" .....	66823	Robert Hunter, Dundas....	1 " ..	8	" .....	

DISTRICT OF WINDSOR—

Feb. 19	Milk.....	54725	D. A. Brown, Strathroy....	3 bots.	Nil.		Jas. Brown.....
" 17	" .....	54714	A. W. Huntley, Ingersoll..	1 qt..	"	Vendor.....	
" 17	" .....	54715	F. A. Foster, Ingersoll....	1 " ..	"	" .....	
" 18	" .....	54717	A. Devenny, St. Marys....	3 bots.	"		
" 18	" .....	54718	J. Rutig, St. Mary's....	3 " ..	5		Walter Stewart.
" 18	" .....	54720	St. Mary's Creamery, St. Mary's.	3 " ..	Nil.		Unknown .. .
" 19	" .....	54726	J. Heardman, Strathroy....	3 " ..	"		

DISTRICT OF MANITOBA—

Feb. 11	Milk .....	53191	A. Goodchild, St. James... ..	1 qt..	10	Vendor .....	
" 11	" .....	53192	F. C. Fraser, St. James....	1 " ..	Nil.	" .....	
" 11	" .....	53193	T. Edwards, St. James....	1 " ..	10	" .....	
" 11	" .....	53194	Crescent Creamery Co., Ltd., Winnipeg.	1 " ..	10	Vendors.....	
" 12	" .....	53195	N. D. Tatton, Transcona... ..	1 " ..	10	Vendor.....	
" 12	" .....	53196	M. Gorewich, Transcona... ..	1 " ..	10	" .....	
" 15	" .....	53197	S. Benson, Selkirk.....	1 " ..	10	" .....	

SESSIONAL PAPER No. 14

MILK.

Inspector's Report Is not an expression of opinion.	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. Gr.	Total Solids.	Fat.	Non-fat Solids.		

H. J. DAGER, ACTING INSPECTOR.

		p. c.	p. c.	p. c.		
.....	1.035	12.46	3.59	8.87	66814	Genuine.
.....	1.034	12.55	3.50	9.05	66815	"
.....	1.035	11.20	2.47	8.73	66816	Fat too low.
.....	1.035	11.84	2.84	9.00	66817	" "
.....	1.033	14.19	5.21	8.98	66818	Genuine.
.....	1.037	12.81	3.99	8.82	66819	"
.....	1.032	11.10	2.86	8.25	66820	Fat too low.
.....	1.032	11.04	3.18	7.86	66821	Non-fat solids low. Doubtful.
.....	1.037	12.37	3.37	9.00	66822	Genuine.
.....	1.035	12.26	3.31	8.95	66823	"

JNO. TALBOT, INSPECTOR.

.....	1.033	11.97	3.22	8.76	54725	Genuine.
.....	1.034	12.75	3.73	9.02	54714	"
.....	1.036	12.42	3.46	8.96	54715	"
.....	1.034	11.85	2.65	9.20	54717	Fat too low.
.....	1.031	12.62	3.62	9.00	54718	Genuine.
.....	1.034	12.42	3.26	9.16	54720	"
.....	1.033	12.60	3.67	8.93	54726	"

A. C. LARIVIERE, INSPECTOR.

.....	1.033	13.23	4.18	9.05	53191	Genuine.
.....	1.027	10.70	3.20	7.51	53192	Non-fat solids low.
.....	1.036	12.85	3.45	9.40	53193	Genuine.
.....	1.032	12.40	3.45	8.95	53194	"
.....	1.032	14.46	5.22	9.24	53195	"
.....	1.030	11.53	3.61	7.92	53196	Non-fat solids low. Pass.
.....	1.039	12.24	3.40	8.84	53197	Genuine.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MANITOBA—

1915.							
Feb. 15	Milk. ....	53198	Jacob Vopnord, Selkirk.....	1 qt..	10	Vendor.....	.....
" 23	" .....	53199	Allen Bros., Virden.....	1 " .	.....	Vendors.....	.....
" 23	" .....	53200	J. Beaton, Virden.....	1 " .	.....	Vendor.....	.....

DISTRICT OF SASKATCHEWAN—

Jan. 27	Milk. ....	66306	S. K. Browning, Wolseley..	1 qt..	10	Vendor.....	.....
" 27	" .....	66314	S. J. Briston, Grenfell.....	1 " .	10	.....	U. Moerri- Bros., Grenfell
" 27	" .....	66317	Phillip Temple, Grenfell... 1 " .	10	Vendor.....	.....	.....
" 29	" .....	66325	David Hart, Qu'Appelle... 1 " .	10	" .....	.....	.....
" 29	" .....	66326	R. E. Middleton, Qu'Appelle. 1 " .	10	" .....	.....	.....
Feb. 2	" .....	66340	F. Myers, Rouleau.....	3 pts.	10	" .....	.....
" 2	" .....	66341	C. A. Stewart, Rouleau.... 3 " .	10	" .....	.....	.....
" 3	" .....	66343	George Davidson, Weyburn. 3 " .	10	" .....	.....	.....
" 3	" .....	66344	Lowes Bros., Weyburn. .... 3 " .	10	Frank Wana- maker, Weyburn	.....	.....
" 3	" .....	66345	A. Burnett, Weyburn..... 3 " .	10	Vendor .....	.....	.....

DISTRICT OF ALBERTA—

Mar. 9	Milk. ....	52065	O. E. Lapp, Didsbury ...	1 qt..	10	Vendor.....	.....
" 10	" .....	52066	Jos. Cousins, Innisfail. .... 1 " .	10	" .....	.....	.....
" 10	" .....	52067	E. H. Dennis, Innisfail ... 1 " .	10	" .....	.....	.....
" 11	" .....	52068	Hepworth & Trimble, Red Deer. 1 " .	Nil.	" .....	.....	.....
" 11	" .....	52069	Red Deer Creamery, Red Deer. 1 " .	10	W. R. Parkins, Red Deer.	.....	.....
" 12	" .....	52070	McCormick & Waddell Bros. 1 " .	10	Vendors .....	.....	.....
" 13	" .....	52071	Lacombe. Peter Iverson, Ponoka..... 1 " .	10	Vendor.....	.....	.....
" 16	" .....	52072	Meadowbrook Dairy, Leduc. 1 " .	10	Vendors.....	.....	.....
" 16	" .....	52073	W. T. Robinson, Leduc.... 1 " .	10	Vendor.....	.....	.....
" 16	" .....	52074	John B. Schneifer, Wetaskiwin. 1 " .	10	" .....	.....	.....

## SESSIONAL PAPER No. 14

## MILK.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. Gr.	Total Solids.	Fat.	Non-fat Solids.		

*Concluded.*

		p. c.	p. c.	p. c.		
.....	1.033	12.15	3.25	8.90	53198	Genuine.
.....	1.036	12.21	2.68	9.53	53199	Fat too low.
.....	1.036	12.49	3.46	9.03	53200	Genuine.

## L. H. HALL, INSPECTOR.

.....	1.034	13.66	4.24	9.42	66306	Genuine.
.....	1.034	11.96	3.38	8.58	66314	"
.....	1.036	14.59	5.19	9.40	66317	"
.....	1.036	13.79	4.60	9.19	66325	"
.....	1.034	12.28	3.65	8.63	66326	"
.....	1.036	15.07	5.04	10.03	66340	"
.....	1.031	10.98	2.53	8.45	69341	Fat too low.
.....	1.029	13.24	4.93	8.31	66343	Genuine.
.....	1.033	13.74	4.23	9.51	66344	"
.....	1.033	12.54	3.39	9.15	66345	"

## A. W. R. MARKLEY, INSPECTOR.

.....	1.035	12.17	2.77	9.40	52065	Fat too low.
.....	1.033	12.01	3.28	8.73	52066	Genuine.
.....	1.033	12.96	3.75	9.21	52067	"
.....	1.032	12.98	4.18	8.80	52068	"
.....	1.031	11.90	3.50	8.40	52069	"
.....	1.030	13.37	5.25	8.62	52070	"
.....	1.034	13.69	4.23	9.46	52071	"
.....	1.034	13.75	4.16	9.59	52072	"
.....	1.032	12.62	3.77	8.85	52073	"
.....	1.029	11.33	3.26	8.07	52074	Non fat solids Low. Pass

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF ROCKY MOUNTAINS—

1915.							
Feb.	6	Milk. ....	61752 H. Carlson, Revelstoke, B.C.	1 qt.	10	Vendor.....	
"	6	" .....	61753 Swan Carlson, Revelstoke, B.C.	1 "	10	" .....	
"	6	" .....	61754 W. C. Calder, Revelstoke, B.C.	1 "	10	" .....	
"	6	" .....	61755 J. McIntyre & Son, Revelstoke, B.C.	1 "	10	" .....	
"	10	" .....	61764 W. Holliday, Salmon Arm, B.C.	1 "	10	" .....	
"	10	" .....	61765 P. Owens, Salmon Arm, B.C.	1 "	10	" .....	
"	16	" .....	61792 H. J. Jones, Rossland, B.C.	1 "	10	" .....	
Mar.	16	" .....	61793 T. Nimsich, Rossland, B.C.	1 "	10	" .....	
"	16	" .....	61794 W. Hayden, Rossland, B.C.	1 "	10	" .....	
"	16	" .....	61795 J. Stone, Rossland, B.C.	1 "	10	" .....	

DISTRICT OF VANCOUVER—

Feb.	3	Milk. ....	55198 R. H. Willcock, Ladner, B.C.	1 qt.	10	Alex. Davie, Ladner, B.C.	
"	4	" .....	55199 J. M. Steves, Steveston, B.C.	1 "	10	Vendor.....	
"	8	" .....	55200 Ben Jones, Eburne, B.C.	1 "	10	" .....	
"	10	" .....	55201 Chilliwack Creamery, Chilliwack, B.C.	1 "	10	Vendors.....	
"	10	" .....	55202 Chas. Hawthorne, Chilliwack, B.C.	1 "	10	Vendor.....	
"	10	" .....	55203 Chas. Robinson, Mission, B.C.	1 "	10	" .....	
"	10	" .....	55204 H. Windebank, Mission, B.C.	1 "	10	" .....	
"	12	" .....	55205 Port Coquitlam Dairy Co. Port Coquitlam, B.C.	1 "	10	Minnekahda Ranch, Port Coquitlam, B.C.	
"	12	" .....	55206 North Vancouver Dairy, North Vancouver, B.C.	1 "	10	Chilliwack Creamery, Chilliwack, B.C.	
"	13	" .....	55207 Hygienic Dairy, North Vancouver, B.C.	1 "	10	Edenbank Creamery, Sardis, B.C.	



SESSIONAL PAPER No. 14

MILK.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.			No. of Sample.	Remarks and Opinions of the Chief Analyst.
	Sp. Gr.	Total solids.	Fat.		

THOS. PARKER, INSPECTOR.

		p. c.	p. c.	p. c.		
.....	1.037	13.42	4.60	8.82	61752	Genuine.
.....	1.027	13.71	4.43	9.28	61753	"
.....	1.037	12.37	3.20	9.17	61754	"
.....	1.033	12.07	3.61	8.46	61755	"
.....	1.036	12.65	3.63	9.02	61764	"
.....	1.034	12.13	3.43	8.70	61765	"
.....	1.030	12.10	3.79	8.31	61792	"
.....	1.034	13.09	3.97	9.12	61793	"
.....	1.032	12.98	4.01	8.97	61794	"
.....	1.032	12.11	3.39	8.72	61795	"

J. E MORGAN, INSPECTOR.

Sample taken from small quantity remaining after delivery.	1.032	12.07	3.58	8.49	55198	Genuine.
Sample taken at the ranch. Milk not filtered.	1.033	14.63	5.26	9.37	55199	"
.....	1.033	12.41	3.47	8.94	55200	"
.....	1.024	14.21	5.68	8.53	55201	"
.....	1.030	11.83	3.29	8.54	55202	"
.....	1.031	12.64	3.84	8.80	55203	"
.....	1.034	13.86	4.31	9.25	55204	"
.....	1.032	11.69	3.07	8.62	55205	Fat slightly low. Pass.
.....	1.032	12.65	3.57	9.08	55206	Genuine.
.....	1.034	12.66	3.63	9.03	55207	"



## APPENDIX B.

## BULLETIN No. 311—SHORTS OR MIDLINGS.

OTTAWA, April 29, 1915.

J. U. VINCENT, ESQ.,  
Deputy Minister Inland Revenue.

SIR,—I have the honour to hand you a report upon one hundred and eighty-nine (189) samples purchased by our inspectors as Shorts or Middlings.

This valuable feed has been made the subject of several reports since 1906 (see Bulletin 116, 156, 191, 231, 254); and it would appear that a considerable variation in character is found in the article sold under the names given.

The late Chief Analyst in a report dated March 16, 1906, advised legislation to define Feeding Stuff (See Bull. No. 116) along the lines of an Act passed by Massachusetts in 1903; and our existent Commercial Feeding Stuff Act became law in 1909. The extended frauds recognized in the manufacture and sale of Cattle feeds, has caused similar legislation to be enacted by most countries and this legislation, like our own, generally recognizes two classes of Feeds. *First*, those which, on account of their origin in nature or in manufacture, have a more or less constant composition and can be defined by fixing limiting values as provided by section 26 of the Adulteration Act. This class has been generally held to include Bran, Shorts, Middlings and so called Chop Feeds. *Second*, those which are manufactured according to a formula devised by the manufacturer, and usually proprietary. This class of feeds has, of course, extremely variable character; and the purchaser is entirely at the mercy of the manufacturers so far as concerns the value he gets for his money. Our Act requires that such feeds be sold only under a registration number, granted by the Department of Inland Revenue; and under a guarantee of minimum content in proteids and fat, and of maximum content in fibre. They are known, on the market as Registered Stock Feeds, in contradistinction to the first class, which may be sold without registration.

The limiting values fixed by Order in Council (see G. 932 and G. 968) for Shorts or Middlings, were determined by analysis of a very large number of samples purchased under these names. Details will be found in Bulletins No. 116, 156, 191 and 231 and the conclusion was reached that Shorts and Middlings must be regarded as practically the same thing, and that the minimum value for an article sold as Shorts or Middlings should be as follows:

Protein . . . . .	15 per cent.
Fat . . . . .	4 per cent.
Fibre . . . . .	8 per cent (maximum)

That these values are reasonable and just, is indicated by the results of inspection. Thus:—

7 GEORGE V, A. 1917

Bulletin.	Year.	Number of Samples.	Mean Protein.	Mean Fat.	Mean Fibre.
116.....	1906	9	16.12	3.87	8.34
156.....	1908	36	16.37	4.00	7.75
191.....	1909	258	15.25	4.04	5.63
231.....	1912	126	16.09	4.57	5.83
254.....	1913	140	15.87	4.38	5.30
Total.....		569	15.67	4.90	5.77

There is, however, an article on the market which many of our inspectors have been supplied with under the name of *Shorts*, or *Special Shorts*, or *Choice Shorts*. This article appears to be regarded as superior to shorts, as ordinarily understood, its superiority consisting apparently in its whiter colour, due to more complete removal of the bran, or chaff, of the grain. It is really a low grade flour; and while it contains less fibre than ordinary shorts, it usually shows a lower fat value. I have drawn attention to this article in Bulletins 231 and 254, and have suggested the advisability of recognizing it as distinct from *Shorts* or *Middlings*, and calling it *Feed Flour*, a name which seems to properly describe it. The protein value of this article is in many cases quite as high as that of *Shorts* or *Middlings*, but its fat value, is usually distinctly lower, owing to more complete removal of the germ of the wheat.

In order clearly to show the difference between *Feed Flour* and *Shorts* (or *Middlings*) proper, I may cite the following example:—

	Proteids.	Fat.	Fibre.
From Bulletin 231.			
36084.....	11.20	2.16	1.5
36956.....	12.73	1.55	0.7
43271.....	12.51	2.08	0.8
43281.....	13.26	2.32	1.3
48512.....	14.61	4.64	1.5
47413.....	15.11	2.66	1.9
47414.....	13.60	3.16	1.8
23866.....	15.29	3.40	1.8
48415.....	14.83	3.32	1.4
48185.....	11.42	1.99	0.9
38186.....	15.79	3.08	1.8
38188.....	14.13	2.82	2.6
38189.....	12.03	1.81	0.5
47611.....	14.61	2.37	1.1
47618.....	13.04	1.98	0.8
47621.....	13.71	2.28	1.0
Means.....	13.61	2.60	1.4

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	Proteids.	Fat.	Fibre.
From Bulletin 254.			
39160.....	15 71	3 50	1 3
50947.....	14 00	2 54	2 3
49676.....	13 78	2 04	1 4
Means.....	14 49	2 69	1 6
From present report.			
63526.....	16 55	4 00	1 3
61593.....	16 75	3 34	0 8
52047.....	13 25	2 74	0 9
55126.....	16 85	3 06	0 7
55127.....	17 65	3 42	1 8
55130.....	18 20	2 99	0 7
55131.....	16 60	3 04	1 7
55135.....	15 60	3 96	0 9
62033.....	17 00	3 04	0 9
Means.....	16 49	3 35	1 1

As already pointed out, the most noteworthy deviation from the standard for Shorts (Middlings) is the very low fibre; but this is accompanied by a lower percentage of fat, and in some cases by a lower protein value. It appears to me that this article should be placed on the market under a distinctive name; in which case it will be necessary to define it independently of shorts (middlings) under which term it apparently finds sale at present. The matter will be considered by your Advisory Board; and in the meantime I would suggest that the following examples of the article which appear in the present collection, be not dealt with as adulterated shorts or middlings, although the fat percentage is below the standard demanded. The protein content meets the requirements of 15 per cent (except in one sample) and as already explained, I have reason to believe that all samples referred to were offered in good faith, as believed to be superior grades of shorts or middlings. The samples in question are Nos. 61593, 52047, 55126, 55127, 55130, 55131, and 62033.

The following summarizes the results of this inspection:

Genuine (as shorts or middlings).....	170 samples.
Passed, as being Feed Flours, etc.....	12 samples.
Genuine as to feed value, but containing noxious weed seeds.....	3 samples.
Below standard value.....	4 samples.
Total.....	189 samples.

I would respectfully advise publishing this report as Bulletin No. 311.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
Chief Analyst.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1914.								
Dec. 30	Middlings...	54241	I. B. Shaffner & Co. Ltd., Halifax, N. S.	2 lbs.	Nil.	Ogilvie M. Co., Montreal.	Mfrs.....	
" 30	" ..	54242	" " .....	2 " ..	"	St. Lawrence M. Co., Montreal.	" .....	
" 31	" ..	54243	F. A. Shaw, Halifax, N. S.	2 " ..	"	Campbell M. Co., Toronto.	J. B. Shaffner Co., Halifax.	
" 31	" ..	54244	G. A. Redmund & Co., Hali- fax, N. S.	2 " ..	"	T. H. Taylor, Ltd. Chatham, Ont.	Mfrs.....	
1915.								
Jan. 11	" ..	54245	Wentzell's Ltd., Halifax, N. S.	2 " ..	Nil.	Lake of the Woods M. Co., Brant- ford, Ont.	" .....	
" 11	" ..	54246	A. & W. Smith & Co., Hali- fax, N. S.	2 " ..	"	Quaker Oats Co., Peterboro, Ont.	" .....	
" 11	" ..	54247	" " .....	2 " ..	"	Maple Leaf M. Co., Canada.	" .....	
" 11	" ..	54248	J. D. Stewart, Halifax, N. S.	2 " ..	4	McLeod M. Co., Stratford, Ont.	Hunt & Nelson, Halifax, N. S.	
" 14	" ..	54249	Cross & De Wolfe, Kent- ville, N. S.	2 " ..	Nil.	Hunt Bros., Lon- don, Ont.	Mfrs.....	
" 15	" ..	54250	Wentworth Stores, Windsor, N. S.	2 " ..	5	St. Lawrence M. Co., Montreal.	" .....	

DISTRICT OF PRINCE EDWARD ISLAND—

1914.								
Oct. 24	Shorts.....	60161	Beer & Goff, Charlottetown, P. E. I.	3 lbs.	6	Ogilvies, Montreal.	.....	
" 28	Middlings..	60162	A. Horne & Co., Charlotte- town, P. E. I.	3 " ..	.....	Canada M. Co., Ltd., Lake of the Woods.	.....	
" 28	" ..	60163	Auld Bros., Charlottetown, P. E. I.	3 " ..	.....	Woodburn M. Co., Glencoe, Ont.	.....	
" 28	" ..	60164	" " .....	3 " ..	.....	The Maple Leaf M. Co. Toronto.	.....	

DISTRICT OF NEW BRUNSWICK—

Nov. 11	Middlings..	59626	W. J. Alexander, St. John, N. B.	3 lbs.	15	Maple Leaf M. Co., Ltd., Ont.	.....	
" 11	" ..	59627	C. H. Perters Sons, St. John, N. B.	3 " ..	15	Campbell F. M. Co., Toronto & Peter- boro.	.....	
" 13	" ..	59628	P. Nase & Son, St. John, N. B.	3 " ..	15	Lake of the Woods M. Co., Ltd., Ont.	.....	

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MIDLINGS (SHORTS.)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.	Vital Weed Seeds per ounce.		

R. J. WAUGH, INSPECTOR.

	p. c.	p. c.	p. c.			
.....	15.30	3.72	6.65	47 Lambs' quarters, 7 Pepper grass.	54241	Genuine.
.....	16.20	4.74	6.75	None.....	54242	"
"Bull Rush" Brand.....	19.00	4.40	8.75	" .....	54243	"
.....	18.45	4.41	7.75	" .....	54244	"
.....	17.35	4.36	8.70	" .....	54245	"
.....	19.65	4.84	8.55	" .....	54246	"
.....	17.30	4.48	8.65	" .....	54247	"
Sold as Shorts.....	15.70	4.10	10.60	1 Lambs' quarter, 3 chess	54248	Some excess fibre, Pass.
.....	16.40	4.16	10.30	7 Lambs' quarters.	54249	"
.....	17.70	4.46	7.80	None .....	54250	Genuine

WM. A. WEEKS, INSPECTOR.

.....	16.60	4.16	8.15	60 Lambs' quarters, 10 quefoil, 1 Tumbling Mustard, 1 evening primrose.	60161	Genuine
.....	19.15	5.68	7.55	None .....	60162	"
.....	15.25	4.00	8.45	" .....	60163	"
.....	17.05	4.42	9.05	" .....	60164	"

JNO. C. FERGUSON, INSPECTOR

Maple Leaf Brand. Regis- tered.	18.90	5.20	7.0	None .....	58626	Genuine
Wheat, " Bull Rush" Brand.	17.05	5.42	8.40	" .....	58627	"
Wheat .....	19.85	5.72	7.20	" .....	58628	"

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BULLETIN No. 311—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NEW BRUNSWICK—

1914.							
Nov. 19	Middlings ..	59629	B. Beveridge, Andover, N.B.	3 lbs	15	Empire F.M. Ltd., St. Thomas, Ont.	
" 20	" ..	59630	Geo. T. Whelpley Estate, Fredericton, N.B.	3 "	15	Western Canada F. M., St. John, N.B.	
" 20	" ..	59631	Currie Bros., Fredericton, N.B.	3 "	25	Robin Hood M., Ltd., Moose Jaw.	
" 26	" ..	59632	Hill Bros., St. Stephen, N.B.	3 "	15	Dominion F. M., Ltd., Montréal.	
Dec. 8	" ..	59633	Sussex Mercantile Co., Ltd., Sussex, N.B.	3 "	15	Ogilvie M. Co., Montréal, P. Q.	
" 9	" ..	59634	The Fawcett M. Co., Ltd., Moncton, N.B.	3 "	15	Maple Leaf M. Co., Ltd., Toronto.	
" 19	" ..	59635	J. B. Snowball Co., Ltd., Chatham, N.B.	3 "	15	Empire F. M., Blenheim, Ont.	

## DISTRICT OF QUEBEC CITY—

Nov. 6	Middlings ..	60729	J. B. Renaud & Cie., Que- bec.	3 lbs.	....	St. Lawrence F.M. Co.	Mfrs.....
" 6	Shorts.....	60730	" " " " " "	3 "	....	Ogilvie F. M. Co.	" .....
" 6	Middlings ..	60731	G. Tanguay, Quebec.....	3 "	....	Dominion F. M. Co.	" .....
" 6	Shorts. ....	60732	" " " " " "	3 "	....	Ogilvie F. M. Co..	" .....
" 6	" .....	60733	W. Carrier & Fils, Quebec.	3 "	....	" " " " " "	" .....
" 6	Middlings ..	60734	F. Kirouack & fils, Quebec.	3 "	....	Western Canada.. F. M.	Manufacturer...
" 6	Shorts.....	60735	" " " " " "	3 "	....	Ogilvie F. M. Co..	" .....
" 9	Middlings ..	60736	P. T. Busiere, Quebec .....	3 "	....	Lac des Bois.....	" .....
" 9	Shorts .....	60737	" " " " " "	3 "	....	" " " " " "	" .....
" 9	" .....	60738	F. E. Drolet, Quebec .....	3 "	....	Ogilvie F. M. Co.	" .....

## DISTRICT OF QUEBEC PROVINCE—

Nov. 7	Middlings ..	56418	Selvio Levasseur.....	2 lbs.	4	.....	Geo. Tanguay, Quebec.
" 9	" ..	56422	D. E. Bernier.....	2 "	5	Canadian C. M., Toronto.	.....
" 2	" ..	203	Damien Hetu, St. Agathe des Monts.	3 "	9	Ogilvie's .....	.....
" 2	" ..	205	J. B. Belisle, St. Agathe des Monts.	3 "	5	St. Lawrence.....	.....
" 2	" ..	206	Noe Forget, St. Agathe des Monts.	3 "	9	Lake of the Woods	.....



SESSIONAL PAPER No. 14

MIDLINGS (SHORTS.)

Inspector's Report. (Is not an Expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.	Vital Weed Seeds per Ounce.		

Concluded.

	p. c.	p. c.	p. c.			
Wheat, "Germ Feed" . . .	17.75	4.26	6.25	None . . . . .	59629	Genuine.
Wheat, Reg. No. 64. Pro- tein=18.36. Fat=6.04. Fibre=7.51.	18.05	5.74	6.70	" . . . . .	59630	"
Guaranteed analysis. Crude protein=17.25. Crude Fat =6.50. Fibre=5.20.	20.00	6.22	6.30	" . . . . .	59631	"
Wheat . . . . .	16.90	5.08	8.60	" . . . . .	59632	"
Ogilvie ~ Wheat . . . . .	18.60	4.68	8.00	" . . . . .	59633	"
Wheat, Reg. M.L.M. . . . .	17.90	3.84	7.15	" . . . . .	59634	"
Wheat . . . . .	16.35	4.80	7.15	4 False Flax . . . . .	59635	Genuine. Excess vital weed seeds.

F. X. W. E. BELAND, INSPECTOR.

. . . . .	17.85	4.70	8.20	None . . . . .	60729	Genuine.
. . . . .	16.75	4.04	7.30	3 lambs quarters, 1 chess 1 peppergrass.	60730	"
. . . . .	17.30	5.22	7.20	None . . . . .	60731	"
. . . . .	18.85	4.82	7.65	" . . . . .	60732	"
. . . . .	18.30	4.90	6.85	10 lambs quarters.	60733	"
. . . . .	17.20	5.38	6.75	None . . . . .	60734	"
. . . . .	16.75	4.48	8.15	70 Lambs' Quarters, 3 Black Birdweed.	60735	"
. . . . .	18.95	4.04	6.75	None . . . . .	60736	"
. . . . .	18.30	4.58	6.90	" . . . . .	60737	"
. . . . .	16.00	4.44	10.35	" . . . . .	60738	Some excess fibre, juana.

A. PELLETIER, N. CADIEUX, J. E. AUDET AND T. GENDREAU, TEMP. INSPECTORS

. . . . .	15.95	4.76	10.00	None . . . . .	56418	Genuine.
. . . . .	17.85	5.90	7.05	" . . . . .	56422	"
. . . . .	17.40	4.48	8.00	" . . . . .	208	"
. . . . .	18.05	5.82	7.70	" . . . . .	205	"
. . . . .	19.50	4.08	4.10	" . . . . .	206	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC PROVINCE—

1914.							
Nov. 11	Middlings..	217	C. Taillon, Ste. Jerome ....	3 lb..	15	Ogilvie's .....	
" 16	" ..	223	Jerome Filion, Ste. Jerome.	3 " ..	5	Macdonald & Robb .....	
Dec. 20	" ..	240	J. B. Leferne, Ste. Therese.	3 " ..	5	St. Lawrence.....	
" 20	" ..	242	Waddell & Frere, Ste. Therese.	3 " ..	5	" .....	
" 20	" ..	244	D. Cloutier, Ste. Therese...	3 " ..	6	" .....	
" 20	" ..	248	A. Delormes, Ste. Thérèse...	3 " ..	5	Ogilvie's .....	
Nov. 12	" ..	3714	Jos. Turgeon, Ste. Isadore.	3 " ..	5	Can. C. and F. M., .....	
Dec. 3	" ..	2876	A. Cloutier, St. Odilon.....	2 " ..	5	.....	Lergeon & Gourdean, Quebec.
" 4	Shorts.....	2884	L. J. Audet, St. Edward....	2 " ..	5	.....	Dorchester Lumber.
Nov. 25	Middlings..	2734	Arcadius Caron, Montmagny	3 " ..	6	.....	Maple Leaf Ltd., Canada.

## DISTRICT OF THREE RIVERS—

Oct. 24	Shorts.....	2625	E. Barette, Joliette.....	3 lb..	5	St. Lawrence F. M. Co., Montreal.	
" 26	" .....	2626	Louis Pauze, L'Assomption	2 " ..	10	Ogilvie F. M. Co., Montreal.	
" 28	" .....	2627	Archibald Duff, Charle- magne.	2 " ..	5	Lake of the Woods Co., Montreal.	
" 28	" .....	2628	Edm. Robillard, St. Paul L'ermite.	2 " ..	6	Ogilvie F. M. Co., Montreal.	
" 31	Middlings..	2695	B. Coutin, Berthierville....	2 " ..	6	St. Lawrence F. M., Montreal.	
" 31	Shorts... ..	2696	" .....	2 " ..	6	" .....	
Nov. 2	" .....	3904	G. H. Read, St. Felix de Valois.	2 " ..	5	Ogilvie F. M., Montreal.	
" 3	" .....	3905	Louis Enos, St. Felix de Valois.	2 " ..	6	St. Lawrence F. M., Montreal.	
" 3	" .....	3906	Wilfred Brissette, St. Felix de Valois.	2 " ..	6	Can. Western Fl. Co., Montreal.	
" 5	" .....	3910	Frs. Rivest, Joliette.....	2 " ..	6	Vendor .....	

## DISTRICT OF MONTREAL—

1915.							
Jan. 8	Shorts.....	62611	C. Campbell, 748 Charle- voix, Montreal. ....	2 lbs.	.....	.....	W. Lamarre & Co., Montreal.
" 9	" .....	62612	Hall Bros. Rgd., 270 Moreau St.	2 " ..	.....	.....	Geo. Cardinal, Montreal.

SESSIONAL PAPER No. 14

MIDLINGS (SHORTS).

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.	Vital Weed Seeds per Ounce.		

Concluded.

	p. c.	p. c.	p. c.			
.....	16.35	3.92	7.90	2 Lambs' Quarters,	1	217
.....	16.85	4.24	5.25	Peppergrass.		223
.....	17.25	4.26	6.90	None .....		240
.....	18.35	4.68	8.40	" .....		242
.....	17.95	4.78	7.90	" .....		244
.....	17.65	4.34	5.95	" .....		248
.....	16.50	4.76	8.40	" .....		3714
Maple Leaf .....	16.25	4.00	7.20	" .....		2876
Ogilvie's .....	19.10	4.46	6.75	13 Lambs' Quarters...		2884
.....	18.10	4.32	7.60	None .....		2734

DR. V. P. LAVALLEE, INSPECTOR.

.....	16.50	4.58	8.30	None .....		2625
.....	19.05	4.28	6.60	2 Lambs' Quarters,	1	2626
.....	19.15	4.88	7.25	Black Bindweed, 1 Cow		2627
.....	18.00	4.00	6.90	Cockle, 1 Peppergrass		2628
.....	19.05	4.52	6.80	None .....		2695
.....	18.95	5.26	8.85	" .....		2696
.....	16.25	4.51	9.20	30 Lambs' Quarters,	3	3904
.....	18.15	5.04	8.95	Black Bindweed,		3905
.....	16.65	5.28	7.00	None .....		3906
.....	16.70	4.76	7.80	1 Stickweed .....		3910

D. J. KEARNEY, INSPECTOR.

.....	15.95	4.34	7.10	None .....		62611
.....	18.15	4.32	6.30	" .....		62612

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF MONTREAL—

1915.							
Jan.	9	Shorts.....	62613 J. A. Roberge, 259 Moreau St.	2 lbs.	.....	.....	E. A. Barry, Montreal.
"	9	" .....	62614 Jos. Larcheveave, 578 Ontario St., Montreal.	2 "	.....	.....	Unknown.....
"	11	Middlings..	62615 B. Vaillencourt, 1195 St. Lawrence Boul., Montreal	2 "	.....	West Canada F. M. Co.	.....
"	11	Shorts.....	62616 St. Louis Grain & Feed Co., 2105 St. Lawrence Boul., Montreal.	2 "	.....	.....	Unknown.....
"	11	" .....	62617 F. Gobeille, Cor. Maguire & Sanguinet.	2 "	.....	Dom. F. Mills.....	.....
"	11	Middlings..	62618 " " "	.....	.....	Robin Hood, F. M.	.....
"	12	" .....	62619 O. Charbonneau, Pointe & Trembles.	2 "	5	.....	Unknown.....
"	12	" .....	62620 E. Benoit & Fils, 181 St. Paul St., Montreal.	2 "	.....	Ogilvie F. M. ....	.....

## DISTRICT OF VALLEYFIELD AND EASTERN TOWNSHIPS—

1914.							
Nov.	9	Middlings..	63021 M. K. M'Kenzie, Richmond	2 lbs.	10	M'Leod M. Co., Stratford, Ont.	.....
"	9	Shorts ....	63022 " " "	2 "	10	" " "	.....
"	9	" .....	63023 " " "	2 "	10	Ogilvie F. M. Co.	.....
"	9	Middlings..	63024 F. H. McKee, " "	2 "	5	" " "	.....
"	9	" .....	63025 " " "	2 "	5	Maple Leaf M. Co.	.....
"	10	" .....	63026 George McCracken, Danville.	2 "	5	Ogilvie F. M. Co., Ltd.	.....
"	10	Shorts.....	63027 " " "	2 "	5	" " "	.....
"	10	" .....	63028 J. Audet, Coaticook.....	3 "	10	St. Lawrence F.M. Co., Ltd.	.....
"	10	Middlings..	63029 " " .....	3 "	10	Ogilvie F. M. Co., Ltd.	.....
"	10	" .....	63030 Lovell, Bros., Coaticook....	3 "	10	Lake of the Woods M. Co., Ltd.	.....
"	17	Shorts.....	62841 Lahaie & Sons, Buckingham	3 "	10	E. A. Barry Mason.	.....
"	17	" .....	62842 A. Cummings, Buckingham.	3 "	.....	Lake of the Woods M. Co.	.....
"	17	Middlings..	62843 " " .....	3 "	.....	" " "	.....
Dec.	9	Shorts.....	62844 D. Walker, Huntingdon....	3 "	5	West. Canada F. M. Co., Ltd.	.....
"	9	" .....	62845 Pringle & Stark, Huntingdon.	3 "	.....	Lake of the Woods M. Co., Ltd.	.....

SESSIONAL PAPER No. 14

MIDLINGS (SHORTS).

Inspector's Report, (Is not an expression of opinion.)	Results of Analysis.			Vital Weed Seeds per Ounce.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.			

Concluded.

	p. c.	p. c.	p. c.			
.....	18.65	5.16	6.15	9 Lambs Quarters, 1 American Dragonhead, 1 Pennycress.	62613	Genuine.
.....	19.25	4.92	9.60	None.....	62614	"
.....	17.15	4.50	6.70	12 Lambs Quarters ...	62615	"
.....	16.70	4.10	10.10	None.....	62616	"
.....	18.95	6.34	6.95	".....	62617	"
.....	17.80	5.26	6.50	".....	62618	"
.....	19.05	5.45	6.75	".....	62619	"
.....	19.35	5.18	8.15	".....	62620	"

J. J. COSTIGAN, ACTING INSPECTOR.

.....	15.65	4.10	6.85	None.....	63021	Genuine.
.....	16.70	4.18	8.80	".....	63022	"
.....	17.10	4.82	7.60	107 Lambs Quarters, 1 Catchfly and 1 Pepper grass.	63023	"
.....	17.76	4.20	6.30	None.....	63024	"
.....	16.30	5.44	8.90	".....	63025	"
.....	17.10	4.26	7.75	".....	63026	"
.....	17.60	4.66	7.60	40 Lambs' Quarters, 1 Western False Flax	63027	"
.....	16.40	5.38	9.80	None.....	63028	"
.....	16.55	4.48	6.90	42 Lambs' Quarters, 1 Catchfly	63029	"
.....	17.65	4.30	5.40	None.....	63030	"
.....	19.50	5.58	8.15	".....	63041	"
.....	18.60	5.28	8.10	".....	63042	"
.....	16.70	4.04	3.95	".....	63043	"
.....	19.55	5.60	7.65	".....	63044	"
.....	18.05	5.48	8.20	".....	63045	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF OTTAWA—

1914.							
Oct.	23	Shorts.....	63526	The Foster Bennett Co., Ltd., River Desert.	3 lb..	5	Alex. Maclaren, Wakefield.
"	24	Middlings..	63527	S. Kerr, Kemptville .....	3 "	10	Lake of the Woods M. Co., Keewatin.
Nov.	3	Middlings, choice.	63528	The Western Canada F. M. Co., Ltd., Ottawa.	3 "	Nil.	Vendors.....
"	3	Shorts.....	63529	" " "	3 "	"	"
"	3	Middlings.	63530	The Maple Leaf M. Co., Ottawa.	3 "	"	"
"	3	"	63531	The Maple Leaf M. Co., Ottawa.	3 "	"	"
"	3	Shorts.....	63532	The Renfrew F. M. Co., Ltd., Ottawa.	3 "	"	"
"	4	Middlings..	63533	Lake of the Woods M. Co., Ottawa.	3 "	"	"
"	4	"	63534	The Ogilvie F. M. Co., Ltd., Ottawa.	3 "	"	"
"	4	Shorts.....	63535	E. Larose, 259 Cumberland St., Ottawa.	3 "	"	Wm. Scott & Co., Deschenes, P.Q.

## DISTRICT OF KINGSTON—

Oct.	29	Shorts.....	61590	J. A. McFarlane, Kingston.	3 lb..	5	West Canada, Ltd., Toronto.
"	29	"	61591	" " "	3 "	5	Maple Leaf Co., Ltd., Toronto.
"	"	"	61592	Kingston Milling Co., Kingston.	3 "	5	Vendors.....
"	29	Middlings..	61593	" " "	3 "	5	"
"	29	Shorts.....	61594	Maple Leaf Co., Kingston..	3 "	5	Maple Leaf Co., Toronto.
"	29	Middlings..	61595	" " "	3 "	5	"
"	29	Shorts.....	61596	W. F. McBroom, Kingston.	3 "	5	Ogilvie Co., Montreal.
"	29	"	61597	Geo. Gibson, Kingston.....	3 "	5	"
"	29	"	61598	W. P. Peters, Kingston....	3 "	5	Lake of the Woods Co.
"	29	Middlings..	61599	" " "	3 "	5	Hunt Bros., London.
Nov.	3	Shorts.....	61600	Hanley Netteville, Belleville.	3 "	5	.....

SESSIONAL PAPER No. 14

MIDLINGS (SHORTS).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of Chief Analyst.
	Protein.	Fat.	Fibre.	Vital Weed Seeds, per ounce.		

J. A. RICKEY, INSPECTOR.

	p. c.	p. c.	p. c.				
.....	16.55	4.60	1.30	17 Lambs' Quarters, 7 Black Bindweed, 1 Russian Pigweed, 1 Hares-ear Mustard.	63526	Genuine.	Feed Flour.
.....	18.55	4.80	6.55	None.....	63527	Genuine.	
.....	18.90	4.04	8.10	".....	63528	"	
.....	18.65	6.44	4.35	".....	63529	"	
Rex Brand.....	18.60	5.36	8.00	".....	63530	"	
Maple Leaf.....	18.40	5.06	8.95	".....	63531	"	
.....	17.90	5.36	8.00	".....	63532	"	
.....	18.75	4.26	5.30	".....	63533	"	
.....	15.20	5.12	5.50	".....	63534	"	
.....	14.70	5.14	12.75	32 Lambs' Quarters, 1 Cinquefoil.	63535	Excess fibre.	Adulterated.

JAMES HOGAN, INSPECTOR.

.....	17.55	5.68	6.80	None.....	61590	Genuine	
.....	17.05	4.26	9.30	".....	61591	"	
.....	18.60	5.18	3.15	".....	61592	"	
.....	16.75	3.31	0.75	".....	61593	Facts low.	Pass Feed Flour.
.....	17.75	4.68	9.25	".....	61594	Genuine	
.....	17.15	4.28	6.00	".....	61595	"	
.....	18.10	4.00	6.60	4 Lambs' Quarters, 1 Pep pergrass, 1 Pannycross	61596	"	
.....	17.65	4.60	7.40	None.....	61597	"	
.....	19.20	4.88	5.80	".....	61598	"	
.....	14.40	3.70	9.60	".....	61599	Nearly up to standard.	
.....	19.75	2.11	11.05	".....	61600	Excess fibre and dark green in portion and low nutritious.	Adulterated.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF TORONTO—

1914.							
Nov. 17	Shorts...	64568	Geo. Gibb, Collingwood...	3 lb.	5	Collingwood Milling Co., Ltd.	.....
" 17	" .....	64579	Barrie Milling Co., Ltd.	3 "	5	Vendors, .....	.....
" 18	" .....	64580	T. Marchand, Penetang...	3 "	5	West Can. F. M. Co., Toronto.	.....
" 18	" .....	64581	George Copeland & Sons. ...	3 "	5	Vendors.....	.....
" 18	" .....	64582	W. M. Thompson, Penetang	3 "	5	Ogilvie F. M. Co., Ltd., Montreal.	.....
" 19	" .....	64583	F. Rollins, Midland.....	3 "	5	Robin Hood M. Co., Ltd., Moosejaw.	.....
" 19	" .....	64584	Geo. Copeland & Sons, Midland.	3 "	5	Vendors.....	.....
" 20	" .....	64585	T. B. Cramp, Orillia. ....	3 "	5	Ogilvie F. M. Co., Ltd., Montreal.	.....
" 27	" .....	64586	Cranpsey & Kelly 684 Queen St. East, Toronto	3 "	5	Maple Leaf M. Co., Ltd., Toronto.	.....
" 27	" .....	64587	Lake of the Woods Milling Co., Toronto.	3 "	5	.....	.....

## DISTRICT OF HAMILTON—

Nov. 2	Shorts...	64517	E. Clarke, Orangeville.....	3 lb.	5	Lake of the Woods M. Co., Montreal.	.....
" 2	" .....	64518	W. A. McClean & Co., 1,000 2nd Ave. E., Owen Sound	3 "	5	The Campbell F. M. Co., Ltd., Toronto.	.....
" 4	" .....	64519	J. U. Tyson, Warton.....	3 "	5	McLeod M. Co., Ltd., Stratford.	.....
" 5	" .....	64520	John Sandlos, Hanover.....	3 "	5	Maple Leaf M. Co., Ltd., Toronto.	.....
" 6	" .....	64521	Wm. Knechtal & Son, Hanover.	3 "	5	Vendors.....	.....
" 6	" .....	64522	Walkerton Flour Mills, Walkerton.	3 "	5	Vendors.....	.....
" 6	" .....	64523	C. S. Smith & McConnell, Walkerton.	3 "	5	Thos. Burrell & Sons, Pinerton.	.....
" 9	" .....	64524	A. W. Swaie, 649 Borton St. E., Hamilton.	3 "	6	Ogilvie M. Co., Ltd., Montreal.	.....
" 6	" .....	64525	A. Dymont & Son, 342 Borton St. E., Hamilton.	3 "	5	Wood M. Co., Ltd. Hamilton.	.....
" 10	" .....	64526	Kerr Milling Co., Ltd., Dundas.	3 "	5	Vendors.....	.....

## DISTRICT OF WINDSOR—

Nov. 4	Shorts.....	63953	W. B. Laurie, Tillonburg...	3 lb.	Nil	Quance Bros., Delhi	.....
" 4	" .....	63954	David Crossett, " .....	3 "	5	Seaforth M. Co., Seaforth.	.....
" 5	" .....	63965	M. Thorburn, Simcoe.....	3 "	10	Lake of the Woods M. Co.	.....



SESSIONAL PAPER No. 14  
MIDLINGS (SHORTS).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.	Vital Weed Seeds, Per ounce.		

H. J. DAGER, INSPECTOR.

	p. c.	p. c.	p. c.			
.....	19.35	5.32	9.00	None .....	64578	Genuine.
.....	16.40	4.92	6.78	" .....	64579	"
.....	18.90	5.52	7.26	" .....	64580	"
.....	18.95	4.62	6.06	" .....	64581	"
.....	16.75	4.10	9.24	" .....	64582	"
.....	19.55	6.12	6.90	" .....	64583	"
.....	18.50	3.50	6.72	" .....	64584	"
.....	16.25	5.06	8.14	" .....	64585	"
.....	17.00	4.46	8.48	" .....	64586	"
.....	18.90	5.02	8.48	" .....	64587	"

H. J. DAGER, ACTING INSPECTOR.

.....	18.25	5.02	6.65	None .....	64517	Genuine.
.....	18.15	4.90	7.35	" .....	64518	"
.....	14.75	4.74	6.40	" .....	64519	"
.....	16.80	4.58	6.60	" .....	64520	"
.....	17.15	5.74	7.35	" .....	64521	"
.....	15.85	5.28	6.40	" .....	64522	"
.....	16.90	5.20	7.45	" .....	64523	"
.....	17.15	5.02	8.00	" .....	64524	"
.....	15.60	4.10	8.70	172 Lamb's Quarters, 2 Catchfly, 1 Plantain, 1 Hedge Nettle	64525	"
.....	20.35	5.80	9.24	None	64526	"

JOHN TALBOT, INSPECTOR.

.....	14.55	4.76	7.40	None	62882	Genuine.
.....	15.75	4.06	8.50	"	62884	"
.....	19.65	5.28	7.55	"	62885	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cost.	Manufacturer.	Furnisher.

DISTRICT OF WINDSOR—

1914.							
Nov. 5	Shorts	63966	E. Edmonds, Simcoe.	3 lb.	Nil.	Tavistock M. Co., Tavistock.	
" 6	"	63970	E. R. White, Aylmer, Ont.	3 "	"	T. Taylor & Co., Chatham.	
" 6	"	63971	Lewis Pierce & Sons, "	3 "	"	Empire M. Co., St. Thomas.	
" 7	"	63973	H. E. Stansell, St. Thomas.	3 "	5	" "	
" 7	"	63974	J. A. Facey, "	3 "	5	Hunt Bros., Lon- don, Ont.	
" 7	"	63975	E. Slobashy, London, East.	3 "	5	Unknown.	
" 7	"	63976	Leith & Staples, " "	3 "	5	Dorter & Son, Lon- don.	

DISTRICT OF MANITOBA—

Oct. 29	Shorts	61182	Ogilvie F. M. Co., Ltd., Winnipeg.	3 lbs.		Vendors	
" 29	"	61183	Western Canada F. M. Co., Ltd., St. Boniface.	3 "		"	
" 30	"	61184	Lake of the Woods M. Co., Ltd., Portage La Prairie.	3 "		"	
Nov. 3	"	61185	Western Canada F. M. Co., Ltd., Brandon.	3 "		"	
" 3	"	61186	Maple Leaf M. Co., Brandon	3 "		"	
" 4	"	61187	Leitch Bros., F. M. Ltd., Oak Lake.	3 "		"	
" 24	"	61188	The Winkler M. Co., Wink- ler.	3 "		"	
" 25	"	61189	Geo. McCulloch & Sons, Souris.	3 "		"	
" 25	"	61190	A. M. Harvie, 651 Sargent St., Winnipeg.	3 "	10	Lake of the Woods M. Co., Kee- watin.	
" 26	"	61193	Standard Hay & Feed Co., 545 Logan Ave., Winnipeg	3 "		" "	

DISTRICT OF SASKATCHEWAN—

Oct. 28	Shorts	64056	Moria & Pfeiffer, Prince Al- bert.	2 lbs.	Nil.	Hudson Bay Mills, Prince Albert.	
" 30	"	64079	G. H. Speer, Mighton & Co., Saskatoon.	3 "	"	Quaker Oats Co., Saskatoon.	
" 30	Middling	64072	S. A. Early & Co., Saskatoon	3 "	"	Robin Hood M. Co., Moosejaw.	
" 31	Shorts	64075	Ogilvie M. Co., Regina.	2 "	"	Vendors	
" 31	"	64077	N. Sutherland, Regina.	2 "	10	Lake of the Woods M. Co., Kee- watin.	

SESSIONAL PAPER No. 14

MIDLINGS (SHORTS).

Inspector's Report (Is not an expression of opinion.)	Results of Analysis.			Vital Weed Seeds per ounce.	No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.			

Concluded.

	p. c.	p. c.	p. c.			
.....	15.85	4.52	8.30	None . . . . .	63966	Genuine.
.....	17.25	4.44	8.80	" . . . . .	63970	"
.....	18.60	5.08	5.85	" . . . . .	63971	"
.....	16.85	5.52	6.75	" . . . . .	63973	"
.....	18.20	5.58	9.15	26 False Flax, 1 Tumb- ling Mustard.	63974	Genuine. Excess vital weed seeds
.....	17.10	5.46	7.75	None . . . . .	63975	Genuine.
.....	17.85	4.82	7.49	" . . . . .	63976	"

A. C. LARIVIERE, INSPECTOR.

.....	19.25	4.78	7.00	None . . . . .	61182	Genuine.
.....	18.67	5.26	7.90	" . . . . .	61183	"
.....	18.20	4.56	7.50	" . . . . .	61184	"
.....	19.30	5.02	6.65	" . . . . .	61185	"
.....	18.85	4.64	8.60	" . . . . .	61186	"
.....	18.80	4.88	8.85	" . . . . .	61187	"
.....	17.50	3.92	8.35	" . . . . .	61188	"
.....	19.30	4.38	8.85	" . . . . .	61189	"
.....	18.90	4.74	8.45	" . . . . .	61190	"
.....	19.20	4.90	8.00	" . . . . .	61195	"

L. H. HALL, INSPECTOR.

.....	15.80	4.44	6.42	9 Lindsays quarters, 1 black lin weed	64676	Genuine.
.....	18.40	4.66	7.14	35 Lindsay quarters, 1 Black lin weed.	64679	"
.....	19.10	4.64	6.60	None . . . . .	64672	"
.....	17.00	4.12	9.15	" . . . . .	64675	"
.....	18.15	4.80	8.25	" . . . . .	64677	"

\* Manufacturers explain the presence of weed seeds by a break down of their machinery

7 GEORGE V, A. 1917

BULLETIN No. 311—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF SASKATCHEWAN—

1914.							
Nov.	2	Shorts . . . .	64081	T. W. McGregor, Mortlach.	2 lb..	10	West. Canada F. M. Co., Winnipeg
"	2	" . . . .	64082	E. C. Bissell, Mortlach. . . .	2 " . .	Nil.	Vendor . . . . .
"	3	" . . . .	64084	Ogilvie Milling Co., Pense. . .	3 " . .	"	Ogilvie M. Co., Winnipeg.
"	4	" . . . .	64087	Lake of the Woods M. Co., Moose Jaw.	2 " . .	"	Lake of the Woods M. Co., Winnipeg
"	4	Middlings . .	64088	Chas. H. Boyd . . . . .	3 " . .	"	Robin Hood M. Co., Moose Jaw.

## DISTRICT OF ALBERTA—

Nov.	19	Shorts . . . .	52044	I. E. Love, Calgary . . . . .	3 lb..	5	Ogilvie, Medicine Hat.
"	20	" . . . .	52045	Erl & Anderson, Calgary . . .	3 " . .	Nil.	" " . . . . .
"	20	" . . . .	52046	Thos. Fletcher, Calgary . . .	3 " . .	"	Robin Hood Mills, Ltd., Calgary.
"	24	" . . . .	52047	Stettler Flour Mills, Stettler	3 " . .	"	Vendors . . . . .
"	25	" . . . .	52048	L. E. Martin, Camrose . . . .	3 " . .	"	Union Supply Co., Nor. Battleford.
"	25	" . . . .	52049	P. M. Laing, Camrose . . . .	3 " . .	"	Robin Hood Mills, Ltd., Calgary.
"	25	" . . . .	52050	MacEachern & McCallum, Wetaskiwin.	3 " . .	"	Vendors . . . . .
"	27	" . . . .	52051	Nicholson & Switzer, La- combe.	3 " . .	"	Ellison M. and E. Co., Lethbridge.
"	27	" . . . .	52052	" " " . . . . .	3 " . .	"	Robin Hood Mills, Ltd., Calgary.
"	30	" . . . .	52053	Crown Feed and Produce Co., Calgary.	3 " . .	"	Lumsden M. and G. Co., Lumsden, Sask.

## DISTRICT OF ROCKY MOUNTAINS—

Nov.	10	Middlings (Shorts.)	61714	J. R. Randall, Trail. . . . .	3 lbs..	20	Robin Hood Mills, Calgary.
"	23	Shorts . . . .	61729	Hudson's Bay Co., Kam- loops.	3 " . .	15	Quaker Oats Co., Saskatoon.
"	23	" . . . .	61731	R. McCall, Kamloops . . . . .	3 " . .	15	Ogilvie M. Co., Medicine Hat.
Dec.	1	Middlings . .	61737	Taylor M. & E. Co., Nelson.	3 " . .	15	Robin Hood Mills, Calgary.
"	1	Shorts . . . .	61738	A. S. Horswill & Co., Nel- son.	3 " . .	15	Ellison M. & E. Co., Lethbridge.

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MIDDLEINGS (SHORTS).

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.	Vital Weed Seeds per Ounce.		

Concluded.

	p. c.	p. c.	p. c.			
Reg. No. 83 .....	18.75	5.40	9.15	None .....	64081	Genuine.
.....	19.15	3.02	3.40	" .....	64082	Fat, low. Pass.
.....	17.80	4.58	8.85	" .....	64084	Genuine.
.....	18.90	5.22	6.40	" .....	64087	"
.....	19.75	5.84	6.35	" .....	64088	"

A. W. R. MARKLEY, INSPECTOR.

.....	20.95	5.22	7.60	4 Lambs' Quarters, 1 Tumbling Mustard.	52041	Genuine.
.....	20.95	4.48	7.40	7 Lambs' Quarters .....	52045	"
.....	19.10	5.00	6.50	None .....	52046	"
.....	13.25	2.74	0.85	" .....	52047	Protein and fat too low. Feed flour. Doubtful.
.....	17.75	4.28	8.80	" .....	52048	Genuine.
.....	20.65	4.46	6.10	" .....	52049	"
.....	15.80	5.12	4.50	" .....	52050	"
.....	18.00	4.16	5.55	14 Lambs' Quarters, 21 Wormseed Mustard.	52051	"
.....	18.80	4.20	7.05	None .....	52052	"
.....	18.70	5.44	7.65	" .....	52053	"

THOS. PARKER, INSPECTOR.

.....	19.15	4.30	6.70	None .....	61724	Genuine
.....	18.85	5.30	5.95	20 Lambs' Quarters .....	61729	"
.....	20.40	4.28	7.65	None .....	61734	"
.....	18.60	4.68	7.20	" .....	61737	"
.....	20.55	4.46	8.00	" .....	61738	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF VANCOUVER—

1914.							
Oct.	30	Middlings.	55126	Brackman Ker M. Co., Ltd., Vancouver.	3 lbs.	10	Robin Hood Mills, Calgary.
"	3	"	55127	Alberta Pacific Grain Co., Vancouver.	3 "	...	Lake of the Woods M. Co., Keewatin.
"	3	"	55128	A. E. Burnett & Co., City Market, Vancouver.	3 "	5	"
"	3	"	55129	F. T. Vernon, 255 Broad- way, Vancouver.	3 "	10	"
"	3	"	55130	Vancouver M. & G. Co., Ltd., Vancouver.	3 "	...	Vendors
"	31	"	55131	McLellan, McCarter Co., Ltd., 1605 6th Ave. W., Vancouver.	3 "	10	Robin Hood Mills, Calgary.
"	31	"	55132	" " "	3 "	10	"
Nov.	3	"	55133	Brackman Ker M. Co., Ltd., 535 Frnt st., New West- minster.	3 "	...	"
"	3	"	55134	Grain Growers B. C. Agency, New Westminster.	3 "	...	Vendors
"	4	"	55135	Brackman Ker M. Co., Ltd., Vancouver.	3 "	10	Magrath M. Co., Magrath, Alta.

## DISTRICT OF VICTORIA—

Nov.	13	Shorts	62031	Sylvester Feed Co., 709 Yates St., Victoria.	3 lbs.	...	Ogilvie M. Co. Me- dicine Hat.
"	13	"	62032	Brackman Ker, M. Co., 1420 Broad St., Victoria.	3 "	...	West. Canada F. M. Co., Brandon.
"	13	Middlings	62033	" " "	3 "	...	Royal Standard Mills, Vancouver.
"	13	"	62034	Scott & Peden, cor. Store & Cormorant St., Victoria.	3 "	7	Robin Hood Mills, Calgary.
"	13	Shorts	62035	" " "	3 "	7	Ogilvie M. Co., Winnipeg.
"	13	"	62036	" " "	3 "	7	Ellison M. & E. Co., Lethbridge.
"	23	"	62037	S. Leiser & Co., Ltd., 527 Yates St., Victoria.	3 "	7	Vancouver M. & G. Co., Ltd., Van- couver.
"	24	"	62038	Vancouver M. & G. Co., Ltd., Kingston St., Victoria.	3 "	7	" " "
"	24	Middlings	62039	" " "	3 "	7	" " "

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MIDLINGS (SHORTS.)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			Vital weed seeds per ounce.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.			

E. J. MORGAN, INSPECTOR.

	p. c.	p. c.	p. c.			
.....	16.85	3.06	0.65	None .....	55126	Fat too low. Feed Flour. Pass.
.....	17.65	3.42	1.75	" .....	55127	Fat low. Feed Flour. Pass.
.....	20.70	4.36	4.65	" .....	55128	Genuine.
.....	20.70	4.28	4.20	" .....	55129	"
.....	18.20	2.99	0.65	" .....	55130	Fat low. Feed Flour. Pass.
.....	16.60	3.04	1.65	" .....	55131	Fat low. Feed Flour. Pass.
.....	17.70	3.64	1.90	" .....	55132	Genuine. Feed Flour.
.....	15.70	3.46	3.95	" .....	55133	Genuine.
.....	19.80	3.90	4.20	" .....	55134	"
.....	15.60	3.90	0.90	" .....	55135	Feed Flour.

D. OSULLIVAN, INSPECTOR.

	p. c.	p. c.	p. c.			
.....	20.50	5.78	6.90	None .....	62031	Genuine.
Reg. No. 63.....	16.25	4.16	10.22	" .....	62032	Some excess fibre Pass.
.....	17.00	3.04	0.90	" .....	62033	Fat, low. Feed Flour. Pass.
.....	19.40	4.84	7.50	" .....	62034	Genuine.
.....	19.15	5.54	7.25	" .....	62035	"
.....	21.10	4.96	8.00	116 Lbs. Quarters, Tumbling Mustard.	14 62036	Genuine. Excess, vital weed seeds.
.....	17.15	4.44	9.20	None .....	62037	Genuine.
.....	14.80	4.08	7.45	" .....	62038	"
.....	17.40	2.82	4.05	" .....	62039	Fat low. Pass.





## APPENDIX C.

## BULLETIN No. 312—MOLASSES.

OTTAWA, April 15, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister Inland Revenue.

SIR,—I beg to hand you a report of work done upon one hundred and forty (140) samples purchased by our inspectors throughout Canada, under the name of Molasses (Melasse).

Molasses has never been defined in Canada under the Adulteration Act; and the present inspection appears to show that the term has no very definite signification for the consuming public. This I infer from the fact that no complaints have been received from consumers, although the character of the article, as evidenced by this report, is extremely variable. The content of total solids varies from above 80 to less than 70 per cent; reducing sugars from 37 to less than 10 per cent; cane sugar from 54 to less than 20 per cent; and ash (mineral matter) from above 9 to less than 1 per cent.

Any complaints which have been received concerning molasses have come from outside sources, and charge that an article not considered fit for human consumption at the place of its production is supplied to the public of Canada. The following statement, made to the Commissioner of Trade and Commerce, by a high authority in Barbados, deserves consideration.

“That ‘black strap’ molasses is not fit for human food and it seems to me that the Canadian Government should let the people know what they are buying as syrup or molasses. Nearly every civilized country now has its pure food laws and I think the Canadian Government should compel those manufacturers who treat ‘black strap’ molasses in such a way as to give it the appearance of High Grade syrup to so mark their product that any purchaser will know what he is getting. I am sure that if Canadians in general knew the nature of the ‘black strap’ molasses they would not think it fit for human food. I understand that even the working classes in Canada insist upon having the highest quality of meat and even the choicest cuts. Why then should they be willing to buy molasses and syrup which at best is fit for nothing but cattle food? We in Barbados are very careful to prevent inferior molasses being exported as high-grade and we have very strict laws to prevent the mixing of molasses. I may call your attention to the Molasses Mixing Prohibition Act enacted by the Governor, Council and Assembly of Barbados in 1912 which provided that any one responsible for mixing fancy or muscovado molasses with vacuum pan molasses with intent that the same may be sold or exported in that state or anyone who sells or exports any fancy or muscovado molasses so mixed shall be liable to a penalty not exceeding one hundred pounds for the first offence and for the second or any subsequent offence shall be liable on summary conviction to be imprisoned for a period not exceeding six months with or without hard labour. Any person who sells or exports any vacuum pan molasses in any package not branded or marked in a legible and conspicuous manner ‘V.P. Molasses’ is liable to a penalty not exceeding fifty pounds. It is provided that all penalties imposed by this Act shall be recovered in a summary manner before a police magistrate on the complaint of any person and shall be paid one-third

to the complainant, one-third to the informer if any other than the complainant, and the residue into the public treasury to the credit of the general revenue. The informer's share is paid to the Inspector General of Police if the Inspector General of Police states in writing that there is an informer who does not desire his name to be disclosed. If the Canadian Government were equally careful to prevent the mixing of molasses and the sale of inferior grades of molasses and syrups however manufactured except when marked in such a way that the purchaser would know exactly what he is getting I believe that we could easily find a market in Canada for all the muscovado molasses and cane syrup we can produce in Barbados."

The results of analysis enclosed, do not furnish any evidence which would stamp the article sold in Canada as being in any way harmful to the health of the consumer. Examination of the ash for heavy metals (lead, zinc, etc.) fails to reveal these in more than harmless and negligible traces. The presence of sulphurous acid, used as a bleaching agent, is usually declared on the label; and is not present in amount that can be regarded as dangerous to health.

It remains quite true, however, that from the æsthetic point of view, as well as in regard to nutrient values, the samples now reported represent very different food substances, which, in all fairness to the consumer, as well as to the producer, should bear distinguishing names. It is impossible, of course, for this department, to dictate the use of language; and it may be well to inquire as to the meaning of the word *molasses*, as used in commerce. The following explanation is quoted from Wiley's "Foods and their Adulteration," second edition, p. 477:

"*Molasses*.—The term 'molasses' is properly applied to the saccharine product which is separated from sugar in the process of manufacture. It is well to clearly discriminate in the use of the term in order that no confusion or misunderstanding may arise. To this end the terms 'syrup' and 'molasses' may be contrasted. A syrup is the direct product of the evaporation of the juice of a sugar-yielding plant or tree without the removal of any of the sugar. The term molasses applies to the same process with the exception of the fact that sugar has been removed at least partially by crystallization and some kind of mechanical separation of the crystals from the remaining liquid. Molasses, therefore, to use a term employed in chemistry, may be considered the 'mother liquid' which has produced the crystallization of the sugar. The production of molasses has already been sufficiently described in the article on sugar making. The molasses is either separated by gravitation as in the old style of drying sugar or, as at the present time, almost exclusively by centrifugal action. The molasses naturally contains the substances in solution or suspension which are not retained upon the gauze of the centrifugal. It differs from the total mass of evaporated sugar liquid only in the fact that a large portion of the sucrose or crystallizable sugar has been separated. The sugar juices of the cane and sorghum contain considerable quantities of sugar of a kind different from sucrose or common sugar, namely, an invert sugar, a 'reducing sugar', as it is called, which consists usually of about equal parts of dextrose and levulose. During the process of manufacture small portions of the sucrose are converted into sugar of this kind thus increasing its quantity. In the final crystallization there is always a portion of sugar uncrystallized remaining as a viscous liquid in contact with the crystallized particles. This natural invert sugar which is in the juice, the small portion formed from the sucrose during the process of manufacture, and the part of sucrose remaining uncrystallized in the mother liquid constitute the molasses. In the washing of sugar the water which is used also passes into the molasses, thus diluting it somewhat from its natural consistence. In the sugar refinery the molasses is made up of practically such materials as just mentioned, but inasmuch as the separation of the sugar is more complete the other portions of the molasses, namely, the mineral salts, particularly appear in a very much larger proportion than in the ordinary molasses as will be seen by the analysis of these bodies.

"*Sugar Cane Molasses*.—Since the introduction of modern processes of making sugar, namely the vacuum pan and centrifugal process, the character of molasses from

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the sugar cane factory has constantly deteriorated. This is a natural deterioration due to the improvement in the method of sugar making. Much larger quantities of sugar are now obtained in a crystallized state than formerly. The molasses is to this extent impoverished and the impurities contained therein increased proportionately. It is quite common now in the process of manufacture of sugar from sugar cane to secure at least three crystallizations.

"*First Molasses.*—When the sugar is crystallized in the vacuum pans and separated from the molasses in the centrifugal the product which is obtained is called 'first molasses.' Usually this molasses is diluted to a sirup and reboiled in connection with the clarified juices direct from the sugar cane and thus a second portion of sugar is obtained or the molasses may be boiled separately and a second crystallization of the sugar separated by the centrifugal. The molasses from this product is called 'second molasses' and is inferior in quality to the first molasses.

"*Third Molasses.*—The second molasses is reboiled to a thick consistency, placed in wagons, and transferred to a warm room where it is allowed to remain, sometimes for two or three months, when a third crystallization takes place. The sugar from this crystallization is separated as usual by the centrifugal, and a third molasses produced of still greater inferiority. Thus, in the best sugar factories high-grade molasses is not made in the United States but only that of inferior quality. This molasses is largely used for fermentation, or is fed to the mules on the plantations. It is also employed to a certain extent for mixing purposes as indicated above.

## ANALYSIS of First, Second and Third Molasses.

Grades.	Total Solids.	Sucrose.	Dextrose.	Levulose.	Ash.	Albuminoids.	Amids.	Acids and Gums.
	%	%	%	%	%	%	%	%
First.....	80.00	53.60	8.76	8.00	4.00	0.20	0.94	4.50
Second.....	80.00	41.70	12.20	12.50	5.35	0.25	1.50	6.50
Third.....	80.00	31.70	15.00	16.50	6.30	0.30	2.00	8.20

"The increasing content of dextrose and levulose, of ash, acids, and gums, and the decreasing content of sucrose or pure sugar are characteristic of the second and the third molasses.

"The above analyses show the progressive change in molasses due to the separation of the successive portions of sugar and indicate the lowering of the quality of the molasses, at least for food purposes, as the separation of the sugar becomes more complete. It is evident that in the manufacture of sugar in this way, in which very probably an effort is made to get the highest possible yield, the resulting final molasses is a substance quite unfit for human consumption.

"*Sugar-house Molasses.*—Attention has already been called to the production of sugar-house molasses or sugar refinery molasses. This is a product which in its physical appearance is far superior to the third molasses of the sugar factory and this superiority is due to the fact that all suspended matter in the refined molasses has been removed by filtration. In so far as soluble material, which are not fixed in concentration, however, the refinery molasses contains even larger proportions than the sugar factory molasses. The refinery molasses is not usually considered suitable for food except when diluted as has been before indicated in the way of mixing sirup."

In 1909 (See Bulletin No. 177) I reported upon 75 samples purchased as table syrups. The majority of these were found to be mixtures of glucose (corn syrup) and cane sugar syrups, or molasses, the latter added to give increased sweetness and greater palatability. Most of these articles are very desirable foods; and it may be of interest to cite the opinion of Dr. Wiley in regard to this class of foods:

" *Mixed Syrups.*—By far the greater part of the syrups used in the United States are mixtures of two or more saccharine substances. The glucose of commerce is the base and perhaps chief constituent of the most of these mixtures. The glucose, being colourless and of a thick body, forms an ideal base as far as physical properties are concerned, for a table sirup. The quantity used varies very largely, but in general the glucose constitutes by far the larger percentage of the mixed product. Since glucose has only a very slightly sweet taste and is devoid of the general palatable properties which make a sirup attractive, it is coloured and flavoured with the product of the sugar cane or the maple tree. Sorghum sirup is also used very extensively in mixing. The process of mixing is an extremely simple one. The glucose is warmed until it is easily workable and the added syrups or molasses which are used for colouring and flavouring mixed intimately with it. In large factories this is done by mechanical mixers while in a small way it may be done by hand. Instead of glucose, one sirup itself may be used as the base and mixed with another for flavour, as, for instance, in the case of mixed maple sirup. Very commonly the brown sugar is melted with water and this is used as a base for the formation of syrups. Whichever may be the case the principle of the process remains the same, namely, using as the base a cheaper and has palatable material. From a dietetic and commercial point of view there can be no valid objection raised to this method of mixing syrups. The product is as a rule, attractive, palatable, and wholesome.

" Attention has already been called to the fact that the final molasses in the sugar refinery, after all the sugar has been extracted that can possibly be gotten out by the most approved modern process, is used very extensively for mixing purposes. This molasses has a very high content of soluble salts, reaching often 8 per cent or more, which give a distinct flavour and character. It also has acquired a certain flavour quite distinct from cane sirup, which gives it a peculiar value as a flavouring agent. It is commonly known as 'refiner's sirup' and is a clear product free from suspended matter by reason of its repeated filtration. It can thus be mixed with glucose and forms a bright mixture, devoid of suspended matter and turbidity, and is attractive to the eye. Ten per cent of molasses of this kind added to a glucose will make a mixture which is attractive and saleable, the objectionable qualities of each ingredient being obscured. The other products which are used for mixing with the glucose in the manufacture of table sirup consist of the molasses obtained from cane sugar factories or the syrups made directly from the sugar cane and sorghum. All these bodies have valuable mixing properties and small quantities of them are sufficient to give colour and flavour to the mixed product."

It will be evident from what has been said that there exist different grades of molasses, some containing so much sugar (sucrose) and so little mineral matter (ash) as to possess a high food value, and to be very desirable foods. The final product of the treatment of sugar cane juice, is, on the other hand, so poor in residual sugar, and so loaded with mineral matters, added during the processing for removal of sugar, as to be a very questionable article of diet. This product, otherwise known as *treacle* or *black strap*, finds its proper place as a cattle food, or as material for the production of alcohol. Modern methods of sugar production are such as to render this final product much less desirable as a food than formerly; and, if sold for human food at all, it should certainly be known by a specific and truly distinguishing name. The word *molasses* is evidently understood to stand for a perfectly edible article, and should therefore be defined in such a way as to exclude *black strap*. This may be most easily done by requiring that molasses shall contain not less than a fixed minimum amount of sugar, and not more than a fixed maximum amount of ash. Also that it shall be entirely free from metallic impurities, and shall not contain dangerous amounts of sulphurous acid, or other foreign matter.

The standards for molasses recommended by the Washington authorities, are as follow:

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"Molasses is the product left after separating the sugars from massecuite, melada, mush sugar or concrete, and contains not more than twenty-five (25) per cent of water, and not more than five (5) per cent of ash."

These standards are satisfactory so far as they go; but I think that they might be made still more definite, to advantage. The present report will serve the purpose of giving information in regard to molasses, as found in the markets of Canada; and will supply a basis for further consideration of the matter, with a view to recommending satisfactory standards.

Of the 140 samples reported, 75 contain less than 40 per cent of cane sugar (sucrose), and should, I think, on this account, be considered as doubtfully suited for human food under the name molasses; 38 samples contain more than 5 per cent of ash, and would undoubtedly be more correctly offered as *black-strap* than as molasses. These decisions can only be regarded as conditional, until such time as legal standards are established.

I beg to recommend publication of this report as Bulletin No. 312.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Vendor as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NOVA SCOTIA—

1915.							
Jan. 11	Molasses....	54231	Cahill & Co., Halifax, N.S.	1 qt.	14	Unknown.....	R. B. Seaton & Co. Halifax, N.S.
" 12	" ...	54232	G. P. Mitchell & Sons, Halifax, N.S.	1 "	Nil.	" .....	J. T. Dew, Antigua, W. I.
" 12	" ...	54233	R. B. Seaton & Co., Halifax, N.S.	1 "	10	James & Swan, Barbadoes, W. I.	Manufacturer.....
" 12	" ...	54234	T. F. Courtney & Co., Halifax, N.S.	1 "	13	Unknown.....	Dom. Molasses Co. Halifax.
" 12	" ...	54235	R. N. McDonald Estate of Halifax, N.S.	1 "	12	" .....	" "
" 12	" ...	54236	E. H. Crease & Sons, Halifax, N.S.	1 "	13	" .....	G. P. Mitchell & Sons, Halifax.
" 18	" ...	54237	Dominion Molasses Co., Halifax, N.S.	1 "	Nil.	" .....	Brotherson Estate, St. Kitts, B.W.I.
" 18	" ...	54238	" " " "	1 "	"	" .....	S. P. Musson, & Sons, Barbadoes.
" 18	" ...	54239	" " " "	1 "	"	" .....	"
" 18	" ...	54240	" " " "	1 "	"	" .....	G. F. Huggins, Port of Spain, Trinidad, B. W. I.

## DISTRICT OF NOVA SCOTIA—

1914.							
Dec. 5	Molasses. ...	65812	The 2 Barkers Ltd., Glasgow.	1 qt.	12	Unknown.....	McCulloch, Creelman & Urquhart, Truro, N.S.
" 5	" ...	65813	A. A. McDonald, Glasgow.	1 "	14	Mitchell Molasses Co., Barbadoes, W. I.	G. P. Mitchell, Halifax.
" 5	" ...	65814	James McArthur, Glasgow.	1 "	15	S. P. Musson & Sons, Barbadoes, W. I.	.....

## DISTRICT OF PRINCE EDWARD ISLAND—

Oct. 24	Molasses....	60136	Stewart & Sons, Charlottetown, P. E. I.	3 jars.	34	.....	Carvell Bros., Charlottetown.
" 24	" ...	60137	Jenkins & Sons, Charlottetown, P. E. I.	3 "	48	.....	" "
" 27	" ...	60138	Coffin & Co., Charlottetown, P. E. I.	3 "	35	.....	R. E. Mutch & Co., Charlottetown.
27	" ...	60139	J. C. Crabbe, "	3 "	35	.....	Nicholson & Meserney, Charlottetown.
" 27	" ...	60140	W. W. Walker, "	3 "	48	Leacock & Co. Barbadoes.	.....

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MOLASSES.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.							No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Water.	Solids.	Reducing Sugar.	Sucrose.	Total Sugar.	Ash.	Organic mat- ter other than Sugar.		

R. J. WAUGH, INSPECTOR.

	p.c.	pc.	p.c.	p.c.	p.c.	p.c.	p.c.		
Porto Rico.....	23.30	76.70	12.72	47.52	60.24	1.00	15.46	54231	
Sold as pure.....	27.65	72.35	13.84	52.68	66.52	2.86	12.77	54232	
" ".....	27.80	72.20	30.56	34.92	65.46	1.20	15.54	54233	Sucrose low
.....	26.50	73.50	20.74	41.80	62.51	1.44	9.52	54234	
Fancy Barbados.....	26.65	73.35	21.24	40.41	61.68	1.14	10.53	54235	
" ".....	24.30	76.70	31.28	33.92	65.20	1.60	9.90	54236	Sucrose low.
Fancy St. Kitts.....	23.58	76.42	26.54	38.44	64.98	1.08	10.36	54237	"
Fancy B. W. I.....	22.20	77.80	30.14	36.08	66.22	0.98	10.60	54238	"
Bright Fancy.....	27.90	72.10	16.81	42.20	59.04	1.32	10.71	54239	
Trinidad.....	25.30	74.70	19.36	42.00	61.36	5.12	8.22	54240	

W. A. PETIPAS, TEMP. INSPECTOR.

.....	26.66	73.34	19.20	44.40	63.60	1.60	8.14	65812	
.....	26.56	73.44	26.56	43.20	69.76	1.86	1.82	65813	
.....	27.51	72.49	22.36	45.00	67.36	1.92	3.21	65814	

WM. A. WEEKS, INSPECTOR.

.....	26.83	73.17	22.76	34.52	57.28	2.90	12.99	60130	Sucrose low
.....	20.93	79.07	31.84	32.36	67.20	2.04	9.83	60137	
.....	20.88	73.12	22.36	42.20	64.56	2.16	6.40	60138	
.....	20.85	73.15	23.12	30.48	59.60	1.30	12.21	60139	
.....	26.73	73.27	21.80	40.44	62.24	1.12	9.91	60140	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher

## DISTRICT OF NEW BRUNSWICK—

1914.							
Nov. 10	Molasses....	59616	2 Barkers, Ltd., St. John, N.B.	1 qt.	10	.....	Crosby Molasses Co., St. John, N. B.
" 11	" ...	59617	N. J. Alexander, St. John, N.B.	1 "	15	.....	Baird & Peters, St. John, N.B.
" 20	" ...	59618	M. E. Doohan, Fredericton, N.B.	1 "	15	.....	Jones & Schofield, St. John, N.B.
Dec. 8	" ...	59619	Sussex Mercantile Co., Ltd., Sussex, N.B.	1 "	15	.....	Baird & Peters, St. John, N.B.
" 10	" ...	59620	J. B. Snowball Co., Ltd., Chatham, N.B.	1 "	15	.....	" "

## DISTRICT OF QUEBEC CITY—

Nov. 3	Molasses ...	60714	O. Lacroix, 19 Rue St. Joseph, Quebec.	1 qt.	15	Musson & Son, Barbados.	N. Turcotte & Cie,
" 3	" ...	60715	" " " "	1 "	15	" "	Gagnon & Garnet.
" 4	" ...	60716	A. Grenier, 94 Rue St. Jean, Quebec.	1 "	15	.....	Joseph & Co. ....
" 5	" ...	60717	Cantin & Frere, 271 Rue St. Joseph, Quebec.	1 "	15	.....	Turcotte & Frere..
" 5	" ...	60718	A. Pichette, 176 Rue D'Orchester, Quebec.	1 "	15	.....	J. B. Renaud & Cie.

## DISTRICT OF QUEBEC PROVINCE—A. PELLETIER, T. GENDREAU,

Nov. 4	Molasses ...	56403	Dame Hector, Hudon. . .	3 pts.	20	M. Lanning & Co., Barbados.	.....
" 4	" ...	56407	Abraham Kilallah, Hudon	3 "	20	Jones & Swan....	Joseph & Cie, Quebec.
" 6	" ...	56408	Philippe Bourgoin, Price..	3 "	13	S. P. Musson, Barbados.	.....
" 6	" ...	56411	Philias Cote, St. Octave..	3 "	19	St. Lucie, Barbados.	.....
" 6	" ...	56413	Louis M. Langlais, St. Octave.	3 "	20	.....	.....
" 21	" ...	2725	Henri Fournier, Cap St. Ignace.	1 qt	15	.....	J. B. C. LeTellier, Quebec.
" 21	" ...	2727	Jos. M. Dube, Cap St. Ignace.	1 "	15	.....	Gagnon & Garent, Quebec.
" 23	" ...	2730	Jos. Fournier, St. Thomas, P. Q.	1 "	15	.....	N. Rioux & Cie, Quebec.
" 24	" ...	2733	Jos. Breton, St. Pierre...	1 "	15	.....	" " ..



SESSIONAL PAPER No. 14

MOLASSES.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Reducing Sugars.	Sucrose.	Total Sugar.	Ash.	Organic mat- ter other than Sugar.		

JNO. C. FERGUSON, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
Barbados, Fancy . . . . .	26.05	73.95	22.76	39.92	62.68	3.80	7.47	59616	
Barbados . . . . .	25.66	74.34	13.64	46.24	64.88	2.46	7.00	59617	
Barbados, Fancy . . . . .	26.34	73.64	20.32	41.88	62.20	2.86	8.58	59618	
" . . . . .	25.86	74.14	22.76	38.04	60.80	2.20	11.14	59619	Sucrose low.
Brand "Red Band." . . . .	25.86	74.14	23.12	43.68	66.80	1.30	6.04	59620	

F. X. W. E. BELAND, INSPECTOR.

	26.83	73.17	20.48	40.44	60.92	1.14	11.11	60714	
	31.23	68.77	37.36	16.28	54.24	1.82	12.71	60715	Sucrose very low.
Barbados, Choice . . . . .	31.13	68.87	12.12	46.60	58.72	2.96	7.19	60716	
Barbados, "Beaver" Brand.	26.88	73.12	14.52	42.80	57.30	1.96	13.84	60717	
Extra Fancy Molasses.	26.88	73.12	21.64	41.24	62.88	1.32	8.92	60718	

G. BROCHU, J. AUDET AND N. CADIEUX, TEMPORARY INSPECTORS.

	26.81	73.19	18.08	42.40	60.48	1.96	10.75	26105	
	26.71	73.29	21.64	43.80	65.44	1.28	6.60	26107	
	27.76	72.24	29.24	31.20	60.48	0.80	10.88	26109	Sucrose low.
	26.96	73.04	24.32	39.64	63.18	0.82	9.04	26111	
Barbados	30.85	69.15	23.72	37.08	60.80	1.80	6.00	26113	Sucrose low.
	27.38	72.62	20.08	40.04	60.72	0.64	11.28	2720	
	26.41	73.59	24.48	37.08	61.60	2.34	9.67	2722	Sucrose low.
	27.98	72.02	11.20	47.60	68.80	1.88	11.34	2726	
	26.08	73.92	21.64	43.20	64.84	1.20	7.88	2730	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC PROVINCE—

1914							
Oct.	27	Syrup Ami.	2571	Joseph Dinelli, Armagh...	1 qt.	15	Turcotte & Frère, Quebec.
"	27	" Fancy Barbados.	2572	" " "	1 "	15	N. Rioux, Quebec.
"	27	Fancy molasses Barbados.	2573	Jos. Langlois, Armagh...	1 "	12	Manning & Co. ... Turcotte & Frère..
"	27	Syrup molasses.	2582	Cléophas Beaudoin, Armagh.	1 "	15	Quebec Preserving Co., Quebec.
"	27	Molasses....	2587	Arthur Fredette Armagh.	1 "	13	N. Turcotte & Cie., Quebec.
Nov.	9	" ....	3701	A. J. Caillonette, Ste. Justine.	1 "	15	Quebec Preserving Co., Quebec.
"	10	" ....	3705	Jos. Doyon, Ste. Justine.	1 "	15	J. B. Renaud.....
"	10	" ....	3706	" " "	1 "	15	Quebec Preserving Co., Quebec.
"	10	" ...	3707	Bolduc & Genest, Ste. Sabine.	1 "	15	Drouin & Frère...
"	12	" ...	3709	Jos. Turgeon, Ste. Isadore.	1 "	15	Bernier, Scott Junction.
"	13	" ....	3716	" " "	1 "	15	Drouin & Frère, Quebec.
Dec.	1	" ....	2867	Dorchester Lumber, Ste. Malachi.	1 "	15	Dominion Molasses
"	1	" ....	2868	" " "	1 "	15	" " "
"	1	" ...	2869	" " "	1 "	15	" " "
"	2	" ....	2875	O. Audet, St. Léon de Standon.	1 "	15	Dorchester Lumber.
"	3	" ....	2879	A. Clontier, St. Odilon, Cramborn.	1 "	15	" " "
"	4	" ....	2881	L. J. Audet, St. Edward.	1 "	15	Dorchester Lumber.
"	4	" ....	2882	" " "	1 "	15	" " "
"	8	" ....	3719	M. Dechine, St. Grmaine Station.	1 "	15	Gagnon & Garent, Quebec.
"	9	" ....	3723	D. Fortier, Ste. Rose, Dorchester.	1 "	15	Dionne St. George, Beauce.
"	10	" ....	* 3729	D. Roy, Ste. Prospère...	1 "	25	" " "
"	21	" ....	3732	A. Mercier, St. Patrice de Beauvinage.	1 "	15	" " "
"	22	" ....	3735	O. Tradette, St. Narcisse-head Bois.	1 "	15	N. Reno, Quebec..
"	22	" ....	3738	A. Demers, St. Narcisse-head, Bois.	1 "	15	Gagnon & Garent, Quebec.

Both samples broken in transit.

SESSIONAL PAPER No. 14

MOLASSES.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Reducing Sugars.	Sucrose.	Total Sugar.	Ash.	Organic mat- ter other than sugar.		

Continued.

	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
.....	27.08	72.92	11.28	49.24	60.52	1.12	11.28	2571	
.....	27.28	72.72	24.84	38.64	63.48	2.04	7.20	2572	Sucrose low.
.....	27.43	72.57	23.72	37.68	61.40	1.82	9.35	2573	"
.....	26.03	73.97	24.48	39.24	63.72	1.10	9.15	2582	"
.....	26.86	73.14	23.52	37.88	61.40	1.60	10.14	2587	"
Extra Fancy Barbados.....	27.03	72.97	21.44	37.88	59.32	1.08	14.57	3701	"
.....	33.12	66.88	9.72	46.20	55.92	0.70	10.26	3705	"
Favorite.....	26.73	73.27	20.88	40.44	61.32	1.50	10.45	3706	"
Fancy Barbados.....	27.38	72.62	19.92	39.84	59.76	1.38	11.48	3707	"
".....	26.12	73.88	20.32	40.44	60.76	2.72	10.40	3709	"
".....	27.03	72.97	14.72	43.80	58.52	4.20	10.25	3716	"
Gingerbread.....	19.38	80.62	28.48	18.60	47.08	7.32	26.22	2665	Ash too high. Sucrose very low.
Selected.....	25.28	74.72	21.24	37.08	58.32	3.44	12.96	2666	Sucrose low.
Fancy Barbados.....	26.23	73.77	19.76	40.64	60.40	2.90	10.47	2667	"
.....	25.78	74.22	19.56	39.84	59.40	2.72	13.10	2675	"
Scott Fancy Barbados.....	27.03	72.97	19.36	39.64	59.00	1.84	12.13	2676	"
Selected.....	26.98	73.02	21.24	39.84	61.08	4.74	7.20	2681	"
Evangeline Johnson.....	27.73	72.27	19.36	42.60	61.96	1.28	9.03	2682	"
.....	27.08	72.92	20.24	34.92	64.16	1.32	7.54	3719	Sucrose low.
.....	25.73	74.27	22.00	37.08	59.08	3.40	11.73	3720	"
Fancy Barbados.....								3728	"
".....	27.03	72.97	21.44	39.24	60.68	0.80	11.43	3732	"
.....	26.58	73.42	21.44	41.40	62.84	1.98	8.60	3733	"
.....	26.48	73.52	21.08	42.80	63.88	1.54	8.10	3738	"

7 GEORGE V, A. 1917  
BULLETIN No. 312—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC PROVINCE—

1914.							
Dec.	23	Molasses....	3741	Jos. Blais, Ste. Bernard, Dorchester.	1 qt.	15	Drouin & Frere, Quebec.
Nov.	2	" ...	2400	Ernestide B. Paroisse, Ste. Jerome.	1 "	13	.....
"	2	" ...	210	Honorias Giroux, Ste. Agathe des Monts.	1 "	13	.....
"	18	" ...	226	J. N. Desjardins, Ste. Jerome.	1 "	19	.....

## DISTRICT OF THREE RIVERS—

Oct.	26	Molasses ...	2648	W. H. Lacasse, L'Assomption.	1 qt.	22	Chevalier Pouliot, Joliette.
"	26	" ...	2649	Louis Pauze.....	1 "	15	Chaput Son, Montreal.
"	28	" ...	2674	Archibald Duff, Charlemagne.	1 "	15	Matthewson Sons, Montreal.
"	28	" ...	2675	Euclid Beauchamp, Charlemagne.	1 "	13	Hudon Orsali, Montreal.
"	28	" ...	2687	Edm. Robillard, St. Paul L'Ermite.	1 "	28	Jos. Ward, Montreal.

## DISTRICT OF VALLEYFIELD AND EASTERN TOWNSHIPS—

	7	Molasses ...	62601	D. Cusson, St. Johns, P.Q.	1 qt.	12	E. Gervais, St. John.
"	7	" ...	62602	L. E. Choquette, Farnham	1 "	13	Wm. Galbraith, Montreal.
"	12	" ...	62603	A. Nadeau, Bedford ....	1 "	13	Hudon Hebert Co., Montreal.
	12	" ...	62604	C. O. Jones, Bedford....	1 "	13	Forbes Bros., Montreal.
"	22	" ...	62605	La Compagnie Dion, Lté, Valleyfield.	1 "	8	Laporte Martin, Montreal.
"	9	" ...	62606	F. X. Leblanc, Ste. Hyacinthe.	1 "	10	Jos. Ward, Montreal.
"	9	" ...	62607	L. A. Gendreau, St. Hyacinthe.	1 "	13	E. Lafrance, Ste. Hyacinthe.
"	9	" ...	62608	N. Gosselin, St. Hyacinthe	1 "	13	W. Valin, Ste. Hyacinthe.
"	9	" ...	62609	Lassond & Frere, St. Hyacinthe.	1 "	15	L. Chaput Fils & Co, Montreal.
"	9	" ...	62610	J. C. Mousseau, Ste. Guillaume.	1 "	10	Laporte Martin Co., Montreal.

SESSIONAL PAPER No. 14

MOLASSES.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Reducing Sugars.	Sucrose.	Total Sugar.	Ash.	Organic mate- rial other than Sugar.		

Concluded.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
.....	26.28	73.72	23.56	43.20	66.76	1.86	5.10	3741
Fancy Barbados .....	26.48	73.52	14.72	51.68	66.40	3.00	4.12	2460
" .....	26.88	73.12	21.08	44.64	65.72	1.32	6.08	210
" .....	27.28	72.72	20.88	40.24	61.12	1.38	10.22	226

DR. V. P. LAVALLEE, INSPECTOR.

.....	27.00	73.00	21.08	41.80	62.88	1.82	8.30	2648
.....	27.46	72.54	21.80	39.24	61.04	0.98	10.52	2649
.....	26.96	73.04	21.80	39.24	61.04	1.88	10.12	2674
.....	26.16	73.84	21.12	41.80	62.92	1.44	9.48	2675
.....	27.00	73.00	22.56	43.60	66.16	1.22	5.62	2687

D. J. KEARNEY, ACTING INSPECTOR.

.....	27.06	72.94	21.80	46.40	68.20	1.24	3.50	62601
.....	27.31	72.69	22.36	39.04	61.40	0.94	10.35	62602
.....	26.61	73.39	18.44	43.80	62.24	1.58	9.57	62603
.....	27.16	72.84	23.32	39.44	62.76	1.16	8.92	62604
.....	27.81	72.19	20.12	43.80	63.92	2.32	5.95	62605
.....	25.81	74.19	22.96	38.84	61.80	1.54	10.85	62606 Sucrose low.
.....	26.46	73.54	27.32	36.04	63.26	1.06	9.12	62607
.....	26.21	73.79	25.04	45.04	70.08	1.40	2.31	62608
.....	27.96	72.04	20.48	41.60	62.08	1.08	8.88	62609
.....	26.46	73.54	24.88	38.04	62.83	1.52	9.80	62610 Sucrose low.

Date of Collection.	Nature of Sample.	No. of Sample.	Names and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MONTREAL—

1914.							
Dec. 3	Molasses. . .	62545	Barbeau Frere, 520* St. Catherine St., E. Montreal.	1 qt.	15	.....	Hudon Hebert & Cie., Montreal.
" 3	" . . . . .	62646	Ed. Tessier, 982 St. Catherine St., Montreal.	1 "	15	.....	Unknown. . . . .
" 3	" . . . . .	62547	J. Forest, 1395 St. Catherine St., Montreal	1 "	13	.....	L. Chaput fils & Cie, Montreal.
" 4	" . . . . .	62548	Chas. E. Lord & Frere, 311 Amburst St., Montreal.	1 "	16	.....	Hudon, Hebert & Cie, Montreal.
" 4	" . . . . .	62549	M. L. Pelletier & Co., 605 Demontigny St., Montreal.	1 "	15	.....	Patenaude, Larue, Carignan, Ltd., Montreal.

DISTRICT OF OTTAWA—

Oct. 23	Molasses. . . .	63521	Anastase Roy, Maniwaki.	3 bots.	30	.....	Provost & Allard, Ottawa.
" 24	" . . . . .	63522	J. L. P. Sanders, Kemptville.	3 tins.	30	Ramsays, Ltd., Montreal.	Gilmour & Co., Brockville.
Nov. 6	" . . . . .	63523	Hellard, Ltd., Rideau St., Ottawa.	3 bots.	15	.....	S. J. Major, Ltd., Ottawa.
" 6	" . . . . .	63524	T. W. Collins, Ottawa.	3 "	15	.....	H. N. Bate & Sons, Ottawa.
" 6	" . . . . .	63525	L. Caron, Ottawa.	3 "	15	.....	Provost & Allard, Ottawa.

DISTRICT OF KINGSTON—

Oct. 28	Molasses. . . .	61570	R. W. Marshall, Kingston.	3 tins.	30	Ramsay's, Montreal.	.....
Nov. 2	" . . . . .	61571	G. W. Boyes, Napanee. . .	3 "	30	" " . . . . .	.....
" 2	" . . . . .	61572	W. H. Milling, Napanee. .	3 "	25	" " . . . . .	.....
" 3	" . . . . .	61573	S. R. Artis, Belleville. . .	3 "	30	John Sloan, Toronto.	.....
" 3	" . . . . .	61574	R. Elvins, Belleville. . . .	3 "	30	Ramsay's, Montreal.	.....

DISTRICT OF TORONTO—

Nov. 16	Molasses. . . .	64621	J. D. Donsch, Collingwood.	3 bots.	10	.....	Perkins Ince Co.
" 17	" . . . . .	64622	E. Armstrong, Barrie. . .	3 "	15	.....	Unknown. . . . .
" 18	" . . . . .	64623	H. J. Charlebois, Penetang.	3 "	15	.....	" . . . . .
" 19	" . . . . .	64624	The Playfair Preston Co., Ltd., Midland.	3 "	18	.....	Parson & Brown, Toronto.
" 20	" . . . . .	64625	Geo. Vick & Son, Orillia. .	3 "	12	.....	Unknown. . . . .

SESSIONAL PAPER No. 14

MOLASSES.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Reducing Sugars.	Sucrose.	Total Sugar.	Ash.	Organic mat- ter other than Sugar.		

D. J. KEARNEY, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
.....	27.06	72.94	21.08	39.64	60.72	1.38	10.84	62545	
.....	26.06	73.94	27.52	27.36	54.88	3.32	13.74	62546	Sucrose very low.
.....	26.81	73.19	21.80	39.61	61.44	2.20	9.55	62547	
.....	27.36	72.61	19.20	41.60	60.80	1.74	10.10	62548	
.....	26.79	73.21	24.08	40.68	64.76	2.84	5.61	62549	

J. A. RICKEY, INSPECTOR.

Fancy Barbados.....	27.21	72.79	20.48	39.84	60.32	3.20	9.27	63521	
Kitchen Brand Louisiana molasses.	25.11	74.89	17.68	35.88	53.56	5.26	6.07	63522	Ash too high. Sucrose low.
Extra Fancy.....	25.51	74.49	28.28	36.88	65.16	1.54	7.79	63523	Sucrose low.
.....	27.01	72.97	19.56	43.80	63.36	2.23	7.40	63524	
.....	25.21	74.79	19.76	41.60	61.36	3.60	9.83	63525	

JAS. HOGAN, INSPECTOR.

.....	25.26	74.74	20.48	28.68	49.16	3.00	22.58	61570	Sucrose low.
.....	27.88	72.12	20.32	34.56	54.88	5.98	11.26	61571	Ash too high. Sucrose low.
.....	30.33	69.67	19.92	33.92	53.84	5.92	9.91	61572	
.....	27.88	72.12	20.88	32.12	53.00	7.03	12.09	61573	Sulphurous acid de- clared on label. Ash too high. Sucrose low.
.....	31.18	68.82	13.80	30.76	44.56	5.80	18.46	61574	Ash too high. Sucrose low.

H. J. DAGER, INSPECTOR.

.....	30.53	79.47	22.3	23.32	45.68	9.36	24.43	64621	Ash too high. Sucrose very low.
.....	24.16	75.84	23.72	23.52	47.24	7.14	21.46	64622	
.....	27.31	72.69	27.92	17.76	45.68	6.32	20.09	64623	
.....	23.31	76.69	21.64	29.68	51.32	4.10	21.27	64624	Sucrose low.
.....	22.96	77.04	23.72	26.96	50.68	6.72	19.64	64625	Ash too high. Sucrose low.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF HAMILTON—							
1914.							
Nov. 3	Molasses...	64542	D. A. McLean, Owen Sound	1 qt..	10	.....	Unknown.....
" 5	" .....	64543	John Sandelos, Hanover,	" ..	10	.....	John Sloan & Co. Toronto.
" 6	" .....	64544	J. Pleskey, Walkerton....	3 bots	12	.....	John Sloan & Co., Berlin.
" 6	" .....	64545	Stephan Bros., " ..	" ..	10	.....	Geo. E. Bristol & Co., Hamilton.
" 10	" .....	64546	H. F. Powell & Co., Ltd., Dundas.	1 qt..	10	.....	" ..
DISTRICT OF WINDSOR—							
Nov. 3	Molasses...	63932	John Scott & Co., Woodstock.	1 qt..	14	.....	Grocers, Ltd., Toronto.
" 3	" .....	63937	Wm. Briggs & Son, " ..	3 tms.	30	.....	" ..
" 3	" .....	63938	W. Buckborough, " ..	" ..	30	.....	Elliott Marr Co. London.
" 4	" .....	63942	Mrs. E. Gibson, Tillsonburg.	1 qt .	30	.....	Geo. Foster & Sons, Brantford.
" 4	" .....	63944	R. M. Teal, " ..	" ..	12	West India Molasses Co., Brantford.	.....
DISTRICT OF MANITOBA—							
Nov. 3	Molasses...	61211	Wm. Muir, Brandon.....	3 pkgs	45	Codville Co., Winnipeg.	.....
" 3	" .....	61212	J. Bower & Co., " .....	" ..	45	John Marin, Co., Winnipeg.	.....
" 12	" .....	61213	Galloway Bros., Gladstone	3 pints	40	.....	.....
" 19	" .....	61214	T. R. Hardern, Portage & Stiles Ave., Winnipeg	3 cans	40	A. Macdonald, Co., Winnipeg.	.....
" 19	" .....	61215	Portage Provision Co., " ..	" ..	45	Codville Co., Ltd., Winnipeg.	.....
DISTRICT OF SASKATCHEWAN—							
Oct. 31	Molasses...	64074	Colonial Grocery Co., Regina.	1 qt..	25	Crosby Molasses Co., St. John, N. B.	Cameron & Heap, Regina.
" 31	" .....	64076	S. B. Gerxa, " ..	" ..	30	Boston Molasses Co., Boston.	Cobb, Bates & Terxa, Boston.
Nov. 2	" .....	64079	Wheatland Mercantile Co. Mortlach.	" ..	40	.....	Codville Co., Ltd.
" 4	" .....	64089	Stewarts Bakery, Moose Jaw.	" ..	25	Crosby Molasses Co., St. John, N. B.	A. Macdonald Co., Moose Jaw.
" 5	" .....	64090	Lalonde & Harrington "	" ..	50	No-Vary Products Co., Minneapolis	Moose Grocery Co. Moose Jaw.



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MOLASSES.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Reducing Sugar.	Sucrose.	Total Sugar.	Ash.	Organic mat- ter other than sug. c.		
H. J. DAGER, ACTING INSPECTOR.									
.....	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
.....	26.23	73.77	20.32	30.90	51.22	9.30	13.25	64542	Ash too high. Sucrose low.
.....	24.88	75.12	24.81	23.88	48.72	4.86	21.54	64543	Sucrose very low.
.....	26.28	73.72	18.24	39.44	57.68	6.24	19.80	64544	Ash too high.
.....	25.43	74.57	26.56	22.36	48.92	6.80	18.85	64545	" " Sucrose very low.
.....	27.43	72.57	24.64	20.08	44.72	6.06	21.79	64546	" "

JOHN TALBOT, INSPECTOR.

.....	24.81	75.19	21.64	29.84	51.48	5.26	18.47	63932	Ash too high. Sucrose low.
"Sunset" Brand, choicest New Orleans Molasses.	23.36	76.64	25.40	23.32	48.72	5.80	22.12	63937	" "
"Ginger Bread" Brand, choicest West India Mo- lasses.	25.81	74.19	36.76	14.64	51.40	3.88	18.91	63938	Sucrose very low.
Special West India Mo- lasses.	23.36	76.64	20.48	25.44	45.92	6.10	24.62	63942	Ash too high. Sucrose low.
West India Molasses.	25.56	74.44	19.92	25.24	45.16	7.80	21.48	63944	" "

A. C. LARIVIERE, INSPECTOR.

"Reliance" Brand ...	24.96	75.04	21.44	24.48	45.92	1.78	20.12	61211	Sulphurous acid de- clared on label. Suc- rose low.
"Challenge" "	19.86	80.14	24.64	26.96	51.60	7.00	20.94	61212	Sulphurous acid de- clared on label. Ash too high. Sucrose low.
Imported from New O- leans.	25.61	74.39	16.56	31.20	47.76	5.78	20.85	61213	Ash too high. Sucrose low.
.....	20.66	79.34	29.04	23.12	52.16	7.20	19.98	61214	Sulphurous acid de- clared on label. Ash too high. Sucrose low.
.....	21.71	78.29	24.84	27.72	52.56	7.06	18.53	61215	Ash too high. Sucrose low.

L. H. HALL, INSPECTOR.

"Aunt Dinah" Brand..	26.06	73.94	15.64	32.96	48.00	5.00	19.44	64974	Ash too high. Sucrose low.
Porto Rico.	26.11	73.89	17.12	38.04	55.10	4.28	14.46	64976	Sucrose low.
"Gold Standard" Brand..	24.66	75.34	21.24	30.24	51.48	6.20	17.60	64979	Ash too high. Sucrose low.
"Family" "	22.96	77.04	18.64	32.74	51.46	5.32	20.32	64980	
"No-Vary" Brand, contains Sulphur Dioxide.	20.61	79.39	29.24	25.44	54.68	3.24	21.47	64980	Sucrose low.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF ALBERTA—							
1914.							
Nov. 18	Molasses...	52034	Pryce Jones (Canada) Ltd., Calgary.	3 tins	45	Dominion Molasses Co. Ltd., Halifax	
" 19	" .....	52035	Geo. J. Wood, Calgary...	1 qt..	30		Campbell, Wilson & Horne, Calgary
" 23	" .....	52036	Sharpe & Page, Stettler..	3 tins	75	Dominion Molasses Co. Ltd., Halifax	
" 26	" .....	52037	Montgomery Bros., Westaskiwin.	3 "	75	" "	
" 27	" .....	52038	A. M. Campbell, Lacombe	3 "	75	" "	
DISTRICT OF ROCKY MOUNTAINS—							
Nov. 10	Molasses...	61704	Trail Grocery Co., Trail, B.C.	3 tins	75	Kelly Confection Co., Vancouver.	
" 10	" .....	61705	" " "	3 "	60	Ramsay Bro. & Co., Vancouver.	
" 10	" .....	61713	T. Lauriente & Son, Trail, B.C.	3 "	60	Dominion Molasses Co. Ltd., Halifax	
" 20	" .....	61721	Armstrong's Dept. Store, Merritt, B.C.	3 "	60	Kelly Confection Co., Vancouver.	
" 23	" .....	61728	Hudsons Bay Co., Kamloops, B.C.	3 "	45	Pacific Coast Syrup Co., Seattle.	
DISTRICT OF VANCOUVER—							
Oct. 27	Molasses...	55096	C. H. Silcox, Lakeview station, Vancouver.	3 tins	45	Penick & Ford, New Orleans, Lo.	
" 30	" .....	55097	Dukes Grocery, 299 Hastings st. E., Vancouver.	3 "	45	Ramsay Bros. & Co. Ltd., Vancouver.	
" 30	" .....	55098	Efford Bros., 246 Broadway st. E., Vancouver.	3 "	40	Kelly Confection Co. Ltd., Vancouver.	
" 30	" .....	55099	Cochrane & Elliott, 657 5th Ave. E., Vancouver.	3 "	45	Crosby Molasses Co. Ltd., St. John, N.B.	
" 31	" .....	55100	Gardiner & Davy, Richard & Smyth sts., Vancouver	3 "	25	Oelerich & Berry Co., New Orleans, Lo.	
DISTRICT OF VICTORIA—							
Nov. 5	Molasses...	62005	The Windsor Grocery Co. Ltd., 817 Govt. street, Victoria.	3 tins	60	Dominion Molasses Co. Ltd., Halifax	
" 6	" .....	62007	The West End Grocery Co. Ltd., 1002 Govt. st., Victoria.	3 "	60	Imperial Syrup Co. Ltd., Vancouver	
" 9	" .....	62014	Copas & Young, Broad & Fort sts., Victoria.	3 "	40	Kelly Confection Co. Ltd., Vancouver.	
" 10	" .....	62020	Dixie H. Ross & Co., 1317 Govt. st., Victoria.	3 "	75	Imperial Syrup Co. Ltd., Vancouver.	
" 11	" .....	62027	H. O. Kirkham Co. Ltd., 741 Fort st., Victoria.	2 lbs.	25	Crosby Molasses Co. Ltd., St. John, N.B.	

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MOLASSES.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Water.	Solids.	Reducing Sugar.	Sucrose.	Total Sugar.	Ash.	Organic matter other than sugar.				
<b>A. W. MARKLEY, INSPECTOR.</b>											
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.				
"Ginger Bread" Brand choice West Indies molasses.	25.91	74.09	26.92	20.08	47.09	6.80	20.29	52034	Ash too high. Sucrose very low.		
.....	27.76	72.24	17.68	38.84	56.52	3.80	11.92	52035	Sucrose low.		
"Ginger Bread" Brand....	25.16	74.84	26.92	21.80	48.72	6.20	19.92	52036	Ash too high. Sucrose very low.		Sucrose
"Domolco," highest grade	24.16	75.84	23.88	36.68	60.56	2.46	12.82	52037	Sucrose low.		
"Ginger Bread" Brand....	21.81	78.19	24.48	26.20	50.68	9.74	17.77	52038	Ash too high. low.		Sucrose
<b>THOS. PARKER, INSPECTOR.</b>											
"Chef".....	26.81	73.19	25.60	30.24	55.84	6.60	26.75	61704	Ash too high. low.		Sucrose
"New Orleans".....	21.33	78.67	23.12	32.20	55.32	6.40	16.95	61705	"		"
"Domolco".....	22.03	77.97	11.40	54.32	65.72	4.46	7.79	61713			
.....	21.33	78.67	23.52	33.36	56.88	1.56	20.23	61721	Sucrose low.		
"Avondale".....	25.03	74.97	20.48	31.60	52.08	6.18	16.71	61728	Ash too high. low.		Sucrose
<b>E. J. MORGAN, INSPECTOR.</b>											
"Aunt Dinah" Brand, pure New Orleans molasses. Contains sulphur dioxide	23.31	76.69	23.76	34.52	58.28	7.34	11.07	55096	Sulphurous acid de- clared on label. Ash too high, sucrose low.		
.....	22.16	77.84	22.06	31.80	53.80	9.32	14.72	55097	Ash too high. Sucrose low.		Sucrose
Puro Barbados.....	26.66	73.34	16.40	41.40	57.80	3.28	12.26	55098			
"Family" Brand, choice New Orleans molasses.	23.86	76.04	13.60	31.60	45.20	8.30	22.54	55099	Ash too high low		Sucrose
"Red Hen" Brand, Louisi- ana molasses. Contains sulphur dioxide.	23.86	76.04	26.36	28.88	55.24	7.32	13.48	55100	Sulphurous acid de- clared on label. Ash too high, sucrose low.		
<b>D. O'SULLIVAN, INSPECTOR.</b>											
"Domolco" Brand.....	19.03	80.97	25.60	34.72	60.32	1.96	18.68	62005	Sucrose low.		
"Kitchen" Brand.....	20.48	79.52	25.04	32.20	57.24	8.64	13.64	62007	Ash too high. low.		Sucrose
"Black Strap" Brand....	23.28	76.72	26.00	28.32	54.32	4.88	17.57	62014	Sucrose low.		
"Kitchen" Brand.....	26.13	73.87	22.76	29.84	52.60	6.40	14.87	62020	Ash too high. low.		Sucrose
"Household" Brand.....	22.28	77.72	25.40	35.68	61.08	6.46	10.18	6.027			



## APPENDIX D.

## BULLETIN No. 313—VINEGAR.

OTTAWA, May 5, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister Inland Revenue.

SIR,—I beg to hand you a report concerning two hundred and forty-five (245) samples purchased as Vinegar, in October, November and December of last year.

Our last extended inspection of vinegar was made in 1911, and is reported in Bulletin No. 235.

Vinegar is defined, under the Adulteration Act as "A more or less coloured liquid, consisting essentially of impure dilute acetic acid, obtained by the oxidation of wine, beer, cider, or other alcoholic liquid." It will be understood that the word *impure*, used in this connection, has regard to the presence of matters *other than* acetic acid not objectionable or undesirable, but, in fact, quite the contrary.

Under section 26 of the Act, standards and certain limiting values for different kinds of vinegar were established by Order in Council of December 19, 1913.

No better illustration of the changes which common usage brings about in the signification of words could be quoted than that afforded by the word vinegar. Etymologically it means soured wine; and it was at first employed with definite reference to that article. The souring of wine is due to the conversion of alcohol into acetic acid; and it was soon found that dilute solutions of alcohol, such as malt mashes, fermented fruit juices, hard cider, fermented raspberry juice, etc., could turn sour, and the resultant product was recognized as vinegar, but distinguished as malt vinegar, raspberry vinegar, cider vinegar, etc. Then, it was discovered that distilled spirit could be diluted to proper strength and made to undergo the acetic acid fermentation, whereby so-called, spirit vinegar was produced. Finally, since the presence of acetic acid was found to be the chief character, it came about that diluted acetic acid from whatever source produced, was made to do duty as vinegar; either *per se*, or by addition to a fermentation product too low in acid strength. The public is therefore offered the following articles under the name vinegar:—

1. Soured (acetic) white wine.
2. " " red wine.
3. " " fermented malt mash.
4. " " " cider.
5. " " " other fruit juices.
6. " " dilute spirits.
7. Diluted acetic acid.

The first six articles named are distinguished from the last (7th) by the fact that the acetic acid which they contain has been produced by fermentation (*aceticus*) in the liquid itself; they are properly described as a class, by the term "fermented." The sixth on the list is sometimes called distilled vinegar since it is made from a distilled spirit. This does not mean that the vinegar itself has been distilled. The last named article is not legally recognized as a vinegar. It may be sold as artificial

vinegar, imitation vinegar; vinegar substitute, or acetar. While it possesses the sourness of true vinegar, it does not possess the special flavour which characterizes the various kinds of true vinegar. The flavour referred to is due to the fact that when fermentation to produce acetic acid occurs in a dilute alcoholic liquid, small amounts of other substances are produced at the same time. These so-called congeners impart flavour to the vinegar, and this flavour is different for each particular source. For this reason, vinegars from certain sources are much in favour with the public; those made from white wine, from malt mash, from cider, and from spirits of wine are most in demand. A solution or pure acetic acid in water has no particular flavour, and is not entitled to be called a vinegar; although a very good substitute for vinegar may be manufactured from acetic acid, by adding suitable flavouring materials. Of course, the acetic acid employed in making such a surrogate vinegar, must be quite pure.

It will readily be conceded that vinegar should be both bought and sold under a name which correctly describes it. A customer who demands vinegar, has no ground of complaint against the dealer who supplies him with any one of the first six varieties listed above. But if he asks for malt vinegar he is defrauded if given a vinegar which is not actually made from malt; and so of the other kinds. The vinegar which dominates the market in any particular country, usually corresponds to the producing material most abundant and therefore most readily available in that country. Thus, wine vinegar is most popular in France, malt vinegar in England, cider vinegar in the United States of America, and spirit vinegar in Canada. But, in Canada, we find a great demand for malt and cider vinegars, and a very wide spread demand for white wine vinegar.

The wide demand for this last named vinegar in Canada led to very extensive use of the name white wine vinegar, for an article which was not made from grapes at all, but was really a spirit vinegar. If it were generally understood that white wine vinegar as sold in Canada was a spirit vinegar, the misapplication of the name would in reality be no worse than that involved in applying the term Vinegar (*vin* = wine; *aigre* = sour) to a product which is not produced from wine, as in the case of malt and cider Vinegars. But, in the first place, spirit Vinegar, is a very desirable form of vinegar, and is entitled to its own name; again Wine Vinegar is already produced to some extent in Canada, and is imported from wine-producing countries, and both maker and importer have a right to object to competition with a surrogate wine vinegar. For these reasons it must be held that a spirit vinegar, offered as a white wine vinegar, is a case of fraud, and constitutes legal adulteration under Section 3 (d) of the Act which says:—

“Food shall be deemed to be adulterated within the meaning of this Act; (d) if it is an imitation of, or is sold under the name of another article.”

For the information of those interested, the Order in Council which defines standards for Vinegar, is reproduced.

42  
FOOD.

G. 1096  
10,000

#### DEPARTMENT OF INLAND REVENUE.

OTTAWA, December 29, 1913.

MEMO.—

Under authority of an Order of His Royal Highness the Governor General in Council, bearing date the 19th day of December, 1913, and in virtue of the Provisions of the 26th Section of the ADULTERATION ACT, the following Standards of quality have been established for “*Vinegar*.”—

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## VINEGAR STANDARDS.

1.—Vinegar is a more or less coloured liquid, consisting essentially of impure, dilute acetic acid, obtained by the oxidation of wine, beer, cider, or other alcoholic liquid.

2.—The term Acetic Acid in the above and in the following clauses is to be understood to mean Acetic anhydride,  $C_4H_6O_3$  molecular weight=102; equivalent=51.

One cubic centimeter of normal soda neutralizes 0.051 gramme of Acetic Acid. Hence, the number of cubic centimeters of normal soda required to neutralize 100 grammes of Vinegar, when multiplied by 0.051 gives the percentage weight of Acetic Acid contained in the Vinegar.

When the Vinegar is measured instead of being weighed the number of cubic centimeters of normal soda required to neutralize 100cc of the Vinegar, multiplied by 0.051 gives the percentage weight of acetic acid in 100 volumes of the Vinegar and is stated as percentage of weight in volume.

3.—Vinegar shall contain not less than three and one-half (3.5) per cent; and not more than ten and one-half (10.5) per cent of Acetic Acid.

4.—Wine Vinegar is vinegar made by the alcoholic and subsequent acetous fermentation of the juice of grapes.

5.—Spirit Vinegar; Alcohol Vinegar; Grain Vinegar is vinegar made by the acetous fermentation of diluted distilled alcohol.

6.—Malt Vinegar is vinegar made by the alcoholic and subsequent acetous fermentation, without distillation, of an infusion of Malt, with or without the addition of other cereals. It is dextrorotatory, and contains in 100cc not less than 1.8 grammes of solids, and not less than 0.2 gramme ash.

7.—Cider Vinegar, Apple Vinegar, is vinegar made by the alcoholic and subsequent acetous fermentation of the juice of apples. It is laevo-rotatory and contains in 100cc not less than 1.6 grammes of apple solids, of which not more than fifty (50) p.c. is reducing sugars; and not less than 0.25 gramme of apple ash. The water soluble ash from 100cc contains not less than ten milligrammes of phosphoric acid ( $P_2O_5$ ) and requires not less than 30cc of deci-normal acid to neutralize its alkalinity. 100cc of the vinegar contains not less than 0.15 gramme of glycerine.

8.—Vinegar may be made by the acetous fermentation of dilute alcoholic liquids whose alcohol may have had its origin in the fermentation of fruit sugars of various kinds, or of ordinary sugar. Such vinegar should bear distinctive names, indicating the source of the saccharine matter.

9.—Blended Vinegar is made by mixing two or more of the above varieties of vinegar.

10.—Artificial Vinegar; Imitation Vinegar; Vinegar Substitute; Acetar, etc., are solutions of pure Acetic Acid within the limits of strength of vinegar, which acid is not wholly the product of alcoholic and subsequent acetous fermentation.

11.—Concentrated Vinegar, Vinegar Essence, is a liquid containing more than ten and one-half (10.5) p.c. of acetic acid, whose acetic acid is entirely the product of the acetous fermentation of alcohol.

12.—Concentrated Artificial Vinegar, or Concentrated Imitation Vinegar or Imitation Vinegar Essence is a liquid containing more than ten and one-half (10.5) p.c. Acetic Acid, such acetic acid being in whole or in part derived from other sources than the acetous fermentation of alcohol.

13.—Concentrated Vinegar, Vinegar Essence and Concentrated Artificial Vinegar, etc., as defined in Sections 11 and 12, shall not be offered for sale when the acetic acid content is above twenty five (25) per cent, unless labelled in such a way as to

show plainly that the article is poisonous unless diluted with at least an equal amount of water.

The Standards above defined take effect on the 28th day of January, 1914.

Under the Provisions of Section 255 of Chapter 51, Revised Statutes of Canada, 1906, "An Act Respecting The Inland Revenue," manufacturers of vinegar made exclusively from Malt, may continue to receive remission of duty on the Malt used in the manufacture of Vinegar, provided no other Cereal is used.

If any other Cereal is employed the refund cannot be made.

This provision will remain in existence until the Section of The Inland Revenue Act, above referred to, has been amended.

WM. HIMSWORTH,  
*Deputy Minister.*

The present report deals with two hundred and forty-five (245) samples of vinegar, purchased under the following names:—

	Samples.
Malt Vinegars. . . . .	70
Cider Vinegars. . . . .	28
White Wine Vinegars. . . . .	47
Various Vinegars. . . . .	100
	<hr/>
Total. . . . .	245
	<hr/>

Their analysis shows that 47 out of 70 malt vinegars are true to name; 22 out of 28 Cider Vinegars are also true to name.

Forty-one (41) samples out of forty-seven (47) sold as White Wine Vinegars, are not Wine Vinegars at all. They are chiefly Spirit Vinegars, and should have been sold as such. As already noted, the so long established custom of selling Spirit Vinegar under the name of *White Wine Vinegar*, has proved too strong to be corrected in the interval of time (somewhat less than a year) between the publication of Departmental Standards, and the inspection now reported.

It has not been the usual policy of this Department to penalize vendors of foods (where no injury to public health was involved) until the lapse of at least one year after the adoption of standards. For this reason I would respectfully advise publication of this report rather as a criticism and a warning to manufacturers and dealers. Inspection of Vinegars will be made continuously from this date; and dealers and manufacturers cannot plead insufficient notification if, on future occasions they are dealt with strictly in accordance with the terms of the Act.

This recommendation to leniency has reference only to those samples of Spirit Vinegar which have been supplied under the incorrect name of Wine Vinegar; and is made in recognition of the long established, but misleading, custom of the trade; a custom which is made illegal under the Order in Council above quoted.

Where surrogates for Malt Vinegar or Cider Vinegar are offered, no such excuse can be urged. Both Malt and Cider Vinegars have long been manufactured and sold under their proper names; and no valid excuse can be made for selling as a Malt Vinegar an article which is not made from malt, or as a Cider Vinegar, an article which is not made from cider. Twenty-three (23) samples sold as Malt Vinegar, are found to be adulterated under the Act, in the sense that they are not made from malt.



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Five (5) samples sold as Cider Vinegar are found not to comply with the standards for this article, and are therefore declared adulterated.

I beg to recommend publication of this report as Bulletin No. 313.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL.

*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents	Manufacturer.	Furnisher.	
DISTRICT OF NOVA SCOTIA—								
1914.								
Dec. 30	Vinegar..	54220	John Tobin & Co., Halifax, N.S.	3 pts..	25	Purnells Co., Bristol, Eng.	Mfrs. ....	Malt.....
1915.								
Jan. 11	" ..	54221	Bauld Bros., Ltd., Halifax, N.S.	3 qts..	46	Holbrook Co., London, Eng.	" .....	" .....
" 11	" ..	54223	Dillon Bros., Halifax.	3 pts..	23	Wilson, Lytle & Badgerow & Co. Toronto, Ont.	" .....	" .....
" 11	" ..	54224	Cahill & Co., Halifax	3 " .	20	McCreedy & Sons, St. John, N.B.	" .....	" .....
DISTRICT OF NOVA SCOTIA—								
1914.								
Dec. 5	Vinegar..	65807	The 2 Barkers, Ltd., New Glasgow, N.S.	3 pts..	25	Holbrook & Co., London, Eng.	Mfrs. ....	Labelled Pure Malt
DISTRICT OF PRINCE EDWARD ISLAND—								
Oct. 24	Vinegar..	60126	Beer & Goff, Char- lottetown, P. E. I.	3 pts..	30	Holbrook, Lon- don, Eng.	" .....	Malt .....
" 24	" ..	60129	Stewart & Sons, Char- lottetown, P. E. I.	3 bots.	60	Crosse & Black- well, London, Eng.	" .....	" .....
" 24	" ..	60130	" " "	3 " .	60	Purnells, Bristol, Eng.	" .....	" .....
DISTRICT OF NEW BRUNSWICK—								
Nov. 10	Vinegar..	59601	Walter Gilbert, St. John, N.B.	3 bots.	75	Crosse & Black- well, London, Eng.	" .....	Malt.....
DISTRICT OF QUEBEC CITY—								
Nov. 2	Vinegar..	56300	O. Lacroix, 19 Rue St. Joseph, Quebec.	3 pts..	60	Holbrook & Co., London.	J. B. Renaud & Cie.	Malt.....
" 2	" ..	60701	" " "	3 " .	70	Heinz, Pitts- burg, Pa.	" .....	" .....
" 4	" ..	60705	A. Grenier, 94 Rue St. Jean, Quebec.	3 " .	50	Lazenby & Son.	Mfrs.....	" .....

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VINEGAR (MALT.)

Results of Analysis.

Grams. per 100cc.			Soluble Ash.	Alkalinity of Soluble Ash cc N/10 acid per 100 cc.	Phosphates P <sub>2</sub> O <sub>5</sub> Mgrs. per 100 cc.		Chlorides.	Sulphates.	Lead Acetate pptc.	Polarization.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
Acidity as Acetic.	Total Solids.	Ash.			Soluble.	Insoluble.						
R. J. WAUGH, INSPECTOR.												
4.31	3.961	0.823	.....	.....	.....	.....	.....	.....	copious	+ 2.6	54220	Meets standard.
4.67	2.815	0.322	.....	.....	.....	.....	.....	.....	"	+ 3.5	54221	"
3.95	2.195	0.263	.....	.....	.....	.....	.....	.....	"	+ 1.5	54223	"
4.23	0.740	0.068	.....	10.7	2.52	.....	.....	.....	medium	- 0.9	54224	Not malt vinegar Adulterated.
W. A. PETIPAS, TEMP. INSPECTOR.												
4.27	3.89	0.595	...	...	.....	.....	trace	trace	copious	.....	65807	Meets standard.
WM. A. WEEKS, INSPECTOR.												
4.08	3.08	0.315	.....	10.8	32.0	.....	trace	copious	copious	.....	60126	Meets standard
4.52	3.37	0.270	.....	14.4	46.8	.....	"	trace	heavy	.....	60129	"
4.17	2.59	0.285	.....	6.0	trace	.....	copious	medium	copious	.....	60130	"
JNO. C. FERGUSON, INSPECTOR.												
5.00	1.93	0.28	.....	4.8	trace	.....	medium	heavy	copious	.....	66601	Meets standard
F. X. W. E. BELAND, INSPECTOR.												
4.37	2.87	0.292	0.150	5.18	trace	55.6	trace	medium	copious	.....	66700	Meets standard.
4.17	2.15	0.225	0.09	9.27	25.6	51.0	.....	.....	.....	.....	66701	"
4.67	2.03	0.28	0.12	8.24	14.7	66.2	heavy	.....	.....	.....	66702	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF QUEBEC PROVINCE—								
1914.								
Nov. 2	Vinegar ..	211	H. Giroux, St. Agathe des Monts.	3 pts..	75			Malt .....
" 11	" ..	220	Pierre Sinard, St. Jerome.	3 bots.	75	Fardons Vinegar Co., Ltd.		" .....
" 18	" ..	224	Eug. Lucas, St. Jerome.	3 " "	45	Purnell & Panter, Ltd.		" .....
Dec. 26	" ..	241	Waddell & Freres, St. Therese de Blainville.	3 " "	75	Crosse & Blackwell.		" .....
Nov. 23	" ..	2729	Jos. Fournier, St. Thomas Montmagny	3 pts..	25			" .....
" 2	" ..	212	D. Hetu, St. Agathe des Monts.	3 " "	75	Crosse & Blackwell.		" .....
DISTRICT OF EASTERN TOWNSHIPS—								
Nov. 24	Vinegar ..	63036	N. Lacroix, Sherbrooke.	3 qts.	38	Wilson, L. B. Co., Ltd., Toronto.		Malt. ....
" 24	" ..	63038	D. W. Stenson, Sherbrooke.	3 " "	38			" .....
DISTRICT OF MONTREAL—								
Nov. 24	Vinegar ..	62526	I. Reindeau, 509 La-salle Road, Verdun	3 pts.	30		Hudon Herbert, Montreal.	Malt .....
" 24	" ..	62529	R. J. Milne, 1453 Wellington st., Ver-dun.	3 bots.	30	Holbrook, Ltd.,		" .....
" 25	" ..	62531	Mrs. Williams, 1393 Wellington st., Verdun.	3 " "	60	S. Chivers & Co., Ltd.		" .....
DISTRICT OF VALLEYFIELD—								
Dec. 9	Vinegar .	62812	E. C. McCoy, Hun-tingdon.	3 pts	30			Malt (Im-ported.)
" 10	" ..	62815	Geo. Leblanc, Longueuil.	3 " "	25			Malt .....
" 15	" ..	62819	The Industrial Co-operative Society, Valleyfield.	3 " "	21			" .....

SESSIONAL PAPER No. 14

VINEGAR (MALT.)

Results of Analysis.											Remarks and Opinion of the Chief Analyst.	
Grams. per 100 cc.			Soluble Ash.	Alkalinity of Soluble Ash cc N/10 acid per 100 cc.	Phosphates P <sub>2</sub> O <sub>5</sub> Mgms. per 100 cc.		Chlorides.	Sulphates.	Lead Acetate pptc.	Polarization.		No. of Sample.
Acidity as Acetic.	Total Solids.	Ash.			Soluble.	Insoluble.						

N. C. CADIEUX AND T. GENDREAU, TEMP. INSPECTORS.

4 20	1 80	0 20	.....	10 0	30 4	.....	medium	heavy	heavy	.....	211	Meets standard.
4 10	2 44	0 25	0 06	3 09	22 7	81 2	"	medium	copious	.....	220	
4 15	3 60	0 64	0 42	7 72	35 3	62 8	copious.	"	large	.....	224	
4 62	1 84	0 265	0 115	9 27	16 0	63 3	trace.	trace.	copious.	.....	241	
4 65	0 15	0 04	0 01	3 09	none	none	"	"	"	.....	2720	Not malt vinegar Adulterated.
4 90	2 13	0 28	.....	14 8	32 8	.....	medium	heavy	copious	.....	212	Meets standard.

J. J. COSTIGAN, ACTING INSPECTOR.

3 65	2 07	0 16	0 075	7 21	trace	24 7	trace	trace	slight.	.....	65036	Meets standard.
3 85	2 0	0 18	0 120	10 3	15 0	45 9	"	"	heavy	.....	63038	

D. J. KEARNEY, INSPECTOR.

4 10	1 62	0 20	.....	5 20	25 2	.....	medium	heavy	heavy	.....	62520	Meets standard.
5 10	2 47	0 28	.....	4 00	8 00	.....	heavy	trace	.....	.....	62521	
4 00	2 15	0 32	.....	10 4	34 8	.....	trace	none	copious	.....	62531	

J. J. COSTIGAN, ACTING INSPECTOR.

5 54	2 48	0 23	0 08	7 21	11 0	64 4	medium	medium	copious	.....	62812	Meets standard.
5 29	0 22	0 04	0 015	2 06	7 0	37 7	trace	"	medium	.....	62813	Not malt vinegar. Adulterated.
3 83	2 55	0 13	0 025	2 55	8 0	37 2	"	"	copious	.....	62819	Meets standard.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF OTTAWA—

1914.								
Oct. 31	Vinegar ..	63516	McLean Bros., Smith's Falls.	3 bts.	15	Wilson, Lytle, Badgerow, Ltd., Toronto.	.....	Wilson's Pure Malt
Nov. 6	" ..	63518	McDonald Bros., Ottawa.	3 "	15	.....	H. N. Bate & Sons, Ottawa	Malt. ....

## DISTRICT OF KINGSTON—

Oct. 28	Vinegar ..	61555	D. B. Mnaary, King- ston.	1 qt.	20	Wilson, Lytle, Badgerow, Ltd, Toronto.	.....	Malt .....
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## DISTRICT OF TORONTO—

Nov. 23	Vinegar ..	64561	The Turner Co., Ltd., 106 Frank st., east, Toronto.	3 bts.	35	Vendors .....	.....	<i>Finest Eng- lish Distil- led Malt.</i>
" 24	" ..	64562	Wilson, Lytle & Bad- gerow Co., Ltd., 112 Duke st., Tor- onto.	3 "	15	" .....	.....	"
" 24	" ..	64563	Parsons Brown & Co., 78 Colborne st., Toronto.	3 "	25	" .....	.....	<i>Coronation Pure Eng- lish Malt.</i>
" 23	" ..	64565	Fred. Coward, 402 Spadina ave., Tor- onto.	3 "	30	Holbrooks, Ltd., Toronto.	.....	<i>Pure Eng- lish Malt.</i>
" 25	" ..	64566	The T. A. Lytle Co., Ltd., Sterling Road, Toronto.	3 "	23	Wilson, Lytle, Badgerow, Ltd., Toronto.	.....	"
" 25	" ..	64567	A. W. Milne, 1063 College st., Toronto	3 "	30	.....	The Ontario Importing Co., Toronto	" <i>Crown Brand.</i>
" 27	" ..	64598	W. W. Hall, 228 Westmoreland ave., Toronto.	3 "	30	Stephens & Har- dy, Toronto.	.....	White Yacht Brand Original Malt, Standard- ized.

SESSIONAL PAPER No. 14

VINEGAR (MALT).

Results of Analysis.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
Grams. per 100cc.			Soluble Ash.	Alkalinity of Soluble Ash cc N/10 acid per 100 cc.	Phosphates P <sub>2</sub> O <sub>5</sub> Mgms. per 100cc.		Chlorides.	Sulphates.	Lead Acetate ppte.	Polarization.		
Acidity as Acetic.	Total Solids.	Ash.			Soluble.	Insoluble.						

J. A. RICKEY, INSPECTOR.

4.03	2.21	0.17	...	3.2	trace	.....	heavy	heavy	heavy	...	63516	Meets standard.
3.40	2.30	0.360	...	4.4	.....	.....	copious.	"	very copious.	.....	63518	"

JAS. HOGAN, INSPECTOR.

3.93	2.02	0.19	...	5.6	trace	.....	none	none	heavy	.....	61555	Meets standard
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H. J. DAGER, INSPECTOR

3.82	0.32	0.20	0.140	16.5	trace	14.0	none	trace	heavy	.....	64561	Meets standard
3.90	2.24	0.14	0.03	1.54	none	67.2	trace	medium	medium	.....	64562	"
3.98	2.65	0.395	0.15	1.54	8.0	70.1	medium	copious	copious	.....	64563	"
4.15	2.51	0.295	0.160	1.54	none	65.3	trace	heavy	.....	.....	64565	"
3.70	2.80	0.15	0.035	2.06	"	54.6	none	trace	medium	.....	64566	"
3.68	3.24	0.14	0.03	1.03	"	69.1	trace	medium	.....	.....	64567	"
2.78	0.25	0.02	0.005	2.06	"	none	none	trace	none	.....	64568	Not malt vinegar. Adulterated.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF HAMILTON—

1914.								
Nov.	3	Vinegar ..	64510	McLauchlan Sons Co., Owen Sound.	3 bts.	25	Macnochie Bros., London, Eng.	Brown Malt
"	6	" ..	64513	Goode & McKay, Walkerton.	3 pts.	20	Holbrooks, Ltd., Toronto.	Malt....
"	9	" ..	64514	H. W. Eaton, 447 Barton St. E., Hamilton.	3 bts.	45	The Turner Co., Ltd., Toronto.	Finest English Malt Vinegar Distilled. 3 Star Quality.

## DISTRICT OF MANITOBA—

Nov.	3	Vinegar ..	61202	J. Bower & Co., Brandon.	3 pts.	20	The Dyson Co., Winnipeg.	Malt.....
"	12	" ..	61205	Galloway Bros., Gladstone.	3 bts.	75	Crosse & Blackwell, London, Eng.	" .....
"	12	" ..	61206	R. E. Broadfoot, Gladstone.	3 pts.	15	" ..	" .....
"	16	" ..	61207	Simkins Grocery Store, St. James, Man.	3 "	30	" "	Red Cross Malt.

## DISTRICT OF SASKATCHEWAN—

Oct.	27	Vinegar ..	64049	Capital Grocery, Regina.	3 bts.	15	.....	Malt.....
"	28	" ..	64058	Manville & Co., Prince Albert.	3 "	10	James Turner & Co., Hamilton.	" .....
"	30	" ..	64071	F. R. Bailey & Co., Saskatoon.	3 "	15	.....	" .....
"	30	" ..	61073	Jones Bros., Saskatoon.	3 pts.	45	The Dyson Co., Winnipeg.	Mfrs.....
Nov.	5	" ..	64092	McLean Grocery, Moose Jaw.	3 "	45	Crosse & Blackwell, London, Eng.	Crawford & Co., Moose Jaw.



SESSIONAL PAPER No. 14

VINEGAR (MALT).

Results of Analysis.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
Grams per 100 cc.			Soluble Ash.	Alkalinity of Soluble Ash cc N/10 acid per 100cc.	Phosphates P <sub>2</sub> O <sub>5</sub> Mgrs. per 100 cc.		Chlorides.	Sulphates.	Lead Acetate pptc.	Polarization		
Acidity as Acetic.	Total Solids.	Ash.			Soluble.	Insoluble.						

H. J. DAGER, ACTING INSPECTOR.

5.02	2.31	0.12	0.03	2.06	34.3	44.9	medium	medium	copious		64510	Meets standard.
3.98	2.52	0.270	.....	5.2	trace	.	none	.	.		64513	"
3.10	0.91	0.07	0.035	1.93	none	trace	"	trace	trace		64514	Not malt vinegar Adulterated

A. C. LARIVIERE, INSPECTOR.

5.64	2.41	0.130					medium	trace			61202	Meets standard
5.20	2.00	0.27		12.8	36.4		light	medium	heavy		61205	"
8.26	1.40	0.06					none	"			61206	Not malt vinegar Adulterated
5.14	4.13	0.285					"				61207	Meets standard.

L. H. HALL, INSPECTOR.

4.37	0.42	0.06	0.025	2.06	none	none	none	medium	trace		64019	Not malt vinegar, Adulterated.
3.93	0.35	0.02	0.005	1.51	-	-	light trace	light trace	none		64068	"
5.00	0.71	0.04	0.018	3.60	-	"	none	trace	-		64071	"
4.92	3.00	0.240	0.08	2.06	-	68.1	heavy	-	copious		64073	Meets standard.
4.57	2.00	0.273	0.105	1.3	30.5	48.8	medium	medium	-		64007	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF ALBERTA—

1914.								
Nov. 18	Vinegar ..	52019	Pryce Jones (Canada) Ltd., Calgary.	3 bots.	90	Crosse & Blackwell, London, Eng.		Pure Malt Vinegar. Free from Mineral Acids.
" 25	" ..	52024	Duncan Sampson, Camrose.	3 "	25	Pioneer Vinegar Co., Edmonton		Malt.....
" 25	" ..	52025	Montgomery, Bros., Wetaskiwin.	3 "	90	Holbrook & Co., London, Eng.	Campbell, Wilson & Horne, Edmonton.	Pure Malt..

## DISTRICT OF ROCKY MOUNTAINS—

Nov. 10	Vinegar ..	61711	Co-operativa Italiana Association, Trail.	3 bots.	75	.....	Kelly, Douglas Co., Vancouver.	Mackenzie's Malt.
" 20	" ..	61716	Merritt Dist. Indust. Co-operative Soc., Merritt.	3 "	75	.....	W. J. Pendray & Sons, Victoria.	Malt. ....
" 20	" ..	61719	Armstrong's Deptl. Store, Merritt.	3 "	75	White, Cottell & Co., London, Eng.	.....	" .....
" 26	" ..	61720	" " "	3 "	60	B. C. Vinegar Works, Vancouver.	.....	" .....
" 23	" ..	61727	Hudson's Bay Co., Kamloops.	3 "	65	.....	.....	" .....

## DISTRICT OF VANCOUVER—

Oct. 27	Vinegar ..	55101	The Findlay Co., Stores, 3358 Commercial Drive, Vancouver.	3 bots.	75	Crosse & Blackwell, London, Eng.	.....	Pure Malt..
" 27	" ..	55102	Knight Bros., 11th Ave., and Commercial Drive, Vancouver.	3 "	40	Royal Mfg. Co., Vancouver.	.....	Royal Brand Malt. The name Empress Mfg. Co., Ltd., appear on lead capsules.
27	" ..	55103	Mitchell & Cahill, 1752 Commercial Drive, Vancouver.	3 "	45	Holbrook & Co., London, Eng.	.....	Pure Malt..

SESSIONAL PAPER No. 14

## VINEGAR (MALT.)

Results of Analysis.												No. of Sample.	Remarks and Opinion of the Chief Analyst.
Grams. per 100cc.			Soluble Ash.	Alkalinity of Soluble Ash cc N/10 acid per 100 cc.	Phosphates P <sub>2</sub> O <sub>5</sub> Mgms. per 100cc.		Chlorides.	Sulphates.	Lead Acetate pptg.	Polarization.			
Acidity as Acetic.	Total Solids.	Ash.			Soluble.	Insoluble.							

A. W. R. MARKLEY, INSPECTOR.

4.45	2.63	0.29	0.13	9.78	24.0	69.1	medium	medium	copious	.....	52019	Meets standard.
7.16	0.57	0.04	0.37	3.09	none	none	none	trace	...	none	52024	Not malt vinegar. Adulterated.
4.80	2.92	0.335	0.16	1.50	6.16	7.12	"	medium	medium	.....	52025	Meets standard.

THOS. PARKER, INSPECTOR.

3.50	0.39	0.005	none	none	none	none	none	none	none	.....	61711	Not malt vinegar. Adulterated.
3.30	0.35	0.02	"	"	"	"	"	"	"	.....	61716	"
4.32	2.37	2.90	0.155	7.21	16.4	46.4	heavy	medium	heavy	.....	61719	Meets standard
3.30	0.74	0.03	0.01	2.11	none	none	none	none	none	.....	61720	Not malt vinegar. Adulterated.
6.71	0.75	0.08	0.030	2.05	"	14.7	"	medium	"	.....	61725	"

E. J. MORGAN, INSPECTOR.

5.20	1.92	0.25		12.80	35.6	.....	heavy	med	heavy	.....	55101	Meets standard.
2.30	0.44	0.02	0.00	0.00	none	none	none	none	none	.....	55102	Not malt vinegar. Adulterated.
4.90	2.58	0.28		5.60	45.8	.....	heavy	med	heavy	.....	55103	Meets standard.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF VANCOUVER—

1914.								
Oct. 28	Vinegar ..	55107	The Main Grocery Store, 1102 Commercial Drive, Vancouver.	3 bots.	75	Grimbles, London, Eng.		English Malt Guaranteed Pure.
" 29	" ..	55109	Quality Mfg. Co., 358 Broadway W., Vancouver.	3 "	45	.....		Malt. Bottled by Vendor.
" 29	" ..	55110	A. C. Bartig, 2441 Granville st., Vancouver.	3 "	45	.....	W. J. Pendray & Sons, Ltd., Victoria.	English Malt Guaranteed Pure
Dec. 16	" ..	55152	B. C. Vinegar Works, Vancouver.	3 "	25	Vendors.....	.....	Mackenzie's Pure Malt. Made from Pure Mal

## DISTRICT OF VICTORIA—

Nov. 5	Vinegar ..	62001	The Windsor Grocery Co., 817 Govt. st., Victoria.	3 pts.	60	.....	W. K. Houston & Co., Victoria.	Malt.....
" 5	" ..	62002	"	3 qts.	75	Crosse & Blackwell, London, Eng.	.....	Pure Malt..
" 6	" ..	62009	The West End Grocery Co., Ltd., 1002 Govt. st., Victoria.	3 "	45	B. C. Vinegar Works, Vancouver.	.....	Pure Canadian Malt
" 6	" ..	62010	"	3 pts.	30	.....	R. P. Rithet & Co., Ltd., Victoria.	Malt.....
" 10	" ..	62018	Dixie H. Ross, 1317 Govt. st., Victoria.	3 "	30	.....	W. J. Pendray & Sons, Ltd., Victoria.	" .....
" 11	" ..	62023	Acton Bros., 1317 Douglas st., Victoria.	3 pts.	30	.....	W. K. Houston & Co., Victoria.	Malt.....
" 11	" ..	62024	"	3 qts.	75	Holbrook & Co., London, Eng.	.....	" .....

SESSIONAL PAPER No. 14

VINEGAR (MALT).

Results of Analysis.												No. of Sample.	Remarks and Opinion of the Chief Analyst.
Grams. per 100 cc.			Soluble Ash.	Alkalinity of Soluble Ash cc N/10 acid per 100 cc.	Phosphates P <sub>2</sub> O <sub>5</sub> Mgns. per 100 cc.		Chlorides.	Sulphates.	Lead Acetate ppt.	Polarization.			
Acidity as Acetic.	Total Solids.	Ash.			Soluble.	Insoluble.							

Concluded.

5.30	2.66	0.43	...	4.0	trace	.....	heavy	heavy	heavy	.....	55107	Meets standard.
5.50	0.40	0.03	.....	6.0	"	.....	trace	"	none	.....	55109	Not malt vinegar Adulterated.
3.60	0.31	0.02	.....	2.8	"	.....	"	trace	"	.....	55110	"
3.10	0.40	0.01	.....	4.2	"	.....	none	none	none	.....	55152	"

D. O'SULLIVAN, INSPECTOR.

3.63	0.23	0.02	.005	1.03	8.0	7.3	none	none	none	.....	62001	Not malt vinegar. Adulterated.
4.72	2.24	.220	.080	6.18	7.3	49.3	heavy	med	heavy	.....	62002	Meets standard.
2.80	0.83	0.02	.005	1.03	none	none	none	none	none	.....	62009	Not malt vinegar. Adulterated.
3.80	0.36	0.03	.002	0.0	none	12.1	"	"	"	.....	62010	"
6.29	0.51	0.01	0.01	1.03	trace	10.2	"	"	"	.....	62018	"
7.03	0.42	0.03	.00	"	"	"	med	"	"	.....	62023	Not malt vinegar Adulterated.
4.47	2.92	.310	.....	2.80	trace	.....	trace	heavy	excess	.....	62024	Meets standard.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF NOVA SCOTIA—

1914.									
Dec.	29	Vinegar	54216	Wm. Moore, Halifax, N.S.	3 qts.	30	N. H. Groves, Bridgetown, N.S.	Mfr.....	Apple Cider.
"	29	"	54217	J. L. Wilson, "	3 pts.	24	Valley Cyder Co., Bridgetown, N.S.	" .. . . .	"
"	30	"	54218	John Tobin & Co., Halifax, N. S.	3 "	20	" "	" .. . . .	Cider.....

## DISTRICT OF PRINCE EDWARD ISLAND—

Oct.	29	Vinegar	60133	W. W. Walker, Ch. Town, P. E. I.	2 pts.	15	.....	R. F. Maddigan & Co., Charlottetown, P. E. I.	Cider.....
"	30	"	60134	R. F. Maddigan & Co., Charlottetown, P. E. I.	3 bots.	20	.....	Valley Cider Co., Bridgetown, N.S.	" .. . . .

## DISTRICT OF NEW BRUNSWICK—

Nov.	13	Vinegar	59603	W. C. Broadbent, St. John, N. B.	3 pts	15	.....	.....	XX Cider..
"	17	"	59604	J. Rankin Brown, Woodstock, N. B.	3 "	15	W. M. Graves, Co., Bridgetown, N.S.	Geo. E. Barbour Co. Ltd. St. John, N. B.	Cider. . . .
Dec.	8	"	59608	King Asbell & Co., Sussex, N. B.	3 "	15	M. W. Graves & Co., Bridgetown, N.S.	.....	" .. . . .

## DISTRICT OF OTTAWA—

Oct.	24	Vinegar	63513	J. L. P. Saunders, Kemptville.	3 bots.	10	Queen City Vinegar Co., Toronto.	.....	XX Cider ..
"	31	"	63515	A. J. Macdonald, Smiths Falls.	3 "	10	Wilson Lytle & Badgerow Ltd. Toronto.	.....	XXX Cider.

SESSIONAL PAPER No. 14

VINEGAR (CIDER).

Results of Analysis.												Remarks and Opinion of the Chief Analyst.
Grams per 100cc.			Soluble Ash.	Alkalinity of Soluble Ash cc N/10 acid per 100 cc.	Phosphates P <sub>2</sub> O <sub>5</sub> Mgrs. per 100 cc.		Chlorides.	Sulphates.	Lead Acetate ppt.	Polarization.	No. of Sample.	
Acidity as Acetic.	Total Solids.	Ash.			Soluble.	Insoluble.						

R. J. WAUGH, INSPECTOR.

4.08	2.102	0.348	0.316	42.0	7.44	.....	.....	.....	Med. ....	-0.8	54216	Meets standard.
2.83	1.696	0.335	0.303	42.4	8.03	.....	.....	.....	" .....	-0.8	54217	" except in acid strength. Pass.
2.49	1.976	0.250	0.210	30.6	3.17	.....	.....	.....	" .....	-0.6	54218	Meets standard except in acid strength and phosphates. Pass.

WM. A. WEEKS, INSPECTOR.

3.00	1.760	0.230	.....	16.4	10.8	.....	Trace, ..	Trace, ..	Copious.	-0.8	60133	Meets standard except in acid strength. Pass.
3.40	1.690	0.210	.....	17.6	10.0	.....	" .....	" .....	" .....	-0.2	60134	Meets standard.

JNO. C. FERGUSON, INSPECTOR.

3.40	1.780	0.160	.....	5.6	Trace	.....	None, ..	None, ..	None, ..	-1.6	59603	Not cider vinegar. Adulterated.
3.80	2.03	0.280	.....	36.0	9.5	.....	" .....	Slight trace	Copious.	.....	59604	Meets standard.
3.58	1.65	0.30	.....	40.4	12.4	.....	" .....	" .....	" .....	-0.4	59608	" .....

J. A. RICKEY, INSPECTOR.

3.30	1.72	0.14	.....	20.4	11.6	.....	Trace	Trace	Copious	-1.2	60110	Meets standard except acid strength. Pass.
3.58	3.72	0.20	.....	32.4	5.6	.....	" .....	" .....	" .....	.....	60111	Meets Standard.

7 GEORGE V, A. 1917

BULLETIN No. 313—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF OTTAWA—

1914.								
Nov. 5	Vinegar ..	63517	Scott Bros., Hull . . .	3 bots.	10	Lion Vinegar Co. Ltd., Montreal.		Cider. ....

## DISTRICT OF KINGSTON—

Oct. 28	Vinegar ..	61556	R. W. Marshall, Kingston.	1 qt..	10	.....	Fenwick Hendry Co., Kingston.	Cider. ....
" 28	" ..	61558	J. R. B. Gage, Kingston.	1 "	10	.....	A. Maclean, Kingston.	" .....
" 29	" ..	61561	C. R. McLeod, "	1 "	19	D. B. Murray, Kingston.	.....	" .....
" 29	" ..	61564	W. J. Lee, Kingston	1 "	10	" "	.....	" .....

## DISTRICT OF TORONTO—

Nov. 16	Vinegar ..	64559	Stephens Store Ltd., Collingwood.	3 pts.	10	.....	Long Bros., Collingwood.	Queen City XXXCider
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## DISTRICT OF HAMILTON—

Nov. 2	Vinegar ..	64507	J. McKim, Orangeville.	3 pts.	15	Port Dover Evap. Co., Port Dover.	.....	Cider ...
" 3	" ..	64509	J. A. Armour, Owen Sound.	3 "	15	Taylor & Pringle Co., Ltd., Owen Sound.	.....	" .....
" 10	" ..	64516	P. & R. Laing, Dundas.	1 qt..	10	Vendors .....	.....	" .....

## DISTRICT OF WINDSOR—

Nov. 3	Vinegar ..	63935	A. A. Rapson, Woodstock, Ont.	1 qt..	15	S. Allen & Co., Norwich.	.....	Cider ...
" 3	" ..	63941	Lewis & Son, Woodstock, Ont.	1 "	10	Wilson, Lytle, Badgerow, Ltd., Toronto.	.....	" Blended



SESSIONAL PAPER No. 14

## VINEGAR (CIDER).

Results of Analysis.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
Grams per 100 cc.			Soluble Ash.	Alkalinity of Soluble Ash cc N/10 acid per 100 cc.	Phosphates P <sub>2</sub> O <sub>5</sub> Mgms. per 100 cc.		Chlorides.	Sulphates.	Lead Acetate ppte.	Polarization.		
Acidity as Acetic.	Total Solids.	Ash.			Soluble.	Insoluble.						

*Concluded.*

4.63	0.26	0.03	.....	4.8	Trace.	.....	None...	None...	None...	-0.2	63517	Not cider vinegar. Adulterated.
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JAS. HOGAN, INSPECTOR.

3.83	1.35	0.18	0.09	19.2	11.2	.....	Trace...	None...	None...	-1.6	61556	Not cider vinegar. Adulterated.
4.47	1.62	0.29	0.145	24.4	9.5	..	None...	"	"	-1.8	61558	Meets standard.
3.98	2.34	0.370	0.285	40.0	16.0	.....	Trace...	Trace...	Med. ...	-0.2	61561	"
4.82	1.87	0.23	0.180	30.8	14.0	.....	None...	None...	None...	-1.0	61564	"

H. J. DAGER, INSPECTOR.

3.93	0.71	0.09	0.060	5.2	4.1	None	Med. ...	None...	Trace...	-0.6	64559	Not cider vinegar. Adulterated.
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H. J. DAGAR, ACTING INSPECTOR.

4.07	2.43	0.210	0.175	23.6	12.0	none	medium	trace...	medium	-2.0	64567	Meets standard.
3.73	1.88	0.24	0.120	18.0	6.0	"	"	medium	"	-0.5	64569	"
4.92	2.06	0.295	0.240	30.9	trace	"	none	heavy	trace...	-2.0	64516	Meets standard, except phosphates. Pass.

JNO. TALBOT, INSPECTOR.

3.93	3.07	0.270		35.6	10.8		none	slight trace	equiva...	-1.0	63832	Meets standard.
3.75	2.07	0.26	...	26.8	11.1	.....	"	"	medium	-0.2	63841	"

Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF WINDSOR—

1914.								
Nov. 4	Vinegar ..	63946	H. M. Scott, Tillsonburg.	1 qt..	8	Port Dover Evap. Co., Port Dover.	.....	Cider .....
" 5	" ..	63960	O. R. Hauselman, Simcoe.	3 pts.	9	" "	.....	" .....
" 5	" ..	63961	Cruikshank Bros., Simcoe.	3 "	12	Lea Bros., Simcoe.	.....	" .....

DISTRICT OF MANITOBA—

Nov. 10	Vinegar .	61203	A. F. Higgins & Co., Carman.	3 pts.	25	The Dyson Co., Winnipeg.	.....	Cider .....
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DISTRICT OF VANCOUVER—

Oct. 28	Vinegar ..	55104	W. D. Fowler, 1,678 Commercial Drive, Vancouver, B.C.	3 bots.	60	McLatchy Mfg. Co., Vanc., B.C.	.....	Pure Apple Cider.
" 29	" ..	55108	E. Bailey, 537 Howe Street, Vancouver, B.C.	3 "	1.05	H. J. Heinz Co., Pittsburg, Pa.	.....	Pure Cider. (Fermented.) 5 p.c. Acetic Strength.

DISTRICT OF ALBERTA—

Nov. 27	Vinegar ..	52028	A. M. Campbell, Lacombe.	3 bots.	75	Alberta Empress Co., Ltd., Calgary.	.....	Cider .....
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SESSIONAL PAPER No. 14

VINEGAR (CIDER).

Results of Analysis.												Remarks and Opinion of the Chief Analyst.
Grams per 100 cc.			Soluble Ash.	Alkalinity of Soluble Ash, cc N/10 acid per 100 cc.	Phosphates P <sub>2</sub> O <sub>5</sub> Mgms. per 100 cc.		Chlorides.	Sulphates.	Lead Acetate ppte.	Polarization.	No. of Sample.	
Acidity as Acetic.	Total Solids.	Ash.			Soluble.	Insoluble.						

Concluded.

3.20	1.17	0.27	.....	33.2	9.1	trace	trace...	slight trace.	heavy ..	-1.2	63946	Meets standard, except solids. Pass. Not cider vinegar. Adulterated.
3.08	0.895	0.175	...	21.6	12.0	.....	none ..	"	medium	-0.2	63960	
4.17	3.08	0.295	.....	33.2	16.8	.....	" ..	trace...	heavy ..	-1.4	63961	

A. C. LARIVIERE, INSPECTOR.

6.00	1.40	0.105	.....	.....	..	.....	medium	trace...	.....	.....	61203	Meets standard, except a s h. Pass.
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E. J. MORGAN, INSPECTOR.

4.00	1.87	0.25	...	34.8	14.5	.....	none ..	none ..	none ..	-1.8	55104	Meets standard.
5.50	2.10	0.32	.....	42.0	9.5	.....	" ..	" ..	heavy	-1.0	55108	

A. W. R. MARKLEY, INSPECTOR.

2.70	1.32	0.22	0.16	28.8	4.5	.....	none ..	none ..	medium	-2.6	5928	Below standard. Insoluble.
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Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NOVA SCOTIA—

1915.							
Jan. 11	Vinegar..	54222	J. D. Stewart, Halifax.....	3 qts.	25	E. S. Tracey, Halifax, Mfr.....	
" 20	" ..	54225	E. S. Tracey, Halifax.....	3 pts.	15	Vendor .....	

## DISTRICT OF PRINCE EDWARD ISLAND—

1914.							
Oct. 24	Vinegar..	60127	Beer & Goff, Charlottetown.	3 pts.	30	McCready & Sons Ltd., St. John.	
" 24	" ..	60128	Jenkins & Sons, Charlottetown.	3 qts.	50	H. J. Heinz Co., Pittsburg.	

## DISTRICT OF NEW BRUNSWICK—

Nov. 20	Vinegar..	59606	John McKnight, Fredericton.	3 pts.	15	Wilson, Lytle & Badgerow Co., Toronto.	
Dec. 10	" ..	59610	D MacLachlin, Chatham..	3 "	20	.....	Jones & Scofield, St. John.

## DISTRICT OF QUEBEC CITY—

Nov. ' 2	Vinegar..	56299	O. Lacroix, 19 Rue St. Joseph, Quebec.	3 pts.	40	T. Cessat, Bordeaux.	A. Toussaint & Cie.
" 4	" ..	60706	A. Grenier, 94 Rue St. Jean, Quebec.	3 "	80	Louis, Frere & Cie, Bordeaux.	Mfrs .....
" 5	" ..	60707	Cantin & Frere 271 Rue St. Joseph, Quebec.	3 "	50	Crosse & Blackwell..	Turcotte & Frere

## DISTRICT OF EASTERN TOWNSHIPS—

Nov. 11	Vinegar..	63031	The Daly Grocery Co., Stanstead.	3 qts.	30	Canadian Vinegar Co., Montreal.	.....
23	" ..	63033	Lassonde & Frere, St. Hyacinthe.	3 "	35	.....	Larivière & Frere, Montreal
23	" ..	63035	Thomas Hebert, St. Hyacinthe.	3 "	36	.....	American Food Co., Montreal.

SESSIONAL PAPER No. 14

VINEGAR (WHITE WINE).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Grams per 100cc.			Chlorides.	Sulphates.	Iodine lost for fermented Vinegar.	Formic Acid.			
	Acidity as Acetic.	Total Solids.	Ash.				Mgms. per 100c.	Parts per 1,000 of Total Acid.		

R. J. WAUGH, INSPECTOR.

White Wine . . . . .	3.60	0.115	0.071	.....	.....	.....	.....	.....	54222	Is not wine vinegar.
" . . . . .	3.55	0.098	0.001	.....	.....	.....	.....	.....	54225	" "

WM. A. WEEKS, INSPECTOR.

White Wine . . . . .	5.96	0.170	0.010	Med. . . . .	Trace. . . . .	..	None . . . . .	..	60127	Is not wine vinegar.
" . . . . .	4.37	0.139	0.020	Trace. . . . .	" . . . . .	..	..	..	60128	

J. C. FERGUSON, INSPECTOR.

White Wine . . . . .	4.42	0.11	0.005	None . . . . .	None . . . . .	Ppt. . . . .	..	..	59690	Is not wine vinegar.
" . . . . .	3.93	0.505	0.005	Trace. . . . .	" . . . . .	-	..	..	59610	

F. X. W. E. BELAND, INSPECTOR

Wine . . . . .	2.6	6.88	0.420	Trace. . . . .	Trace. . . . .	..	..	..	50290	Acidity too low
" . . . . .	5.49	1.63	0.164	..	Med . . . . .	..	..	..	60700	Genitive.
" . . . . .	4.81	2.14	0.260	Med . . . . .	" . . . . .	..	..	..	60707	

J. J. COSTIGAN, ACTING INSPECTOR

White Wine . . . . .	4.0	0.095	0.015	Slight trace. . . . .	None . . . . .	None . . . . .	..	..	60001	Is not wine vinegar.
" . . . . .	4.82	0.140	0.015	..	" . . . . .	" . . . . .	..	..	60002	
" . . . . .	4.82	0.150	0.020	..	" . . . . .	" . . . . .	..	..	60003	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF EASTERN TOWNSHIPS—

1914.							
Nov. 24	Vinegar ..	63037	N. Lacroix, Sherbrooke ...	3 qts.	30	Wilson, L. B. Co.,	.....
" 24	" ..	63039	D. W. Stenson, Sherbrooke.	3 "	35	Ltd., Toronto.	.....
" 25	" ..	63040	Beaudry & Beauchemin, Granby.	3 "	20	.....	.....

## DISTRICT OF MONTREAL--

Nov. 24	Vinegar...	62525	Beaudoin & Couture, 497 Lasalle Rd., Verdun.	3 qts.	32	Canadian Vinegar	.....
" 24	" ..	62528	O. Trudeau, 1394 Wellington St., Verdun.	3 pts.	24	Co., Montreal.	Geo. Perry, Mon- treal.
" 25	" ..	62530	E. Menard, 169 Galt Ave., Verdun.	...	15	.....	Hudon, Hebert.
" 26	" ..	62532	G. H. Langevin, 414 St. Lawrence Boul., Montreal.	3 bots.	90	Unknown .....	.....

## DISTRICT OF VALLEYFIELD—

Dec. 9	Vinegar...	62811	Geo. Dixon, Huntingdon ...	3 pts.	13	.....	.....
" 10	" ..	62814	G. Bourdon, Longueuil ...	3 "	15	.....	.....
" 15	" ..	62816	J. Z. Daoust, Valleyfield ...	3 "	20	.....	.....
" 15	" ..	62817	E. Bougie, " ...	3 "	15	.....	.....
" 15	" ..	62818	A. R. Biron, " ...	3 "	15	.....	.....

## DISTRICT OF OTTAWA—

Oct. 23	Vinegar...	63511	Estate Late Chas. Logne, Central Store, Maniwaki.	3 bots.	18	H. J. Heinz, Pitts- burg.	Mfrs. ....
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SESSIONAL PAPER No. 14

VINEGAR (WHITE WINE).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Grams per 100cc.			Chlorides.	Sulphates.	Iodine Test for Fermented Vinegar.	Formic Acid.			
	Acidity as Acetic.	Total Solids.	Ash.				Mgms. per 100cc.			Parts per 1,000 of Total Acid.

Concluded.

White Wine .....	3.93	0.120	0.015	Slight trace.	Trace...	Trace.....			63037	Is not wine vinegar.
" .....	5.04	0.110	0.015	" .....	" .....	" .....			63039	" .....
Wine .....	5.85	0.145	0.015	" .....	None...	" .....			63040	" .....

D. J. KEARNEY, INSPECTOR.

White Wine .....	5.64	0.180	0.005	Trace ..	None ..	.....			62525	Is not wine vinegar.
White .....	4.18	0.355	0.005	" .....	" .....	.....			62528	" .....
White Wine .....	6.10	0.185	0.025	" .....	Trace ..	.....			62530	" .....
" .....	4.94	0.805	0.085	Heavy ..	" .....	None ..			62532	" .....

J. J. COSTIGAN, ACTING INSPECTOR.

White wine .....	4.0	0.9	0.002	None ..	Trace ..	None	Trace ..		62811	Is not wine vinegar.
" .....	5.76	0.125	0.01	" .....	None ..	Ppt ..			62814	" .....
" .....	3.98	0.105	0.015	Slight trace.	Trace ..	Trace ..			62816	" .....
" .....	5.66	0.17	0.01	" .....	Med ..	Ppt ..			62817	" .....
" .....	6.0	0.28	0.02	None ..	None ..	None	0.9		62818	" .....

F. A. RICKEY, INSPECTOR.

White wine .....	4.37	0.140	0.025	Trace ..	None ..	.....			63011	Is not wine vinegar.
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Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF TORONTO—

1914.							
Nov. 16	Vinegar...	64558	S. J. Bailey, Collingwood . .	3 pts.	10	Wilson, Lytle, Badgerow Co. Ltd., Toronto.	.....
" 18	" ..	64560	W. M. Thompson, Penetang	3 bots	10	" "	.....

DISTRICT OF HAMILTON—

Nov. 3	Vinegar...	64508	W. J. Ward, Owen Sound . .	3 pts.	20	Queen City Vinegar Co. Ltd., Toronto.	.....
" 4	" ..	64511	E. Irwin, Warton.....	3 "	10	S. Allen, Norwich..	.....
" 5	" ..	64512	H. Bruder, Hanover . . .	3 "	12	Lion Vinegar Co., Montreal.	.....
" 9	" ..	64515	E. M. Precious, 409 Barton st. E., Hamilton.	1 qt..	10	S. Allen, Norwich...	.....

DISTRICT OF WINDSOR—

Nov. 3	Vinegar...	63933	John Scott & Co., Woodstock.	1 qt..	10	Wilson, Lytle. . .	.....
" 3	" ..	63936	Wm. Buggs & Son, Woodstock.	3 pts.	15	.....	Grocers Ltd., Toronto.
" 4	" ..	63951	F. H. Simpkins, Tillsonburg	3 jars.	15	Heinz Pickling Co..	.....
" 5	" ..	63958	R. Edwards, Simcoe . . . . .	3 pts.	12	S. Allen, Norwich..	.....
" 5	" ..	63962	L. F. Aiken, " . . . . .	3 "	15	" "	.....

DISTRICT OF MANITOBA—

Nov. 3	Vinegar...	61201	Wm. Muir, Brandon. . . . .	3 pts.	30	Wilson, Lytle. . . . .	.....
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DISTRICT OF SASKATCHEWAN—

Oct. 28	Vinegar. .	64054	Agnews Ltd., Prince Albert	3 Bots.	15	.....	A. McDonald Co
Nov. 3	" ..	64083	W. G. Dey, Pense.....	3 "	15	The Dyson Co., Winnipeg.	Mfrs.....



SESSIONAL PAPER No. 14

VINEGAR (WHITE WINE).

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Grains per 100cc.			Chlorides.	Sulphates.	Iodine test for fermented Vinegar.	Formic Acid.			
	Acidity of Acetic.	Total Solids.	Ash.				Mgms. per 100cc.	Parts per 1,000 of Total Acid.		

H. J. DAGER, INSPECTOR.

White wine . . . . .	3.73	0.260	0.015	None . . .	None . . .				64558	Is not wine vinegar.
" . . . . .	3.55	0.185	0.01	Slight trace.	None . . .				64560	" "

H. J. DAGER, ACTING INSPECTOR.

White wine . . . . .	4.32	0.175	0.045	Trace . . .	None . . .				64508	Is not wine vinegar.
" . . . . .	3.4	0.440	0.030	" . . .	" . . .				64511	" "
" . . . . .	4.18	0.315	0.015	" . . .	" . . .				64512	" "
" . . . . .	4.64	0.265	0.035	" . . .	Trace . . .				64515	" "

JOHN TALBOT, INSPECTOR.

Wilson's XXX white wine.	4.72	0.310	0.065	Trace.	None				63938	Is not wine vinegar.
White wine . . . . .	2.63	0.160	0.030	"	"				63936	" "
" . . . . .	4.87	0.540	0.050	None . . .	"				63951	" "
" . . . . .	4.52	0.305	0.055	Trace.	"				63958	" "
" . . . . .	4.17	0.180	0.040	None	"				63962	" "

A. C. LARIVIERE, INSPECTOR

White wine . . . . .	5.72	0.150	0.025	Trace	Med				61201	Is not wine vinegar.
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L. H. HALL, INSPECTOR

White (spirit)	4.23	0.430	0.060	med	none				64094	Is not Wine Vinegar
" . . . . .	5.90	0.80	0.055	"	trace				64092	" "

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF ALBERTA—

1914.							
Nov. 25	Vinegar...	52023	R. B. Price, Camrose.....	3Bots.	75	G. F. & J. Galt Co., Ltd., Calgary.	

DISTRICT OF ROCKY MOUNTAINS—

Nov. 10	Vinegar..	61709	E. W. Hazelwood, Trail....	3Bots.	60	Empress Mfg. Co., Vancouver.	
" 20	" ..	61717	Merritt & Dist., Indust. Cook Soc'y., Merritt.	3 "	60	W. J. Pendray & Sons, Victoria.	
" 20	" ..	61718	Merritt Mercantile, .C o., Merritt.	3 "	75	B. C. Vingar Works, Vancouver.	

DISTRICT OF VANCOUVER—

Oct. 28	Vinegar...	55105	F. Lyons, 1609 Commercial Dr., Vancouver.	3Bots.	45	B. C. Vingar Works, Vancouver.	
Dec. 16	" ..	55151	B.C. Vingar Works, Van- couver.	3 "	25	Vendors.....	

DISTRICT OF VICTORIA—

Nov. 9	Vinegar...	62011	Copas & Young, Broad & Sts., Victoria.	3 Pts.	30	.....	W. K. Houston & Co., Victoria.
" 11	" ..	62028	H. O. Kirkham Co., Ltd., 741 Fort St., Vancouver.	3 "	30	Unknown.....	Unknown .....

SESSIONAL PAPER No. 14

VINEGAR (WHITE WINE).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst
	Grains per 100cc.			Chlorides.	Sulphates.	Iodine test for fermented Vinegar.	Formic Acid.			
	Acidity as Acetic.	Total Solids.	Ash.				Mgms. per 100cc.	Parts per 1,000 of Total Acid Acid.		

A. W. R. MARKLEY, INSPECTOR.

Perfect Jem, Pure White Wine.	4.70	0.46	0.08	heavy	heavy	.....	trace		52023	Is not Wine Vinegar
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THOS. PARKER, INSPECTOR.

White Wine.....	3.5	.129	.010	none	none	none	none	.....	61709	Is not Wine Vinegar
" " .....	3.5	.125	.010	"	"	"	trace	.....	61717	" "
" " ....	3.2	.105	.008	"	"	"	"	.....	61718	" "

E. J. MORGAN, INSPECTOR.

Pure White Wine warranted x x x, bottled by vendor.	4.17	.14	.035	none	none	ppt	trace	.....	55105	Is not Wine Vinegar
MacKenzie's Pure White Wine made from Pure grains.	3.60	.07	.001	"	"	"	none	.....	55151	" "

D. O. SULLIVAN, INSPECTOR.

White Wine.,	3.73	.10	.005	none	none	ppt			62011	Is not Wine Vinegar
" .....	5.69	.165	.020	trace		none			62028	" "

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1914.							
Dec. 30	Vinegar ..	54219	John Tobin & Co., Halifax.	3 pts.	20	Heinz Co., Pittsburg	Mfr .....

DISTRICT OF PRINCE EDWARD ISLAND—

Oct. 27	Vinegar...	60131	Coffin & Co., Charlotte town.	3 pts.	18	McCready & Son., Ltd., St. John.	.....
" 28	" ...	60139	R. Mutch & Co., Charlotte town.	3 bots.	15	Wilson, Lytle, Badgerow Co., Ltd., Toronto.	.....
" 30	" ...	60135	Carvell Bros., Charlotte town.	3 "	15	McIntyre Vinegar Works, St. John.	.....

DISTRICT OF NEW BRUNSWICK—

Nov. 13	Vinegar ..	59602	T. McCready & Sons, Ltd., St. John.	3 pts.	15	Vendors.....	.....
" 19	" ...	59605	B. Beveridge, Andover. . .	3 "	25	McIntyre's Bouded Vinegar Factory No. 2, St. John.	Jones, Scofield, St. John.
" 26	" ...	59607	Hill Bros., St. Stephen. . . .	3 "	15	McCready & Son, Ltd., St. John.	.....
Dec. 9	" ...	59609	Mrs. P. White, Moncton. . .	3 "	15	" "	Read & Co., Moncton.

DISTRICT OF QUEBEC CITY—

Nov. 2	Vinegar ..	60702	O. Laeroix, 19 Rue St. Joseph, Quebec.	3 pts.	30	St. Lawrence Co., Quebec.	Mfrs .....
" 2	" ...	60703	" " " "	3 "	30	" "	" .....
" 2	" ...	60704	" " " "	3 "	105	E.D. Smith, Winona, Ont.	Turcotte & Frere
" 5	" ...	60708	J. H. Turcotte, 92 Rue Caron, Quebec.	3 "	30	St. Lawrence Co., Quebec.	Mfrs .....

DISTRICT OF QUEBEC PROVINCE—

Nov. 4	Vinegar ..	56401	Alphonse Roy, St. Angele. .	3 pts.	20	.....	Turcotte & Frere
" 4	" ...	56404	Dame Hector Hudon, St. Angele.	3 "	20	Unknown .....	Unknown .....

SESSIONAL PAPER No. 14

VINEGAR (OTHER THAN WHITE WINE, MALT AND CIDER).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								Remarks and Opinion of the Chief Analyst	
	Grams per 100cc.			Chlorides.	Sulphates.	Iodine test for fermented Vinegar.	Formic Acid.			No. of Sample.
	Acidity as Acetic.	Total Solids.	Ash.				Mgms. per 100cc.	Parts in 1,000 of Total Acid.		

R. J. WAUGH, INSPECTOR.

Crystal White....	4.02	0.138	0.030	.....	.....	Ppt .....	.....	.....	54219	Genuine.
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WILLIAM WEEKS, INSPECTOR.

Spirit.....	5.91	0.145	0.015	None...	None...	.....	.....	.....	60131	Genuine.
" .....	3.63	0.125	0.015	" .....	" .....	.....	.....	.....	60132	"
" .....	3.67	0.260	0.015	" .....	" .....	.....	.....	.....	60135	"

JOHN C. FERGUSON, INSPECTOR.

Spirit .....	3.93	.130	.010	None...	Trace .....	.....	.....	.....	59602	Genuine.
" .....	3.62	.350	.015	Heavy.	" .....	trace..	None	.....	59605	"
Distilled Spirit Vinegar, sherry coloured.	4.07	.187	.007	Trace ..	" .....	Heavy ..	.....	.....	59607	Coloured.
Spirit White	3.93	.125	.002	None	" .....	Ppt ..	.....	.....	59609	Genuine.

F. X. W. E. BELAND, INSPECTOR.

Proof .....	6.00	0.380	0.015	Trace	Trace .....	.....	.....	.....	60702	Genuine.
" .....	5.62	0.160	0.015	None	None .....	.....	.....	.....	60703	"
Raspberry Pure ..	.....	.....	.....	.....	.....	.....	Rasp. berry Vinegar	.....	60704	Rasp. berry vinegar Genuine.
.....	7.06	0.435	0.020	None	None .....	.....	.....	.....	60708	Genuine.

ALF. PELLETIER, S. CADIEUX, O. BROCHU, F. GENDREAU, TEMPORARY INSPECTORS

.....	3.18	.250	.01	Trace	None .....	.....	.....	None	50401	Genuine.
.....	4.47	.540	.035	"	Trace .....	.....	.....	.....	50404	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC PROVINCE—

1914.									
Nov.	6	Vinegar ..	56409	Philippe Bourgoin, Pricé. . . . .	3	pts.	20	.....	Langlois & Paradis, Quebec.
"	6	" ..	56410	Phileas Cote, St. Octave. . . . .	5	"	23	H. J. Heinz, Pittsburg.	.....
"	6	" ..	56414	Louis M. Langlois, St. Octave.	3	"	20	" "	J. B. Renaud, Quebec.
"	6	" ..	56416	Paul Therriault, Kempt . . . . .	3	"	20	.....	Whitehead & Turner, Quebec
"	9	" ..	56421	D. E. Bernier. . . . .	3	"	23	Unknown . . . . .	Unknown . . . . .
"	9	" ..	56124	La Cie Commerciale Langlais-Doran, Amqui.	3	"	23	H. J. Heinz, Pittsburg.	.....
"	9	" ..	56426	Joseph Goselin, Cider Hall, Sayabee.	3	"	20	.....	N. Rioux, Quebec.
"	9	" ..	56427	Alp. Fernando Boulian. . . . .	3	"	24	Unknown. . . . .	Unknown . . . . .
Oct.	28	" ..	2397	Charles Taillon, Paroisse St. Jerome.	3	"	23	.....	Chevalier & Poulriot, Joliette
"	28	" ..	2399	Ernestide Beauchamp, Paroisse St. Jerome.	3	"	25	.....	Jos. Dufresne, Joliette
Nov.	2	" ..	213	A. Leduc, St. Agathe des Monts.	3	bots.	45	.....	.....
Dec.	26	" ..	245	P. E. Desjardines, St. Therese de Blainville.	3	"	90	L. A. Price, Bordeaux, France.	.....
Oct.	27	" ..	2574	Jos. Langlois, Armagh. . . . .	1	qt.	12	St. Lawrence Vinegar Co.	.....
"	27	" ..	2575	" " . . . . .	1	"	12	.....	Turcotte Frere, Quebec.
"	27	" ..	2579	M. Boulanger, Armagh. . . . .	1	"	15	.....	A. B. Dupuis, Quebec.
"	27	" ..	2583	C. Beaudoin, Armagh. . . . .	1	"	15	Boivine & Grenier, Quebec.	.....
"	27	" ..	2586	Arthur Fradette, Armagh. . . . .	1	"	15	A. B. Dupuis, Quebec.	.....
"	29	" ..	2588	Antoine Labrecque, St. Raphael.	1	"	15	Naz. Turcotte Cie, Quebec.	.....
"	29	" ..	2592	J. A. Lemieux, St. Michel. . . . .	1	"	12	St. Lawrence Vinegar Co.	.....
"	30	" ..	2593	George Roy, St. Michel. . . . .	1	"	14	" " . . . . .	.....
"	30	" ..	2594	" " . . . . .	1	"	10	" " . . . . .	.....
Nov.	3	" ..	2595	Onesime Noel . . . . .	1	"	15	" " . . . . .	.....
Oct.	26	" ..	2856	Dorchester Lumber, St. Malachi.	1	"	10	" " . . . . .	.....
Nov.	9	" ..	3703	A. J. Caillouette, St. Justine.	1	"	15	Carrier & Fils, Quebec.	.....
"	10	" ..	3702	Joseph Doyon, St. Justine. . . . .	1	"	15	St. Lawrence Vinegar Co., Quebec.	J. B. Renaud, Quebec.
"	11	" ..	3708	Bolduc & Genest, St. Sabine. . . . .	1	"	15	" " . . . . .	Drouin & Frere..

SESSIONAL PAPER No. 14

VINEGAR (OTHER THAN WHITE WINE, MALT AND CIDER).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							Remarks and Opinion of the Chief Analyst.	
	Grains per 100 cc.			Chlorides.	Sulphates.	Iodine test for fermented Vinegar.	Formic Acid.		
	Acidity as Acetic.	Total Solids.	Ash.				Mgms. per 100cc.		Parts per 1,000 of Total Acid.

Continued.

.....	7.16	.236	.025	Trace	Trace	.....	.....	56409	Genuine.
.....	3.98	.159	.035	"	"	.....	.....	56410	"
.....	4.47	.135	.030	"	None	.....	.....	56414	"
.....	6.71	.425	.025	None	"	.....	.....	56416	"
.....	5.77	.210	.02	Trace	"	.....	.....	56421	"
.....	4.47	.160	.040	"	Trace	.....	.....	56424	"
.....	4.17	.495	.035	None	None	.....	.....	56426	"
.....	5.07	.155	.001	Trace	"	.....	.....	56427	"
Congo	5.09	.315	.010	"	"	.....	.....	2397	"
Proof	5.57	.259	.014	"	"	.....	.....	2399	"
The Sapho Jernal Special.	3.63	.540	.020	None	Trace	.....	.....	213	"
.....	5.09	.240	.010	Medium	None	.....	.....	245	"
Marsollais Natural.	6.61	.220	.015	Trace	"	.....	.....	2574	"
Coloie Belgu.	4.98	.530	.025	"	"	.....	.....	2575	"
.....	4.75	.775	.065	None	"	.....	.....	2579	"
Coloie	4.80	.690	.025	"	"	.....	.....	2583	"
Coloie	3.58	4.5	.020	"	"	.....	.....	2586	"
.....	4.87	.500	.020	"	"	.....	.....	2588	"
.....	5.86	.440	.020	Trace	"	.....	.....	2592	"
.....	6.16	.595	.035	"	"	.....	.....	2593	"
.....	5.32	.410	.030	None	"	.....	.....	2594	"
.....	4.92	.275	.03	"	"	.....	.....	2595	"
.....	4.87	.410	.025	"	"	.....	.....	2596	"
Proof	4.67	.40	.02	"	"	.....	.....	3708	Below proof strength.
.....	7.76	1.24	.385	Trace	.....	.....	.....	3709	Genuine.
.....	4.98	.445	.055	None	"	.....	.....	3708	"

Date of Collection.	Nature of Sample	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC PROVINCE—

1914.							
Nov. 12	Vinegar...	3711	Jos. Turgeon, St. Isidore...	1 qt.	15	Bernier, Scotts Junc.	.....
13	" ..	3717	J. B. Turgeon, St. Isidore .	1 "	15	" "	.....
Dec. 2	" ..	2871	D. Tarvel, St. Leon de Standon.	1 "	15	Dorchester Lumber St. Malachi.	.....
" 2	" ..	2872	O. Audet, St. Leon de Standon.	1 "	15	St. Lawrence Vine- gar Co.	.....
" 3	" ..	2880	A. Clouthier, St. Odilon.	1 "	15	St. Lawrence Vine- gar Co.	.....
" 4	" ..	2883	L. J. Audet, St. Edouard.	1 "	15	St. Lawrence Vine- gar Co.	Dorchester Lum- ber.
" 8	" ..	3718	M. Dechine, St. Germaine Sta.	1 "	15	.....	J. B. Renaud, Quebec.
" 9	" ..	3722	D. Fortier, St. Rose Dor- chester.	1 "	15	.....	Carrier & Fils, Levis.
" 10	" ..	3725	D. Roy, St. Prosperc Dor- chestgr.	1 "	25	.....	J. B. Renaud, Quebec.
" 21	" ..	3733	A. Mercier, St. Patrie de Beaurivage.	1 "	15	.....	" " ..
" 22	" ..	3734	O. Fradette, St. Narcisse neud Bois.	1 "	15	.....	N. Reno, Que- bec.
" 22	" ..	3739	A. Demers, St. Narcisse neud Bois.	1 "	15	.....	Gagnon & Gar- ent, Quebec.
" 23	" ..	3742	Jos. Blais, St. Bernard Dor- chester.	1 "	15	.....	Bernier Scott, Dorchester.
Nov. 21	" ..	2724	Henri Fournier, Capt St. Ignace.	3 pt.	25	.....	St. Laurent, Quebec.
" "	" ..	2726	Jos. M. Dube, Capt St. Ignace.	3 "	25	.....	Gagnon & Gar- ent.
" 24	" ..	2732	Jos. Breton, St Pierre, Mont.	3 "	25	.....	J. B. E. Letellier, Quebec.

## DISTRICT OF THREE RIVERS—

Oct. 30	Vinegar...	2640	Arthur Caisse, Berthier- ville.	1 qt.	15	.....	Larivière Bros., Montreal.
" 30	" ..	2644	J. D. Daviault, Berthier- ville.	1 "	15	.....	Laporte, Martin & Cie, Mont- real.
" 26	" ..	2677	J. W. Lacasse, L'Assomp- tion.	1 "	18	.....	Chevalier & Pou- hot, Joliette.
" 26	" ..	2678	Louis Panze, L'Assomption.	1 "	18	.....	Hudon Herbert, Montreal.
" 28	" ..	2679	Archibald Duff, Charle- magne.	1 "	15	.....	Mathewson Sons Co., Ltd., Montreal.
" 28	" ..	2681	Euclid Beauchamp, Charle- magne	1 "	15	.....	Hudon Orsali, Montreal.



SESSIONAL PAPER No. 14

VINEGAR (OTHER THAN WHITE WINE, MALT AND CIDER).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Anavst.
	Grains per 100cc.				Formic Acid.					
	Acidity as Acetic.	Total Solids.	Ash.	Chlorides.	Sulphates.	Iodine test for fermented Vinegar.	Mgms. per 100cc.	Parts per 1000 of Total Acid.		

Concluded.

Proof .....	5 72	0 30	0 25	Trace	None				3711	Genuine.
" .....	5 62	4 45	0 30	None	"				3717	"
" .....	4 78	0 465	0 015	None	"				2871	"
" .....	4 97	0 445	0 020	"	"				2872	"
Proof .....	5 37	0 480	0 030	Trace	"				2880	Slightly below proof
" .....	7 85	0 560	0 025	None	"				2883	Genuine.
" .....	4 77	0 325	0 010	"	"				3718	"
" .....	5 58	0 535	0 020	"	"				3722	"
" .....	4 93	0 215	0 010	"	"				3725	"
" .....	4 52	0 405	0 035	"	"				3733	"
" .....	4 42	0 565	0 025	"	"				3734	"
" .....	6 01	0 390	0 015	Trace	"				3739	"
" .....	5 91	0 415	0 020	None	"				3742	"
" .....	6 20	0 550	0 025	"	"				3724	"
Vinager Rouge.	6 15			"	"	Trace			2726	"
" .....	5 86	0 42	0 03	"	"				2712	"

DR. V. P. LAVALLEE, INSPECTOR.

" .....	5 14	0 165	0 010	None	None				2640	Genuine.
" .....	4 87	0 345	0 020	Med	"	Trace			2641	"
" .....	5 37	0 330	0 010	Trace	"				2671	"
" .....	5 72	0 735	0 180	Cap	Trace	Trace			2678	"
" .....	4 17	0 240	0 015	Trace	None				2679	"
" .....	5 81	0 250	0 015	"	"				2681	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF THREE RIVERS—

1914.							
Oct. 28	Vinegar ..	2683	Edm. Robillard, St. Paul L'Ernite.	1 qt	33	Underlop Co., Demi Johns Balmans, Montreal.	
" 29	" ..	2684	O. Carignan Fils, Three Rivers.	1 "	50		J. B. Renaud & Cie, Quebec.
" 31	" ..	2698	Joseph Fernet, Fernetville.	1 "	10		Chevalier & Pouliot, Joliette.
Nov. 2	" ..	3903	Arthur Tessier, St. Felix de Valois.	1 "	10		" ..

DISTRICT OF EASTERN TOWNSHIPS—

Nov. 11	Vinegar ..	63032	The Daly Grocery Co., Stanstead.	3 qts.	30	Canadian Vinegar Co., Montreal.	
" 23	" ..	63034	H. Messier, St. Hyacinthe.	3 "	25		L. Chaput Fils & Cie, Montreal

DISTRICT OF MONTREAL—

Nov. 24	Vinegar ..	62527	J. G. Garent, 381 Latallé rd., Verdun.	3 bots	30		The Lion Vinegar Co., Montreal.
" 26	" ..	62533	Albert Steinfeld, 83 Demontigny st. e., Montreal.	3 pts.	21	Sapho. Man. Co., Montreal.	
" 26	" ..	62534	J. Hoffman, 196 Demontigny st. e., Montreal.	2 "	24		P. Adelstein, Montreal.

DISTRICT OF VALLEYFIELD—

Dec. 10	Vinegar ..	62813	Z. Lamare, Longueuil.	3 pts.	15		
" 15	" ..	62820	J. H. Boyer, New Salisbury.	3 "	15		

DISTRICT OF OTTAWA—

Oct. 23	Vinegar ..	63512	The Foster Bennett Co., Ltd., River Desert.	3 bots	60	Wilson, Lytle, Badgerow Co., Toronto	
" 27	" ..	63514	Jos. Martel & Cie, Hull.	3 "	15	The Lion Vinegar Co., Ltd., Montreal	S. J. Major, Ltd., Ottawa.

SESSIONAL PAPER No. 14

VINEGAR (OTHER THAN WHITE WINE, MALT AND CIDER).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Grams per 100cc.			Chlorides.	Sulphates.	Iodine test for fermented Vinegar.	Formic Acid.			
	Acidity as Acetic.	Total Solids.	Ash.				Mgms. per 100c.			Parts per 1,000 of Total Acid.

Concluded.

.....	5.43	0.275	0.030	None...	Trace...				2683	Genuine.
.....	5.81	0.595	0.015	Trace.	None ..				2684	"
.....	4.82	.235	.015	Trace.	None.				2698	"
.....	5.53	.270	.025	"	"				3903	"

J. J. COSTIGAN, ACTING INSPECTOR.

Coloured spirit ..	5.17	.335	.015	None.	None ..				63032	Genuine. Coloured.
Spirit. ....	5.86	.145	.015	Slight trace.	"				63034	"

D. J. KEARNEY, INSPECTOR.

.....	4.28	1.46	.170	Heavy.	Heavy.		Trace		62527	Genuine.
.....	3.37	.250	.015	Trace.	Trace.		Trace		62533	"
.....	4.08	.290	.005	None.	None.				62534	"

J. J. COSTIGAN, ACTING INSPECTOR

Spirit .....	6.48	.11	.002	Trace	None.				62815	Genuine.
.....	5.37	.385	.020	Slight trace	"		None		62824	"

J. A. RICKEY, INSPECTOR.

Pure Spirit 50 D. F.	7.75	.140	.010	Trace.	None ..				63011	Genuine.
Fred Reina Brand Pure Spirit Vinegar	5.92	.270	.025	"	Trace				63014	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF OTTAWA—

1914.							
Nov. 6	Vinegar ..	63519	L. Z. Caron, Nelson and Wilbrod sts., Ottawa.	3 bots	10	Heinz, Pittsburg...	
" 9	" ..	63520	Halpenny & Co., 590 Bank st., Ottawa.	3 "	10	The Lion Vinegar Co., Montreal.	

DISTRICT OF KINGSTON

Oct. 28	Vinegar ..	61557	John Gordon, Kingston...	1 qt.	10	H. J. Heinz, Dea- mington.	
" 28	" ..	61559	D. B. Murray, Kingston...	1 "	10	D. B. Murray, King- ston.	
" 29	" ..	61560	J. Gilbert, Kingston..	1 "	10	" ..	
" 29	" ..	61562	H. M. Stover, Kingston...	1 "	10	.....	Fenwick, Hen- dry, Co., King- ston.
" 29	" ..	61563	W. J. Arniel, Kingston...	1 "	10	D. B. Murray, King- ston.	

DISTRICT OF MANITOBA—

Nov. 10	Vinegar...	61204	H. Hastie, Carman....	3 pts.	15	J. C. Wilson, Toronto	The Codville Co., Winnipeg.
" 16	" ..	61208	Berney & Chapman, St. James, Man.	3 "	15	Blackwoods, Ltd., Winnipeg.	Mfrs . . . . .
" 16	" ..	61269	" "	3 "	15	" "	" .. . . .
" 17	" ..	61210	D. Dalman, Selkirk..	3 "	30	" "	" .. . . .

DISTRICT OF SASKATCHEWAN—

Oct. 28	Vinegar...	64055	The McLeod Co., Prince Albert.	3 bots.	20	Pioneer Vinegar Co., Edmonton.	Northern Pro- duce Co.
Nov. 2	" ..	64078	Beacock & Hodges, Mortlach.	3 "	20	Wilson, Lytle, Badge- row Co., Toronto.	H. G. Smith & Co., Regina.
" 5	" ..	64091	Paragon Store, Moosejaw...	3 qts.	60	White Star Mfg. Co., Winnipeg.	Crawford & Co., Moosejaw.

SESSIONAL PAPER No. 14

VINEGAR (OTHER THAN WHITE WINE, MALT AND CIDER.)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Grains per 100cc.			Chlorides.	Sulphates.	Iodine test for fermented Vinegar.	Formic Acid.			
	Acidity as Acetic.	Total Solids.	Ash.				Mgns. per 100cc.	Parts per 1,000 of Total Acid.		

Concluded.

White Crystal Label Vinegar.	4.13	.105	.015	None.	None				63519	Genuine.
Pure Spirit Vinegar.	3.88	.145	.015	Trace.	Trace.				63520	

JAMES HOGAN, INSPECTOR.

Spirit.	3.83	.105	.015	Trace.	Trace.				61557	Genuine.
"	2.24	.189	.015	"	"				61559	
"	3.69	.075	.010	Slight trace.	None.		Trace.		61560	
"	4.35	.139	.015	"	"		Trace.		61562	
"	3.63	.100	.010	Trace.	Trace.				61563	

A. C. LARIVIERE, INSPECTOR.

.....	8.52	0.935	0.090	none.	med.				61204	Genuine.
Spirit xxx Brown	2.77	0.530	0.060	heavy	heavy		trace.		61208	Below standard strength.
" White.	3.60	0.275	0.065	"	"				61209	Genuine.
Pure White Spirit	5.84			"	"				61210	

L. H. HALL, INSPECTOR.

White Wine (Spirit).	4.94	0.390	0.020	trace	traces.				64088	Spirit Vinegar Genuine.
" "	9.37	0.285	0.005	"	none		trace.		64078	
White Wine Star Brand	4.57	0.525	0.050	heavy	med.				64081	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF ALBERTA—

1914.							
Nov. 18	Vinegar...	52020	S. G. Freeze, Calgary . . .	3 bots.	60	Stimington & Co., Calgary.	
" 18	" . . .	52021	John Irwin & Co., Calgary.	3 "	60	The Dyson Co., Win- nipeg.	
" 24	" . . .	52022	Pride Nash & Co., Stettler..	3 "	75	" "	
" 26	" . . .	52026	Lake & Co., Wetaskiwin...	3 "	75	Pioneer Vinegar Co., Edmonton.	
" 26	" . . .	52027	Fowler & Co., Wetaskiwin..	3 "	60	The Dyson Co., Win- nipeg.	

DISTRICT OF ROCKY MOUNTAINS—

Nov. 10	Vinegar...	61710	E. W. Hazlewood, Trail....	3 bots.	60	Pure Fruit Mfg. Co., Vanc.	
" 23	" . . .	61726	Hudsons Bay Co, Kam- loops.	3 "	65	Jones Bros. Co., Portland, Ore.	

DISTRICT OF VANCOUVER—

Oct. 28	Vinegar ..	55106	Birds Grocery, 1304 Com- mercial Dr., Vance.	3 bots.	45	B.C. Vinegar Wks., Vanc.	
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DISTRICT OF NOVA SCOTIA—

Dec. 5	Vinegar...	65803	A. A. McDonald, New Glas- gow, N.S.	3 pts.	45	Heinz, Leamington, Ont.	Mfrs. . . . .
" 5	" . . .	65809	James McArthur . . . . .	3 "	45	MacCreedy & Sons, St. John, N.B.	" . . . . .

DISTRICT OF VICTORIA—

Nov. 14	Vinegar ..	62019	Dixie H. Ross, Victoria, B.C.	3 qts.	60	Geo. Downs & Co., Ltd., Dublin.	
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## SESSIONAL PAPER No. 14

## VINEGAR (OTHER THAN WHITE WINE, MALT AND CIDER.)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Grains per 100cc.			Chlorides.	Sulphates.	Iodine test for fermented Vinegar.	Formic Acid.			
	Acidity as Acetic.	Total Solids.	Ash.				Alguns. per 100cc.			Parts per 1,000 of Total Acid.
A. W. R. MARKLEY, INSPECTOR.										
Finest pure xxx Table Vinegar, bottled expressly for Vendor.	4.02	0.375	0.035	none..	trace...	.....	.....	.....	52020	Genuine.
Dyson's Red Cross Pure Spirit Wine Vinegar, Govt. standard.	5.61	0.32	0.09	med....	med ..	ppt. .	none..	.....	52021	"
" " "	4.58	0.970	0.065	heavy..	" ..	.....	" ..	.....	52022	"
Buffalo Brand White Wine Cider.	3.78	0.30	0.035	none..	trace...	.....	" ..	.....	52026	Spirit Vinegar.
50 per cent Spirit White Wine, Govt. standard.	3.0	8.22	0.155	ppt. .	ppt. .	.....	trace..	.....	52027	below standard strength.
THOS. PARKER, INSPECTOR.										
Pure Fruit. ....	2.5	0.150	0.010	none..	none..	.....	trace..	.....	61710	Below standard strength.
White Pickling.	4.23	0.540	0.025	trace	trace..	.....	.....	.....	61726	Genuine.
E. J. MORGAN, INSPECTOR.										
Pure Canadian, mfgd. and bottled in bond.	3.42	0.54	0.095	none	none..	.....	trace..	.....	75106	Genuine.
W. A. PETIPAS, TEMP. INSPECTOR.										
" " "	4.12	0.505	0.140	trace	none..	.....	.....	.....	62808	Genuine.
" " "	3.48	0.285	0.025	none	" ..	.....	.....	.....	62809	"
D. O'SULLIVAN, INSPECTOR.										
Pure Belmont	2.90	0.50	0.02	none..	none..	.....	none	.....	62810	Below standard strength.

## APPENDIX E.

## BULLETIN No. 314 -WHITE PEPPER.

OTTAWA, May 28, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister Inland Revenue.

SIR,—I beg to hand you a report dealing with three hundred and eighteen (318) samples of White Pepper, purchased throughout Canada by our inspectors in January, February and March of this year. To this I have appended as a supplement, the results of analysis of sixty-nine (69) samples of pepper collected in British Columbia during September and October of last year. This report therefore covers a total of three hundred and eighty-seven (387) samples of pepper.

The last named collection of sixty-nine samples was made in consequence of certain complaints by responsible persons, to the effect that adulterated pepper was being offered for sale in British Columbia. The results of analysis indicate that so far as samples taken by our inspectors are concerned, the complaint made was without foundation. Only one sample was found to be adulterated. Of the 318 samples purchased during the first three months of this year, 305 are found to be genuine.

Adulteration in the case of 13 samples consists in the addition of starch or flour, without notification to the purchaser. The amounts vary from about 10 to about 60 per cent. The percentage of adulteration is 4.1; a result which compares very favourably with that found in 1913 (Bull. 250) when 19 per cent. adulteration was found.

Correspondence with vendors has brought out the fact, that in many cases the pepper sold to our inspector as such, has been supplied by the manufacturer or furnisher as a compound article, and properly labelled such on the package or container. When this is the case, the retail dealer is quite evidently responsible for his action in selling the article without declaration of its compound character.

In a number of instances I find that the manufacturer labels his goods, "Compound XXX pepper," the triple X indicating a high grade article, and some retailers claim that they feel justified in selling it as *pure*, on this account. In several cases I find pepper to have been supplied to the retail dealer as "Pure Compound." Such labelling is entirely reprehensible, and I think that the small dealer who is induced to sell the article as *pure* in virtue of his having bought it with a label of the kind described, should have legal recourse against the furnisher.

While pepper continues to be one of the most notably adulterated foods, it is very gratifying to observe a great improvement in the character of this article since the enforcement of the Adulteration Act. The following synopsis is of interest:—



## SESSIONAL PAPER No. 14

Year of Inspection.	Percentage of Adulteration.
1876 and 1877 .....	83.0
1878 .....	70.0
1879 .....	50.0
1880 .....	43.0
1881 .....	66.6
1882 .....	69.0
1883 .....	65.0
1884 .....	71.0
1885 .....	57.3
1886 .....	51.3
1888 .....	69.0
1890 .....	52.0
1891 .....	58.5
1894 .....	46.8
1896 .....	27.4
1899 .....	20.0
1900 .....	22.7
1904 .....	55.4
1905 .....	42.0
1908 .....	24.1
1910 .....	16.6
1913 (black) .....	17.0
1913 (white) .....	19.0
1915 (white) .....	4.1

I beg to recommend publication of this report as Bulletin No. 314

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1915.								
Feb. 26	White Pepper.	64111	J. L. Wilson & Co., Halifax, N. S.	3 pkgs	22	W. H. Schwartz & Sons, Halifax, N.S.	Mfrs.....	
Mar. 4	"	64112	Bauld Bros., Ltd., Halifax, N. S.	3 "	27	" " "	" "	
" 4	"	64113	Wm. Moore, Halifax, N. S.	$\frac{3}{4}$ lbs.	30	J. P. Mott & Co., Halifax, N. S.	" "	
" 4	"	64114	R. B. Sceton & Co., Halifax, N. S.	3 pkgs	27	W. H. Schwartz & Sons, Halifax, N.S.	" "	
" 5	"	64115	Payzant & King, Halifax, N. S.	3 "	21	J. P. Mott & Co., Halifax, N. S.	" "	
" 5	"	65116	Nat. Drug & Chem. Co., Halifax, N. S.	$\frac{3}{4}$ lbs.	30	Vendors	" "	
" 5	"	64117	Jas. Scott & Co., Halifax, N. S.	$\frac{3}{4}$ "	30	W. H. Schwartz & Sons, Halifax, N.S.	Mfrs. ....	
" 5	"	64118	Brown Bros. & Co., Halifax, N. S.	$\frac{3}{4}$ "	30	S. H. Ewing & Sons, Montreal.	" "	
" 6	"	64119	John P. Mott & Co., Halifax, N. S.	$\frac{3}{4}$ "	30	Vendors	" "	
" 9	"	64120	W. H. Schwartz & Sons, Halifax, N. S.	$\frac{3}{4}$ "	27	"	" "	
" 12	"	64121	Yerxas, Kentville, N.S.	3 pkgs	30	H. W. Cole, St. John, N. B.	Mfrs.....	
" 12	"	64122	" " "	3 "	30	White Swan S. & C Co., Toronto, Ont.	" "	
" 12	"	64123	Cross & De Wolfe, Kentville, N. S.	3 "	30	McCready & Sons, St. John, N. B.	" "	
" 15	"	64124	H. S. Hall, Bridgewater, N. S.	3 "	30	Todhunter & Mitchell Co., Toronto.	" "	
" 16	"	64125	B. G. Oxner, Lunenburg, N. S.	3 "	30	Gorman Eckhart, Toronto.	" "	

DISTRICT OF NOVA SCOTIA—

Feb. 19	White Pepper.	65821	2 Barker's Ltd., New Glasgow, N. S.	3 tins.	27	McLaren's, Ltd., Hamilton, Ont.	Unknown. ....	
" 19	"	65825	James McArthur, New Glasgow, N. S.	3 "	30	G. E. Barbour, St. John, N. B.	Mfrs.....	
" 19	"	65826	James Cavanagh, New Glasgow, N. S.	1 lb ..	40	" " "	" "	
" 19	"	65827	C. Grant, New Glasgow, N. S.	3 tins.	30	Gorman, Eckert & Co., London, Ont.	" "	
" 19	"	65828	" " "	3 pkgs	30	W. H. Schwartz, Halifax, N. S.	Unknown	
" 19	"	65829	A. J. Roop, New Glasgow, N. S.	1 lb ..	40	Gorman, Eckert & Co., London, Ont.	Mfrs.....	
" 19	"	65830	S. M. Lockhart, New Glasgow, N. S.	3 pkgs	30	G. E. Barbour, St. John, N. B.	" "	
" 19	"	65831	D. J. Murray, New Glasgow, N. S.	3 "	30	C. H. Cochrane & Co., Ottawa.	Unknown	

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WHITE PEPPER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

R. J. WAUGH, INSPECTOR.

	p. c.			
.....	1.04	Pepper tissues only .....	64111	Genuine
.....	0.86	" " .....	64112	"
.....	1.16	" " .....	64113	"
.....	1.06	" " .....	64114	"
.....	1.02	" " .....	64115	"
.....	1.06	" " .....	64116	"
.....	1.29	" " .....	64117	"
.....	1.20	" " .....	64118	"
.....	1.14	" " .....	64119	"
.....	1.26	" " .....	64120	"
"Thistle" Brand.....	2.50	" " .....	64121	"
White Swan Brand.....	1.80	" " .....	64122	"
.....	1.14	" " .....	64123	"
.....	0.86	" " .....	64124	"
.....	1.20	" " .....	64125	"

W. A. PETIPAS, TEMPORARY INSPECTOR.

.....	1.02	Pepper tissues only .....	65824	Genuine
.....	0.90	" " .....	65825	"
.....	0.92	" " .....	65826	"
.....	1.98	" " .....	65827	"
.....	1.14	" " .....	65828	"
.....	1.68	" " .....	65829	"
.....	1.00	" " .....	65830	"
.....	0.82	" " .....	65831	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF PRINCE EDWARD ISLAND—

1915.							
April 8	White Pepper.	60165	Jenkins & Son, Charlottetown, P.E.I.	1 lb..	40	John P. Mott & Co., Halifax, N.S.	
" 8	" ..	60166	Beer & Goff, Charlotte-town, P.E.I.	3 pkgs	30	" " ..	
" 8	" ..	60167	Coffin & Co., Charlotte-town, P.E.I.	1 lb..	40	W. H. Schwartz & Son, Halifax, N.S.	
" 8	" ..	60168	E. Toombs, Charlotte-town, P.E.I.	1 " ..	40	.....	Carvell Bros., Charlottetown, P.E.I.
" 8	" ..	60169	W. W. Walker, Charlottetown, P.E.I.	1 " ..	40	W. H. Schwartz & Son, Halifax, N.S.	

DISTRICT OF NEW BRUNSWICK—

Jan. 29	White Pepper.	59686	H. W. Cole, Ltd., St. John, N.B.	1 lb..	30	Vendors.....	
" 30	" ..	59687	Dearborn & Co., St. John, N.B.	3 tins.	40	" ..	
Feb. 1	" ..	59688	2 Barkers, Ltd., St. John, N.B.	1 lb..	30	" ..	
" 3	" ..	9689	Walter Gilbert, St. John, N.B.	3 tins.	30	Pure Gold Mfg. Co., Ltd., Toronto, Ont.	
" 9	" ..	59690	G. E. Barbour Co., Ltd., St. John, N.B.	3 pkgs	30	" " ..	
" 9	" ..	59691	Puddington, Wetmore, Morrison, Ltd., St. John, N.B.	1 lb..	25	" " ..	
" 10	" ..	59692	L. H. Thorne, St. John, N.B.	1 " ..	30	" " ..	
" 16	" ..	59693	Hill Bros., St. Stephen, N.B.	1 " ..	50	Wright, Crossley & Co., Liverpool, Eng.	
" 19	" ..	59694	Baird & Peters, Fredericton, N.B.	3 pkgs	30	Jno. P. Mott & Co., Halifax, N.S.	
" 24	" ..	5695	J. L. White, Grand Falls, N.B.	3 " ..	30	G. E. Barbour & Co., Ltd., St. John, N.B.	
Mar. 2	" ..	59696	Sussex Mercantile Co., Ltd., Sussex, N.B.	1 lb..	50	H. W. Cole, Ltd., St. John, N.B.	
" 3	" ..	59697	Reed Co., Ltd., Moncton, N.B.	3 pkgs	26	Jno. P. Mott & Co., Halifax, N.S.	
" 3	" ..	59698	Geo. A. Robertson, Moncton, N.B.	1 lb..	40	S. H. & A. S. Ewing, Montreal.	
" 3	" ..	59699	Simon Melanson, Moncton, N.B.	1 " ..	40	C. H. Cochrane & Co., Ottawa, Ont.	
" 3	" ..	59700	J. T. Ryan, Moncton, N.B.	3 pkgs	30	Nat. Drug and Chem. Co., St. John, N.B.	

DISTRICT OF QUEBEC CITY—

Jan. 20	Poivre Blanc.	60774	Arthur Drolet, 712 Rue St. Valier, Quebec.	1 lb..	40	Unknown.....	Langlois & Paradis.
" 22	" ..	60775	Myrand & Pouliot, 70 Rue de la Couronne, Quebec.	1 " ..	50	" ..	J. B. Renaud & Cie.

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WHITE PEPPER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

WM. WEEKS, INSPECTOR.

	p. c.			
.....	1.18	Pepper tissues only .....	60165	Genuine.
.....	0.86	" " .....	60166	"
.....	1.08	" " .....	60167	"
.....	1.32	" " .....	60168	"
.....	1.54	" " .....	60169	"

JOHN C. FERGUSON, INSPECTOR.

.....	1.08	Pepper tissues only .....	59686	Genuine.
" National Brand " .....	2.40	" " .....	59687	"
.....	1.20	" " .....	59688	"
.....	1.16	" " .....	59689	"
" Acorn Brand " .....	1.02	" " .....	59690	"
.....	4.01	" " Black Pepper	59691	" Is black pepper
.....	1.14	" " .....	59692	"
.....	1.10	" " .....	59693	"
.....	1.16	" " .....	59694	"
" Acorn Brand " .....	6.06	" " Black Pepper	59695	" Is black pepper
.....	2.50	" " .....	59696	"
.....	1.14	" " .....	59697	"
.....	2.24	" " .....	59698	"
.....	0.92	" " .....	59699	"
.....	1.10	" " .....	59700	"

F. N. W. E. BELAND, INSPECTOR.

.....	1.57	Pepper tissues only .....	60774	Genuine.
.....	1.23	" " .....	60775	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC CITY--

1915.							
Jan. 22	Poivre Blanc.	60776	C. Rivérin, 55 Rue de la Couronne, Quebec.	1 lb.	50	Unknown.....	Turcotte & Frere
" 22	" ..	60777	W. Pampalon, 120 Rue D'Orchester, Quebec.	1 " ..	40	.....	N. Turcotte & Cie.
" 26	" ..	60778	Eng. Lacasse, 48 Rue St. Ambroise, Quebec.	1 " ..	50	Unknown. ....	" .....
" 26	" ..	60779	J. B. Lapointe, 57 Rue St. Ambroise, Quebec.	1 " ..	40	" .....	" .....
" 26	" ..	60780	W. Bilodeau, 13 Rue St. Therese, Quebec.	1 " ..	40	" .....	Unknown .....
" 26	" ..	60781	Jean Gauthier, 50 Rue Boilard, Quebec.	1 " ..	40	" .....	Turcotte & Frere
" 26	" ..	60782	J. Pepin, 132 Rue Massue, Quebec.	1 " ..	40	Ewing & Co., Montreal.	Mfrs. ....
" 26	" ..	60783	E. Belzerite, 190 Rue Massue, Quebec.	1 " ..	40	Unknown.....	Drouin & Frere.
" 26	" ..	60784	Jos. Peltier, 185 Rue Massue, Quebec.	1 " ..	40	" .....	J. B. Renaud & Cie.
" 26	" ..	60785	R. Picard, 132 Rue St. Luc, Quebec.	1 " ..	40	" .....	Drouin & Frere.
" 26	" ..	60786	D. Barrette, 142 Rue Napoleon, Quebec.	1 " ..	40	" .....	Quebec Preserving Co.
" 26	" ..	60787	De l'Petitlere, 99 Rue St. Germain.	1 " ..	40	" .....	N. Rioux & Cie.
" 26	" ..	60788	Jos. Blondeau, 101 Rue St. Germain, Quebec.	1 " ..	40	" .....	N. Turcott & Cie.

DISTRICT OF QUEBEC PROVINCE--

Jan. 18	Poivre Blanc..	3745	Syndica de Thetford Mines.	1 lb..	40	S. H. Ewing & Son Montreal.	.....
" 20	" ..	3751	John O'Brien, Black Lake, Megantic.	3 boîte	30	Chaput & fils, Montreal.	.....
" 25	" ..	3756	Dodier Crate, Levis. .	1 lb.	40	C. H. Cochrane & Co., Ottawa.	.....
" 28	" ..	3771	Louis Mercier & Co., Levis.	1 " ..	40	Unknown. ....	.....
" 30	" ..	3777	Frs. Bourret, 145 St. Paul, Quebec.	1 " ..	45	" .....	Unknown .....
Feb. 2	" ..	3782	P. L. Turgeon, Enregistreur, Quebec.	1 " ..	40	S. H. Ewing & Son Montreal.	.....
" 2	" ..	3783	Boyer & Son, Quebec.	1 " ..	50	Leblanc, Ltd., Montreal.	.....
" 4	" ..	3787	A. Boily, Quebec ....	1 " ..	40	Herron Leblanc, Ltd., Montreal.	.....
" 10	" ..	3789	Lacasse & Ande, St. Etward	1 " ..	40	Dorchester Lumber.	.....
" 11	" ..	3792	G. E. Dussault, St. Marguerite.	1 " ..	40	Brunnette & Cie, Quebec.	.....
" 8	" ..	3503	Adelard Belanger, St. Lazare.	1 " ..	35	Drouin Frere & Ratt-ray, Quebec.	.....
" 8	" ..	3504	Alph. Bilodeau, St. Lazare.	1 " ..	35	Naz. Turcotte & Cie.	.....

SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

*Concluded.*

	p.c.			
.....	1.51	Pepper tissues only. . . . .	60776	Genuine.
.....	2.26	Pepper tissues and about 30 to 40 wheat starch.	80777	Adulterated.
.....	2.86	Pepper tissues and about 15 to 20 maize starch.	60778	"
.....	1.15	Pepper tissues only.....	60779	Genuine.
.....	2.21	" " .....	60780	"
.....	1.84	" " .....	60781	"
.....	2.14	" " .....	60782	"
.....	1.88	" " .....	60783	"
.....	1.84	" " .....	60784	"
.....	2.66	" " .....	60785	"
.....	1.15	" " .....	60786	"
.....	1.17	" " .....	60787	"
.....	1.14	" " .....	60788	"

J. E. AUDET, N. CADIEUX, T. GENDRON, ALF. PELLETIER, TEMP. INSPECTORS

.....	2.83	Pepper tissues only . . .	3745	Genuine.
.....	3.23	" " .....	3751	"
.....	2.07	" " .....	3756	"
.....	3.78	" " .....	3771	"
.....	1.16	" " .....	3777	"
.....	2.19	" " .....	3782	"
.....	2.35	" " .....	3783	"
.....	2.31	" " .....	3787	"
.....	1.10	" " .....	3788	"
.....	2.77	" " .....	3792	"
.....	2.03	" " .....	3803	"
.....	2.21	" " and about 20 to 30 per cent wheat starch.	3804	Adulterated.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC PROVINCE—

1915.							
Feb. 8	Poivre Blanc..	3507	J. B. W. Roy, St. Ger- vais.	1 lb..	40	Turcotte frere, Que- bec.	.....
" 8	" ..	3509	G. Carrier, St. Gervais.	1 "	30	W. Brumet & Cie...	.....
" 9	" ..	3511	J. Bhacone, St. Charles	1 "	35	J. B. Renaud & Cie, Quebec.	.....
" 9	" ..	3513	Joseph Laboute, St. Charles.	1 "	35	Turcotte & freres. . .	.....
" 9	" ..	3514	Alph. Nadeau, St Char- les.	1 "	40	Langlois & Paradis..	.....
" 9	" ..	3518	Geo. Roy, St. Michel..	1 "	40	S. H. Ewing & Son, Montreal.	.....
" 9	" ..	3520	Louis Carriveau, St. Michel.	1 "	35	Turcotte & freres, Quebec.	.....
" 10	" ..	3522	Eugene Bolduc, St. Valier.	1 "	40	" ..	.....
" 10	" ..	3524	L. N. Roy, St. Valier..	1 "	40	Langlois & Paradis..	.....
" 10	" ..	3525	Achille E. Lanarre, St. Valier.	1 "	30	Canadian Spice Mills, Quebec.	.....
" 10	" ..	3526	Theodore Bernard, St. Raphael.	1 "	35	Quebec Preserving Co., Quebec.	.....
" 10	" ..	257	Dame Nap. Fournelle, St. Agathe des Monts	1 livre	50	Watt Godon & Co..	.....
" 10	" ..	258	Rodrigue Touchette, St. Agathe des Monts.	1 "	40	Laporte & Martin...	.....
" 10	" ..	259	Dne. L. W. Brisette, St. Agathe des Monts	1 "	40	Hudon Hebert & Cie	.....
" 10	" ..	260	H. Giroux, St. Agathe des Monts.	1 "	40	S. H. Ewing.....	.....
" 10	" ..	261	Noe Forget, St. Agathe des Monts.	1 "	40	Hudon & Orsali...	.....
Jan. 20	" ..	2737	Ed. Dancans Mont- magny.	1 lb..	40	.....	Whitehead & Turner, Quebec
" 20	" ..	2738	Emile Dube, Mont- magny.	1 "	40	.....	J. B. Renaud, Quebec.
" 21	" ..	2739	Romeo L. Esperance, Montmagny.	1 "	50	.....	J. V. Boudrias, Ltd., Montreal
" 27	" ..	2741	Alp. Letournean, St. Pierre, Montmagny Co	1 "	40	.....	Turcotte Frere & Cie, Quebec.
" 28	" ..	2743	Pierre Morin, Cap. St. Ignace	1 "	40	.....	C. A. Carrier & fils, Ltd., Levis.
" 30	" ..	2747	Joseph Fourrier, St. Thomas, Montmagny Co.	1 "	40	.....	N. Rioux & Cie, Quebec.
Feb. 1	" ..	56438	Uillz Kirouac, Cacouna.	1 "	45	.....	T. Langlais, Fraserville.
" 1	" ..	56439	Pierre Roy "	1 "	40	.....	Turcotte & Frere, Quebec.
" 1	" ..	56440	J. Erneste Dugas "	1 "	40	.....	T. Langlais, Fraserville.
" 1	" ..	56441	H. J. Servis & Cie "	1 "	40	.....	Turcotte & Frere, Quebec.
" 3	" ..	56445	Joseph Thivierge, Isle Verte.	1 "	40	.....	N. Rioux, Que- bec.



SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

*Concluded.*

	p. c.			
.....	1.58	Pepper tissues only.....	3507	Genuine.
.....	1.92	".....	3509	"
.....	1.72	" and about 10 per cent wheat starch.	3511	Adulterated.
.....	1.98	Pepper tissues and about 20 to 30 per cent maize starch	3513	"
.....	1.15	Pepper tissues only.....	3514	Genuine.
.....	2.28	".....	3518	"
.....	1.65	".....	3520	"
.....	1.97	".....	3522	"
.....	1.15	".....	3524	"
.....	1.07	".....	3527	"
.....	1.47	".....	3529	"
.....	2.25	".....	257	"
.....	1.50	".....	258	"
.....	2.26	".....	259	"
.....	2.61	".....	260	"
.....	1.52	".....	261	"
.....	2.26	".....	2737	"
.....	1.41	".....	2738	"
.....	2.93	".....	2739	"
.....	1.50	".....	2741	"
.....	1.04	".....	2743	"
.....	1.49	".....	2745	"
.....	2.83	".....	36438	"
.....	2.26	" and about 40 to 50 per cent maize and wheat starch	36439	Adulterated.
.....	2.85	Pepper tissues only.....	36440	Genuine.
.....	1.62	".....	36441	"
.....	0.96	".....	36442	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF THREE RIVERS—

1915.							
Jan.	18	Poivre Blanc..	3940	Joseph Dufresne, Joliette.	1 lb.	24	Herron L-blanc, Montreal
"	19	"	3911	Joseph Bordelean, Joliette.	1 "	50	Chevalier et Pouliot, Joliette.
"	20	"	3942	W. M. Perrault, Joliette	1 "	50	Chevalier et Magnan, Joliette.
"	20	"	3943	J. A. Boisvert "	1 "	50	Chevalier et Pouliot, Joliette.
"	20	"	3944	I. E. Dufont "	1 "	40	F. F. Dalley Co., Ltd., Hamilton.
"	21	"	3945	W. H. Lacasse, L'Assomption.	1 "	35	Chevalier et Pouliot, Joliette.
"	21	"	3946	Edmond Lafortune, L'Assomption.	1 "	36	" "
"	21	"	3947	Theodore Poisy, L'Assomption.	1 "	35	S. H. Ewing, Montreal.
"	22	"	3948	A. Chanssé, L'Assomption.	1 "	40	Gilbert Hamel Cie., 696 Mount Royal.
"	22	"	3949	Arthur Lafortune, L'Assomption.	1 "	40	Hudon & Orsali, Montreal.
"	22	"	3950	Elzear Parent, L'Assomption.	1 "	40	Chevalier et Pouliot, Joliette.
"	20	"	3951	Camille Barrette, Joliette.	1 "	40	J. J. Soumis, Joliette.
"	27	"	3953	J. Bte. Rivest, Joliette.	1 "	40	"
"	27	"	3954	I. H. Deblois "	1 "	50	Jos. Dufresne, Joliette.
"	27	"	3923	H. Moreau "	1 "	40	S. H. Ewing, Montreal.

DISTRICT OF EASTERN TOWNSHIPS—

Feb.	9	Poivre Blanc..	1772	Ginn & Elliott, Richmond.	1 lb.	30	Mathewson's Sons, Montreal.
"	9	"	1773	N. A. Kewalk, Warwick	1 "	40	S. H. Ewing & Sons, Montreal.
"	9	"	1774	J. E. Guhnet, Danville	1 "	40	The F. F. Dally Co., Ltd., Hamilton.
"	10	"	1775	J. H. A. Lafontaine, Victoriaville.	1 "	40	L. Chaput fils & Cie, Montreal.
"	11	"	1776	E. A. McKee, Coaticook.	1 "	40	The F. F. Dally Co., Ltd., Hamilton.
"	16	"	1777	W. S. Samson & Son, Windsor Mills.	1 "	40	Unknown
"	16	"	1778	W. B. Murray, Sherbrooke E.	1 "	40	Pure Gold Mfg. Co., Ltd., Hamilton.
"	16	"	1779	Denault Grain & Prov. Co., Ltd., Sherbrooke, E.	1 "	32	Herron Leblanc, Montreal.

SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report. (Is not an expression of opinion)	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

Dr. V. P. LAVALLEE, INSPECTOR.

	p. c.			
.....	2 20	Pepper tissues only. ....	3940	Genuine.
.....	1 27	" " .....	3941	"
.....	2 08	" " .....	3942	"
.....	1 09	" " .....	3943	"
.....	1 43	" " .....	3944	"
.....	1.13	" " .....	3945	"
.....	1 68	" " .....	3946	"
.....	2 19	" " .....	3947	"
.....	2 06	" " and about 35 to 40 wheat starch.	3948	Adulterated.
.....	2 40	Pepper tissues only . ....	3949	Genuine.
.....	1 10	" " .....	3950	"
.....	1 65	" " .....	3951	"
.....	2 24	" " .....	3953	"
.....	2 28	" " .....	3954	"
.....	2 72	" " .....	3923	"

J. C. ROULEAU, INSPECTOR

.....	2 91	Pepper tissues only, ....	1772	Genuine.
.....	2 41	" " and foreign stone cells (examut or olive stones)	1773	Adulterated
.....	1 16	Pepper tissues only . ....	1774	Genuine.
Guaranteed pure	1 26	" " .....	1775	"
.....	1 17	" " .....	1776	"
.....	2 24	" " .....	1777	"
.....	1 30	" " .....	1778	"
.....	2 52	" " .....	1779	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF EASTERN TOWNSHIPS—

1915.							
Feb. 17	Poivre Blanc.	1780	Kathan & Hopkins, Rock Island.	3pkgs.	30	Lymans, Ltd., Montreal.	
" 18	" ..	1781	Monty freres, Granby	1 lb.	40	Unknown.....	
" 18	" ..	1782	W. D. Bradford, Granby	1 "	40	Pure Gold Mfg. Co., Ltd., Toronto.	
Mar. 25	" ..	1783	A. E. Chabot, St. Hyacinthe.	1 "	40	Laporte Martin, Montreal.	F. H. Leblanc, St. Hyacinthe.
" 25	" ..	1784	E. A. Gendron, St. Hyacinthe.	$\frac{3}{4}$ "	30	.....	E. Lafrance, St. Hyacinthe.
" 25	" ..	1785	Lassonde & freres, St Hyacinthe.	1 "	40	L. Chaput fils & Cie, Montreal.	
" 25	" ..	1786	J. B. St. Pierre, St. Hyacinthe.	1 "	40	J. V. Boudrias, Montreal.	

DISTRICT OF MONTREAL—

Jan. 26	White Pepper	62246	H. Legault, 89 Mul-larky ave., Verdun.	1 lb.	45	.....	Labreque & Pellerin, Montreal.
" 26	" ..	62647	A. Forget, 211 Mul-larky ave., Verdun.	1 "	40	.....	Unknown.....
" 26	" ..	62648	J. J. Bowen, 115 Gertrude st., Verdun.	1 "	30	.....	.....
" 26	" ..	62649	Nap. Rochon, 108 Gertrude St., Verdun.	1 "	40	.....	Kearney Bros., Montreal.
" 26	" ..	62650	N. Lalonde, 1 Church Ave., Verdun.	1 "	40	.....	The Nat. Coffee and Spice Co., Montreal.
Feb. 1	" ..	62651	J. Harvey, 82Clande St., Verdun.	1 "	40	.....	L. Chaput fils et Cie, Montreal.
" 1	" ..	62652	R. W. Hadley, 35 Gordon Ave., Verdun.	1 "	40	.....	S. H. Ewing & Sons, Montreal.
" 2	" ..	62653	Dionne & Dionne, 4120 St. Cath. St. West, Westmount.	1 "	50	.....	" "
" 2	" ..	62654	E. J. Quinn, 4201 St. Cath. St. West, Westmount.	3 tins.	39	McLarens, Ltd., Hamilton, Ont.	.....
" 3	" ..	62655	G. Corbo, 35 Notre Dame, St., Lachine.	1 lb.	40	.....	L. Chaput & fils, Montreal.
Mar. 9	" ..	62656	A. Beaudoin, 132 Delormier Ave., Montreal.	1 "	40	.....	Unknown.....
" 9	" ..	62657	I. Pelonsky, 10 Dorchester St. West, Montreal.	1 "	40	.....	J. Edelberg, Montreal.
" 9	" ..	62658	E. Arshnoff, 168 Clarke St., Montreal.	1 "	25	.....	" "
" 9	" ..	62659	I. Goodman, 11 Lagachetiere St. West, Montreal.	1 "	35	.....	M. Lavnt, Montreal.
11	" ..	62660	DuLilly & frere, 586 Notre Dame St., Missis-sauga, Montreal.	1 "	40	.....	Herron Leblanc, Montreal.

SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

Concluded.

	p. c.			
.....	1.12	Pepper tissues only.....	1780	Genuine.
.....	1.62	" " " .....	1781	"
.....	2.88	" " " .....	1782	"
.....	2.81	" " " .....	1783	"
.....	1.69	" " " .....	1784	"
.....	1.19	" " " .....	1785	"
.....	2.28	" " " .....	1786	"

D. J. KEARNEY, INSPECTOR.

.....	1.78	Pepper tissues only.....	62646	Genuine.
.....	2.52	" " " .....	62647	"
.....	1.68	Pepper tissues and about 40 to 50% wheat and maize starches	62648	Adulterated.
.....	1.16	Pepper tissues only.....	62649	Genuine.
.....	2.19	" " " .....	62650	"
.....	1.07	" " " .....	62651	"
.....	1.55	" " " .....	62652	"
.....	1.10	" " " .....	62653	"
.....	1.06	" " " .....	62654	"
.....	2.34	" " " .....	62655	"
.....	2.23	" " " .....	62656	"
.....	2.49	" " " .....	62657	"
.....	1.64	" " " .....	62658	"
After purchase Vendor said it was Compound.	2.32	" " " and about 35 to 45% Maize Starch.	62659	Adulterated
.....	3.00	Pepper tissues only.....	62660	Genuine

7 GEORGE V, A. 1917

BULLETIN No. 314—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF VALLEYFIELD—

1915.							
Feb. 1	White Pepper.	58211	F. Giroux, St. Johns, P. Q.	1 lb.	30	.....	.....
" 1	"	58212	E. D. Leblanc, "	1 "	30	J. V. Boudrias, Montreal.	.....
" 1	"	58213	J. B. Latour, "	1 "	40	" "	.....
" 1	"	58214	H. Dubois, "	1 "	40	S. H. Ewing & Sons, Montreal.	.....
" 1	"	58215	A. Alexandre, "	1 "	40	Simard & Brossard, Montreal.	.....
" 5	"	58216	R. Lanctot, Valleyfield.	1 "	40	S. H. Ewing & Sons, Montreal.	.....
" 5	"	58217	A. Daoust, "	1 "	40	F. F. Dalley Co., Ltd.	.....
" 5	"	58218	W. J. McPherson, "	1 "	40	.....	.....
" 5	"	58219	Primeau freres, "	1 "	40	F. F. Dalley Co., Ltd.	.....
" 16	"	58220	W. Be t-and, Bucking- ham.	1 "	40	S. H. Ewing & Sons, Montreal.	.....
" 16	"	58221	William O'Neill, "	1 "	40	F. F. Dalley Co., Ltd.	.....
" 16	"	58222	Wm. Griffiths, "	3pkgs.	30	White Swan, S. & C. Co., Ltd.	.....
" 16	"	58223	J. A. D'Aoust, "	1 lb.	35	S. H. Ewing & Sons, Montreal.	.....
" 23	"	58224	J. E. Ballargeon, Farn- ham.	3pkgs.	30	Gorman Eckhart & Co., London, Ont.	.....
" 23	"	58225	Ed. Bienvenu, "	1 lb.	40	White Swan, S. & C. Ltd.	.....

## DISTRICT OF OTTAWA—

Jan. 12	White Pepper.	63562	P. Lapensee, Cornwall.	1 lb.	40	Unknown .....	Ford Bros., McGill street, Montreal.
" 12	"	63563	M. M. Mulhern, Corn- wall.	1 "	40	.....	Mathewson's Sons, Montreal.
" 12	"	63564	M. L. Smith, Cornwall.	1 "	40	Gorman Eckert, Lon- don, Ont.	.....
" 13	"	63565	Fawthroys Bros, Corn-	1 "	50	.....	Mathewson's Sons, Montreal.
" 28	"	63566	John Hughes, Prescott.	1 "	40	Unknown.....	Unknown .....
" 28	"	63567	Doyle Bros, Prescott..	1 "	40	Dalton Bros, Toronto.	Gilmour & Co., Brockville.
" 28	"	63568	J. H. Bralley, Prescott	1 "	40	J. M. Lowes, Ltd., Toronto.	.....
" 28	"	63569	McDermott & McCar- thy, Prescott.	1 "	40	Unknown .....	Unknown .....
" 28	"	63570	C. Whitney & Son, Prescott	1 "	40	Hamilton Coffee and Spice Co., Hamil- ton.	.....

SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report (is not an expression of opinion).	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Total Ash.			

J. J. COSTIGAN, INSPECTOR.

	p. c.			
.....	1.09	Pepper tissues only.....	58211	Genuine.
.....	2.36	" .....	58212	"
.....	1.37	" .....	58213	"
.....	2.70	" .....	58214	"
.....	2.18	" and about 20 to 37% Maize and Wheat Starches.	58215	Adulterated.
.....	2.68	Pepper tissues only.....	58216	Genuine.
.....	1.17	" .....	58217	"
.....	1.39	" .....	58218	"
.....	1.16	" .....	58219	"
.....	3.21	" .....	58220	"
.....	1.28	" .....	58221	"
.....	1.08	" .....	58222	"
.....	2.26	" .....	58223	"
.....	1.97	" .....	58224	"
.....	2.14	" .....	58225	"

J. A. RICKEY, INSPECTOR.

.....	2.24	Pepper tissues only ..	63562	Genuine.
.....	1.66	" .....	63563	"
.....	0.97	" .....	63564	"
.....	1.16	" .....	63565	"
.....	1.07	" .....	63566	"
.....	3.08	" .....	63567	"
.....	2.85	" .....	63568	"
.....	1.03	" .....	63569	"
.....	1.95	" .....	63570	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF OTTAWA—

1915.							
Jan. 23	White Pepper	63571	R. A. Scott & Co., Prescott.	1 lb.	40	C. H. Cochrane & Co., Ottawa.	
" 30	"	63572	R. G. Jamieson, Maxville.	1 "	40		H. N. Bate & Sons, Ottawa.
" 30	"	63573	Smillie & McDiarmid, Maxville.	1 "	50	Pure Gold Mfg. Co., Toronto.	
" 30	"	63574	P. Tracey, Maxville.	1 "	45	Unknown.	
Feb. 4	"	63575	D. G. Cowan, 1227 Bank St., Ottawa.	1 "	40	The J. M. Lowes Co., Ltd., Toronto.	
" 4	"	63576	R. H. Beck, 1150 Bank St., Ottawa.	1 "	40	Dalton Bros., Toronto.	

DISTRICT OF KINGSTON—

Feb. 1	White Pepper.	66511	W. E. Hopkinson, Kingston.	1 lb.	40	F. F. Dalley Co., Hamilton.	
" 3	"	66512	W. J. Nesbitt, Kingston.	1 "	40	J. M. Lowes Co., Toronto.	
" 3	"	66513	J. Culien, Kingston.	1 "	40		Andrew Maclean, Kingston.
" 3	"	66514	C. H. Pickering, Kingston.	1 "	60	Gorman Eckert Co., London.	
" 3	"	66515	Anderson Bros., Kingston.	1 "	40	J. M. Lowes Co., Toronto.	
" 15	"	66516	H. C. Hampton, Belleville.	1 "	40		J. Walmsley Co., Belleville.
" 15	"	66517	A. Kellaway, Belleville.	1 "	40	J. M. Lowes Co., Toronto.	
" 15	"	66518	J. H. P. Young, Belleville.	1 "	40	Pure Gold Mfg. Co., Toronto.	
" 16	"	66519	Thos. McIntosh, Cobourg.	1 "	40	Todhunter Mitchell, Toronto.	
" 16	"	66520	W. P. Platt, Cobourg.	1 "	40	"	
" 16	"	66521	Estate Hugh Crozier, "	1 "	38	Dalton Bros., Toronto	
" 16	"	66522	T. R. Harvey & Son, "	1 "	50	Todhunter Mitchel, Toronto.	
" 16	"	66523	F. H. Brown, Port Hope.	1 "	50	Pure Gold Mfg. Co., Toronto.	
" 16	"	66524	A. H. Jordan, Port Hope.	1 "	50	Gorman Eckert Co., London, Ont.	
" 17	"	66525	W. J. Roulty, Peterboro.	1 "	40	F. F. Dalley Co., Hamilton.	

DISTRICT OF TORONTO—

Feb. 16	White Pepper	64475	Geo. Cowie, Richmond Hill.	1 lb.	40		Unknown.
" 16	"	64476	Towns & Morris, Aurora	1 "	40		"



SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

*Concluded.*

	p.c.			
.....	0 87	Pepper tissues only . . . . .	63571	Genuine.
.....	2 28	" " . . . . .	63572	"
.....	0 97	" " . . . . .	63573	"
.....	1 46	" " . . . . .	63574	"
.....	1 06	" " . . . . .	63575	"
.....	2 41	" " . . . . .	63576	"

JAS. HOGAN, INSPECTOR.

.....	1 58	Pepper tissues only . . . . .	66511	Genuine.
.....	1 81	" " . . . . .	66512	"
.....	1 35	" " . . . . .	66513	"
.....	3 43	" " . . . . .	66514	"
.....	3 57	" " . . . . .	66515	"
.....	1 91	" " . . . . .	66516	"
.....	1 84	" " . . . . .	66517	"
.....	1 34	" " . . . . .	66518	"
.....	1 39	" " . . . . .	66519	"
.....	1 14	" " . . . . .	66520	"
.....	1 12	" " . . . . .	66521	"
.....	1 41	" " . . . . .	66522	"
.....	1 15	" " . . . . .	66523	"
.....	1 15	" " . . . . .	66524	"
.....	1 40	" " . . . . .	66525	"

H. J. DAGER, INSPECTOR.

.....	2 17	Pepper tissues only . . . . .	64671	Genuine.
.....	1 13	" " . . . . .	64672	"

7 GEORGE V, A. 1917

BULLETIN No. 314—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF TORONTO—

1915.							
Feb. 16	White Pepper.	64677	Hamilton Bros, New-market.	1 lb.	30	.....	Thos. Kinnear Toronto.
" 16	"	64678	G. H. Knowles, New-market.	1 "	40	Todhunter Mitchell & Co. Toronto.	.....
" 17	"	64679	A. Burrows, Sutton....	1 "	40	.....	F. W. Humphrey Toronto.
" 17	"	64680	M. E. Hamilton "	1 "	35	.....	Unknown.....
" 18	"	64681	S. D. Corvelty, Oshawa.	1 "	40	.....	" .....
" 18	"	64682	H. A. Ross, "	1 "	40	Todhunter Mitchell & Co., Toronto.	.....
" 18	"	64683	A. T. Lawler, Whitby..	1 "	40	.....	Unknown.....
" 22	"	64684	H. M. Sealey, 106 Mutual St., Toronto	1 "	40	J. M. Lowes Co. Ltd., Toronto.	.....
" 22	"	64685	C. Grant, 287 Gerrard St. east, Toronto.	1 "	35	Pure Gold Mfg. Co. Ltd., Toronto.	.....
" 24	"	64686	Groves Bros, 483 Church St., Toronto.	1 "	40	Todhunter Mitchell & Co., Toronto.	.....
" 24	"	64687	W. R. McGaw, 242 Arthur St., Toronto.	1 "	40	Pure Gold Mfg. Co. Ltd., Toronto.	.....
" 25	"	64688	J. Hutchinson, & Son Woodbridge.	1 "	40	.....	Unknown.....
" 25	"	64689	F. A. Bagg, Woodbridge	1 "	40	.....	" .....

## DISTRICT OF HAMILTON—

Mar. 2	White Pepper.	66854	A. Antie & Son, Galt ..	1 lb.	40	Litster's Pure Food Co., Ltd., Toronto	.....
" 2	"	66855	A. Graeb, Preston .....	1 "	35	.....	Eby Blair Ltd., Toronto.
" 2	"	66856	Mrs. E. Henry, Hespler	1 "	40	.....	Unknown....
" 2	"	66857	J. F. Kohli, Hespler...	1 "	40	.....	M. Masuret & Co., London.
" 3	"	66858	B. Lango, Waterloo, Ont.	1 "	40	.....	Unknown .....
" 3	"	66859	Geo. Faber, Berlin....	1 "	40	Litster's Pure Food Co., Ltd., Toronto.	.....
" 9	"	66860	Geo. E. Taylor, Paris Station.	1 "	40	White Swans & C. Co., Ltd., Toronto.	.....
" 10	"	66861	F. A. Miller, Burford.	1 "	40	.....	Unknown .....
" 10	"	64863	R. J. Welsh, Brantford.	1 "	40	.....	Geo. Foster & Sons, Ltd., Brantford.
" 11	"	66864	Thos. Wood, Beamsville	1 "	40	MacLarens, Ltd., Hamilton.	.....
" 11	"	66865	W. G. Panter, Beamsville.	1 "	40	.....	Unknown .....
" 12	"	66866	Jas. P. Kerwin, Dundas	1 "	40	.....	Geo. E. Bristol & Co., Ltd., Hamilton.

SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.	Microscopical Examinations.	No. of Sample	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

*Concluded.*

	p.c.			
Labelled pure.....	2.72	Pepper tissues only.....	64677	Genuine.
.....	2.67	" ".....	64678	"
.....	1.28	" ".....	64679	"
.....	1.45	" ".....	64680	"
.....	2.67	" and about 60 to 70 maize starch	64681	Adulterated
.....	1.07	" tissues only.....	64682	Genuine
.....	2.16	" ".....	64683	"
Labelled pure.....	1.50	" ".....	64684	"
.....	1.25	" ".....	64685	"
.....	1.04	" ".....	64686	"
.....	1.26	" ".....	64687	"
.....	0.99	" ".....	64688	"
.....	1.25	" ".....	64689	"

H. J. DAGER, INSPECTOR.

.....	1.18	Pepper tissues only.....	66854	Genuine.
Labelled, Lion, Pure ..	2.34	" ".....	66855	"
.....	2.17	" ".....	66856	"
.....	2.15	" ".....	66857	"
.....	2.58	" ".....	66858	"
.....	1.52	" ".....	66859	"
.....	1.13	" ".....	66860	"
.....	1.39	" ".....	66861	"
.....	2.82	" ".....	66862	"
.....	1.04	" ".....	66864	"
.....	1.33	" ".....	66865	"
.....	3.71	" ".....	66866	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF HAMILTON--

1915							
Mar. 12	White Pepper.	66867	D. Monro, 433 James St., North, Hamilton.	1 lb..	35	Young Windfield, Hamilton.	
" 12	"	66868	Mrs. E. Moore, 185 Park St., Hamilton.	1 "	35	" "	
" 13	"	66901	Wm. Carroll, 94 John St., South, Hamilton.	1 "	40	The F. F. Dalley Co., Ltd., Hamilton.	

DISTRICT OF WINDSOR--

Feb. 16	White Pepper.	54703	Fred. Punney, London.	$\frac{3}{4}$ lb..	30		Scandrett Bros., London.
" 16	"	54706	H. Beren, London.	1 "	40		" "
" 16	"	54707	A. R. Boug, London.	1 "	40	I. X. L. Spice & Coffee Co., London	
" 16	"	54708	Wyckoff & Gafney, London.	$\frac{3}{4}$ "	30		E. Adams & Co., London.
" 16	"	54710	J. T. May, London.	1 "	40	Gorman, Eckert Co., London.	
" 16	"	54711	R. A. Ross, London.	1 "	50	" "	
" 16	"	54713	Alfred Cane, London South.	1 "	35	I. X. L. Spice & Coffee Co., London	
" 17	"	54721	D. G. Gibb, St. Mary's.	1 "	40	Unknown	
" 17	"	54723	J. P. Rogers & Co., St. Mary's.	1 "	40	"	
" 9	"	63989	Moylan & Moylan, St. Thomas.	1 "	40	Gorman Eckert & Co., London, Ont.	
" 9	"	63992	D. H. McIntyre, St. Thomas.	1 "	40	" "	
" 9	"	63994	R. H. Cook, St. Thomas.	1 "	40	" "	
" 9	"	63996	Charles C. Raison, St. Thomas.	1 "	25		E. Adams Co., London, Ont.

DISTRICT OF MANITOBA--

Jan. 27	White Pepper.	53141	Blue Ribbon, Ltd., Winnipeg.	3 pks.	30	Vendors	
" 27	"	53142	Campbell Bros. & Wilson, Winnipeg.	3 "	Nil.	"	
" 27	"	53143	Gold Standard Mfg. Co., Winnipeg.	3 "	"	"	
" 27	"	53144	Todhunter Mitchell Coffee Co., Winnipeg.	1 lb..	"	"	
" 27	"	53145	The Dyson Co., Winnipeg.	1 "	"	"	
"	"	53146	The White Star Mfg. Co., Winnipeg.	3 pks.	"	Vendors	

SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspectors Report. (Is not an expression of opinion.)	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

Concluded.

	p.c.			
.....	1.72	Pepper tissues only. ....	66867	Genuine.
.....	1.23	" " .....	66868	"
.....	1.44	" " .....	66901	"

JNO. TALBOT, INSPECTOR.

.....	2.85	Pepper tissues only . . . . .	54703	Genuine.
.....	2.94	" " and about 30 to 40 p.c. wheat starch.	54706	Adulterated.
"Sweetheart" Brand..	1.03	Pepper tissues only. ....	54707	Genuine.
.....	1.55	" " .....	54708	"
.....	1.17	" " .....	54710	"
.....	1.61	" " .....	54711	"
.....	2.41	" " .....	55713	"
.....	1.78	" " .....	54721	"
.....	1.17	" " .....	54723	"
.....	2.42	" " .....	63989	"
.....	2.00	" " .....	63992	"
Labelled pure.	1.76	" " .....	63994	"
.....	2.72	" " .....	63996	"

A. C. LARIVIERE, INSPECTOR.

.....	1.14	Pepper tissues only . . . . .	73141	Genuine.
.....	1.43	" " .....	73142	"
.....	1.57	" " .....	73143	"
.....	1.08	" " .....	73144	"
.....	1.71	" " .....	73145	"
.....	1.52	" " .....	73146	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cost.	Manufacturer.	Furnisher.

## DISTRICT OF MANITOBA—

1915.							
Jan.	28	White Pepper.	53147	The Jobin Marrin Co., Ltd., Winnipeg.	3 pks.	Nil.	Todhunter Mitchell Co., Toronto.
Feb.	1	"	53148	H. Woodley, 470 Burrows Ave., Winnipeg.	3 "	30	The White Star Mfg. Co., Winnipeg.
"	1	"	53149	S. J. Deroche, 470 Burrows Ave., Winnipeg.	1 lb.	40	A. Macdonald & Co., Winnipeg.
"	2	"	53150	Wilton & Conley, 1322 Main St., Winnipeg.	3 pks.	30	Gorman, Eckert & Co., London.
"	2	"	53151	Moffett & Douglas, Selkirk Ave., Winnipeg.	3 "	30	Gold Standard Mfg. Co., Winnipeg.
"	3	"	53152	H. Carter, St. James.	3 "	30	The White Star Mfg. Co., Winnipeg.
"	3	"	53153	E. M. Neelands, St. James.	1 lb.	35	Gorman, Eckert Co., London, Ont.
"	3	"	53154	N. Posner, St. James.	3 pks.	30	The White Star Mfg. Co., Winnipeg.
"	4	"	53155	Brown's Ltd., Portage-la-Prairie.	3 "	40	Eby Blain, Toronto.

## DISTRICT OF SASKATCHEWAN -

Jan.	26	White Pepper.	66302	R. Taylor & Co., Indian Head, Sask.	1 lb.	50	Campbell, Wilson & Strathdee, Regina.
"	26	"	66303	Halliday & Carlisle, Indian Head, Sask.	1 "	40	" " "
"	27	"	66304	D. J. Craig, Worsley, Sask.	3 cans	30	Gold Standard Mfg. Co., Winnipeg.
"	27	"	66305	Crozier Bros., Worsley, Sask.	1 lb.	40	Campbell, Wilson & Strathdee, Regina.
"	27	"	66307	W. P. Pocock, Worsley, Sask.	1 "	40	Cameron and Heap, Regina.
"	27	"	66308	Magee & Thompson, Worsley, Sask.	1 "	40	Campbell Bros., & Wilson, Winnipeg.
"	27	"	66309	Clayton Bros. & Co., Grenfell, Sask.	1 "	50	Jobin & Marrin, Winnipeg.
"	27	"	66311	Flemming & Bennett, Grenfell, Sask.	1 "	25	McDonald's Consolidated, Winnipeg.
"	27	"	66313	Greenless & Sons, Grenfell, Sask.	1 "	50	Jobin & Marrin, Winnipeg.
"	27	"	66315	Grenfell Trading Co., Grenfell, Sask.	1 "	50	Cameron and Heap, Regina.
"	27	"	66316	James Smith, Grenfell, Sask.	3 cans	30	White Star Mfg. Co., Winnipeg.
"	27	"	66318	Whitewood Supply Co., Whitewood, Sask.	1 lb.	40	Blue Ribbon, Ltd., Winnipeg.
"	2	"	66320	J. J. Knowles & Co., Whitewood, Sask.	1 "	40	Codyville Co., Ltd., Brandon.

SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report. (Is not an expression of Opinion.)	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

*Concluded.*

	p. c.			
"Challenge" Brand.....	2 92	Pepper tissues only .....	53147	Genuine.
"White Star" Brand...	1 41	" " .....	53148	"
.....	1 54	" " .....	53149	"
"Forest City" Brand...	2 20	" " .....	53150	"
.....	2 83	" " .....	53151	"
.....	1 32	" " .....	53152	"
.....	1 25	" " .....	53153	"
.....	1 43	" " .....	53154	"
.....	2 79	" " .....	53155	"

L. H. HALL, INSPECTOR.

.....	1 30	Pepper tissues only ..	66302	Genuine
.....	1 14	" " .....	66303	"
.....	0 96	" " .....	66304	"
.....	1 15	" " .....	66305	"
.....	1 26	" " .....	66307	"
.....	1 22	" " .....	66308	"
.....	1 41	" " .....	66309	"
.....	1 98	" " .....	66311	"
.....	2 24	" " .....	66318	"
.....	3 07	" " .....	66315	"
.....	1 41	" " .....	66316	"
.....	1 16	" " .....	66318	"
.....	1 39	" " .....	66320	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF SASKATCHEWAN—

1915.							
Jan. 27	White Pepper.	66322	The Whitewood Trading Co., Whitewood, Sask.	1 lb	35	.....	Codville Co., Ltd., Brandon.
" 27	"	66324	W. J. Mackay, Moosomin, Sask.	1 " ..	50	.....	Campbell Bros. & Wilson, Winnipeg.

DISTRICT OF ALBERTA--

Mar. 12	White Pepper.	52085	Urquhart & Co., Ltd., Lacombe, Alta.	3 tins.	10	Gorman, Eckert & Co., London and Winnipeg.	.....
" 12	"	52086	R. G. Gilmour, Lacombe, Alta.	1 lb..	40	Campbell, Wilson & Horne, Calgary.	.....
" 12	"	52087	A. M. Campbell, Lacombe, Sask.	3 tins.	30	Blue Ribbon, Ltd., Winnipeg.	.....
" 12	"	52088	" " "	1 lb..	40	Gorman, Eckert Co. Winnipeg.	.....
" 13	"	52089	A. Reid, Pownoka, Alta.	3 tins.	30	W. A. Jameson Coffee Co., Victoria, B.C.	.....
" 15	"	52090	Lowry, Glamie & Co., Leduc, Alta.	1 lb..	50	Campbell Bros. & Wilson, Winnipeg.	.....
" 16	"	52091	Montgomery Bros., Wetaskiwin, Alta.	1 " ..	40	" " "	.....
" 19	"	52092	John Irwin & Co., Calgary.	1 " ..	40	Tuxedo Spice Co., Calgary.	.....
" 19	"	52093	Pryce Jones (Canada) Ltd., Calgary.	3 tins.	30	F. F. Dalley Co., Hamilton, Ont.	.....
" 19	"	52094	P. J. Moran, Calgary.	3 tins.	30	Alberta Empress Co., Ltd., Calgary.	.....
" 22	"	52095	Hudsons Bay Co., Calgary.	1 lb..	18	Tuxedo Mfg. Co., Calgary.	.....
" 22	"	52096	" " "	3 tins.	38	E. R. Durke & Co., New York.	.....
" 22	"	52097	G. J. Wood, Calgary.	3 " "	30	Tuxedo Mfg. Co., Calgary.	.....
" 22	"	52098	J. A. Nolan, Calgary.	1 lb..	40	Blue Ribbon Ltd., Winnipeg.	.....
" 22	"	52099	S. G. Freeze, Calgary.	1 " ..	40	F. F. Dalley Co., Hamilton.	.....

DISTRICT OF ROCKY MOUNTAINS—

Feb. 1	White Pepper.	61744	J. A. Irving & Co., Nelson, B.C.	1 lb..	40	Empress Mfg. Co., Vancouver, B.C.	.....
" 1	"	61745	Bell Trading Co., Nelson, B.C.	1 " ..	40	Wm. Baird & Co., Vancouver, B.C.	.....
" 6	"	61756	J. McIntyre & Son, Revelstoke, B.C.	3/4 " ..	30	Kelly Douglas & Co., Vancouver, B.C.	.....
" 6	"	61757	C. B. Hume & Co., Revelstoke B.C.	1 " ..	50	Empress Mfg. Co., Vancouver, B.C.	.....



SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report (Is not an expression of opinion).	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

Concluded.

	p. c.			
.....	1.40	Pepper tissues only.....	66322	Genuine.
.....	1.10	" " .....	66324	"

A. W. R. MARKLEY, INSPECTOR.

"Forest City" Brand....	2.27	Pepper tissues only.....	52085	Genuine.
.....	1.11	" " .....	52086	"
.....	1.39	" " .....	52087	"
.....	1.05	" " .....	52088	"
"Victoria" Brand.....	2.42	" " .....	52089	"
.....	1.22	" " .....	52090	"
.....	1.21	" " .....	52091	"
.....	1.13	" " .....	52092	"
.....	1.03	" " .....	52093	"
.....	1.11	" " .....	52094	"
.....	1.23	" " .....	52095	"
Gauntlet Brand.....	1.53	" " .....	52096	"
.....	1.33	" " .....	52097	"
.....	1.40	" " .....	52098	"
.....	1.20	" " .....	52099	"

THOS. PARKER, INSPECTOR.

.....	1.11	Pepper tissues only.....	61744	Genuine.
.....	1.05	" " .....	61745	"
.....	0.95	" " .....	61746	"
.....	1.07	" " .....	61747	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF ROCKY MOUNTAINS—

1915.							
Feb. 6	White Pepper.	61758	G. W. Bell, Revelstoke, B.C.	1 lb.	40	F. F. Dalley Co., Hamilton.	
" 10	"	61762	The S. A. F. E. Ltd, Salmon Arm, B.C.	1 "	40		Leesor Dickie & Gross, Vancouver, B.C.
" 10	"	61763	J. M. Toombs, Salmon Arm, B.C.	1 "	40	Kelly Douglas & Co., Vancouver, B.C.	
" 15	"	61769	Munn Bros, Kamloops, B.C.	1 "	35	" "	
" 15	"	61770	Wilson Grocery Co., Kamloops, B.C.	1 "	40	Empress Mfg. Co., Vancouver, B.C.	
Mar. 16	"	61786	Hunter Bros., Rossland, B.C.	3 tins.	40	Kelly Douglas & Co., Vancouver, B.C.	
" 16	"	61787	T. P. Rogers, Rossland, B.C.	1 lb.	45	" " "	
" 16	"	61788	Agnew & Co., Rossland, B.C.	1 "	40	" " "	
" 16	"	61791	Union Co-operative Association, Rossland, B.C.	3 tins	40	The F. F. Dalley Co., Hamilton.	

DISTRICT OF VANCOUVER—

Jan. 21	White Pepper.	55153	F. Wright, 645 Seymour St., Vancouver, B.C.	1 lb.	45	Kelly, Douglas & Co., Ltd., Vanc., B.C.	
" 21	"	55154	City Cash Grocery, 712 Davie St., Vancouver, B.C.	1 "	35	Empress Mfg. Co., Vanc., B.C.	
" 21	"	55155	Burrard Grocery, Davie and Burrard Sts., Vancouver, B.C.	1 "	40	Wm. Braid & Co., Vanc., B.C.	
" 21	"	55156	M. T. Greene, Denman and Nelson Sts., Vancouver, B.C.	1 "	40	" "	
" 21	"	55157	H. A. Young, 1701 Robson St., Vancouver, B.C.	3 tins.	30	W. H. Malkin Co., Ltd., Vanc., B.C.	
" 26	"	55158	James Harkness, 676 Keefer St., Vancouver, B.C.	1 lb.	40	Empress Mfg. Co., Vanc., B.C.	
" 27	"	55159	Grant & Winton, 1900 Powell Ave., Vancouver, B.C.	1 "	40	Kelly, Douglas & Co., Ltd., Vanc., B.C.	
" 28	"	55160	David Spencer, Ltd., Vancouver, B.C.	1 "	18	Empress Mfg. Co., Vanc., B.C.	
" 28	"	55161	Henderson's Bay Co., Vancouver, B.C.	1 "	40	" "	
Feb. 1	"	55162	Powell's Market, 58 Hastings St., Vancouver, B.C.	1 "	25	Kelly, Douglas & Co., Ltd., Vanc., B.C.	
" 3	"	55163	E. L. Berry, Ladner, B.C.	1 "	35	" "	
" 1	"	55164	Rubinowitz Dept. Stor., Steveston, B.C.	1 "	40	" "	

SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

Concluded.

	p. c.			
.....	1.09	Pepper tissues only.....	61758	Genuine.
.....	1.24	" " .....	61762	"
Nabob.....	0.98	" " .....	61763	"
" .....	0.94	" " .....	61769	"
.....	1.01	" " .....	61779	"
Nabob.....	0.82	" " .....	61786	"
" .....	0.92	" " .....	61787	"
Columbia.....	1.32	" " .....	61788	"
.....	1.24	" " .....	61791	"

E. J. MORGAN, INSPECTOR.

"Nabob" Brand.....	1.00	Pepper tissues only.....	55153	Genuine.
.....	0.87	" " .....	55154	"
.....	1.09	" " .....	55155	"
.....	1.08	" " .....	55156	"
"Malkin's Best" Brand.	1.08	" " .....	55157	"
.....	1.09	" " .....	55158	"
"Nabob" Brand	1.32	" " .....	55159	"
.....	1.11	" " .....	55160	"
.....	1.01	" " .....	55161	"
After purchase, vendor stated sample sold was compound pepper.	1.26	" " .....	55162	"
.....	0.90	" " .....	55163	"
"Nabob" Brand	0.97	" " .....	55164	"

Date of Collection.	Nature of Sample	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VANCOUVER—

1915.							
Feb.	4	White Pepper.	55165 Steveston Supply Co., Ltd., Steveston, B.C.	1 lb..	40	W. H. Malkin Co., Ltd., Vanc., B.C.	.....
"	8	" ..	55166 W. H. Walsb, Eburne, B.C.	1 " ..	40	Kelly, Douglas & Co., Ltd., Vanc., B.C.	.....
"	10	" ..	55167 Ashwell's Dept. Store, Chilliwack, B.C.	1 " ..	40	Empress Mfg. Co., Vanc., B.C.	.....

DISTRICT OF VICTORIA—

Feb.	9	White Pepper.	62040 Windsor Grocery Co., 817 Govt. St., Victoria, B.C.	1 lb..	50	Pioneer Coffee and Spice Mills, Victoria, B.C.	.....
"	9	" ..	62043 The West End Grocery Co., Ltd., 1002 Govt. St., Victoria, B.C.	3 tins.	39	Empress Mfg. Co., Vanc., B.C.	.....
"	9	" ..	62044 " " ..	1 lb.	50	" " ..	.....
"	10	" ..	62046 F. E. Plummer, 1118 Quadra St., Victoria, B.C.	1 " ..	45	W. A. Jameson Coffee Co., Victoria, B.C.	.....
"	10	" ..	62048 Erskine & Co., 861 Johnson St., Victoria, B.C.	1 " ..	40	Pioneer Coffee and Spice Mills, Victoria, B.C.	.....
"	10	" ..	62049 Henry W. Driver, 856 Yates St., Victoria, B.C.	3 pkgs	30	Wm. Braid & Co., Vanc., B.C.	.....
"	11	" ..	62051 Fairfield Grocery, 259 Cook St., Victoria, B.C.	3 " ..	30	E. R. Durkee & Co., New York.	.....
"	11	" ..	62053 Linden Grocery Co., Linden & May Sts., Victoria, B. C.	1 lb..	50	Empress Mfg. Co., Vancouver, B. C.	.....
"	11	" ..	62056 Pioneer Coffee & Spice Mills, 641 Pembroke St., Victoria, B. C.	1 " ..	35	.....	R. G. Bedlington & Co., Vancouver, B. C.
"	11	" ..	62057 " " ..	3pkgs.	20	.....	" " ..
"	11	" ..	62058 W. A. Jameson Coffee Co., 754 Broughton St., Victoria B. C.	1 lb..	35	G. S. Dunn & Co., Hamilton.	.....
"	12	" ..	62059 Dixie H. Ross & Co., 1317 Govt. St., Victoria, B. C.	1 " ..	50	.....	Wm. Braid & Co., Vancouver, B. C.
"	12	" ..	62063 Copas & Young, 631 Fort St., Victoria, B.C.	1 " ..	30	Wm. Braid & Co., Vancouver, B. C.	.....
"	12	" ..	62066 H. O. Kirkham & Co., 741 Fort St., Victoria, B.C.	1 " ..	40	.....	Kelly Douglas & Co., Victoria, B. C.
"	22	" ..	62069 Acton Bros., 1317 Douglas St., Victoria, B.C.	1 " ..	40	Pioneer Coffee & Spice Mills, Victoria, B. C.	.....

SESSIONAL PAPER No. 14

WHITE PEPPER.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.	Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Ash.			

*Concluded.*

	p. c.			
"Malkin's Best" Brand	1.07	Pepper tissues only.....	55165	Genuine.
"Nabob" Brand.....	1.00	" " .....	55166	"
"Empress" Brand.....	1.00	" " .....	55167	"

D. O'SULLIVAN, INSPECTOR.

.....	1.12	Pepper tissues only .....	62040	Genuine.
"Empress" Brand.....	0.93	" " .....	62043	"
.....	1.02	" " .....	62044	"
.....	1.91	" " .....	62045	"
.....	1.30	" " .....	62048	"
"Braid's Best".....	1.08	" " .....	62049	"
"Durkee's".....	1.31	" " .....	62061	"
.....	1.02	" " .....	62063	"
.....	1.13	" " .....	62066	"
"Empire" Brand.....	1.14	" " .....	62067	"
.....	1.52	" " .....	62068	"
.....	1.21	" " .....	62069	"
.....	1.04	" " .....	62062	"
.....	0.88	" " .....	62064	"
.....	1.17	" " .....	62069	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF ROCKY MOUNTAINS—

1914.							
Oct.	2	Pure Black Pepper.	61655	Cranbrook Trading Co., Ltd., Cranbrook, B.C.	$\frac{3}{4}$ lb..	30	Wilson Bros., Victoria, B.C.
"	2	Pure White Pepper.	61656	" " "	3 tins.	30	" " "
"	2	" "	61657	" " "	$\frac{3}{4}$ lb..	30	Georgeson & Co., Calgary.
"	2	Pure Black Pepper.	61658	" " "	3 tins.	30	" " "
"	2	" "	61659	Frank Provenzano, ..	$\frac{3}{4}$ lb..	35	W. A. Jameson, Coffee Co., Victoria, B.C.
"	2	Pure White Pepper.	61660	" " "	3 tins.	40	" " "
"	2	" "	61661	Ira R. Manning, Cranbrook, B.C.	3 "	40	The F. F. Dalley Co., Victoria, B.C.
"	2	Pure Black Pepper.	61662	" " "	3 "	40	" " "
"	2	" "	61663	Ward & Harris, Cranbrook, B.C.	3 "	40	" " "
"	2	Pure White Pepper.	61664	" " "	3 "	40	" " "
"	2	" "	61665	J. Manning, Cranbrook, B.C.	3 "	40	The W. H. Malkin Co., Vancouver, B.C.
"	13	Pure Black Pepper.	61669	Trites Wood Co., Fernie, B.C.	3pk. s.	30	W. A. Jameson, Coffee Co., Victoria, B.C.
"	13	Pure White Pepper.	61670	" " "	3 "	40	Gold Standard Mfg. Co., Winnipeg.
"	13	" "	61671	Crow's Nest Trading Co., Fernie, B.C.	3 "	40	White Star Mfg. Co., Winnipeg.
"	13	Pure Black Pepper.	61672	" " "	3 "	30	" " "
"	13	" "	61673	P. Carosella, Fernie, B.C.	3 "	30	Wilson Bros., Victoria, B.C.
"	13	" "	61674	Fernie Co operating Society, Fernie, B.C.	3 "	30	Wm. Braid & Co., Vancouver, B.C.
"	13	Pure White Pepper.	61675	" " "	3 "	30	" " "
"	26	Black Pepper.	61689	Joy Bros, Nelson, B.C.	3 bots.	30	G. F. Sutton Sons & Co., London, Eng.
"	26	White Pepper.	61690	" " "	3 tins.	40	Empress Mfg. Co., Vancouver, B.C.
"	26	" " "	61691	Star Grocery, Nelson, B.C.	3 "	40	Kelly Douglas & Co., Vancouver, B.C.
"	26	Black Pepper.	61692	" " "	3 "	40	" " "
"	26	" " "	61693	M. Scully, Nelson, B.C.	3 "	30	Wm. Braid & Co., Vancouver, B.C.
"	26	Pure Black Pepper.	61694	Bell Trading Co., Nelson, B.C.	3 "	40	" " "
"	26	Pure White Pepper	61695	" " "	3 "	40	" " "
"	26	" "	61696	" " "	$\frac{3}{4}$ lb..	30	" " "

SESSIONAL PAPER No. 14

GROUND PEPPER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.		Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Ash.				
	Total.	Insoluble in HCl. (sand).			

THOS. PARKER, INSPECTOR.

	p. c.	p. c.			
.....	6.40	.....	Pepper tissues only.....	61655	Genuine.
.....	1.04	.....	" " .....	61656	"
.....	1.13	.....	" " .....	61657	"
.....	6.24	.....	" " .....	61658	"
.....	4.21	.....	" " .....	61659	"
.....	1.71	.....	" " .....	61660	"
.....	1.09	.....	" " .....	61661	"
.....	5.75	.....	" " .....	61662	"
.....	8.62	3.87	" " .....	61663	"
.....	1.08	.....	" " .....	61664	"
.....	1.03	.....	" " .....	61665	"
.....	6.38	.....	" " .....	61666	"
.....	1.11	.....	" " .....	61670	"
.....	1.27	.....	" " .....	61671	"
.....	6.04	.....	" " .....	61672	"
.....	5.80	.....	" " .....	61673	"
.....	5.56	.....	" " .....	61674	"
.....	1.64	.....	" " .....	61675	"
.....	5.20	.....	" " .....	61680	"
.....	0.36	.....	" " .....	61680	"
.....	0.50	.....	" " .....	61681	"
.....	4.89	.....	" " .....	61682	"
.....	7.20	2.50	" " .....	61683	"
.....	5.05	.....	" " .....	61684	"
.....	1.00	.....	" " .....	61686	"
.....	1.31	.....	" " .....	61686	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF ROCKY MOUNTAINS—

1914.							
Oct.	26	Pure Black Pepper	61697	Bell Trading Co., Nelson, B.C.	$\frac{3}{4}$ lb.	30	Wm. Braid & Co., Vancouver, B.C.
"	26	"	61698	J. A. Irving & Co., Nelson, B.C.	3 Tins	40	Empress Mfg. Co., Vancouver, B.C.
"	26	Pure White Pepper	61699	" "	3 "	40	"

DISTRICT OF VANCOUVER—

Sept.	28	Black Pepper	55067	Larseurs Grocery, 274 Pender St. east, Vancouver, B.C.	$\frac{3}{4}$ lb.	30	Kelly Douglas & Co., Ltd., Vancouver, B.C.
"	28	"	55068	Filion Ltd., 204 Carrall St. Vancouver, B.C.	$\frac{3}{4}$ "	25	Empress Mfg. Co., Vancouver, B.C.
"	29	"	55069	J. Lowenthal, 2243 Main St. Vancouver, B.C.	$\frac{3}{4}$ "	30	Unknown
"	29	"	55070	Efford Bros., 244 Broadway E. Vancouver, B.C.	$\frac{3}{4}$ "	30	Empress Mfg. Co., Vancouver, B.C.
"	29	"	55071	McCulloch Bros., 422 Hasting St. E. Vancouver, B.C.	$\frac{3}{4}$ "	30	Kelly Douglas & Co. Ltd., Vancouver, B.C.
"	29	"	55072	Kilborn & Munger, 2505 Main St. Vancouver, B.C.	$\frac{3}{4}$ "	25	"
"	30	"	55073	Gruchy & Carlaw, 5th Ave. & Granville St. Vancouver, B.C.	$\frac{3}{4}$ "	30	Empress Mfg. Co., Vancouver, B.C.
"	30	"	55074	S. Pritchard, 950 Robson St. Vancouver, B.C.	$\frac{3}{4}$ "	30	Wm. Braid & Co., Vancouver, B.C.
Oct.	5	"	55075	The Main Grocery Store, 1102 Commercial Drive Vancouver, B.C.	$\frac{3}{4}$ "	30	The W. H. Malkins Co., Ltd., Vancouver, B.C.
"	7	"	55076	Larsen & Anne, 601 Front St. New Westminster, B.C.	$\frac{3}{4}$ "	30	Unknown
Sept.	30	White Pepper	55077	Mills & McAdair, 2039 4th Ave. W. Vancouver, B.C.	$\frac{3}{4}$ "	30	Kelly Douglas & Co., Ltd., Vancouver, B.C.
"	30	"	55078	A. C. Bartig, 2441 Granville St. Vancouver, B.C.	$\frac{3}{4}$ "	30	"
"	30	"	55079	Arinour Macfarlane, 8th Ave. & Granville St. Vancouver, B.C.	$\frac{3}{4}$ "	30	"
"	30	"	55080	Fairview Grocery, 2242 Granville St. Vancouver, B.C.	$\frac{3}{4}$ "	30	"
"	30	"	55081	Gruchy & Carlaw, 5th Ave. & Granville St. Vancouver, B.C.	$\frac{3}{4}$ "	30	Empress Mfg. Co., Vancouver, B.C.



SESSIONAL PAPER No. 14

GROUND PEPPER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.		Microscopical Examination.	No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Ash				
	Total %	Insoluble in HCl. (Sand.)			

Concluded.

	p. c.	p. c.			
.....	6.44	.....	Pepper tissues only.....	61697	Genuine.
.....	4.52	.....	" " .....	61698	"
.....	0.94	.....	" " .....	61699	"

E. J. MORGAN, INSPECTOR.

"Nabob" Brand.....	3.89	.....	Pepper tissues only .....	55067	Genuine.
Empress " .....	3.60	.....	" " .....	55068	"
Old Stock.....	5.58	.....	" " .....	55069	"
Empress Brand .....	4.55	.....	" " .....	55070	"
"Nabob" " .....	4.72	.....	" " .....	55071	"
" .....	3.87	.....	" " .....	55072	"
Empress Brand.....	3.81	.....	" " .....	55073	"
.....	6.49	.....	" " .....	55074	"
Victoria Cross Brand...	5.64	.....	" " .....	55075	"
.....	5.50	.....	" " .....	55076	"
"Nabob" Brand .....	0.82	.....	" " .....	55077	"
" .....	0.85	.....	" " .....	55078	"
" .....	1.06	.....	" " .....	55079	"
" .....	0.81	.....	" " .....	55080	"
Empress Brand.....	0.85	.....	" " .....	55081	"

Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VANCOUVER—

1914.							
Sept. 30	White Pepper.	55082	W. A. Ferguson, 1028 Robson St. Vancouver, B.C.	$\frac{3}{4}$ lb.	40	Wm. Braid & Co., Vancouver, B.C.	
" 30	"	55083	T. F. McDowell, 938 Granville St. Vancouver, B.C.	$\frac{3}{4}$ "	30	"	
Oct. 5	"	55084	The Main Grocery Store, 1102 Commercial Drive Vancouver, B.C.	$\frac{3}{4}$ "	30	Kelly Douglas & Co., Ltd., Vancouver, B.C.	
" 5	"	55085	Bird's Grocery, 1301 Commercial Drive, Vancouver, B.C.	$\frac{3}{4}$ "	20	The W. H. Malkin Co., Ltd., Vancouver, B.C.	
" 7	"	55086	Annandale Supply Co., 641 Columbia St., New Westminster, B.C.	$\frac{3}{4}$ "	30	Kelly Douglas Co., Ltd., Vancouver, B.C.	

DISTRICT OF VICTORIA—

Sept. 22	White Pepper.	61962	W. A. Jameson Coffee Co., 754 Broughton St., Victoria, B.C.	$\frac{3}{4}$ lb.	20		G. S. Dunn & Co., Hamilton, Ont.
" 22	"	61963	" " " " "	$\frac{3}{4}$ "	25		"
" 22	Black	61964	" " " " "	$\frac{3}{4}$ "	20		"
" 22	"	61965	" " " " "	$\frac{3}{4}$ "	15		"
" 22	White	61966	The Windsor Grocery Co., 817 Government St., Victoria, B.C.	$\frac{3}{4}$ "	35	Pioneer Coffee & Spice Mills, Victoria, B.C.	
" 22	Black	61967	" " " " "	$\frac{3}{4}$ "	35	"	
" 22	White	61971	Pioneer Coffee & Spice Mills, 641 Pembroke St., Victoria, B.C.	$\frac{3}{4}$ "	30	Vendors..	
" 22	"	61972	" " " " "	$\frac{3}{4}$ "	25	"	
" 22	Black	61973	" " " " "	$\frac{3}{4}$ "	25	"	
" 22	"	61974	" " " " "	$\frac{3}{4}$ "	20	"	
" 23	"	61977	E. B. Jones, 1802 Cook St., Victoria, B.C.	$\frac{3}{4}$ "	30		W. A. Jameson Coffee Co., Victoria, B.C.
" 23	White	61978	" " " " "	$\frac{3}{4}$ "	30		"
" 24	Black	61981	The West End Grocery Co., Ltd., 1002 Government St., Victoria, B.C.	$\frac{3}{4}$ "	25		Pioneer Coffee & Spice Mills, Victoria, B.C.
"	White	61982	" " " " "	$\frac{3}{4}$ "	25		"

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GROUND PEPPER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.		Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Ash.				
	Total.	Insoluble in HCl (Sand.)			

Concluded.

	p. c.	p. c.			
.....	1.00	..	Pepper tissues only .....	55082	Genuine.
.....	0.95	..	" " .....	55083	"
Columbia Brand.....	1.00	..	" " .....	55084	"
Malkin's Best.....	1.06	..	" " .....	55085	"
Columbia Brand.....	0.88	.....	" starch. and wheat	55086	Contains foreign matter. Adulterated.

D. O'SULLIVAN, INSPECTOR.

.....	1.88	.....	Pepper tissues only	61962	Genuine.
.....	1.79	.....	"	61963	"
.....	3.89	.....	"	61964	"
.....	8.15	2.67	"	61965	Ash high. Sand and dirt.
.....	1.17	.....	"	61966	Genuine.
.....	7.25	2.75	"	61967	Ash high. Sand and dirt.
Star Brand .	0.88	.....	"	61971	Genuine.
.....	1.17	.....	"	61972	"
Star Brand	7.28	3.13	"	61973	Ash high. Sand and dirt.
.....	6.89	2.92	"	61974	Genuine.
.....	5.34	.....	"	61977	"
.....	1.29	.....	"	61978	"
.....	5.59	.....	"	61981	"
.....	0.87	.....	"	61982	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VICTORIA—

1914.	-						
Sept. 25	White Pepper.	61984	Acton Bros., Victoria, B.C.	3 tins.	30	Empress Mfg. Co., Ltd., Vancouver, B.C.	.....
" 25	Black "	61985	" " ..	3 "	30	" ..	.....
Oct. 3	White "	61986	Dixi H. Ross & Co., 1317 Government St., Victoria, B.C.	$\frac{3}{4}$ lb..	30	Wm. Braid, Vancouver, B.C.	.....
" 3	Black "	61987	" " ..	$\frac{3}{4}$ "	30	" ..	.....
" 3	White "	61990	Copas & Young, 631 Fort St., Victoria, B.C.	3 tins.	30	.....	Wm. Braid & Co., Vancouver, B.C.
" 3	Black "	61991	" " ..	3 "	30	.....	" ..

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GROUND PEPPER

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.		Microscopical Examination	No. of Sample.	Remarks and Opinions of the Chief Analyst.
	Ash.				
	Total.	Insoluble in Hcl. (sand.)			

*Concluded.*

	p. c.	p. c.			
Empress Brand. ....	0.79	.....	Pepper tissues only.....	61984	Genuine.
" .....	5.41	.....	" .....	61985	"
.....	1.01	.....	" .....	61986	"
.....	4.74	.....	" .....	61987	"
.....	0.99	.....	" .....	61990	"
Anti-Combine .....	5.69	.....	" .....	61991	"

## APPENDIX F.

## BULLETIN No. 315—TINCTURE OF OPIUM (LAUDANUM).

Ottawa, August 4, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister Inland Revenue.

SIR,—I have the honour to hand you a report upon one hundred and twenty-seven (127) samples purchased by our inspectors as Tincture of Opium, generally known as Laudanum. These samples were procured throughout the different inspectoral districts of Canada in October, November and December of last year.

Tincture of Opium is one of the most important and widely used drugs of the pharmacopœia; and, containing as it does, a highly active ingredient (morphine) it follows that the greatest care should be had in its preparation and dispensing. It has been made the subject of inspection upon two previous occasions, by this Department. In 1899 (See Bulletin No. 60) fifteen (15) samples were examined, and of this number, five (5) were found to be below standard pharmacopœal requirements. Only one of these was so far deficient as to render it notably adulterated. In 1908 (see bulletin No. 168), thirty-one (31) samples were examined. Of this number sixteen (16) samples were found to be within standard limits; five (5) were above and ten (10) below pharmacopœal requirements. The discrepancies were, however, in most cases, not such as to make the article dangerous in use, although, in a drug of this kind, any variation beyond the limits fixed by authority of the pharmacopœia, should be regarded as serious. It must be apparent that, when the alkaloidal strength is too great, the patient is endangered, while, when too weak, the physician is unable to secure the results desired.

In the present inspection ninety-six (96) samples are found to meet pharmacopœal demands, and are passed as genuine.

It is to be noted here that the British Pharmacopœia requires that morphine should be present in Tincture of Opium to the amount of 0.75 of one per cent, a variation between the limits of 0.70 and 0.80 per cent, being allowed. This has reference to the Edition of 1898, which is the only edition recognized by the Adulteration Act. (Section 7a).

Our pharmacopœia, like those of other countries, is subjected to periodical revision, and as a matter of fact, the British Pharmacopœia was revised last year (13th July, 1914). The revised (1914) Edition is now legal authority in the United Kingdom, and I note that the Ontario College of Pharmacy has issued a circular to druggists, endorsing its recognition for Canada. Such action can, of course, carry no legal force, so long as the Adulteration Act remains unchanged. It is, perhaps, regrettable that our Act makes special mention of any particular edition of the British Pharmacopœia, since it is in the nature of things, that each later edition should supplant previous editions. This matter must secure attention by amendment of the Act at an early date.

Tincture of Opium is one of several drugs whose strength is altered in the revised edition of the Pharmacopœia; the alkaloidal strength being made one per cent, in terms of anhydrous morphine, instead of 0.75 per cent, as in the edition of 1898.

Eight samples of the present collection meet the requirements of this new standard for the article. It may be that the manufacturer had intention to furnish a tincture of this strength. If so, the fact should be made known upon the label; and it is evident that,

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for some time to come, this particular tincture should be so labelled as to show whether it is intended to meet the standard of the pharmacopœia of 1898 or that of 1914.

In a strictly legal interpretation, these samples are adulterated, since the edition of 1898 is the only legal standard for Canada. It is however sufficiently evident that they meet the intention of the Act and they are treated accordingly. Twenty-three (23) samples must be regarded as illegal, nineteen (19) of these being too low in morphine content, and four (4) being too high. Among these the following call for special mention:—

No. 60722	contains	0·19	p.c.	morphine.
“ 64620	“	0·44	“	“
“ 48999	“	0·47	“	“
“ 60143	“	1·25	“	“
“ 63014	“	1·28	“	“
“ 63546	“	1·26	“	“
“ 61997	“	1·48	“	“

The first three samples contain very notable deficiency, and the last four samples as notable excess of morphine. It will be observed that, except in cases where the vendor is the manufacturer, the name of the manufacturer is not published. In most instances the vendor gave the name of a manufacturer, but careful enquiry proves that, in a majority of these cases, the manufacturer had furnished an opium concentrate, of assayed strength, from which the retail vendor prepared his tincture. I have caused several of these concentrates to be examined, and in every case have found them to be as represented by the manufacturer. They are usually from five to seven times as strong as the tincture, and directions are furnished for dilution so as to prepare the pharmacopœial tincture. This dilution being done by the retailer, it would evidently be improper to hold the manufacturer of the concentrate responsible for the character of the tincture as sold. The concentrate referred to is not strictly a pharmacopœial preparation, but when it is correctly assayed and labelled, it is a very desirable and convenient material for the preparation of a tincture. Responsibility for the quality of the tincture must rest with the vendor, and if through evaporation of the solvent or inaccuracy in measurement, he sells a tincture either too weak or too strong in morphine, the blame cannot be shifted to the manufacturer of a concentrate.

Of course, it follows that occasional inspection of the concentrates themselves must be made, not only in the interest of the public, but as a protection to the retail druggist.

I beg to recommend publication of this report as bulletin No. 315.

I have the honor to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

BULLETIN No. 315—TINCTURE OF OPIUM (LAUDANUM.)

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.		Cost.	Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Result of Analysis. Anhydrous Morphine present in 100 c.c.	No. of Sample.	Remarks and Opinion of the Chief Analyst. (References are to the 1898 Edition of the British Pharmacopœia).
			Quantity.	Cents.		Manufacturer.	Furnisher.				

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1914.	Dec. 15	Tincture of opium.	54201	Chas. Hutchins, Liverpool, N.S.	6 oz.	50	Vendor.	.....	0.77	54201	Meets B. P. requirements.
	" 16	"	54202	H. F. Porter, Bridge-water.	6 "	1 00	"	.....	0.69	54202	" "
	" 29	"	54203	National Drug & Chemical Co. Halifax.	6 "	90	"	.....	0.78	54203	" "
1915.	Jan. 11	"	54204	E. M. McLeod, Halifax.	6 "	90	"	.....	0.71	54204	" "
	" 11	"	54205	G. McGillivray, Halifax.	6 "	75	"	.....	0.79	54205	" "

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

1914.	Nov. 6	Tincture of opium.	59621	National Drug & Chemical Co. St. John.	6 oz.	90	Vendors.	.....	0.95	59621	Above B. P. strength as per B. P. of 1898. Meets requirements of revised edition.
	" 11	"	59622	The Canadian Drug Co. Ltd. St. John.	6 "	90	"	.....	0.72	59622	Meets B. P. requirements.
	" 26	"	59623	Arthur J. Ryan, Fredericton.	6 "	1 20	"	.....	0.70	59623	" "



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50624	B. J. Sharp, Sussex	6 "	90	.....	.....	1.03	50624	Above B. P. strength. Meets requirements of revised B. P.
50625	Legere Drug Co., Ltd., Moncton.	6 "	120	Vendors	.....	0.72	50625	Meets B. P. requirements.

DISTRICT OF PRINCE EDWARD ISLAND—W.M. WEEKS, INSPECTOR.

60141	E. A. Foster, Charlotte town	6 oz.	80	.....	.....	0.73	60141	Meets B. P. requirements.
60142	J. Johnson & Johnson, Charlottetown	6 "	90	.....	.....	0.77	60142	" "
60143	J. E. Hughes, Charlottetown	6 "	90	.....	.....	1.25	60143	Much above B. P. strength.
60144	The McKinnon Drug Co., Charlottetown.	6 "	90	.....	.....	0.83	60144	Meets B. P. requirements.

DISTRICT OF QUEBEC CITY—F. X. BELAND, INSPECTOR.

60719	J. G. Maxon, 808 rue St. Valer, Quebec	6 oz.	60	.....	.....	0.76	60719	Meets B. P. requirements.
60720	H. Giroux, 487 rue St. Joseph, Quebec	6 "	75	.....	.....	0.69	60720	" "
60721	W. Precote & Co., 1286 rue St. Joseph, Quebec	6 "	150	Vendor	.....	0.69	60721	" "
60722	A. Frostner, 516 rue St. Jean, Quebec	6 "	70	Unknown	.....	0.19	60722	Much below B. P. requirements.
60723	A. E. Frostner, 5740 rue St. Jean, Quebec	6 "	150	Vendor	.....	0.74	60723	Meets B. P. requirements.
60724	A. L. J. Janssen, 208 rue St. Jean, Quebec	6 "	120	.....	.....	0.91	60724	Above B. P. strength for B. P. of 1898. Correct for revised edition.
60725	E. Dube, 43 rue St. Jean, Quebec	6 "	75	.....	.....	0.73	60725	Meets B. P. requirements.
60726	Jerry Wilson, 411 rue St. Jean, Quebec	6 "	60	.....	.....	0.81	60726	" "
60727	W. J. Rogers, 44 rue Valerius, Quebec	6 "	150	.....	.....	0.75	60727	" "
60728	L. J. March, 55 rue St. Joseph, Quebec	6 "	70	.....	.....	0.75	60728	" "

BULLETIN No. 315—TINCTURE OF OPIUM (LAUDANUM).

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.		Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Result of Analysis. Anhydrous Morphine present in 100 c.c.	No. of Sample.	Remarks and Opinion of the Chief Analyst. (References are to the 1898 edition of the British Pharmacopoeia).
			Quantity.	Cents.	Manufacturer.	Furnisher.						

DISTRICT OF QUEBEC PROVINCE—N. CADIEUX, T. GENDREAU, INSPECTORS.

1914.												
Nov. 2	Tincture of opium.	214	Omer St. Amour, Ste 3 oz. Agathe des Monts.	60	Vendor					0.65	214	Nearly meets B. P. requirements, but somewhat too weak.
" 11	"	216	Eng. Fournier, Ste 6 " Jerome.	1 00						0.70	216	Meets B. P. requirements.
Dec. 26	"	243	H. Deschambault, Ste 6 " Therese.	1 00						0.68	243	" "
Nov. 25	"	2735	Dr. Jos. Gagnon, Mont. 6 " Inagny.	1 20						0.76	2735	" "

DISTRICT OF THREE RIVERS—DR. V. P. LAVALLEE, INSPECTOR.

Oct. 29	Tincture of opium.	2623	L. P. Normand, Three Rivers.	1 20	Vendor					0.85	2623	Meets B. P. requirements.
" 29	"	2624	J. A. Peltier, Three Rivers.	2 40						0.81	2624	" "
" 29	"	2639	R. W. Williams, Three Rivers.	75						0.98	2639	Above B. P. strength for B. P. of 1898. Correct for revised edition.
Nov. 4	"	3907	A. L. Bouzher, Joliette.	1 13	Vendor					0.78	3907	Meets B. P. requirements.
" 4	"	3908	L. C. Rivest, Joliette	90	"					0.81	3908	" "

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DISTRICT OF MONTREAL—D. J. KEARNEY, INSPECTOR.

No. of Tonnage of Optical.	62550	62551	62552	62553	62554	62555	62556	62557	62558	62559
23	Mrs. Freedman, 1068 St. 6 Lawrence Boul., Montreal.	Lancet & Brault, 820 St 6 Lawrence Boul., Montreal.	Alfred F. Larose, 2 Sher- brooke st. E., Montreal	Wentfields Pharmacy, 488 6 St. Lawrence Boul., Montreal.	W. Lessard, 1400 Wel- lington st., Verdun	Dr. Y. Rheanne, 188 6 Charchoate, Verdun.	Dr. S. Ste Marie, 447 6 Charcel ave., Verdun.	Hamilton & Harbison, 258 6 St. Denis St., Montreal	R. W. Bryson, Cor. Peel and St. Catherine Sts., Montreal.	American Drug Store, 6 57 St. Catherine St., Montreal.
	1 20	1 20	1 20	1 20	1 00	1 20	1 20	1 20	1 20	1 20
	0.79	0.65	0.72	0.71	0.75	0.79	0.80	0.71	0.77	0.74
	Meets B. P. requirements.	Nearly meets B. P. require- ments, but somewhat too weak	Meets B. P. requirements.	" "	" "	" "	" "	" "	" "	" "

DISTRICT OF EASTERN TOWNSHIPS AND VALLEYFIELD—J. J. COSTIGAN, ACTING INSPECTOR.

No. of Tonnage of Optical.	63011	63012	63013	63014	63015	62831	62832	62833
26	H. E. DeLinger, Sher 6 oz. Lavelle	Pharmacia Cognon Sher 6 Lavelle	J. J. Jones, Danville 6	E. C. Treha, Coaticook 6	F. Agnell, Sherbrooke 6	Dr. Wallace, Beaufort Isle	F. O. Robertson, St. John 6	Wright & Co., St. John 6
	3 00	1 00	1 25	1 00	1 50	1 20	1 00	60
	0.69	0.66	0.80	1.28	0.85	0.76	0.74	0.61
	Meets B. P. requirements.	" "	" "	Much above B. P. strength.	Meets B. P. requirements.	" "	" "	Below B. P. requirements.

BULLETIN No. 315—TINCTURE OF OPIUM (LAUDANUM).

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Result of Analysis. Anhydrous Morphine present in 100 c.c.	Remarks and Opinion of the Chief Analyst. (References are to the 1888 Edition of the British Pharmacopoeia.)
				Quantity.	Cents.	Manufacturer.	Furnisher.			

DISTRICT OF EASTERN TOWNSHIPS AND VALLEYFIELD—Concluded.

1914.										
Nov. 20	Tincture of Opium.	62834	H. M. Davies, St. Lam-beat.	6 oz.	1 00				0.72	Meets B.P. requirements.
Dec. "	"	62835	James Fortune, Hunt-ington.	6 "	90				0.71	" "

DISTRICT OF OTTAWA—J. A. RICKEY, INSPECTOR.

Oct. 31	Tincture of Opium.	63546	J. A. Johnston, Smiths Falls.	6 oz.	1 25				1.26	Much above B.P. strength.
" 31	"	63547	L. A. Wilson, Smiths Falls.	6 "	1 25	Vendor			0.74	Meets B.P. requirements.
Nov. 5	"	63548	Hull Medical Hall, Hull.	6 "	1 25				0.86	" "
" 5	"	63549	H. Therin, Hull.	6 "	1 25				0.77	" "
" 6	"	63550	D. J. Johnstone, Ottawa.	6 "	1 25	Vendor			0.83	" "
" 6	"	63551	Allan & Cochrane, Ot-tawa.	6 "	1 25	Vendors			0.79	" "
" 7	"	63552	E. M. Ahearn, Ottawa.	6 "	1 25	Vendor			0.73	" "
" 7	"	63553	E. J. Durocher, Ottawa.	6 "	1 25				0.79	" "
" 7	"	63554	J. A. Mu-grove, Ottawa.	6 "	1 25				1.07	Above B. P. Strength for B. P. of 1898. Meets require-ments of revised edition.
" 7	"	63555	N. W. Campbell,	6 "	1 25	Vendor			0.77	Meets B. P. requirements.

DISTRICT OF KINGSTON—JAMES HOGAN, INSPECTOR.

No.	Signature of Opium.	Net wt.	Vendor.	Analysis.	Remarks.
1	61575 F. L. Hooper, Napanee	6 oz.	75 Vendor	0.84	Meets B. P. requirements.
2	61576 T. B. Wallace	6 "	1 50	0.72	" "
3	61577 D. M. Waters, Belleville	6 "	90	0.73	" "
4	61578 O. G. Johns, Cobourg	6 "	1 05	0.67	" "
5	61579 The Warne Drug Co., Peterborough	6 "	90	0.67	" "

DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

No.	Signature of Opium.	Net wt.	Vendor.	Analysis.	Remarks.
16	64612 A. H. Johnson, Collingwood	6 oz.	65	0.73	Meets B. P. requirements.
17	64613 Geo. Monkman, Barrie	6 "	75	0.65	Nearly meets B. P. requirements but somewhat too weak.
18	64614 C. A. Nettleton, Peterborough	6 "	1 20	0.70	Meets B. P. requirements.
19	64615 G. W. Gerie, Midland	6 "	75 Vendor from concentrated.	0.73	" "
20	64616 H. Ball, Orillia	6 "	1 20	0.66	Nearly meets B. P. requirements but slightly too weak.
21	64617 Wm. Crossland, Barrie	6 "	1 25 Vendor	0.76	Meets B. P. requirements.
22	64618 Geo. H. Hainah, 221 Spadina Ave., Toronto	6 "	90	0.70	" "
23	64619 W. H. Anderson, Dundas St., Toronto	6 "	1 20	0.72	" "
24	64620 K. F. Weeks, 186 Wilton Ave., Toronto	6 "	1 00	0.44	Below B. P. requirements.

DISTRICT OF HAMILTON—H. J. DAGER, ACTING INSPECTOR.

No.	Signature of Opium.	Net wt.	Vendor.	Analysis.	Remarks.
1	64547 T. F. & T. J. Brown, Orangeville	6 oz.	90	0.61	Below B. P. requirements.
2	64548 Parker A. Co., 275 2nd Ave. E., Owen Sound	6 "	75	0.63	" "
3	64549 J. Peters, Warden	6 "	75	0.61	" "
4	64551 H. G. Hunter, Walker	6 "	90	0.61	" "

BULLETIN No. 315—TINCTURE OF OPIUM (LAUDANUM).

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Result of Analysis. Anhydrous Morphine present in 100 c.c.	No. of Sample.	Remarks and Opinion of the Chief Analyst. (References are made to the 1898 edition of the British Pharmacopœia.)
				Quantity.	Cents.	Manufacturer.	Furnisher.				

DISTRICT OF WINDSOR—JOHN TALBOT, INSPECTOR.

1914											
Nov.	4	Tincture of Opium.	W. S. McDonald, Tillsonburg.	9 oz.	2 25				0.59	63948	Below B. P. requirements.
"	4	"	J. Austen & Co., Simcoe.	6 "	1 20				0.63	63956	" "
"	5	"	E. H. Jackson, Simcoe.	6 "	1 20				0.77	63964	Meets "
"	6	"	J. B. Richards & Co., Aylmer.	6 "	75				0.68	63968	" "
"	6	"	Em. A. Caughell, Vendor.	6 "	90				0.96	63969	Above B. P. strength for edition of 1898. Correct for revised edition of 1914.
"	27	"	W. E. Saunders & Co., London.	6 "	75				0.71	63977	Meets B. P. requirements.

DISTRICT OF MANITOBA—A. C. LARIVIERE, INSPECTOR.

Oct.	30	Tincture of Opium.	J. K. Hill, Prairie.	6 oz.	1 25				0.67	48991	Meets B. P. requirements.
"	30	"	Portage Pharmacy, Portage-la-Prairie.	6 "	1 50				0.72	48992	" "
Nov.	3	"	Cleanets Drug Store, Brandon.	6 "	1 50				0.68	48993	" "
"	3	"	McCalloughs Drug Store, Brandon.	6 "	1 25				0.83	48994	" "
"	4	"	Robertson & Co., Brandon.	6 "	50				0.93	48995	Above B. P. strength for B. P. of 1898. Correct for revision of 1914.

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10	48996	Saunders Drug Store, 6 oz.	1 25	.....	0.76	48996	Meets B. P. requirements.
11	48997	Carnan, Gladstone, 6 oz.	1 25	.....	0.70	48997	" "
12	48998	Gladstone, 6 oz.	1 50	.....	0.72	48998	" "
13	48999	James, Selkirk, 6 oz.	2 10	.....	0.42	48999	Below B. P. requirements.
14	49000	W. H. C. Gibbs, Selkirk, 6 oz.	1 80	.....	0.73	49000	Meets B. P. requirements.

DISTRICT OF SASKATCHEWAN—L. H. HALL, INSPECTOR.

Oct. 26	64064	A. DeLong Ltd., Saskatoon, 6 oz.	2.10	Vendor	0.86	64064	Meets B. P. requirements.
27	64065	Central Drug Store, Saskatoon, 6 oz.	1.50	"	0.55	64065	Below B. P. requirements.
28	64066	A. Dunman, Regina, 6 oz.	1.50	"	0.69	64066	Meets B. P. requirements.
Nov 3	64067	Dr. Boyd, Pemma, 6 oz.	75	"	0.77	64067	" "
4	64080	T. W. Bradley, Mortlach, 6 oz.	1.50	Vendor	0.91	64080	Above B. P. strength for edition of 1898. Correct for revision of 1914.

DISTRICT OF ALBERTA—A. W. R. MARKLEY, INSPECTOR.

Nov 15	52039	Macfarlane, Calgary, 6 oz.	1 00	Vendor	0.71	52039	Meets B. P. requirements.
16	52040	The Pharmacy, Calgary, 6 oz.	1 00	"	0.70	52040	" "
17	52041	H. W. Johnston, Camrose, 6 oz.	1 00	Vendor	0.67	52041	" "
18	52042	F. F. Isall, Wetaskiwin, 6 oz.	1 50	"	0.73	52042	" "
19	52043	Pharmacy, Lacrosse, 6 oz.	75	Vendor	0.54	52043	Below B. P. requirements.

DISTRICT OF ROCKY MOUNTAINS—THOS. PARKER, INSPECTOR.

Nov 20	61723	A. F. Robbins, Merritt, 6 oz.	1 25	.....	0.82	61723	Meets B. P. requirements.
21	61735	J. H. Cleophas, Kamloops, 6 oz.	1 25	.....	0.81	61735	" "
22	61736	G. G. Gaudin, Kamloops, 6 oz.	1 25	.....	0.70	61736	" "

BULLETIN 315.—TINCTURE OF OPIUM (LAUDANUM).

Date of Collection.	Name of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Result of Analysis.— Anhydrous Morphine present in 100 c.c.	No. of Sample.	Remarks and Opinion of the Chief Analyst. (References are to the 1898 Edition of British Pharmacopœia.)
				Quantity.	Cents.	Manufacturer.	Furnisher.				

DISTRICT OF ROCKY MOUNTAINS—Concluded.

1914.											
Dec. 1	Laudanum.	61739	Canada Drug Co., Nelson.	6 oz.	1.50				0.77	61739	Meets B. P. requirements.
" 1	"	61740	Rutherford Drug Co., Nelson.	6 "	1.50				0.61	61740	Below B. P. requirements.

DISTRICT OF VANCOUVER—E. J. MORGAN, INSPECTOR.

Oct. 31	Tincture of Opium.	55141	C. H. McFarlane, Eburn	6 oz.	1.50				0.77	55141	Meets B. P. requirements.
Nov. 2	"	55142	Campbells Ltd., Granville & Hastings, Vancouver.	6 "	1.50				0.72	55142	" "
" 2	"	55143	Woods Pharmacy, 601 Hastings St., Vancouver.	6 "	1.20				0.66	55143	Nearly meets B. P. requirements. Slightly too weak.
" 2	"	55144	Vancouver Drug Co., 405 Hastings St., Vancouver.	6 "	1.50				0.72	55144	Meets B. P. requirements.
" 2	"	55145	Marrett & Reid, 157 Hastings St., Vancouver.	6 "	2.00	Vendors			0.77	55145	" "
" 2	"	55146	E. T. Knowlton, 15 Hastings St., Vancouver.	6 "	2.50				0.76	55146	" "
" 2	"	55147	Woodward Dept. Stores, Vancouver.	6 "	1.25	Vendors			0.53	55147	Below B. P. requirements.



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55148	MacLennans Drug Store, 6750 Columbia St., New Westminster.	"	1.50	"	.....	0.74	55148	Meets B. P. requirements.
55149	H. Ryall, 701 Columbia St., New Westminster.	"	1.00	"	.....	0.68	55149	" "
55150	D. T. Curtis & Co., 6396 Columbia St., New Westminster.	"	1.50	"	.....	0.81	55150	" "

DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

Nov. 12	1 lb	61566	G. A. Fraser & Co., 9126 Govt. St., Victoria.	1.50	Vendor.....	0.73	61566	Meets B. P. requirements.
"	"	61567	F. J. Williams, 613 Fort St., Victoria.	1.50	"	1.48	61567	Much above B. P. strength.
"	"	61568	D. E. Campbell, Cor. Fort & Douglas St., Victoria.	1.50	"	0.82	61568	Meets B. P. requirements.
"	"	61569	W. S. Terry, 705 Fort St., Victoria.	75	"	0.71	61569	" "
"	"	62000	G. U. Bawa, 1228 Govt. St., Victoria.	1.50	"	0.79	62000	" "

## APPENDIX G.

## BULLETIN No. 316—NATIVE WINE.

OTTAWA, July 8, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister Inland Revenue,

SIR,—I beg to submit herewith a report upon one hundred and eighty seven (187) samples purchased as *Native Wine*, in January, February and March of this year. These have been obtained at various points throughout the Dominion, and it may be fairly assumed that they represent the article as sold in Canada.

No extensive inspection of Native Wine has been made by this Department since 1908 (See Bulletin No. 160). Meantime the article has been tentatively and partially defined by Order in Council of February 8, 1911 as follows:

1. Wine is the product of the normal alcoholic fermentation of the juice of sound ripe grapes, neat, or variously modified, and followed by a proper cellar treatment.

2. All beverages sold or offered for sale as Wine shall be distinctly labelled to show the place of their production; and shall meet the requirements for wine, which are established by law in the place of their production.

3. Wine made in any part of Canada shall be labelled in such a way as to show the locality in which it has been produced. The specific name of such locality together with the names of the makers, shall be held to be a legal description of the article.

NOTE.—The defining of types of Canadian made Wines is postponed until sufficient data have been secured.

The present inspection has for one chief object, an attempt to secure data which might serve to classify the various types of native wines. Many of these are called ports, others evidently aim at the claret type. Most of them are merely described as *Wine*; and a few of these are fairly dry; i.e. contain but little residual sugar.

Of the samples herein reported forty (40) are received in bottles which bear labels, having the name of the manufacturer and the place of production printed thereon, thus meeting requirements of subsection 3 above. These I have indicated as properly labelled. Several samples are distinguished by a monogram or private marks, which may possess a meaning to the initiated, but cannot be held as fulfilling the requirements of the Order in Council.

Most of these samples are supplied in bottles bearing no label; or having a label on which the name of manufacturer and place of production does not appear. In this matter they fail to meet legal requirements. It is of course, quite possible that the original container (barrel or keg) in which the shipment was made, may have been labelled in such a way as to show where and by whom manufactured. This information should, however, appear upon each package sold at retail; the intention being to inform the consumer in the matter.

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One sample (No. 60760) is labelled *Unfermented Port*. Such a name is, of course, a contradiction in terms. Unfermented grape juice is possible; unfermented *Port* is impossible. A port wine from which the alcohol had been removed might, correctly enough, be described as dealcoholized port.

Two other samples are grape juice and not wine. One of these is plainly labelled grape juice, and should not have been accepted by the inspector as a wine.

This report is intended to furnish information regarding native wines, and to inform the public as to the character of this article as found on our markets. Your advisory board will be able, it is hoped, in the light of the data herein placed on record, to make recommendations in the matter of classification of wines which shall serve to give greater definiteness and clearer meaning to such terms as Canadian Port, Canadian Sherry, Canadian Claret, etc.

Meantime, I would respectfully suggest its publication as Bulletin No. 316.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate

DISTRICT OF NOVA SCOTIA—

1915.										
Feb. 17	Native Wine.	64101	Kelley & Glas y, Halifax, N.S.	3 pts.	50	Niagara Falls Wine Co.	Mfrs		1.0347	0.9849
" 17	"	64102	A. Monaghan & Co., Halifax, N.S.	3 "	45	Stamford Park Wine Co., Niagara Falls.	"		1.0430	0.9824
" 17	"	65103	Jas. Scott & Co., Halifax, N.S.	3 "	40	Niagara Falls Wine Co.	"		1.0252	0.9813
" 18	"	64104	T. F. Courtney & Co., Halifax, N.S.	3 "	40	T. G. Bright & Co., Niagara Falls.	"	Sold as Native Port.	1.0595	0.9865
" 18	"	64105	E. Donahoe & Son, Halifax, N.S.	3 "	45	"	"		1.0274	0.9866
" 19	"	64106	Dillon Bros., Halifax, N.S.	3 "	40	"	"		1.0208	0.9808
" 19	"	64107	Cahill & Co., Halifax, N.S.	3 "	45	"	"		1.0253	0.9808
" 19	"	64108	Simon & Fraser, Halifax, N.S.	3 "	45	Unknown	E. Donahoe, Halifax, N.S.		1.0234	0.9778
" 22	"	64109	Grace & Castonguay, Halifax, N.S.	3 "	40	T. G. Bright & Co., Niagara Falls.	Mfrs		1.0198	0.9796
" 22	"	64110	John Tobin & Co., Halifax, N.S.	3 "	40	"	"		1.0234	0.9808

DISTRICT OF NEW BRUNSWICK—

Jan. 29	Native Wine.	59666	Comeau & Sheehan, St. John, N.B.	3 pts.	90	T. G. Bright Co., Niagara Falls.			1.0256	0.9808
" 29	"	59667	W. E. McIntyre, Ltd., St. John, N.B.	3 "	75	"			1.0259	0.9809
Feb. 1	"	59668	Foster & Co., St. John, N.B.	3 "	75	Pelee Wine Co., Brantford.		St. Augustine.	1.0536	0.9808
" 1	"	59669	" " "	3 "	60	"		Concord	1.0723	0.9881
" 3	"	59670	R. Sullivan & Co., St. John, N.B.	3 "	75	Ont. Grape Growing and Wine Mfg. Co., St. Catharines			1.0633	0.9840

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## NATIVE WINE.

Results of Analysis.													Remarks and Opinion of the Chief Analyst.	
Alcohol.			Grammes per 100cc.									No. of Sample.		
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert Sugar.	Non-Sugar Solids.	Ash	Polarization in 200 mm. tube Direct.	Acidity.			Preservatives.			Dyes.
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.				
R. J. WAUGH, INSPECTOR.														
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.				
11.69	14.46	25.34	13.54	15.71	2.96	0.200	-11.0	0.570	0.081	0.469	None.			64101
11.31	13.99	24.52	15.60	13.54	2.06	0.174	-20.4	0.609	0.073	0.578	Pre- sent.			64102
12.12	14.98	26.25	11.28	8.36	2.92	0.272	-12.0	0.594	0.114	0.452	None.			64103
8.29	10.30	18.04	18.70	16.62	2.08	0.152	-16.6	0.867	0.330	0.455	Trace.			64104
12.09	15.68	27.48	12.06	8.42	3.64	0.256	-3.6	0.600	0.120	0.450	None.			64105
12.50	15.44	27.07	10.31	7.08	3.23	0.304	-6.6	0.603	0.116	0.458	"			64106
12.50	15.44	27.07	11.39	8.63	2.76	0.258	-12.4	0.558	0.111	0.420	"			64107
13.27	16.38	28.70	11.23	7.74	3.49	0.238	-3.8	0.591	0.098	0.460	"			64108
13.46	16.61	29.11	10.35	6.89	3.46	0.286	-5.8	0.579	0.121	0.428	"			64109
12.54	15.49	27.15	10.90	7.98	2.92	0.230	-10.0	0.567	0.117	0.421	"			64110

JNO. C. FERGUSON, INSPECTOR.

12.50	15.44	27.07	11.58	7.91	3.61	0.285	-0.6	0.678	0.120	0.524	None.			64006
12.42	15.36	26.90	11.57	8.37	3.20	0.266	-8.4	0.645	0.086	0.525	"			64007
12.50	15.44	27.07	18.91	15.20	3.71	0.218	-12.8	0.591	0.137	0.430	"			64008
7.17	8.92	16.63	21.77	18.10	3.67	0.127	-15.1	0.672	0.279	0.332	"			64009
10.03	12.49	21.89	20.44	17.59	2.85	0.177	-50.6	0.819	0.192	0.697	Pre- sent.			64010

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

DISTRICT OF NEW BRUNSWICK—

1915.										
Feb.	3 Native Wine.	59671	R. Sullivan, & Co., St. John, N. B.	3 pts.	1 50	Ont. Grape Growing and Wine Mfg. Co., St. Catharines.	.....	Golden Diana.	1.0617	0.9819
"	3 "	59672	" " "	3 bots.	2 70	" " "	.....	7 year Old Port.	1.0598	0.9808
"	4 "	59673	P. M. O'Neil, St. John, N. B.	3 pts.	90	Stamford Park Wine Co., Niagara Falls.	.....	.....	1.0544	0.9828
"	4 "	59674	" " "	3 bots.	1 20	" " "	.....	Gold Medal Port.	1.0440	0.9821
"	9 "	59675	T. H. Haley, St. John, N. B.	3 pts.	1 00	T. G. Bright & Co., Niagara Falls.	.....	Concord ..	1.0254	0.9806

DISTRICT OF QUEBEC CITY—

Jan.	20 Vin Canadien.	60754	Arthur Drolet, 712 Rue St. Valier, Quebec.	3 pts.	90	Stamford Park Wine Co.	.....	.....	1.0388	0.9832
"	20 "	69755	" " "	3 "	90	T. Bright Co., Niagara Falls.	.....	.....	1.0236	0.9813
"	20 Vin Diamond.	60756	T. A. Bedard, 728 Rue St. Valier, Quebec.	3 "	1 20	" " "	.....	Diamond.	1.0307	0.9825
"	20 Vin Concord.	60757	" " "	3 "	1 50	" " "	.....	Concord ..	1.0320	0.9815
"	21 "	60758	O. Lacroix, 19 Rue St. Joseph, Quebec.	3 "	1 00	Niagara Wine.	.....	.....	1.0284	0.9819
"	21 Vin Canadien.	60759	" " "	3 "	80	A. Toussaint & Cie.	.....	Competition.	1.0455	0.9866
"	21 Unfermented.	60760	" " "	3 "	1 50	The Turner Co., Ltd., Toronto.	.....	.....	1.0821	0.9999
"	21 Vin Canadien.	60761	Cantin & Frère, 271 Rue St. Joseph, Quebec.	3 "	1 20	A. Toussaint & Cie., Quebec.	.....	.....	1.0263	0.9844
"	22 Niagara.	60762	Myrand & Pouliot, 70 Rue de la Couronne, Quebec.	3 "	1 00	T. Bright Co., Niagara Falls.	N. Rioux & Cie.	.....	1.0420	0.9815
"	22 Port X...	60763	" " "	3 "	66	A. Toussaint & Cie., Quebec.	.....	Port X...	1.0214	0.9810

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NATIVE WINE.

Results of Analysis.														No. of Sample.	Remarks and Opinion of the Chief Analyst.
Alcohol.			Grammes per 100cc.									Preservatives.	Dyes.		
By Weights.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert Sugar.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. tube Direct.	Acidity.							
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.					

*Concluded.*

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.				
11.71	14.49	25.39	20.66	17.91	2.75	0.157	-31.8	0.876	0.089	0.765	None.			59671	Properly label- led.
12.52	15.47	27.12	20.46	17.73	2.73	0.191	39.8	0.681	0.112	0.542	Pre- sent.			59672	
11.00	13.62	23.86	18.30	16.33	1.97	0.166	-18.0	0.606	0.068	0.521				59673	
11.51	14.24	24.95	15.79	13.56	2.23	0.165	-19.0	0.642	0.069	0.555				59674	
12.69	15.68	27.45	11.49	8.54	2.82	0.242	11.6	0.573	0.102	0.445	None			59675	

F. X. W. E. BELAND, INSPECTOR.

10.69	13.24	23.21	14.41	11.15	3.26	0.172	13.4	0.840	0.125	0.684	None	None		60754	
12.15	15.02	26.33	10.95	7.20	3.75	0.212	7.2	0.585	0.055	0.516				60755	
11.23	13.90	21.36	12.48	7.77	4.71	0.308	-0.2	0.660	0.130	0.500				60756	
12.09	14.84	26.00	13.08	8.39	4.69	0.220	-5.6	0.549	0.058	0.476				60757	
11.69	14.16	25.31	12.04	7.53	4.51	0.268	6.0	0.627	0.065	0.540		Pre- sent		60758	
8.21	10.21	17.89	15.27	4.60		0.156	20.4	0.620	0.108	0.585				60759	
0.95	0.07	0.12	21.36	17.30	4.06	0.280	-18.0	0.794	0.031	0.555				60760	Labelled "Unfer- mented (1887)."
9.79	12.13	21.27	16.84	7.82	3.02	0.220	3.6	0.531	0.061	0.451				60761	
12.00	14.84	26.00	15.68	13.16	2.52	0.252	6.2	0.538	0.072	0.468				60762	
10.08	12.49	21.89	9.68	7.96	1.72	0.168	2.6	0.740	0.082	0.437				60763	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

DISTRICT OF QUEBEC PROVINCE—

1915.											
Jan.	26	Vin Canadien.	3760	G. & Ed. Couture, Levis.	3 bts.	1 20	Ont. Grape Growing & Wine Mfg. Co.			1.0689	0.9880
"	26	" ..	3761	" " ..	3 "	75	" "			1.0620	0.9836
"	27	" ..	3767	J. A Gagnou & Fils., Levis.	3 "	35	A. Toussaint Cie., Quebec.			1.0179	0.9812
"	27	" ..	3768	" " ..	3 "	35	" "			1.0410	0.9844
"	28	" ..	3770	Louis Mercier Cie., Levis.	1 pt.	25	J. H. Lee Co. Toronto.			1.0451	0.9859
"	29	" ..	3775	O. Lacroix, 19 Rue St. Joseph, Quebec.	3 bts.	75	E. D. Smith, Winona.			1.0750	1.000
"	30	" ..	3776	Frs. Bourret, 145 St. Paul St. Quebec.	3 "	20	A. Toussaint & Cie., Quebec.			1.0450	0.9844
Feb.	1	" ..	3778	S. Martel, Quebec.	3 "	75	T. Bright Co. Niagara Falls.			1.0234	0.9820
"	2	" ..	3780	P. J. Turgeon, Quebec.	3 "	75	" "			1.0247	0.9842
Jan.	29	" ..	3773	O. Lacroix, 19 Rue St. Joseph, Quebec.	3 "	75	Niagara Wine Co.			1.0280	0.9982

DISTRICT OF THREE RIVERS—

Jan.	16	Vin Canadien.	3931	George Gouin, St. Felix de Valois.	3 bts	75	Ont. Grape Growing Wine Co., St. Catharines.			1.0670	0.9846
"	18	"	3932	L. A. Chaetier, Joliette.	3 "	75	St. David Growers Co. Toronto.	J. J. Soumis, Joliette.		1.0438	0.9864
"	19	"	3933	Joseph Bordelean, Joliette.	3 "	30	Niagara Falls Wine Co.			1.3060	0.9820
"	20	"	3934	Ludger Duperrant, St. Felix de Valois.	3 "	50	St. David Growers Co. Toronto.			1.0156	0.9861
"	20	"	3935	W. M. Perrault, Joliette.	3 "	90	Cherry Wine Niagara Co. N. F.			1.0202	0.9816
"	22	"	3936	Thomas Laporte, L'Assomption.	3 "	75	Niagara Falls Wine Co., Niagara Falls.			1.0276	0.9830



SESSIONAL PAPER No. 14

NATIVE WINE.

Results of Analysis.

Alcohol.			Grammes per 100cc.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert Sugar.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. tube Direct.	Acidity.			Preservatives.	Dyes.		
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.				
14.82	18.25	31.99	21.02	18.84	3.18	0.180	-31.6	0.930	0.046	0.873	None.	None.	3760	Properly labelled.
10.38	12.87	22.55	20.36	15.58	4.78	0.172	-35.0	0.780	0.058	0.707	Present.	"	3761	"
12.23	15.12	26.49	9.49	6.54	2.95	0.100	-6.2	0.540	0.084	0.435	None.	"	3767	
9.79	12.13	21.27	14.67	12.09	2.58	0.148	-9.6	0.624	0.065	0.543	"	Present.	3768	
8.71	10.82	18.96	15.35	11.69	3.66	0.200	-20.4	0.720	0.105	0.589	Present.	"	3770	
None.	None.	None.	19.47	17.11	2.36	0.268	-20.8	1.260	0.120	1.110	None.	None.	3775	Labelled "Grape Juice."
9.79	12.13	21.27	15.71	11.00	4.71	0.132	-7.6	0.643	0.065	0.562	"	Present.	3770	
11.62	14.37	25.18	10.71	7.06	3.65	0.300	-0.8	0.630	0.090	0.585	"	"	3778	
9.93	12.31	21.57	10.48	8.94	1.54	0.251	-8.2	0.600	0.072	0.468	"	"	3780	
7.13	8.88	15.56	8.00	7.77	0.33	0.280	-6.6	0.624	0.048	0.564	Present.	"	3778	

DR. V. P. LAVELLEE, INSPECTOR.

9.64	11.96	20.96	21.41	19.16	3.26	0.200	-20.0	0.825	0.064	0.741	Present.	Present.	3801	
8.36	10.38	18.20	14.87	11.15	3.72	0.188	-25.0	0.738	0.067	0.651	None.	"	3805	
11.02	14.37	25.18	12.58	8.69	3.96	0.272	-10.2	0.612	0.065	0.547	"	"	3803	
8.57	10.65	18.65	15.42	11.45	3.97	0.161	-24.0	0.720	0.101	0.594	Present.	None.	3804	
11.02	14.74	25.80	10.00	7.14	2.89	0.268	-5.0	0.645	0.065	0.564	None.	"	3806	
10.05	13.43	23.54	11.56	7.11	4.44	0.268	-14.0	0.690	0.046	0.546	"	Present.	3808	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

DISTRICT OF THREE RIVERS—

1915.												
Jan.	22	Vin Canadien.	3937	Vital Lafortune, L'Assomption.	3	bots	90	Niag'a Falls Wine Co., Niag'a Falls			1.0274	0.9817
"	25	"	3938	Camille Barrette, Joliette.	3	"	40	"				
"	25	"	3939	L. Z. Magnan, Joliette.	3	"	1.05	"			1.0247	0.9816
"	25	"	3952	Napoleon Gareau, Joliette.	3	"	55	J. J. Soumis, Joliette.			1.0487	0.9861

DISTRICT OF EASTERN TOWNSHIPS—

Feb.	9	Vin Canadien.	1762	E. McGovern, Richmond E. L.	3	bots	70	Niag'a Falls Wine Co., Niag'a Falls			1.0247	0.9809
"	10	"	1763	P. Lavigne, Victoriaville.	3	"	50	H. H. Guay Ltd., Victoriaville			1.0464	0.9857
"	16	"	1764	T. F. Proulx, Windsor Mills.	3	"	60	St. David Wine Grocers, Toronto	J. Lavigne Windsor Mills.		1.0447	0.9865
"	16	"	1765	W. Murray & Co., Sherbrooke.	3	"	65	"			1.0468	0.9870
"	22	"	1766	R. Dubreuil, St. Cesaire.	3	"	90	"			1.0465	0.9864
"	22	"	1767	M. Bessette, Marieville.	3	"	60	Stamford Park Wine Co., Ltd., Niag'a Falls			1.0380	0.9863
"	22	"	1768	J. Lalanne, St. Hilaire Sta.	3	"	1.10	"			1.0275	0.9824
Mar.	4	Vin Canadien Rouge.	1769	H. Berdet, Hyacinthe.	3	"	.....	"			1.0163	0.9900
"	22	Vin Canadien Blanc.	1770	V. Martinon, Hyacinthe.	3	"	90	"			0.9964	0.9870
"	26	Vin Canadien Rouge.	1771	La. Cie S. Bourgeois Inc., St. Hyacinthe.	3	"	60	"			1.0539	0.9838

SESSIONAL PAPER No. 14

NATIVE WINE.

Results of Analysis.													Remarks and Opinion of the Chief Analyst.
Alcohol.			Grammes per 100cc.									No. of Sample.	
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. Tube Direct.	Acidity.			Preservatives.		
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.			

Continued.

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.				
11.85	14.65	25.67	11.83	8.06	3.77	0.272	-9.0	0.564	0.055	0.493	None.	Pre-sent.		3937
...	...	...	...	...	...	...	...	...	...	...	...	...	...	*3938
11.92	14.74	25.83	11.15	7.87	3.28	0.228	-6.4	0.615	0.060	0.541	None.	Pre-sent.		3939
8.57	10.65	18.65	16.07	12.44	3.63	0.156	-22.4	0.885	0.091	0.772	Pre-sent.			3952

J. C. ROULEAU, INSPECTOR.

12.46	15.40	26.99	11.34	7.41	3.90	0.220	-12.2	0.609	0.060	0.534	None.	Pre-sent.		1762
8.86	11.00	19.27	15.74	11.84	3.90	0.200	-24.0	0.735	0.077	0.629	Pre-sent.			1763
8.29	10.30	18.04	15.08	11.45	3.63	0.130	-16.0	0.717	0.093	0.611				1764
7.93	9.86	17.29	15.50	11.64	3.86	0.160	-19.0	0.670	0.091	0.547	None.			1765
8.36	10.38	18.20	15.58	11.05	4.53	0.180	-25.0	0.918	0.122	0.750				1766
8.43	10.47	18.25	13.39	12.64	0.75	0.260	-23.4	0.270	0.088	0.160		None.		1767
11.31	13.99	24.52	11.68	8.37	3.31	0.260	-0.4	0.270	0.043	0.217				1768
5.87	7.32	12.84	6.80	0.63		0.140	-0.2	0.732	0.094	0.709				1769
7.93	9.86	17.29	2.43	0.84	1.59	0.212	1.0	0.759	0.060	0.714				1770
10.23	12.68	22.22	18.19	12.94	5.36	0.262	-3.6	0.681	0.060	0.619		Pre-sent.		1771

\* Both samples broken

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

DISTRICT OF MONTREAL—

1915.											
April 10	Native Wine.	62661	J. A. R. Beaudin, 1283 Desrables St., Montreal.	3 pts.	33	St. David Wine Co.				1.0432	0.9867
" 10	"	62662	J. E. Perreault, 1157 Marianne St. E., Montreal.	3 "	30	Stamford Park Wine Co.				1.0602	0.9862
" 10	"	62663	Grenon Freres, 680 Papineau Ave., Montreal.	3 "	38	Hudon & Orsali.				1.0265	0.9814
" 10	"	62664	T. Bertrand, 102 De Laroche St., Montreal.	3 "	60	Ont. Grape Growing Co.				1.0729	0.9861
" 10	"	62665	James Kilgallon, 421 Wellington St., Montreal.	3 "	40	Stamford Park Wine Co.				1.0631	0.9877
" 10	"	62666	J. H. Dupuis, 373 Wellington St., Montreal.	3 "	50	"				1.0479	0.9993
" 10	"	62667	J. E. Behsle, 129 Wellington St., Montreal.	3 "	60	St. David Wine Co.				1.0427	0.9860
" 10	"	62668	P. Bedard, 2236 St. Denis St., Montreal.	3 "	50	Hudon & Orsali.				1.0257	0.9818
" 10	"	62669	D. D. Gauthier, 111 St. Zotique St., Montreal.	3 "	45	"				1.0282	0.9821
" 10	"	62670	H. Plouffe, 92 St. Zotique St., Montreal.	3 "	60	"				1.0261	0.9818

DISTRICT OF VALLEYFIELD—

Feb. 1	Wine	58226	G. Dupuis, St. Johns, P.Q.	3 pts.	40	Ont. Grape Growing Co., St. Catharines.				1.0738	0.9852
" 1	"	58227	F. Claprod, St. Johns, P.Q.	3 "	50		E. H. Hebert, Valleyfield.			1.0451	0.9818
" 5	"	58228	E. H. Hebert, Valleyfield.	3 "	38	Stamford Park Wine Co.				1.0472	0.9827
" 5	"	58229	J. A. Masson, Valleyfield.	3 "	35	Niagara Falls Wine Co.				1.0244	0.9829

SESSIONAL PAPER No. 14

NATIVE WINE.

Results of Analysis.														No. of Sample.	Remarks and Opinion of the Chief Analyst.
Alcohol.			Grammes per 100cc.									Preservatives.	Dyes.		
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. tube Direct.	Acidity.							
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.					

D. J. KEARNEY, INSPECTOR.

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.				
8.86	11.00	19.27	14.90	11.64	3.26	0.180	-23.0	0.573	0.028	0.538	Present.	Present.	62661	
8.59	10.50	18.50	19.21	15.99	3.22	0.228	-29.6	0.801	0.098	0.679	None.	"	62662	
12.08	14.93	26.17	11.68	8.10	3.58	0.268	-12.2	0.582	0.055	0.513	"	"	62663	
8.57	10.65	18.65	22.57	18.62	3.95	0.200	-20.0	0.798	0.067	0.714	Present.	None.	62664	
7.47	9.29	16.28	19.58	15.27	4.31	0.261	-31.0	0.810	0.046	0.782	"	Present.	62665	
0.37	0.46	0.81	12.58	11.00	1.58	0.220	-3.6	0.705	0.041	0.654	"	None.	62666	Grape Juice
8.64	10.73	18.81	14.69	12.04	2.63	0.156	-21.8	0.714	0.093	0.599	"	Present.	62667	
11.77	14.56	25.51	11.36	7.91	3.45	0.268	-10.4	0.549	0.036	0.504	None.	"	62668	
11.54	14.27	25.01	11.94	7.72	4.22	0.280	-10.4	0.588	0.065	0.507	"	None.	62669	
11.62	14.37	25.18	14.21	8.39	2.82	0.228	9.0	0.486	0.038	0.438	"	Present.	62670	

J. J. COSTIGAN, ACTING INSPECTOR.

9.21	11.44	20.04	23.04	19.09	3.95	0.212	32.4	0.990	0.067	0.908	Present.	None.	68226	
11.77	14.56	25.51	16.41	14.20	2.21	0.220	-15.6	0.678	0.031	0.597	"	"	68227	
11.08	13.71	24.03	14.73	14.66	2.07	0.244	-18.8	0.699	0.041	0.648	"	"	68228	
10.92	13.52	23.70	16.74	7.58	3.16	0.308	-6.8	0.594	0.060	0.508	None.	Present.	68229	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

DISTRICT OF VALLEYFIELD—

1915.										
Feb. 5	Wine....	58230	J. Lepage, Valleyfield.	3 pts.	38	Stamford Park Wine Co.			1.0455	0.9818
" 5	" .....	58231	S. Beaudin, Valleyfield.	3 bots	75			Bottled by vendor.	1.0727	0.9855
" 16	" .....	58232	A. Filion, Buckingham.	3 pts.	50	Niagara Falls Wine Co.			1.0204	0.9808
" 16	" .....	58233	Tourangeau & Champagne, Buckingham.	3 "	50				1.0614	0.9842
" 23	" ...	58234	S. Gauthier, Farnham.	3 "	75				1.0398	0.9884
" 23	" .....	58235	H. F. Batalon, Farnham.	3 "	60		Narcisse Loul, St. Johns, P.Q.		1.0443	0.9804

DISTRICT OF OTTAWA—

Feb. 3	Native Wine.	63487	The Ottawa Wine Vaults Co., Ottawa.	3 bots.	100	Stamford Park Wine Co., Niagara Falls.	Mfrs. ...	Old Niagara.	1.0512	0.9833
" 3	"	63488	" " "	3 "	50	" " "	"	Gold Medal.	1.0496	0.9847
" 3	"	63489	S. J. Major, Ltd., Ottawa.	3 "	45	T. G. Bright Co., Niagara Falls.	"	Diamond.	1.0273	0.9818
" 3	"	63490	" " "	3 "	60	" " "	"	Royal.	1.0266	0.9804
" 6	"	63491	M. J. Laverdure, Hull.	3 "	75	Ont. Grape Growing & Wine Mfg. Co., St. Catharines.	"	Pure Grape Wine.	1.0673	0.9846
" 6	"	63492	" " "	3 "	75	St. David Wine Growers Co., Toronto.	"		1.0426	0.9842
" 8	"	63493	Jos. Lavigne, Wellington St., Ottawa.	3 "	75	Stamford Park Wine Co., Niagara Falls.	"		1.0376	0.9834
" 8	"	63494	A. L. Pinard & Sons, Rideau St., Ottawa.	3 "	1 50	T. G. Bright Co., Niagara Falls.	"		1.0276	0.9810
" 8	"	63495	J. H. O'Reilly, Rideau St., Ottawa.	3 "	75	Peelee Island Wine & Vineyards Co., Brantford.	"		1.0654	0.9867
" 8	"	63496	" " "	3 "	1 50	" " "	"	St. Augustine.	1.0577	0.9823

SESSIONAL PAPER No. 14

NATIVE WINE.

Results of Analysis.

Alcohol.			Grammes per 100cc.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. tube Direct.	Acidity.			Preservatives.	Dyes.		
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.				
<i>Concluded.</i>														
p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.				
11.77	14.56	25.51	16.52	13.69	2.83	0.220	-16.0	0.696	0.035	0.648	Present.	None	58230	
9.00	11.17	19.58	22.67	19.05	3.62	0.212	-32.2	0.975	0.130	0.793	"	"	58231	
12.54	15.49	27.15	10.25	6.73	3.52	0.220	-10.0	0.510	0.048	0.450	None	Present.	58232	
9.93	12.31	21.57	20.05	16.10	3.95	0.200	-29.6	0.870	0.060	0.795	Present.	None	58233	
7.00	8.72	15.27	13.31	8.34	3.99	0.180	-4.0	0.816	0.106	0.710	"	"	58234	
12.85	15.86	27.81	16.57	14.53	2.01	0.220	-1.0	0.740	0.036	0.695	None	"	58235	

J. A. RICKEY, INSPECTOR.

10.62	13.15	23.04	17.62	14.15	3.47	0.188	-23.1	0.615	0.036	0.570	Present.	None	63487	
9.57	11.87	20.81	16.83	13.24	3.59	0.184	-3.4	0.765	0.055	0.696	None.	"	63488	
11.77	14.56	25.51	11.78	16.86	0.92	0.208	9.6	0.585	0.065	0.504	"	Present.	63489	
12.85	15.86	27.81	11.96	7.63	4.33	0.210	-0.6	0.609	0.077	0.513	"	"	63490	Property labelled.
9.64	11.96	20.96	21.49	16.98	4.51	0.228	-30.2	0.885	0.072	0.795	Present.	None	63491	
9.93	12.31	21.57	15.11	12.49	2.65	0.180	21.0	0.696	0.091	0.585	"	Present.	63492	Property labelled.
10.54	13.05	22.88	14.04	12.05	1.99	0.320	-17.0	0.690	0.041	0.629	"	None	63493	
12.38	15.30	26.82	12.06	7.49	4.57	0.288	-2.0	0.665	0.053	0.600	None	"	63494	
8.14	10.12	17.74	20.44	16.62	3.82	0.124	-10.4	0.714	0.120	0.564	"	Present.	63495	
11.38	14.09	24.69	19.58	9.30	"	0.132	-20.0	0.660	0.075	0.591	"	"	63496	Property labelled.

7 GEORGE V, A. 1917

BULLETIN No. 316--

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.
DISTRICT OF KINGSTON--										
1915.										
Feb. 1	Native Wine.	66526	The Thompson Co., Kingston.	3 bots.	90			Bottled by Vendor.	1.0460	0.9861
" 1	"	66527	E. Beaupre, Kingston.	3 "	1 50	Hillrust Wine Mfg. Co., St. Catharines.		Canadian Port.	1.0699	0.9846
" 1	"	66528	J. Gordon, Kingston.	3 "	1 50			Sherry. Bottled by Vendor.	0.9863	0.9808
" 1	"	66529	" "	3 "	1 50	Ont. Grape Growing & Wine Mfg Co., St. Catharines.		Port	1.0747	0.9853
" 1	"	66530	J. McParland, Kingston	3 "	1 50	T. G. Bright & Co., Toronto			1.0317	0.9821
" 1	"	66531	" "	3 "	1 50	Peele Island Wine & Vineyards Co.		St. Augustine.	1.0650	0.9829
" 15	"	67532	W. A. Radbourne, Belleville.	3 "	90	T. G. Bright, Toronto.			1.0268	0.9823
" 15	"	66533	Wesley Bullen, Belleville.	3 "	1 35	Peele Island Wine & Vineyards Co.			1.0617	0.9848
" 16	"	66534	Hooey & Son, Cobourg.	3 "	90	T. G. Bright, Toronto.			1.0287	0.9829
" 16	"	66535	William Mitchell, Port Hope.	3 "	1 50	T. G. Bright, Niagara Falls			1.0291	0.9816

## DISTRICT OF TORONTO

Jan. 29	Native Wine.	64618	T. F. Hannan, 834 Yonge st., Toronto.	3 pts.	75	T. G. Bright, Niagara Falls.			1.0267	0.9823
" 29	"	64649	A. P. Herbert, 183 King st., E., Toronto.	3 bots.	75	"			1.0253	0.9841
" 29	"	64650	Ryan & Co., Ltd., 928 Bloor st., W., Toronto.	3 pts.	60	"			1.0261	0.9815
" 29	"	64651	J. H. King, 112 Dundas st., Toronto.	3 bots.	1 05	Peele Island Wine & Vinegar Co., Brantford.		St. Augustine.	1.0706	0.9836



## SESSIONAL PAPER No. 14

## NATIVE WINE.

Results of Analysis.															Remarks and Opinion of the Chief Analyst.
Alcohol.			Grammes per 100cc									Preservatives.	Dyes.	No. of Sample	
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. Tube Direct.	Acidity.							
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.					
JAMES HOGAN, INSPECTOR.															
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.					
8 57	10 65	18 65	15 53	13 64	1 89	0 200	- 24 0	1 080	0 175	0 862	Pre-sent.	Pre-sent.	66526		
9 64	11 96	20 96	22 17	16 98	5 19	0 196	- 22 1	0 861	0 077	0 765	"	None.	66527	Properly labelled.	
12 54	15 49	27 15	1 42	1 10	0 32	0 336	- 0 6	0 402	0 036	0 357	None.	"	66528		
9 14	11 35	19 89	23 25	21 72	1 53	0 228	- 31 2	0 916	0 077	0 820	Pre-sent.	"	66529		
11 54	14 27	25 01	12 84	8 63	4 21	0 252	- 4 6	0 570	0 057	0 499	None	Pre-sent.	66530		
10 92	13 52	23 70	21 33	16 98	4 35	0 228	- 13 6	0 574	0 098	0 452	"	"	66531		
11 38	14 09	24 69	11 52	8 25	3 27	0 252	- 6 0	0 585	0 156	0 390	"	"	66532		
9 50	11 79	20 65	19 97	15 68	3 29	0 168	- 13 0	0 732	0 163	0 529	"	"	66533	Properly labelled	
10 92	13 52	23 70	11 91	8 06	3 85	0 280	- 9 0	0 741	0 096	0 621	"	"	66534		
11 92	14 74	25 83	12 30	9 11	3 19	0 156	- 6 0	0 633	0 072	0 543	"	"	66535		
H. J. DAGER, INSPECTOR.															
11 38	11 09	21 69	11 48	8 20	3 20	0 296	- 2 0	0 645	0 053	0 578	None	Pre-sent.	66648		
10 00	12 40	21 73	10 66	8 01	2 65	0 216	- 10 2	0 606	0 046	0 549	"	"	66649	Properly labelled	
12 00	14 84	26 09	11 55	8 36	2 59	0 268	- 6 8	0 609	0 06	0 540	"	"	66650		
10 38	12 87	21 55	22 62	10 81	2 81	0 152	- 10 2	0 486	0 084	0 400	"	"	66651	Properly labelled	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the vendor.		Inspector's Report. (Is not an expression of opinion.)	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

## DISTRICT OF TORONTO—

1915.										
Jan. 30	Native Wine.	64652	W. J. Kelly, 749 Queen st., W., Toronto.	3 bots.	75	J. W. Lee & Co., Toronto.			1·0447	0·9852
Feb. 18	"	64653	M. Finigan, Whitby.	3 "	1 00	Ont. Wine Growing & Mfg. Co., St. Catharines.			1·0756	0·9857
" 24	"	64654	E. T. Sardell, 525 Yonge st., Toronto.	3 "	90	"			1·0127	0·9810
" 26	"	66811	The Wm. Mora Co., Ltd., 94 Yonge st., Toronto.	3 "	1 35	Niagara Falls Wine Co., Niagara Falls.	Concord		1·0243	0·9803
" 26	"	66812	Michie Co., Ltd, 5½ King st., W., Toronto.	3 "	1 35	T. G. Bright Co., Niagara Falls.	"		1·0248	0·9812
" 26	"	66813	J. Mather, 152 King st. E., Toronto.	3 "	90	"			1·0242	0·9818

## DISTRICT OF HAMILTON—

Mar. 2	Native Wine.	66834	Geo. Bernhardt, Preston.	3 bots.	75	T. G. Bright & Co., Niagara Falls.			1·0287	0·9819
" 3	"	66835	J. E. Segrain & Sons, Waterloo, Ont.	3 "	90	J. S. Hamilton & Co., Brantford.			1·0632	0·9861
" 3	"	66836	Beinhardt & Zeyler, Berlin.	3 "	90	Ont. Grape Growing & Wine Mfg. Co., St. Catharines			1·0652	0·9892
" 9	"	*66837	J. S. Hamilton & Sons, Brantford	3 "	90	Vendors				
" 12	"	66838	J. Haurigan, Dundas.	3 "	90	T. G. Bright Co., Niagara Falls.			1·0249	0·9813
" 12	"	66839	M. Cummings, 4 Barton st., E., Hamilton.	3 "	75	Stamford Park Wine Co., Niagara Falls.			1·0555	0·9815
" 12	"	66840	H. Callows, 255 Hughson st., N., Hamilton.	3 "	90	St. Davids Wine Co., Ltd., Toronto.			1·0495	0·9866

\*Both samples broken.

SESSIONAL PAPER No. 14

NATIVE WINE.

Results of Analysis.														Remarks and Opinion of the Chief Analyst.	
Alcohol.			Grammes per 100cc									Preservatives.	Dyes.		No. of Sample.
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert Sugar.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. tube Direct.	Acidity.							
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.					
9.21	11.44	20.04	15.42	11.99	3.43	0.152	- 26.8	0.690	0.093	0.574	Pre-sent.	Pre-sent.	64652		
8.86	11.00	19.27	23.38	19.71	3.67	0.240	- 14.0	0.885	0.014	0.870	None.	None.	64653		
12.38	15.30	26.82	8.20	4.83	3.37	0.180	- 8.0	0.879	0.048	0.819	-	-	64654	Property labeled	
12.92	15.96	27.97	11.39	9.75	1.44	0.250	- 0.7	0.684	0.041	0.633	-	-	66811		
12.23	15.12	26.49	11.28	8.77	2.51	0.230	+ 2.0	0.678	0.026	0.645	-	Pre-sent.	66812		
11.77	14.56	25.51	10.97	7.96	3.01	0.240	- 7.0	0.672	0.069	0.602	-	-	66813		

H. J. DAGGER, ACTING INSPECTOR

11.09	14.46	25.31	12.12	8.31	3.78	0.268	- 9.6	0.588	0.064	0.508	None.	Pre-sent.	66834	
8.57	10.65	18.65	20.02	15.79	4.23	0.164	- 10.0	0.717	0.163	0.513	-	-	66835	
6.43	8.01	14.04	19.73	16.72	3.01	0.200	- 30.0	0.858	0.057	0.787	Pre.	None.	66836	Property labeled
													66837	
12.15	15.02	26.33	11.28	9.61	1.67	0.288	- 1.6	0.258	0.046	0.201	None.	None.	66838	Property labeled
12.00	14.84	26.00	19.21	13.74	5.47	0.220	- 7.0	0.966	0.050	0.904	Pre-sent.	-	66839	
8.21	10.21	17.89	16.31	12.39	3.92	0.124	- 17.6	0.660	0.120	0.740	-	-	66840	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Of Wine.	Of Distillate.
				Quantity.	Cents.	Manufacturer.	Furnisher.			

DISTRICT OF HAMILTON—

1915.										
Mar. 12	Native Wine.	66841	James Blake, 117 Simcoe st., E., Hamilton.	3 bots.	90	.....	Jas. Turner, Hamilton.	.....	1·0277	0·9815
" 12	"	66842	Strickland & Shea, 276 King st., E., Hamilton.	3 "	90	The Hill-rust Wine Mfg. Co., St. Catharines.	.....	.....	1·0483	0·9842
" 12	"	66843	Wm. Smye, Jr., 75 Wellington st., N., Hamilton.	3 "	90	Stamford Park Wine Co., Niagara Falls.	.....	.....	1·0453	0·9825

DISTRICT OF WINDSOR—

Jan. 21	Native Wine.	63978	Ed. Shea, London.	3 pts.	60	Stamford Wine Co., Niagara Falls.	.....	.....	1·0586	8·9859
" 21	"	63979	" " "	3 "	75	T. G. Bright Co., Niagara Falls.	.....	.....	1·0284	0·9818
" 21	"	63980	P. J. Watt, London.	3 bots.	Nil.	Stamford Wine Co., Niagara Falls.	.....	Gold Medal Port.	1·0448	0·9828
" 25	"	63981	Hockin Bros., London.	3 "	120	Girarilot Wine Co., Sandwich.	.....	.....	1·0653	0·9862
" 26	"	63983	E. B. Smith, London.	3 "	75	Ont. Grape and Wine Co., St. Catharines.	.....	.....	1·0663	0·9844
Feb. 9	"	63984	Donald Fraser, St. Thomas.	3 pts.	35	St. David's Wine Growers.	.....	Port E...	1·0451	0·9862
" 9	"	63985	" " "	3 bots.	75	Peele Island Wine and Vineyard Co.	.....	.....	1·0506	0·9855
" 9	"	63986	E. J. Butler, St. Thomas.	3 "	75	Niagara Falls Wine Co., Ltd.	.....	.....	1·0302	0·9826
" 9	"	63987	J. H. Price, St. Thomas.	3 pts.	50	St. David's Wine Co., Toronto.	.....	Port.....	1·0494	0·9861
" 9	"	63988	" " "	3 bots.	150	T. G. Bright Co., Toronto.	.....	Concord..	1·0278	0·9817

SESSIONAL PAPER No. 14

NATIVE WINE.

Results of Analysis.															Remarks and Opinion of the Chief Analyst.
Alcohol.			Grammes per 100cc.									Preservatives.	Dyes.	No. of Sample.	
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert sugar.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. tube Direct.	Acidity.							
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.					
12.09	14.84	26.90	11.96	7.68	4.28	0.280	-9.0	0.684	0.055	0.629	None.	Present.	66841		
9.93	12.31	21.57	16.62	13.64	2.98	0.200	-16.5	0.747	0.046	0.689	Pre.	None.	66842	Properly labelled.	
11.23	13.90	24.36	16.2	11.69	4.59	0.236	-13.6	0.690	0.070	0.610	None.	Present.	66843		

*Concluded.*

JNO. TALBOT, INSPECTOR.

8.71	10.82	18.96	18.87	16.46	2.41	0.200	-29.6	0.720	0.025	0.689	Present.	Present.	63978	
11.77	14.56	25.51	11.96	6.92	5.04	0.292	-24.0	0.690	0.065	0.609	None.	-	63979	
11.00	13.62	23.86	16.97	13.64	3.43	0.244	-17.4	0.699	0.032	0.659	Present.	None.	63980	
8.50	10.56	18.50	20.55	17.14	3.31	0.188	-12.6	0.764	0.237	0.468	None.	Present.	63981	Properly labelled.
9.79	12.13	21.27	21.28	17.14	5.14	0.164	-31.4	0.870	0.134	0.613	Present.	None.	63982	
8.67	10.65	18.65	15.27	13.04	2.23	0.160	-1.4	0.750	0.091	0.637	-	Present.	63983	
9.00	11.17	19.58	16.88	13.04	3.84	0.148	-21.8	0.723	0.081	0.622	-	-	63984	Properly labelled.
14.15	13.81	24.19	12.32	7.87	4.45	0.300	-4.6	0.645	0.055	0.540	None.	-	63985	
8.57	10.65	18.65	16.41	12.64	3.77	0.188	-28.0	0.690	0.137	0.579	Present.	None.	63987	
11.85	14.65	15.67	11.94	7.87	4.07	0.272	-3.0	0.723	0.079	0.620	None.	Present.	63988	Properly labelled.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

DISTRICT OF MANITOBA—

1915.										
Jan. 25	Native Wine.	61226	E. Brotman & Son, Logan Ave., Winnipeg.	3 pts.	60	Stanford Park Wine Co., Niagara Falls.	.....	Gold Medal Port.	1.0564	0.9844
" 25	"	61227	Manitoba Liquor Store, 248 Logan Ave., Winnipeg.	3 "	40	"	.....	.....	1.0554	0.9842
" 25	"	61228	North West Liquor Store, 309 Logan Ave., Winnipeg.	3 "	75	"	.....	.....	1.0584	0.9833
" 25	"	61229	Winnipeg Wine Co., Main St., Winnipeg.	3 "	65	"	.....	.....	1.0552	0.9838
" 25	"	61230	Eagle Liquor Store, 175 Heney St., Winnipeg.	½ gall.	65	"	.....	.....	1.0570	0.9852
" 25	"	61231	Regal Wine Co., Ltd., 721 Main St., Winnipeg.	½ "	65	"	.....	.....	1.0339	0.9836
" 25	"	61232	T. D. Cavanagh, Ltd., Higgins Ave., Winnipeg.	½ "	65	"	.....	.....	1.0508	0.9855
" 25	"	61233	The Quality Liquor Store, 148 Higgins Ave., Winnipeg.	½ "	65	"	.....	.....	1.0532	0.9831
" 26	"	61234	Maple Leaf Wine Co., 324 Notre Dame Ave., Winnipeg.	½ "	65	"	.....	.....	1.0591	0.9846
" 26	"	61235	The City Liquor Store, 308 Notre Dame Ave., Winnipeg.	½ "	60	"	.....	.....	1.0227	0.9814

DISTRICT OF SASKATCHEWAN—

Jan. 30	Native Wine.	66329	Wm. Robertson, Regina.	3 pts.	40	T. G. Bright, Niagara Falls.	.....	.....	1.0272	0.9800
" 30	"	66330	E. Foret, Regina.	3 "	75	"	.....	.....	1.0240	0.9813
" 30	"	66331	Regina Wholesale Liquor Co., Regina.	3 "	40	St. David Wine Grocers Co., Toronto.	.....	.....	1.0398	0.9820

SESSIONAL PAPER No. 14

NATIVE WINE.

## Results of Analysis.

Alcohol.			Grammes per 100cc.								Preservatives.	Dyes.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert Sugar.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. tube Direct.	Acidity.						
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.				
9.79	12.13	21.27	18.69	14.66	4.03	0.188	-17.2	0.666	0.036	0.621	Pre-sent.	None.	61226	
9.93	12.31	21.57	18.48	14.66	3.82	0.224	-16.4	0.693	0.053	0.627	"	"	61227	
10.62	13.15	23.04	19.50	15.48	4.02	0.188	-17.0	0.684	0.053	0.618	"	"	61228	
10.23	12.68	22.22	18.53	15.48	3.05	0.180	-15.4	0.696	0.038	0.645	"	"	61229	
9.21	11.44	20.04	18.63	16.10	2.53	0.228	+1.6	0.807	0.060	0.732	"	"	61230	
10.38	12.87	22.55	10.43	9.68	0.75	0.220	-17.4	0.696	0.042	0.643	"	"	61231	
9.00	11.17	19.58	16.94	14.25	2.69	0.156	-32.8	0.600	0.038	0.552	"	"	61232	
10.77	13.34	23.37	18.19	14.05	4.14	0.204	-14.4	0.720	0.036	0.675	"	"	61233	
9.64	11.96	20.96	19.34	14.30	5.04	0.180	0.4	0.821	0.038	0.733	"	"	61234	
12.08	14.93	26.17	10.69	6.78	4.11	0.260	9.6	0.630	0.066	0.547	None	"	61235	

L. H. HALL, INSPECTOR.

13.15	16.24	28.46	12.22	9.30	2.92	0.268	-10.4	0.574	0.048	0.514	None	Pre-sent	61236	
12.16	15.02	26.33	11.05	8.49	2.56	0.284	7.2	0.654	0.064	0.564	"	"	61237	
11.02	14.37	25.18	14.98	13.24	1.74	0.200	-22.0	0.726	0.077	0.630	"	"	61238	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report (Is not an expression of opinion.)	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

DISTRICT OF SASKATCHEWAN—

1915.										
Jan. 30	Native Wine.	66332	H. M. Hillman, Regina.	3 pts.	75	Ont. Grape Growing Wine Mfrs. St. Catharines.			1 0741	0 9849
" 30	"	66333	Capital Wine Co., Regina.	3 "	65	T. G. Bright Co., Niagara Falls.			1 0289	0 9819
Feb. 1	"	66335	Gold Coin Liquor Store, Moosejaw.	3 "	50	St. David's Wine Growers Co., Toronto.			1 0461	0 9893
" 1	"	66336	E. B. R. Pragnell, Moosejaw.	3 "	25	"			1 0477	0 9861
" 1	"	66337	Moose Jaw Liquor Store, Moosejaw.	3 "	50	T. G. Bright Co., Niagara Falls.			1 0229	0 9809
" 1	"	66338	Western Commercial Co., Moosejaw.	3 "	75	St. David's Wine Growers Co., Moosejaw.			1 0484	0 9862
" 3	"	66346	Robinson & Walsh, Weyburn.	3 "	1 00	"			1 0420	0 9849

DISTRICT OF ALBERTA—

Mar. 11	Native Wine.	52075	H. R. Arnold, Red Deer.	3 pts.	15	Ont. Grape Growing & Wine Mfg. Co., St. Catharines.			1 0751	0 9849
" 12	"	52076	F. L. Smith Co., Lacombe.	3 "	75	St. David's Wine Growers, Toronto.			1 0331	0 9865
" 13	"	52077	Wetaskiwin Wine and Spirit Co., Wetaskiwin.	3 bots.	75	Niagara Falls Wine Co.			1 0238	0 9813
" 17	"	52078	Western Commercial Co., Calgary.	1 qt.	65	T. G. Bright & Co., Niagara Falls.			1 0306	0 9814
" 19	"	52079	"	1 "	65	J. W. Lee & Co., Toronto.			1 0459	0 9857
" 19	"	52080	E. W. Spence, Calgary.	1 "	75	Niagara Falls Wine Co.	Diamond		1 0222	0 9807



SESSIONAL PAPER No. 14

NATIVE WINE.

Results of Analysis.													Remarks and Opinion of the Chief Analyst.	
Alcohol.			Grammes per 100cc.									No. of Sample.		
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert Sugar.	Non-Sugar, Solids.	Ash.	Polarization in 200 mm. tube Direct.	Acidity.			Preservatives.			Dyes.
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.				

Concluded.

9.43	11.70	20.50	23.20	20.57	2.63	0.188	-31.6	0.984	0.055	0.915	Present	None.	66332
11.69	14.46	25.34	12.17	9.49	2.68	0.252	-11.6	0.609	0.057	0.538	None.	Present.	66333
6.36	7.92	14.88	14.72	13.21	1.48	0.176	-24.4	0.810	0.055	0.736	Present.	"	66335
8.57	10.65	18.65	15.97	13.44	2.53	0.228	-20.4	0.909	0.125	0.753	"	"	66336
12.46	15.40	26.99	10.87	8.53	2.34	0.228	-21.8	0.621	0.048	0.561	None.	"	66337
8.50	10.56	18.50	16.13	12.84	3.29	0.068	-21.6	0.879	0.144	0.690	Present.	None.	66338
9.43	11.70	20.50	14.80	11.89	2.91	0.156	-20.4	3.720	0.077	0.624	"	"	66340

A. W. R. MARKLEY, INSPECTOR.

9.43	11.70	20.50	23.46	15.99	7.47	0.228	-3.6	0.939	0.060	0.964	None.	None.	52975
8.29	10.30	18.04	12.06	11.74	0.32	0.200	-1.8	0.961	0.225	0.736	Present.	"	52976
12.15	15.02	26.33	11.00	6.83	4.17	0.250	-7.1	0.690	0.046	0.635	None.	"	52977
12.08	14.93	26.17	12.74	10.45	2.29	0.280	0.1	0.699	0.045	0.645	Present.	"	52978
8.86	11.00	19.27	15.61	10.46	5.15	0.150	7.6	1.070	0.091	0.979	None.	Present.	52979
12.62	15.58	27.31	10.71	10.61	0.13	0.250	2.0	0.711	0.080	0.631	"	"	52980

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

DISTRICT OF ALBERTA

1915.										
Mar. 19	Native Wine.	52081	North west Supply Co., Calgary.	1 Qt.	60	Niagara Falls Wine Co.			1.0330	0.9819
" 19	"	52082	Diamond Liquor Store.	1 "	75	"			1.0272	0.9806
" 19	"	52083	J. A. Guttman, Calgary.	1 "	75	St. David's Wind Co., Toronto.			1.0488	0.9858
" 19	"	52084	The McMann's Liquor Co., Calgary.	1 "	60	Niagara Falls Wine Co.			1.0488	0.9860

DISTRICT OF ROCKY MOUNTAINS

Feb. 1	Native Wine.	61741	Nelson Wine & Spirit Co., Nelson, B.C.	3 bots.	1 50	T. G. Bright Co., Niagara Falls.		One Diamond.	1.0348	0.9820
" 1	"	61742	" " "	3 "	2 25	" " "		Concord.	1.0262	0.9804
" 1	"	61743	Hudsons Bay Co., Nelson, B.C.	3 "	1 50	" " "			1.0281	0.9832
" 6	"	61751	Revelstoke Wine & Spirit Co., Revelstoke, B.C.	3 "	1 00	St. David's Wine Growers Co., Toronto.			1.0466	0.9851
" 15	"	61766	Western Wine & Liquor Co., Kamloops, B.C.	3 "	1 00	Stanford Park Wine Co., Niagara Falls.			1.0581	0.9816
" 15	"	61767	Hudsons Bay Co., Kamloops, B.C.	3 "	1 50		Hudsons Bay Co., Vancouver, B.C.		1.0274	0.9816
" 16	"	61783	Owens Family Liquor Store, Rossland, B.C.	3 "	2 25	Ont. Grape Growing & Wine Mfg. Co., St. Catharines.			1.0710	0.9851
" 16	"	61784	D. Thomas, Ltd., Rossland, B.C.	3 "	2 25	St. David's Wine Growers Co., Toronto.			1.0415	0.9852

SESSIONAL PAPER No. 14

NATIVE WINE,

Results of Analysis.														Remarks and Opinion of the Chief Analyst
Alcohol.			Grammes per 100cc										No. of Sample.	
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert Sugar.	Non-Sugar Solids.	Ash.	Polarization in 100 mm. tube Direct.	Acidity.			Preservatives.	Dyes.		
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.				

Concluded.

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.			
11.69	14.46	25.31	13.21	10.43	2.78	0.268	- 1.0	0.696	0.053	0.630	None.	None.	52081
12.69	15.68	27.48	12.06	7.20	4.86	0.220	+ 0.6	0.716	0.043	0.663	..	..	52082
8.79	10.91	19.11	16.33	9.69	6.64	0.130	- 2.2	0.961	0.093	0.855	Pre-sent.	..	52083
8.64	10.73	18.81	16.28	2.68		0.120	+ 2.0	0.675	0.043	0.622	..	Pre-sent.	52084

THOMAS PARKER, INSPECTOR.

11.62	14.37	25.18	13.68	10.46	3.22	0.312		3.6	0.858	0.065	0.777	None.	Pre-sent.	61741
12.85	15.86	27.81	11.86	7.25	1.61	0.156	- 1.6	0.660	0.038	0.612	..	None.	61742	
10.69	13.24	23.21	11.62	8.25	2.37	0.161		1.0	0.666	0.041	0.615	..	..	61743
9.29	11.52	20.19	15.94	11.94	1.00	0.168		21.0	0.780	0.086	0.673	Pre-sent.	Pre-sent.	61751
9.61	11.96	20.96	19.08	18.03	1.05	0.220		5.6	0.990	0.091	0.887	..	None.	61766
11.92	14.74	25.83	11.86	7.49	4.37	0.220		0.6	0.588	0.057	0.513	None.	..	61767
9.26	11.52	20.19	22.33	21.69	1.24	0.269		15.0	0.888	0.054	0.808	..	Pre-sent.	61783
9.21	11.44	20.04	14.69	9.64	1.95	0.200		1.0	0.813	0.110	0.650	Pre-sent.	None.	61784

Properly labelled

Properly labelled.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

DISTRICT OF VANCOUVER—

1915.											
Jan. 21	Native Wine.	55168	Gold Seal Liquor Co., Ltd., 712 Pender St., Vancouver, B.C.	3	bots.	75	Stamford Park Wine Co., Niagara Falls.	St. Elmo.	1.0465	0.9823	
" 22	"	55169	A & B. Liquor Co., 659 Granville St., Vancouver, B.C.	3	"	75	St. David's Wine Growers Co., Toronto.		1.0276	0.9846	
" 22	"	55170	Hudsons Bay Co., 670 Granville St., Vancouver, B.C.	3	"	75	Niagara Falls Wine Co.		1.0463	0.9825	
" 22	"	55171	Hose & Brooks Co., Ltd., 504 Main St., Vancouver, B.C.	3	"	75	St. David's Wine Growers Co., Toronto.		1.0476	0.9861	
" 22	"	55172	Hugh Bros., 105 Hastings St., E., Vancouver, B.C.	3	"	75	T. G. Bright Co., Niagara Falls.		1.0276	0.9815	
" 22	"	55173	Crown Liquor Co., 6 Hastings St., E., Vancouver, B.C.	3	"	75	" " "		1.0222	0.9808	
" 22	"	55174	Universal Wine Co., 54 Cordova St., Vancouver B.C.	3	"	75	Niagara Falls Wine Co.		1.0232	0.9800	
" 22	"	55175	B.C. Wine Co., 534 Pender St., W., Vancouver, B.C.	3	"	75	T. G. Bright Co., Niagara Falls.	Princess Irma Brand.	1.0241	0.9833	
" 23	"	55176	Maple Leaf Liquor Co., 831 Granville St., Vancouver, B.C.	3	"	75	Unknown		1.0621	0.9852	
" 23	"	55177	Vancouver Wine & Spirit Co., Ltd., 1097 Granville St., Vancouver, B.C.	3	"	75	Stamford Park Wine Co., Niagara Falls.		1.0309	0.9822	

DISTRICT OF VICTORIA—

Feb. 12	Native Wine.	62061	Dixi H. Ross, 1317 Government St., Victoria, B.C.	3	qts.	1.00	J. W. Lee, Co., Toronto.		1.0472	0.9661	
" 12	"	62062	Victoria Liquor Co., Victoria, B.C.	3	"	1.00	Stamford Park Wine Co., Niagara Falls.		1.0432	0.9829	
" 12	"	62065	H. O. Kirkham & Co., 741 Fort St., Victoria, B.C.	3	"	1.00	"		1.0443	0.9827	

SESSIONAL PAPER No. 14

NATIVE WINE.

Results of Analysis.															Remarks and Opinion of the Chief Analyst.
Alcohol.			Grammes per 100cc.										No. of Sample.		
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert Sugar.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. tube Direct.	Acidity.			Preservatives.	Dyes.			
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.					
11 38	14 09	24 69	16 65	13 64	3 01	0 158	-17 0	0 795	0 067	0 711	Pre-sent.	None.		55168	Properly labelled.
9 64	11 96	20 96	11 13	9 10	2 13	0 212	-18 2	0 759	0 096	0 639	..	Pre-sent.	55169		
11 23	13 90	24 36	16 54	14 66	1 88	0 248	-19 6	0 714	0 041	0 663	..	None.	55170		
8 57	10 65	18 65	15 94	12 64	3 30	0 212	-27 6	0 654	9 093	0 538	..	Pre-sent.	55171		
12 00	14 84	26 00	11 94	8 49	3 45	0 280	-12 6	0 615	0 057	0 544	None	None	55172		
12 54	15 49	27 15	10 71	7 58	3 13	0 280	- 5 4	9 612	0 060	0 537	..	Pre-sent.	55173	Properly labelled	
13 15	16 24	28 46	11 18	8 77	2 41	0 264	- 3 4	0 630	0 034	0 587	..	-	55174		
10 62	13 15	23 04	10 56	7 20	3 36	0 276	- 9 6	0 825	0 140	0 639	..	None	55175	Properly labelled	
9 21	11 44	20 04	10 97	16 20	3 77	0 230	-23 4	0 735	0 082	0 633	..	Pre-sent.	55176		
11 46	14 18	24 86	12 61	8 87	3 74	0 244	- 7 0	0 693	0 074	0 600	..	-	55177		

D. O'SULLIVAN, INSPECTOR.

2 22	2 78	4 89	21 07	18 00	3 07	0 210	-14 3	0 660	0 117	0 514	Pre-sent.	None.	62861	Properly labelled.
10 92	13 52	23 70	15 63	10 66	4 97	0 230	-23 8	0 696	0 031	0 652	-	-	62862	
11 08	13 71	24 03	15 97	12 64	3 53	0 188	-18 7	0 680	0 031	0 600	..	-	62863	Properly labelled.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Specific Gravity.	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Of Wine.	Of Distillate.

DISTRICT OF VICTORIA

1915.										
Feb. 22	Native Wine.	62067	Victoria & Vancouver Importing Co., 1624 Government st., Victoria, B.C.	3 qts.	1 00		R. P. Rithet & Co., Victoria.		1 0216	0 9817
" 22	"	62068	Hudson's Bay Co., 1312 Douglas st. Victoria, B.C.	3 "	1 00		Hudson's Bay Co., Victoria, B.C.		1 0441	0 9853
" 22	"	62070	B. C. Wine Co., 1216 Douglas st. Victoria, B.C.	3 "	1 00		B.C. Wine Co., Vancouver.		1 0242	0 9812
" 27	"	62077	Pither & Leiser, Ltd., Fort and Wharf sts., Victoria, B.C.	3 pts.	50	Niag'a Falls Wine Co.			1 0221	0 9818
" 27	"	62078	R. P. Rithet & Co., 1117 Wharf st., Victoria, B.C.	3 "	50	"			1 0413	0 9849
" 27	"	62079	Hudson's Bay Co., 1120 Wharf st., Victoria, B.C.	3 "	50	"			1 0275	0 9824

SESSIONAL PAPER No. 14

## NATIVE WINE.

Results of Analysis.															Remarks and Opinion of the Chief Analyst.
Alcohol.			Grammes per 100 cc.										No. of Sample.		
By Weight.	By Volume.	Proof Spirit.	Extract.	Reducing Sugar as Invert Sugar.	Non-Sugar Solids.	Ash.	Polarization in 200 mm. tube Direct.	Acidity.			Preservatives.	Dyes.			
								Total as Tartaric.	Volatile as Acetic.	Fixed as Tartaric.					

Concluded.

p c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.					
11.85	14.65	25.67	10.32	9.52	0.80	0.300	+ 3.6	0.657	0.038	0.614	None	None.	62067	Properly labelled.	
9.14	11.35	19.89	15.24	11.99	3.25	0.156	- 2.4	0.685	0.088	0.565	Present.	"	62068		
12.23	15.12	26.49	11.13	6.40	4.73	0.180	- 1.0	0.717	0.055	0.649	None	Present.	62070		
11.77	14.56	25.51	10.43	8.18	1.25	0.288	- 1.0	0.678	0.038	0.630	-	None	62077		
9.43	14.70	20.50	14.61	10.17	4.44	0.210	- 9.6	0.699	0.084	0.614	-	-	62078		
11.31	13.96	24.52	11.68	10.70	0.98	0.280	- 1.6	0.666	0.065	0.585	Present.	"	62079		





## APPENDIX H.

## BULLETIN No. 317—FERTILIZERS, 1915.

OTTAWA, September 2, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister, Inland Revenue.

SIR,—I beg to hand you a report upon Fertilisers as found on the Canadian market during the current year.

Four hundred and twenty (420) samples have been analyzed, of which number three hundred and eighty-two (382) are found to meet their guarantee, and sixteen (16) others approximate closely to the guaranty, or contain compensating values in certain ingredients, so that I have ventured to advise their acceptance as satisfactory.

Eleven (11) samples were offered for sale without the registration number appearing on the package, thereby violating the provisions of section 7 of the Act. It is certain that, in some cases at least, this omission is not the fault of the manufacturer; and the vendor must be held to be responsible.

Eleven (11) samples fail to meet their guarantee, and are specially noted in the report. In three (3) of these cases the deficiency is in the potash content. This component is particularly difficult to obtain, from the fact that imports from Germany, whose mines practically supply the world's potash are inhibited through war conditions. It may be proper to bear this fact in mind; and it is noteworthy that manufacturers have, for the most part, reduced the guaranteed content of potash in mixed fertilisers.

I beg to recommend publication of this report as Bulletin No. 317.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NOVA SCOTIA —

1915.									
Apr. 7	Slag . . . . .	64161	Nova Scotia Fert. Co., Halifax.	3 lbs.	Nil.	Staackman & Co., Anvers, Belgium.			
" 14	Bone Meal . . . .	64162	A. C. Melvin, & Halifax.	3 "	"	Nova Scotia Fert. Co., Halifax.			
" 14	Ceres Superphosphate.	64163	" " . . .	3 "	"	" . . .			
" 14	Acid phosphate.	64164	" " . . .	3 "	"	" . . .			
" 14	High Grade . . . .	64165	" " . . .	3 "	"	" . . .			
" 14	Potato Phosphate.	64166	" " . . .	3 "	"	" . . .			
" 14	10% Potato Phosphate.	64167	" " . . .	3 "	"	" . . .			
" 16	Ground Bone . . .	64168	Halifax Seed Co., Halifax.	3 "	"	Lowell Fert. Co., Windsor.			
" 16	Potato Manure . .	64169	" " . . .	3 "	"	" . . .			
" 16	Nitrate of Soda.	64170	" " . . .	3 "	"	Harab Davies Co. Steele, Briggs Seed Co., Toronto.			
" 22	Basic Slag, A Quality.	64171	Truro Market Ltd., Truro.	3 "	"	Cross Fert. Co., Sydney.			
" 23	Soluble Bone and Potash.	64172	J. R. Cooke, Bridgewater.	3 "	"	National Fert Co., Boston.			
" 23	Market Garden Revised.	61173	" " . . .	3 "	"	" . . .			
" 23	All Round Fertilizer.	64174	H. O. Bates, Bridgewater.	3 "	"	Howker Fert. Co., Boston.			
" 23	Potato Phosphate.	64175	" " . . .	3 "	"	" . . .			
" 26	Special 5-8-4 . . .	64176	Lowell Fert. Co., Windsor.	3 lbs.	Nil.	Vendors . . .			
" 26	Special Potato and Vegetable 4-8-4.	64177	" " . . .	3 "	"	" . . .			
" 26	Fish and Potash.	64178	Essex Fert. Co., Windsor.	3 "	"	" . . .			
" 26	1-8-2 . . . . .	64179	" " . . .	3 "	"	" . . .			
" 26	4½-8-4 . . . . .	64180	Colonial Fert. Co., Windsor.	3 "	"	" . . .			

SESSIONAL PAPER No. 14

FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.							Potash.	Fineness.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.								
		Total: including that of Nitric Acid or Ammonia, if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.				

R. J. WAUGH, INSPECTOR.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
971	As guaranteed	.....	.....	.....	12.0	2.0	14.0	12.0	.....	.....	64161	Meets guaranty.
	As found	.....	.....	.....	13.08	1.98	15.06	13.08	.....	.....		
44	As guaranteed	.....	3.0	.....	.....	.....	23.0	.....	.....	.....	64162	4% low in phosphoric acid
	As found	2.88	3.5	.....	.....	.....	18.84	.....	.....	.....		
1395	As guaranteed	1.64	2.0	5.0	2.0	2.0	9.0	7.0	1.0	.....	64163	Low in phosphoric acid, but much above guaranteed value. Pass
	As found	2.76	3.35	5.73	0.47	0.55	6.75	6.20	7.40	.....		
1334	As guaranteed	.....	.....	.....	16.0	2.0	18.0	16.0	.....	.....	64164	Meets guaranty.
	As found	.....	.....	.....	15.97	2.25	18.22	15.97	.....	.....		
1396	As guaranteed	3.28	4.0	4.5	1.5	2.0	8.0	6.0	4.0	.....	64165	
	As found	3.13	3.89	6.88	0.34	0.60	7.82	7.22	7.64	.....		
1394	As guaranteed	1.64	2.0	5.0	2.0	2.0	9.0	7.0	0.50	.....	64166	
	As found	2.90	3.52	6.98	0.31	0.64	7.93	7.29	3.66	.....		
1391	As guaranteed	2.05	2.5	4.0	2.0	2.0	8.0	6.0	4.0	.....	64167	2% low in phosphoric acid, but much above guaranteed value. Pass
	As found	3.44	4.18	5.50	0.34	0.49	6.13	5.64	6.80	.....		
807	As guaranteed	2.46	3.0	.....	.....	.....	23.0	.....	.....	.....	64168	Meets guaranty
	As found	2.51	3.05	.....	.....	.....	28.25	.....	.....	.....		
804	As guaranteed	1.64	2.0	3.0	4.0	1.0	8.0	7.0	4.0	.....	64169	
	As found	1.66	2.02	6.10	1.49	0.74	8.33	7.59	3.59	.....		
1282	As guaranteed	15.0	18.3	.....	.....	.....	.....	.....	.....	.....	64170	
	As found	15.0	18.22	.....	.....	.....	.....	.....	.....	.....		
1067	As guaranteed	.....	.....	.....	10.0	4.0	14.0	10.0	.....	.....	64171	Nearly meet guaranty. Pass
	As found	.....	.....	.....	10.13	2.50	12.65	10.13	.....	.....		
1178	As guaranteed	.....	.....	6.0	4.0	1.0	11.0	10.0	2.0	.....	64172	Meets guaranty
	As found	.....	.....	4.65	4.84	1.71	11.20	9.49	2.19	.....		
1182	As guaranteed	2.47	3.0	4.0	4.0	1.0	9.0	8.0	3.0	.....	64173	
	As found	2.53	3.10	4.0	4.69	1.41	10.10	8.69	3.08	.....		
1090	As guaranteed	2.47	3.0	4.0	4.0	1.0	9.0	8.0	3.0	.....	64174	
	As found	2.49	3.03	4.55	3.60	1.44	9.08	8.24	3.34	.....		
1092	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	2.0	.....	64175	
	As found	1.74	2.11	5.13	5.58	1.42	10.13	8.71	2.27	.....		
1265	As guaranteed	4.10	5.0	4.0	4.0	1.0	9.0	8.0	4.0	.....	64176	
	As found	4.35	5.28	6.48	1.61	0.64	8.73	8.09	5.33	.....		
1297	As guaranteed	3.28	4.0	4.0	4.0	1.0	9.0	8.0	4.0	.....	64177	
	As found	3.48	4.23	6.43	1.95	0.62	9.0	8.38	4.18	.....		
702	As guaranteed	2.0	2.5	4.0	4.0	1.0	9.0	8.0	3.0	.....	64178	
	As found	2.95	3.64	6.15	1.20	0.74	8.1	7.41	6.0	.....		
1201	As guaranteed	0.82	1.0	4.0	4.0	1.0	9.0	8.0	3.0	.....	64179	
	As found	1.40	1.70	0.40	1.0	1.0	8.40	7.40	5.38	.....		
1175	As guaranteed	3.69	4.5	4.0	4.0	1.0	9.0	8.0	4.0	.....	64180	
	As found	4.52	5.5	5.78	1.43	0.39	7.80	7.80	8.40	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cost.	Manufacturer.	Furnisher.	

DISTRICT OF NOVA SCOTIA—

1915.								
April 26	Grain and Grass.	64181	Colonial Fert. Co., Windsor.	3 lbs.	Nil.	Vendors.....		
" 26	Potato Special..	64182	Pigeon Fert. Co., Windsor.	3 "	"	" .....		
" 26	New England Ground Bone.	64183	New England Fert. Co., Windsor.	3 "	"	" .....		
" 26	Special Complete Root and Grain.	64184	Hants Co. Fruit and Produce Co., Ltd., Windsor.	3 "	"	National Fert. Co., Boston.		
" 26	Special Potato Phosphate.	64185	" " ..	3 "	"	" .....		
" 27	Square Brand...	64186	Burgess & Co., Wolfville.	3 "	"	Bowker Fert. Co., Boston.		
" 27	Stockbridge Manure.	64187	" " ..	3 "	"	" .....		
" 27	Sure Crop.....	64188	" " ..	3 "	"	" .....		
" 27	Ground Bone...	64189	" " ..	3 "	"	" .....		
" 27	Bradley's XL Superphosphate of Lime.	64190	" " ..	3 "	"	Amer. Agr. Chem. Co., New York.		
" 27	Bradley's Eclipse Phosphate.	64191	" " ..	3 "	"	" .....		
" 27	Pacific Guano...	64192	" " ..	3 "	"	" .....		
" 27	Read's Sure Catch.	64193	" " ..	3 "	"	" .....		
" 29	Fish, Bone and Potash.	64194	United Fruit Co., Kentville.	3 "	"	Baugh Sons Co., Baltimore.		
" 29	Acid Phosphate.	64195	" " ..	3 "	"	" .....		
" 29	Baugh's Ground Bone.	64196	" " ..	3 "	"	" .....		

DISTRICT OF NEW BRUNSWICK—

Mar. 8	Bowker's Potash Bone.	65914	D. J. Seely & Sons, St. John.	3 jars.	10	Bowker Fert. Co., Boston.		
" 8	Bowker's Fresh Ground Bone.	65915	" " ..	3 "	10	" .....		
" 8	Bowker's All Round Fertilizer.	65916	" " ..	3 "	10	" .....		
" 8	Bowker's Bone and Potash, Square Brand.	65917	" " ..	3 "	10	" .....		
" 8	Stockbridge General Crop Manure	65918	" " ..	3 "	10	" .....		

SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.							
		Total; Including that of Nitric Acid or Ammonia, if present.	Total; Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Soluble.	Total.	Total Available.	Potash.		

Continued.

766	As guaranteed	1.25	1.5	3.0	4.0	1.0	8.0	7.0	2.0	64181	Meets guaranty.
	As found	3.79	4.60	5.85	0.82	0.57	7.25	6.68	3.48		
1241	As guaranteed	2.46	3.0	4.0	4.0	1.0	9.0	8.0	4.0	64182	"
	As found	3.47	4.22	6.43	1.75	0.55	8.73	8.18	5.87		
819	As guaranteed	2.46	3.0	...	...	...	23.0	...	...	64183	3% below guaranty in phosphoric acid.
	As found	2.79	3.39	...	...	...	20.06	...	...		
1186	As guaranteed	3.29	4.0	4.0	4.0	1.0	9.0	8.0	4.0	64184	Meets guaranty.
	As found	3.68	4.47	5.13	3.21	1.21	9.55	8.34	4.47		
1180	As guaranteed	2.06	2.5	4.0	4.0	1.0	9.0	8.0	3.0	64185	"
	As found	2.11	2.56	4.80	3.06	1.92	10.38	8.46	2.07		
1091	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	2.0	64186	"
	As found	1.59	1.93	3.78	4.83	1.52	10.13	8.61	2.33		
1089	As guaranteed	3.29	4.0	4.0	4.0	1.0	9.0	8.0	4.0	64187	"
	As found	3.12	3.79	4.58	3.61	1.59	9.78	8.19	3.92		
1093	As guaranteed	0.82	1.0	5.0	4.0	1.0	10.0	9.0	2.0	64188	"
	As found	1.03	1.25	5.33	4.55	1.74	11.60	9.86	1.91		
101	As guaranteed	2.47	3.0	...	...	...	20.59	...	...	64189	"
	As found	2.74	3.33	...	...	...	23.97	...	...		
1117	As guaranteed	2.06	2.5	4.0	4.0	1.0	9.0	8.0	1.5	64190	"
	As found	2.02	2.46	5.05	3.0	1.90	9.95	8.05	1.63		
4	As guaranteed	1.03	1.25	6.0	2.0	1.0	9.0	8.0	2.0	64191	"
	As found	1.17	1.42	4.72	3.67	1.0	9.40	8.40	2.37		
1130	As guaranteed	2.06	2.5	4.0	4.0	1.0	9.0	8.0	1.5	64192	"
	As found	2.04	2.48	4.10	4.25	1.40	9.75	8.35	1.55		
1127	As guaranteed	...	...	6.0	4.0	1.0	11.0	10.0	2.0	64193	"
	As found	...	...	7.18	2.15	1.80	11.25	9.37	2.12		
1061	As guaranteed	3.30	4.0	6.22	1.78	1.72	9.92	8.0	4.0	64194	"
	As found	3.27	3.97	7.08	1.30	1.51	9.95	8.44	4.07		
848	As guaranteed	...	...	...	16.0	0.30	16.30	16.0	...	64195	"
	As found	...	...	...	16.0	0.30	16.30	16.0	...		
1062	As guaranteed	1.87	2.28	...	12.85	16.0	28.85	12.8	...	64196	"
	As found	2.57	3.12	...	17.89	8.70	26.59	17.89	...		

J. C. FERGUSON, INSPECTOR.

1094	As guaranteed	0.82	1	4	4	1	9	8	1	64197	Meets guaranty
	As found	0.99	1.20	4.9	3.62	1.45	10.0	8.0	1.90		
101	As guaranteed	2.47	3	...	...	...	20.59	...	...	64198	"
	As found	2.50	3.04	...	...	...	26.55	...	...		
1090	As guaranteed	2.47	3	4	4	1	9	8	3	64199	"
	As found	2.74	3.33	4.23	3.50	1.17	8.90	7.75	3.21		
991	As guaranteed	1.65	2	4	4	1	9	8	2	64200	"
	As found	1.91	2.32	3.85	4.72	1.51	10.08	8.57	2.10		
1080	As guaranteed	3.29	4	4	4	1	9	8	4	64201	"
	As found	3.48	4.23	4.72	3.90	1.37	10.05	8.80	3.97		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NEW BRUNSWICK—

1915.									
Mar.	8	Bowker's Potato Phosphate.	65919	D.J. Seely & Sons, St. Johns.	3 jars.	10	Bowker Fert. Co., Boston.		
"	8	Bowker's Sure Crop Phosphate	65920	" " "	3 "	10	"		
"	11	Thomas Phosphate Powder	65921	The Anglo-Canadian Chem. Co., St. John.	3 "	10	Late H. E. Albert Chem. Works, London, Eng.		
"	11	Special Odourless Potato Phosphate.	65922	" " "	3 "	10	"		
"	17	Provincial No. 1 One-Eight-One	65923	Provincial Chem. Fert. Co., St. John.	3 "	10	Vendors		
"	17	Provincial No. 2 One-Nine-3.	65924	" " "	3 "	10	"		
"	17	Provincial No. 3 Two & half-Nine-One.	65925	" " "	3 "	10	"		
"	17	Provincial No. 4 Two-Nine-Three.	65926	" " "	3 "	10	"		
"	17	Provincial No. 5 Two-Eight-Four.	65927	" " "	3 "	10	"		
"	17	Provincial No. 6 Three-Nine-Four.	65928	" " "	3 "	10	"		
"	17	Provincial No. 7 Four-Nine-Four.	65929	" " "	3 "	10	"		
"	17	Provincial No. 8, Four and half-Nine-Four.	65930	Provincial Chem. Fert. Co., St. John.	3 jars.	10	"		
"	17	Provincial No. 9, Five-Nine-Four.	65931	" " "	3 "	10	"		
"	23	4 8-4	65932	Dominion Fert. Co., Ltd., St. Stephen.	3 "	10	"		
"	23	5-8-4	65933	" " "	3 "	10	"		
"	23	4½-10-4	65934	" " "	3 "	10	"		
"	23	2-9-2	65935	" " "	3 "	10	"		
"	23	4½-9-3	65936	" " "	3 "	10	"		
"	23	1-8-2	65937	" " "	3 "	10	"		
"	23	3-8-3	65938	" " "	3 "	10	"		
"	23	4-8-3	65939	" " "	3 "	10	"		

SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.							Potash.	Fineness.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.								
		Total, including that of Nitric Acid or Ammonia if present	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.				

Continued.

1092	As guaranteed	1.65	2	4	4	1	9	8	2	.....	65919	Meets guaranty.
	As found.....	1.74	2.12	3.30	4.98	1.47	9.75	8.28	1.97	.....		
97	As guaranteed	0.82	1	6	2	1	9	8	2	.....	65920	"
	As found.....	0.81	1.02	6.75	2.46	1.02	10.23	9.21	2.40	.....		
1	As guaranteed	.....	.....	.....	12	.....	.....	.....	15	.....	65921	"
	As found.....	.....	.....	.....	13.65	.....	.....	.....	15.40	.....		
142	As guaranteed	2	.....	.....	.....	.....	7	.....	7	.....	65922	Two per cent low in potash.
	As found.....	2.35	2.90	.....	.....	.....	9.55	.....	4.40	.....		
1098	As guaranteed	.8	1	5	2	1	8	7	1	.....	65923	Meets guaranty
	As found.....	.90	1.09	6.10	1.91	1.04	9.05	8.01	1.19	.....		
1099	As guaranteed	.8	1	6	2	1	9	8	3	.....	65924	"
	As found.....	.88	1.07	6.80	2.21	1.12	10.13	9.01	2.98	.....		
1100	As guaranteed	2	2.5	6	3	1	10	9	1	.....	65925	"
	As found.....	2.15	2.61	7	2.65	1.27	10.93	9.66	1.95	.....		
1101	As guaranteed	1.6	2	6	2	1	9	8	3	.....	65926	"
	As found....	1.69	2.05	6.92	2.35	1.06	10.33	9.27	3.65	.....		
1102	As guaranteed	1.6	2	5	2	1	8	7	4	.....	65927	"
	As found....	1.78	2.16	5.98	2.38	0.95	9.31	8.36	4.89	.....		
1103	As guaranteed	2.4	3	6	2	1	9	8	4	.....	65928	"
	As found.....	2.53	3.08	6.23	2.41	0.94	9.58	8.64	4.64	.....		
1104	As guaranteed	3.3	4	6	2	1	9	8	4	.....	65929	"
	As found....	3.31	4.01	6.65	2.51	0.97	10.13	9.16	4.64	.....		
1105	As guaranteed	3.7	4.5	6	2	1	9	8	4	.....	65930	"
	As found....	3.85	4.67	7.48	2.35	1.32	11.15	9.83	4.86	.....		
1106	As guaranteed	4.1	5	6	2	1	9	8	4	.....	65931	"
	As found.....	3.87	4.70	6.70	2.32	1.11	10.13	9.02	4.52	.....		
1163	As guaranteed	3.3	4	6	2	1	9	8	4	.....	65932	"
	As found.....	3.38	4.10	7.25	1.90	0.67	8.92	8.25	4.27	.....		
1167	As guaranteed	4.1	5	6	2	1	9	8	4	.....	65933	"
	As found.....	4.03	4.90	7.00	1.08	0.62	8.70	8.08	4.13	.....		
1166	As guaranteed	3.7	4.5	7	3	1	11	10	4	.....	65934	"
	As found.....	4.13	5.02	8.22	1.61	0.92	10.75	9.83	4.16	.....		
1161	As guaranteed	1.6	2	7	2	1	10	9	2	.....	65935	"
	As found.....	1.92	2.31	7.33	1.76	0.81	9.90	9.09	2.43	.....		
1164	As guaranteed	3.7	4.5	7	2	1	10	9	3	.....	65936	"
	As found.....	3.97	4.82	7.55	1.43	0.64	9.62	8.98	3.10	.....		
1160	As guaranteed	0.8	1	6	2	1	9	8	2	.....	65937	"
	As found.....	1.11	1.35	6.33	1.90	0.79	9.02	8.23	2.19	.....		
1162	As guaranteed	2.5	3	6	2	1	9	8	3	.....	65938	"
	As found.....	2.53	3.08	6.92	1.19	0.74	8.85	8.11	3.11	.....		
1165	As guaranteed	3.2	4	6	2	1	9	8	3	.....	65939	"
	As found.....	3.26	3.96	6.92	1.43	0.65	8.98	8.33	3.11	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of Opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NEW BRUNSWICK—

1915.									
Mar. 23	Bradley's Eclipse	65940	Hill Bros., St Stephen.	3 jars.	10	Amer. Agr. Chem. Co., New York.			
" 23	Bradley's XL Superphosphate of Lime.	65941	"	3 "	10	"			
" 23	Bradley's Special High Grade Fertilizers.	65942	"	3 "	10	"			
" 23	Bradley's Potato	65943	"	3 "	10	"			
April 8	Basic Slag, A Quality.	65944	Toombs & Son, Moncton.	3 jars.	10	Cross Fert. Co., Sydney.			
" 8	Potato Special	65945	"	3 "	10	Am. Agr. Chem. Co., N. York			
" 8	General Guano.	65946	"	3 "	10	"			
" 8	Fine Ground Bone.	65947	"	3 "	10	"			
" 22	Ground Bone...	65948	F. H. Everett, Fredericton.	3 "	15	Lowell Fert. Co., Windsor.			
" 22	Special Potato Phosphate.	65949	"	3 "	15	"			
" 22	Potato Manure.	65950	"	3 "	15	"			
" 22	New England Superphosphate	65951	Sansom & McNally, Fredericton.	3 "	15	New England Fert. Co., Windsor.			
" 22	New England Potato Manure	65952	"	3 "	15	"			
" 22	Peerless.....	65953	"	3 "	15	"			
" 23	Grass and Oats.	65954	Perley, Smith & Co., Woodstock.	3 "	Nil.	Am. Agr. Chem. Co., N. York			
" 24	Bradley's A. A Special Potato Grower.	65955	Porter Manzer, Ltd., Perth, N. B.	3 "	"	"			
" 24	Darling Special Blood Bone & Potash.	65956	"	3 "	"	"			

DISTRICT OF QUEBEC CITY—

Feb. 9	Havana Tobacco	56309	Eug. Julien & Cie, Quebec.	.....	.....	Amer. Agr. Chem. Co.			
" 9	Juliens Canadian Special.	56310	"	.....	.....	"			
" 9	Canadian Potash	56311	"	.....	.....	"			



SESSIONAL PAPER No. 14

FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.									No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.								
		Total: including that Nitric Acid or Ammonia, if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.	Potash.	Finesness.		

Concluded.

1115	As guaranteed	1.03	1.25	4	4	1	9	8	2	...	65940	Meets guaranty
	As found.....	1.09	1.32	4.10	4.42	1.29	9.72	8.52	2.17	...		
1117	As guaranteed	2.06	2.5	4	4	1	9	8	1.5	...	65941	"
	As found.....	2.29	2.78	4.58	4.23	1.52	10.33	8.81	1.73	...		
1123	As guaranteed	2.88	3.5	4	4	1	9	8	4	...	65942	"
	As found.....	3.04	3.70	4.72	4.60	1.20	10.52	9.32	4.50	...		
1134	As guaranteed	2.06	2.5	4	4	1	9	8	3	...	65943	"
	As found.....	2.28	2.77	4.50	4.36	1.47	10.33	8.86	3.11	...		
557	As guaranteed	...	...	...	12.8	...	...	...	...	...	65944	"
	As found.....	...	...	...	13.10	...	13.93	...	...	...		
1129	As guaranteed	2.06	2.5	4	4	1	9	8	3	...	65945	"
	As found.....	2.07	2.52	4.35	4.23	1.14	9.72	8.58	3.77	...		
1135	As guaranteed	1.03	1.25	4	4	1	9	8	2	...	65946	"
	As found.....	1.19	1.45	5.60	4.63	1.35	11.58	10.23	2.24	...		
1139	As guaranteed	2.47	3	...	8.24	12.35	20.59	8.24	...	...	65947	"
	As found.....	2.56	3.11	...	15.52	7.38	22.90	15.52	...	...		
807	As guaranteed	2.46	3	...	...	...	23.0	...	...	...	65948	"
	As found.....	2.46	3	...	...	...	27.41	...	...	...		
1208	As guaranteed	2.46	3	4	4	1	9	8	4	...	65949	"
	As found.....	2.39	2.91	6.28	2.26	66	9.20	8.54	3.88	...		
804	As guaranteed	1.64	2	3	4	1	8	7	4	...	65950	"
	As found.....	1.71	2.08	5.35	2.44	54	8.33	7.79	3.63	...		
811	As guaranteed	2.46	3	4	4	1	9	8	3	...	65951	"
	As found.....	2.59	3.15	6.70	1.67	66	9.03	8.37	3.70	...		
814	As guaranteed	1.64	2	4	3	1	8	7	4	...	65952	"
	As found.....	1.67	2.03	5.43	2.10	50	8.03	7.53	3.60	...		
815	As guaranteed	0.82	1	4	3	1	8	7	1	...	65953	"
	As found.....	1.73	2.10	4.48	3.50	72	8.70	7.98	3.15	...		
1154	As guaranteed	...	...	7	4	1	12	11	2	...	65954	"
	As found.....	...	...	4.98	5.48	1.82	12.28	10.46	1.94	...		
1138	As guaranteed	3.7	4.5	6	4	1	11	10	4	...	65955	"
	As found.....	3.77	4.58	7.33	2.68	1.41	11.45	10.01	4.02	...		
1133	As guaranteed	4.11	5	5	4	1	10	9	4	...	65956	"
	As found.....	4.11	5	6.73	3.02	1.50	11.25	9.76	3.48	...		

F. X. W. E. BELAND, INSPECTOR.

686	As guaranteed	1.65	2.0	6.0	2.0	1.0	9.0	8.0	4.0	...	65957	Meets guaranty
	As found.....	1.37	1.70	1.82	6.96	0.76	9.63	8.73	3.66	...		
685	As guaranteed	1.66	2.0	6.0	2.0	1.0	9.0	8.0	3.0	...	66216	"
	As found.....	1.58	1.96	5.20	3.30	1.20	9.74	8.50	3.36	...		
335	As guaranteed	0.82	1.0	4.0	2.0	1.0	7.0	6.0	3.0	...	66214	"
	As found.....	0.84	1.0	3.58	4.89	0.30	8.77	8.47	3.11	...		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF QUEBEC CITY—

1915.								
Feb.	9 Complete Manure.	56312	Eug. Julien & Cie. Quebec.	.....		Amer. Agr. Chem. Co.	.....	
"	9 General Tobacco	56313	" "	.....		"	.....	
"	9 Thomas Phosphate.	56314	" "	.....		The Leeds Phosphate Wks., Buffalo	.....	
"	9 Reliable.....	56315	" "	.....		Amer. Agr. Chem. Co., Buffalo.	.....	
"	11 Nitrate of Soda.	56316	J. B. Renand & Cie, Quebec.	.....		British Oil & Cake Mills.	.....	
"	11 Basic Phosphate.	56317	" "	.....		Hickman Ltd., Bilston.	.....	
"	11 Sulphate of Potash.	56318	" "	.....		British Oil & Cake Mills.	.....	
"	17 Superphosphate.	56319	F. Canac Marquis, Quebec.	.....		Vendors.....	.....	
"	17 Guano du Globe.	56320	" "	.....		"	.....	
"	17 Phosphate Quebec.	56321	" "	.....		"	.....	
"	17 Montcalm ..	56322	" "	.....		"	.....	
"	17 Joliette .....	56323	" "	.....		"	.....	
"	19 Virginia Tobacco XXX.	56324	P. T. Legare, Ltd. Quebec.	.....		Amer. Agr. Chem. Co.	.....	
"	19 Complete Fertilizers.	56325	" "	.....		" "	.....	
"	19 Special Fruit and Vine.	56326	" "	.....		" "	.....	
"	19 Defiance .....	56327	" "	.....		" "	.....	
"	19 Thomas Phosphate.	56328	" "	.....		Cross Fert. Co. Sydney.	.....	
"	19 Legare's Special Corn.	56329	" "	.....		Cap. Chem. Fert. Co., Buckingham	.....	
Mar.	4 Capital.....	56501	G. Tanguay, Quebec.	.....		Vendors.....	.....	
"	3 Monarch Guano	56502	" "	.....		"	.....	
"	3 Royal Guano...	56503	" "	.....		"	.....	
"	4 Nestor .....	56504	" "	.....		"	.....	
"	4 Celtic .....	56505	" "	.....		"	.....	
"	3 Nestor Guano...	56506	" "	.....		"	.....	
"	3 Union Guano ..	56507	" "	.....		"	.....	

SESSIONAL PAPER No. 14

FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.							Potash.	Phosphorus.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p. c.		Phosphoric Acid per cent.								
		Total: including that of Nitric Acid or Ammonia, if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.				

Continued.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
226	As guaranteed	2.06	2.50	6.0	2.0	1.0	9.0	8.0	3.0	.....	56312	Meets guaranty
	As found.....	1.89	2.38	2.65	5.56	1.08	9.29	8.21	2.70	.....		
881	As guaranteed	0.82	1.0	4.0	1.0	1.0	6.0	5.0	7.0	.....	56313	"
	As found.....	1.02	1.27	4.96	0.29	1.0	6.25	5.25	6.80	.....		
253	As guaranteed	.....	.....	.....	.....	.....	.....	18.0	.....	75.0	56314	"
	As found.....	.....	.....	.....	.....	.....	17.94	.....	.....	80.0		
880	As guaranteed	0.82	1.0	3.0	1.0	1.0	5.0	4.0	3.0	.....	56315	"
	As found.....	0.63	0.78	1.08	4.41	0.74	6.23	5.49	3.27	.....		
273	As guaranteed	15.0	18.5	.....	.....	.....	.....	.....	.....	.....	56316	"
	As found.....	15.04	18.6	.....	.....	.....	.....	.....	.....	.....		
302	As guaranteed	.....	.....	.....	15.40	3.85	19.25	15.40	.....	85.0	56317	"
	As found.....	.....	.....	.....	15.70	.....	20.25	.....	.....	.....		
299	As guaranteed	.....	.....	.....	.....	.....	.....	.....	48.0	.....	56318	"
	As found.....	.....	.....	.....	.....	.....	.....	.....	47.3	.....		
911	As guaranteed	0.82	1.0	6.0	1.0	1.0	8.0	7.0	2.0	.....	56319	"
	As found.....	1.55	1.93	2.22	7.32	4.48	14.02	9.54	3.05	.....		
912	As guaranteed	0.82	1.0	3.25	0.75	1.0	5.0	4.0	6.0	.....	56320	"
	As found.....	1.06	1.24	1.48	6.56	2.54	10.58	8.04	7.20	.....		
913	As guaranteed	1.65	2.0	6.75	1.25	1.0	9.0	8.0	3.0	.....	56321	"
	As found.....	1.32	1.64	3.55	7.88	2.66	14.09	11.43	4.87	.....		
914	As guaranteed	1.65	2.0	3.25	0.75	1.0	5.0	4.0	6.0	.....	56322	"
	As found.....	1.36	1.69	1.80	7.86	2.45	12.11	9.66	6.49	.....		
1107	As guaranteed	2.47	3.0	6.0	1.0	1.0	8.0	7.0	10.0	.....	56323	"
	As found.....	1.59	1.97	4.14	6.15	5.16	15.46	10.29	9.56	.....		
1222	As guaranteed	.....	2.0	.....	.....	.....	.....	.....	8.0	.....	56324	"
	As found.....	1.52	1.89	4.06	4.35	1.27	9.68	8.41	2.90	.....		
1221	As guaranteed	.....	2.0	.....	.....	.....	.....	.....	8.0	.....	56325	"
	As found.....	1.61	2.0	4.20	3.88	1.52	9.60	8.08	2.97	.....		
1227	As guaranteed	.....	3.0	.....	.....	.....	.....	.....	3.0	.....	56326	"
	As found.....	2.41	3.0	6.79	3.87	1.46	12.12	10.66	2.82	.....		
1220	As guaranteed	.....	2.0	.....	.....	.....	.....	.....	8.0	.....	56327	"
	As found.....	1.65	2.0	2.46	5.99	1.46	9.91	8.45	2.07	.....		
891	As guaranteed	.....	.....	.....	13.60	.....	17.00	.....	.....	80.0	56328	"
	As found.....	.....	.....	.....	15.15	.....	16.44	.....	.....	85.00		
933	As guaranteed	.....	1.0	.....	.....	.....	.....	.....	8.0	.....	56329	"
	As found.....	1.45	1.80	.....	8.77	2.65	11.43	8.78	1.96	.....		
946	As guaranteed	.....	5.0	.....	.....	.....	8.0	.....	6.0	.....	56331	"
	As found.....	4.09	5.0	2.6	8.73	4.07	15.04	11.33	6.97	.....		
1403	As guaranteed	.....	3.5	.....	.....	.....	8.0	.....	2.0	.....	56332	"
	As found.....	3.90	4.80	4.2	3.95	1.25	9.6	8.35	2.92	.....		
1402	As guaranteed	.....	3.5	.....	.....	.....	9.0	.....	2.0	.....	56333	"
	As found.....	4.22	5.2	6.2	4.15	0.95	11.3	10.35	2.31	.....		
952	As guaranteed	.....	2.0	.....	.....	.....	8.0	.....	3.0	.....	56334	"
	As found.....	1.56	1.9	3.1	5.93	1.27	19.3	9.08	4.54	.....		
953	As guaranteed	.....	.....	.....	.....	.....	10.0	.....	5.0	.....	56335	"
	As found.....	.....	.....	3.45	7.50	0.8	11.75	10.05	6.2	.....		
1079	As guaranteed	.....	2.5	.....	10.0	.....	.....	.....	.....	.....	56336	"
	As found.....	2.65	3.3	8.6	3.33	0.97	12.0	11.83	.....	.....		
1078	As guaranteed	.....	3.5	.....	.....	.....	10.0	.....	.....	.....	56337	"
	As found.....	3.17	3.9	8.7	2.8	1.2	12.7	11.5	.....	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF QUEBEC CITY

1915.								
Mar.	3	Celtic Guano....	56508	Geo. Tanguay,	.....	.....	Vendor.....	.....
"	3	Star Guano....	56509	" "	.....	.....	".....	.....
"	3	Superphosphate.	56510	" "	.....	.....	".....	.....
"	3	Banner.....	56511	" "	.....	.....	".....	.....
"	3	Potato Guano...	56512	" "	.....	.....	".....	.....
"	3	International Tobacco.....	56513	" "	.....	.....	".....	.....
"	4	General Phosphate Thomas.	56514	" "	.....	.....	".....	.....
"	4	Union Guano...	56515	" "	.....	.....	".....	.....
"	4	Grain Guano...	56516	" "	.....	.....	".....	.....

DISTRICT OF QUEBEC PROVINCE—

Feb.	17	Fertilizer.....	2890	D. Audet, Ste. Malachi.	.....	.....	E. Julien, Quebec.	.....
"	17	".....	2892	Dorchester Lumber, Ste. Malachi	.....	.....	".....	.....
"	23	Banner.....	3804	Lacasse and Audet, St. Edward.	.....	.....	.....	.....
"	23	Celtic.....	3805	" "	.....	.....	.....	.....
"	23	Fertilizer.....	3806	" "	.....	.....	Geo. Tanguay, Quebec.	.....
"	23	Phosphate....	3808	Philip Gregoire, Ste. Angel Beauce.	.....	.....	Bowker Fert. Co., Boston.	.....
"	26	Complete Fertilizer.	3813	P. Gagnon, Ste. Marie Beauce.	.....	.....	.....	.....
Mar.	2	Fertilizer.....	3819	M. Larochelle, Ste. Germaine.	.....	.....	P.T. Lagare, Quebec.	.....
"	10	Fertilizer.....	3824	G. Doyon, Beauce.	.....	.....	P.T. Lagare, Quebec.	.....
"	11	Muriate of Potash.	3825	A. Roy, St. Frederique.	.....	.....	.....	.....
"	11	Fertilizer.....	3826	" "	.....	.....	Nitrate Agencies, New York.	.....
"	12	Potato Phosphate.	3827	N. Plante, St. Frederique.	.....	.....	Bowker Fert. Co., Boston.	.....

SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.									No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.								
		Total, including that of Nitric Acid or Ammonia if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.	Potash.	Finesness.		

Concluded

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
1075	As guaranteed	...	1.0	...	...	...	...	8.0	12.0	...	56508	Meets guaranty.
	As found.....	1.18	1.5	1.9	8.5	1.2	11.6	10.4	12.5	...		
1082	As guaranteed	...	2.0	...	...	...	...	10.0	...	...	56509	"
	As found.....	2.03	2.5	8.5	3.53	1.07	13.1	12.03	...	...		
958	As guaranteed	...	...	16.0	...	1.0	17.0	16.0	...	...	56510	"
	As found.....	...	...	15.31	1.62	1.57	18.50	16.93	...	...		
1081	As guaranteed	...	2.0	...	...	...	...	8.0	2.0	...	56511	"
	As found.....	1.89	2.3	2.7	8.08	1.02	11.8	10.78	3.40	...		
1076	As guaranteed	...	2.0	...	...	...	...	8.0	2.0	...	56512	"
	As found.....	2.32	2.9	2.83	5.92	1.25	10.0	8.75	4.31	...		
755	As guaranteed	...	2.0	...	...	...	...	8.0	4.0	...	56513	"
	As found.....	2.19	2.7	0.34	8.75	0.85	9.94	9.09	5.03	...		
1083	As guaranteed	...	...	...	14.0	...	16.0	...	...	...	56514	"
	As found.....	...	...	...	15.8	...	16.19	...	...	81.00		
945	As guaranteed	...	4.0	...	...	...	11.0	...	...	...	56515	"
	As found.....	2.45	3.0	8.62	2.44	1.2	12.26	11.06	...	...		
1080	As guaranteed	...	1.0	...	...	...	8.0	...	1.0	...	56516	"
	As found.....	0.81	1.0	3.58	6.86	1.12	11.56	10.44	1.35	...		

J. E. AUDET, O. BROCHU, T. GENDRON, TEMPORARY INSPECTORS.

226	As guaranteed	2.06	2.5	6.0	2.0	1.0	9.0	8.0	3.0	...	2890	Meets guaranty.
	As found.....	2.09	2.6	3.0	5.57	1.37	9.94	8.57	2.78	...		
253	As guaranteed	...	...	...	...	...	18.00	...	75.00	...	2892	"
	As found.....	...	...	...	...	...	19.19	...	85.50	...		
1081	As guaranteed	1.65	2.0	6.0	2.0	1.0	9.0	8.0	2.0	...	3804	"
	As found.....	1.56	1.83	3.02	7.59	1.45	12.06	10.61	2.05	...		
1975	As guaranteed	0.85	1.0	6.0	2.0	1.0	9.0	8.0	2.0	...	3807	"
	As found.....	0.81	0.98	...	...	...	2.52	12.06	9.51	1.17		
1974	As guaranteed	...	...	...	15.75	1.25	17.00	...	80.00	...	3809	2.75 p.c. below guaranty in phosphoric acid
	As found.....	...	...	...	13.75	...	14.25	...	...	...		
1093	As guaranteed	0.82	1.0	5.0	4.0	1.0	10.0	9.0	2.0	...	3809	Meets guaranty.
	As found.....	0.96	1.2	4.98	4.31	1.35	10.87	9.32	2.0	...		
1221	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	3.0	...	3813	"
	As found.....	1.70	2.0	5.48	3.65	1.37	10.5	9.13	3.31	...		
1227	As guaranteed	2.47	3.0	6.0	4.0	1.0	11.0	10.0	3.0	...	3819	"
	As found.....	2.37	2.96	8.0	4.86	1.52	13.38	12.86	3.03	...		
1230	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	2.0	...	3824	"
	As found.....	1.41	1.7	1.72	6.26	0.9	8.88	7.98	2.3	...		
368	As guaranteed	...	...	...	...	...	...	...	48.0	...	3825	"
	As found.....	...	...	...	...	...	...	...	51.8	...		
236	As guaranteed	...	...	...	...	...	14.0	...	...	...	3826	"
	As found.....	...	...	...	...	2.2	18.19	15.99	...	...		
1192	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	2.0	...	3827	"
	As found.....	1.68	2.0	4.7	4.19	1.07	10.5	8.89	3.14	...		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF QUEBEC PROVINCE—								
1915.								
Mar. 4	Superphosphate with Potash.	3842	J. Nadeau, St. Severin.	.....	.....	Bowker fert Co., Boston.	.....	.....
" 4	Potash.	3844	S. Vachon, St. Elzear.	.....	.....	.....	E. Julien, Quebec.	.....
" 9	Thomas Phosphate.	3529	J. A. Bélanger, St. Lazare.	3 lbs.	10	.....	P. T. Legare, Quebec.	.....
" 9	Complete.	3530	" "	3 "	10	.....	" "	.....
" 9	"	3532	Philibert Laval, Burland.	3 "	10	.....	" "	.....
" 10	Phosphate Lime.	3533	L. P. Bolduc, Ste. Sabine.	3 "	10	.....	E. Julien, Quebec.	.....
" 16	Complete.	3534	George Roy, St. Raphael.	3 "	10	.....	P. T. Legare,	.....
" 17	Acme Fertilizer.	3537	J. R. Laflamme, St. Gervais.	3 "	10	Lesage Packing Co. Montreal.	.....	.....
" 18	Thomas Phosphate.	3538	Alphonse Dion, Honfleur.	3 "	10	Geo. Tanguay, Quebec.	.....	.....
" 18	International	3539	" "	3 "	10	" "	.....	.....
" 20	Union	3540	Protais Isabelle, Armagh.	3 "	10	Geo. Tanguay, Quebec.	.....	.....
" 20	Nestor	3541	" "	3 "	10	" "	.....	.....
" 9	Fertilizer	2748	J. P. Guay, Montmagny.	3 "	10	.....	P. T. Lagare, Quebec.	.....
" 9	Basic Slag	2749	" "	3 "	10	.....	" "	.....
" 9	Thomas Phosphate Flour.	2750	Arcadius Caron, Montmagny.	3 "	Nil.	Leeds Phosphate Works.	.....	.....
" 11	Phosphate	2752	Joseph L'Abbe, Cap St. Ignace.	3 "	Nil.	Alex. Cross & Sons, Glasgow, Scot.	.....	.....

## DISTRICT OF THREE RIVERS—

March 4	Michigan Corbon Complete.	3927	Simon Forest, L'Epiphanie.	3 lbs.	15	.....	.....	.....
" 4	Michigan Corbon Virginia Tobacco.	3928	Adrien Taillon, L'Epiphanie.	3 "	15	.....	.....	.....
" 5	Michigan Corbon Complete	3929	Albert Dostales, Grand Cote.	3 "	15	.....	.....	.....
" 6	Michigan Corbon Virginia Tobacco.	3930	Omar Dostales, Berthier.	3 "	15	.....	.....	.....
" 8	N. W. Reliable.	3964	Hormisdas Henry, St. Lin.	3 "	15	.....	.....	.....

SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.							Potash.	Fineness.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid, per cent.								
		Total: including that of Nitric Acid or Ammonia if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.				

Concluded.

99	As guaranteed	.....	.....	6.0	4.0	1.0	11.0	10.0	2.0	.....	3842	Meets guaranty.
	As found	.....	.....	6.0	4.87	1.57	12.44	10.87	1.97	.....		
335	As guaranteed	0.82	1.0	4.0	2.0	1.0	7.0	6.0	6.0	.....	3844	Nearly 3% low in potash.
	As found	0.80	1.0	3.32	5.14	1.22	9.68	8.46	3.15	.....		
591	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	3529	Meets guarantee
	As found	.....	.....	.....	.....	.....	.....	.....	.....	.....		
1228	As guaranteed	1.75	2.0	.....	8.0	.....	8.0	8.0	3.0	.....	3530	"
	As found	1.94	2.4	2.94	5.61	2.77	11.32	8.55	4.15	.....		
929	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	3532	"
	As found	1.58	1.95	.....	.....	2.67	9.94	7.27	4.23	.....		
253	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	3533	"
	As found	.....	.....	.....	.....	.....	19.19	.....	.....	.....		
1228	As guaranteed	1.75	2.0	.....	9.0	.....	8.0	8.0	3.0	.....	3534	"
	As found	1.94	2.4	.....	6.52	2.67	9.19	6.52	3.96	.....		
1084	As guaranteed	1.65	2.0	5.0	.....	1.0	6.0	5.0	.....	.....	3537	"
	As found	1.55	1.94	3.8	4.53	0.42	8.75	8.33	.....	.....		
1074	As guaranteed	.....	.....	.....	15.75	1.25	1.0	.....	.....	80.00	3538	2.5% low in phosphoric acid.
	As found	.....	.....	.....	13.95	.....	14.31	.....	.....	82.00		
1080	As guaranteed	0.85	1.0	6.0	2.0	1.0	9.0	8.0	1.0	.....	3539	2% low in phosphoric acid, nearly meets value guaranteed. Pass.
	As found	1.00	1.24	2.04	4.46	0.5	7.0	6.5	1.22	.....		
945	As guaranteed	2.49	3.0	4.0	2.0	1.0	7.0	6.0	3.5	.....	3540	Meets guaranty.
	As found	1.76	2.1	.....	.....	0.57	8.94	8.37	4.45	.....		
1079	As guaranteed	2.47	3.0	8.0	2.0	1.0	11.0	10.0	.....	.....	3541	"
	As found	2.26	2.8	9.24	3.86	1.27	14.37	13.1	.....	.....		
206	As guaranteed	1.65	2.0	6.0	2.0	1.0	9.0	8.0	4.0	.....	2748	"
	As found	1.77	2.2	4.94	4.99	1.45	11.38	9.33	4.54	.....		
591	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	2749	"
	As found	.....	.....	.....	13.90	.....	.....	.....	.....	.....		
253	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	2750	"
	As found	.....	.....	.....	.....	.....	18.0	.....	.....	.....		
335	As guaranteed	0.82	1.0	4.0	2.0	1.0	7.0	6.0	6.0	.....	2752	"
	As found	0.83	1.0	6.0	2.56	2.07	10.63	8.56	7.44	.....		

Dr. V. P. LAVALLEE, INSPECTOR.

1221	As guaranteed	1.65	2	4	4	1	9	8	8	.....	3927	Meets guaranty.
	As found	1.68	2.09	4.62	4.33	1.3	10.25	8.95	2.97	.....		
1225	As guaranteed	2.06	2.5	4	4	1	9	8	3	.....	3928	"
	As found	1.55	1.94	4.90	3.46	1.27	9.63	8.36	2.90	.....		
206	As guaranteed	1.65	2	6	2	1	9	8	4	.....	3929	"
	As found	1.87	2.3	4.62	4.57	1.27	10.43	9.19	3.04	.....		
1222	As guaranteed	1.65	2	4	4	1	9	8	3	.....	3930	"
	As found	1.81	2.25	4.46	3.84	1.20	9.50	8.30	4.15	.....		
880	As guaranteed	0.82	1	3	1	1	5	4	6	.....	3934	"
	As found	0.86	1.07	0.7	4.21	1.22	6.13	4.91	7.34	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF THREE RIVERS—

1915.								
Mar.	8 Victor.....	3965	Monahan Bros., St. Lin.	3 lbs.	15			
"	9 Guano . . . . .	3966	Ulric Beaudoin, St. Julienne.	3 "	15	F. C. Marquis, Quebec.		
"	10 Montcalm.....	3967	"	3 "	15	"		
"	11 Fertilizer Harab Davies.	3968	Gravel & Beadry, Joliette.	3 "	15	Ont. Fert. Co., West Toronto.		
"	11 Tobacco Special.	3969	"	3 "	15	"		
"	11 Fertilizer.....	3970	"	3 "	15	"		
"	12 International Tobacco.	3971	Cyriac Roy, St. Thomas de Joliette.	3 "	20	Geo. Tanguay, Quebec.		
"	12 Celtic Guano...	3972	"	3 "	20	"		
"	12 Union Guano...	3973	"	3 "	20	"		
"	15 Fertilizer Joliette.	3975	I. E. Dupuis Ruisseau, St. George.	3 "	20	F. C. Marquis, Quebec.		
"	16 Phosphate Quebec.	3979	D. Dupuis & Fils, Ruisseau St. George.	3 "	20	F. C. Marquis, Quebec.		
"	17 Superphosphate.	3981	D. Levesque, Ruisseau Vacher.	3 "	20	Geo. Tanguay, Quebec.		
"	19 All Crop Fertilizer.	3984	D. Dupuis & Fils, Ruisseau St. George.	3 "	20	Amer. Agr. Chem. Co., New York.		
"	19 Champion Phosphate.	3985	"	3 "	20	"		
"	19 Corn, Wheat and Rye.	3986	"	3 "	20	"		
"	19 High Grade Farmer's Friend Superphosphate.	3987	"	3 "	20	"		
"	19 Vegetable and Vine.	3988	"	3 "	20	"		
"	23 Sulphate of Potash.	3992	Hildaige St. George, Joliette.	3 "	25	Kali Syndicate, Berlin, Germany.		
"	23 Acid Phosphate	3993	"	3 "	25	Nitrate Agencies, New York.		
"	23 Nitrate of Soda.	3994	"	3 "	25	"		
April	1 Jupiter Guano..	3995	S. Vessot, Joliette	3 "	20	Geo. Tanguay Quebec.		



## SESSIONAL PAPER No. 14

## FERTILIZERS AS SOLD

Registration Number.	Analysis of Sample.	Results of Analysis.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.									
		Total: including that of Nitric Acid or Ammonia, if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.	Potash.	Finesness.			
83	As guaranteed	p. c.	p. c.	p. c.	d. c.	p. c.	p. c.	p. c.	p. c.	p. c.	3965	Meets guaranty.	
	As found	1 36	1 70	.....	.....	.....	7	9 88	.....	3 42			
912	As guaranteed	0 82	1	3 25	0 75	1	5	4	.....	6	3966	Nearly meets guaranty. Pass.	
	As found	1 39	1 72	2 49	5 06	1 85	9 31	7 46	.....	4 91			
914	As guaranteed	1 65	2	3 25	0 75	1	5	4	.....	6	3967	"	
	As found	1 56	1 94	2 44	6 25	2 5	11 19	8 69	.....	4 58			
1269	As guaranteed	4 9	6	2	5	1	8	7	.....	3	3968	Three per cent low in nitrogen. Claim a mistake in tagging.	
	As found	1 98	2	0 42	8 76	3 32	12 50	9 18	.....	3 36			
1407	As guaranteed	1 60	2	5	3	1	9	8	.....	3	3969	Meets guaranty.	
	As found	3 20	3 97	1 52	8 38	2 05	11 75	9 70	.....	3 86			
1281	As guaranteed	.....	.....	14	.....	1	15 0	14	.....	.....	3970	"	
	As found	.....	.....	2 48	14 99	2 22	19 69	17 47	.....	.....			
955	As guaranteed	1 65	2	4	2	1	7	6	.....	4	3971	One per cent low in potash, value compensated. Pass.	
	As found	2 44	3 0	3 42	8 08	1 0	12 5	11 5	.....	2 89			
1075	As guaranteed	0 85	1	6	2	1	9	8	.....	2	3972	Meets guaranty.	
	As found	1 08	1 3	4 42	3 68	1 20	9 30	8 10	.....	1 31			
1078	As guaranteed	3 29	4	7	3	1	11	10	.....	.....	3973		
	As found	2 65	3 3	4 6	4 74	1 47	10 81	9 34	.....	.....			
1107	As guaranteed	2 47	3	6	1	1	8	7	.....	10	3975	Three per cent low in potash, compensated value. Pass.	
	As found	2 27	2 8	4 41	8 39	2 80	15 63	12 83	.....	7 18			
913	As guaranteed	1 65	2 0	6 75	1 25	1 0	9 0	8 0	.....	3 0	3979	Meets guaranty.	
	As found	1 87	2 3	1 70	6 81	3 65	12 19	8 54	.....	3 63			
958	As guaranteed	.....	.....	16 0	.....	1 0	17 0	16 0	.....	.....	3981	Meets guaranty.	
	As found	.....	.....	17 02	.....	1 20	18 22	17 02	.....	.....			
1349	As guaranteed	0 82	1 0	5 0	4 0	1 0	10 0	9 0	.....	3 0	3984	Meets guaranty.	
	As found	0 84	1 0	7 0	2 57	1 12	10 69	9 57	.....	3 01			
1345	As guaranteed	.....	.....	6 0	4 0	1 0	11 0	10 0	.....	2 0	3985	Meets guaranty.	
	As found	.....	.....	9 46	0 31	1 42	11 19	9 77	.....	2 49			
1350	As guaranteed	1 65	2 0	4 0	4 0	1 0	9 0	8 0	.....	3 0	3986	Meets guaranty.	
	As found	1 68	2 1	6 14	3 08	0 72	9 24	9 22	.....	3 01			
1353	As guaranteed	3 29	4 0	6 0	4 0	1 0	11 0	10 0	.....	3 0	3987	Meets guaranty.	
	As found	2 88	3 60	7 66	3 40	0 87	11 93	11 06	.....	2 51			
1352	As guaranteed	2 47	3 0	4 0	4 0	1 0	9 0	8 0	.....	3 0	3988	Meets guaranty.	
	As found	2 58	3 2	6 56	3 15	0 76	10 38	9 71	.....	2 46			
692	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	3992	Meets guaranty.	
	As found	.....	.....	.....	.....	.....	.....	.....	.....	47 0			
		.....	.....	.....	.....	.....	.....	.....	.....	48 5			
970	As guaranteed	.....	.....	16 0	.....	1 0	17 0	16 0	.....	.....	3995	Meets guaranty.	
	As found	.....	.....	17 62	0 94	1 57	20 13	18 76	.....	.....			
295	As guaranteed	15 0	.....	.....	.....	.....	.....	.....	.....	.....	3994	Meets guaranty.	
	As found	15 1	19 1	.....	.....	.....	.....	.....	.....	.....			
1401	As guaranteed	3 70	4 0	6 0	3 0	1 0	10 0	9 0	.....	2 0	3996	Nearly meets guaranty. Pass.	
	As found	2 98	.....	3 99	4 02	0 77	8 99	7 92	.....	2 11			

Continued.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF THREE RIVERS—

1915.								
April 6	Reliable.....	67903	Ludger Beaugard, Joliette.	3 lbs.	20	.....	E. Julien, Quebec.	.....
" 7	Thomas Phosphate.	67904	Napoleon Gandet, St. Liguori.	3 "	20	.....	Nap. Rivest	.....
" 7	Farm and Garden Phosphate	67905	" "	3 "	20	Bowker's Fert. Co., Boston.		
" 10	Special Golden Harvest.	67914	Odilon Lachapelle, St. Liguori.	3 "	20			
" 20	Virginia Tobacco.	67931	Alexis Malhiot, Montcalm.	3 "	20	Mich. Fert. Co., Buffalo.		
" 26	Guano de Golfe	67941	Zotique Beaudoin, St. Alexis.	3 "	20	F. C. Marquis, Quebec.		

DISTRICT OF MONTREAL—

Apr. 13	Vegetable and Potato.	67101	Montreal Abbatoirs, Montreal.	3 jars.	Nil.	Vendor.....		
" 13	Special Potato Manure.	67102	" " ..	3 "	"	" ..		
" 13	Sure Grower....	67103	" " ..	3 "	"	" ..		
" 13	Bone Meal.....	67104	" " ..	3 "	"	" ..		
" 13	Vegetable Grower.	67105	" " ..	3 "	"	" ..		
" 13	Corn and Cereal Special.	67106	" " ..	3 "	"	" ..		
" 16	Basic Slag, A Quality.	67108	The Wm. Ewing Co., Montreal.	3 "	"	The Cross Fert. Co.		
" 16	Tobacco and Potato.	67109	" " ..	3 "	"	Gunnis.....		
" 16	Acid Phosphate.	67110	Dupuy & Ferguson, Montreal.	3 "	"	" ..		No reg. No. or tags on bags.
" 16	General Crop...	67111	" " ..	3 "	"	" ..		" ..
" 16	Potato Manure.	67112	" " ..	3 "	"	" ..		" ..
" 20	Guano du Golfe.	67113	Hector L. Devy, Montreal.	3 "	"	F. C. Marquis, Quebec.		
" 20	Superphosphate.	67114	" " ..	3 "	"	" ..		
" 21	Acme.....	67115	Wm. Rennie Co., Ltd., Montreal.	3 "	"	Lesage Packing and Fert. Co.		
Apr. 21	Crockers New General Crop.	67116	Le Pailleur & Frere, Lachine.	3 jars.	Nil.	Crockers, Buffalo, N. Y.		

SESSIONAL PAPER No. 14

FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.										Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.								
		Total: including that of Nitric Acid or Ammonia if present	Total: Calculated as Ammonium.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.	Potash.	Finesness.	No. of Sample.	

Concluded.

1306	As guaranteed	0.82	1.0	3.0	3.0	1.0	7.0	6.0	3.0	.....	67903	Meets guaranty.
	As found.....	0.74	0.98	3.42	3.48	1.60	8.50	6.90	3.55	.....		
253	As guaranteed	.....	.....	.....	.....	.....	18.0	.....	.....	.....	67904	Meets guaranty.
	As found.....	.....	.....	.....	.....	.....	19.37	.....	.....	.....		
410	As guaranteed	1.65	2.0	6.0	2.0	1.0	9.0	8.0	2.0	.....	67905	Meets guaranty.
	As found.....	1.66	2.02	5.12	3.68	2.07	10.87	8.80	2.11	.....		
1375	As guaranteed	.....	.....	8.0	4.0	1.0	13.0	12.0	2.0	.....	67914	Meets guaranty.
	As found.....	.....	.....	9.20	4.58	2.15	15.93	13.78	2.55	.....		
207	As guaranteed	2.06	2.50	6.0	2.0	1.0	9.0	8.0	3.0	.....	67931	Meets guaranty.
	As found.....	1.87	2.30	7.52	1.69	1.17	10.38	9.21	3.69	.....		
912	As guaranteed	0.82	1.0	3.25	0.75	1.0	5.0	4.0	6.0	.....	67941	Meets guaranty.
	As found.....	1.26	1.56	1.04	6.17	1.60	8.81	7.20	5.0	.....		

D. J. KEARNEY, INSPECTOR.

1108	As guaranteed	0.82	1.0	.....	8.0	2.0	10.0	8.0	3.0	.....	67101	Meets guaranty.
	As found.....	1.75	2.2	.....	11.87	1.32	13.19	11.87	3.48	.....		
556	As guaranteed	.....	1.0	.....	.....	.....	.....	8.0	5.0	.....	67102	
	As found.....	1.73	2.2	.....	.....	1.85	13.50	11.05	5.58	.....		
551	As guaranteed	.....	1.0	.....	.....	.....	.....	8.0	1.0	.....	67103	
	As found.....	2.33	2.9	.....	.....	1.27	14.0	12.73	1.49	.....		
1041	As guaranteed	1.64	2.0	.....	10.0	10.0	20.0	10.0	.....	.....	67104	
	As found.....	2.97	3.8	.....	.....	7.17	23.62	16.45	.....	.....		
553	As guaranteed	.....	4.0	.....	.....	.....	.....	6.0	8.0	.....	67105	
	As found.....	2.94	3.7	.....	.....	2.82	12.87	10.05	8.21	.....		
552	As guaranteed	.....	2.0	.....	.....	.....	.....	8.0	2.0	.....	67106	
	As found.....	2.70	3.3	.....	.....	1.07	13.25	12.18	2.07	.....		
557	As guaranteed	.....	.....	.....	12.80	.....	.....	.....	.....	.....	67108	
	As found.....	.....	.....	.....	13.05	.....	.....	.....	.....	.....		
130	As guaranteed	.....	4.0	.....	.....	.....	.....	7.0	3.0	.....	67109	
	As found.....	3.31	4.03	5.06	2.23	0.52	7.81	7.29	3.13	.....		
.....	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	67110	Sold without registration number.
	As found.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	67111	
	As found.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	67112	
	As found.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
912	As guaranteed	0.82	1.0	3.25	0.75	1.0	5.0	4.0	6.0	.....	67113	Meets guaranty.
	As found.....	1.65	2.0	4.62	7.10	1.47	13.19	11.72	5.45	.....		
914	As guaranteed	0.82	1.0	6.0	1.0	1.0	8.0	7.0	2.0	.....	67114	
	As found.....	1.71	2.1	4.64	8.34	2.52	15.50	12.98	2.16	.....		
1081	As guaranteed	1.65	2.0	5.0	1.0	1.0	6.0	5.0	.....	.....	67115	
	As found.....	1.52	1.89	5.14	3.09	0.16	9.18	8.23	.....	.....		
1298	As guaranteed	0.82	1.0	4.0	4.0	1.0	9.0	8.0	1.0	.....	67116	
	As found.....	0.84	1.0	2.86	5.09	1.0	10.50	8.85	1.06	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VALLEYFIELD—

1915.								
Mar.	5	Legare Special Grain.	62860	Joseph Pigeon, Sweetsburgh.	3 jars.	Nil.	Capelton Chem. Fert. Co., Buckingham.	
"	5	Dom. 2-9-2. ....	62861	W. J. Lee, Sweetsburgh.	3 "	"	Dom. Fert. Co.	
"	5	" 5-8-4. ....	62862	" "	3 "	"	"	
"	5	Potato Phosphate.	62863	C. M. Beattie, Sweetsburgh.	3 "	"	Bowker's Fert. Co.	
"	9	Fertilizer. ....	62864	F. H. McKeough, Hemmingford.	3 "	"	Read's Fert. Co.	
"	9	" .....	62865	" "	3 "	"	"	
"	9	Special C. & C. .	62866	J. C. McKay, Hemmingford.	3 "	"	Montreal Abattoirs, Ltd.	
"	9	Empres. ....	62867	G. W. Keddy, Hemmingford.	3 "	"	Lowell Fert. Co.	
"	9	Potato Manure .	62868	" "	3 "	"	"	
"	10	Vegetable and Potato.	62869	J. E. Berthiaume, Bedford.	3 "	"	Montreal Abattoirs, Ltd.	
"	15	Farm Garden. . .	62871	Norman Brooks, Franklin Centre.	3 "	"	Bowker's Fert. Co.	No tags on bags at time of taking sample.
Mar.	15	Sure Crop .....	62872	Norman Brooks, Franklin Centre.	3 "	"	Bowker Fert. Co.	No tags on bags at time of taking sample.
"	15	All Crop. ....	62873	W. B. Coulter, Anderson Corners.	3 "	"	Read Fert. Co.	
"	15	Special Corn, Wheat and Rye.	62874	" "	3 "	"	"	
"	15	Farmer's Reliable.	62875	" "	3 "	"	"	
"	15	Pioneer .....	62876	" "	3 "	"	"	
"	24	Monarch .....	62877	Capelton Chem. & Fert. Co., Buckingham.	3 "	"	Vendors. ....	
"	24	Special Corn ....	62878	" "	3 "	"	"	
"	24	Complete XXX.	62879	" "	3 "	"	"	
"	24	Royal Canadian.	62880	" "	3 "	"	"	
"	24	Corn Special ....	62881	" "	3 "	"	"	

SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.							Potash.	Fineness.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.								
		Total, including that of Nitric Acid or Ammonia, if present.	Total, Calculated as Atomic.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.				

J. J. COSTIGAN, ACTING INSPECTOR.

989	As guaranteed	1.75	2.0	6.0	2.0	.....	8.0	8.0	2.0	.....	62860	Meets guaranty.
	As found	1.29	1.6	4.54	4.82	3.27	12.63	9.35	1.93	.....		
1161	As guaranteed	1.6	2.0	7.0	2.0	1.0	10.0	9.0	2.0	.....	62861	"
	As found	1.73	2.15	3.94	5.93	1.43	11.49	9.97	2.29	.....		
1167	As guaranteed	4.1	5.0	6.0	2.0	1.0	9.0	8.0	4.0	.....	62862	"
	As found	4.08	5.07	5.59	3.39	0.47	9.30	8.83	3.56	.....		
1092	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	2.0	.....	62863	"
	As found	1.80	2.24	4.00	5.15	1.40	10.55	9.15	2.47	.....		
1368	As guaranteed	0.82	1.0	5.0	1.0	1.0	10.0	9.0	3.0	.....	62864	"
	As found	0.98	1.22	4.04	5.31	1.65	11.00	9.35	3.16	.....		
1366	As guaranteed	.....	.....	8.0	4.0	1.0	13.0	12.0	2.0	.....	62865	"
	As found	.....	.....	7.30	4.70	1.60	13.60	12.00	1.89	.....		
552	As guaranteed	.....	2.0	.....	.....	.....	.....	8.0	2.0	.....	62866	"
	As found	3.0	3.8	.....	.....	2.35	13.06	10.71	2.47	.....		
802	As guaranteed	1.24	1.50	4.0	3.0	1.0	8.0	7.0	2.0	.....	62867	"
	As found	1.54	1.9	5.12	2.32	0.50	7.94	7.44	2.43	.....		
804	As guaranteed	1.64	2.0	3.0	1.0	1.0	8.0	7.0	4.0	.....	62868	"
	As found	2.03	2.49	5.10	2.43	0.72	8.25	7.53	3.77	.....		
1108	As guaranteed	0.82	1.0	.....	.....	.....	8.0	10.0	3.0	.....	62869	"
	As found	1.92	2.37	.....	.....	2.3	13.5	11.20	2.55	.....		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	62871	Sold without tag on bag.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	62872	Sold without registration number.
1349	As guaranteed	0.82	1.0	5.0	1.0	1.0	10.0	9.0	3.0	.....	62873	Meets guaranty
	As found	0.52	1.14	7.90	2.60	0.56	11.06	10.50	2.87	.....		
1350	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	3.0	.....	62874	"
	As found	1.71	2.1	4.30	4.87	1.43	10.60	9.17	2.78	.....		
1346	As guaranteed	.....	.....	8.0	4.0	1.0	13.0	12.0	2.0	.....	62875	"
	As found	.....	.....	9.20	2.78	1.02	13.00	11.88	2.02	.....		
1348	As guaranteed	0.82	1.0	4.0	4.0	1.0	9.0	8.0	2.0	.....	62876	"
	As found	0.98	1.2	5.82	3.69	1.62	11.13	9.61	1.86	.....		
857	As guaranteed	.....	4.0	.....	.....	.....	8.0	8.0	.....	.....	62877	"
	As found	3.40	4.2	.....	.....	.....	9.81	.....	7.72	.....		
933	As guaranteed	.....	1.0	.....	.....	.....	8.0	8.0	2.0	.....	62878	"
	As found	1.04	1.30	.....	8.980	3.30	12.20	8.90	2.25	.....		
1228	As guaranteed	1.75	2.0	.....	8.0	.....	8.0	8.0	3.0	.....	62879	"
	As found	1.56	1.94	.....	10.18	2.67	12.80	10.18	3.11	.....		
81	As guaranteed	.....	4.0	.....	.....	.....	9.0	.....	5.0	.....	62880	"
	As found	3.69	4.46	.....	.....	.....	11.93	.....	5.64	.....		
82	As guaranteed	.....	1.0	.....	.....	.....	7.0	.....	3.0	.....	62881	"
	As found	1.24	1.54	.....	.....	.....	11.13	.....	3.44	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the vendor.		Inspector's Report (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VALLEYFIELD—

1915.								
Mar. 24	No. 1.....	62882	Capelton Chem. & Fert. Co., Buckingham.	3 jars.	Nil	Vendors..		
" 24	Victor .....	62883	"	3 "	"	"		
" 24	Potato Special..	62884	"	3 "	"	"		
" 15	Farm Garden...	58259	Besner & Chasle, Valleyfield.	3 "	"	Bowker Fert. Co.		No tags on bags at time of taking sample.
" 15	Sure Crop .....	58260	"	3 "	"	"		
Apr. 28	12-2 .....	62885	R. W. Blair, Hemmingford.	3 "	"	Buffalo Fert. Co.		
" 28	Farm and Garden	62886	J. McCause, Hemmingford.	3 "	"	Bowker Fert. Co.		
May 4	Cuckers Crop Grower.	62887	T. S. McFarlane, Athelstane.	3 "	"	F. S. Royster Guano Co.		
" 4	Fish, Flesh and Fowl.	62888	"	3 "	"	"		
" 4	Acid Phosphate.	62889	"	3 "	"	"		
" 4	Grain Special...	62890	Thos. Coyland, Athelstane.	3 "	"	Inter. Chem. Corporation.		
" 4	Vegetable and Potato.	62891	"	3 "	"	"		
" 4	Ideal Wheat and Corn.	62892	"	3 "	"	"		
" 4	1-8-2.....	62893	"	3 "	"	"		
" 4	Farmers' Choice.	62894	"	3 "	"	"		

DISTRICT OF OTTAWA—

Mar. 9	Farmer's Choice	63396	H. Brown & Son, Brockville.	3 lb.	Nil.	Inter. Agr. Corp. Buffalo Fertilizer Wks. Buffalo		The figures 1146, were on bags on opposite side from claim and name of Brand. Did not say Reg. No.
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SESSIONAL PAPER No. 14

FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.										No. of Sample.	Remarks and Opinion of the Chief Analysis.	
		Nitrogen p.c.		Phosphoric Acid per cent.							Potash.			Fineness.
		Total: including that Nitric Acid or Ammonia, if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.						

Concluded.

81	As guaranteed						10.0					62882	Meets guaranty
	As found.....						15.19						
83	As guaranteed	2.0					7.0		3.0			62883	"
	As found.....	1.90	2.36				12.66		3.07				
336	As guaranteed	2.0		6.0					2.0			62884	"
	As found....	1.55	1.93	1.28	8.80	1.48	11.36	10.08	7.68				
...	As guaranteed											58259	Sold without registration number.
	As found.....												
...	As guaranteed											58260	"
	As found.....												
1148	As guaranteed			9.0	3.0	1.0	13.0	12.0	2.0			62885	Meets guaranty
	As found.....			8.30	3.94	2.57	14.81	12.24	2.43				
1378	As guaranteed	0.82	1.0	5.0	4.0	1.0	10.0	9.0	2.0			62886	"
	As found.....	1.57	1.94	6.10	5.22	1.55	12.87	11.32	2.12				
1411	As guaranteed	0.82	1.0	6.0	2.0	0.50	8.50	8.0	1.0			62887	"
	As found....	0.77	0.96	2.96	5.52	1.27	9.75	8.42	1.04				
1412	As guaranteed	1.65	2.0	6.0	2.0	0.50	8.50	8.0	3.0			62888	"
	As found.....	1.62	2.0	4.88	5.0	1.50	11.38	9.8	3.57				
1413	As guaranteed			14.0	2.0	0.50	16.50	16.0				62889	"
	As found.....			9.32	8.15	1.85	19.32	17.47					
1444	As guaranteed	2.1	2.5	6.0	2.0	1.0	9.0	8.0	1.5			62890	"
	As found.....	1.94	2.4	6.00	3.67	1.95	11.62	9.67	1.49				
1443	As guaranteed	2.5	3.0	6.0	2.0	1.0	9.0	8.0	3.0			62891	"
	As found....	2.06	2.5	5.84	3.97	2.00	11.81	9.81	3.19				
1445	As guaranteed	1.6	2.0	7.0	2.0	1.0	10.0	9.0	2.0			62892	"
	As found.....	1.51	1.9	6.36	3.87	2.10	12.63	10.23	2.11				
1447	As guaranteed	0.80	1.0	6.0	2.0	1.0	9.0	8.0	2.0			62893	"
	As found....	1.02	1.24	5.00	3.61	2.45	11.96	8.61	1.85				
1446	As guaranteed	0.80	1.0	7.0	3.0	1.0	11.0	10.0	2.0			62894	"
	As found.....	0.90	1.1	7.38	4.25	1.00	12.63	11.63	1.78				

J. A. RICKEY, INSPECTOR.

...	As guaranteed	0.82	1.0	7.0	3.0	1.0	11.0	10.0	2.0			62896	Meets guarantess.
	As found.....	0.86	1.0	6.10	3.17	2.42	11.69	9.27	1.84				

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF OTTAWA—

1915.								
Mar. 9	Vegetable and Potato.	63397	H. Brown & Son, Brockville, Ont.	3 lbs.	Nil.	Inter. Agr. Corp., Buffalo Fert. Wks., Buffalo.		The figures 1143, the same as previous sample.
" 9	Grain Special...	63398	" " "	3 "	" "	" "		The figures 1144, same as sample 63396.
" 9	Ideal Wheat and Corn.	63399	" " "	3 "	" "	" "		No. 1145 was not on bags. Got it from invoice.
" 11	Special High Grade Farmers Friend Superphosphate.	63497	W. F. Macpherson, Prescott.	3 "	" "	American Agr. Chem. Co., New York.	Shipped from Cartaret.	
" 11	Farmer's Friend Superphosphate.	63498	" " "	3 "	" "	" "	" "	
" 9	Read's Special Corn, Wheat and Rye.	63584	The H. T. Murray Co., Brockville.	3 "	" "	" "	" "	
" 9	Read's All Crop.	63585	" " "	3 "	" "	" "	" "	
" 9	Reads Pioneer Special.	63586	" " "	3 "	" "	" "	" "	
" 11	Sugar Beet, Corn and General Field Crop	63587	N. Willard, Prescott.	3 "	" "	Gunn's Ltd., W. Toronto.		
" 11	Tobacco and Potato.	63588	" " "	3 "	" "	" "		
" 13	Basic Slag A. Quality.	63589	W. G. Wood, Smith's Falls.	3 "	" "	The Cross Fert. Co., Sydney.		
" 23	Bradley's Circle Phosphate.	63590	Perth Roller Mills, Perth, Ont.	3 "	" "	American Agr. Chem. Co., New York.	Shipped from Cartaret.	
" 23	Bradley's New Method.	63591	" " "	3 "	" "	" "	" "	
" 23	Bradley's Unicorn.	63592	" " "	3 "	" "	" "	" "	
" 25	Read's Vegetable and Vine.	63593	Baker & Snyder, Morrisburg.	3 "	" "	Am. Agr. Chem. Co., N. York	Shipped from Cartaret.	
" 25	Read's Standard Superphosphate	63594	" " "	3 "	" "	" "	" "	
" 25	Read's Farmer's Reliable.	63595	" " "	3 "	" "	" "	" "	
" 26	Freeman's Bone and Potash.	63598	K. McDonald & Sons, Ottawa,	3 "	" "	W. A. Freeman, Ltd., Hamilton.		



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.							Potash.	Fineness.	No. of Sample.	Remarks and Opinions of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.								
		Total: including that of Nitric Acid or Ammonia, if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.				

Continued.

....	As guaranteed	2.4	3.0	6.0	2.0	1.0	9.0	8.0	3.0	....	63397	Meets guaranty
	As found.....	2.24	2.78	4.50	3.51	1.80	9.81	8.01	3.38	....		
...	As guaranteed	2.0	2.5	6.0	2.0	1.0	9.0	8.0	1.5	....	63398	"
	As found.....	1.92	2.38	5.18	4.19	1.82	11.19	9.37	1.6	....		
....	As guaranteed	1.6	2.0	7.0	2.0	1.0	10.0	9.0	2.0	....	63399	"
	As found.....	1.84	2.29	4.87	3.77	2.62	11.26	8.64	2.07	....		
1353	As guaranteed	3.29	4.0	6.0	4.0	1.0	11.0	10.0	3.0	....	63497	"
	As found.....	3.25	4.01	6.74	4.99	0.90	12.63	11.73	2.96	....		
1351	As guaranteed	2.06	2.5	4.0	4.0	1.0	9.0	8.0	3.0	....	63498	"
	As found.....	2.16	2.68	4.82	4.58	1.10	10.50	9.46	3.46	....		
1350	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	3.0	....	63584	"
	As found.....	1.80	2.29	4.0	5.30	1.40	10.70	9.20	3.05	....		
1345	As guaranteed	0.82	1.0	5.0	4.0	1.0	10.0	9.0	3.0	....	63585	"
	As found.....	1.04	1.3	5.30	4.31	1.52	11.13	9.61	3.13	....		
1348	As guaranteed	0.82	1.0	4.0	4.0	1.0	9.0	8.0	3.0	....	63586	"
	As found.....	1.12	1.39	5.20	3.07	1.82	10.09	8.27	2.07	....		
1224	As guaranteed	..	2.0	..	..	..	9.0	..	4.0	....	63587	"
	As found.....	1.71	2.1	..	..	..	9.62	..	3.61	....		
1230	As guaranteed	..	4.0	..	..	..	7.0	..	3.0	....	63588	Nearly meets guaranty. Poor
	As found.....	3.0	3.73	..	..	..	7.66	..	1.97	....		
557	As guaranteed	..	..	..	12.80	..	12.80	12.80	..	8.00	63589	Meets guaranty
	As found.....	..	..	..	11.90	..	17.59	14.90	..	8.00		
725	As guaranteed	..	..	8.0	2.0	1.0	11.0	10.0	8.0	....	63590	"
	As found.....	..	..	8.40	3.18	0.80	12.38	11.58	9.10	....		
187	As guaranteed	0.82	1.0	6.0	2.0	1.0	9.0	8.0	2.0	....	63591	"
	As found.....	1.00	1.24	5.60	3.23	1.30	10.1	8.8	2.31	....		
732	As guaranteed	1.6	2.0	6.0	2.0	1.0	9.0	8.0	2.0	....	63592	"
	As found.....	1.73	2.15	6.20	3.60	1.40	11.26	9.80	2.27	....		
1302	As guaranteed	2.45	3	4	4	1	9	8	3	....	63593	"
	As found.....	2.49	3.1	3.52	5.01	1.60	10.15	8.42	2.86	....		
383	As guaranteed	0.82	1	6	2	1	9	8	4	....	63594	"
	As found.....	0.88	1.2	5.32	5.31	1.20	11.90	10.60	4.28	....		
737	As guaranteed	..	..	10	2	1	13	12	..	....	63595	"
	As found.....	..	..	9.36	4.06	1.20	14.62	13.42	..	....		
147	As guaranteed	..	2	..	..	..	..	..	..	....	63596	"
	As found.....	3.47	4.3	..	..	..	..	9.06	8.78	....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF OTTAWA—

1915.								
Mar. 26	Potash Special..	63599	K. McDonald & Sons, Ottawa.	3 lbs.	Nil.	Capelton Chem Fert. Co., Buckingham		
" 26	Lawn.....	63600	"	3 "	"	"		
April 22	Standard. . .	63696	Standard Fert. & Chem.Co., Smith's Falls.	3 "	"	Vendors . . .		
" 22	Corn and Grass.	63697	"	3 "	"	"		
" 22	Phosphate Plaster.	63698	"	3 "	"	"		
" 22	Watchem Grow.	63699	"	3 "	"	"		

## DISTRICT OF KINGSTON—

April 19	Scottish Potato Manure.	57379	Hoffman & Bunnett, Belleville.	3 lbs.	10	The Cross Fert. Co., Sydney.		
" 20	Bradley's Unicorn.	57386	John Gunyo, Brighton.	3 "	10	Amer. Agr. Chem. Co., Buffalo.		
" 20	Bradley's Vegetable.	57387	"	3 "	10	"		
" 20	Bradley's New Method.	57388	"	3 "	10	"		
" 20	Bradley's Half Century.	57389	"	3 "	10	"		
" 20	Bradley's Patent Superphosphate.	57390	"	3 "	10	"		
" 20	Bradley's Special B. D. Guano.	57391	"	3 "	10	Vendors . . .		

## DISTRICT OF TORONTO—

Mar. 17	Harab Davis 5-9-2.	66877	Ont. Fert. Co., Ltd., West Toronto.	3 lbs.	15	"		
" 17	Harab Davis 6-7-3.	66878	"	3 "	15	"		
" 17	Harab Davis Special 10-2.	66879	"	3 "	15	"		
" 17	Harab Davis 4-6-3.	66880	"	3 "	15	"		

SESSIONAL PAPER No. 14

FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.							Potash.	Fineness.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.								
		Total: including that of Nitric Acid, or Ammonia, if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.				

Concluded.

336	As guaranteed		2	6					8		63599	Two per cent low in potash, compensated. Pass.
	As found	2.37	2.90				9.15		5.90			
336	As guaranteed		2	6					8		63600	Meets guaranty.
	As found	1.64	2.04				11.75		7.88			
280	As guaranteed	2	2.4	8	1.5	5	14	9	12		63698	"
	As found	1.86	2.3	4.44	6.49	5.20	16.13	10.93	2.57			
1641	As guaranteed	1.65	2	6	1	4	11	7	4		63697	"
	As found	1.39	1.72	8.52	1.89	3.90	14.31	10.41	4.02			
283	As guaranteed					5					63698	"
	As found					7.52	10.19	2.67				
282	As guaranteed		4					9	8		63699	Two per cent low in potash compensated Pass.
	As found	3.78	4.7			0.90	12.31	11.41	6.09			

JAMES HOGAN, INSPECTOR.

515	As guaranteed	2.47	3.0	7.0	1.0	1.0	9.0	8.0	3.5		57379	Meets guaranty.
	As found	2.71	3.40	1.04	9.85	2.17	12.06	10.89	3.79			
1292	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	2.0		57386	"
	As found	1.50	1.89	4.32	4.48	1.45	10.25	8.80	2.00			
1295	As guaranteed	3.29	4.0	6.0	4.0	1.0	11.0	10.0	3.0		57387	"
	As found	3.62	4.47	6.28	4.06	2.10	12.41	10.34	2.84			
1290	As guaranteed	0.82	1.0	4.0	4.0	1.0	9.0	8.0	2.0		57388	"
	As found	0.87	1.07	3.06	5.67	1.65	10.38	8.73	1.99			
1294	As guaranteed	2.06	2.5	4.0	4.0	1.0	9.0	8.0	3.0		57389	"
	As found	1.92	2.38	4.26	4.56	1.37	10.19	8.82	2.96			
1293	As guaranteed	2.06	2.5	4.0	4.0	1.0	9.0	8.0	1.5		57390	"
	As found	1.93	2.38	2.18	5.89	1.37	9.44	8.07	1.58			
1291	As guaranteed	0.82	1.0	4.0	4.0	1.0	9.0	8.0	3.0		57391	"
	As found	0.86	1.07	2.92	5.79	0.86	9.56	8.71	3.09			

H. J. DAGER, INSPECTOR.

1268	As guaranteed	4.1	5.0	3.0	4.0	1.0	10.0	9.0	2.0		68877	Meets guaranty.
	As found	3.89	4.83	3.64	7.35	1.57	12.56	10.99	2.12			
1269	As guaranteed	4.0	6.0	2.0	5.0	1.0	8.0	7.0	3.0		68878	"
	As found	4.06	6.0	0.96	7.14	2.16	10.25	8.16	3.21			
1255	As guaranteed			7.0	3.0	1.0	11.0	10.0	2.0		68879	"
	As found			1.09	10.25	1.17	12.44	11.27	1.91			
1266	As guaranteed	3.3	4.0	3.5	2.5	1.0	7.0	6.0	3.0		68880	"
	As found	3.43	4.17	0.66	5.63	2.25	8.44	6.19	3.01			

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF TORONTO—

1915.									
Mar. 17	Harab Davis 2½-9-2.	66881	Ont. Fert. Co., Ltd., West To- ronto.	3 lbs.	15	Vendors.....			
" 17	Harab Davis 1-12-1.	66882	" "	3 "	15	" .....			
" 17	Harab Davis 2-8-1½.	66883	" "	3 "	15	" .....			
" 17	Harab Davies, 4- 8-1½.	66884	" "	3 "	15	" .....			
" 17	Harab Davies, 3- 8-1½.	66885	" "	3 "	15	" .....			
" 17	Harab Davies, 4- 12-3.	66886	" "	3 "	15	" .....			
" 17	Harab Davies, 2- 19-2.	66887	" "	3 "	15	" .....			
" 17	Harab Davies, 3- 9-3.	66888	" "	3 "	15	" .....			
April 6	Harab Davies, Blood & Bone.	66889	" "	3 "	15	" .....			
" 6	Harab Davies, Special, 12-2.	66890	" "	3 "	15	" .....			
" 6	Harab Davies, 2½- 7-2.	66891	" "	3 "	15	" .....			
Mar. 6	Harab Davies, Blood, Bone and Potash.	66892	" "	3 "	15	" .....			
" 6	Harab Davies, Pure Ground Blood.	66893	" "	3 "	15	" .....			
" 6	Harab Davies, Acid Phos- phate.	66894	" "	3 "	15	" .....			
" 6	Harab Davies, 1½- 10-1.	66895	" "	3 "	15	" .....			
" 6	Harab Davies, Nitrate of Soda.	66896	" "	3 "	15	" .....			
" 6	Shur Crop Wheat Special, 2-9-2.	66897	Gunn's Ltd, West Toronto.	3 "	15	" .....			
" 6	Gunn's Special.	66898	" "	3 "	15	" .....			
" 6	Sugar Beet, Corn and General Field Crop.	66899	" "	3 "	15	" .....			
" 6	Wheat Special, 2-9-2.	66900	" "	3 "	15	" .....			
Arril. 6	Harab Davies Pure Bone	66903	Ont. Fert. Co., Ltd., West To- ronto.	3 "	15	" .....			
" 7	Harab Davies Fine Steamed Bone Flour.	66904	" "	3 "	15	" .....			
" 8	Niagara Special	66905	Gunn's Ltd., West Toronto.	3 "	15	" .....			

SESSIONAL PAPER No. 14

FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.								Potash.	Fineness.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.									
		Total, including that of Nitric Acid or Ammonia, if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.					

Continued.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
1262	As guaranteed	2.0	2.5	6.0	3.0	1.0	10.0	9.0	2.0	.....	66881	Meets guaranty.
	As found.....	2.21	2.71	0.74	7.85	3.60	12.19	8.59	2.28	.....		
1257	As guaranteed	0.80	1.0	5.0	7.0	1.0	13.0	12.0	1.0	.....	66882	
	As found....	1.31	1.63	3.80	10.48	2.35	16.63	14.28	1.56	.....		
1259	As guaranteed	1.6	2.0	5.0	3.0	1.0	9.0	8.0	1.0	.....	66883	"
	As found.....	1.84	2.29	1.30	9.27	2.55	13.12	10.57	1.45	.....		
1265	As guaranteed	3.3	4	5	3	1	9	8	1.5	.....	66884	"
	As found.....	3.22	3.91	1.52	8.47	2.57	12.56	9.99	1.39	.....		
1263	As guaranteed	2.4	3	5	3	1	9	8	1.5	.....	66885	"
	As found.....	2.35	2.92	1.16	9.82	2.90	13.88	10.98	1.20	.....		
1267	As guaranteed	3.3	4	7	5	1	13	12	3	.....	66886	"
	As found....	3.05	3.8	4.42	8.23	1.72	14.37	12.65	3.10	.....		
1261	As guaranteed	1.6	2	6	4	1	11	10	2	.....	66887	"
	As found.....	1.82	2.25	0.36	10.00	5.57	15.93	10.36	1.95	.....		
1261	As guaranteed	2.4	3	5	4	1	10	9	3	.....	66888	"
	As found.....	2.45	3.0	1.22	7.11	4.42	12.75	8.33	3.40	.....		
1270	As guaranteed	7	8.5	.....	10	1	11	10	.....	.....	66889	"
	As found.....	7.36	8.93	0.32	11.08	4.60	16.00	11.40	.....	.....		
1256	As guaranteed	.....	9	3	1	13	12	2	.....	.....	66890	"
	As found.....	.....	1.58	10.20	1.92	13.60	11.77	1.58	.....	.....		
1260	As guaranteed	2	2.5	4	3	1	8	7	2	.....	66891	"
	As found....	1.96	2.38	1.12	7.93	2.95	11.00	9.05	2.03	.....		
1271	As guaranteed	6.6	8	6	.....	2	8	6	3	.....	66892	"
	As found.....	6.04	7.33	.....	.....	3.67	11.06	7.39	3.24	.....		
1276	As guaranteed	11.5	14	.....	.....	.....	.....	.....	.....	.....	66893	1.5 low in nitrogen.
	As found....	10.00	12.14	.....	.....	.....	.....	.....	.....	.....		
1280	As guaranteed	.....	.....	16	.....	1	17	16	.....	.....	66894	Meets guaranty.
	As found....	.....	.....	18.00	0.25	1.00	19.25	18.25	.....	.....		
1258	As guaranteed	1.2	1.5	.....	10	3	13	10	1	.....	66895	"
	As found....	2.11	2.6	0.26	8.43	7.97	16.06	8.69	2.43	.....		
1282	As guaranteed	15	18.3	.....	.....	.....	.....	.....	.....	.....	66896	"
	As found....	15.4	19.1	.....	.....	.....	.....	.....	.....	.....		
1023	As guaranteed	1.65	2	7	2	1	10	9	2	.....	66897	"
	As found....	1.70	2.1	7.68	1.95	1.00	10.63	9.63	2.49	.....		
1231	As guaranteed	2.46	3	0.5	6.5	2	9	7	2	.....	66898	"
	As found....	2.52	3.1	3.72	3.47	0.75	7.94	7.19	2.41	.....		
1234	As guaranteed	1.65	2	0.5	8.5	2	11	9	3	.....	66899	"
	As found....	1.71	2.2	6.58	2.60	0.92	10.19	9.27	2.82	.....		
1235	As guaranteed	1.65	2	0.5	8.5	2	11	9	1	.....	66900	"
	As found....	1.74	2.2	5.0	2.97	0.97	8.91	7.97	1.58	.....		
1278	As guaranteed	3.3	4	.....	15	8	23	15	.....	.....	66901	"
	As found....	2.95	3.6	.....	18.61	6.90	25.61	18.61	.....	.....		
1279	As guaranteed	2.8	3.5	.....	16	8	24	.....	.....	.....	66902	"
	As found....	2.87	3.65	.....	19.31	6.62	25.93	.....	.....	.....		
1232	As guaranteed	2.46	3	0.5	8.5	2	11	9	3	.....	66903	"
	As found....	2.81	3.45	5.60	3.33	1.27	10.25	8.98	3.38	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF TORONTO—

1915.							
April	8 Black Loam Special.	66906	Gunn's Ltd., West Toronto.	3 lbs.	15	Vendors .....	
"	8 Tobacco and Potato.	66907	" " "	3 "	15	" .....	
"	8 Blood and Bone Compound.	66908	" " "	3 "	15	" .....	
"	8 Bowling Green & Greenhouse.	66909	" " "	3 "	15	" .....	
"	8 Acid Phosphate.	66910	" " "	3 "	15	" .....	
"	8 Swift's 14%....	66911	Swift's Canadian Co., Ltd., West Toronto.	3 "	15	" .....	
"	8 Dry Blood ....	66912	" " "	3 "	15	" .....	
"	8 Swift's 2-10-2...	66913	" " "	3 "	15	" .....	
"	8 " 2-8-2....	66914	" " "	3 "	15	" .....	
"	8 " 1-9-2....	66915	" " "	3 "	15	" .....	
"	8 Pure Bone Meal.	66916	Swift Can. Co., West Toronto.	3 "	15	" .....	
"	8 Swift's 3 8-3...	66917	" " "	3 "	15	" .....	
"	8 Swift's 2-9-3...	66918	" " "	3 "	15	" .....	
"	8 Harab Davies, Ground Animal Tankage.	66919	Ont. Fert. Co. Ltd. West Toronto.	3 "	15	" .....	
"	23 Steamed Bone..	66943	Gunn's Ltd., West Toronto.	3 "	15	" .....	
"	23 Special Manure.	66944	" " "	3 "	15	" .....	
"	23 4-8-3.....	66945	Swifts Can. Co., West Toronto.	3 "	15	" .....	
"	23 Nitrate of Soda.	66946	" " "	3 "	15	.....	Imported by Vendors.
"	23 Ground Tankage	66947	" " "	3 "	15	Vendor.....	.....

DISTRICT OF HAMILTON—

Mar.	16 Vegetable and Potato Manure	66870	W. A. Freeman Co. Ltd., Hamilton.	4 lbs.	15	Vendors .....	
"	16 Grass, Grain and Fruit Manure.	66871	" " "	4 "	15	" .....	
"	16 Celery and early Vegetable Manure.	66872	" " "	4 "	15	" .....	

SESSIONAL PAPER No. 14

FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.							Potash.	Fineness.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.								
		Total: Including that of Nitric Acid or Ammonia, if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.				

Concluded.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
1237	As guaranteed	.....	.....	0 5	9 5	0 61	10 61	10	12	.....	66906	Meets guaranty
	As found	.....	.....	3 48	7 49	0 72	11 69	10 97	12 03	.....		
1230	As guaranteed	3 3	4	0 5	6 5	2	9	7	23	.....	66907	"
	As found	3 01	3 8	5 24	3 41	0 57	9 25	8 68	3 44	.....		
1236	As guaranteed	4 95	6	0 5	6 5	2	9	7	.....	.....	66908	"
	As found	4 80	6 0	1 46	9 34	0 70	11 50	10 80	12 22	.....		
1233	As guaranteed	3 3	4	0 5	5 5	2	8	6	.....	.....	66909	"
	As found	2 68	3 35	3 60	5 77	0 82	10 19	9 37	3 82	.....		
1037	As guaranteed	.....	.....	14	2	0 8	16 8	16	.....	.....	66910	"
	As found	.....	.....	13 60	3 04	1 55	18 19	16 64	.....	.....		
1423	As guaranteed	.....	.....	13 14	0 86	0 22	14 22	14	.....	.....	66911	"
	As found	.....	.....	9 90	3 14	2 02	15 06	13 04	.....	.....		
1429	As guaranteed	13 17	16	.....	.....	.....	.....	.....	.....	.....	66912	"
	As found	13 4	16 6	.....	.....	.....	.....	.....	.....	.....		
1420	As guaranteed	1 65	2	8 46	1 54	1	11	10	12	.....	66913	"
	As found	1 99	2 5	5 96	4 02	1 40	11 38	9 98	12 26	.....		
1418	As guaranteed	1 65	2	4 92	3 08	0 94	8 94	8	.....	.....	66914	"
	As found	1 98	2 5	4 47	4 74	0 92	10 13	9 21	12 16	.....		
1417	As guaranteed	0 82	1	7 20	1 80	0 42	9 42	9	12	.....	66915	"
	As found	1 56	1 91	5 98	4 00	0 95	10 93	9 98	12 05	.....		
1431	As guaranteed	2 47	3 0	6 35	3 65	14 0	24 0	10 0	.....	.....	66916	"
	As found	3 88	4 83	2 44	13 55	9 20	25 19	15 99	.....	.....		
1421	As guaranteed	2 47	3 0	4 54	3 46	0 97	8 97	8 0	3 0	.....	66917	"
	As found	1 89	2 0	5 65	3 72	0 75	10 13	9 38	3 15	.....		
1419	As guaranteed	1 65	2 0	7 20	1 80	0 42	9 42	9 0	3 0	.....	66918	"
	As found	1 62	2 0	5 48	3 71	1 62	10 51	9 19	12 86	.....		
1277	As guaranteed	7 4	9 0	.....	8 0	4 0	12 0	8 0	.....	.....	66919	"
	As found	7 0	8 7	.....	10 17	1 52	11 69	10 17	.....	.....		
1038	As guaranteed	2 46	3 0	0 4	12 6	9 0	22 0	13 0	.....	.....	66943	"
	As found	3 0	3 8	0 52	15 81	6 92	23 25	16 33	.....	.....		
1239	As guaranteed	1 65	2 0	0 5	9 5	2 0	12 0	10 0	.....	.....	66944	"
	As found	1 58	1 9	5 76	5 72	1 02	11 50	10 48	.....	.....		
1422	As guaranteed	3 29	4 0	4 92	3 08	0 94	8 94	8 0	3 0	.....	66945	"
	As found	3 46	4 3	4 40	4 20	1 47	10 07	8 60	3 24	.....		
1426	As guaranteed	15 0	18 0	.....	.....	.....	.....	.....	.....	.....	66946	"
	As found	15 5	19 1	.....	.....	.....	.....	.....	.....	.....		
1428	As guaranteed	5 76	7 0	2 65	2 21	6 14	11 0	4 86	.....	.....	66947	"
	As found	7 30	8 9	0 28	11 43	1 40	12 87	11 47	.....	.....		

H. J. DAGER, ACTING INSPECTOR.

1250	As guaranteed	3 0	4 0	6 0	3 0	0 50	9 71	9 0	3 0	.....	66870	Meets guaranty
	As found	3 36	4 17	3 54	7 68	1 80	13 12	11 22	2 28	.....		
1253	As guaranteed	1 50	2 0	5 0	3 0	0 25	8 50	8 0	2 0	.....	66871	"
	As found	2 06	2 56	3 42	6 64	1 50	11 56	10 06	2 59	.....		
1254	As guaranteed	3 75	5 0	6 0	3 0	0 50	9 75	9 0	2 50	.....	66872	"
	As found	4 69	5 61	3 88	6 91	1 40	12 10	10 79	2 15	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF HAMILTON—

1915.									
Mar. 16	Sure Growth . . .	66873	W. A. Freeman Co. Ltd., Hamilton.	4 lbs.	15	Vendors . . . . .			
" 16	Bone Meal . . . . .	66874	" " . . . . .	4 "	15	" . . . . .			
Apr 13	Crocker's Revised High Grade Special.	66920	Tetterington Bros. St. Catharines.	3 "	15	American Agr. Chem. Co., Buffalo.			
" 13	Crocker's Special Complete Manure.	66921	" " . . . . .	3 "	15	" . . . . .			
" 13	Bradley's Patent Super phosphate.	66922	" " . . . . .	3 "	15	" . . . . .			
" 13	Nitrate of Soda . . .	66923	" " . . . . .	3 "	15		Am. Agr. Chem. Co. Buffalo.		
" 13	Buffalo 12-2 . . . .	66924	Chas. Taylor & Co. St. Catharines.	3 "	15	Int. Agr. Fert. Co., Buffalo.			
" 14	Buffalo Wheat Special.	66925	Ernest Platt, Wellingland.	3 "	15	Buffalo Fert. Wks. Buffalo			
" 14	Vegetable and Potato.	66926	" " . . . . .	3 "	15	" . . . . .			
" 14	Ideal Wheat and Corn.	66927	" " . . . . .	3 "	15	" . . . . .			
" 14	Farmer's Choice.	66928	" " . . . . .	3 "	15	" . . . . .			
" 14	Buffalo 1-8-3 . . . .	66929	" " . . . . .	3 "	15	" . . . . .			
" 14	Basic Slag A Quality.	66930	" " . . . . .	3 "	15		Buffalo Fert. Wks. Buffalo.		
" 15	Crocker's Wheat and Corn.	66931	F. A. J. Shephard, Queenston.	3 "	15	Amer. Agr. Chem. Co., Ltd., Buffalo.			
" 15	Crocker's Potato, Hop and Tobacco.	66932	" " . . . . .	3 "	15	" " . . . . .			
" 15	Fertilizer . . . . .	66933	Amer. Cyanide Co., Niagara Falls.	3 "	15	Vendors . . . . .			
" 16	Schall's Special Corn and Potato.	66934	E. E. Morse, Fenwick.	3 "	15	Schall Sheldon Fert. Co., Buffalo.			
16	Schall's Special Tucker's Manure.	66935	" " . . . . .	3 "	15	" " . . . . .			
16	Schall's Standard.	66937	" " . . . . .	3 "	15	" " . . . . .			



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.							Potash.	Fineness.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphate Acid per cent.								
		Total, including that of Nitric Acid or Ammonia, if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.				

Continued.

144	As guaranteed	2.89	3.5	5.0	3.0	0.25	8.25	8.0	3.0	...	66873	Meets guaranty.
	As found.....	2.85	3.54	2.92	8.21	1.87	12.00	11.13	3.65	...		
146	As guaranteed	2.47	3.0	.....	20.0	1.0	21.0	20.0	.....	.....	66874	low in available-phosphoric acid; but above guaranteed value. Pass.
	As found.....	4.38	5.44	.....	15.80	.....	21.06	.....	.....	.....		
1300	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	3.0	.....	66920	Meets guaranty.
	As found.....	1.66	2.1	4.54	3.60	1.67	9.81	8.14	3.01	.....		
1299	As guaranteed	0.82	1.0	4.0	4.0	1.0	9.0	8.0	3.0	.....	66921	
	As found.....	0.80	0.99	4.66	3.89	1.45	10.00	8.55	3.23	.....		
1293	As guaranteed	2.06	2.5	4.0	4.0	1.0	9.0	8.0	1.5	.....	66922	
	As found.....	2.02	2.5	3.90	5.61	1.30	10.81	9.51	1.80	.....		
1287	As guaranteed	15.0	18.23	.....	.....	.....	.....	.....	.....	.....	66923	
	As found.....	14.5	18.0	.....	.....	.....	.....	.....	.....	.....		
1148	As guaranteed	.....	.....	9.0	3.0	1.0	13.0	12.0	2.0	.....	66924	
	As found.....	.....	.....	7.48	4.41	2.37	14.19	11.89	1.87	.....		
678	As guaranteed	2.0	2.5	6.0	2.0	1.0	9.0	8.0	1.5	.....	66925	
	As found.....	2.3	2.9	1.70	6.79	2.07	10.56	8.49	1.76	.....		
1143	As guaranteed	2.5	3.0	6.0	2.0	1.0	9.0	8.0	3.0	.....	66926	
	As found.....	2.24	2.8	5.76	3.19	0.92	9.87	8.95	3.05	.....		
1145	As guaranteed	1.6	2.0	7.0	2.0	1.0	10.0	9.0	2.0	.....	66927	
	As found.....	1.82	2.25	6.88	3.50	1.47	11.85	10.78	2.25	.....		
1146	As guaranteed	0.80	1.0	7.0	3.0	1.0	11.0	10.0	2.0	.....	66928	
	As found.....	0.68	0.85	6.46	4.23	3.25	13.91	10.69	2.05	.....		
1149	As guaranteed	0.80	1.0	6.0	2.0	1.0	9.0	8.0	3.0	.....	66929	
	As found.....	1.04	1.3	4.90	4.47	1.95	11.32	9.87	3.05	.....		
557	As guaranteed	.....	.....	.....	12.8	.....	.....	.....	.....	.....	66930	
	As found.....	.....	.....	.....	14.6	.....	.....	.....	.....	.....		
1301	As guaranteed	2.06	2.5	4.0	4.0	1.0	9.0	8.0	1.5	.....	66931	
	As found.....	2.04	2.5	4.41	5.59	1.35	11.38	10.03	1.41	.....		
1302	As guaranteed	2.06	2.5	4.0	4.0	1.0	9.0	8.0	3.0	.....	66932	
	As found.....	1.96	2.4	4.12	4.76	1.87	10.75	8.88	3.11	.....		
445	As guaranteed	14	17.0	.....	.....	.....	.....	.....	.....	.....	66933	
	As found.....	10.0	19.9	.....	.....	.....	.....	.....	.....	.....		
1320	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	3.0	.....	66934	
	As found.....	1.73	2.1	3.82	4.99	1.62	10.45	8.81	3.21	.....		
1347	As guaranteed	2.47	3.0	4.0	4.0	1.0	9.0	8.0	3.0	.....	66935	
	As found.....	2.35	2.95	9.14	0.33	1.40	10.87	9.47	3.09	.....		
1315	As guaranteed	1.65	2.0	4.0	4.0	1.0	9.0	8.0	3.0	.....	66936	
	As found.....	1.57	1.94	3.54	5.41	0.90	9.88	8.98	2.26	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF HAMILTON—

1915.								
April 16	Schall's Fireside Phosphate.	66938	E. E. Morse Fenwick.	3 lbs.	15	Schall Sheldon Fert. Co., Buffalo.		
" 16	Nitrate of Soda.	69939	" "	3 "	15		Schall Sheldon Fert. Co., Buffalo.	
" 20	Bowker's Sure Crop Phosphate.	66940	Robert James, Dunnville.	3 "	15	Bowker's Fert. Co., Buffalo.		
" 20	Bowker's Farm and Garden Phosphate.	66941	" "	3 "	15	" "		
" 21	Bowker's Special Golden Harvest.	66942	W.E. Everingham, Canfield.	3 "	15	" "		

DISTRICT OF WINDSOR—

Mar. 17	Stons's 2-7-3....	54730	Wm. Stone & Sons, Ingersoll.	3 jars.	Nil.	Vendors.....		
" 17	Stone's Fruit Fert.	54731	" "	3 "	"	"		
" 17	Stone's Garden Fert.	54732	" "	3 "	"	"		
" 17	Stone's Garden and Root.	54734	" "	3 "	"	"		
" 17	Oxford Special	54735	" "	3 "	"	"		
" 17	Stone's 10-2....	54736	" "	3 "	"	"		
April 12	Grass and Grain	54745	A. M. Hamilton & Son, London.	3 "	"	W. H. Freeman, Hamilton.		
" 12	Potato Manure.	54746	" "	3 "	"	" "		
" 12	Celery and Vegetable.	54747	" "	3 "	"	" "		
" 12	Sure Growth ...	54748	" "	3 "	"	" "		
" 14	A-1 Potash.....	54749	Sargeant Co., Chatham.	3 "	"	Michigan Carbon Works, Detroit.		
" 14	General Fert....	54750	" "	3 "	"	" "		
" 14	Bone Black. ...	54751	" "	3 "	"	" "		
" 14	Red Lime Phosphate	54752	" "	3 "	"	" "		
" 14	Bean Fertiliser.	54753	" "	3 "	"	" "		

SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.						Total Available.	Potash.	Fineness.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.								
		Total: including that of Nitric Acid or Ammonia, if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Soluble.	Total.					

Concluded.

1318	As guaranteed As found.....	3.29 3.33	4.0 4.0	3.0 3.40	3.0 3.29	1.0 1.75	7.0 8.44	6.0 6.69	3.0 2.80	.....	66938	Meets guaranty.
1287	As guaranteed As found....	15.0 15.42	18.23 19.1	.....	.....	.....	.....	.....	.....	.....	66939	"
1357	As guaranteed As found.....	0.82 0.94	1.0 1.2	5.0 5.32	4.0 3.98	1.0 1.70	10.0 11.00	9.0 9.30	2.0 2.03	.....	66940	"
1358	As guaranteed As found.....	1.65 1.72	2.0 2.1	4.0 4.40	4.0 4.63	1.0 1.47	9.0 10.50	8.0 9.03	2.0 1.95	.....	66941	"
1355	As guaranteed As found.....	.....	.....	8.0 8.70	4.0 4.23	1.0 1.20	13.0 14.13	12.0 12.93	2.0 1.68	.....	66942	"

JOHN TALBOT, INSPECTOR.

1173	As guaranteed As found.....	1.64 1.56	2.0 1.9	5.50 1.48	1.50 7.68	1.0 1.40	8 10.56	7.0 9.16	3.0 2.23	.....	54730	Meets guaranty.
1097	As guaranteed As found....	1.64 1.49	2.0 1.9	10.50 10.36	1.50 3.14	1.50 1.25	13.50 14.75	12.0 13.50	3.0 1.86	.....	54731	One per cent low in potash.
1089	As guaranteed As found.....	3.29 4.52	4.0 5.6	4.0 1.62	4.0 6.94	1.0 2.25	9.0 10.81	8.0 8.56	4.0 2.91	.....	54732	One per cent low in potash. Compensated. Pass.
545	As guaranteed As found....	1.64 1.76	2.0 2.2	6.50 7.59	1.50 1.02	1.25 9.75	9.25 8.75	8.0 8.75	2.0 2.34	.....	54734	Meets guaranty.
889	As guaranteed As found....	0.83 1.44	1.0 1.7	9.0 3.38	1 7.74	1.0 1.32	11.0 12.44	10.0 11.12	2.0 1.47	.....	54735	"
1085	As guaranteed As found.....	.....	.....	9.50 2.94	0.50 8.52	1.0 0.60	11.0 12.06	10.0 11.46	2.0 2.87	.....	54736	"
1253	As guaranteed As found....	1.50 2.52	2.0 3.1	5.0 4.18	3.0 5.43	0.25 1.32	8.50 10.93	8.0 9.61	2.0 2.47	.....	54745	"
145	As guaranteed As found....	2.47 4.21	3.0 5.2	5.0 6.50	3.0 4.40	0.25 2.35	8.25 13.31	8.0 10.96	5.0 2.17	.....	54746	Low in potash, but compensated value. Pass.
*148	As guaranteed As found....	4.12 2.37	5.0 2.95	5.50 5.00	3.50 6.73	0.25 1.52	9.25 13.25	9.0 11.73	2.5 2.27	.....	54747	Low in nitrogen.
144	As guaranteed As found.....	2.89 2.63	3.5 3.2	5.0 2.08	3.0 7.40	0.25 1.52	8.25 11.00	8.0 9.48	3.0 3.60	.....	54748	Meets guaranty.
1326	As guaranteed As found....	0.82 0.99	1.0 1.22	4.0 4.84	4.0 3.78	1.0 2.25	9.0 10.87	8.0 8.62	3.0 2.99	.....	54749	"
1327	As guaranteed As found.....	1.65 1.72	2.0 2.1	4.6 3.34	4.0 5.96	1.0 2.70	9.0 12.00	8.0 9.30	3.0 2.94	.....	54750	"
1330	As guaranteed As found....	2.06 1.94	2.5 2.38	4.0 3.60	4.0 5.13	1.0 2.65	9.0 11.58	8.0 8.73	1.5 1.51	.....	54751	"
1325	As guaranteed As found.....	.....	.....	6.0 4.86	4.0 5.32	1.0 3.47	11.0 13.76	10.0 10.38	2.0 1.97	.....	54752	"
1328	As guaranteed As found.....	1.65 1.68	2.0 2.1	4.0 4.52	4.0 4.31	1.0 2.30	9.0 11.15	8.0 8.81	3.0 3.00	.....	54753	"

\* Should have been sold as 1254. Claim NH<sub>4</sub>, K<sub>2</sub>O = 2.5 - P<sub>2</sub>O<sub>5</sub> 9.50 Mr. Freeman & Co. Clarks

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF WINDSOR—

1915.								
Apr. 14	2-8-3.....	54754	J. D. Soutar, Chatham.	3 jars.	Nil.	Buffalo Fert. Co. Buffalo.		
" 14	Farmer's Choice.	54755	" " ..	3 "	" "	" ..		
" 14	Ideal Brand....	54756	" " ..	3 "	" "	" ..		
" 14	Best by test 2-8-2	54757	Canadian Fert. Co. Chatham.	3 "	" "	Vendors ..		
" 15	Best by test 3-8-3	54758	" " ..	3 "	" "	" ..		
" 15	16% available Acid Phosphate.	54759	" " ..	3 "	" "	" ..		
" 15	Best by test 4-8-3	54760	" " ..	3 "	" "	" ..		

DISTRICT OF MANITOBA—

Feb. 26	Bone Flour.....	61248	Steel Briggs Seed Co., Winnipeg.	3 lbs.	25	W. A. Freeman Co., Ltd. Hamilton.		No Reg. No.
" 26	Flower Fertilizer	61249	" " ..	3 pkg.	25	" ..		" ..
" 27	Fertilizer ..	61250	Wm. Rennie Co. Portage Avenue, Winnipeg.	3 "	1.50	Bonora Chem. New York.		" ..
" 27	" ..	61251	" " ..	3 "	15	Vendors ..		" ..

DISTRICT OF NELSON—

Mar. 13	"A" Fertilizer.	61771	Brackman Ker M. Co., Nelson.	3 lbs.	15	Victoria Chem. Co. Victoria.		
" 13	"B" " ..	61772	" " ..	3 "	15	" ..		
" 13	"D" " ..	61773	" " ..	3 "	15	" ..		
" 13	Nitrate of Soda.	61774	" " ..	3 "	15	" ..		
" 13	Sulphate of Potash.	61775	" " ..	3 "	15	" ..		
" 13	Muriate of Potash	61776	" " ..	3 "	15	" ..		
" 13	Superphosphate of Lime.	61777	" " ..	3 "	15	" ..		
" 13	B. and K. Bone Meal.	61778	" " ..	3 "	15	Vendors ..		
" 13	"A" Fertilizer.	61779	P. Burns & Co. Nelson.	3 "	15	P. Burns Co. Calgary.		
" 13	"B" " ..	61780	" " ..	3 "	15	" ..		
" 13	"C" " ..	61781	" " ..	3 "	15	" ..		
" 13	"D" " ..	61782	" " ..	3 "	15	" ..		

SESSIONAL PAPER No. 14

FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.									No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p. c.		Phosphoric Acid per cent.								
		Total: including that of Nitric Acid or Ammonia, if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.	Potash.	Finesness.		
1151	As guaranteed	1.6	2.0	6.0	2.0	1.0	9.0	8.0	3.0	.....	54745	Meets guaranty.
	As found	1.20	1.15	8.28	5.37	2.60	16.25	13.65	2.24	.....		
1146	As guaranteed	0.82	1.0	7.0	3.0	1.0	11.0	10.0	12.0	.....	54755	"
	As found	0.93	1.13	5.98	4.28	1.87	12.13	10.26	12.10	.....		
1145	As guaranteed	1.6	2.0	7.0	2.0	1.0	10.0	9.0	12.0	.....	54756	"
	As found	1.58	1.92	6.58	3.84	2.02	12.44	10.12	12.24	.....		
1454	As guaranteed	.....	2.0	.....	.....	.....	8.0	.....	12.0	.....	54757	"
	As found	1.58	1.92	.....	.....	.....	9.49	.....	1.44	.....		
1453	As guaranteed	.....	3.0	.....	.....	.....	8.0	.....	3.0	.....	54758	"
	As found	2.64	3.21	.....	.....	.....	10.00	.....	2.53	.....		
1458	As guaranteed	.....	.....	.....	.....	.....	16.0	.....	.....	.....	54759	"
	As found	.....	.....	.....	.....	.....	17.60	.....	.....	.....		
1452	As guaranteed	.....	4.0	.....	.....	.....	8.0	.....	3.0	.....	54760	"
	As found	2.67	3.24	.....	.....	.....	10.19	.....	3.01	.....		

Concluded.

A. C. LARIVIERE, INSPECTOR.

...	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	61248	Sold without register number.
	As found	.....	.....	.....	.....	.....	.....	.....	.....	.....		
...	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	61249	"
	As found	.....	.....	.....	.....	.....	.....	.....	.....	.....		
...	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	61250	"
	As found	.....	.....	.....	.....	.....	.....	.....	.....	.....		
969	As guaranteed	.....	3.0	5.50	2.50	0.25	8.25	8.0	2.0	.....	61251	Meets guaranty.
	As found	2.47	3.0	6.44	3.47	0.52	10.43	9.91	4.91	.....		

THOS. PARKER, INSPECTOR.

74	As guaranteed	4.0	.....	10.00	.....	.....	.....	.....	7.0	.....	61771	Meets guaranty.
	As found	3.81	4.63	10.00	1.78	0.67	12.45	11.78	7.92	.....		
924	As guaranteed	3.50	.....	.....	.....	.....	9.0	.....	11.0	.....	61772	"
	As found	3.45	1.20	8.15	3.27	0.98	12.0	11.12	10.22	.....		
76	As guaranteed	2.50	.....	10.0	.....	.....	.....	.....	11.0	.....	61773	"
	As found	2.22	2.69	9.10	3.21	0.39	13.30	12.31	12.39	.....		
77	As guaranteed	15.0	.....	.....	.....	.....	.....	.....	.....	.....	61774	"
	As found	14.97	18.20	.....	.....	.....	.....	.....	.....	.....		
78	As guaranteed	.....	.....	.....	.....	.....	.....	.....	50.0	.....	61775	"
	As found	.....	.....	.....	.....	.....	.....	.....	50.27	.....		
79	As guaranteed	.....	.....	.....	.....	.....	.....	.....	50.0	.....	61776	"
	As found	.....	.....	.....	.....	.....	.....	.....	52.41	.....		
80	As guaranteed	.....	.....	16.0	.....	.....	.....	.....	.....	.....	61777	"
	As found	.....	.....	13.36	5.64	1.66	20.66	18.99	.....	.....		
353	As guaranteed	.....	3.5	.....	.....	.....	26.0	.....	.....	.....	61778	"
	As found	3.07	3.71	.....	.....	.....	27.06	.....	.....	.....		
430	As guaranteed	2.80	3.40	0.25	1.10	13.89	1.39	1.41	3.80	.....	61779	"
	As found	3.54	4.30	0.15	11.70	7.06	18.80	11.80	8.74	.....		
431	As guaranteed	6.10	7.40	0.11	9.28	5.81	12.20	9.20	4.75	.....	61780	"
	As found	5.43	6.59	0.22	7.62	1.26	9.10	7.84	13.36	.....		
432	As guaranteed	5.01	6.81	0.30	3.07	6.67	10.60	3.90	3.71	.....	61781	"
	As found	6.47	7.87	0.28	8.28	2.09	10.60	8.56	7.49	.....		
433	As guaranteed	6.53	7.93	0.13	8.28	4.30	12.73	8.11	4.69	.....	61782	"
	As found	7.73	9.40	0.24	6.90	1.21	8.35	7.14	7.63	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cost.	Manufacturer.	Furnisher.	

DISTRICT OF VANCOUVER—

1915.								
Mar. 10	B. and K. Bone Meal.	55210	Kew Gardens 503 Pender St., Van.	3 jars.	10	Brackman Ker M. Co., Victoria.		
" 10	Ground Bone No. 2.	55211	" " "	3 "	10	Vane, Prince Rupert Meat, New Westminster.		
" 10	Fertilizer B. ....	55212	Brackman Ker M. Co., Vancouver.	3 "	30	Victoria Chem. Co. Victoria.		
" 10	" B. Special	55213	" " "	3 "	30	" "		
" 10	" C. ....	55214	" " "	3 "	30	" "		
" 10	" D. ....	55215	" " "	3 "	30	" "		
" 11	Dried Blood...	55216	P. Burns Co. Ltd. Vancouver.	3 "	Nil.	Vendors.....		
" 11	Tankage.....	55217	P. Burns Co., Ltd. Vancouver.	3 jars.	Nil.	Vendors....		
" 11	Fertilizer A ....	55218	Brackman-Ker M. Co., Vancouver.	3 "	30	Victoria Chem. Co., Victoria.		
" 11	Sulphate of Potash.	55219	" " "	3 "	30	" "		
" 11	Superphosphate of Lime.	55220	" " "	3 "	30	" "		
" 11	Nitrate of Soda.	55221	" " "	3 "	30	" "		
" 11	Muriate of Potash.	55222	" " "	3 "	30	" "		
" 11	Flower Fertilizer.	55223	A. J. Woodward, 667 Granville St., Vancouver.	3pkgs.	75	" "		
" 11	Canary Guano..	55224	Brown Bros. & Co., Ltd., 785 Granville St., Vanc.	3 tins.	100	The Chem. Union, Ipswich, Eng.		Not registered. Proprietor said he would apply for Reg. No.
" 12	Lawn Fertilizer.	55225	Campbell's Ltd., Granville and Hastings Sts., Vancouver.	3pkgs.	75	Victoria Chem. Co., Victoria.		
" 12	Sweet Pea Fertilizer.	55226	" " "	3 "	75	" "		
" 12	Thomas Phosphate.	55227	Brackman-Ker M. Co., Vancouver.	3 jars.	30	" "		
" 15	Nitrate of Lime.	55228	Wm. Rennie Co., Ltd., Vancouver.	3 "	25	Unknown ....		
" 19	Tankage.. ...	55229	Vanc. Prince Rupert Meat Co., New Westminster.	3 "	....	Vendors ...		

SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis.								Potash.	Phosphoric.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.c.		Phosphoric Acid per cent.									
		Total: including that of Nitric Acid or Ammonia if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.					

E. J. MORGAN, INSPECTOR.

355	As guaranteed	.....	3.50	.....	.....	.....	26.0	.....	.....	.....	55210	Meets guaranty.
	As found	.....	2.83	3.44	.....	.....	26.90	.....	.....	.....		
905	As guaranteed	.....	4.10	4.95	.....	10.94	14.90	25.90	11.0	0.05	55211	"
	As found	.....	4.11	5.00	.....	12.10	12.10	24.20	12.10	0.04		
924	As guaranteed	.....	3.50	.....	.....	.....	9.0	.....	11.0	.....	55212	"
	As found	.....	3.54	4.31	10.10	0.72	0.58	11.40	10.82	10.06		
924	As guaranteed	.....	3.50	.....	.....	.....	9.0	.....	11.0	.....	55213	"
	As found	.....	3.55	4.31	7.90	2.19	0.91	11.00	10.09	12.58		
75	As guaranteed	.....	.....	.....	12.50	.....	.....	.....	11.0	.....	55214	"
	As found	.....	.....	.....	12.00	2.16	0.69	14.85	14.16	11.30		
76	As guaranteed	.....	2.50	.....	10.0	.....	.....	.....	11.0	.....	55215	"
	As found	.....	2.21	2.68	9.00	3.36	0.79	13.15	12.36	12.23		
603	As guaranteed	.....	12.34	15.00	.....	.....	.....	.....	.....	.....	55216	"
	As found	.....	13.10	15.92	.....	.....	.....	.....	.....	.....		
602	As guaranteed	.....	6.37	7.75	.....	.....	.....	11.0	.....	.....	55217	"
	As found	.....	6.17	7.55	.....	.....	.....	12.55	.....	.....		
73	As guaranteed	.....	4.0	.....	10.0	.....	.....	.....	7.0	.....	55218	"
	As found	.....	3.72	4.52	10.35	1.19	0.36	11.90	11.54	8.04		
78	As guaranteed	.....	.....	.....	.....	.....	.....	.....	50.0	.....	55219	"
	As found	.....	.....	.....	.....	.....	.....	.....	50.47	.....		
80	As guaranteed	.....	.....	.....	16.0	.....	.....	.....	.....	.....	55220	"
	As found	.....	.....	.....	14.65	3.39	2.21	20.25	18.04	.....		
77	As guaranteed	.....	15.0	.....	.....	.....	.....	.....	.....	.....	55221	"
	As found	.....	15.10	18.36	.....	.....	.....	.....	.....	.....		
79	As guaranteed	.....	.....	.....	.....	.....	.....	.....	50.0	.....	55222	"
	As found	.....	.....	.....	.....	.....	.....	.....	52.89	.....		
1095	As guaranteed	.....	4.0	4.86	10.0	.....	.....	10.0	10.0	8.0	55223	"
	As found	.....	4.40	5.35	13.55	.....	0.10	13.65	13.55	9.36		
....	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	55224	Registration number applied for, but not granted at time of sale.
	As found	.....	4.95	6.03	0.50	4.90	9.0	14.40	5.40	0.82		
1096	As guaranteed	.....	5.0	6.07	10.0	.....	.....	10.0	10.0	5.0	55225	Meets guaranty.
	As found	.....	5.56	6.76	14.10	0.03	0.12	14.25	14.13	5.98		
1097	As guaranteed	.....	2.6	2.43	11.0	.....	.....	11.0	11.0	10.0	55226	"
	As found	.....	2.30	2.79	14.40	0.52	0.18	15.10	14.92	11.07		
513	As guaranteed	.....	.....	.....	16.0	.....	.....	.....	16.0	.....	55227	"
	As found	.....	.....	.....	16.88	.....	.....	18.00	16.88	.....		
1354	As guaranteed	.....	13.0	15.70	.....	.....	.....	.....	.....	.....	55228	"
	As found	.....	12.76	15.52	.....	.....	.....	.....	.....	.....		
902	As guaranteed	.....	7.20	8.75	.....	4.50	6.30	10.90	4.60	0.25	55229	"
	As found	.....	7.07	8.60	.....	7.80	1.50	9.30	7.80	0.24		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VANCOUVER—

1915.								
Mar. 19	Dried Blood....	55230	Vanc. Prince Rupert Meat Co., New Westminster.	3 jars.	....	Vendors....	.....	.....
" 19	Ground Bone No. 1.	55231	" " ..	3 "	....	" ..	.....	.....
" 19	Ground Bone No. 3.	55232	" " ..	3 "	....	" ..	.....	.....
Apr. 8	Ritchie's Fertilizer.	55233	Ritchie Brand & Co., 723 Robson St., Vancouver.	3 "	50	Richardson Chem. Manure Co., Ltd., Belfast, Ireland.	.....	.....

DISTRICT OF VICTORIA—

Mar. 30	Whale Guano...	62084	Brackman-Ker M. Co., Victoria.	2 lbs.	5	Can. North Pac. Fisheries, Ltd., Victoria.	.....	.....
" 30	Bone Meal.....	62085	" " ..	2 "	5	Vendors ..	.....	.....
" 30	Complete.....	62086	Sylvester Bros., 709 Yates St., Victoria.	2 "	Nil.	" ..	.....	.....
" 31	Fertilizer A ....	62087	Victoria Chem. Co., Victoria.	2 "	6	" ..	.....	.....
" 31	" B ....	62088	" " ..	2 "	6	" ..	.....	.....
" 31	" C ....	62089	" " ..	2 "	6	" ..	.....	.....
" 31	" D ....	62090	" " ..	2 "	6	" ..	.....	.....
" 31	Muriate of Potash.	62091	" " ..	2 "	6	Meyer-Wilson, San Francisco.	.....	.....
" 31	Sulphate of Potash.	62092	" " ..	2 "	6	" ..	.....	.....
" 31	Superphosphate of Lime.	62093	" " ..	2 "	6	Vendors ..	.....	.....
" 31	Thomas Phosphate.	62094	" " ..	2 "	6	Sydney Smith, London, Eng.	.....	.....
" 31	Nitrate of Soda.	62095	" " ..	2 "	6	Grace & Co., San Francisco.	.....	.....
" 31	Bone Meal.....	62096	" " ..	2 "	6	Can. Northern Pacific Fisheries, Ltd., Victoria.	.....	.....
" 31	Two Blade Brand Sweet Peas.	62097	" " ..	2 "	6	Vendors ..	.....	.....



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration Number.	Analysis of Sample.	Results of Analysis								No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen p.e.		Phosphoric Acid per cent.							
		Total: including that of Nitric Acid or Ammonia if present.	Total: Calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.	Potash.		

Concluded.

903	As guaranteed	12.25	14.90	.....	1.10	0.59	1.73	1.14	0.05	.....	55230	Meets guaranty.
	As found.....	12.96	15.76	.....	0.54	0.11	0.65	0.54	0.21	.....		
904	As guaranteed	4.10	4.95	.....	10.94	14.96	25.90	11.00	0.05	.....	55231	"
	As found.....	4.20	5.10	.....	13.60	10.60	23.60	13.60	0.04	.....		
906	As guaranteed	4.10	4.95	.....	10.94	14.90	25.90	11.00	0.05	.....	55232	"
	As found.....	4.04	4.90	.....	14.45	11.45	25.90	14.45	0.06	.....		
1247	As guaranteed	3.50	4.25	5.10	3.20	3.21	11.51	8.30	5.82	.....	45233	"
	As found.....	3.19	3.88	6.05	5.00	1.40	12.45	11.05	5.87	.....		

D. O'SULLIVAN, INSPECTOR.

589	As guaranteed	10.30	12.50	.....	.....	.....	.....	.....	.....	.....	62084	Meets guaranty.
	As found.....	11.03	13.40	.....	.....	.....	.....	.....	.....	.....		
355	As guaranteed	.....	3.50	.....	.....	.....	26.0	.....	.....	.....	62085	"
	As found.....	3.13	3.81	.....	.....	.....	26.80	.....	.....	.....		
884	As guaranteed	1.68	2.04	.....	5.60	13.40	19.00	5.60	.....	.....	62086	Four per cent. low in phosphoric acid.
	As found.....	1.22	1.48	0.05	7.90	4.70	12.67	7.95	.....	.....		
73	As guaranteed	4.0	.....	10.0	.....	.....	.....	.....	7.0	.....	62087	Meets guaranty.
	As found.....	3.47	4.22	10.05	1.20	0.30	11.55	11.25	8.08	.....		
924	As guaranteed	3.50	.....	.....	.....	.....	9.0	.....	11.0	.....	62088	"
	As found.....	3.35	4.07	9.00	0.97	0.38	10.35	9.97	11.00	.....		
75	As guaranteed	.....	.....	12.50	.....	.....	.....	.....	11.0	.....	62089	"
	As found.....	.....	.....	12.70	1.31	0.24	14.27	14.01	10.79	.....		
76	As guaranteed	2.50	.....	10.0	.....	.....	.....	.....	11.0	.....	62090	"
	As found.....	2.54	3.09	10.05	0.96	0.44	11.45	11.01	11.15	.....		
79	As guaranteed	.....	.....	.....	.....	.....	.....	.....	50.0	.....	62091	"
	As found.....	.....	.....	.....	.....	.....	.....	.....	52.21	.....		
78	As guaranteed	.....	.....	.....	.....	.....	.....	.....	50.0	.....	62092	"
	As found.....	.....	.....	.....	.....	.....	.....	.....	50.27	.....		
80	As guaranteed	.....	.....	16.0	.....	.....	.....	.....	.....	.....	62093	"
	As found.....	.....	.....	15.65	1.33	0.77	17.75	16.98	.....	.....		
613	As guaranteed	.....	.....	.....	16.0	.....	.....	.....	16.0	.....	62094	"
	As found.....	.....	.....	.....	15.92	.....	.....	.....	17.81	15.35		
77	As guaranteed	15.0	.....	.....	.....	.....	.....	.....	.....	.....	62095	"
	As found.....	15.80	19.20	.....	.....	.....	.....	.....	.....	.....		
590	As guaranteed	2.88	3.50	.....	.....	.....	27.43	.....	.....	.....	62096	"
	As found.....	3.52	4.28	.....	.....	.....	25.80	.....	.....	.....		
1097	As guaranteed	2.00	2.43	11.0	.....	.....	11.0	11.0	10.0	.....	62097	"
	As found.....	2.30	2.70	13.30	1.00	0.10	14.45	14.30	10.70	.....		

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VICTORIA—

1915.								
April 1	Two-Blade Brand for Flowers.	62098	Victoria Chem. Co., Victoria.	2 lbs.	6	Vendors.....		
" 1	Two-Blade Brand for Lawns.	62099	" "	2 "	6	" .....		

DISTRICT OF ALBERTA—

May 28	Fertilizer.....	52168	Swift Can. Co., Edmonton.	1½ lbs.	5	Vendors.....		
" 28	" .....	52169	" "	1½ "	5	" .....		
" 28	" .....	52170	P. Burns & Co., Calgary.	1½ "	5	" .....		

DISTRICT OF PRINCE EDWARD ISLAND—

May 13	Superphosphate.	60306	Auld Bros. Ltd., Charlottetown.	3 lbs.	....	Amer. Agr. Chem. Co., New York.		
June 1	"	60307	Gill & Lantz, Charlottetown.	3 "	....	Nitrate Agencies, New York.		
" 1	Nitrate of Soda.	60308	Auld Bros. Ltd., Charlottetown.	3 "	....		H. J. Baker Bros., New York.	
" 1	Basic Slag . . . .	60309	" "	3 "	....	Cross Fert. Co., Sydney.		
" 4	Superphosphate.	60310	A. Horne & Co., Charlottetown.	3 "	....	Nitrate Agencies, New York.		
" 4	Nitrate of Soda.	60311	Gill & Lantz, Charlottetown.	3 "	....	"		
" 4	" "	60312	A. Horne & Co., Charlottetown.	3 "	....	"		



APPENDIX I.

BULLETIN No. 318—MILK IN SMALLER TOWNS AND VILLAGES.

OTTAWA, August 5, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister Inland Revenue.

SIR,—I beg to hand you a report upon two hundred and nine (209) samples of milk, purchased by our inspectors in various towns and villages throughout Canada in April, May, June and July of this year. This is the third of a series of inspections of the kind, instituted in consequence of widely extended complaint to the effect that, while the cities and larger towns of Canada, as a rule, provide systematic inspection of their milk supply, the smaller towns and villages are not so protected.

The complaint referred to is found to have a basis in fact. Bulletin No. 298 reports upon fifty-nine (59) samples, of which twenty-six (26) are below the legal standard. Bulletin No. 310 reports concerning two hundred and eight (208) samples, of which twenty-one (21) were below legal standard, and sixteen (16) were classed as doubtful.

The results of the present report may be summarized as follows:—

	Samples.
Found genuine (up to standard requirements) . . . . .	152
“ “ but dirty . . . . .	12
“ doubtful, as being below standard requirements, but not so definitely as to be judged adulterated . . . . .	17
“ Adulterated . . . . .	27
“ so far spoiled as to be unworkable . . . . .	1
	<hr style="width: 10%; margin-left: auto; margin-right: 0;"/>
Total . . . . .	209

When visible and measurable amount of dirt is present in milk, this constitutes adulteration, even though the sample is otherwise genuine. Inasmuch, however, as no quantitative standard in this regard has been fixed, I have not judged these (12) samples as adulterated, but have merely stated a fact. It may be necessary to amend our standards in this matter, so as to positively fix a limit for dirt. This dirt consists of dust, hairs and cow-dung, and is most offensive and objectionable, as well as dangerous to health.

Adulteration of twenty-seven (27) samples consists in notable departure from legal standards in the matter of fat content, non-fat solids, and other data. In nine (9) of these cases, the milk fat, while distinctly less than the legal standard requires (3.25 per cent) is not less than we know to be contained in the milk of certain individual cows, under exceptional conditions, such as improper feeding. The remaining samples (eighteen in number) indicate such marked deviation from standard requirements, as to admit of no recommendation for leniency.

SESSIONAL PAPER No. 14

These are the following:—

Sample Number.	Fat.	Non-fat Solids.
3846.....	2.27	8.95
3852.....	2.47	9.02
3853.....	2.08	9.15
3547.....	1.29	8.82
3550.....	1.32	8.89
3580.....	2.48	9.98
66550.....	2.44	9.26
66558.....	1.54	9.13
67039.....	2.59	9.03
67040.....	2.46	9.23
67042.....	2.30	9.46
67043.....	2.59	9.42
67044.....	2.61	9.27
52180.....	0.74	8.56
66702.....	2.48	9.02
58176.....	2.55	9.01
66707.....	2.67	7.82
66974.....	2.41	7.57

In all but the last two cases, the results of analysis point to removal of milk fat (cream) only; in the last two cases, the abnormally low non-fat solids, indicate addition of water.

I beg to recommend publication of this report as Bulletin No. 313.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

### CORRECTION.

#### BULLETIN No. 301.—WHITE PAINT.

In this bulletin under "remarks and opinion of the Chief Analyst" the word barytes appears. Instead of this word, the term barium sulphate should be used. Barium Sulphate is used as a paint material either as the ground mineral heavy spar or barytes, or as a product of the interaction of barium sulphide and zinc sulphate, which results in the formation of lithopone, a pigment consisting essentially of 30 per cent. of zinc sulphide and of 70 per cent. barium sulphate. This product is commercially known as lithopone and is a greatly more desirable paint material than the pulverized mineral above referred to.

It has been ascertained that it is in this last form (lithopone) that barium sulphate is present in most of the samples reported in Bulletin No. 301.

*Chief Analyst.*

7 GEORGE V, A. 1917

BULLETIN No. 318—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NOVA SCOTIA—

1915.							
June 30	Milk . . . .	54071	Ed. Rose, Yarmouth. . . .	1 qt. . . .	5	Vendor . . . . .	.....
" 30	" . . . .	54072	G. L. Cleaveland, Yarmouth.	1 " . . . .	5	Unknown . . . . .	.....
" 30	" . . . .	54073	F. L. Marshall, Yarmouth.	1 " . . . .	5	Vendor . . . . .	.....
July 2	" . . . .	54074	W. C. Warrington, Digby.	1 " . . . .	7	Unknown . . . . .	.....
" 2	" . . . .	54075	C. J. Young, Digby . . . .	1 " . . . .	7	Vendor . . . . .	.....
" 8	" . . . .	54076	J. A. Goudrey, Mahone Bay.	1 " . . . .	7	" . . . . .	.....
" 8	" . . . .	54077	Mrs. Henry Schnose, Mahone Bay.	1 " . . . .	7	" . . . . .	.....
" 9	" . . . .	54078	Willard Wile, Bridgewater.	1 " . . . .	6	" . . . . .	.....
" 9	" . . . .	54079	C. D. Walker, Bridgewater.	1 " . . . .	7	" . . . . .	.....
" 13	" . . . .	54080	Geo. Bell, Dartmouth. . . .	1 " . . . .	8	" . . . . .	.....

## DISTRICT OF NEW BRUNSWICK—

1915.							
May 28	Milk . . . .	66056	J. Warren James, Andover.	1 qt. . . .	10	Vendor . . . . .	.....
June 8	" . . . .	66057	Obder Little, Harvey Station, York Co.	1 " . . . .	10	" . . . . .	.....
" 10	" . . . .	66058	Jos. M. McCullough, St. Andrews.	1 " . . . .	10	" . . . . .	.....
" 10	" . . . .	66059	J. D. Grimmer, St. Andrews.	1 " . . . .	10	" . . . . .	.....
" 10	" . . . .	66060	S. H. Rigby, St. Andrews.	1 " . . . .	10	Charles Garness, Bayside, St. Croix.	.....
" 15	Milk . . . .	66061	Wm. Durnin, Norton, Kings Co.	1 " . . . .	10	Vendor . . . . .	.....
" 15	" . . . .	66062	C. L. O'Neill, Norton, Kings Co.	1 " . . . .	10	" . . . . .	.....
" 15	" . . . .	66063	Bliss Mann, Norton, Kings Co.	1 " . . . .	10	" . . . . .	.....
" 15	" . . . .	66064	A. H. Wilcox, Norton, Kings Co.	1 " . . . .	10	" . . . . .	.....
" 16	" . . . .	66065	Harry McQuin, Sussex. . . .	1 " . . . .	10	James McElroy, Sussex.	.....

## DISTRICT OF QUEBEC CITY—

May 3	Lait . . . .	56375	Pierre Gignère, Place sans bruit.	1 pte. . . .	12	.....	.....
" 3	" . . . .	56376	Arthur Legard, Place sans bruit.	1 " . . . .	12	.....	.....
" . . . .	" . . . .	56377	Louis Cloutier, Place sans bruit.	1 " . . . .	12	.....	.....

SESSIONAL PAPER No. 14

MILK.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.					Cleanliness.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. Gr. at 20° C.	Total Solids.	Fat.	Non-fat Solids.	R.*			

R. J. WAUGH, INSPECTOR.

		p. c.	p. c.	p. c.				
.....	1-0320	12.80	4.13	8.67	.....	Dirt present	54071	Genuine, but not clean.
.....	1-0335	13.42	4.12	9.39	.....	"	54072	" "
.....	1-0335	12.52	3.53	8.99	.....	"	54073	" "
.....	1-0290	11.72	3.77	7.95	.....	"	54074	Non-fat solids low, and not clean. Doubtful.
.....	1-0315	15.75	6.86	8.89	.....	"	54075	Genuine, but not clean.
.....	1-0310	13.13	4.23	8.90	.....	"	54076	" "
.....	1-0320	15.22	5.93	9.29	.....	"	54077	" "
.....	1-0320	12.92	4.08	8.84	.....	"	54078	" "
.....	1-0285	13.40	5.75	7.65	.....	"	54079	Non-fat solids low, and not clean. Doubtful.
.....	1-0320	12.65	3.89	8.76	.....	"	54080	Genuine, but not clean.

JOHN C. FERGUSON, INSPECTOR.

		p. c.	p. c.	p. c.				
.....	1-0325	13.70	4.78	8.92	.....	Clean.	66056	Genuine.
.....	1-0320	13.12	4.34	8.78	.....	"	66057	"
.....	1-0315	13.20	4.49	8.71	.....	"	66058	"
.....	1-0320	13.14	4.40	8.74	.....	"	66059	"
.....	1-0325	13.27	4.26	9.01	.....	"	66060	"
.....	1-0320	13.40	4.61	8.79	.....	Slight dirt.	66061	"
.....	1-0327	12.51	3.69	8.82	.....	"	66062	"
.....	1-0310	12.07	3.83	8.24	.....	"	66063	"
.....	1-0318	13.00	4.17	8.83	.....	Dirt present	66064	Genuine, but dirty
.....	1-0320	12.65	4.08	8.57	.....	Clean	66065	"

F. X. W. E. BELAND, INSPECTOR.

.....	1-0320	11.20	2.71	8.49	.....	Dirt present	56375	Fat too low, and dirty. Adulterated.
.....	1-0315	13.82	5.10	8.72	.....	"	56376	Genuine, but dirty.
.....	1-0345	14.02	4.29	9.73	.....	Clean	56377	Genuine.

\* Immersion Refractometer reading on Milk Serum at 20° C.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC CITY—

1915.							
May	3	Lait.....	56378	Edmond Leclerc, Petite Rivière.	1 pte.	12	.....
"	3	" .....	56379	Arthur Giguère, Les Saulds.	1 " ..	10	.....
"	4	" .....	55380	Ignace Verret, Rang Sillery.	1 " ..	10	.....
"	4	" .....	56381	Joseph Paquet, Rang Sillery.	1 " ..	12	.....
"	4	" .....	56382	Jacques Robitaille, Les Saulds.	1 " ..	12	.....
"	4	" .....	56383	Michael Denis, Les Saulds.	1 " ..	12	.....
"	4	" .....	56384	Meleste Dubuc, Les Saulds.	1 " ..	12	.....

DISTRICT OF QUEBEC—

May	2	Lait.....	3839	F. X. Demers, St. Malo..	1 Pte.	15	.....
"	2	" .....	3846	E. Juneau, St. Malo ...	1 "	15	.....
"	3	" .....	3847	F. X. Latulipe, Charlebourg.	1 "	15	.....
"	7	" .....	3848	J. X. Dagnault, St. Joseph, Levis.	1 "	15	Vendor.....
"	8	" .....	3849	L. Poire, St. Joseph, Levis.	1 "	15	" .....
"	10	" .....	3850	A. Turgeon, St. Joseph, Levis.	1 "	15	" .....
"	28	" .....	3851	O. Samson, St. Joseph, Levis.	1 "	15	" .....
"	11	" .....	3852	O. Cote, St. Joseph, Levis.	1 "	15	" .....
"	12	" .....	3853	P. Dumas, St. Joseph, Levis.	1 "	15	" .....
"	14	" .....	3854	E. Riviere, Ste. Fois, Quebec.	1 "	15	" .....
"	4	" .....	3547	Arthur Labbe, Ste. Magloire.	1 chop	3	.....
"	5	" .....	3550	Jos. Labbe, Ste. Magloire.	1 "	3	.....
"	7	" .....	3557	Alfred Gagne, St. Damien	1 "	3	.....
"	8	" .....	3564	Marcel Lapierre, Ste. Charles.	1 "	3	.....
"	8	" .....	3565	Wilfrid Roy, Ste. Charles.	1 "	3	.....
"	10	" .....	3571	Andre Audet, Armagh...	1 "	3	.....
"	10	" .....	3573	François Cote, Armagh...	1 "	3	.....
"	10	" .....	3575	Adolphe Turgeon, Armagh.	1 "	3	.....
"	10	" .....	3530	Donat Brochu, Armagh...	1 "	3	.....
"	10	" .....	3582	Lucien Bernard, Armagh	1 "	3	.....



## SESSIONAL PAPER No. 14

## MILK.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. at 20° C.	Total Solids,	Fat.	Non-fat Solids,	R *	Cleanliness,		
<i>Concluded.</i>								
.....	1.0310	13.91	5.23	8.68	.....	Clean ..	56378	Genuine.
.....	1.0315	12.65	4.10	8.55	.....	"	56379	"
.....	1.0330	13.18	4.32	8.86	.....	Dirty.	56380	" but dirty.
.....	1.0315	13.12	4.26	8.86	.....	Clean.	56381	"
.....	1.0285	19.32	11.22	8.10	.....	Dirt present.	56382	" but dirty.
.....	1.0325	12.40	3.82	8.58	.....	Clean.	56383	"
.....	1.0320	14.30	5.18	9.12	.....	"	56384	"

## J. E. AUDET, O. BROCHU, N. CADIEUX, T. GENDREAU, TEMPORARY INSPECTORS.

.....	1.0303	11.60	2.79	8.83	42.2	Clean ..	3839	Fat too low. Adulterated
.....	1.0315	11.22	2.27	8.95	42.2	" ..	3846	"
.....	1.0321	12.23	2.81	9.42	43.5	" ..	3847	"
.....	1.0311	12.35	3.35	9.00	43.8	" ..	3848	Genuine.
.....	1.0312	12.91	3.75	9.16	42.1	" ..	3849	"
.....	1.0311	13.53	3.39	9.14	42.9	" ..	3850	"
.....	1.0314	12.48	3.32	9.16	42.5	" ..	3851	"
.....	1.0292	11.49	2.47	9.02	43.8	" ..	3852	Fat too low. Adulterated
.....	1.0297	11.23	2.08	9.15	42.9	" ..	3853	"
.....	1.0290	11.82	2.79	9.03	42.5	" ..	3854	"
.....	1.0321	10.11	1.29	8.82	43.3	" ..	3857	Fat much too low. Adulterated
.....	1.0315	10.21	1.32	8.89	42.9	" ..	3856	"
.....	1.0319	14.32	4.64	9.08	41.7	" ..	3857	Genuine.
.....	1.0296	11.66	2.78	8.88	43.1	" ..	3861	Fat too low. Adulterated
.....	1.0285	11.64	2.83	8.81	43.0	" ..	3862	"
.....	1.0291	12.97	3.84	9.13	43.6	" ..	3871	Genuine.
.....	1.0331	12.60	3.00	9.00	43.4	" ..	3872	"
.....	1.0310	13.29	4.12	9.17	42.2	" ..	3875	"
.....	1.0342	12.46	2.48	9.38	41.3	" ..	3880	Fat too low. Adulterated
.....	1.0304	16.08	6.51	9.67	44.4	" ..	3892	Genuine.

\*Immersion refractometer reading on milk serum at 20° C.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC—

1915.							
April 29	Lait. . . . .	277	François Lebeau, St. Jerome.	1 chop	5		
" 29	" . . . . .	278	Hyacinthe Bastien, St. Jerome.	1 "	5		
" 29	" . . . . .	279	Exalephat Marcotte, St. Jerome.	1 "	5		
May 4	" . . . . .	288	Wilfred Groux, Ste Agathe des Monts.	1 "	5		
" 4	" . . . . .	289	Fidime Baulme, Ste Agathe des Monts.	1 "	5		
April 24	" . . . . .	2757	Jos. Gaye, Montmagny.	1 pte.	7	Vendor . . . . .	
" 24	" . . . . .	2758	Louis Fetu, St. Thomas.	1 "	7	" . . . . .	
" 24	" . . . . .	2759	Adelard Ganiach, Montmagny.	1 "	7	" . . . . .	
" 26	" . . . . .	2760	Jos. Beaumont, St. Thomas.	1 "	7	" . . . . .	
" 26	" . . . . .	2761	Eg. Bernatchez, Montmagny.	1 "	7	" . . . . .	

## DISTRICT OF THREE RIVERS—

May 3	Milk . . . . .	67948	Ludger Peltier, Joliette.	1 qt.	6	Vendor . . . . .	
" 3	" . . . . .	67949	Joseph Coderre . . . . .	1 "	6	De Blais & Ducharme St. Ch. Borromee.	
" 3	" . . . . .	67950	Dolphis Perraut, Joliette.	1 "	6	J. L. Basinet, St. Paul de Joliette.	
" 3	" . . . . .	67951	Samuel Vessot, " . . . . .	1 "	6	Vendor . . . . .	
" 3	" . . . . .	67953	Napoleon Contu, " . . . . .	1 "	6	Nadeau & Jetti, St. Chas. Borromee.	
" 5	" . . . . .	67954	I. H. Couloube, Berthierville.	1 "	6	Vendor . . . . .	
" 6	" . . . . .	67955	Xavier Piche, " . . . . .	1 "	6	" . . . . .	
" 22	" . . . . .	67956	Raoul Lorrain, Charlemagne.	1 "	6	" . . . . .	
" 22	" . . . . .	67964	Egide Leveille, St. Paul L'Ermite.	1 "	10	" . . . . .	
" 26	" . . . . .	69104	I. Ed. Amyrault, L'Epiphanie.	1 "	6	" . . . . .	

## DISTRICT OF EASTERN TOWNSHIPS—

May 26	Milk . . . . .	57956	J. O. Roy, Magog . . . . .	1 qt.	5		
" 26	" . . . . .	57957	Delphis Dupuis, Magog . . . . .	1 "	5		
" 26	" . . . . .	57958	Joseph Thisdell, Magog . . . . .	1 "	5		
" 26	" . . . . .	57959	William Chaput, Magog . . . . .	1 "	5		

## SESSIONAL PAPER No. 14

## MILK.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.						No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Sp. gr. at 20° C.	Total Solids.	Fat.	Non-fat Solids.	R*.	Cleanliness.		

*Concluded.*

		p. c.	p. c.	p. c.				
.....	1·0319	13·28	4·13	9·15	44·3	Clean ..	277	Genuine.
.....	1·0310	13·42	4·52	8·90	43·8	" ...	278	"
.....	1·0319	13·04	3·89	9·15	44·1	" ...	279	"
.....	1·0326	12·07	2·95	9·12	43·7	" ...	288	Fat slightly low, pass as doubtful.
.....	1·0294	13·04	4·29	8·75	42·6	" ...	289	Genuine.
.....	1·0317	12·36	3·55	8·81	43·4	" ..	2757	"
.....	1·0320	14·12	4·75	9·37	43·8	" ..	2758	"
.....	1·0319	13·73	4·44	9·29	43·3	" ..	2759	"
.....	1·0302	13·47	4·35	9·12	41·7	" ..	2760	"
.....	1·0293	12·82	4·26	8·56	42·0	" ..	2761	"

## Dr. V. P. LAVALLEE, INSPECTOR.

.....	1·0314	12·55	3·42	9·13	43·2	Clean ..	67948	Genuine.
.....	1·0315	12·20	3·13	9·07	43·7	" ..	67949	"
.....	1·0299	11·80	3·07	8·73	43·2	" ..	67950	"
.....	.....	.....	.....	.....	.....	" ..	67951	Not worked.
.....	1·0276	11·99	3·47	8·52	41·8	" ..	67953	Genuine.
.....	1·0300	12·16	2·97	9·19	44·2	" ..	67954	Fat slightly low, pass as doubtful.
.....	1·0282	12·22	3·05	9·17	44·0	" ..	67955	Genuine.
.....	1·0248	14·34	5·33	9·01	43·0	" ..	67956	"
.....	1·0267	14·44	5·43	9·01	42·6	" ..	67964	"
.....	1·0314	12·47	2·78	9·69	43·3	" ..	69104	Fat too low. Adulterated.

## J. J. COSTIGAN, ACTING INSPECTOR.

.....	1·0308	13·33	4·11	9·22	43·0	Clean.	67956	Genuine.
.....	1·0277	11·15	3·21	7·99	40·1	"	67957	Non-fat solids slightly low doubtful.
.....	1·0316	12·74	3·59	9·15	44·1	"	67958	Genuine.
.....	1·0315	13·40	4·03	9·07	43·3	"	67959	"

\* Immersion Refractometer reading on Milk Serum at 20° C.  
(Received in condition unfit for analysis.)

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF EASTERN TOWNSHIPS—

1915.							
May 26	Milk.....	57960	Alcide Goudreau, Magog.	1 qt..	5		
" 26	" .....	57961	Henri Chagnon, Magog..	1 " ..	5		
" 27	" .....	57962	L. B. Duquette, Megantic.	1 " ..	6		
" 27	" .....	57963	Alphonse Boyer, Megantic.	1 " ..	6		
" 27	" .....	57964	Auguste Duquette, Megantic.	1 " ..	6		
" 27	" .....	57965	G. M. McClure, Megantic.	1 " ..	6		Adolphe Lemay, Megantic.

DISTRICT OF VALLEYFIELD—

June 10	Milk.....	58178	O. Robert, Farnham....	1 qt..	6		
" 10	" .....	58179	A. D. Labrecque, Farnham.	1 " ..	6		
" 10	" .....	58180	Noah Chevalier, Farnham.	1 " ..	6		
" 10	" .....	58181	J. Molson, Farnham....	1 " ..	6		
" 17	" .....	58182	Z. Belisle, Longueuil....	1 " ..	8		
" 17	" .....	58183	A. Trudeau, Longueuil...	1 " ..	8		
" 17	" .....	58184	N. Aubin, Longueuil....	1 " ..	8		
" 17	" .....	58185	J. Lajeunesse, Longueuil.	1 " ..	8		
May 19	" .....	58176	John A. McDonald, Alexandria.	1 " ..	5		
" 19	" .....	58177	Geo. A. Charlebois, Alexandria.	1 " ..	5		

DISTRICT OF MONTREAL—

May 19	Milk.....	67191	R. Blain, 1055 Lajoie st., Outremont.	1 qt..	8		A. C. Struthers...
" 19	" .....	67192	John McEwen, 2826 Hutcheson st., Outremont.	1 " ..	8	Vendor.	
" 19	" .....	67193	Jos. Deneau, 1641 Van Horne ave., Outremont.	1 " ..	8		E. H. Drolet .....
" 19	" .....	67194	A. Normandeau, 1199 Van Horne ave., Outremont.	1 " ..	8		J. J. Joubert .....
" 19	" .....	67195	L. J. Chalifon, 785 Bloomfield ave., Outremont.	1 " ..	9		Mr. Quenville.....
" 20	" .....	67196	Westminster Prov. Stores, 58 Westminster ave., Montreal W.	1 " ..	10		C. G. Hall.....

SESSIONAL PAPER No. 14

MILK.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. at 20° C	Total Solids.	Fat.	Non fat Solids.	R.*	Cleanliness.		

Concluded.

.....	1-0312	12-18	3-34	8-84	43-2	Clean.	57960	Genuine.
.....	1-0310	12-93	3-74	9-19	43-5	"	57961	"
.....	1-0281	12-30	3-46	8-84	42-4	"	57962	"
.....	1-0301	13-56	4-43	9-13	44-6	"	57963	"
.....	1-0306	12-95	3-73	9-22	43-9	"	57964	"
.....	1-0310	12-67	2-97	9-10	44-0	"	57965	Fat slightly low. Pass as doubtful.

J. J. COSTIGAN, ACTING INSPECTOR.

.....	1-0315	12-72	3-45	9-27	43-6	Clean.	58178	Genuine.
.....	1-0307	13-27	3-95	9-32	44-4	"	58179	"
.....	1-0283	13-20	4-24	8-96	43-4	"	58180	"
.....	1-0287	12-44	3-66	8-78	42-0	"	58181	"
.....	1-0307	11-82	2-96	8-86	41-8	"	58182	Fat slightly low. Pass as doubtful.
.....	1-0307	12-37	3-30	9-07	42-4	"	58183	Genuine.
.....	1-0311	13-06	3-99	9-07	42-8	"	58184	"
.....	1-0305	12-31	3-38	8-93	43-0	"	58185	"
.....	1-0320	11-56	2-55	9-01	43-0	"	58176	Fat too low - Adulterated.
.....	1-0320	12-65	3-42	9-23	43-0	"	58177	Genuine.

D. J. KEARNEY, INSPECTOR.

.....	1-0314	12-74	3-64	9-10	42-5	Clean.	67191	Genuine.
.....	1-0308	12-47	3-40	9-07	43-3	"	67192	"
.....	1-0304	12-60	3-46	9-14	43-6	"	67193	"
.....	1-0305	12-90	3-73	9-17	43-9	"	67194	"
.....	1-0311	12-64	3-46	9-18	44-0	"	67195	"
.....	1-0307	13-07	3-97	9-10	43-0	"	67196	"

\* Immersion Refractometer reading on milk serum at 20° C.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MONTREAL—

1915.							
May 20	Milk.....	67197	A. E. Collins, 44 Westminster ave., Montreal W.	1 qt..	9	.....	W. H. Bradley....
" 20	" .....	67198	Limoges Bros., 2000 Hutcheson st., Outremont.	1 "	8	.....	Mr. Lemire .....
" 20	" .....	67199	A. Gadbois, 2298 Hutcheson st., Outremont.	1 "	6	.....	H. Lecavalier ....
" 20	" .....	67200	P. Clarest, 1150 Lajoie st., Outremont.	1 "	8	.....	Hydreine Pure Milk Co.

DISTRICT OF OTTAWA—

April 22	Milk....	63613	Beckwith Dairy, Smith's Falls.	1 qt..	10	Vendors.....	.....
" 22	" .....	63614	Rideau Dairy, Smith's Falls.	1 "	10	" .....	.....
" 22	" .....	63615	J. E. Edmunds, Smith's Falls.	1 "	10	Vendor .....	.....
" 24	" .....	63616	W. A. Gogo, Morrisburg.	1 "	10	" .....	.....
" 24	" .....	63617	S. J. Casselman, Morrisburg.	1 "	10	" .....	.....
" 24	" .....	63619	James McKenzie, Morrisburg.	1 "	10	" .....	.....
" 24	" .....	63620	M. L. Casselman, Morrisburg.	1 "	10	" .....	.....
" 26	" .....	63622	S. Holmes, Renfrew.....	1 "	10	" .....	.....
" 27	" .....	63623	M. J. O'Brien, Renfrew..	1 "	10	" .....	.....
" 27	" .....	63626	Jas. Shields, Renfrew....	1 "	10	" .....	.....

DISTRICT OF KINGSTON—

Apr. 26	Milk.....	66549	Wm. Simms, Bath Road.	1 qt..	7	Vendor .....	.....
" 27	" .....	66550	Fred Lovelace, Yarker..	1 " ..	5	" .....	.....
" 27	" .....	66551	Manson Lee, Yarker.....	1 " ..	5	" .....	.....
" 27	" .....	66552	J. S. Brown, Yarker.....	1 " ..	5	" .....	.....
" 27	" .....	66553	John Emberly, Yarker...	1 " ..	5	" .....	.....
" 27	" .....	66554	R. Cure, Yarker.....	1 " ..	5	" .....	.....
" 27	" .....	66555	George Lee, Yarker .....	1 " ..	5	" .....	.....
" 27	" .....	66556	James Warner, Yarker..	1 " ..	5	" .....	.....
" 27	" .....	66557	Damon Carroll, Yarker..	1 " ..	5	" .....	.....
" 27	" .....	66558	Joman Silver, Yarker....	1 " ..	5	" .....	.....

## SESSIONAL PAPER No. 14

## MILK.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. at 20° C.	Total Solids.	Fat.	Non-fat Solids.	R.*	Cleanliness.		
.....	1·0287	14·37	5·64	8·73	42·8	Clean.	67197	Genuine.
.....	1·0323	12·00	2·76	9·24	43·2	"	67198	Fat too low. Adulterated.
.....	1·0248	18·27	9·93	8·34	41·8	"	67199	Genuine.
.....	1·0315	12·70	3·44	9·26	42·0	"	67200	"

*Concluded.*

## J. A. RICKEY, INSPECTOR.

.....	1·0302	11·66	3·17	8·49	42·2	Clean.	63613	Genuine.
.....	1·0305	11·45	3·99	8·46	42·0	"	63614	"
.....	1·0309	11·50	2·91	8·59	42·7	"	63615	Fat slightly low. Pass as doubtful.
.....	1·0301	12·16	3·56	8·60	43·2	"	63616	Genuine.
.....	1·0312	11·71	2·99	8·72	42·7	"	63617	Fat slightly low. Pass as doubtful.
.....	1·0277	14·18	5·94	8·24	42·4	"	63619	Genuine.
.....	1·0302	12·02	3·38	8·64	42·7	"	63620	"
.....	1·0290	12·07	3·70	8·37	42·4	"	63622	"
.....	1·0293	13·16	4·58	8·58	42·7	"	63623	"
.....	1·0303	12·27	3·60	8·67	43·3	"	63626	"

## JAMES HOGAN, INSPECTOR.

.....	1·0290	11·00	2·87	8·13	40·2	Clean	66549	Fat too low; also non fat solids. Adulterated.
.....	1·0305	12·70	2·44	9·26	45·0	"	66550	Fat too low. Adulterated.
.....	1·0315	12·58	3·61	8·97	43·6	"	66551	Genuine.
.....	1·0314	13·18	4·14	9·04	43·7	"	66552	"
.....	1·0313	12·95	3·87	9·08	44·0	"	66553	"
.....	1·0282	13·98	5·67	8·31	42·2	"	66554	"
.....	1·0306	12·59	3·26	9·33	43·0	"	66555	"
.....	1·0312	12·33	3·47	8·86	43·5	"	66556	"
.....	1·0320	13·51	4·03	9·48	44·8	"	66557	"
.....	1·0341	10·67	1·54	9·13	43·7	"	66558	Fat much too low. Adulterated.

\* Immersion refractometer reading on milk serum at 20° C.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF TORONTO—

1915.							
May 11	Milk.....	67039	W. Lewis, Stouffville.....	1 qt..	7	Farmers, Stouffville.	
" 11	" .....	67040	Ira Russell, Stouffville...	1 " ..	7	D. H. Russell, Stouffville.	
" 11	" .....	67041	H. Lilley, Markham.....	1 " ..	6	Vendor .....	
" 12	" .....	67042	W. C. Hogg, Uxbridge...	1 " ..	7	" .....	
" 12	" .....	67043	N. R. Phair, Uxbridge...	1 " ..	7	" .....	
" 12	" .....	67044	Chas. McArthur, Port Perry.	1 " ..	6	George Lyle, Port Perry.	
" 13	" .....	67045	J. & A. Jardine, Beaverton.	1 " ..	6	Vendor.....	
" 14	" .....	67046	H. Fallowfield, Waubashene.	1 " ..	6	" .....	
" 15	" .....	67047	H. Hilcox & Sons, Midland	1 " ..	6	" .....	
" 15	" .....	67048	C. A. Scott .....	1 " ..	8	" .....	
" 14	" .....	67061	J. B. Jamieson, Orillia...	1 " ..	8	Vendor and neighbour.	

DISTRICT OF HAMILTON—

April 27	Milk.....	66968	W. B. Mitchell, Fergus...	1 qt .	6	Vendor .....	
" 27	" .....	66969	A. Howalt, Fergus.....	1 " .	6	" .....	
" 27	" .....	66970	T. H. Brown, Palmerston	1 " .	8	" .....	
" 28	" .....	66971	Geo. Beley, Mt. Forest...	1 " .	7	" .....	
" 28	" .....	66972	E. C. Callaway, Mt. Forest	1 " .	8	" .....	
" 28	" .....	66973	Geo. Davidson, Mt. Forest	1 " .	7	" .....	
" 29	" .....	66974	N. Oppertshausen, Mildmay.	1 " .	7	Vendor and a neighbour.	
" 30	" .....	66975	G. W. Vandervet, Chasley	2 pts.	7	" "	
May 4	" .....	66976	J. W. Wilson, Oakville...	1 qt .	8	John Wilson, Jr., Oakville.	
" 4	" .....	66977	S. G. Powley, Oakville...	1 " .	8	Biger Bros. & G. H. King, Oakville.	

DISTRICT OF WINDSOR—

May 4	Milk.....	54607	Thos. Bolton, R.R. No. 2, Mandamin.	1 qt .	Nil.	Vendor .....	
" 4	" .....	54608	Ph. Roberts, Sarnia Tunnell.	3 Bots	"	" .....	
" 4	" .....	54609	Josiah Smith, Sarnia .....	3 " .	5	" .....	
" 4	" .....	54610	R. Kenleer, R.R. No. 1, Sarnia.	3 " .	5	.....	



SESSIONAL PAPER No. 14

MILK.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					N <sup>o</sup> . of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. Gr. at 20° C.	Total solids.	Fat.	Non-fat Solids.	R. <sup>a</sup>		

H. J. DAGER, INSPECTOR.

		p.c.	p.c.	p.c.				
.....	1-0305	11.62	2.59	9.03	42.8	Clean.	67039	Fat too low. Adulterated.
.....	1-0307	11.69	2.46	9.23	43.0	"	67040	" "
.....	1-0280	11.12	2.87	8.25	40.0	"	67041	Fat too low; also non-fat solids. Doubtful.
.....	1-0331	11.76	2.39	9.46	43.8	"	67042	Fat too low. Adulterated.
.....	1-0318	12.01	2.59	9.42	43.4	"	67043	"
.....	1-0303	11.88	2.61	9.27	42.5	"	67044	"
.....	1-0310	11.62	2.87	8.75	42.9	"	67045	" Doubtful.
.....	1-0333	12.68	3.22	9.46	43.7	"	67046	Genuine.
.....	1-0331	13.47	3.87	9.60	44.6	"	67047	"
.....	1-0262	11.76	3.99	7.77	38.9	"	67048	Non-fat solids low. Doubtful.
.....	1-0289	12.74	3.47	9.27	43.7	"	67061	Genuine.

H. J. DAGER, ACTING INSPECTOR.

.....	1-0306	12.96	4.13	8.83	43.3	Clean...	66968	Genuine
.....	1-0315	12.83	3.87	8.96	43.0	"	66969	"
.....	1-0312	11.99	3.37	8.62	42.3	"	66970	"
.....	1-0327	13.36	4.02	9.34	45.0	"	66971	"
.....	1-0298	11.85	3.28	8.57	42.7	"	66972	"
.....	1-0293	11.09	2.95	8.14	40.6	"	66973	Fat slightly low; also non-fat solids. Doubtful.
.....	1-0274	9.98	2.41	7.57	38.4	"	66974	Fat too low; also non-fat solids adulterated.
.....	1-0310	11.81	3.11	8.70	41.4	"	66975	Genuine.
.....	1-0321	12.61	3.48	9.13	43.3	"	66976	"
.....	1-0316	11.79	3.00	8.79	42.0	"	66977	"

JOHN TALBOT, INSPECTOR

.....	1-0316	13.71	4.61	9.20	44.0	Clean	64097	Genuine.
.....	1-0306	12.67	3.78	8.80	43.0	"	64098	"
.....	1-0327	13.21	3.81	9.40	43.2	"	64099	"
.....	1-0316	12.05	3.15	8.00	43.3	"	64100	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF WINDSOR—

1915.							
May	4	Milk.....	54611	R. B. Bauthamer, Sarnia.	3 bots.	5	John McGuiness, Field & Parson, Sarnia Genl, Delivery.
"	4	" .....	54612	A. Hughes, R.R. No. 2, Sarnia.	3 "	Nil.	Vendor.....
"	5	" .....	54616	D. Evans, Petrolia.....	3 "	6	" .....
"	5	" .....	54617	F. Stinson, Petrolia .....	3 "	5	..... Mr. Prudine & Mr. Irwin, Petrolia.
"	5	" .....	54618	R. H. Drope, Petrolia....	3 "	Nil.	Vendor.....

DISTRICT OF MANITOBA—

May	19	Milk .....	61301	M. L. McDonald, Minnedota.	1 qt.	10	Vendor.....
"	19	" .....	61302	Rex Dyer, Minnedosa...	1 "	10	" .....
"	19	" .....	61303	C. E. Lawson, Minnedosa	1 "	10	" .....
"	21	" .....	61304	Crescent Creamery Co., Winnipeg.	1 "	10	.....
"	21	" .....	61305	Sturgeon Creek Dairy, St. James.	1 "	10	.....
"	21	" .....	61306	E. Goodchild, St. James.	1 "	10	.....
"	26	" .....	61307	J. E. Redmond, Souris..	1 "	nil.	.....
"	27	" .....	61308	H. Nesbitt, " ..	1 "	10	.....
"	27	" .....	61309	J. T. English, " ..	1 "	nil.	.....
"	27	" .....	61310	James McCulloch, " ..	1 "	"	.....
"	27	" .....	61323	J. E. Redmond. " ..	1 "	10	.....

DISTRICT OF SASKATCHEWAN—

April	20	Milk. ....	66360	S. G. Johnston, Gull Lake	1 qt.	10	Vendor. ....
"	29	" .....	66366	P. C. Colquhan, Maple Creek.	1 "	10	" .....
"	29	" .....	66367	E. J. Ferraley, Maple Creek.	1 "	10	" .....
May	4	" .....	66378	W. H. Keys, Pense....	1 "	10	" .....
"	4	" .....	66379	E. C. Dyers, " .....	1 "	10	" .....
"	4	" .....	66380	W. Dawson, " .....	1 "	10	" .....
"	5	" .....	66384	M. Wilkinson, Lumsden..	1 "	10	" .....

SESSIONAL PAPER No. 14

MILK.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. at 20° C.	Total Solids.	Fat.	Non-fat Solids.	R*		

*Concluded.*

.....	1·0311	p.c. 12·93	p.c. 3·88	p.c. 9·05	42·5	Clean ..	54611	Genuine.
.....	1·0288	15·01	5·69	9·32	44·0	" ..	54612	"
.....	1·0322	12·42	3·36	9·06	44·2	" ..	54616	"
.....	1·0321	12·27	3·22	9·05	43·6	" ..	54617	"
.....	1·0299	13·35	4·60	8·75	42·5	" ..	54618	"

A. C. LARIVIERE, INSPECTOR.

.....	1·0305	12·27	3·53	8·74	.....	Clean ..	61301	Genuine
.....	1·0321	12·49	3·71	8·78	.....	" ..	61302	"
.....	1·0308	12·17	3·40	8·77	.....	" ..	61303	"
.....	1·0297	12·28	3·76	8·52	.....	" ..	61304	"
.....	1·0297	11·93	3·12	8·81	.....	" ..	61305	"
.....	1·0290	13·04	4·07	8·97	.....	" ..	61306	"
.....	1·0296	13·08	4·12	8·96	.....	" ..	61307	"
.....	1·0310	13·08	3·83	9·25	.....	" ..	61308	"
.....	1·0303	12·75	3·74	9·01	.....	" ..	61309	"
.....	1·0307	13·08	3·90	9·18	.....	" ..	61310	"
.....	1·0288	13·83	4·10	9·73	.....	" ..	61323	"

L. H. HALL, INSPECTOR.

.....	1·0318	12·57	3·86	9·21	43·2	Clean ..	60366	Genuine
.....	1·0268	13·68	5·33	8·36	41·3	" ..	60366	"
.....	1·0303	14·15	5·08	9·07	41·5	" ..	60367	"
.....	1·0324	12·93	3·66	9·27	43·8	" ..	60378	"
.....	1·0304	12·71	3·29	9·42	43·5	" ..	60379	"
.....	1·0307	11·03	3·07	8·80	43·2	" ..	60380	"
.....	1·0321	12·22	3·25	8·97	43·2	" ..	60384	"

\* Immersion Refractometer reading on Milk Serum at 20°C.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF SASKATCHEWAN--

1915.							
May	5 Milk.....	66385	F. H. Cochrane, Lumsden	1 qt..	10	Vendor.....	
"	7 " .....	66390	J. E. Steele, Drinkwater.	1 "	10	" .....	
"	7 " .....	66391	R. McConnell, Drinkwater.	1 "	10	" .....	

DISTRICT OF ALBERTA--

June	9 Milk. ....	52172	John Whitney, Langdon.	1 qt..	10	Vendor .....	
"	10 " .....	52173	Katherine Stephens.....	1 " .	10	" .....	
"	10 " .....	52174	Hugh Williams, Strathmore.	1 " .	10	" .....	
"	11 " .....	52175	Jos. Botton, Strathmore.	1 " .	10	" .....	
"	12 " .....	52176	C. A. Millie, Gleichen. .	1 " .	10	" .....	
"	12 " .....	52177	Wm. Walsh, Gleichen. .	1 " .	10	" .....	
"	12 " .....	52178	Mrs. W. R. Payne, Gleichen	1 " .	10	" .....	
"	14 " .....	52179	Geo. Yates, Bassano. . .	1 " .	10	" .....	
"	14 " .....	52180	Albert Davies, Brooks. . .	1 " .	10	" .....	
"	15 " .....	52181	Norman Stafford, Brooks.	1 " .	10	" .....	

DISTRICT OF ROCKY MOUNTAINS--

April	26 Milk. ....	61796	A. Sehnaebele, Trail. ....	qt.	10	Vendor.....	
"	26 " .....	61797	J. Quinstrom, Trail.....	1 " .	10	" .....	
"	26 " .....	61798	J. Hintz, Trail .....	1 " .	10	" .....	
May	20 " .....	61808	Achisons Dairy, Cranbrook.	1 " .	10	" .....	
"	20 " .....	61809	T. E. Austin, Cranbrook	1 " .	10	" .....	
"	20 " .....	61810	W. B. Bardgeth, Cranbrook.	1 " .	10	" .....	
June	10 " .....	61825	R. A. Upper, Revelstoke.	1 " .	10	" .....	
"	10 " .....	61826	C. Granstrom, Rivelstoke.	1 " .	10	" .....	
"	10 " .....	61827	A. G. Carlson, Rivelstoke.	1 " .	10	" .....	

SESSIONAL PAPER No. 14

MILK.

Inspector's Report. (Is not an expression of opinion)	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. at 20°C.	Total Solids.	Fat.	Non fat Solids.	R°	Cleanliness.		

Concluded.

.....	1.0266	14.47	6.30	8.17	41.1	Clean...	66385	Genuine.
.....	1.0318	12.22	3.03	9.19	41.4	" ..	66390	
.....	1.0291	12.59	3.82	8.77	40.7	" ..	66391	"

A. W. R. MARKLEY, INSPECTOR.

Sold in sealed bottles.	1.0307	11.47	3.48	7.99	40.1	.....	52172	Non-fat solids slightly low. Pass as doubtful.
" bulk .....	1.0344	13.71	3.98	9.73	.....	.....	52173	Genuine.
" sealed bottles.	1.0311	13.44	4.44	9.00	.....	.....	52174	"
" "	1.0327	12.38	3.31	9.07	43.3	.....	52175	"
" bulk .....	1.0315	12.01	3.29	8.72	43.3	.....	52176	"
" bulk & bottles.	1.0304	13.09	4.27	8.82	.....	.....	52177	"
" "	1.0332	13.27	3.91	9.36	.....	.....	52178	"
" "	1.0318	13.18	3.98	9.20	.....	.....	52179	"
" bulk .....	1.0332	9.30	0.74	8.56	41.2	.....	52180	Fat very low Adulterated
" sealed bottles.	1.0329	14.40	4.77	9.63	.....	.....	52181	Genuine

THOS. PARKER, INSPECTOR.

.....	1.0249	17.43	8.77	8.60	43.1	.....	61796	Genuine
.....	1.0313	13.26	4.12	9.14	43.8	.....	61797	"
.....	1.0296	12.47	3.90	8.58	42.2	.....	61798	"
.....	1.0315	14.40	5.46	8.94	.....	.....	61800	"
.....	1.0320	13.67	4.65	9.12	.....	.....	61801	"
.....	1.0325	12.94	4.29	8.66	.....	.....	61810	"
.....	1.0321	12.08	3.90	8.72	.....	.....	61820	"
.....	1.0313	12.49	3.46	9.03	.....	.....	61828	"
.....	1.0306	12.79	3.67	9.12	.....	.....	61827	"

\*Immersion Refractometer reading on Milk Serum at 2° C.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VANCOUVER—

1915.							
June	2	Milk. . . .	55285	Eburne Dairy, Eburne. . . .	1 qt. . . .	10	Vendor . . . . .
"	2	" . . . . .	55286	Eburne Creamery, Eburne. . . .	1 " . . . .	10	D. McKay, Lulu Island. . . . .
"	2	" . . . . .	55287	J. M. Steves, Steveston. . . .	1 " . . . .	10	Vendor . . . . .
"	4	" . . . . .	55288	Chas. Hawthorne, Chilliwack. . . .	1 " . . . .	10	" . . . . .
"	4	" . . . . .	55289	Chilliwack Creamery Chilliwack. . . .	1 " . . . .	10	" . . . . .
"	4	" . . . . .	55290	Chas. Robinson, Mission. . . .	1 " . . . .	10	" . . . . .
"	4	" . . . . .	55291	Mrs. H. Windebank, Mission. . . .	1 " . . . .	10	" . . . . .
"	5	" . . . . .	55292	A. Davie, Ladner. . . . .	1 " . . . .	10	" . . . . .
"	7	" . . . . .	55293	Port Coquitlam Dairy Co., Port Coquitlam. . . .	1 " . . . .	10	Minnekadda Ranch, Port Coquitlam. . . . .
"	9	" . . . . .	55294	H. Bradshaw, White Rock. . . . .	1 " . . . .	10	Vendor . . . . .

DISTRICT OF VICTORIA—

May	19	Milk. . . . .	66701	James Watson, Harward, Nanaimo. . . . .	1 qt. . . .	10	. . . . .
"	19	" . . . . .	66702	Wm. Reynolds, Protection Island, Nanaimo. . . . .	1 " . . . .	10	. . . . .
"	19	" . . . . .	66703	J. J. Dickinson, Harward, Nanaimo. . . . .	1 " . . . .	10	. . . . .
"	19	" . . . . .	66704	John Watson, Harward, Nanaimo. . . . .	1 " . . . .	10	. . . . .
"	19	" . . . . .	66705	Geo. Rains, Delta, Cranberry District, V.I. . . . .	1 " . . . .	10	. . . . .
"	19	" . . . . .	66706	T. L. Brown, East Wellington, Mountain Dist. . . . .	1 " . . . .	10	. . . . .
"	20	" . . . . .	66707	Louis Grouhel, Lady-smith. . . . .	1 " . . . .	10	. . . . .
"	20	" . . . . .	66708	W. A. Gosier, Lady-smith. . . . .	1 " . . . .	10	. . . . .
"	20	" . . . . .	66709	John Ramont, Duncans, V.I. . . . .	1 " . . . .	10	. . . . .

SESSIONAL PAPER No. 14

MILK.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. Gr. at 20° C.	Total Solids.	Fat.	Non-fat Solids.	R.*	Cleanliness.		

E. J. MORGAN, INSPECTOR.

		p. c.	p. c.	p. c.				
.....	1-0312	12-34	3-61	8-73	.....	.....	55285	Genuine.
.....	1-0295	11-42	3-23	8-19	40-0	.....	55286	Non-fat solids low. Doubtful.
.....	1-6327	12-21	2-92	9-29	.....	.....	55287	Fat slightly low. Pass as doubtful.
.....	1-0317	13-50	4-33	9-17	.....	.....	55288	Genuine.
.....	1-0313	12-90	3-86	9-04	.....	.....	55289	"
.....	1-0296	13-13	4-35	8-78	.....	.....	55290	"
.....	1-0327	14-24	4-58	9-66	.....	.....	55291	"
.....	1-0315	13-00	3-83	9-17	.....	.....	55292	"
.....	1-0302	11-71	3-57	8-14	40-2	.....	55293	Non-fat solids low. Doubtful.
.....	1-0325	12-68	3-71	8-97	.....	.....	55294	Genuine.

D. O'SULLIVAN, INSPECTOR.

.....	1-0257	18-29	9-85	8-44	.....	.....	66701	Genuine.
.....	1-0334	11-50	2-48	9-02	42-0	.....	66702	Fat low. Adulterated
.....	1-0315	12-76	3-89	8-87	.....	.....	66703	Genuine.
.....	1-0277	14-33	5-96	8-37	.....	.....	66704	"
.....	1-0323	12-70	3-91	8-79	.....	.....	66705	"
.....	1-0306	12-71	3-99	8-72	.....	.....	66706	"
.....	1-0280	10-49	2-67	7-82	38-3	.....	66707	Solids too low. Adulterated
.....	1-0301	11-70	3-28	8-42	41-1	.....	66708	Genuine.
.....	1-0316	12-40	3-68	8-72	41-5	.....	66709	"

\* Immersion Refractometer reading on Milk Serum at 20° C.





SESSIONAL PAPER No. 14

## APPENDIX J.

## BULLETIN No. 319—CHOP FEED.

OTTAWA, August 7, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister Inland Revenue,

SIR,—I beg to hand you a report upon one hundred and forty nine (149) samples purchased as Chop Feed during January, February and March of this year.

With this name (Chop Feed) I have identified the article sold as Moulée, Proven-der, Provende, grains concassé, but it is to be noted that *Moulée* is the only one of these terms which has legal recognition as a synonym for Chop Feed.

The legal standard for Chop Feed is as follows:

Protein, at least 10 per cent.  
Fat, at least 2 per cent.  
Fibre, at most 10 per cent.

The Act, however, provides that a deficiency of not more than one per cent in protein or fat; or an excess of not more than two per cent of fibre shall not be held as evidence of fraudulent intent, provided that the total value of the article in nutri-tive material is substantially equivalent to the standard value.

By an Order in Council of 3rd May, 1911, it is further required that Chop Feed shall be free from vital seeds of noxious weeds.

As judged by these requirements I find the samples now reported to be as follows:

	Samples.
Meet standard (or guaranteed) value . . . . .	114
Passed, as reasonably close to this standard . . . . .	11
Adulterated, as low in value . . . . .	24
Total . . . . .	149

The above classification has regard only to the nutritive or feeding value of the article.

Twenty-four samples are found to contain vital weed seeds in excess. With one exception, these samples possess satisfactory value as nutrients. They are, neverthe-less, adulterated in a legal sense, as failing to meet the requirements of the Order in Council above referred to.

There can be no doubt that the spread of noxious weeds, through preventable distribution of their vital seeds, is a great evil, and calls for every attention on the part of those departments of the government which are entrusted with the adminis-tration of Acts in its regard. The Department of Agriculture, in charge of the Seed Control Act, has listed those weed species which are to be regarded as *noxious* and has established the following quantitative limits:—

(a) For seeds of oats, barley, wheat, or other seeds similar in size, one weed seed in one pound avoirdupois.

(b) For seeds of flax, millet, or other seeds similar in size, one weed seed in one ounce avoirdupois.

(c) For seed of white clover and grasses, five weed seeds in one ounce avoirdupois.

In this connection, I may quote as follows, from the text of Bulletin No. 254 of this department:

"It is to be kept in mind that these regulations apply to seeds intended to be applied directly to the land. In the case of cattle feeds, the vital weed seeds are presumably applied to the soil only after they have passed through the alimentary tract of the animals to which they are fed, and it is reasonable to suppose that their vitality will be greatly affected in the processes of digestion.

"The only experimental data available to me directed to the determination of the vitality of seeds which have been fed to animals is contained in a report published as Bulletin No. 128 of the Maryland Agricultural Experiment Station, College Park, Md., in June, 1908.

This valuable study of the question is briefly presented in the following summary:—

#### SUMMARY.

The above results were obtained through experiments concerning the vitality of weed seeds under the influence of their distribution by manure along two different lines: namely, the effect of fermenting manure on the vitality of weed seeds (seeds introduced through bedding) and the effect upon the vitality of weed seeds after passing through the digestive channel of domestic animals (seeds fed to animals).

The first part of the experiment was accomplished so as to cover the condition where manure remains for six months in a barnyard, pound or pile. The second covered conditions where the manure remained on piles for a short while, as when shipped by earload lots from cities.

From the above results the following conclusions seem justified:—

1st. When manure is allowed to ferment in piles for 6 months no danger of distributing weed seeds is incurred.

2nd. When manure is allowed to remain in piles and undergoing partial fermentation, little danger of distribution is incurred.

The second part of the experiment which dealt with the effect upon the vitality of weed seeds after passing through the digestive channels of domestic animals was accomplished so as to bring about three existing conditions:—

1st. Manure hauled direct from the stable to the field as a top dressing and left there exposed to the washing of the rains.

2nd. Where the manure is hauled directly from the stable to the field where it is immediately ploughed under.

3rd. Where the domestic animals are allowed to run in pasture and the droppings are allowed to remain wherever they chance to fall.

From the above tables in the latter part, the following results were obtained:—

1st. Where the manure was hauled directly from the stable as a top dressing an average of only 12.8 per cent of the seeds fed to animals germinated.

2nd. Where the manure was hauled directly from the stable upon the land and ploughed under, 2.3 per cent of the seeds fed to animals came up.

3rd. Where the droppings remained on the pasture fields unadulterated as they fell, an average of only 3.1 per cent of the seeds fed to animals germinated."

I have the following expression of opinion from G. H. Clark, Esq., seed commissioner of the Department of Agriculture, Canada:—

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"There has been quite a large number of samples of mill feeds analysed in our seed laboratory covering the period of six years, and from the results of this work we have formed the opinion that the proportion of whole weed seeds contained in the feeding stuff depends largely on the care or lack of care on the part of the manufacturer.

"Weed seeds in seed grain are probably five times more dangerous to agriculture than are weed seeds in mill feeds, for the reason that only a small per cent of the weed seeds fed to stock ultimately are put on the land in a viable condition.

"For the present, I think I cannot do more than to express the opinion that if you were to tolerate five noxious weed seeds per pound of bran, shorts or chop feed before you consider their character affected as being free from the seeds of the said weeds within the meaning of your regulations; then field agriculture would be as well safeguarded as it now is under the regulations that are applied for a similar purpose under the Seed Control Act."

The department has not, up to the present time, fixed any legal limit for weed seeds, in consequence of which I have not judged as adulterated any of the samples herein reported. I have, however, ventured to describe weed seeds as in excess when present to the extent of 3 seeds per ounce, practically 50 seeds per pound. I am sure that this is a very liberal interpretation of the regulations; but until some departmental action is taken to fix numerical limits beyond which noxious weed seeds shall be recognized as illegal, nothing more can be done.

It will be noted that the article *chop feed*, varies greatly in its feeding value. While the protein minimum fixed by law is 10 per cent, 55 samples show more than 12 per cent protein; 36 samples more than 13 per cent; 20 samples more than 14 per cent and 17 samples more than 15 per cent protein while 3 samples show above 20 per cent. These last are usually chopped peas. It is a question whether or not the term chop-feed is not too comprehensive, and might not, with advantage to the buyer, and in justice to the miller, be more closely defined by recognition of sub-classes. It is quite evident, by the percentages of fibre found in some of these samples, that some millers take advantage of the excess value in protein and fat, to add valueless material (chaff or oat-hulls, etc.) to the feed. More than 15 per cent of crude fibre is found in 18 samples herein reported, while the legal maximum is 10 per cent.

These matters will be further considered; and it is hoped that recommendations for amendment of our standard may result from fuller experience and study of the subject.

Meantime, I beg to recommend publication of this report as Bulletin No. 319.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1915.								
March 8	Chop Feed...	64136	G. B. Shaffner & Co., Ltd., Halifax, N.S.	3 lb.	Nil.	Gunn & Co., Hal- ifax, N.S.	Manufacturers..	
" 9	" .....	64137	Gunn & Co., Ltd., Hal- ifax, N.S.	3 " "	"	Vendors.....	.....	
" 9	" .....	64138	" " ..	3 " "	"	" .....	.....	
" 10	" .....	64139	Shand Bros., Windsor, N.S.	3 " "	6	Lake of the Woods M. Co., Mont- real.	Manufacturers..	
" 10	" .....	64140	" " ..	3 " "	6	T. H. Taylor Co., Chatham, Ont.	" ..	
" 11	" .....	64141	Hants Co. Fruit & Pro- duct Co., Windsor, N.S.	3 " "	Nil.	Chisholm M. Co., Toronto.	Smith Brokerage St. John, N.B.	
" 12	" .....	64142	Lamont & Steadville, Kentville, N.S.	3 " "	"	Can. Flour Mills, Chatham, Ont.	Manufacturers..	
" 15	" .....	64143	H. S. Hall, Bridgewater, N.S.	3 " "	5	Can. C. & F. Mills, Galt, Ont.	" ..	
" 15	" .....	64144	C. M. Bent, Bridgewater, N.S.	3 " "		Unknown.....	Unknown ...	

DISTRICT OF NEW BRUNSWICK—

Feb. 10	Chop Feed...	59656	Steen Bros., St. John, N.B.	3 pgs.	10	Vendors .....	.....	
" 11	" .....	59657	Maritime Corn Meal Mill, St. John, N.B.	3 "	Nil.	" .....	.....	
" 11	" .....	59658	St. John Milling Co., St. John, N.B.	3 "	"	" .....	.....	
" 10	" .....	59659	F. H. Everett, Frederic- ton.	3 "	10	Vendor .....	.....	
" 19	" .....	59660	Johnston & Kitchen, Fredericton.	3 "	20	Quaker Oats Co., Peterboro.	.....	
" 19	" .....	59661	H. W. Hodge, Frederic- ton.	3 "	15	Rob Roy Cereal Mills, Durham, Ont.	.....	
" 22	" .....	59662	Meduxnakeag Roller Mills Woodstock, N.B.	3 "	15	Vendors.....	.....	
" 24	" .....	59663	Napoleon Turcotte, Grand Falls, N.B.	3 "	15	Vendor .....	.....	
March 2	" .....	59664	Sussex Mercantile Co., Ltd., Sussex, N.B.	3 "	15	Ogilvie's, Ltd., Montreal.	.....	
" 3	" .....	59665	" .....	3 "	15	Quaker Oats Co., Peterboro.	.....	
" 3	" .....	65911	Fawcett Milling Co., Moncton, N.B.	3 "	20	Vendors .....	.....	

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## CHOP FEED.

Inspector's Report (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.	Vital Weed Seeds Per ounce.		
R. J. WAUGH, INSPECTOR.						
O. & C. chop. . . . .	9.87	4.32	6.09	14 Lambs Quarters, 10 Black Bindweed, 3 Wild Oats, 1 Wild Mustard, 1 Sunflower.	64136	Meets legal feed value. Noxious weed seeds in excess.
Pig chop. . . . .	10.38	3.82	2.30	75 Lambs Quarters, 1 Black Bindweed, 2 Wild Mustard, 1 Hares-ear Mustard, 1 Campaign.	64137	" "
O. & C. chop. . . . .	10.05	4.40	5.45	1 Black Bindweed, 30 Lambs Quarters, 1 Penny-cress, 1 Russian Pigweed, 1 Sunflower, 2 Hares-ear Mustard	64138	Meets legal feed value.
C. O. B. chop. . . . .	10.25	4.10	6.35	2 Black Bindweed, 1 Wild Oats.	64139	"
Horse and cattle chop	10.63	3.76	4.25	None . . . . .	64140	"
Corn, oat and barley	10.75	3.98	6.70	6 Black Bindweed, 14 Wild Oats.	64141	Meets legal feed value. Noxious weed seeds in excess.
B. O. C. $\frac{1}{2}$ chop. . . . .	11.19	3.38	5.05	2 Wild Oats. . . . .	64142	Meets legal feed value.
B. O. C. chop. . . . .	10.50	3.04	4.55	4 Black Bindweed, 17 Wild Oats, 1 Wild Mustard, 2 Lambs Quarters, 1 Helys-arum.	64143	Meets legal feed value. Noxious weed seeds in excess.
. . . . .	10.02	3.82	9.70	None . . . . .	64144	Meets legal feed value.
JOHN C. FERGUSON, INSPECTOR.						
Argentine corn. . . . .	10.19	4.84	3.05	2 Wild Oats. . . . .	59656	Meets legal feed value.
Cracked corn and oats. . . . .	10.50	4.72	6.45	None . . . . .	59657	"
" . . . . .	10.57	4.48	6.80	5 Wild Oats, 2 Black Bindweed.	59658	Meets legal feed value. Noxious weed seeds in excess.
. . . . .	10.38	4.82	8.10	1 Spurrey, 2 Smartweed, 2 Tartary wheat.	59659	Meets legal feed value.
Banner, Claim Protein 8.5, Fat 3.5, Fibre 9.0.	9.94	3.56	6.70	None . . . . .	59660	and claim.
Chaffin Brand, Claim Protein 6.65, Fat 5.41, Fibre 13.33	8.25	2.90	11.45	" . . . . .	59661	Meets claim, except on fat. Below claim for legal chop. Assorted.
Oats, wheat, etc. . . . .	10.57	3.92	9.00	" . . . . .	59662	Meets legal feed value.
Oats, barley and buckwheat.	9.56	3.62	9.20	57 Spurrey, 1 Campaign.	59663	"
Hercules Brand . . . . .	10.37	3.76	10.15	4 Lambs Quarters, 4 Black Bindweed, 1 Sunflower, 2 Wild Oats, 2 Wild Mustard, 1 Hares-ear Mustard.	59664	Meets legal feed value. Noxious weed seeds in excess.
Schmacher Brand, Claim Protein 10.5, Fat 4.0, Fibre 10.5	9.87	3.30	8.58	4 Lambs Quarters, 1 Penny-cress.	59665	Meets legal feed value.
Golden Star Brand . . . . .	9.81	3.84	3.62	None . . . . .	63011	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC CITY.—

1915.							
Jan.	29	Cracked Oats.	60789	J. B. Renaud & Cie, Quebec.	5 lbs.	...	Vendors .....
"	29	" Corn.	60790	" "	5 "	...	" .....
"	29	Oatmeal Feed.	60791	" "	5 "	...	Quebec Oats Co. ....
"	29	Ground Oats.	60792	" "	5 "	...	Vendor .....
"	29	" ..	60793	" "	5 "	...	John Mackay, Bowmanville, Vendors. ....
"	29	Blé d'Inde Casse.	60794	W. Carrier & Cie, Quebec.	5 "	...	Vendors. ....
"	29	Oat Meal Feed	60795	" "	5 "	...	Ogilvie, F. M., Co. ....
"	29	Blé d'Inde Casse.	60796	P. J. Busiere & Cie, Quebec.	5 "	16	Vendors .....
"	29	Moulté d'avoine	60797	" "	5 "	16	Lake of the Woods .....
"	29	" d'Orge.	60798	" "	5 "	16	Macky, Ottawa ...

## DISTRICT OF QUEBEC PROVINCE.—

Jan.	25	Moulté...	3757	Dodier & Crete, Levis...	3 lbs.	9	F. Guay, Levis. ....
"	25	" .....	3759	" "	3 "	9	J. B. Renaud & Cie, Quebec. ....
"	26	" .....	3764	G. & Ed. Couture, Levis..	3 "	10	Ogilvie Flour Mills .....
"	27	" .....	3766	J. A. Gagnon & fils, Lewis.	3 "	9	J. B. Renaud & Cie, Quebec. ....
Feb.	10	" .....	3791	Lacasse & Aude, St. Edward.	3 "	10	A. Lonchant, Traintod, Co. Dorchester. ....
Jan.	27	Gruaux...	2742	Alp. Letourneau, St. Pierre.	3 "	18	Trincotte frère & Cie, Quebec. ....
"	28	Pois Concassé.	2744	L. Uger Benaier, Cap. St. Ignace.	3 "	18	J. B. Renaud & Cie, Quebec. ....
"	29	Gruaux Avoine	2745	Nap. Proulx, Montmagny.	3 "	25	Quaker Oats Co., Peterboro. ....
"	30	Pois Concassé.	2746	Joseph Fournier, St. Thomas.	3 "	21	N. Rioux & Cie, Quebec. ....
Feb.	2	Blé d'Inde Casse.	56443	Pierre Lagois, St. Epiphaine.	3 "	12	T. Langlais, Fraserville. ....

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CHOP FEED.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.	Vital Weed Seeds per Ounce.		

F. X. W. E. BELAND, INSPECTOR.

	p. c.	p. c.	p. c.			
.....	12.15	4.80	10.45	26 Wild Oats, 13 Wild Mustard, 1 Ball Mustard, 13 Hares' Ear Mustard, 5 Pennycress, 20 Lambs' Quarters, 25 Black Bindweed.	60789	Meets legal feed value, noxious weed seeds in excess.
.....	9.98	3.88	2.15	None.....	60790	Meets legal feed value.
.....	5.65	2.54	23.68	2 Wild Mustard.....	60791	Adulterated under the Act.
.....	11.95	4.62	9.75	10 Lambs' Quarters.....	60792	Meets legal feed value.
.....	13.75	3.96	12.70	None.....	60793	Some excess fibre; other wise good. Pass.
.....	9.60	3.80	2.20	".....	60794	Meets legal feed value.
.....	6.61	2.32	23.30	".....	60795	Adulterated.
.....	9.40	3.85	2.05	".....	60796	Meets legal feed value.
.....	10.05	1.84	15.00	".....	60797	Excess fibre. Adulterated.
.....	14.05	3.32	9.75	".....	60798	Meets legal feed value.

J. E. AUDET, T. GENDREAU, ALP. PELLETIER, TEMP. INSPECTORS.

.....	11.40	4.38	8.75	None.....	3757	Meets legal feed value.
.....	6.22	2.20	22.15	".....	3759	Adulterated.
.....	8.10	1.60	0.35	".....	3764	Low in protein. Adulterated.
.....	9.55	3.88	1.45	".....	3766	Meets legal feed value.
.....	11.15	4.14	9.91	".....	3791	Meets legal feed value.
.....	13.80	7.40	1.17	".....	2742	Meets legal feed value.
.....	26.70	0.88	1.15	".....	2744	Low in fat, but very high in protein. Pass, as compensated.
.....	15.50	7.14	1.11	".....	2745	Meets legal feed value.
.....	29.20	1.05	1.67	".....	2746	Low in fat, but very high in protein. Pass, as compensated.
.....	8.00	2.18	1.10	".....	2044	Low in protein. Adulterated.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF THREE RIVERS—

1915.							
Jan. 16	Moulee.....	3921	G. H. Read, St. Felix de Valois.	5 lb..	10	Ogilvie, F. M. Co., Montreal.	
" 20	" .....	3922	J. E. Dufort, Joliet.....	4 " ..	10	Lake of the Woods Flour Mills Co.	

DISTRICT OF EASTERN TOWNSHIPS—

Feb. 9	Moulee. ...	1689	H. Roux & Fils, Danville.	3 lb..	10	Mount Royal Flour Milling Co., Montreal.	
" 11	Bléinde and Avoine.	1690	D. S. Bachand, Coaticook.	3 " ..	4	" " .....	
" 16	Moulee.....	1691	A. Milette, Windsor Mills	3 " ..	4	Ogilvie M. Co., Montreal.	
" 16	" .....	1692	S. & W. Fortier, Sherbrooke.	3 " ..	5	" " .....	
" 17	" .....	1693	A. W. Moore & Co., Magog.	3 " ..	5	Western Canada F. M. Co., Montreal.	
" 18	Victor Feed..	1694	Neil Bros., Waterloo..	3 " ..	5	Quaker Oats, Peterboro'.	
" 18	Avoine Moulee	1695	G. J. McGuire,.....	2 " ..	5	J. Labrecque, Waterloo, P.Q.	
" 18	Moulee. ....	1696	J. C. Robert, Granby ...	3 " ..		" " .....	
Mch. 26	" .....	1697	Chs. G. Racicot, St. Hyacinthe.	3 " ..	5	Wm. Scott & Co., Ottawa.	
" 26	" .....	1698	O. Gaucher, St. Hyacinthe	3 " ..	5	Reniere & Scott, St. Hyacinthe.	

DISTRICT OF MONTREAL—

Jan. 28	Moulee.....	62691	M. Gervais, 147 Mullarky ave., Verdun.	3 lb..	5	W. Lamarre & Co., Montreal.
Feb. 1	" .....	62692	P. Thibault, 473 Church ave., Verdun.	3 " ..	5	" " ..
Mch. 19	" .....	61693	T. Dansereau & Co., 499 Charlevoix st., Montreal.	3 " ..	10	Jos. Elie, Montreal.
" 19	" .....	62694	J. B. Bonhomme & Co., 811 Charlevoix st., Montreal.	3 " ..	10	W. Lamarre & Co., Montreal.
" 19	" .....	62695	Laporte & Frere, 49 St. Charles st., Montreal.	3 " ..	6	Unknown.....
" 19	" .....	62696	A. Vachon, 593 Marie Anne st., Montreal.	3 " ..	6	F. Gobeille, Montreal.
" 20	" .....	62697	J. Mongeau, 826 Marie Anne st., Montreal.	3 " ..	6	" " ..
" 20	" .....	62698	R. Corbeil, 146 Garnier st., Winnipeg.	3 " ..	9	" " ..
" 20	" .....	62699	A. Hetu & Co., 147 DeLaroche st., Montreal.	3 " ..	8	" " ..
" 20	" .....	62700	A. Filatrault, 976 St. Andre st., Montreal.	3 " ..	5	" " ..



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## CHOP FEED.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.	Vital Weed Seeds. per ounce.		
DR. V. P. LAVALLEE, INSPECTOR.						
.....	16.35	3.98	5.75	None.....	3921	Meets legal feed value.
.....	16.75	3.74	5.25	".....	3922	" "
J. C. ROULEAU, INSPECTOR.						
.....	11.00	11.52	4.80	None.....	1689	Meets legal feed value.
.....	10.40	4.48	5.55	".....	1690	" "
Reg. No. 101. Me- lange. Claim, Pro- tein, 8.5, Fat=3.1 Fibre=14.5.	9.70	4.74	13.25	".....	1691	Meets claim of guarantee.
Blé d'Inde.....	9.90	4.02	1.92	".....	1692	Meets legal feed value.
Blé.....	16.00	3.58	5.20	".....	1693	"
Reg. No. 14, Claim, Protein, 8.0, Fat 3.5, Fibre=12.0	9.04	3.26	11.04	".....	1694	Meets guarantee.
.....	12.50	5.18	9.10	2 Wild Oats.....	1695	Meets legal feed value.
Blé d'Inde.....	9.42	3.74	1.48	None.....	1696	" "
Melange.....	10.90	3.48	14.83	".....	1697	Excess fibre. Adulterated
Avoine and Blé.....	12.50	2.61	4.57	1 Ball Mustard.....	1698	Meets legal feed value.
D. J. KEARNEY, INSPECTOR.						
.....	9.67	3.40	15.39	6 Lambs Quarters. 1 Russian Pigweed.	62691	Excess Fibre. Adulterated.
.....	9.55	3.62	15.43	None.....	62692	" "
.....	9.31	2.78	7.40	".....	62693	Nearly meets legal feed value. Pass
.....	8.82	4.08	17.35	".....	62694	Low protein and excess fibre. Adulterated.
.....	7.65	1.92	19.10	".....	62695	"
.....	9.02	2.90	13.67	".....	62696	"
.....	11.40	3.48	11.95	1 Sow Thistle 1 St. Lucie 2 Wild Mustard.	62697	Slight excess fibre. Pass. Noxious weed seeds in hay.
.....	12.60	3.06	7.36	None.....	62698	Meets legal feed value.
.....	8.80	2.42	10.65	1 Black Birdweed 7 Lambs Quarters. 1 Penny-cress.	62699	Protein slightly low and slight excess fibre. Pass
.....	14.07	3.65	10.26	None.....	62700	Meets legal feed value.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacture or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacture.	Furnisher.

DISTRICT OF OTTAWA—

1915.							
Jan. 12	Chop Feed...	63386	G. D. Atkinson, Cornwall.	3 lbs.	....	Vendor .....	.....
" 12	" .....	63387	Black & Borthwick, "	3 "	....	Vendors .....	.....
" 12	" .....	63388	" " "	3 "	....	" .....	.....
" 12	" .....	63389	Tilton & Graham "	3 "	6	Peterboro Cereal Co. ....	.....
" 28	" .....	63390	Doyle Bros., Prescott ...	4 "	10	Maple Leaf M. Co. Kenora. ....	.....
Feb. 9	Provender....	63391	Lake of the Woods M. Co., Ottawa.	3 "	....	Vendors .....	.....
" 9	" .....	63392	Ed. Sz. Germain, Ottawa.	3 "	10	Renfrew M. Co., Renfrew. ....	.....
" 9	Chop Feed....	63393	Western F. M. Co., "	3 "	....	Vendors .....	.....
" 9	Provender....	63394	J. A. Forward, "	3 "	....	Vendor .....	.....
" 20	" .....	63395	J. J. Ralph "	3 "	....	Wm. R. Cummings' Bridge. ....	.....

DISTRICT OF KINGSTON—

Feb. 1	Moulée.....	66546	The Maple Leaf M. Co., Kingston.	3 lbs.	10	Vendors .....	.....
" 1	" .....	66547	Geo. Gibson, Kingston ..	3 "	10	Maple Leaf Milling Co. ....	.....
" 9	" .....	66548	E. Brawley, Sydenham...	3 "	10	" " .....	.....

DISTRICT OF TORONTO—

Feb. 16	Chop.....	66801	James Reynolds, Aurora..	3 lbs.	10	Wm. Reynolds & Son, Staynor. ....	.....
" 16	" .....	66802	W. J. Baldwin, "	3 "	10	Vendor .....	.....
" 16	" .....	66803	Geo. Forester, Newmarket	3 "	10	" .....	.....
" 17	" .....	66804	A. J. Lowick & Son, Sutton.	3 "	10	Vendors .....	.....
18	" .....	66805	R. W. Dixon, Oshawa....	5 "	10	Vendor .....	.....

SESSIONAL PAPER No. 14

CHOP FEED.

Inspector's Report, (Is not an expression of opinion.)	Results of Analysis.			Vital Weed Seeds per Ounce.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.			

J. A. RICKEY, INSPECTOR.

	p. c.	p. c.	p. c.			
Corn and Oat Chop..	10.35	3.96	5.29	None.....	63386	Meets legal feed value.
" "	10.50	4.24	7.16	" .....	63387	" "
Corn Chop .....	9.36	3.90	1.85	" .....	63388	" "
Barley " .....	13.35	2.44	6.80	" .....	63389	" "
Oat " .....	13.00	4.18	10.70	1 <i>Wild Oat</i> .....	63390	" "
Oxmeal Reg. No. 51. Claim — Protein 16.5—Fat = 3.0— Fibre 7.6.	16.85	3.44	4.80	None.....	63391	" "
.....	11.80	2.90	7.65	2 Bed straw.....	63392	" "
Excelsior, Reg. No. 345. Corn, Oats and Wheat. Claim Protein 11.11—Fat = 2.73—Fibre = 15.51.	9.11	2.94	15.40	12 Black Bindweed, 7 Lambs' Quarters, 2 American Dragonhead, 1 <i>Chirory</i> , 1 Cinquefoil, 1 Pennycress, 1 Peppercress, 1 Western Sunflower, 3 Evening Prim rose, 1 <i>Ball Mustard</i> , 4 <i>Hares Ear Mustard</i> , 1 <i>Tumbling Mustard</i> , 43 <i>Wild Mustard</i> , 25 <i>Sticksseed</i> .	63393	Low in proteins. Noxious weed seeds in excess Adulterated.
.....	13.30	4.64	7.55	None.....	63394	Meets legal feed value.
.....	11.50	4.10	8.00	" .....	63395	" "

JAS. HOGAN, INSPECTOR.

.....	17.70	4.30	4.15	None.....	66546	Meets legal feed value.
.....	17.55	4.28	4.20	" .....	66547	" "
.....	18.50	4.54	5.55	" .....	66548	" "

H. J. DAGER, INSPECTOR.

.....	13.40	2.86	8.15	1 <i>Wild Oat</i> .....	66801	Meets legal feed value.
.....	12.80	2.76	5.71	None.....	66802	" "
.....	11.20	3.57	5.45	8 <i>Chenopodium</i> .....	66803	" "
.....	11.90	3.49	5.10	3 <i>Wild Oats</i> , 1 <i>Wormseed Mustard</i> .	66804	Meets legal feed value. Noxious weed seed in ex- cess.
.....	12.10	4.10	8.88	1 <i>Wild Mustard</i> , 9 <i>Wild Oats</i>	66805	" "

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacture or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF TORONTO—

1915.							
Feb. 18	Chop.....	66806	Cooper Smith Co., Oshawa	5 lbs.	10	Vendors..	
" 24	" .....	66807	The Watt M. & F. Co., Toronto.	5 "	10	" .....	
" 25	" .....	66808	Wallace Bros., Wood-bridge.	5 "	10	" .....	
" 25	Chop Feed...	66809	Moody Bros., Weston	3 "	5	" .....	
" 25	" .....	66810	F. A. Oldham, Weston	3 "	10		Walker Thistle-down.

DISTRICT OF HAMILTON—

Mar. 2	Chop Feed...	66824	J. R. White & Sons, Galt.	3 lbs.	5	Vendors....	
" 3	" .....	66825	Wm. Snider, Waterloo, Ont.	3 "	10	" .....	
" 3	" .....	66826	S. Brown & Son, Berlin	3 "	10	" .....	
" 9	" .....	66827	Geo. E. Taylor, Paris Station.	3 "	10	Tavistock M. Co., Tavistock.	
" 9	" .....	66828	W. Rutherford, Paris	4 "	5	" .....	
" 10	" .....	66829	Wood Bros., Brantford	3 "	...	Vendors .....	
" 11	" .....	66830	H. Rayner & Co., Grimsby	4 "	10		Unknown.....
" 11	" .....	66832	Tufford & Wismer, Beamsville.	5 "	10	D. B. Wood M. Co., Hamilton.	
" 12	" .....	66833	P. B. Newton & Sons, Dundas	5 "	5	Niagara G. and F. Co., Ltd., Toronto.	
" 13	" .....	66902	Wood Milling Co., Ltd., Hamilton.	5 "	10	Vendors ...	

DISTRICT OF WINDSOR—

Feb. 17	Chop Feed...	54716	G. M. McKay, Ingersoll.	3 lbs.	7	Scott & Daniels Ingersoll.	
" 18	" .....	54722	St. Marys M. Co., St. Marys.	3 "	10		
" 18	" .....	54724	Weir & Weir, St. Marys.	3 "	Nil.	Vendors....	
" 19	" .....	54727	R. M. Pincombe, Strathroy.	3 "	5	Vendor .....	
" 19	" .....	54728	S. S. Donaldson, Strathroy.	3 "	Nil.	" .....	
" 23	" .....	54729	Empire M. Co., St. Thomas	3 "	"	Vendors.....	

SESSIONAL PAPER No. 14

CHOP FEED.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			Vital Weed Seeds per Ounce.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.			
<i>Concluded.</i>						
	p.c.	p.c.	p.c.			
.....	13.92	5.42	6.80	6 Black Bindweed, 2 American Dragonhead, 8 Lambs' Quarters, 1 Ball Mustard, 1 Hares-Ear Mustard, 2 False Flax, 4 Wild Mustard, 12 Wild Oats.	66806	Meets legal feed value. Noxious weed seed in excess.
.....	11.15	4.34	10.65	4 Wild Oats, 6 Wild Mustard, 1 Lambs' Quarters, 1 Black Bindweed.	66807	" "
.....	11.90	4.62	9.70	22 Wild Oats.....	66808	" "
.....	11.95	4.14	11.20	None.....	66809	Slight excess fibre. Pass.
.....	12.35	3.48	9.00	1 Wild Oat.....	66810	Meets legal feed value.

H. J. DAGER, ACTING INSPECTOR.

.....	12.05	3.55	5.30	1 pennycress.....	66824	Meets legal feed value.
.....	11.80	5.00	9.20	2 Wild Oats, 1 Wild Mustard.	66825	" Noxious weed seeds in excess.
.....	10.70	4.36	11.20	None.....	66826	Slight excess fibre. Pass
One-third mill screenings and two-third out feed. No analysis on bags.	7.08	3.14	10.90	".....	66827	Low proteins Adulterated.
" "	7.53	3.72	23.30	1 Hares Ear Mustard, 3 Lamb Quarters, 1 Russian Pig weed.	66828	Low proteins and excess fibre. Adulterated.
.....	13.33	3.50	4.06	None.....	66829	Meets legal feed value.
.....	12.30	4.55	10.57	".....	66830	"
.....	11.65	3.18	4.35	".....	66832	"
Niagara Dairy Feed, Claim Protein 13.5, Fat 4.0, Fibre 10.5.	8.27	3.31	14.42	".....	66833	Low proteins and excess fibre. Adulterated.
.....	10.40	4.36	9.40	6 Black Bindweed, 1 Penny cress, 1 Western False Flax, 2 Wild Mustard.	66832	Meets legal feed value. Noxious weed seeds in excess.

JNO. TALBOT, INSPECTOR

.....	11.60	3.66	10.40	None.....	64710	Meets Legal feed value.
.....	11.03	3.06	9.45	".....	64722	"
.....	11.25	3.28	8.85	".....	64724	"
.....	11.06	4.00	6.60	".....	64725	"
.....	11.96	3.40	6.70	".....	64726	"
.....	11.50	8.20	4.21	".....	64729	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MANITOBA—

1915.							
Jan. 27	Chop Feed....	61236	Ogilvie Flour Mills Co., Winnipeg.	3 lbs.	.....	Vendors..	.....
Feb. 4	"	61237	Lake of the Woods M. Co., Portage-la-Prairie.	3 "	.....	"	.....
" 4	"	61238	"	3 "	.....	"	.....
" 5	"	61239	Western Flour Mills Co., St. Boniface.	"	.....	"	.....
" 5	"	61240	"	3 "	.....	"	.....
" 17	"	61241	Laing Bros., Winnipeg.	3 "	.....	"	.....
" 17	"	61242	Carnefac Stock Food Co., Winnipeg.	3 "	.....	"	.....
" 17	"	61243	"	3 "	.....	"	.....
" 23	"	61244	Western Flour Mills Co., Brandon.	3 "	.....	"	.....
" 23	"	61245	"	3 "	.....	"	.....

DISTRICT OF SASKATCHEWAN—

Feb. 1	Chop Feed....	66334	Chas. S. Walsh, Moosejaw	5 lbs.	10	Vendors....	.....
" 1	"	66339	Charles H. Boyd, "	5 "	10	"	.....
" 2	"	66342	Adam Johnson, Rouleau.	3 "	4	"	.....
" 3	"	66348	J. H. Mooney, Weyburn.	4 "	Nil.	"	.....
" 3	"	66349	Soo Line M. & E. Co., "	3 "	"	"	.....

DISTRICT OF ALBERTA—

Mar. 13	Chop Feed....	52110	Wetaskiwin Produce Co., Wetaskiwin.	3½ lbs.	.....	Vendors	.....
" 13	"	52111	"	3½ "	.....	"	.....
" 23	"	52112	Crown Feed and Produce Co., Calgary.	5 "	.....	Quaker Oats Co., Saskatoon	.....
" 23	"	52113	Thos. Fletcher, Calgary	4 "	15	Vendors.....	.....
" 23	"	52114	"	4 "	10	"	.....



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF ALBERTA—

1915.							
Mar. 23	Chop Feed ...	52115	Erl & Anderson, Calgary.	5 lbs.	15	Robin Hood Mills.	.....
" 23	" ...	52116	" " ..	5 "	15	W. Munro, Springbank, Alta.	.....
" 23	" ...	52117	Robin Hood Mills, Calgary.	5 "	....	Robin Hood Mills, Moose Jaw.	.....
" 23	" ...	52118	" " ..	5 "	....	Vendors.....	.....
" 23	" ...	52119	West End Feed Store, Calgary.	5 "	10	Quaker Oats Co., Saskatoon.	.....

DISTRICT OF ROCKY MOUNTAINS—

Feb. 1	Chop Feed ...	61749	Brackman-Ker M. Co., Nelson, B.C.	5 lbs.	15	B. K. M. Co., Calgary.	.....
Mar. 16	" ...	61790	Brackman-Ker M. Co., Rossland.	5 "	25	" " ..	.....

DISTRICT OF VANCOUVER—

Feb. 1	Chop Feed ...	55188	Alberta Pacific Grain Co., Ltd., Vancouver, B.C.	3 lbs.	....	Quaker Oats Co., Saskatoon.	.....
" 4	" ...	55189	" " ..	3 "	....	Vendors.....	.....
" 5	" ...	55190	Vancouver Milling and Grain Co., Vancouver, B.C.	3 "	....	" ..	.....
" 6	" ...	55191	F. T. Vernon, 255 Broadway, Vancouver, B.C.	3 "	5	Vendor .....	.....
" 6	" ...	55192	" " ..	3 "	5	" ..	.....
" 6	" ...	55193	A. E. Burnett & Co., City Market, Vancouver, B.C.	3 "	5	Vendors.....	.....
" 6	" ...	55194	" " ..	3 "	10	" ..	.....
" 8	" ...	55195	Tait Bros., Eburne.....	3 "	....	" ..	.....
" 8	" ...	55196	McLellan-McCarter Co., Ltd., 1605 6th Ave. W., Eburne.	3 "	10	" ..	.....
" 8	" ...	55197	" " ..	3 "	15	" ..	.....
" 9	" ...	55208	Grain Growing, B.C. Agency, New Westminster, B.C.	3 "	....	" ..	.....
" 9	" ...	55209	" " ..	3 "	....	" ..	.....



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CHOP FEED.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			Vital Weed Seeds. per ounce.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.			

Concluded.

	p. c.	p. c.	p. c.			
Chopped Oats . . . . .	12.90	5.08	9.00	None . . . . .	52115	Meets legal feed value.
" Barley . . . . .	14.00	2.43	4.90	" . . . . .	52116	" "
Oat Feed . . . . .	6.95	3.20	21.04	" . . . . .	52117	Low protein and excess fibre. Adulterated.
Barley Chop . . . . .	12.50	2.00	5.47	" . . . . .	52118	Meets legal feed value.
Reg. No. 339. Claim —Protein 7.5, Fat 3.0, Fibre 20.0.	7.50	3.16	17.53	8 Lambs' Quarters . . . . .	52119	Meets claim of guarantee.

THOS. PARKER, INSPECTOR.

Empire . . . . .	6.58	1.33	24.22	None . . . . .	61749	Low protein and excess fibre. Adulterated.
. . . . .	2.60	1.16	29.10	" . . . . .	61790	" "

E. J. MORGAN, INSPECTOR.

Dairy Feed . . . . .	7.02	3.18	22.12	7 Lambs' Quarters, 1 Black Birdweed.	55188	Low protein and excess fibre. Adulterated.
Excelsior Chop . . . . .	11.10	3.10	6.75	10 Lambs' Quarters, 5 <i>Bull Mustard</i> , 3 <i>Wild Mustard</i> .	55189	Meets legal feed value. Noxious weed seeds in excess.
Excelall " . . . . .	10.95	4.96	6.09	7 Black Birdweed, 2 <i>Wild Oats</i> .	55190	Meets legal feed value.
Oat " . . . . .	11.90	5.34	8.15	None . . . . .	55191	" "
Barley " . . . . .	12.00	1.78	4.10	6 Lambs' Quarters . . . . .	55192	" "
Oat " . . . . .	11.90	4.86	8.85	None . . . . .	55193	" "
Barley " . . . . .	11.20	1.92	6.75	" . . . . .	55194	" "
" " . . . . .	7.77	1.64	4.80	2 Black Birdweed, 3 <i>Sparrow, 1 Wild Oat</i> .	55195	Low in protein. Adulterated.
Corn " . . . . .	8.13	3.60	1.80	None . . . . .	55196	" "
Oat " . . . . .	11.00	5.56	8.30	1 <i>Chick Pea</i> , 1 <i>Wild Oat</i> , 1 <i>Sparrow</i> .	55197	Meets legal feed value.
Danish Milk Feed	11.85	6.36	11.75	None . . . . .	55198	Slight excess fibre. Pass.
Pansley Dairy.	18.75	6.20	10.00	" . . . . .	55199	Meets legal feed value.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VICTORIA—

1915.								
Feb. 22	Chop Feed...	62071	Brackman Ker M. Co., Victoria, B.C.	4 lb.	.....		Vendors.....	.....
" 22	" .....	62072	" "	4 "	.....		" .....	.....
" 22	" .....	62073	" "	4 "	.....		" .....	.....
" 22	" .....	62074	" "	4 "	.....		" .....	.....
" 23	" .....	62075	Scott & Peden, Victoria, B.C.	4 "	.. 7		Robin Hood Mills, Moose Jaw.	.....
" 23	" .....	62076	" "	4 "	.. 8		Brackman Ker M Co., Victoria.	.....
Mar. 5	" .....	62081	Vancouver M. and Grain Co., Victoria, B.C.	4 "	.....		Vanc. M. and G. Co., Vancouver.	.....
" 5	" .....	62082	" "	4 "	.....		" .....	.....
" 5	" .....	62083	" "	4 "	.....		" .....	.....

SESSIONAL PAPER No. 14

CHOP FEED.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			Vital Weed Seeds. Per ounce.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Protein.	Fat.	Fibre.			

D. O'SULLIVAN, INSPECTOR.

	p. c.	p. c.	p. c.			
Corn Chop, Reg. No., 136. Claim: Pro- tein 9.0, Fat 4.0 Fibre 8.0	9.40	3.20	11.72	None.....	62071	Some excess fibre. Pass.
Oat Feed, Reg. No. 137. Claim: Pro- tein 7.0, Fat 3.0, Fibre 15.0.	7.10	5.16	17.97	" .....	62072	Meets claim of guarantee.
Jersey Dairy Feed, Reg. No. 138. Claim: Protein 18.0, Fat 5.0, Fibre 10.0.	21.65	5.00	11.77	" .....	62073	Meets claim of guarantee.
Chicken Chop, Reg. No. 154. Claim: Protein 15.0, Fat 5.0, Fibre 5.0.	15.20	4.24	7.48	" .....	62074	Meets legal feed value.
Oat Feed. Claim: Protein 5.25, Fat 2.5, Fibre 20.0. No Reg. No. on sacks.	6.79	3.00	20.70	" .....	62075	Meets claim.
Jersey Dairy Feed, Reg. No. 138. Claim: Protein 18.0, Fat 5.0, Fibre 10.0.	18.75	4.20	12.72	" .....	62076	Nearly meets claim. Pass
Excellall Chop. Not Registered.	15.65	3.49	6.95	35 Wild Oats, 1 Black Bind weed, 1 Smartweed.	62081	Meets legal feed value. Noxious weed seeds in excess
Milk Food. Claim: Protein 25.3, Fat 5.23, Fibre 5.23.	16.65	4.18	11.42	None.....	62082	Protein below claim; fibre in excess. Adulterated.
Dairy, Reg. No. 139. Claim: Protein 11.1, Fat 4.5, Fibre 10.8.	13.40	2.28	9.25	" .....	62083	Meets legal feed value.



## APPENDIX K.

## BULLETIN No. 320—TABLE SYRUPS OTHER THAN MAPLE.

OTTAWA, August 7, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister Inland Revenue.

SIR,—The report herewith submitted deals with syrups other than maple, used as table syrups. Maple syrup has been several times made the subject of inspection, since it is peculiarly a Canadian product, and has been quite extensively adulterated. Samples of molasses have also been collected.

The samples now reported (200 in number) were purchased by our inspectors in January, February and March last, and may serve to show the general character of syrup, other than maple syrup, offered on the Canadian market. The samples may be classified as below:

Cane sugar syrups. . . . .	49
Essentially glucose syrups. . . . .	109
Mixtures, containing a considerable percentage of cane sugar syrup. . . . .	27
Molasses. . . . .	15
	<hr/>
Total. . . . .	200

It would appear from this showing that glucose, or so called corn starch syrups, are most largely found. All of these contain some cane sugar or refiner's syrup, and some of them contain considerable percentages of this. They are perfectly wholesome articles of food, decidedly less sweet than the cane sugar syrups. It is doubtless because of their cheapness that they are so much in evidence. The data here put on record will serve to give the public information regarding the syrups in the Canadian market, and will also be helpful towards standardization of syrup, under the Act, should such a step appear to be necessary.

I beg to recommend publication of this report as Bulletin No. 320.

I have the honour to be, Sir,  
Your obedient servant,

ALP. LEMOINE,  
*For Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NOVA SCOTIA—

1915.							
Feb. 26	Table Syrup	64126	J. L. Wilson, Halifax, N.S.	3 tins.	56	A. Lyle & Son, London, Eng.	Mfrs . . . . .
Mar. 4	" ..	64127	Wm. Moore, Halifax, N.S.	3 "	38	Can. Starch Co., Fort William, Ont.	" .. . . .
" 4	" ..	64128	R. B. Sweeton & Co., Halifax, N.S.	3 "	50	A. Lyle & Son, London, Eng.	" .. . . .
" 5	" ..	64129	Payzant & King, Halifax, N.S.	3 "	33	Can. Starch Co., Fort William, Ont.	" .. . . .
" 5	" ..	64130	Wentzells Ltd., Halifax, N.S.	3 "	35	St. Lawrence Starch Co., Montreal.	" .. . . .
" 5	" ..	64131	James Scott & Co., Halifax, N.S.	3 "	45	Corn Products Refining Co., New York.	.....

## DISTRICT OF NOVA SCOTIA—

Feb. 19	Table Syrup	65815	A. A. McDonald, New Glasgow.	3 tins.	45	A. Lyle & Son, London, Eng.	Unknown.....
" 19	" ..	65816	2 Barkers Ltd., New Glasgow.	3 "	39	Can. Starch Co., Fort William, Ont.	Mfrs .. . . .
" 19	" ..	65817	James McArthur, New Glasgow.	3 "	51	Corn Products Refining Co., New York.	" .. . . .
" 19	" ..	65818	James Cavanagh, New Glasgow.	3 "	54	A. Lyle & Son, London, Eng.	Unknown.....
" 19	" ..	65819	" " ..	2 lbs.	12	Can. Starch Co., Fort William, Ont.	Mfrs .. . . .
" 19	" ..	65820	C. Grant, New Glasgow.	2 "	13	" " ..	Unknown.....
" 19	" ..	65821	R. M. Sutherland, New Glasgow.	2 "	15	" " ..	Mfrs .. . . .

## DISTRICT OF PRINCE EDWARD ISLAND—

Apr. 8	Table Syrup	60175	Beer & Goff, Charlottetown.	3 tins.	48	Can. Starch Co., Cardinal.	.....
" 8	" ..	60176	Stewart & Son, Charlottetown.	3 lbs.	18	" " ..	.....
" 8	" ..	60177	E. Toombs, Charlottetown.	3 tins.	35	.....	Carvell Bros., Charlottetown.
" 14	" ..	60178	Beer & Goff, Charlottetown.	3 "	60	A. Lyle & Son, London, Eng.	.....
" 14	" ..	60179	Jenkins & Son, Charlottetown.	3 "	45	Can. Starch Co., Cardinal.	.....

## DISTRICT OF NEW BRUNSWICK—

Jan. 29	Table Syrup	59676	H. W. Cole, Ltd., St. John, N.B.	3 tins.	45	Can. Starch Co., Ltd., Cardinal.	.....
Feb. 9	" ..	59677	Puddington, Wetmore & Morrison, Ltd., St. John, N.B.	3 "	40	" " ..	.....

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TABLE SYRUP.

Inspectors's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Water.	Ash.	Polarization.			Cane Sugar.		
				Direct.	Invert.	Differ- ence.			

R. J. WAUGH, INSPECTOR.

	p. c.	p. c.	p. c.				p. c.		
Golden Syrup.....	81.70	18.30	1.82	+ 22.2	- 24.1	46.3	34.90	64126	Cane sugar syrup.
.....	77.00	23.00	0.70	+154.4	+150.7	3.7	2.79	64127	Chiefly glucose.
Golden Syrup.....	82.35	17.65	1.86	+ 22.4	- 24.2	46.6	35.13	64128	Cane sugar syrup.
.....	78.55	21.45	0.56	+151.4	+147.8	3.6	2.72	64129	Chiefly glucose.
Bee Hive Brand.....	80.60	19.40	0.90	+151.8	+146.5	5.3	4.00	64130	"
Karo Brand.....	76.35	23.65	0.82	+147.2	+141.4	5.8	4.37	64131	"

W. A. PETIPAS, TEMPORARY INSPECTOR.

.....	82.25	17.75	1.50	+ 20.4	- 23.3	43.7	32.94	65815	Cane sugar syrup.
.....	76.00	24.00	0.51	+156.4	+152.9	3.5	2.64	65816	Chiefly glucose.
.....	76.30	23.70	0.98	+147.4	+141.7	5.7	4.30	65817	"
.....	81.35	18.65	1.74	+ 21.0	- 23.1	44.1	33.25	65818	Cane sugar syrup.
.....	76.65	23.35	0.63	+152.4	+148.5	3.9	2.94	65819	Chiefly glucose.
.....	76.50	23.50	0.68	+153.4	+148.9	4.5	3.40	65820	"
.....	75.80	24.20	0.53	+156.0	+153.3	2.7	2.05	65821	"

WM. A. WEEKS, INSPECTOR.

.....	75.05	24.95	0.44	+151.4	+148.7	2.7	2.05	60175	Chiefly glucose.
.....	68.60	31.40	0.30	+107.4	+ 66.2	41.2	31.06	60176	Cane sugar and glucose.
.....	75.85	24.15	0.58	+157.6	+153.1	4.5	3.32	60177	Chiefly glucose.
.....	81.65	18.35	1.80	+ 21.2	- 22.2	43.4	32.65	60178	Cane sugar syrup.
.....	79.05	24.95	0.58	+146.6	+141.2	5.4	4.06	60179	Chiefly glucose.

JNO. C. FERGUSON, INSPECTOR

Crown Brand Corn, Sydney	77.35	22.65	0.64	+152.6	+148.0	4.6	3.47	59676	Chiefly glucose.
Crown Brand ...	76.00	24.00	0.42	+163.0	+148.0	5.0	3.77	59677	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NEW BRUNSWICK—

1915.								
Feb. 10	Table Syrup	59678	J. W. Philips, St. John, N. B.	3 bots.	45	Crosse & Blackwell, London, Eng.		
" 16	"	59679	J. W. Robinson, St. Stephens, N. B.	3 tins.	40	Can. Starch Co., Cardinal, Ont.	W. C. Purves, St. Stephen, N. B.	
" 19	"	59680	G. T. Whelpley Estate, Fredericton, N. B.	3 "	60	A. Lyle & Son, London, Eng.		
" 19	"	59681	M. E. Doohan, Fredericton, N. B.	3 "	40	Can. Starch Co., Cardinal, Ont.		
" 24	"	59682	J. Burgess & Son, Ltd., Grand Falls, N. B.	3 "	45	Corn Products Refining Co., New York.		
Mar. 2	"	59683	Mills Eveleigh Co., Ltd., Sussex, N. B.	3 "	45	Canada Starch Co., Cardinal, Ont.		
" 3	"	59684	Reed Co., Ltd., Moncton.	3 "	44	A. Lyle & Son, London, Eng.		
" 3	"	59685	Roderick McLean, Moncton.	3 "	45	Edwardsburg Starch Co., Cardinal, Ont.		

DISTRICT OF QUEBEC CITY—

Jan. 20	Table Syrup	60764	Arthur Drolet, Quebec.	1½ lb.	10	Unknown	Unknown	
" 20	"	60765	T. Art. Bedard, Quebec.	1½ "	15	"	Turcotte & Frère.	
" 20	"	60766	" " "	1½ "	15	"	N. Rioux & Cie.	
" 21	"	60767	O. Lacroix, Quebec....	1½ "	15	P. Masson, Barbadoes..	N. Turcotte & Cie.	
" 21	"	60768	" " "	1½ "	15	Sammers & Son, Barbadoes.	Gagnon & Garent.	
" 21	"	60769	" " "	1½ "	15	S. F. Masson & Son, Barbadoes.	"	
" 21	"	60770	Cantin & Frère, Quebec.	1½ "	15	Gagnon & Garent	"	
" 22	"	60771	Myrand & Pouliot, Quebec.	1½ "	15	"	"	
" 22	"	60772	" " "	1½ "	15	.....	Turcotte & Frère.	
" 22	"	60773	C. Riverin, Quebec....	1½ "	15	Unknown.....	"	

DISTRICT OF QUEBEC PROVINCE—J. E. AUDET, O. BROCHU

Jan. 18	Molasse ....	3746	Syndicat de Thetford Mines.	1 pint.	15	.....	J. B. Renaud, Quebec.	
" 18	"	3747	" " "	1 "	15	.....	Quebec Preserving Co.	
" 20	"	3750	John O'Brien, Black Lake, Megantic.	1 "	15	.....	Denault, G. & P., Co., Sherbrooke.	
" 25	"	3755	Dodier & Crete, Levis.	1 "	15	.....	J. B. Renaud, Quebec.	



SESSIONAL PAPER No. 14

TABLE SYRUP.

Inspector's Report. (Is not an Expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Water.	Ash.	Polarization.			Cane sugar.		
				Direct.	Invert.	Differ- ence.			

*Concluded.*

	p. c.	p. c.	p. c.				p. c.		
Golden Syrup.....	81.65	18.25	1.81	+ 21.0	- 22.0	43.0	32.40	59678	Cane sugar syrup.
.....	75.85	24.15	0.43	+155.8	+150.7	5.1	3.84	59679	Chiefly glucose.
Lyles Golden Syrup..	81.45	18.55	1.81	+ 22.6	- 22.6	45.2	34.07	59680	Cane sugar syrup.
Crown Brand.....	75.35	24.65	0.35	+151.0	+146.5	4.5	3.32	59681	Chiefly glucose.
Karo Brand . . . . .	75.15	24.85	1.01	+144.6	+140.6	4.0	3.00	59682	"
Crown Brand.....	76.50	23.50	0.58	+143.2	+139.0	4.2	3.17	59683	"
Lyles Golden Syrup..	82.15	17.85	1.94	+ 21.2	- 23.3	44.5	33.55	59684	Cane sugar syrup.
Crown Brand.....	76.15	23.85	0.62	+153.2	+148.9	4.3	3.24	59685	Chiefly glucose.

F. X. W. E. BELAND, INSPECTOR.

.....	.....	.....	.....	Molasses	.....	60764	Molasses.
.....	.....	.....	.....	"	.....	60765	"
.....	.....	.....	.....	"	.....	60766	"
.....	.....	.....	.....	"	.....	60767	"
.....	.....	.....	.....	"	.....	60768	"
Fancy .....	.....	.....	.....	"	.....	60769	"
.....	.....	.....	.....	"	.....	60770	"
.....	.....	.....	.....	"	.....	60771	"
Fancy Barbadoes .....	.....	.....	.....	"	.....	60772	"
" " .....	.....	.....	.....	"	.....	60773	"

N. CADIEUX, T. GENDREAU, ALPH. PELLETIER, TEMP. INSPECTORS

.....	.....	.....	.....	Molasses	.....	3746	Molasses
.....	.....	.....	.....	"	.....	3747	"
.....	.....	.....	.....	"	.....	3748	"
.....	.....	.....	.....	"	.....	3749	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC PROVINCE—

1915.								
Jan. 25	Table Syrup	3758	Dodier & Crete, Levis.	3 tins.	45	.....	J. B. Renaud, Quebec.	
" 26	"	3763	G. & E. Couture, Levis	3 "	45	Canada Starch Co., Cardinal.		
" 27	"	3765	J. A. Gagnon & fils, Levis.	3 "	45	"	"	
" 29	"	3774	O. Lacroix, Quebec.	3 "	45	"	"	
Feb. 2	"	3781	P. G. Turgeon, Quebec	3 "	45	"	"	
" 3	"	3784	Boyer & Son, Quebec.	3 "	45	"	"	
" 4	"	3788	A. Boily, Quebec.	3 "	36	"	"	
" 6	Sirop Table.	3501	Arthur Fradette, Armagh.	1 pinte	30	"	"	
" 6	"	3502	Onesime Noel, Armagh	1 "	30	St. Lawrence Starch Co., Ltd.		
" 8	"	3508	Arthur Ursinault, St. Gervais.	3 tins.	45	Imperial Syrup Co., Ltd., Montreal.		
" 9	"	3510	J. B. Lacroix, St. Charles.	3 "	45	Canada Starch Co., Edwardsburg.		
" 9	"	3512	J. H. Couture, St. Charles.	3 chopin.	35	"	"	
" 9	"	3517	J. A. Lemieux, St. Michel.	6 lbs.	42	"	"	
" 9	"	3519	Louis Corriveau, St. Michel.	6 "	45	"	"	
" 10	"	3523	Eugene Bolduc, St. Valier.	3 tins.	30	Imperial Sugar Co., Montreal.		
" 1	"	262	Cie de Construction & Bois, Ste. Agathe des Monts.	3 "	45	Edwardsburg.....		
" 1	"	263	Dane N. Fournelle, Ste. Agathe des Monts.	3 "	45	"		
" 1	"	261	Noe Forget, Ste. Agathe des Monts.	3 "	36	"		
Jan. 20	Sirop de Table.	2736	L. G. Fournier, Montmagny.	3 tins.	60	Canada Starch Co., Cardinal.		
" 27	"	2740	Phileas Letourneau & Cie, St. Pierre, Co. Montmagny.	3 "	60	"	Carrier & fils, Levis.	
Feb. 1	Sirop Doré.	56442	H. J. Serois & Cie, Cacouana.	3 "	90	.....	T. Langlois, Fraserville.	
" 3	Sirop Blé-dinde.	56444	Philodime Michaud, Isle Verte.	3 "	45	N. Rioux, Quebec		

DISTRICT OF THREE RIVERS—

Jan. 16	Sirop de Table.	3911	V. H. Ducharme, St. Felix.	5 lbs.	28	Canada Starch Co., Cardinal.		
" 18	"	3912	Joseph Desfresne, Joliette.	3 cans	33	"	"	

SESSIONAL PAPER No. 14

TABLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Water.	Ash.	Polarization.			Cane sugar.		
				Direct.	Invert.	Differ- ence.			

Concluded.

.....	See	Sample	Nos.	3763	64694	.....	...	3758	Chiefly glucose.
.....	76.00	24.00	0.62	+151.2	+147.6	3.6	2.7	3763	"
.....	See	Sample	Nos.	3763	64694	.....	.....	3765	"
.....		"		3763	64694	.....	.....	3774	"
.....		"		3763	64694	.....	.....	3781	"
.....		"		3763	64694	.....	.....	3784	"
.....		"		3763	64694	.....	.....	3788	"
Crown Brand.....		"		3763	64694	.....	.....	3501	"
.....		"		63900	52100	.....	.....	3502	"
.....	74.05	25.95	2.80	+ 81.0	+38.5	42.5	32.1	3508	Cane sugar and glu- cose.
Crown Brand.....	See	Sample	Nos.	3763	64694	.....	.....	3510	Chiefly glucose.
.....		"		3763	64694	.....	.....	3512	"
.....		"		3763	64694	.....	.....	3517	"
Crown Brand.....		"		3763	64694	.....	.....	3519	"
.....	78.95	21.05	2.68	+101.6	+ 64.7	36.9	27.8	3523	Cane sugar and glu- cose.
.....	See	Sample	Nos.	3763	64694	.....	.....	262	Chiefly glucose.
.....		"		3763	64694	.....	.....	263	"
.....		"		3763	64694	.....	.....	264	"
.....	See	Sample	Nos.	3763	64694	.....	.....	2736	Chiefly glucose.
.....		"		3763	64694	.....	.....	2740	"
.....		"		66844	63993	.....	.....	26442	Cane sugar syrup.
.....		"		3763	64694	.....	.....	26441	Chiefly glucose.

L. V. P. LAVALLEE, INSPECTOR.

.....	See	Sample	Nos.	3763	64694	.....	.....	3911	Chiefly glucose.
.....		"		3763	64694	.....	.....	3912	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF THREE RIVERS—

1915.							
Jan. 19	Sirop de Table.	3913	Joseph Bordeleau, Joliette.	3 cans	45	Canada Starch Co., Cardinal.	.....
" 20	" ..	3914	W. M. Perrault, Joliette.	3 "	39	" "	.....
" 20	" ..	3915	J. A. Boisvert, Joliette	3 "	50	.....	Chevalier & Pouliot, Joliette.
" 21	" ..	3916	W. H. Lacasse, L'Assomption.	3 "	39	Canada Starch Co., Cardinal.	.....
" 21	" ..	3917	Edmund Lafortune, L'Assomption.	3 "	36	" "	.....
" 21	" ..	3918	Theodore Foisy, L'Assomption.	3 "	36	" "	.....
" 20	" ..	3919	C. Barette, Joliette...	3 "	36	" "	.....
" 27	" ..	3920	J. B. Rivest, Joliette..	3 "	36	" "	.....

DISTRICT OF EASTERN TOWNSHIPS—

Feb. 9	Sirop de Table.	1787	A. W. Beausoleil, Richmond Est.	2 lbs.	15	St. Lawrence Refinery, Ltd., Montreal.	.....
" 9	Sirop Barbadoes.	1788	H. Pepin & fils, Warwick.	1 pint	10	Dom. Molasses Co., Montreal.	.....
" 9	Sirop de Blé-dinde.	1789	E. W. S. Gibson, Danville.	2 lbs.	15	Canada Starch Co., Cardinal.	.....
" 10	" "	1790	P. Tourigny & fils, Victoriaville.	5 "	50	" "	.....
" 11	Table Karo	1791	Woodman & McKee, Coaticook.	2 "	15	Corn Products Refining Co., New York.	.....
" 16	Table Crown	1792	H. Lanctot & fils, Sherbrooke.	2 "	12	Canada Starch Co., Cardinal.	.....
" 17	Table Lily White.	1793	F. W. B. Melloon, Rock Island.	3 lbs.	25	Can. Starch Co., Cardinal.	.....
" 17	Table Karo.	1794	Gosselin & Paradis, Magog.	3 cans.	45	Corn Products Refining Co., New York.	.....
" 18	Table de Cannes.	1795	Tenny & Boudreau, Waterloo.	3 "	45	St. Lawrence Refining, Ltd., Montreal.	.....
" 25	Table de Table.	1796	H. Messier, St. Hyacinthe.	2 lbs.	13	Can. Starch Co., Cardinal.	.....

DISTRICT OF MONTREAL

Jan. 28	Table Syrup	62671	J. A. Seguin, 34 Esbel st., Verdun.	3 tins.	39	Canada Starch Co. ....	.....
" 28	" ..	62672	J. E. Parent, 113 Esbel st., Verdun.	3 "	60	A. Lyle & Son. ....	.....
Feb. 2	" ..	62673	Dionne & Dionne, 4120 St. Cath. st. W., Westmount.	3 "	45	Corn Products Refining Co.	.....
" 12	" ..	62674	Hudon, Hebert & Cie., Montreal.	3 "	35	St. Lawrence Sugar Refining Co.	.....
Mar. 9	" ..	62675	Canada Maple Exchange, 101 Parthenais st., Montreal.	3 "	30	Vendors. ....	.....

SESSIONAL PAPER No. 14

TABLE SYRUP.

Inspector's Report. (Is not an Expression of opinion.)	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Total Solids.	Water.	Ash.	Polarization.					Cane Sugar.
				Direct.	Invert.	Differ- ence.			

Concluded.

	p. c.	p. c.	p. c.				p. c.		
	See	Sample	Nos.	3763	64694			3913	
.....		"		3763	64694			3914	Chiefly glucose.
.....		"		3763	64694			3915	" "
.....		"		3763	64694			3916	" "
.....		"		3763	64694			3917	" "
.....		"		3763	64694			3918	" "
.....		"		3763	64694			3919	" "
.....		"		3763	64694			3920	" "

J. C. ROULEAU, INSPECTOR.

.....	See	Sample	Nos.	66537	64693			1787	Cane sugar and glu- cose.
Barbadoes.....				Molasses				1788	Molasses.
Corn Syrup.....	See	Sample	Nos.	3763	64694			1789	Chiefly glucose.
".....		"		3763	64694			1790	" "
Karo.....		"		66845	64691			1791	" "
Crown Brand.....		"		3763	64694			1792	" "
Lily White.....		"		66847	63991			1793	" "
Karo.....		"		66845	64691			1794	" "
.....		"		66537	64693			1795	Cane sugar and glu- cose.
.....				3763	64694			1796	Chiefly glucose.

D. J. KEARNEY, INSPECTOR.

Crown Brand.....	See	Sample	Nos.	3763	64694			62671	Chiefly glucose.
Lyle's Golden Syrup.....				66844	63993			62672	Cane sugar syrup.
Karo Brand.....	74 20	25 80	0 91	142 4	140 0	3 4	2 1	62673	Chiefly glucose.
Crystal Diamond.....	See	Sample	Nos.	66537	64693			62674	Cane sugar and glu- cose.
Small's Standard.....	67 05	32 95	0 01	66 5	20 7	87 2	66 7	62675	Cane sugar syrup.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF MONTREAL—

1915.							
Mar. 9	Table Syrup	62676	A. Beaudoin, 132 Delorimier st., Montreal.	3 tins.	39	Canada Starch Co., Ltd.	
" 15	" ..	62677	F. S. Potvin, 38 St. Edward st., Montreal.	3 "	60		L. T. Prairie, Montreal.
" 16	" ..	62678	A. Picard, 97 Carrière st., Montreal.	3 lbs.	35		P. Bastien, Montreal.
" 16	" ..	62679	N. Drouin, 678 Drolet st., Montreal.	3 tins.	36	Maples Ltd., Toronto	
" 17	" ..	62680	Fraser, Viger & Co., 309 St. James st., Montreal.	3 "	60	A. Lyle & Son	

## DISTRICT OF VALLEYFIELD—

Feb. 19	Table Syrup	58251	Richer & Page, Valleyfield.	3 tins.	36	Canada Starch Co.	
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## DISTRICT OF OTTAWA—

Jan. 28	Table Syrup	63577	John Hughes, Prescott.	2 lbs.	15	Canada Starch Co., Cardinal.	Mrs. ....
" 28	" ..	63578	Doyle Bros., Prescott.	3 tins.	45	St. Lawrence Sugar Refiners Ltd., Montreal	E. Gilmour, Brockville.
Feb. 4	" ..	63579	D.G. Cowan, 1227 Bank st., Ottawa.	3 "	30	A. Lyle & Sons, London, Eng.	
" 4	" ..	63580	Geo. H. Stoate, 1117 Bank st., Ottawa.	2 lbs.	15	St. Lawrence Starch Co., Ltd.	
Feb. 8	" ..	63581	A. E. Rea Co., Ltd., Ottawa.	3 tins.	45	Edwardsburg Starch Co., Ltd., Cardinal.	
" 8	" ..	63582	" ..	3 "	45	Westburn Sugar Refiners, Ltd., Greenock, Scotland.	

## DISTRICT OF KINGSTON—

Feb. 1	Table Syrup	66536	W. E. Hopkinson, Kingston.	3 tins.	45	Canada Starch Co., Cardinal.	
" 3	" ..	66537	W. J. Nesbitt, Kingston.	3 "	45	St. Lawrence Sugar Refineries, Montreal.	
" 3	" ..	66538	J. Cullen, Kingston.	3 "	45	" ..	
" 3	" ..	66539	C. Saunders, Kingston.	3 "	45	Canada Starch Co., Cardinal.	
" 3	" ..	66540	C. H. Pickering, Kingston.	3 "	45	" ..	
" ..	" ..	66541	Anderson Bros., Kingston.	3 "	45	" ..	

SESSIONAL PAPER No. 14

TABLE SYRUP.

Inspector's Report. (Is not an Expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Water.	Ash.	Polarization.			Cane sugar.		
				Direct.	Invert.	Differ- ence.			

Concluded.

	p. c.	p. c.	p. c.				p. c.	
Crown Brand.....	See	Sample	Nos.	3763	64694	.....	62676	Chiefly glucose.
Yum Yum Bee Syrup.	85.20	14.80	0.19	+ 75.6	+ 49.6	26.0	19.6	62677 Cane sugar and glu- cose.
Sweet Sixteen.....	77.45	22.55	1.07	+129.6	+114.8	14.8	11.1	62678 Glucose and cane su- gar.
Golden Bell. ....	76.75	23.25	1.86	+111.6	+ 88.0	23.6	17.8	62679 Cane sugar and glu- cose.
Lyle's Golden Syrup..	See	Sample	Nos.	66844	63993	.....	62680	Cane sugar syrup.

J. J. COSTIGAN, ACTING INSPECTOR.

Crown Brand.....	See	Sample	Nos.	3763	64694	.....	58251	Chiefly glucose.
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J. A. RICKEY, INSPECTOR.

Crown Brand Corn Syrup.	See	Sample	Nos.	3763	64694	.....	63577	Chiefly glucose.
Crystal Diamond. ....		"		66537	64693	.....	63578	Cane sugar and glu- cose.
Lyle's Golden Syrup..		"		66844	63993	.....	63579	Cane sugar syrup.
Bee Hive, Corn Syrup.		"		63900	52100	.....	63580	Chiefly glucose.
Lily White Corn Syrup.	See	Sample	Nos.	66847	63991	.....	63581	Chiefly glucose.
Golden Syrup.....	81.95	18.05	1.28	+ 21.8	- 21.3	43.1	32.5	63582 Cane sugar syrup.

JAMES HOGAN, INSPECTOR.

.....	See	Sample	Nos.	3763	64694	.....	66539	Chiefly glucose.
.....	78.95	21.05	4.30	+ 69.3	+ 34.0	35.3	26.6	66537 Cane sugar and glu- cose.
.....	See	Sample	Nos.	66537	64693	.....	66538	
.....		"		3763	64694	.....	66539	Chiefly glucose.
.....		"		3763	64694	.....	66540	"
.....		"		3763	64694	.....	66541	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF KINGSTON—							
1915.							
Feb. 15	Table Syrup	66542	A. Kellaway, Belleville.	3 tins.	39	Canada Starch Co., Cardinal.	.....
" 15	" ..	66543	J. H. P. Young, Belleville.	3 "	45	" "	.....
" 16	" ..	66544	T. McIntosh, Cobourg.	3 "	45	" "	.....
" 16	" ..	66545	W. P. Platt, Cobourg.	3 "	45	" "	.....
DISTRICT OF TORONTO—							
Feb. 16	Table Syrup	64690	James Whinster, Aurora.	3 cans.	45	.....	Perkins & Co., Toronto.
" 16	" ..	64691	C. S. McCauley, Newmarket.	3 "	45	Corn Products Refining Co., New York.	.....
" 17	" ..	64692	G. F. McDonald, Sutton.	3 "	45	St. Lawrence Starch Co., Ltd.	.....
" 18	" ..	64693	J. E. Beaton, Oshawa.	3 "	45	St. Lawrence Sugar Refineries, Montreal.	.....
" 18	" ..	64694	Malkinson Bros., Whitby.	3 "	45	Canada Starch Co.	.....
" 22	" ..	64695	T. J. Midland, 132 King St. E., Toronto.	3 "	30	A. Lyle & Son, London, Eng.	.....
" 22	" ..	64696	A. Provan, 134 King St. E., Toronto.	3 "	30	Dom. Molasses Co., Ltd., Halifax.	.....
" 22	" ..	64697	T. Eaton Co., Ltd., Yonge and Queen Sts., Toronto.	3 "	45	St. Lawrence Starch Co., Port Credit	.....
" 22	" ..	64698	T. P. Lobban Stores, 228 Queen st. E., Toronto.	3 cans.	45	Maples, Ltd., Toronto.	.....
" 24	" ..	64699	Ferguson Giles, 822 Yonge st., Toronto.	3 bots.	45	.....	.....
DISTRICT OF HAMILTON—							
Mar. 2	Table Syrup	66844	J. H. Laird, Galt.	3 cans.	30	.....	Unknown .....
" 2	" ..	66845	Anderson & Beattie, Hespeler.	3 "	45	Corn Products Refining Co., New York.	W. T. Wickham, Toronto.
" 3	" ..	66846	S. B. Bricker & Co., Waterloo.	3 "	38	.....	Randall & Roos, Berlin.
" 3	" ..	66847	Durke & Co., Berlin.	3 "	50	Edwardsburg Starch Co., Cardinal.	.....
" 10	" ..	66848	J. L. Charles, Burford.	3 "	45	.....	Eby Blain, Toronto.
" 10	" ..	66849	G. R. Millard, Brantford.	3 "	45	.....	Geo. Watt & Sons, Ltd., Brantford.
" 11	" ..	66850	Book Grocery Store, Beamsville.	3 "	45	.....	Balfour Smye & Co., Hamilton
" 12	" ..	66851	Powell & Co., Ltd., Dundas.	3 "	45	.....	Geo. E. Bristol & Co., Hamilton
" 12	" ..	66852	R. Clark, Dundas.	3 "	47	.....	"
" 13	" ..	66853	E. H. Soules, 99 John st. South, Hamilton.	3 "	45	St. Lawrence Sugar Refineries, Montreal.	.....



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TABLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							Nu. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Water.	Ash.	Polarization.			Cane Sugar.		
				Direct.	Invert.	Differ- ence.			

Concluded.

	p. c.	p. c.	p. c.				p. c.		
.....	See	Sample	Nos.	3763	64694	.....	66542	Chiefly glucose.	
.....		"		3763	64694	.....	66543	"	
.....		"		3763	64694	.....	66544	"	
.....		"		3763	64694	.....	66545	"	

H. J. DAGER, INSPECTOR.

Sailor Boy.....	76 95	23 95	0 68	+149 6	+146 3	3 3	2 5	64690	Chiefly glucose.
Karo.....	76 30	23 70	0 43	+151 4	+139 3	12 1	9 1	64691	"
Bee Hive.....	See	Sample	Nos.	63900	52100	.....	.....	64692	"
Crystal Diamond....	73 70	21 30	4 28	+ 69 6	+ 34 3	35 3	26 6	64693	Cane sugar and glucose.
Crown Brand.....	77 20	22 80	0 79	+156 6	+152 5	4 1	3 1	64694	Chiefly glucose.
Lyle's Golden Syrup..	See	Sample	Nos.	66844	63993	.....	.....	64695	Cane sugar syrup.
Golden Sling.....		"		53185	52104	.....	.....	64696	"
White Clover.....	77 40	22 60	0 48	+142 4	+132 0	12 4	9 4	64697	Chiefly glucose.
Golden Belle.....	76 60	23 40	1 44	+125 6	+110 7	14 9	11 2	64698	"
Bottled by Vendor....	65 80	34 20	0 18	+ 63 8	+ 20 0	83 8	63 2	64699	Cane sugar syrup.

H. J. DAGER, ACTING INSPECTOR.

Lyle's Golden Syrup.	82 05	17 95	1 87	+ 19 9	- 23 0	42 9	32 3	66844	Cane sugar syrup.
Karo.....	76 30	23 70	0 44	+151 4	+139 5	11 9	9 0	66845	Chiefly glucose.
Bee Hive.....	See	Samples	Nos.	63900	52100	.....	.....	66846	"
Lily White.....	76 70	23 30	0 19	+148 8	-131 1	17 7	13 3	66847	Glucose and cane syrup.
Caramel Pan Cake	69 70	30 30	0 54	+117 9	+ 92 4	24 8	18 7	66848	"
Crown Brand..	See	Samples	Nos.	3763	64694	.....	.....	66849	Chiefly glucose.
Tartan Brand.....	76 10	23 90	0 68	+155 6	+150 7	4 9	3 7	66850	"
Sweet Sixteen.....	74 50	25 50	1 25	+111 4	+ 90 6	20 8	15 7	66851	Glucose and cane syrup.
Cane Sugar Syrup.....	78 80	21 20	0 97	+ 9 2	- 23 0	32 2	24 3	66852	Cane sugar syrup.
Crystal Diamond.....	See	Samples	Nos.	66857	64693	.....	.....	66853	Cane sugar and glu- cose.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF WINDSOR—

1915.							
Feb. 9	Table Syrup	63990	Moylan & Moylan, St. Thomas.	3 tins.	39	St. Lawrence Starch Co.	
" 9	"	63991	D. H. McIntyre, St. Thomas.	3 "	45	Edwardsburg Starch Co.	
" 9	"	63993	R. H. Cook, St. Thomas	3 "	38	A. Lyle & Sons, London, Eng.	
" 9	"	63995	Chas. C. Raison, St. Thomas.	3 "	40	American Sugar Refining Co.	
" 16	"	54704	R. McIntosh, London	3 "	39	St. Lawrence Starch Co.	
" 16	"	54705	H. Beren, London . . .	3 "	30	A. Lyle & Sons, London, Eng.	
" 16	"	54709	Wyckoff & Gafney, London.	3 "	45	Can. Starch Co., Cardinal.	
" 16	"	54712	Alfred Cane, London South.	3 "	45	Am. Sugar Refining Co., Jersey City.	
" 18	"	54719	W. R. Butcher, St. Marys.	3 "	30	John Walker & Co., Greenock, Scot.	

DISTRICT OF MANITOBA—

Feb. 1	Table Syrup	53181	H. Woodley, 470 Burrows, Winnipeg.	3 cans.	45	Corn Products Refining Co., New York.	Macdonald Consolidated, Winnipeg.
" 1	"	53182	" " "	2 lbs.	25	A. Lyle & Son, London, Eng.	"
" 1	"	53183	S. J. Deroche, Burrows ave., Winnipeg.	3 tins.	40	St. Lawrence Starch Co.	A. McDonald, Winnipeg.
" 1	"	53184	" " "	3 "	40	Edwardsburg Starch Co., Ltd., Cardinal.	
" 2	"	53185	Wilton & Conley, 1322 Main st., Winnipeg.	3 "	60	Domimon Molasses Co., Halifax.	
" 2	"	53186	" " "	3 "	45	Edwardsburg Starch Co., Cardinal.	
" 2	"	53187	Moffett & Douglas, Selkirk ave., Winnipeg.	3 "	45	St. Lawrence Starch Co., Ltd.	
" 2	"	53188	" " "	3 "	65	A. Lyle & Sons, London, Eng.	
" 3	"	53189	H. Carter, St. James st., Winnipeg.	3 "	45	Edwardsburg Starch Co., Ltd., Cardinal.	
" 3	"	53190	N. Posner, St. James st., Winnipeg.	3 "	45	" "	

DISTRICT OF SASKATCHEWAN—

Jan. 26	Table Syrup	66301	Halliday & Carlisle, Indian Head.	3 cans.	75	A. Lyle & Sons . . . . .	
" 27	"	66310	Claxton Bros. & Co., Grenfell.	3 "	75	" "	Jobin & Marrin, Winnipeg.
" 27	"	66312	Greenless & Sons, Grenfell.	3 "	60	St. Lawrence Starch Co.	"
" 28	"	66319	Whitewood Supply Co., Whitewood.	3 "	45	" "	Brandon Grocery Co.

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TABLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Water.	Ash.	Polarization.			Cane sugar.		
				Direct.	Invert.	Differ- ence.			

JNO. TALBOT, INSPECTOR.

	p. c.	p. c.	p. c.				p. c.		
Bee Hive Corn Syrup..	79.35	20.65	0.82	+155.2	+150.5	4.7	3.5	63990	Chiefly glucose.
Lily White Corn Syrup	77.10	22.90	0.22	+149.4	+131.8	17.6	13.3	63991	Glucose and cane syrup.
Lyle's Golden Syrup..	81.35	18.65	1.67	+ 19.9	- 22.8	42.7	32.2	63993	Cane sugar syrup.
Dom. Pure Cane Sugar Syrup.	See	Samples	Nos.	54712	66852	.....	.....	63959	"
Bee Hive.....	"	"	"	63900	52100	...	.....	54704	Chiefly glucose.
Lyle's Golden Syrup..	"	"	"	66844	63993	....	.....	54705	Cane sugar syrup.
Crown Brand, Corn Syrup.	"	"	"	3763	64694	..	.....	54709	Chiefly glucose.
Crystal Diamond, Pure Cane Syrup.	78.60	21.40	0.94	+ 9.8	- 23.1	32.9	24.8	54712	Cane sugar syrup.
Walker's Royal Scotch Golden Syrup.	80.50	19.50	3.33	+ 23.2	- 27.5	50.7	38.3	54719	"

A. C. LARIVIERE, INSPECTOR.

Karo.....	74.60	25.40	1.43	+136.6	+ 130.2	6.4	4.8	53181	Chiefly glucose.
.....	See	Samples	Nos.	66844	63993	....	.....	53182	Cane sugar syrup.
Bee Hive.....	"	"	"	63900	52100	...	.....	53183	Chiefly glucose.
Corn Syrup.....	"	"	"	3763	64694	...	.....	53184	"
Pure Cane Sugar Syrup	80.65	19.35	3.28	+ 37.4	- 13.9	55.1	41.5	53185	Cane sugar syrup.
Corn Syrup .....	See	Samples	Nos.	3763	64694	...	.....	53186	Chiefly glucose.
.....	"	"	"	63900	52100	...	.....	53187	"
Lyle's Golden Syrup ..	"	"	"	66844	63993	....	.....	53188	Cane sugar syrup.
Corn Syrup .....	"	"	"	3763	64694	...	.....	53189	Chiefly glucose.
" .....	"	"	"	3763	64694	...	.....	53190	"

L. H. HALL, INSPECTOR

Lyle's Golden Syrup ..	See	Samples	Nos.	66844	63993	....	.....	66201	Cane sugar syrup.
.....	"	"	"	66844	63993	....	.....	66210	"
Bee Hive.....	"	"	"	63900	52100	...	.....	66217	Chiefly glucose.
.....	"	"	"	63900	52100	...	.....	66218	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF SASKATCHEWAN—

1915.							
Jan. 28	Table Syrup	66321	J. J. Knowler & Co., Whitewood.	3 cans.	60	B.C. Sugar Refining Co., Vancouver.	Codville Co., Brandon.
" 28	" ..	66323	R. D. McNaughton & Co., Moosomin.	3 "	45	Can. Starch Co., Cardinal.	.....
" 29	" ..	66327	J. P. Beauchamp & Co., Qu'Appelle.	3 "	60	Corn Products Refining Co., New York.	.....
" 29	" ..	66328	W. A. Caswell & Co., Qu'Appelle.	3 "	60	Can. Starch Co., Cardinal.	.....
Feb. 3	" ..	66347	McKinnons Ltd., Weyburn.	3 "	60	" "	Weyburn Grocery.
" 4	" ..	66350	Curry Grocery, Moose Jaw.	3 "	60	B.C. Sugar Refining Co., Vancouver.	Codville Co., Moose Jaw.

DISTRICT OF ALBERTA—

Mar. 12	Table Syrup	52100	Urquhart & Co., Lacombe.	3 tins.	20	St. Lawrence Starch Co.	A. McDonald, Edmonton.
" 16	"	52101	Lake & Co., Wetaskiwin.	3 "	75	Lyle & Sons, London, Eng.	.....
" 19	"	52102	John Irwin & Co., Calgary.	3 "	60	Can. Starch Co., Cardinal.	.....
" 19	"	52103	" "	3 "	60	B. C. Sugar Refining Co., Vancouver.	.....
" 19	"	52104	" "	3 "	60	Dominion Molasses Co., Halifax.	.....
" 19	"	52105	Pryce Jones (Canada) Ltd., Calgary.	3 "	75	B. C. Sugar Refining Co., Vancouver.	.....
" 22	"	52106	Hudson's Bay Co., Calgary.	3 "	60	" "	.....
" 22	"	52107	" "	"	"	Can. Starch Co., Cardinal.	.....
" 22	"	52108	Geo. J. Wood, Calgary.	3 "	60	Corn Products Refining Co., New York.	.....
" 22	"	52109	S. J. Freeze, Calgary.	3 "	90	B. C. Sugar Refining Co., Vancouver.	.....

DISTRICT OF ROCKY MOUNTAINS—

Feb. 1	Table Syrup	61746	Bell Trading Co., Nelson, B.C.	3 tins.	60	Kelly Confection Co., Vancouver, B.C.	.....
" 1	"	61747	" "	3 "	75	" "	.....
" 1	"	61748	" "	3 "	60	Edwardsburg Starch Co., Cardinal.	.....
" 6	"	61750	L. C. Masson, Revelstoke, B.C.	3 "	60	Kelly Confection Co., Vancouver, B.C.	.....
" 6	"	61759	G. W. Bell, Revelstoke, B.C.	3 "	75	A. Lyle & Sons, London, Eng.	.....
" 10	"	61760	The S. A. F. E. Ltd., Salmon Arm, B.C.	3 "	60	B. C. Sugar Refining Co., Vancouver.	.....

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TABLE SYRUP.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Total Solids.	Water.	Ash.	Polarization.					Cane sugar.
				Direct.	Invert.	Differ- ence.			

Concluded.

	p.c.	p.c.	p.c.			p.c.		
	See	Samples	Nos.	52109	52103		66321	Cane sugar syrup.
		"		3763	64694		66323	Chiefly glucose.
		"		66845	64691		66327	"
Edwardsburg Brand..		"		3763	64694		66328	"
" ..		"		3763	64694		66347	"
Rogers Golden Syrup..		"		52109	52103		66350	Cane sugar syrup.

A. W. R. MARKLEY, INSPECTOR.

	78.50	21.50	0.90	+146.6	+143.2	3.4	2.6	52100	Chiefly glucose.
	See	Sample	Nos.	66844	63993			52101	Cane sugar syrup.
Corn syrup .....		"		3763	64694			52102	Chiefly glucose.
Golden Syrup .....	82.85	17.15	1.50	+ 19.1	- 17.3	36.4	27.4	52103	Cane sugar syrup.
Golden Sling.....	75.95	24.05	4.00	+ 42.6	- 13.2	55.8	42.0	52104	"
	See	Sample	Nos.	52109	52103			52105	"
Rogers Golden Syrup.		"		52109	52103			52106	"
Crown Brand.....		"		3763	64694			52107	Chiefly glucose
Karo Brand.....		"		66845	64691			52108	"
Rogers Golden Syrup.	82.90	17.10	1.46	+ 19.4	+ 17.4	36.8	27.7	52109	Cane sugar syrup.

THOS. PARKER, INSPECTOR.

Sugar Drops .....	75.95	24.05	2.52	+ 87.6	+ 44.9	42.7	32.2	61740	Cane sugar and glu- cose.
Best Blend.....	76.60	24.40	1.87	+ 96.0	+ 44.4	51.0	30.0	61741	"
Crown.....	See	Sample	Nos.	3763	64694			61742	Chiefly glucose.
Confection Brand .....	75.60	24.40	2.80	+ 160.4	+ 77.4	23.0	17.2	61743	Cane sugar and glu- cose.
	See	Sample	Nos.	66844	63993			61744	Cane sugar syrup.
Rogers .....		"		52109	52103			61745	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF ROCKY MOUNTAINS—

1915.							
Feb. 10	Table Syrup	61761	The S. A. F. E. Ltd., Salmon Arm, B.C.	3 tins.	60	West Sugar Refineries, Greenock, Scot.	Leesor, Dickie & Gross, Vancouver
" 15	"	61768	Munn Bros., Kamloops, B.C.	3 "	45	St. Lawrence Starch Co., Prescott.	.....
Mar. 16	"	61785	Hunter Bros., Rossland, B.C.	3 "	1.35	Ramsay's, Vancouver..	.....
" 16	"	61789	Agnew & Co., Rossland, B.C.	3 "	75	A. Lyle & Sons, London, Eng.	.....

DISTRICT OF VANCOUVER—

Jan. 26	Table Syrup	55178	Woodward Dept. Stores, Vancouver, B.C.	1 tin.	15	B. C. Sugar Refining Co., Vancouver.	.....
" 26	"	55179	Edgett Stores Ltd., Vancouver, B.C.	1 "	15	Can. Starch Co., Cardinal.	.....
" 26	"	55180	H. Newell, 575 Hastings St. E., Vancouver, B.C.	1 "	15	Ramsays Bros. & Co., Ltd., Vancouver.	.....
" 26	"	55181	Exenos & Daldas, 800 Hastings St. E., Vancouver, B.C.	1 "	15	A. Lyle & Sons, London, Eng.	.....
" 26	"	55182	John Gogowris, 546 Princess Ave., Vancouver, B.C.	1 "	15	Kelly Confection Co. Ltd., Vancouver.	.....
" 27	"	55183	Peter Torrance, 898 Keefer St., Vancouver, B.C.	1 "	15	Corn Products Refining Co., New York.	.....
" 28	"	55184	David Spencer Ltd., Vancouver, B.C.	1 "	15	St Lawrence Starch Co.	.....
" 28	"	55185	Hudson's Bay Co., Vancouver, B.C.	1 "	30	Pacific Coast Syrup Co., San Francisco.	.....
" 29	"	55186	C. A. Welch Ltd., 681 Columbia St., New Westminster, B.C.	1 "	35	Ramsay Bros. & Co., Ltd., Vancouver.	.....
" 29	"	55187	" " "	1 "	30	Kelly Confections Co. Ltd., Vancouver.	.....

DISTRICT OF VICTORIA—

Feb. 9	Table Syrup	62041	Windsor Grocery Co., Victoria, B.C.	1 pt.	20	B.C. Sugar Refining Co., Vancouver.	.....
" 9	"	62042	" " "	1 qt.	35	Pacific Coast Syrup Co., San Francisco.	.....
" 9	"	62045	West End Grocery Co. Ltd., Victoria, B.C.	1 tin.	20	A. Lyle & Sons, London Eng.	.....
" 10	"	62047	F. E. Plummer, Victoria, B.C.	2 lb.	25	.....	R. P. Rithet & Co., Victoria., B.C.

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TABLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Total Solids.	Water.	Ash.	Polarization.					Cane Sugar.
				Direct.	Invert.	Differ- ence.			

Concluded.

	p. c.	p. c.	p. c.				p. c.		
.....	80.75	19.25	0.75	+ 27.9	- 14.4	42.3	31.9	61761	"
.....	See	Sample	Nos.	63900	52100	.....	.....	61768	Chiefly glucose.
Imperial.....	66.75	33.25	0.10	+ 62.8	- 20.8	83.6	63.1	61785	Cane sugar syrup.
.....	See	Sample	Nos.	66844	63993	.....	.....	61789	"

E. J. MORGAN, INSPECTOR.

Rogers Golden Syrup.	See	Sample	Nos.	52109	52103			55178	Cane sugar syrup.
Crown Brand, Corn Syrup,	"	"	"	3763	64694	.....	.....	55179	Chiefly glucose.
Manilla Golden Drops	77.30	23.30	1.48	+ 98.7	+ 40.8	57.9	43.6	55180	Cane sugar and glu- cose.
Lyles Golden Syrup.	See	Sample	Nos.	66844	63993	.....	.....	55181	Cane sugar syrup.
Confection Brand Corn and Sugar Refiner Syrup.	72.60	27.40	2.66	+ 108.6	+ 95.0	13.0	9.8	55182	Chiefly glucose.
Karo.....	See	Sample	Nos.	66845	64691	.....	.....	55183	"
Bee-Hive, 90% Corn, 10% Cane.	"	"	"	63900	52100	.....	.....	55184	"
Tea Garden Brand, Sugar and Corn Syrup	74.90	25.10	1.55	+ 89.1	+ 33.2	56.2	42.3	55185	Cane sugar and glu- cose.
Imperial Brand	64.95	35.05	0.22	+ 50.0	- 21.0	71.0	53.5	55186	Cane sugar syrup.
Best Blend, Corn and Sugar Cane Syrup.	74.65	25.35	2.26	+ 80.0	- 23.8	56.2	42.3	55187	Cane sugar and glu- cose.

D. O. SULLIVAN, INSPECTOR.

Rogers Golden Syrup.	See	Sample	Nos.	52109	52103			62041	Cane sugar syrup.
Tea Garden Brand	74.45	25.55	1.33	+ 82.0	+ 30.6	52.0	39.2	62042	Cane sugar and glu- cose.
Lyles Golden Syrup	See	Sample	Nos.	66844	63993	.....	.....	62043	Cane sugar syrup.
" "	"	"	"	66844	63993	.....	.....	62045	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VICTORIA—

1915.								
Feb.	10	Table Syrup	62050	Henry W. Driver, Gates St., Victoria, B.C.	2 lb.	15	Can. Starch Co., Cardi- nal.	...
"	11	"	62052	Fairfield Grocery, Vic- toria, B.C.	2 "	15	B.C. Sugar Refining Co., Vancouver.	.....
"	11	"	62054	Linden Grocery, Vic- toria, B.C.	2 "	15	Corn Products Refining Co., New York.	.....
"	11	"	62055	" "	2 "	15	St. Lawrence Starch Co., Port Credit.	.....
"	12	"	62060	Dixi H. Ross, Vic- toria, B.C.	1 qt.	35	Pacific Coast Syrup Co., Seattle.	.....
"	12	"	62064	Copas & Young, Vic- toria, B.C.	1 "	25	Ramsay Bros. & Co., Vancouver.	.....



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TABLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids.	Water.	Ash.	Polarization.			Cane sugar.		
				Direct.	Invert.	Differ- ence.			

Concluded.

	p. g.	p. c.	p. c.				p. c.	
	See	Sample	Nos.	3765	64694	.....	.....	62050
Crown Brand. ....								Chiefly glucose,
Rogers Golden Syrup.	"	"	"	52100	52103	.....	.....	62052 Cane sugar syrup.
Karo ....	"	"	"	66845	64691	....	...	62054 Chiefly glucose.
Bee Hive.....	"	"	"	63900	52100	....	.....	62055 " "
.....	73 75	26 25	1 12	+ 91 6	+36 1	55 5	41 9	62060 Cane sugar and glu- cose.
Manilla Golden Drips.	72 00	28 00	1 96	+ 73 2	+ 8 1	65 1	49 1	62064 Cane sugar and some glucose

## APPENDIX L.

## BULLETIN No. 321—LIME JUICE.

OTTAWA, September 1, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister, Inland Revenue.

SIR,—I beg to hand you herewith a report upon eighty-three (83) samples purchased as Lime Juice by our inspectors in April, May and June of this year. This inspection was undertaken in consequence of complaints to the effect that this article was extensively adulterated, in the sense of being much below the legal standards for Lime Juice.

By Order in Council of 28th January last, the following standards were legalized, as under Section 26 of the Adulteration Act.

Lime Juice, Lime Fruit Juice, is the freshly expressed juice of the ripe fruit of Citrus (various species; and has a specific gravity at 20° C. of not less than 1.030 and not greater than 1.040, and contains not less than eight (8) per cent of solids and not less than seven (7) per cent of free citric acid. Its optical activity (rotatory power to polarized light) lies between the limits of +0.5° and -1.0° of the Soleil-Ventzke scale, when observed in a column of 200 mm. length at 20° C.

These standards only differ from those established by Order in Council of 11th February, 1911, in the following particulars:—

1. Recognizes various species of Citrus instead of *C. limetta* only, as sources.
2. Fixes 8 per cent solids instead of 10 per cent as in the earlier standards.
3. An optical activity between the limits of +0.5° and -1.0° is recognized, instead of +0.5° to -0.5° as in the Order in Council of 1911.

These changes have the effect of making the standards less exacting than formerly, in consequence of which any failures to meet existing standards are less excusable.

The results of this inspection may be summarized as follows:—

Found genuine . . . . .	40	samples.
Found nearly genuine, and passed as acceptable ..	14	"
Found not sold as Lime Juice . . . . .	2	"
Found adulterated, as departing notably from the legal standard . . . . .	27	"
	—	
Total . . . . .	83	"

It will be noted that 43 samples contain preservatives, benzoic, salicylic or sulphurous acids. In none of these cases is any statement declaring the presence of a preservative, made upon the label. This is in violation of Order in Council dated 4th April, 1914. (published as Circular G. 1111) which requires that, preservatives of the class which includes those above named, shall be declared on the label, when

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present. This Order in Council further limits the amount of preservative which may be present, and requires that not more than one kind of preservative shall be added to any one kind of food, or to any mixture of two or more kinds of food.

The limits fixed as regards Line Juice are as follows:—

Benzoic acid:	1 part in 1,000 parts.
Salicylic acid:	1 part in 5,000 parts.
Sulphurous acid	1 part in 10,000 parts.

Three samples (55266, 66730 and 66733) violate these limits by containing more than one preservative each. Two samples (52160 and 61835) violate these limits by containing more than the permitted amount of the preservative present.

In most cases, the amount of preservative present is well within the prescribed limit, and in many cases, is properly described as a trace only, and therefore negligible.

On account of the long established usage of preservative in this article and the comparatively recent enactment of standards in regard to preservatives, I would recommend that samples otherwise genuine, be treated leniently so far as declaration is concerned; but with the understanding that, after this notification and warning all violations of departmental requirements will be strictly dealt with.

I beg to recommend publication of this report as Bulletin No. 321.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1915.							
June 25	Lime Juice...	54061	Wentzell's, Ltd., Halifax, N.S.	3 bots.	75	Howard M'fg. Co., Halifax.	Mfrs . . . . .
" 25	" . . .	54062	Knoche & Nicolle, Halifax, N.S.	3 "	75	Francis Drake, New Glasgow.	A. & W. Smith Co., Halifax.
" 25	" . . .	54063	W. P. Meyer, Halifax, N.S.	3 "	45	E. S. Tracey M'fg. Co., Halifax.	Mfr . . . . .
July 1	" . . .	54064	E. P. Theriault, Weymouth.	3 "	75	Nat. Drug and Chem. Co., St. John, N.B.	" . . . . .
" 13	" . . .	54065	B. O. Bishop, Dartmouth.	3 "	45	Howard M'fg. Co., Halifax.	Wentzell's Ltd., Halifax.

DISTRICT OF NOVA SCOTIA—

June 4	Lime Juice...	65860	A. J. Roop, New Glasgow.	3 bots.	75	L. Rose & Co., London, Eng.	.....
" 4	" . . .	65861	A. A. McDonald, New-Glasgow.	3 "	45	Nat. Drug Co., Halifax.	.....

DISTRICT OF PRINCE EDWARD ISLAND—

Apr. 30	Lime Juice...	60180	J. G. Passmore, Charlottetown.	3 bots.	36	Nat. Drug and Chem. Co., Halifax.	.....
" 30	" . . .	60181	" . . . . .	3 "	60	.....	R. E. Mutch & Co., Charlottetown.
May 7	" . . .	60182	W. W. Walker, Charlottetown.	3 "	75	L. Rose & Co., London, Eng.	.....

DISTRICT OF NEW BRUNSWICK—

May 10	Lime Juice...	66086	Nat. Drug and Chem. Co., St. John.	3 "	45	.....	Nat. Drug and Chem. Co., Montreal.
" 13	" . . .	66087	The Can. Drug Co., Ltd., St. John.	3 "	25	.....	G. P. Mitchell & Son, Halifax.
" 17	" . . .	66088	Baird & Peters, St. John.	3 "	100	.....	Nat. Drug and Chem. Co., St. John.
" 18	" . . .	66089	G. E. Barbour Co., Ltd., St. John.	3 "	30	Vendors . . . . .	.....
" 26	" . . .	66090	The Baird Co. Ltd., Woodstock	3 "	40	" . . . . .	.....

SESSIONAL PAPER No. 14

LIME JUICE.

Inspector's Report. (Is not an expression of Opinion).	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. of Juice.	Total Solids.	Acidity as Citric Acid.	Rotation (2 dm.)		

R. J. WAUGH, INSPECTOR.

		p. c.	p. c.				
.....	1-0419	8.58	5.21	+ 0.2	Trace salicylic acid.	54061	Citric acid, below standard. Adulterated.
.....	1-0278	6.74	6.02	+ 1.0	.....	54062	" " "
Gold Medal Brand..	1-0223	5.32	5.11	+ 0.5	Salicylic acid. ....	54063	" " "
.....	1-0405	9.83	8.89	- 0.1	" .....	54064	Genuine, with a preservative.
.....	1-0305	7.43	7.00	+ 0.2	Trace salicylic acid.	54065	Solids slightly low. Pass.

W. A. PETIPAS, TEMPORARY INSPECTOR.

.....	1-0357	8.48	8.15	- 0.3	.....	65850	Genuine.
.....	1-0379	9.10	8.43	- 0.4	Trace salicylic acid.	65851	"

WM. A. WEEKS, INSPECTOR.

.....	1-0383	9.14	8.47	- 0.6	Trace salicylic acid.	60180	Genuine.
.....	1-0382	9.12	8.51	- 0.4	" .....	60181	"
.....	1-0357	8.50	8.12	- 0.3	.....	60182	"

JOHN C. FERGUSON, INSPECTOR

.....	1-0359	8.64	8.12	- 0.4	.....	60080	Genuine.
.....	1-0530	12.12	10.18	+ 0.3	Salicylic acid	60087	exceptional strength.
.....	1-0350	8.38	8.61	- 0.2	.....	60088	"
.....	1-0397	9.30	8.71	- 0.4	Trace salicylic acid.	60089	"
.....	1-0392	9.30	8.61	- 0.4	.....	60090	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC CITY—

1915.							
April 20	Lime Juice...	56395	O. Lacroix, 19 rue St. Joseph, Quebec.	3 bots.	30	T. A. Lytle Co., Toronto.	Turcotte & Frere
" 20	" ..	56396	" " "	3 "	75	L. Rose, London.	J. B. Renaud & Cie.
" 20	" ..	56397	Elz. Turcotte, 74 Desfosés, Quebec.	3 "	1.50	Montserrat Co. Ltd., England.	Unknown ...
" 20	" ..	56398	" " "	3 "	75	Dalton Bros., Toronto.	" .....
" 20	" ..	56399	" " "	3 "	30	L. Rose Co. Ltd., London.	J. B. Renaud & Cie.

DISTRICT OF QUEBEC PROVINCE—

May 4	Lime Juice...	282	F. D. Hall, Ste Agathe des Monts.	3 bots.	60	L. Rose & Co. Ltd.	.....
" 22	" ..	56458	Fraserville Drug Co., Fraserville.	3 "	1.50	.....	Lymans Ltd., Montreal.
" 22	" ..	56461	Damien & Cie, Fraserville.	3 "	45	Suteliffe & Bingham, Ltd.	.....
June 1	" ..	56464	T. Therriault, Fraserville.	3 "	90	L. Rose & Co., Ltd., London.	.....

DISTRICT OF THREE RIVERS—

May 21	Lime Juice...	67957	A. C. Duff, Charlemagne.	3 bots.	75	N. D. & C. Co., Montreal.	.....
" 28	" ..	69107	Bellefeuille Giroux, Three Rivers.	3 "	1.20	L. Rose & Co., Ltd., London.	.....
" 29	" ..	69108	O. Carignan & Fils, Three Rivers.	3 "	1.05	Evan Sons, Lescher & Webb.	N. D. & C. Co., Montreal.
June 1	" ..	69114	J. A. Boisvert, Joliette...	3 "	75	L. Rose & Co., Ltd., London.	Laporte & Martin, Montreal.

DISTRICT OF MONTREAL—

May 7	Lime Juice...	62596	Vianville Cash Grocery, 89 St. Catherine street, Maisonneuve.	3 bots.	30	Green & Co., Toronto.	.....
" 17	" ..	62597	P. H. Theoret, 71 Vitre st. E., Montreal.	3 "	1.05	Finsbury Distillery Co., London.	.....
" 19	" ..	62598	The Royal George Grocery, 221 Bernard ave., Montreal.	3 "	30	L. Rose & Co., Ltd., London.	.....
June 7	" ..	62599	Dr. Champagne, 1314 Wellington st., Verdun.	3 "	45	.....	Lymans Ltd....
" 9	" ..	62600	Louis Montplaisir, 582 St. Catharine st., Maisonneuve.	3 "	45	T. A. Lytle Co., Ltd., Toronto.	.....

DISTRICT OF VALLEYFIELD—

June 9	" ..	57946	J. E. Baillargeon, Farnham.	3 bots.	60	Dalton Bros., Toronto.	.....
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SESSIONAL PAPER No. 14

LIME JUICE.

Inspector's Report (is not an expression of opinion.)	Results of Analysis.				Found.	No of Sample.	Remarks, and Opinion of the Chief Analyst.
	Sp. gr. of Juice.	Total solids.	Acidity as citric acid.	Rotation (2 dm.)			

F. X. W. E. BELAN, INSPECTOR.

		p. c.	p. c.				
.....	1-0339	7.90	7.17	+ 0.6	Benzoic acid.....	56395	Genuine, with a preservative.
.....	1-0364	8.72	8.12	- 0.5	.....	56396	Genuine.
.....	1-1258	31.08	1.99	-37.8	.....	56397	Sugared and watered. Sold as a cordial and not as lime juice.
.....	1-0419	9.78	7.49	- 2.2	Benzoic acid .....	56398	Genuine, with a preservative.
.....	1-0348	8.36	7.98	- 0.4	.....	56399	Genuine.

N. CADIEUX AND A. PELLETIER, TEMPORARY INSPECTORS.

.....	1-0356	8.40	7.91	0.0	.....	282	Genuine.
.....	1-0235	6.90	6.40	+ 0.1	Salicylic acid.....	56458	Solids and citric acid below standard. Adulterated.
.....	1-0262	6.32	6.02	- 0.3	" .....	56461	" "
.....	1-0349	8.49	7.91	- 0.5	.....	56464	Genuine.

DR. V. P. LAVALLEE, INSPECTOR.

.....	1-0326	6.89	7.28	0.0	.....	67957	Solids somewhat low. Pass.
.....	1-0348	8.13	8.12	0.0	.....	69107	Genuine.
.....	1-0356	8.48	7.84	0.0	.....	69108	"
.....	1-0354	8.25	8.12	0.0	.....	69114	"

D. J. KEARNEY, INSPECTOR.

.....	1-0516	12.23	1.40	-13.80	Salicylic acid.....	62596	Sold as a lime juice cordial; not as lime juice.
.....	1-0370	7.81	7.21	0.0	.....	62597	Genuine.
.....	1-0351	7.31	8.12	0.0	.....	62598	Solids slightly low; pass.
.....	1-0326	6.86	7.28	0.0	Benzoic acid .....	62599	" " with preservative
.....	1-0331	6.88	6.72	0.0	.....	62600	Solids slightly low; pass.

J. J. COSTIGAN, ACTING INSPECTOR.

.....	1-0561	12.47	8.47	6.30	Benzoic acid .....	67946	Contains sugar. Otherwise genuine, with preservative. Pass.
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Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF OTTAWA—								
1915.								
April 24	Lime Juice...	63618	Casselman Bros., Morrisburg.	1 bot.	35	The Turner Co., Ltd., Toronto.		
" 30	" ...	63639	Jos. Grant, York street, Ottawa.	3 "	75	T. A. Lytle Co Ltd., Toronto.		
May 4	" ...	63653	The F. J. Castle Co. Ltd. Wellington st., Ottawa.	1 "	19		N. D. & C. Co., Ottawa.	
DISTRICT OF KINGSTON—								
April 28	Lime Juice...	68041	T. H. Sargent, Kingston..	3 bots.	75	E. G. West & Co., Toronto.		
" 28	" ...	68042	A. P. Chown, Kingston.	3 "	99			
" 28	" ...	68043	Geo. A. Mahood, Kingston	3 "	90	Lyman's Ltd., Montreal.		
" 29	" ...	68044	A. Glover, Kingston. ....	3 "	75	L. Rose & Co., London.		
May 4	" ...	68045	D. G. Blecker, Belleville.	3 "	105	Davis & Lawrence Co., Montreal.		
DISTRICT OF TORONTO—								
May 11	Lime Juice...	67069	R. A. Mason, Markham..	3 bots.	78	Suteliffe & Bingham, Ltd., Manchester, Eng.		
" 13	" ...	67070	W. H. Parr, Beaverton...	3 "	75	Dalton Bros., Toronto.		
" 15	" ...	67071	The Playfair Preston Co., Midland.	3 "	45	T. A. Lytle Co., Toronto.		
" 20	" ...	67073	C. B. Shield, 1417 Queen street, W. Toronto.	3 "	105	Rowatt & Co., Glasgow.		
" 20	" ...	67076	E. C. Brown, 2489 Yonge street, Toronto.	3 "	45	E. G. West & Co., Toronto.		
DISTRICT OF HAMILTON—								
April 26	Lime Juice...	66988	J. C. Hadden, Guelph ...	3 bots.	75	G. F. Sutton Sons & Co., London, Eng.	Unknown. ....	
" 26	" ...	66990	G. M. Jamieson, Fergus..	3 "	75	Dalton Brothers, Toronto.		
" 27	" ...	66991	H. E. Yeomen, Mount Forest.	3 "	75	Rowatt & Co., Glasgow.	Unknown. ....	
May 5	" ...	66992	Stanley Mills & Co., 11 King st., E. Hamilton.	3 "	30	Suteliffe & Bingham, Ltd., Manchester, Eng.		
" 5	" ...	66993	Peebles Hobson & Co., King and McNabb sts., Hamilton.	3 "	75	R. Fry & Co., Brighton.		
June 5	" ...	67086	Stanley Mills & Co., 11 King st., E. Hamilton.	3 "	105	Suteliffe & Bingham, Ltd., Manchester, Eng.		
" 5	" ...	67087	Peebles Hobson & Co., 40 King st., W. Hamilton.	3 "	75	R. Fry & Co., Brighton.		



## SESSIONAL PAPER No. 14

## LIME JUICE.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. of Juice.	Total solids.	Acidity as citric acid.	Rotation (2 dm.)	Found.		
<b>J. A. RICKEY, INSPECTOR.</b>							
		p. c.	p. c.				
Turner's Lime Juice.	1.0282	6.30	6.23	0.0	.....	63618	Below standard. Adulterated.
Sterling Brand.....	1.0282	6.33	6.09	0.0	.....	63639	" " "
Olympia, quality guaranteed.	1.0347	7.83	7.49	0.0	.....	63653	Genuine.
<b>JAMES HOGAN, INSPECTOR.</b>							
.....	1.0348	7.55	7.21	0.0	.....	68041	Solids slightly low. Pass.
Olympia Brand.....	1.0289	6.27	6.65	0.0	.....	68042	Solids and citric acid low. Adulterated.
.....	1.0334	8.19	8.05	0.0	Benzoic.....	68043	Genuine, with a preservative.
.....	1.0334	7.86	7.77	0.0	.....	68044	Genuine.
.....	1.0304	6.91	7.14	0.0	.....	68045	Solids slightly low. Pass.
<b>H. J. DAGER, INSPECTOR.</b>							
Kkoyah Lime Juice..	1.0270	6.28	6.23	0.0	Salicylic .....	67069	Below standard. Adulterated.
Dalton's West India Lime Juice.	1.0584	13.88	5.46	-9.2	Benzoic.....	67070	Contains added sugar. Adul- terated, as below legal acid strength.
Sterling Brand . . .	1.0296	6.87	6.30	0.0	.....	67071	Below standard. Adulterated.
.....	1.0260	6.12	5.53	0.0	.....	67073	" " "
Royal Crest . . . . .	1.0333	9.23	8.40	0.0	.....	67076	Genuine.
<b>H. J. DAGER, ACTING INSPECTOR</b>							
.....	1.0282	6.50	6.41	0.0	Salicylic .....	66988	Below standard. Adulterated.
.....	1.0531	12.25	7.91	-5.4	Benzoic .....	66990	Contains sugar. Otherwise genuine, with preservative. Pass.
.....	1.0300	7.10	6.51	0.0	.....	66991	Solids and acid low. Adul- terated.
Kkoyah Lime Juice.	1.0274	6.29	5.88	0.0	Salicylic .....	66992	" " "
Labelled Pure Lime Juice	1.0357	8.39	7.98	0.0	.....	66993	Genuine.
Kkoyah Pure Lime Juice.	1.0318	7.48	7.01	0.0	Salicylic .....	67000	Solids somewhat low. Pass.
Labelled Pure Lime Juice	1.0300	8.40	7.91	0.0	.....	67087	Genuine.

Date of Collection.	Name of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF WINDSOR—							
1915.							
Apr. 21	Lime Juice...	54766	J. P. Sheppard, Clinton...	3 bts.	1.20	Montserrat Co. Ltd., London E.	.....
" 23	" ...	54789	Dicksons, St. Mary's.....	3 "	75	Imperial Extract Co. Toronto.	.....
" 23	" ...	54791	F. W. Hutton, St. Mary's	3 "	30	L. Rose & Co. Ltd. London, Eng.	.....
" 25	" ...	54794	Standard Drug Co., London	3 "	75	Nat. Drug Co., Canada.	.....
DISTRICT OF MANITOBA—							
May 18	Lime Juice...	61282	The Minnedosa Pharmacy Minnedosa.	3 bts.	1.05	The Bole Drug Co. Winnipeg.	.....
" 18	" ...	61233	P. W. Hutton, Minnedosa	3 "	1.00	Western Mfg. Co., Winnipeg.	.....
" 19	" ...	61284	J. A. Dunkin, Portage-la-Prairie.	3 "	45	The Bole Drug Co. Winnipeg.	.....
" 25	" ...	61285	J. Paterson, Winnipeg....	3 "	75	The White Star Mfg. Co. Winnipeg.	.....
" 25	" ...	61286	" " " " " " " "	3 "	75	The Blackwoods Ltd. Winnipeg	.....
DISTRICT OF ALBERTA—							
Apr. 30	Lime Juice...	52157	Hudson's Bay Co. Edmonton.	3 bts.	90	Imperial Extract Co. Toronto.	.....
May 1	" ...	52158	J. H. Morris, Edmonton.	3 "	45	White Star Mfg. Co. Winnipeg.	.....
" 20	" ..	52159	Wendell Maclean, Calgary	3 "	1.05	G. F. Sutton Sons & Co. London E.	.....
" 21	" ...	52160	Nat. Drug & Chem. Co. Calgary.	3 "	1.15	Vendors .....	.....
June 17	" ...	52161	Geo. Kerr, Lethbridge....	3 "	1.05	L. Rose & Co. Ltd. London, Eng.	.....
DISTRICT OF ROCKY MOUNTAINS—							
Apr. 26	Lime Juice...	61864	E. W. Hazlewood, Trail.	3 bts.	1.50	Nat. Drug & Chem. Co. Vancouver.	.....
May 20	" ...	61821	Sun Grocery Co. Cranbrook.	3 "	1.05	Imperial Extract Co. Toronto.	Jobbers Limited Cranbrook.
June 10	" ...	61829	A. Hobson, Revelstoke...	3 "	1.50	Kelly Douglas & Co. Vancouver.	.....
" 16	" ...	61835	L. C. Masson, " " " "	3 "	1.50	W. H. Malkin Co. Vancouver.	.....
" 10	" ...	61836	" " " " " " " "	3 "	2.25	Kops Breweries London, Eng.	.....

SESSIONAL PAPER No. 14

LIME JUICE.

Inspector's Report (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and opinions of the Chief Analyst.
	S <sup>o</sup> . gr. of Juice.	Total solids.	Acidity as Citric Acid.	Rotation in 2 dm.		

JOHN TALBOT, INSPECTOR.

		p. c.	p. c.			
Montserrat Lime Fruit Juice.	1-0352	8-07	7-91	0-0	.....	54766 Genuine.
Yacht Club.....	1-0237	5-56	5-67	0-0	Salicylic.....	54789 Below standard. Adulterated.
Rose Prepared West India Lime Juice.	1-0360	8-47	8-05	0-0	.....	54791 Genuine.
Olympia.....	1-0320	7-44	7-35	0-0	.....	54794 Solids somewhat low. Pass.

A. C. LARIVIÈRE, INSPECTOR.

.....	1-0311	7-76	6-93	-0-4	.....	61282 Genuine.
.....	1-0192	4-00	3-50	+0-4	Salicylic.....	61283 Below standard. Adulterated.
.....	1-0400	8-60	6-65	-0-1	.....	61284 Acid slightly low. Pass.
.....	1-0310	7-46	6-93	-0-5	.....	61285 Solids slightly low. Pass.
.....	1-0321	7-65	7-14	-0-6	.....	61286 "

A. W. R. MARKLEY, INSPECTOR.

Imperial.....	1-0205	6-41	5-16	-0-4	Contains artificial colouring.	52157 Below standard. Adulterated.
White Star.....	1-0305	8-56	6-72	-0-4	Salicylic acid 0-30 pts per 5000.	52158 Genuine, with preservative.
West Indian.....	1-0268	7-73	5-69	-0-3	Salicylic acid 0-65 pts per 5000	52159 Below standard. Adulterated.
Sovereign.....	1-0322	8-76	7-03	-0-3	Sulphurous acid 3-12 pts per 10,000	52160 Genuine, with preservative in excess.
Ross's.....	1-0357	9-37	7-85	-0-4	Sulphurous acid 0-05 pts per 10,000.	52161

THOS. PARKER, INSPECTOR

.....	1-0200	5-93	4-65	-0-3	Salicylic acid 0-40 pts per 5000	61801 Below standard. Adulterated.
Yacht Club.....	1-0189	5-54	4-21	-0-2	Salicylic acid 0-05 pts per 5000.	61821
Nabob.....	1-0311	9-10	7-60	-0-6	Sulphurous acid 0-10 pts per 10,000	61822 Genuine with preservative.
.....	1-0353	9-47	7-10	-0-2	Salicylic acid 2-00 pts per 5000.	61823 Genuine, with preservative in excess.
.....	1-0310	8-65	7-00	-0-0	Sulphurous acid 0-04 pts per 10,000	61824

7 GEORGE V, A. 1917

BULLETIN No. 321—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF VANCOUVER—

1915.							
May	22	Lime Juice...	55266	Cochrane & Elliott, 657 15th Ave., E. Vancouver	3 bots.	75	Leesor, Dickie, Gross & Co., Ltd., Vancouver.
"	22	"	55267	G. W. Bennett, 761 Kings- way, E. Vancouver.	3 "	75	Kelly, Douglas & Co., Ltd., Van- couver.
"	25	"	55268	B. C. Market Co., 924 Grenville St., E. Van- couver.	3 "	75	Pure Fruit Pack- ing Co., Van- couver.
"	26	"	55269	Knight Bros., 11th Ave. and Commercial Drive, E. Vancouver.	3 "	120	W. H. Malkin Co., Ltd., Vancon- ver.
"	27	"	55270	Annandale Supply Co., Columbia St., New Westminster.	3 "	75	Imperial Extract Co., Toronto.

## DISTRICT OF VICTORIA—

June	9	Lime Juice...	66727	H. O. Kirkham & Co., 741 Fort St., Victoria.	3 pts.	75	L. Ross & Co., Ltd., London, Eng.
"	9	"	66730	Henry W. Driver, 856 Yates St., Victoria.	3 qts.	75	..... The Pure Fruit Packing Co., Vancouver.
"	11	"	66738	Geo. A. Fraser & Co., 914 Government St., Vic- toria.	3 bot.	75	..... N. D. & C. Co. Victoria.
"	11	"	66740	F. J. Williams, 613 Fort St., Victoria.	3 pts.	75	Alex. Riddle & Co., Ltd., London, Eng.
"	15	"	66749	Ivel's Pharmacy, 1415 Government St., Vic- toria.	3 bots.	75	W. A. Ross & Bro., Belfast, Ireland.

SESSIONAL PAPER No. 14

LIME JUICE.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. of Juice.	Total Solids.	Acidity as Citric Acid.	Rotation (2 dm.)	Found.		

E. J. MORGAN, INSPECTOR.

		p. c.	p. c.				
Labelled Finest West India Lime Juice.	1·0189	5·60	4·29	- 0·2	Salicylic acid 0·55 pts. per 5,000. Sulphurous acid 0·02 pts. per 10,000.	55266	Below standard. Adulterated. Contains two preservatives.
Columbia Brand ...	1·6159	5·16	3·60	- 0·1	Sulphurous acid 0·06 pts. per 10,000.	55267	Below standard. Adulterated.
Labelled Pure Fruit Lime Juice.	1·0112	3·66	2·54	+ 0·2	Salicylic acid 0·70 pts. per 5,000.	55268	" "
Victoria Cross Brand	1·0346	9·27	7·69	0·0	Sulphurous acid 0·22 pts. per 10,000.	55269	Genuine, with preservative.
Yacht Club.....	1·0081	3·36	2·10	+ 0·3	Artificial colour- ing.	55270	Below standard. Adulterated.

D. O'SULLIVAN, INSPECTOR.

Rose's Prepared West India Lime Juice.	1·0357	9·91	7·70	- 0·9	Sulphurous acid 9·10 pts. per 10,000.	66727	Genuine, with preservative.
Pure Fruit Lime Juice.	1·0165	5·05	3·70	- 0·1	Salicylic acid 2·75 pts. per 10,000. Sulphurous acid 0·07 pts. per 10,000.	66730	Below standard. Adulterated. Contains two preservatives.
.....	1·0196	5·58	4·55	- 0·2	Salicylic acid 0·50 pts. per 5,000. Sulphurous acid 1·01 pts. per 10,000.	66738	Below standard. Adulterated.
.....	1·0329	8·38	7·12	0·0	Sulphurous acid 0·94 pts. per 10,000.	66740	Genuine, with preservative.
.....	1·0337	8·82	7·54	- 0·9	Salicylic acid 0·35 pts. per 5,000.	66749	" "

## APPENDIX M.

## BULLETIN No. 322—MAPLE CONFECTIONS.

OTTAWA, 17th. November, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report dealing with fifty-eight (58) samples of confections, characterized as maple products, by use of the word maple in the name under which they are sold.

Maple Sugar and Maple Syrup are defined by an Order in Council of 20 March, 1911 (published as Circular G. 994), effective from 27 November, 1911; and by an Amendment to the Adulteration Act, assented to, 12 June, 1914, and effective from 1 January, 1915 (published as Circular G. 1152.)

These articles have frequently been made the subject of inspection, the last report upon Maple Sugar having been published as Bulletin No. 258, in April 1913 and that upon Maple Syrup, as Bulletin No. 259, also in April, 1913.

A further amendment to the Act was assented to on the 15th. April of this year, and this Amendment takes cognizance of other maple products than sugar and syrup, and restricts the use of the word *maple* to sugar and syrup. The text of this amendment, so far as maple products are concerned, is as follows:—

1. Section 29a of the Adulteration Act, Chapter 133 of the Revised Statutes, 1906, as enacted by chapter 19 of the statutes of 1914, is repealed and the following is substituted therefor:—

## MANUFACTURE OR SALE OF ADULTERATED MAPLE SUGAR OR SYRUP.

“29a. No person shall manufacture for sale, keep for sale, offer or expose for sale, or sell, any article of food resembling or being an imitation of maple sugar or maple syrup, or which is composed partly of maple sugar or maple syrup, and which is not pure maple sugar or pure maple syrup.

## ADULTERATED MAPLE SUGAR OR SYRUP DEFINED.

“2. Any maple sugar or maple syrup which is not up to the standard prescribed by the sixth schedule to this Act, or, if such standard is changed by the Governor in Council, to such standard as the Governor in Council may from time to time prescribe, shall be deemed to be adulterated within the meaning of this Act.”

## USE OF THE WORD “MAPLE” RESTRICTED TO PURE MAPLE SUGAR OR SYRUP.

“3. The word “maple” shall not be used, either alone or in combination with any other word or words, or letter or letters, on the label or other mark, illustration or device on a package containing any article of food, or on any article of food itself, which is not pure maple sugar or pure maple syrup, and any article of food labelled or marked in violation of this subsection shall be deemed to be adulterated within the meaning of this Act.”

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The order for collection of the articles now reported was issued on the 13th. April of this year, that is, before the last named amendment came into force; and for this reason, none of the samples are judged as adulterated. The object had in view from this inspection, was the ascertainment of the extent to which the word maple is actually in use as a designation of maple products other than sugar and syrup.

The result shows that, of the fifty-eight (58) samples reported, twenty-five (25) are sold as maple butter, five as maple cream and five as maple cheese. It is probable that in most of these cases, the employment of the words butter, cream and cheese, has regard primarily to the consistence of the article and is not intended to convey the idea that butter, cream or cheese enters into the composition of the confection.

A possible exception to this statement is found in an article of Maple Butter, manufactured by Maples, Limited, of Toronto. The label borne by this article contains the following:—

“Wholesome and delicious food luxury, made from pure Maple Sugar and fresh rich cream. For table use, in place of ordinary butter or jam; a superior substitute at less cost.”

These statements appear to claim for the article an actual butter content. We find only 0.12 per cent of butter fat in the samples examined here; and I have information, from other sources, that samples analyzed elsewhere have yielded only traces of butter fat. Under these circumstances, it is clear that the claim is entirely unwarranted, and is misleading. Undoubtedly, a small amount of milk or cream has been used in the manufacture; but this amount is so insignificant that to claim a food value for it, or to insinuate that it may take the place of butter, is simply to deceive the purchaser.

One sample (No. 66028) consists of pop-corn, sweetened with maple, and possibly with other sugar. The amount of sugar present is too small to permit of certain identification.

Two samples sold as maple-buds, and one sample sold as rose-buds, are essentially chocolate, containing some maple sugar as a flavour. The word “buds” is probably used in reference to the shape of the confection.

Other samples are sold under various fancy names, as maple wafers; maple fudge; maple taffy; maple pudding; and others as compounds in the name of which the components are indicated, as maple fruit fudge; chocolate maple walnuts, etc.

None of these samples are offered as straight maple sugar or maple syrup; and in consequence of this fact, they do not come under regulations governing maple products which were in force at the time of the collection. It is quite apparent that in most of them, maple sugar is present merely for the purpose of giving a flavour to the article, just as lemon or vanilla might be present. It is, I think, open to question, whether the amendment of 15th. April last was intended to prohibit the employment of maple sugar as a flavouring material. Manufacturers have assured me that they have been extremely careful to purchase genuine maple sugar in order that they might thus secure a genuine maple flavour for their products. If they are forbidden to use the word *maple* in naming these products, it is difficult to see how they can find a market for them. In such cases, a statement that the goods are flavoured with maple sugar, is a simple statement of fact, and would not appear to violate the fundamental principle of the Act.

For reasons already given I have not judged any of these samples as adulterated; but in cases where cane sugar is present, I have made mention of the fact.

I beg to recommend publication of this report as Bulletin No. 322.

I have the honour to be Sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF NOVA SCOTIA—								
1915.								
May 19	Maple wafers.	54021	Woolworth's, Ltd., Halifax.	1 lb.	15	Montreal Biscuit Co., Montreal.	Manufacturer ..	
" 20	Maple cream..	54022	H. H. Marshall, Halifax..	1 " ..	30	Albert Smith, Elgin, N.B.	" ..	
" 21	Maple butter.	54023	A. & W. Smith & Co., Halifax.	3 tins.	63	Maple's, Ltd., Toronto.	" ..	
" 25	Maple wafers.	54024	Mo'r's, Ltd., Halifax.....	1 lb .	15	Vendors.....	.....	
DISTRICT OF NOVA SCOTIA—								
June 3	Maple butter..	65832	James Cavanagh, New Glasgow.	3 tins.	60	Maple's, Ltd., Toronto.	R. McGregor & Son, New Glasgow.	
" 3	Crema maple butter.	65833	D. J. Murray, New Glasgow.	3 "	45	Can. Maple Exchange.	.....	
DISTRICT OF CAPE BRETON—								
May 6	Maple butter..	63811	Walter's Confectionery, Sydney.	3 jars.	45	Maple's, Ltd., Toronto.	.....	
DISTRICT OF PRINCE EDWARD ISLAND—								
May 7	Maple butter..	60302	J. C. Crabbe, Charlotte town.	3 tins.	45	.....	Carvell Bros., Charlottetown	
DISTRICT OF NEW BRUNSWICK—								
May 13	Maple butter..	66031	W. A. Simonds, St. John.	3 tins.	60	Maple's, Ltd., Toronto.	.....	
June 22	Chocolate maple walnuts.	66032	The Corona Co., Ltd., St. John.	½ lb .	20	Vendors.....	.....	
" 22	Maple fritters.	66033	T. J. Phillips, St. John..	3 pkgs.	15	Vendor...	.....	
" 22	Maple fudge..	66034	" " ..	3 "	15	" ..	.....	
" 23	Maple walnuts	66935	M. E. Glass, St. John ..	3 "	45	Ganong Bros., Ltd., St. Stephen.	.....	
May 19	Maple cre-mo.	66036	J. I. Davis & Son, St. John.	3 tins.	45	Can. Maple Exchange.	.....	
June 16	Maple cream, chocolate bars	66037	H. H. Keirshead, Sussex	3 bars	30	Robertson Bros., Toronto.	.....	
" 21	Maple crispettes.	66038	W. A. Simonds, St. John.	3 rolls	15	Maple Crispette Co., Montreal	.....	
" 22	Maple cream chocolate.	66039	The Corona Co., Ltd., St. John,	3 pkgs	11	Vendors.....	.....	
" 22	Maple cream taffy.	66040	White's Dairy, St. John..	3 "	11	The Corona Co., Ltd., St. John.	.....	



SESSIONAL PAPER No. 14

MAPLE CONFECTIONS.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Results on dry basis.		Found.		
			Lead number (Canadian)	Total Ash.			
<b>R. J. WAUGH, INSPECTOR.</b>							
	p. c.	p. c.		p. c.			
Vendor stated that he would not guaran- tee these goods all maple.	5.06	.....	0.52	0.77	.....	54021	Cane sugar present.
.....	7.81	.....	1.59	0.63	.....	54022	" "
.....	12.80	87.20	2.64	.....	.....	54023	Meets legal require- ments.
.....	7.08	.....	0.26	0.30	.....	54024	Cane sugar present.
<b>W. A. PETIPAS, TEMP. INSPECTOR.</b>							
.....	10.48	89.52	5.04	.....	.....	65832	Meets legal require- ments.
.....	6.80	93.20	1.93	.....	.....	65833	" "
<b>E. T. McKEEN, INSPECTOR.</b>							
.....	6.40	93.60	3.41	.....	.....	63811	Meets legal require- ments.
<b>WM. A. WEEKS, INSPECTOR.</b>							
.....	5.80	94.20	1.23	0.23	.....	60302	Cane sugar present.
<b>JOHN C. FERGUSON, INSPECTOR.</b>							
Old Stock, .....	12.68	87.92	2.52	.....	.....	66031	Meets legal require- ments
.....	15.12	84.88	2.18	.....	Mixture of chocolate and maple sugar.	66032	"
.....	8.40	91.60	0.08	0.53	.....	66033	Cane sugar present.
.....	10.36	89.64	0.90	0.51	.....	66034	"
.....	8.00	92.00	0.68	0.20	Mixture of nut and sugar	66035	"
.....	14.40	85.60	1.84	0.90	.....	66036	Meets legal require- ments
.....	15.92	84.08	4.80	.....	Mixture of chocolate and maple sugar Popcorn	66037	"
.....	13.24	86.76	3.74	.....	Mixture of chocolate and maple sugar	66038	Not analysed.
.....	5.60	94.44	0.24	0.42	.....	66039	Meets legal require- ments.
.....	.....	.....	.....	.....	.....	66040	Cane sugar present.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF NEW BRUNSWICK—							
1915.							
May 13	Maple cheese.	66041	W. A. Simond, St. John.	3 tins.	30	Maples, Ltd., Toronto.	
June 16	Maple walnuts.	66042	H. H. Keirstead, Sussex.	$\frac{3}{4}$ lb.	45	Robertson Bros., Ltd., Toronto.	
" 16	Maple buds chocolates.	66043	" "	$\frac{3}{4}$ " "	60		Ganong Bros., St. Stephen.
" 21	Maple buds...	66044	W. A. Simonds, St. John.	3 pkg	30	The Cowan Co., Ltd., Toronto.	
" 22	Maple chocolate fudge.	66045	White's Dairy, St. John.	3 "	15	The Corona Co., Ltd., St. John.	
" 23	Rosebuds.....	66091	Wm. Hawker & Son, St. John.	3 "	45	Wm. Neilson, Toronto.	
" 23	Maple chocolate walnuts.	66092	W. H. Sharpe, St. John.	3 "	30	Ganong Bros., Ltd., St. Stephen.	
DISTRICT OF QUEBEC CITY—							
April 20	Maple butter.	56360	Myrant & Pouliot, Quebec.	3 tins.	60	Maples, Ltd., Toronto.	J. B. Renaud & Cie.
" 22	" "	56520	Arthur Drolet, 714 St. Valier, Quebec.	3 "	60	Langlais & Paradis.	Mfrs.....
" 22	Maple cheese.	56521	" "	3 "	30	" "	"
DISTRICT OF QUEBEC PROVINCE—							
April 23	Maple butter.	2753	Ed. Dancausse, Montmagny.	3 lb.	90	Maples, Ltd., Toronto.	
" 23	" "	2755	A. N. Normand, Montmagny.	3 "	75	" "	
May 22	Maple pudding.	61453	Pierre Berube, Fraserville.	3 "	35	Perrin's Candy, Canada.	
DISTRICT OF MONTREAL—							
April 30	Maple butter.	67301	Martin & Fils, 1718 Mason St., Rosemount.	3 tins.	60	Maples, Ltd., Toronto.	
" 30	Maple cream.	67302	W. Hawthorn, 1155 Mt. Royal Ave. E., Montreal.	3 "	36	V. B. Syrup Exchange.	
May 19	Maple butter.	67303	The Royal George Grocery, 221 Bernard Ave., Montreal.	3 "	45	Canada Maple Exchange.	

SESSIONAL PAPER No. 14  
 MAPLE CONFECTIONS.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				Found.	No. of Sample.	Remarks and opinion of the Chief Analyst.
	Water.	Solids.	Results on dry basis.				
			Liquid Num- ber (Can- adian).	Total Ash.			

*Concluded.*

	p. c.	p. c.		p. c.			
.....	5.80	94.20	1.59	0.53	.....	66041	Cane sugar present.
.....	7.04	92.96	0.15	0.28	Mixture of Nuts and Sugar.	66042	" "
Cowan's .....					Chocolate.....	66043	Not analyzed as maple.
.....					"	66044	" "
.....	8.00	92.00	1.15	0.60	Mixture of Chocolate and Sugar.	66045	Cane sugar present.
Neilson's vendor stated that sample was similar to Cowan's Maple Buds.					Chocolate.....	66091	Not analyzed as maple.
.....	1.04	98.96	1.66	0.22	Mixture of Chocolate and Sugar.	66092	Cane sugar present.

F. X. W. E. BELAND, INSPECTOR.

.....	10.96	89.04	2.22	.....	.....	56366	Meets legal require- ments.
.....	14.84	85.16	1.40	0.44	.....	56529	Cane sugar present.
.....	6.76	93.24	2.30	.....	.....	56521	Meets legal require- ments.

T. GENDREAU AND A. PELLETIER, TEMPORARY INSPECTORS.

.....	15.60	84.40	1.16	0.37	.....	2753	Cane sugar present.
.....	12.32	87.68	3.73	.....	.....	2758	Meets legal require- ments.
.....	13.72	86.28	1.83	0.62	Mixture of Nuts and Maple Sugar.	56453	"

D. J. KEARNEY, INSPECTOR.

.....	10.36	89.64	1.79	0.40	.....	67301	Doubtful.
.....	11.48	88.52	0.19	0.47	.....	67302	Cane sugar present.
.....	12.96	87.04	1.11	0.60	.....	67303	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF VALLEYFIELD—								
1915.								
April 22	Maple butter.	57931	Graham & Hunter, St. Lambert.	3 tins.	75	Maples, Ltd., Toronto.		
" 22	"	57932	W. R. Simpson, St. Johns.	3 "	45	Canada Maple Exchange.		
DISTRICT OF OTTAWA—								
April 20	Maple butter.	63608	J. T. Conway, Perth. ....	3 tins.	45	Can. Maple Exchange, Montreal.		
" 17	"	63621	A. M. Parkinson, Kemptville.	3 "	60	Maples, Ltd., Toronto.		
" 27	Maple cream.	63627	Michael Vise, Renfrew...	1 cake	10	Unknown	Unknown	
" 30	Maple cream butter.	63638	Wall & Co., Ottawa.....	3 tins.	30	Ramsays, Ltd., Montreal.		
DISTRICT OF KINGSTON—								
April 29	Maple butter.	68052	J. Gilbert Kingston. ....	3 tins.	30	Maples, Ltd., Toronto		
DISTRICT OF TORONTO—								
May 13	Maple cheese.	67074	D. J. Dunsheath, Beaver-ton.	3 cakes	30	Maples, Ltd., Toronto.	Unknown	
" 15	Maple cream.	67075	G. Georgas, Midland.....	1 lb.	25	Vendor.....		
" 27	Maple butter.	67083	Maples, Ltd., Toronto. . .	3 cans.	45	Vendors.....		
DISTRICT OF HAMILTON—								
April 27	Maple butter	67003	Steele Bros., Palmerston.	3 cans.	60	Maples, Ltd., Toronto.		
" 28	Maple Bon Bon.	67004	R. G. Lambert & Sons, Hamilton.	1 lb.	20		Geo. E. Bristol & Co., Hamilton.	
May 5	Maple butter.	67011	A. G. Bain & Co, Hamilton.	3 cans.	30	Can Maple Exchange.		
"	Maple fruit fudge.	67012	F. W. Woolworth, Ltd., King St. E. Hamilton.	31 lb..	20	Quaker Candy Co., Toronto.		
" 5	Maple cream.	67013	James Crawford, 34 King St. E., Harriston.	1 " ..	30	Vendor.....		
" 6	Maple granulo sugar.	67014	James Osborne & Sons, 12 James St. S., Hamilton.	1 pkg.	25	Can. Maple Exchange, Montreal.		

SESSIONAL PAPER No. 14

MAPLE CONFECTIONS.

Inspector's Report. (Is not an Expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Water.	Solids.	Results on dry basis.				Found.
			Lead Num- ber (Can- adian.)	Total ash.			

J. J. COSTIGAN, ACTING INSPECTOR.

	p. c.	p. c.		p. c.		
.....	14.68	85.92	1.28	0.37	.....	57931 Cane sugar present.
.....	14.68	85.92	1.09	0.63	.....	57932 " "

J. A. RICKEY, INSPECTOR.

Crema, Small's the genuine Crema maple butter.	15.00	85.00	1.88	0.88	.....	63608 Meets legal require- ments.
Lion Brand made from pure maple sugar and fresh rich cream.	11.80	88.20	2.54	.....	.....	63621 " "
.....	3.17	.....	2.14	0.62	.....	63627 " "
.....	12.00	88.00	0.50	0.25	.....	63638 Cane sugar present.

JAMES HOGAN, INSPECTOR.

.....	13.92	86.08	3.30	.....	.....	68052 Meets legal require- ments.
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H. J. DAGER, INSPECTOR.

.....	2.92	97.08	2.10	.....	.....	67074 Meets legal require- ments.
.....	7.56	92.44	0.43	0.22	.....	67075 Cane sugar present.
.....	10.56	89.44	2.93	.....	.....	67088 Meets legal require- ments.

H. J. DAGER, ACTING INSPECTOR

Lion Brand	10.40	89.60	1.90	.....	.....	67090 Meets legal require- ments.
.....	4.67	.....	0.23	0.23	.....	67094 Cane sugar present.
Crema Brand.	1.80	95.20	1.45	0.11	.....	67011 " "
.....	10.60	89.40	2.10	.....	Mixture of fruit and maple sugar	67012 Meets legal require- ments.
.....	2.16	97.84	4.00	.....	.....	67013 " "
.....	0.08	99.92	0.64	0.24	.....	67014 Cane sugar present.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MANITOBA—

1915.							
April 26	Maple butter.	61321	J. Jost, Sargent Ave., Winnipeg.	1 lb.	75	Maples, Ltd., To- ronto	.....
" 26	Maple cheese.	61322	" " "	3 pkgs	30	" "	.....

DISTRICT OF SASKATCHEWAN—

April 27	Maple butter.	66359	Conlin Bros., Swift Cur- rent.	3 cans	75	Maples, Ltd., Toronto.	Swift Current Grocery.
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DISTRICT OF ALBERTA—

April 30	Maple butter.	52151	Johnstone Walker, Ltd., Edmonton.	3 tins.	75	Maples, Ltd., Toronto.	.....
May 21	Maple cheese.	52152	Pryce Jones (Can.) Ltd., Calgary.	3 ckes	30	" "	.....

DISTRICT OF ROCKY MOUNTAINS—

May 20	Maple butter.	61813	Ira R. Manning, Ltd., Cranbrook.		100	Maples, Ltd., Toronto.	.....
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DISTRICT OF VANCOUVER—

May 3	Maple butter.	55244	T. W. Turner, 890 Pender St. W., Vancouver.	3 tins.	75	Maples, Ltd., Toronto.	.....
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DISTRICT OF VICTORIA—

May 31	Maple butter.	66717	West End Grocery, Ltd., 1002 Govt. St., Victoria.	3 tins.	75	Maples, Ltd., Toronto.	.....
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SESSIONAL PAPER No. 14

MAPLE CONFECTIONS.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Results on dry basis.				Found.		
	Water.	Solids.	Lead Num- ber (Canu- dian).	Total Ash.			

A. C. LARIVIERE, INSPECTOR.

.....	p. c.	p. c.		p. c.	.....	61321	Cane sugar present.
	11.76	88.24	1.33	0.35			
.....					.....	61322	" "
	6.92	93.08	1.49	0.44			

L. H. HALL, INSPECTOR.

.....					.....	66359	Doubtful.
	11.72	88.28	1.81	0.44			

A. W. R. MARKLEY, INSPECTOR.

.....					.....	52151	Cane sugar present.
	9.92	91.08	1.37	0.37			
.....					.....	52152	" "
	3.48	96.52	0.90	0.34			

THOS. PARKER, INSPECTOR.

.....					.....	61813	Meets legal require- ments.
	11.28	88.72	2.57				

E. J. MORGAN, INSPECTOR.

Lion Brand .....					.....	55244	Meets legal require- ments.
	9.50	90.50	6.31				

D. O'SULLIVAN, INSPECTOR.

Lion Brand .....					.....	66717	Meets legal require- ments.
	16.32	83.68	2.90				

## APPENDIX N.

## BULLETIN No. 323—SALPETRE.

OTTAWA, October 13, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister Inland Revenue.

SIR,—I beg to hand you herewith a report upon one hundred and sixty-six (166) samples, purchased by our inspectors in April, May and June of this year, as *Salt-petre*.

This term applies to the potassium salt of nitric acid, otherwise known as *Nitre*, or nitrate of potash. As a food material it is chiefly used in pickling meats. In the arts, it is largely employed for manufacture of gunpowder and other explosives; and for this reason, as well as because the Stassfurt mines of Germany have been in recent years, our chief source of potash, considerable difficulty in securing supplies of salt-petre exists.

In consequence of the above facts the sodium salt of nitric acid, commercially known as Chili Saltpetre, is made to supply the place of true salt-petre, wherever such replacement is possible. The hygroscopic character of the sodium salt (Chili Saltpetre) makes it less available for most uses in the arts; but for the purposes of a pickle Chili Saltpetre may be regarded as satisfactory, when properly refined. The physiological properties of the nitrates of potash and soda are, as far as known, practically identical.

An official announcement was made in September, 1914, by the Secretary of Agriculture at Washington, to the following effect:

“This order permits the immediate use of nitrate of soda (Chili Saltpetre) in the preparations of meat and food products in establishments where Federal meat inspection is maintained.”

While no ground exists for objecting to the substitution of sodium nitrate for potassium nitrate, so far as the manufacture of pickle is concerned, it remains that the cheaper article (Sodium nitrate) should be offered for sale under its own proper name, and should not be sold as Saltpetre or nitre. Complaints have been received by the Department charging that many dealers supply the sodium salt under the name of the potassium salt (salt-petre) and are thus able to compete unfairly in the market as against those dealers who properly describe the article.

The present report appears to justify the complaint made; and the results of inspection may be summarized as follows:—

Found genuine as Saltpetre.. . . . .	109 samples.
Found to be Chili Saltpetre.. . . . .	49 “
Found to be mixtures of both.. . . . .	7 “
Found to be sulphate of soda.. . . . .	1 “
Total.. . . . .	166 “



SESSIONAL PAPER No. 14

Sample No. 56451 found to be sulphate of soda (Glauber's Salt) is evidently a mistake on the part of the vendor.

I would respectfully advise publication of this report as Bulletin No. 323. It will serve the purpose of a warning to dealers, and furnish information to the public.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

BULLETIN No. 323—SALTPETRE.

Date of Collection.	Nature of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturers or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Results of Analysis.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
			Quantity.	Cents.	Manufacturer.	Furnisher.				

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1915.	June 18	Saltpetre ...	54041	Nat. Drug & Chem. Co., 1 lb.	25	Unknown	.....	Potassium Nitrate.....	54041	Genuine.
"	23	"	54042	Halifax. Brown Bros. & Co., 1 "	25	"	.....	"	54042	"
"	23	"	54043	Halifax. Estate of J. R. Rowley, 1 "	25	"	.....	"	54043	"
"	25	"	54044	Halifax. Kinleys, Ltd., Halifax .. 1 "	25	"	.....	"	54044	"
"	28	"	54045	Buckley Bros., Halifax .. 1 "	20	"	.....	"	54045	"

DISTRICT OF PRINCE EDWARD ISLAND—WM. WEEKS, INSPECTOR.

May	7	Saltpetre ...	60185	F. A. Foster, Charlotte- 1 lb.	25	Lymans Ltd,	.....	Potassium Nitrate.....	60185	Genuine.
"	7	"	60186	town. C. D. Rankin, Charlotte- 1 "	20	Montreal. N. D. & C. Co.,	.....	"	60186	"
"	10	"	60187	town. George E. Hughes, Char- 1 "	25	Halifax. Lymans Ltd.,	.....	"	60187	"
				lottetown.		Montreal.				

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DISTRICT OF NEW BRUNSWICK—JOHN C. FERGUSON, INSPECTOR.

May	Saltpetre	66076	Nat. Drug & Chem. Co., St. John.	25	N. D. & C. Co., Montreal.			Potassium Nitrate.....	66076	Genuine.
"	"	66077	Canadian Drug Co., St. John.	25	Unknown			"	66077	"
"	"	66078	Esler & Peters, St. John	25	N. D. & C. Co., St. John.			Sodium Nitrate.....	66078	Is Chili Saltpetre.
"	(adversized)	66079	Padlington, Wetmore & Morrison, St. John.	20				Potassium Nitrate.....	66079	Genuine.
"	Saltpetre	66080	W. H. Vanwart, Fred. erican.	25				Sodium Nitrate. . .	66080	Is Chili Saltpetre.
"	"	66081	Stevens Bros., Woodstock, N.B.	25				Potassium Nitrate.....	66081	Genuine.
"	"	66082	Wade-Drugg Co., Perth N.B.	25				Sodium Nitrate.....	66082	Is Chili Saltpetre.
June	"	66083	S. B. Hunter, Harvey Station.	15				Potassium Nitrate 84% About 15% Sodium Nitrate.	66083	Mixed nitrates of potash and soda.
"	"	66084	J. D. Ginner, St. Ann draws	25	Unknown			Potassium Nitrate.....	66084	Genuine.
"	"	66085	S. J. Mearns, St. Ann. S. Ann.	15				"	66085	"

DISTRICT OF QUEBEC CITY—F. X. W. E. BELAND, INSPECTOR.

April 27	Saltpetre	56364	J. M. Gagne, 731 Valer, Quebec.	12	Dr. Ed. Morin, Cab.	Mrs. . . . .		Potassium Nitrate . . .	56364	Genuine.
"	"	56365	J. L. Lacombe, 735 Valer, Quebec.	20	Nat. Drug. . . . .	Nat. Drug, Montreal.		"	56365	"
"	"	56367	J. B. Gervais, 387 St. Jean, Quebec.	25	Barraghs Wellcome Co., Montreal.	Lymanus, Ltd., Montreal.		"	56367	"
"	"	56373	W. F. Proulx, 1322 Rue St. Joseph, Quebec.	30	W. F. P. Currie, Montreal.	Mir. . . . .		"	56373	"
"	"	56374	L. F. Martel, 51 Rue St. Jean, Quebec.	30	"	"		"	56374	"
"	"	56375	J. M. Gagne, 488 Rue St. Valer, Quebec.	25	Dr. Ed. Morin, Cab.	"		"	56375	"
"	"	56376	Dr. Fournier, 316 St. Jean, Quebec.	20	"	"		"	56376	"
"	"	56377	A. F. Fournier, 379 St. Jean, Quebec.	20	"	"		"	56377	"
"	"	56378	A. E. Fournier, 308 St. Jean, Quebec.	25	J. E. Laverneux	"		Sodium Nitrate . . . . .	56378	Is Chili Saltpetre
"	"	56379	F. X. Beland, 201 St. Jean, Quebec.	25	Lymanus, Ltd.	Mir. . . . .		Potassium Nitrate-97%	56379	Genuine.

BULLETIN No. 323—SALTPETRE.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
			Quantity.	Cost					

DISTRICT OF QUEBEC CITY—F. X. W. E. BELAND, INSPECTOR.

1915.	April 29 Saltpetre ...	56527	J. E. Turcotte, 117 St. 1 Jean, Quebec.	20	Nat. Drug ... Mfr.....	.....	Potassium Nitrate....	56527	Genuine.
"	" 29 " ...	56528	J. E. Livernois, Quebec.	18	Unknown ...	.....	"	56528	"
"	" 29 " ...	56529	B. B. Roger, 44 Fabrique, Quebec.	30	Lymans, Ltd.... Mfrs .....	.....	"	56529	"
"	" 29 " ...	56530	Laroche & Cie, 4 Fabrique, Quebec.	50	E. B. Squibb, New York.	.....	"	56530	"

DISTRICT OF QUEBEC PROVINCE—J. E. AUDET, O. BROCHU, T. GENDREAU, N. CADEUX AND A. PELLETIER, TEMPORARY INSPECTORS.

May 1	Saltpetre ...	3838	S. Martel, Quebec Marché.	15	.....	.....	Sodium Nitrate. ....	3838	Is Chili Saltpetre.
"	" 15 " ...	3855	Jacasse & Audet, St. Ed. ward, Fronton.	20	.....	.....	"	3855	"
"	" 27 " ...	3858	A. Cloutier, Ste Odilon.	30	.....	.....	"	3858	"
"	" 19 " ...	3861	Anselme Fortier, Ste. Rose.	25	.....	.....	Sodium Nitrate, contains organic matter.	3861	"
"	" 20 " ...	3862	C. Dechêne, Ste. maine.	20	.....	.....	Sodium Nitrate....	3862	"
"	" 26 " ...	3864	Doresteur Lumber, Malachic.	23	.....	.....	"	3864	"

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June 4	3-66 Jos Turgeon, St. Nazaire.	20							3866	"	
"	3-67 P. Genest, St. Bernard.	40							3867	"	
"	3-68 Nap. Dumas, St. Come.	30							3868	"	
"	3-71 Jos. Cloutier, St. Ephrem.	30							3871	"	
May 7	3-63 Alphonse Audet, St. La.	12	J. B. Morin						3563	"	
April 25	2756 A. E. Michard, Mont.	24							2756	Genuine,	Potassium Nitrate
"	2764 C. Corriveau, Mont.	12							2764	Is Chili Saltpetre,	Sodium Nitrate
"	274 Eug. Fournier, St. Jo.	25							274	Genuine,	Potassium Nitrate
May 4	284 A. St. Armand, Ste. Ag.	30							284	"	"
"	287 Dr. Ed. Grignon, St.	25							286	"	"
"	5641 L. P. Lesage, Rimouski.	50	Unknown						5641	Evidently supplied by mistake,	Sodium Sulphate
"	5646 Fraserville, Drug Ob.	50							5646	Genuine,	Potassium Nitrate
"	5647 Ed. Cloutier, Fraser	40	Unknown						5647	Is Chili Saltpetre,	Sodium Nitrate
June 1	5649 John Kaine, Fraserville	35	Lymans, Mont.						5649	Mixed sodium and potassium ni-	Potassium Nitrate

DISTRICT OF THREE RIVERS DR. V. P. LAVALLEE, INSPECTOR.

May	6746 J. T. Gaudet, Joliette	1 lb							6746	Genuine,	Potassium Nitrate
"	6748 A. L. Boeche, Joliette	30							6748	Is Chili Saltpetre,	Sodium Nitrate
"	6750 E. Rivest, Joliette	12							6750	Genuine,	Potassium Nitrate
"	6751 V. Desrosiers, Berthier	12							6751	Is Chili Saltpetre,	Sodium Nitrate
"	6752 O. Paquette, Berthier	12							6752	"	"
"	6753 A. L. Gaudes, Berthier	15							6753	"	"
"	6754 O. J. Desrosiers, Berthier	15							6754	"	"
"	6755 G. Barrette, Berthier	10							6755	"	"

BULLETIN No. 323—SALTPETRE.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher As given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.	No. of Sample.	Remarks, and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.				
DISTRICT OF THREE RIVERS—DR. V. P. LAVALLEE, INSPECTOR.— <i>Concluded.</i>											
1915.											
May 15	Saltpetre ..	68000	William Perrault, Bert- hierville,	1	10		Jos. Dufresne.		Sodium Nitrate.....	68000	Is Chili Saltpetre.
" 25	" ..	69102	Louis Provost, L'Épi- phanie,	1	08		Chevalier Pou- liot, Montreal.		" ..	69102	" ..

DISTRICT OF MONTREAL—D. J. KEARNEY, INSPECTOR.

Apr. 26	Saltpetre....	67331	Dr. Millier, 1800 Masson St., Rosemont.	1 lb.	25		Unknown .....		Potassium Nitrate....	67331	Genuine
" 26	" ..	67332	G. St. Jacques, 1161 Mt. Royal Ave., Montreal.	1 "	10		" ..		" ..	67332	" ..
" 26	" ..	67333	J. E. Morin, 927 Mount Royal Ave., Montreal.	1 "	25		National Drug Company.		" ..	67333	" ..
" 26	" ..	67334	D. & A. Lufresne, 781 Mount Royal Ave., Montreal.	1 "	30		Lyman Ltd.....		" ..	67334	" ..
" 26	" ..	67335	N. Cleroux, 738 Mount Royal Ave., Montreal.	1 "	25		" ..		" ..	67335	" ..
" 26	" ..	67336	A. Lalonde, 586 Mount Royal Ave., Montreal.	1 "	35		" ..		" ..	67336	" ..
" 27	" ..	67337	Ontrenont Pharmacy, 1195 Bernard Street, Montreal.	1 "	15		" ..		" ..	67337	" ..
" 27	" ..	67338	Van Horne Drug Store, 1001 Van Horne Ave., Montreal.	1 "	20		Unknown ..		" ..	67338	" ..

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27	67339	Geo. A. Langlois, 1871 Bernard Ave., Mon- treal.	1871	40	Lyman Ltd.	67339
27	67340	P. R. Thomas, 384 Bleury St., Montreal	15	15	McEwen, Cam- eron & Wait, Nat. Drug Co.	67340
27	67341	M. Carmacks, 127 Prince Arthur St., Montreal	1	20	Unknown	67341
27	67342	A. P. Fortin, 1500 Park Ave., Montreal.	1	10	Unknown	67342
27	67343	H. R. Hunt, 230 Laurier ave. w., Montreal.	1	45	Lyman's, Ltd.	67343
27	67344	Martineau Drug Store, 1068 St. Denis st., Mon- treal.	1	15	Unknown	67344
27	67345	J. H. Robert, 1185 St. Denis st., Montreal.	1	15	"	67345

DISTRICT OF EASTERN TOWNSHIPS—J. J. COSTIGAN, ACTING INSPECTOR.

May 25	Saltpetre.	58171	E. C. Fraser, Sherbrooke	1 lb.	25	Lyman's, Ltd.	Potassium nitrate.	58171	Genuine.
"	"	58172	F. T. Ansell,	"	20	"	"	58172	"
"	"	58173	G. Richard,	"	35	"	"	58173	"
"	"	58174	F. D. Hewitt,	"	25	N. D. & C. Co.	"	58174	"
"	"	58175	A. E. D. Berger,	"	25	Lyman's, Ltd.	"	58175	"
"	"	57951	Pharmacia Viger, St. Hymertie.	"	20	"	"	57951	"

DISTRICT OF OTTAWA—J. A. RICEY, INSPECTOR.

April 26	Saltpetre.	63637	Jos. Grant, Ottawa.	1 b	15	W. & F. P. Cur- rie & Co., 340 St. James st., Montreal.	Sodium nitrate.	63637	Is Chili Saltpetre.
May 6	"	63648	P. D'Aunt & Co, Hill,	1	8	"	"	63648	"
"	"	63652	The F. J. Cuthb Co, OTTAWA	1 lb.	8	Unknown	"	63652	"

BULLETIN NO. 323—SALTPETRE.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.				

DISTRICT OF KINGSTON—JAMES HOGAN, INSPECTOR.

1915.	April 28	Saltpetre...	68031	C. S. Prouse, Kingston...	1 lb.	20	N. C. Polson & Co., Kingston.	.....	Sodium Nitrate.....	68031	Is Chili Saltpetre.
	" 28	"	68032	T. H. Sargent, Kingston.	1 "	20	Nat. Drug Co., Toronto.	.....	Potassium Nitrate.....	68032	Genuine.
	May 4	"	68033	Green's, Belleville.....	1 "	30	Drug Trading Co., Toronto.	.....	"	68033	"
	" 4	"	68034	F. C. Clarke, Belleville.	1 "	20	"	.....	"	68034	"
	" 4	"	68035	W. H. Lattimer.....	1 "	20	J. Sloane & Co., Belleville.	.....	Sodium Nitrate.....	68035	Is Chili Saltpetre.
	" 4	"	68036	The Belleville Pharmacy, Belleville.	1 "	20	Lyman's, Ltd., Toronto.	.....	Potassium Nitrate.....	68036	Genuine.
	" 4	"	68037	H. T. Paton, Cobourg...	1 "	30	"	.....	"	68037	"
	" 5	"	68038	W. J. B. Davison, Port Hope.	1 "	25	Drug Trading Co., Toronto.	.....	"	68038	"
	" 5	"	68039	F. C. Weber, Peterboro.	1 "	20	E. G. West & Co., Toronto.	.....	"	68039	"
	" 5	"	68040	M'Dermid & Jury, Peter.	1 "	15	Drug Trading Co., Toronto.	.....	"	68040	"





BULLETIN No. 323—SALTPETRE.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	Results of Analysis.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.					

DISTRICT OF WINDSOR—JOHN TALBOT, INSPECTOR.

1915.										
May	3	Saltpetre...	54604 H. Robertson, Sarnia...	1 lb..	30	Lyman Bros., Toronto.	.....	Potassium Nitrate....	54604	Genuine.
"	3	"	54605 Clement Drug Store, Sarnia.	1 "	20	Drug Trading Co., Toronto.	.....	"	54605	"
"	3	"	54606 Geo. Ingersoll, Sarnia...	1 "	25	"	.....	"	54606	"
"	4	"	54614 P. T. McKibbin, Sarnia...	1 "	20	E. G. West & Co., Toronto.	.....	"	54614	"
"	4	"	54615 J. B. Dale, Petrolia.	1 "	25	Drug Trading Co., Toronto.	.....	"	54615	"
"	6	"	54620 W. O. Foster, St. Thomas.	1 "	15	Nat. Drug Co., St. Thomas.	.....	"	54620	"
"	6	"	54621 Geo. H. Small, St. Thomas.	1 "	20	"	.....	"	54621	"
"	6	"	54622 F. W. Judd, St. Thomas.	1 "	25	"	.....	"	54622	"
"	6	"	54623 R. E. Crane & Co., St. Thomas.	1 "	25	"	.....	"	54623	"
"	6	"	54624 F. A. Leman & Co., St. Thomas.	1 "	15	Drug Trading Co., Toronto.	.....	"	54624	"

DISTRICT OF MANITOBA—A. C. LARIVIERE, INSPECTOR.

May	14	Saltpetre...	61272 Geo. McLean Co., Ltd., Winnipeg.	1 lb.	10	.....	.....	Sodium Nitrate....	61272	Is Chili Saltpetre.
"	14	"	61273 Richards & Brown, Winnipeg.	1 "	Nil.	.....	.....	"	61273	"

14	61274	The A. McDonald Co., Winnipeg.	10	"	61274	"
14	61275	Campbell Bros. & Wilson, Winnipeg.	Nil	"	61275	"
14	61276	The Godyelle Co., Winnipeg.	"	"	61276	"
18	61277	The Mamedesa Pharmacy, Minnedosa.	25	Potassium Nitrate 92% and Sod. Nitrate.	61277	Mixed nitrates, potash and soda.
18	61278	R. T. Batchart, Minnedosa.	20	"	61278	"
19	61279	B. M. Cayniff, Portage la Prairie.	25	Sodium Nitrate.	61279	Is Chili Saltpetre.
19	61280	Parage Pharmacy, Portage la Prairie.	25	Potassium Nitrate 83% and Sod. Nitrate.	61280	Mixed nitrates, potash and soda.
19	61281	J. K. Hill, Portage la Prairie.	25	Potassium Nitrate 86% and Sod. Nitrate.	61281	"

DISTRICT OF SASKATCHEWAN—L. H. HALL, INSPECTOR.

April 26	66351	T. W. Harrison, Swift Current.	35	Potassium Nitrate.	66351	Genuine.
27	66357	J. G. Laycock, Swift Current.	25	"	66357	"
May 1	66371	F. W. Marlett, Moose Jaw.	25	"	66371	"
1	66372	E. J. Colling, Moose Jaw.	25	"	66372	"
1	66373	H. A. Dayhousen, Moose Jaw.	20	Sodium Nitrate.	66373	Is Chili Saltpetre.
2	66376	Charles Co., Moose Jaw.	10	"	66376	"
6	66382	William & Sons, Regina.	5	"	66382	"
4	66383	W. B. Mackay, Regina.	20	Potassium Nitrate.	66383	Genuine.

DISTRICT OF ALBERTA—A. W. R. MARKLEY, INSPECTOR.

April 26	52146	H. Graydon, Edmonton.	30	Potassium Nitrate.	52146	Genuine.
30	52147	H. Loren, Edmonton.	25	"	52147	"
30	52148	Charles Cooper, Leduc.	10	Potassium Nitrate, 92.48 p.c.; 7.52 p.c. Sodium Nitrate.	52148	Mixed Nitrates Potash & Soda.

BULLETIN No. 323—SALTPETRE.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.				

DISTRICT OF ALBERTA—A. W. R. MARKLEY, INSPECTOR.—*Concluded.*

1915.											
April 30	Saltpetre . . .	52149	Macdonald Cooper, Ltd., Edmonton.	1 lb.	10		B. & R., New York.		Potassium Nitrate, 0.10 p.c.; 99.90 p.c. Sodium Nitrate.	52149	Is Chili Saltpetre.
May 18	" . . .	52150	Findlay Drug Co., Calgary.	Cal-1 "	25		Lyman & Sons, Montreal.		Pot. Nitrate . . . . .	52150	Genuine.
" 20	" . . .	52154	Wendell McLean, Calgary.	Cal-1 "	30		N. D. & C. Co., Calgary.		Pot. Nitrate Trace Sod Nitrate.	52154	"
" 21	" . . .	52155	Nat. Drug & Chem. Co., Calgary.	1 "	20		" "		Pot. Nitrate . . . . .	52155	"
June 14	" . . .	52156	J. H. Slites, Bassana, Lethbridge.	1 "	20		" "		" . . . . .	52156	"
" 15	" . . .	52182	P. W. McNabb, Brooks, Lethbridge.	1 "	40		" "		" . . . . .	52182	"
" 17	" . . .	52184	Frank Hedley Drug Co., Lethbridge.	1 "	35		Martin, Bole & Wynne, Win- ipeg.		" . . . . .	52184	"

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DISTRICT OF ROCKY MOUNTAINS—THOS. PARKER, INSPECTOR.

April 26	Saltpetre	6180	E. W. Hazelwood, Trail	1 lb.	35	N. D. & C. Co., Vancouver.	Potassium Nitrate	61803	Genuine.
May 2	"	61820	Cranbrook Drug & Book Co., Cranbrook.	1 "	20	N. D. & C. Co., Montreal.	"	61820	"

DISTRICT OF VANCOUVER—E. J. MORGAN, INSPECTOR.

May 25	Saltpetre	55271	Kelly, Douglas & Co., Ltd., Vancouver.	1 lb.	20	N. D. & C. Co. of Canada.	Potassium Nitrate	55271	Genuine.
"	"	55272	W. M. Harrison & Co., Ltd., Ruben and Granville Sts., Vancouver.	1 "	25	Unknown.	"	55272	"
"	"	55273	Frederic T. Hill, 628 Colima St., New Westminster.	1 "	25	N. D. & C. Co. of Canada.	"	55273	"
"	"	55274	Lessem, Dickie, Gross & Co., Water St., Vancouver.	1 "	25	J. A. Lepscorten, Ltd., Vancouver.	"	55274	"
"	"	55275	W. H. Malkin Co., Ltd., Water St., Vancouver.	1 "	25	Unknown.	"	55275	"

DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

June 11	Saltpetre	66739	Goss, A. Fraser & Co., 914 Govt St., Victoria.	1 lb.	35	N. D. & C. Co., Victoria.	Potassium Nitrate	66739	Genuine.
"	"	66741	S. Williams, 613 Fort St., Victoria.	1 "	35	"	"	66742	"
"	"	66743	E. Campbell, Fort & Douglas Sts., Victoria.	1 "	2	"	"	66743	"
"	"	66744	Lerry's Drug Store, 706 Fort St., Victoria.	1 "	40	E. R. Squibb & Sons, New York.	"	66744	"
"	"	66746	Hall & Co., 702 Yates St., Victoria.	1 "	35	N. D. & C. Co., Victoria.	"	66746	"
"	"	66748	Lewis Pharmacy, 1411 Fort St., Victoria.	1 "	35	"	"	66748	"
"	"	66750	W. Jackson & Co., 1411 Douglas St., Victoria.	1 "	30	J. J. Lepscorten & Co., Vancouver.	"	66750	"
"	"	66752	Johnson, Colorado, 1300 Douglas St., Victoria.	1 "	30	N. D. & C. Co., Victoria.	"	66752	"
"	"	66755	Mac Drug & Chem. Co., 35 Yates St., Victoria.	1 "	20	N. D. & C. Co., Vancouver.	"	66755	"
"	"	66756	Cyrus H. Howe, 1228 Grosvenor St., Victoria.	1 "	25	Laybourn, Ltd., Montreal.	"	66756	"

## APPENDIX O.

## BULLETIN No. 324—MAPLE SUGAR.

OTTAWA, October 14, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report upon Maple Sugar 'as obtained by our inspectors in April, May and June of this year.

Standards for Maple Sugar have been in force since November 27, 1911; the Order in Council defining them is published by this department as Circular G. 994.

An amendment to the Adulteration Act was assented to in April of this year, and introduces the following change in the Act, as regards maple products:—

“1. Section 29a of the Adulteration Act, chapter 133 of the Revised Statutes, 1906, as enacted by chapter 19 of the statutes of 1914, is repealed and the following is substituted therefor:—

“29a. No person shall manufacture for sale, keep for sale, offer or expose for sale, or sell, any article of food resembling or being an imitation of maple sugar or maple syrup, or which is composed partly of maple sugar or maple syrup, and which is not pure maple sugar or pure maple syrup.

“2. Any maple sugar or maple syrup which is not up to the standard prescribed by the sixth schedule to this Act, or, if such standard is changed by the Governor in Council, to such standard as the Governor in Council may from time to time prescribe, shall be deemed to be adulterated within the meaning of this Act.

“3. The word “maple” shall not be used, either alone or in combination with any other word or words, or letter or letters, on the label or other mark illustration or device on a package containing any article of food, or on any article of food itself, which is not pure maple sugar or pure maple syrup, and any article of food labelled or marked in violation of this subsection shall be deemed to be adulterated within the meaning of this Act.”

The following synopsis presents the results of analysis of the above mentioned samples:—

	Samples.
Found genuine. . . . .	204
“ to meet the requirements. . . . .	5
“ : adulterated. . . . .	25
	<hr/>
Total. . . . .	234

## SESSIONAL PAPER No. 14

Five samples so nearly meet legal minimum requirements, that adulteration cannot be established in their regard: but they are not, on this account, above suspicion.

I would respectfully recommend publication of this report as Bulletin No. 324.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

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NOTE 1.—Vendor claims to have sold this as a compound maple sugar.

“ 2.—Vendor claims to have sold sample without giving a guarantee of purity.

“ 3.—Vendor claims that the sugar was sold to him as pure by the manufacturer.

“ 4.—Vendor or furnisher states that the article was manufactured by Maples Ltd., Toronto.

“ 5.—Manufacturer claims that the article was sold by him not as maple sugar, but as maple flavoured sugar.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1915.								
May 19	Maple Sugar.	54001	Estate of Wm. Patrick, Halifax.	1 lb.	25	Unknown.....	J. F. Harrison, Athol, N.S.	Mfr.....
" 19	"	54002	Rooney & Lovett, Halifax	1½ "	30	G. Gilbert, Gilbert's Mountain.		
" 19	"	54003	W. A. Hart, Halifax.....	1 "	20	Unknown.....	E. W. Crease & Son, Halifax.	Mfr.....
" 20	"	54004	W. A. Shanks, Halifax..	1¼ "	25	D. A. Lavers, Parrsboro, N.S.		
" 20	"	54005	S. Smith & Son, Halifax..	1 "	20	Maples, Ltd., Toronto.	Bauld Bros., Halifax.	Mfr.....
" 21	"	54006	Bauld Bros., Ltd., Halifax.	1 "	15	"	"	"
" 21	"	54007	E. W. Crease & Son, Halifax.	1¼ "	20	Knox Dodge, Mapleton, N.S.		"
" 26	"	54008	A. Stitchbury, Dartmouth	1¼ "	32	Unknown.....	Unknown.....	
" 26	"	54009	Coleman & Eisener, Halifax.	1 "	20	"	R. B. Seeton, Halifax.	
" 26	"	54010	A. Forsyth, Halifax... ..	1 "	20	Sugars and Cannery, Ltd., Montreal.	C. E. Choate, Halifax.	

DISTRICT OF NOVA SCOTIA—

June 4	Maple Sugar.	65854	A. J. Roop, New Glasgow	1 lb.	20	E. E. Dickinson, West Brook, N.S.	Mfr.....
" 4	"	65855	A. A. McDonald, New Glasgow.	1 "	20	"	"
" 4	"	65857	D. J. Murray, New Glasgow.	1 "	20	"	"
" 5	"	65858	C. Grant, New Glasgow..	1 "	15	Unknown .....	Unknown.....
" 5	"	65859	John D. McIver, New Glasgow.	1 "	26	"	B. D. Rogers, Stellarton, N.S.

DISTRICT OF CAPE BRETON—

May 6	Maple Sugar.	63808	Hennigers, Sydney.....	1 lb.	25	Milford Crowe, Mapleton, N.S.	.....
" 6	"	63810	Walter's Confectionery, Sydney.	1 "	25	Maples, Ltd., Toronto.	.....



SESSIONAL PAPER No. 14

MAPLE SUGAR.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Results on dry basis.			
		Total Ash.	Lead Number (Canadian.)		

R. J. WAUGH, INSPECTOR.

	p. c.	p. c.			
.....	3.62	0.88	3.53	54901	Genuine.
.....	4.37	0.83	2.73	54902	"
.....	4.23	1.01	3.76	54903	"
.....	5.02	1.18	3.98	54904	"
.....	5.42	0.55	1.67	54905	Adulterated.—Notes 3 & 4.
.....	6.13	0.50	1.36	54906	Notes 3 & 4.
.....	4.55	1.00	3.60	54907	Genuine.
.....	2.42	1.17	4.23	54908	"
.....	5.10	0.49	1.50	54909	Adulterated.—Note 4.
.....	5.94	0.83	3.18	54910	Genuine.

W. A. PETIPAS, TEMPORARY INSPECTOR.

	p. c.	p. c.			
.....	5.03	0.92	3.20	65854	Genuine.
.....	4.58	1.05	3.44	65855	"
.....	2.80	0.93	3.35	65857	"
.....	4.08	1.32	5.11	65858	"
.....	2.94	0.51	1.66	65859	Adulterated.—Note 4.

E. F. McKEEN, TEMPORARY INSPECTOR.

	p. c.	p. c.			
.....	9.58	0.95	2.61	65858	Genuine.
.....	8.96	0.62	1.76	65810	Meets legal requirements.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF PRINCE EDWARD ISLAND—

1915.							
May	7	Maple Sugar ..	60301	J. C. Crabbe, Charlotte-town.	1 lb..	20	Carveli Bros., Charlotte-town.
"	17	" ..	60303	Jenkins & Sons, Charlotte-town.	1 " ..	20	Canadian Maple Exchange Ltd., Montreal.
"	17	" ..	90304	Stewart & Sons, Charlotte-town.	1 " ..	20	Maple Ltd., Toronto.
"	17	" ..	60305	Beer & Goff, Charlotte-town.	$\frac{3}{4}$ " ..	15	Canadian Maple Exchange Ltd., Montreal.
							N. Rattenbury Ltd., Charlotte-town.

DISTRICT OF NEW BRUNSWICK—

May	6	Maple Sugar...	66001	Slocum & Ferris, St. John	2 pkg.	50	Sussex Mercantile Co., Ltd., Elgin.
"	6	" ..	66002	L. S. Peters, St. John....	2 "	48	H. Hawford, Geldart Elgin.
"	8	" ..	66003	Wm. Baxter, St. John....	2 bxs.	40	R. N. Habley, Goshon, N.B.
"	10	" ..	66004	H. E. Williams & Co., Ltd., St. John.	2 "	50	Unknown.....
"	10	" ..	66005	W. Fenwick, St. John...	2 "	48	Tait Rabkin Co., Elgin, N. B.
"	14	" ..	66006	T. E. Robinson, St. John.	1 lb..	25	Unknown.....
"	14	" ..	66007	J. W. Philips, St. John ..	1 "	25	Slocum & Ferris, St. John.
"	14	" ..	66008	McAlaey & Co., St. John.	1 "	25	Wm. Fenwick, St. John.
"	25	" ..	66009	Johnston & Kitchen, Fredericton.	1 "	35	James & Nelson Cliff, Lower Queensbury.
"	25	" ..	66010	W. H. Vanwart, Fredericton.	1 "	30	Sussex Mercantile Co., Elgin.
"	25	" ..	66011	C. H. Burtt, Fredericton	1 "	25	W. L. Burtt, Sealand Station.
June	9	" ..	96012	H. O'Neill, St. Andrews.	3 bars	30	Sugars & Cannerys Ltd., Montreal.
"	15	" ..	66013	Jones & Brown, Norton, King's Co.	3 pkg.	30	Baird & Peters, St. John.
"	15	" ..	66014	E. Harmer, Ltd., Norton, King's Co.	1 "	25	R. G. Innes, Petitediac.
"	16	" ..	66015	W. B. McKay Co., Ltd., Sussex.	1 "	25	T. A. Groggin & Sons Elgin.

SESSIONAL PAPER No. 14

MAPLE SUGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Water.	Solids.	Results on dry basis.				
			Lead Number (Canadian).	Total Ash.	Water Soluble Ash.		

WM. A. WEEKS, INSPECTOR.

	p. c.	p. c.		p. c.	p. c.	p. c.		
.....	6.23	93.77	4.15	1.03	.....	.....	60301	Genuine.
.....	6.89	93.11	3.20	0.83	.....	.....	60303	"
.....	4.90	95.10	3.10	0.82	.....	.....	60304	"
.....	5.90	94.10	3.46	0.92	.....	.....	60305	"

JOHN C. FERGUSON, INSPECTOR

.....	6.60	93.40	2.96	0.75	0.41	0.34	66001	Genuine.
.....	6.60	90.40	3.23	0.75	0.37	0.38	66002	"
.....	9.69	90.31	3.84	0.88	0.48	0.40	66003	"
.....	8.92	91.08	2.30	0.64	0.42	0.22	66004	"
.....	9.74	90.26	2.25	0.69	0.49	0.20	66005	"
.....	5.98	94.02	2.37	0.79	.....	.....	66006	"
.....	7.63	92.37	1.54	0.72	.....	.....	66007	Adulterated
.....	6.34	93.66	2.55	0.74	.....	.....	66008	Genuine.
.....	4.03	95.97	2.75	0.78	.....	.....	66009	"
.....	5.02	94.38	2.06	0.74	.....	.....	66010	"
.....	3.61	96.39	3.73	1.01	.....	.....	66011	"
.....	3.86	96.14	2.46	0.80	.....	.....	66012	"
.....	4.69	95.31	3.29	0.99	.....	.....	66013	"
.....	6.08	90.02	2.87	1.01	.....	.....	66014	"
.....	3.43	96.07	2.02	0.75	.....	.....	66015	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC CITY—

1915.							
April 23	Sucre d'érable.	56343	H. St. Cyr, 95 du Pont, Quebec.	2 lb.	30	T. Bureau, Sault Momorency.	.....
" 20	"	56345	O. Lacroix, 19 St. Joseph, Quebec.	1 "	12	Louis Chevalier, St. Tite des Caps.	.....
" 20	"	56346	Elz. Turcotte, 74 Desfosés, Quebec.	2 "	30	Phil Vezina, Ange Gardien.	.....
" 20	"	56347	" " "	2 "	30	H. Demers, Megantic, St. Pierre Baptiste.	.....
" 20	"	56348	" " "	2 "	30	Unknown	.....
" 21	"	56349	Myrant & Poulot, Quebec.	1 "	15	Huot, Ange Gardien.	.....
" 21	"	56350	Chs. Riverin, 55 Couronne, Quebec.	1 "	15	Paré, St. Gervais	.....
" 22	"	56351	Cantin & Frere, 271 St. Joseph, Quebec.	1½ "	24	Huot, Ange Gardien.	.....
" 23	"	56352	H. D. Marier, 174 Dorchester, Quebec.	1 "	16	Durand, St. Famille.	.....
" 23	"	56353	Z. Paquet & Co., 154 du Pont, Quebec.	1 "	13	Tremblay	.....
" 23	"	56354	G. L. Letourneau, 133 du Pont, Quebec.	2 "	26	Audet, St. Anselme.	.....
" 26	"	56355	C. O. Simard, 8 St. Jean, Quebec.	2 "	35	Vezina, Ange Gardien.	.....
" 26	"	56357	Jos. Savard, 35 St. Jean, Quebec.	2 "	35	Z. Gariepy, Ange Gardien.	.....
" 26	"	56358	A. Grenier, 94 St. Jean, Quebec.	2 "	35	A. Mathier, Ange Gardien.	.....
" 26	"	56361	A. Turcotte, 272 St. Jean, Quebec.	1 "	17	Hardy, St. Basile	.....

DISTRICT OF QUEBEC PROVINCE—J. AUDET, D. BROCHU,

April 21	Sucre d'érable.	3833	C. Carbonneau, Ste. Marguerite.	1 lb.	25	.....	.....
" 23	"	3835	A. Audet, Ste. Claire	1 "	25	.....	.....
" 27	"	3836	F. Dallaire, St. Anselme.	1 "	25	.....	.....
" 28	"	3837	J. Fortier, St. Edward	1 "	25	.....	.....
May 15	Sucre	3856	Lacasse & Audet, St. Edward.	2 "	30	.....	.....
" 17	"	3859	Chas. Rodville, St. Benjamin.	3 "	25	.....	.....
" 18	"	3860	Nap. Langelier, St. Prosper.	3 "	50	.....	.....
" 25	"	3863	D. Towell, St. Leon de Standon.	3 "	50	.....	.....
" 27	"	3857	A Clouthier, St. Odilon	3 "	35	.....	.....
June 3	Sucre d'érable	3865	Jos. Tanguay, St. Nazaire	3 "	40	.....	.....

SESSIONAL PAPER No. 14

## MAPLE SUGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Results on dry basis.			
		Total Ash.	Lead Number (Canadian).		

F. X. W. E. BELAND, INSPECTOR.

	p. c.	p. c.			
.....	2.14	1.51	6.12	56343	Genuine.
.....	4.92	1.04	3.58	56345	"
.....	6.00	1.03	3.48	56346	"
.....	5.10	0.73	1.80	56347	"
.....	5.44	1.30	3.86	56348	"
.....	3.75	1.33	4.31	56349	"
.....	8.45	1.12	3.82	56350	"
.....	6.37	1.17	4.36	56351	"
.....	4.30	1.43	4.84	56352	"
.....	6.91	1.46	4.66	56353	"
.....	8.16	1.27	3.29	56354	"
.....	6.48	1.10	3.77	56355	"
.....	6.20	0.87	2.42	56357	"
.....	7.62	1.11	3.93	56358	"
.....	5.64	0.96	3.34	56361	"

T. GENDREAU, N. CADIEUX, TEMPORARY INSPECTORS.

.....	4.34	0.91	2.92	3833	Genuine.
.....	3.80	0.91	3.92	3835	"
.....	1.71	1.12	3.75	3836	"
.....	4.02	1.25	3.86	3837	"
.....	7.22	1.41	5.35	3838	"
.....	6.28	1.02	3.01	3839	"
.....	5.25	1.04	4.39	3840	"
.....	5.75	0.87	3.00	3841	"
.....	7.58	1.08	3.90	3842	"
.....	6.61	1.18	4.59	3843	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC PROVINCE—

1915.							
June 8	Sucre d'érable.	3869	Louis Carrier, St. Honoré de Chenly.	3 lb.	50		
" 9	" ..	3870	Arthur Boutin, St. Gideon	3 "	50		
" 17	Sucre.....	3872	J. C. Bolduc, Ste. Méthode.	4 "	60		
May 3	Sucre d'érable.	3543	Alfred Pouliot, St. Philémon.	2 "	24	Pierre Gagnon, St. Philémon.	
" 4	" ..	3546	Cyrille Larochelle, St. Magloire.	2 "	24	Jos. Larochelle, St. Canille.	
" 4	" ..	3548	Alfred Labbe, St. Magloire.	2 "	28	L. Labbe, St. Magloire.	
" 4	" ..	3549	Louis Asselin, St. Sabina.	2 "	24	A. Labbe, St. Magloire.	
" 5	" ..	3553	Louis Laverdière, St. Magloire.	2 "	26	Jos. Laverdière, St. Magloire.	
" 6	" ..	3555	Philberte Lavalle, Buckland.	2 "	24	Jos. Boutin, Buckland.	
" 6	" ..	3556	Alfred Audet, St. Damien.	2 "	24	Wm. Guilmet, St. Damien.	
" 7	" ..	3560	Jos. Robert, St. Damien.	2 "	24	Wm. Mercier, St. Damien.	
" 7	" ..	3561	" " ..	2 "	24	Amédée Audet, St. Damien.	
" 8	" ..	3570	Ant. Labrecque, St. Raphael.	2 "	25	Edouard Boufard, St. Raphael.	
" 10	" ..	3576	François Coté, Armagh ..	2 "	30	Pierre Coté, Armagh.	
" 10	" ..	3577	Pierre Isabel, Armagh ..	2 "	28	Fr. Isabel, Armagh.	
" 10	" ..	3579	Donat Brochu, Armagh ..	2 "	30	Alfred Royer, Armagh.	
" 10	" ..	3583	Michel Cadrin, Armagh ..	2 "	26	Charles Cadrin, Armagh.	
April 23	" ..	2754	Nap. Letourneau, Montmagny.	2½ "	30	Damase Cloutier, St. Thomas.	
" 27	" ..	2762	A. Caron, St. Pierre .....	1½ "	18	Vendor .....	
" 29	" ..	2765	J. Z. Guimond, Cap St. Ignace.	1½ "	24	Michel Delage, Cap St. Ignace.	
" 29	" ..	2766	W. Bernier, Cap St. Ignace.	2 "	25	Vendor .....	
" 24	" ..	270	Pierre Simard, St. Hypolite.	1 "	20	.....	
May 20	" ..	56447	Hellem & Bros., Rimouski.	1 "	15	Babzile & Gagnon, St. Modiste.	
" 20	" ..	56450	Joseph Garneau, Rimouski.	1 "	17	.....	A. Legaré & Fils, Quebec.
" 22	" ..	56452	Pierre Berube, Fraserville.	1 "	13	Irene Calivette .....	
" 22	" ..	56454	J. A. Chamard, Fraserville.	1 "	15	Thos. Chamard, St. Jean, Port Jolie.	
" 22	" ..	56455	Joseph Vill, Fraserville ..	1 "	17	Auguste St. Pierre, St. Cyrille.	
" 22	" ..	56460	Damien & Cie, Fraserville.	1 "	15	.....	O. Carbonneau, L'Islet.

SESSIONAL PAPER No. 14

MAPLE SUGAR.

Inspector's Report. (Is not an Expression of opinion.)	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Results on dry basis.			
		Total Ash.	Lead Number (Canadian.)		

Continued.

.....	p.c.	p.c.			
.....	7.34	0.93	3.23	3869	Genuine.
.....	4.92	1.00	3.45	3870	"
.....	7.73	1.03	4.17	3872	"
.....	7.79	1.19	4.64	3543	"
.....	7.51	1.25	4.77	3545	"
.....	7.87	1.29	5.60	3548	"
.....	8.97	1.36	5.69	3549	"
.....	4.97	1.41	5.47	3553	"
.....	6.41	1.25	4.62	3555	"
.....	5.44	1.22	4.84	3556	"
.....	4.01	1.22	4.46	3560	"
.....	7.62	1.04	3.44	3561	"
.....	5.19	1.43	5.37	3570	"
.....	5.53	1.06	3.75	3575	"
.....	5.49	1.03	3.94	3577	"
.....	3.80	0.93	3.43	3579	"
.....	8.41	1.14	3.80	3583	"
.....	1.79	1.16	4.93	2754	"
.....	5.04	1.29	3.97	2762	"
.....	1.38	1.18	3.75	2765	"
.....	1.21	1.19	4.12	2766	"
Purchased at St. Jerome Market.	1.77	1.01	3.61	270	"
.....	7.11	1.51	5.94	56447	"
.....	7.94	1.50	4.50	56450	"
.....	5.08	1.55	6.63	56452	"
.....	4.44	1.49	5.37	56454	"
.....	2.76	1.29	5.17	56455	"
.....	3.11	1.29	4.97	56459	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer	Furnisher.

DISTRICT OF QUEBEC PROVINCE—

1915.							
June 2	Sucre d'érable.	56473	Joseph L. Drolet, Fraserville.	1 lb.	25	H. Belanger, St. Aubert.	
" 2	"	56474	Eugène Michaud, Fraserville.	1 "	14		Dominion Fish, Quebec.
" 2	"	56475	Joseph A. Michaud, Fraserville.	1 "	15	H. Belanger, St. Aubert.	
" 2	"	56476	Joseph Bernier, Fraserville.	1 "	15		O. Carbonneau, L'Islet.
" 4	"	56478	F. Lavali, St. Jean, Port Jolie.	1 "	10	Abraham Caron, St. Jean, Port Jolie.	
May 17	"	2488	J. A. Provencher, Matane.	1 "	18		
" 17	"	2489	N. Durette	1 "	20		
" 19	"	2496	A. F. Boutin, Mont Joli.	1 "	13		

DISTRICT OF THREE RIVERS—

May 11	Maple Sugar.	67958	Narcisse Roberge, St. Felix de Valois.	1 lb.	15	Vendor.....	
" 14	"	67963	Ed. Joly, St. Cleophas...	1 "	10	"	
" 8	"	67965	Paul Champagne, St. Jean de Matha.	3 "	30	"	
" 8	"	67966	Wilfrid Roy, St. Jean de Matha.	2 "	20	"	
" 10	"	67967	Louis Desroches, St. Jean de Matha.	3 "	30	"	
" 11	"	67974	Louis Boucher, Castle Hill	1 "	10	"	
" 12	"	67975	Alexis Lepicier, Ste. Cecile	1 "	10	"	
" 12	"	67976	Michel Lepicier, Ste. Cicile	1 "	10	"	
" 13	"	67977	Veuve V. Ducharme, St. Cleophas de Brandon.	2 "	20	"	
" 24	"	69101	Nap. Gravel, St. Léon. ...	1 "	12	"	

DISTRICT OF MONTREAL—

April 30	Maple Sugar	67166	N. Trudeau, 248 Dandurand St., Rosemount, Montreal.	1½ lb.	24		Horne Food Co...
" 30	"	67167	J. E. Normandeau, 2252 Boul. Rosemount, Montreal.	1½ "	25		Gunn & Langlois..
" 30	"	67168	A. Petit, 2424 Boul. Rosemount, Montreal.	1½ "	30		" " ..
" 30	"	67169	H. Pepin, Dandurand and 9th ave., Boul. Rosebunt, Montreal.	1½ "	20		National Produce Co.



SESSIONAL PAPER No. 14

MAPLE SUGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			No. of Sample.	Remarks and Op of the Chief Analyst.
	Water.	Results on dry basis.			
		Total Ash.	Lead Number (Canadian.)		

*Concluded.*

	p. c.	p. c.			
.....	2.52	1.31	4.92	56473	Genuine.
.....	5.53	0.89	2.68	56474	"
.....	3.92	1.12	3.54	56475	"
.....	3.98	1.17	4.06	56476	"
.....	4.74	1.51	4.67	56478	"
.....	7.70	0.60	1.01	2488	Adulterated.
.....	5.50	1.56	5.78	2489	Genuine.
.....	3.61	1.17	4.82	2496	"

DR. V. P. LAVALLEE, INSPECTOR.

.....	5.63	1.05	4.07	67958	Genuine.
.....	5.59	0.97	3.04	67963	"
.....	7.44	1.03	3.44	67965	"
.....	6.04	0.98	3.48	67966	"
.....	9.61	0.95	3.25	67967	"
.....	4.26	1.15	4.43	67974	"
.....	5.20	1.03	3.52	67975	"
.....	5.87	0.98	3.59	67976	"
.....	8.54	1.32	4.10	67977	"
.....	4.79	1.29	5.04	69101	"

D. J. KEARNEY, INSPECTOR.

.....	3.47	0.13	0.01	67166	Adulterated
.....	2.95	0.89	3.09	67167	Genuine.
.....	1.79	1.23	4.45	67168	"
Was purchased as Com- pound Maple Sugar.	7.30	0.09	0.00	67169	Adulterated Note 1.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MONTREAL—

1915.							
May	5	Maple Sugar.	67170	M. A. Payette, 217 Ontario st., Maisonneuve.	1 lb	15	W. Wolfe.....
"	5	" ..	67171	Phil. Cardon, 35 Market, Maisonneuve.	1 $\frac{3}{4}$ "	28	Gunn & Langlois..
"	5	" ..	67172	D. Marion, 659 Ontario st., Maisonneuve.	1 $\frac{3}{4}$ "	24	N. Fontaine.....
"	5	" ..	67173	Pierre Serve, 858 Ontario st., Maisonneuve.	1 $\frac{1}{2}$ "	24	Gunn & Langlois..
"	5	" ..	67174	A. Ouellette, 945 Colonial st., Montreal.	1 $\frac{3}{4}$ "	26	W. Champagne...
"	5	" ..	67175	P. Deslières, 1750 Cadiex st., Montreal.	.....	.....	.....
"	5	" ..	67176	E. Beauchamp, 1731 Cadiex st., Montreal.	2 $\frac{1}{4}$ "	35	J. Gratton.....
"	5	" ..	67177	F. Legault, 1400 City Hall ave., Montreal.	1 $\frac{3}{4}$ "	23	Unknown .....
"	5	" ..	67178	P. Paquette, 1399 City Hall ave., Montreal.	1 $\frac{1}{4}$ "	16	" .....
"	5	" ..	67179	A. Boisvert, 1401 City Hall ave., Montreal.	1 $\frac{3}{4}$ "	25	J. Limoges.....
"	5	" ..	67180	J. A. Tardif, 1030 Henri Julien st., Montreal.	1 $\frac{3}{4}$ "	23	" .....

DISTRICT OF EASTERN TOWNSHIP AND VALLEYFIELD—

May	5	Maple Sugar	58116	J. B. St. Pierre, St. Hyacinthe.	1 blk.	10	.....
"	5	" ..	58117	L. Gendron, St. Hyacinthe.	1 "	12	.....
"	5	" ..	58118	J. Leduc, St. Hyacinthe.	1 "	30	.....
"	5	" ..	58119	Horace Robinson, St. Hyacinthe.	1 "	10	.....
"	10	" ..	58129	P. J. Girard, Richmond Est.	1 "	10	.....
"	10	" ..	58121	E. G. Pearson, Richmond Est.	1 "	25	.....
"	10	" ..	58122	Gun & Elliott.....	1 "	25	J. Hodge, Dennison Mills.
"	10	" ..	58123	Alphonse Girard, Richmond Est.	1 "	12	.....
"	10	" ..	58124	F. J. Verrill, Melbourne.	1 "	15	Chester & Fleck, Melbourne.
"	10	" ..	58125	E. E. Biron, Sherbrooke..	1 "	10	.....
"	10	" ..	58126	Herbert & Fortier, Sherbrooke.	1 "	20	J. Lapointe, Compton.
"	10	" ..	58127	Bernard & Cie, Sherbrooke.	1 "	10	.....
"	10	" ..	58128	Geo. F. Moore, Sherbrooke.	1 "	15	.....
"	10	" ..	58129	J. Audet, Coaticook .....	1 "	12	J. Vallee, Compton.
"	12	" ..	58130	Woodman & McKee, Sherbrooke.	1 "	18	H. H. Edwards, Coaticook.

SESSIONAL PAPER No. 14

MAPLE SUGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.		No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Results on dry basis.		
		Total Ash.		

*Concluded.*

	p. c.	p. c.			
.....	7.08	0.79	2.10	67170	Genuine.
.....	3.44	1.32	4.44	67171	"
.....	7.68	0.87	2.81	67172	"
.....	3.17	1.25	4.40	67173	"
.....	7.21	0.74	2.46	67174	"
.....	7.10	0.89	3.14	67175	"
.....	3.52	0.89	3.61	67176	"
.....	5.44	1.08	3.85	67177	"
.....	1.46	0.77	2.31	67178	"
.....	6.28	1.00	3.06	67179	"
.....	2.48	1.03	3.56	67180	"

J. J. COSTIGAN, INSPECTOR.

.....	2.05	0.63	2.87	58116	Genuine.
.....	7.40	0.99	2.93	58117	"
Concord	4.39	0.62	2.05	58118	"
.....	2.32	1.30	0.42	58119	Adulterated.
.....	6.10	0.94	2.81	58120	Genuine.
.....	2.03	0.98	3.17	58121	"
.....	2.47	0.90	3.30	58122	"
.....	5.09	0.87	2.44	58123	"
.....	6.97	0.99	3.63	58124	"
.....	3.85	0.07	0.03	58125	Adulterated - Note 2
.....	3.74	0.85	2.52	58126	Genuine.
.....	5.68	0.86	2.39	58127	"
.....	4.10	1.02	3.14	58128	"
.....	8.16	0.93	3.41	58129	"
.....	2.16	0.88	2.82	58130	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF EASTERN TOWNSHIPS AND VALLEYFIELD—

1915.							
April 21	Maple Sugar..	57916	Joseph Miron, Hawkesbury.	1 lb.	15	Arthur Aubrey, Mont Oscar.	.....
" 21	" ..	57917	Laurin & Frère, Hawkesbury.	1 cake	17	John Milner, Hawkesbury.	.....
" 22	" ..	57918	Graham & Hunter, St. Lambert.	1 "	35	.....	Lessiham Graham, Montreal.
" 22	" ..	57919	J. A. Tremblay & Cie, St. Lambert.	1 "	28	.....	Gunn Langlois,
" 23	" ..	57920	P. J. Roy, St. Johns, P.Q.	1 blk.	16	.....	.....
" 23	" ..	57921	A. Foisy, St. Johns, P.Q.	1 "	16	W. Hodge, Stanbridge East.	.....
" 23	" ..	57922	W. K. Simpson, St. Johns, P.Q.	1 "	15	W. S. Clark, Highwater.	.....
" 27	" ..	57923	E. Bougie, Valleyfield...	1 "	26	.....	.....
" 27	" ..	57924	Leduc & Prieur, Valleyfield.	1 "	28	.....	.....
May 1	" ..	57925	Pringle Stark Co., Huntingdon.	1 "	50	Vendors...	.....
" 3	" ..	57926	Jean Simon, Longueuil...	1 "	27	.....	Gunn Langlois, Montreal.
" 3	" ..	57927	Charles Lord, Longueuil.	1 "	25	.....	.....
" 3	" ..	57928	L. M. Lamarre, Longueuil	1 "	15	G. Gagnon, Lawrenceville.	.....
" 3	" ..	57929	V. Dare, Longueuil.....	1 "	23	.....	.....
" 3	" ..	57930	Gustave Bourdon, Longueuil.	1 "	24	.....	.....

DISTRICT OF OTTAWA—

April 17	Maple Sugar.	63601	A. M. Parkinson, Kempville.	1 lb..	15	James Hyndman, Oxford, Ont.	.....
" 20	" ..	63604	Mrs. J. Laurie, Perth, Ont.	1 " ..	20	Mr. Purdon, McDonald's Corners.	.....
" 20	" ..	63605	Mrs. J. Sutherland, Perth, Ont.	¾ " ..	15	Sugars & Cannery, Ltd., Montreal.	.....
" 27	" ..	63625	P. J. Campbell, Renfrew.	1 " ..	15	A. J. Shepard, Freightsburg, P.Q.	.....
" 27	" ..	63628	A. E. Leach, Renfrew....	1 cake	10	Canada Maple Exchange, Montreal.	C. E. Plain, Ottawa.
" 27	" ..	63630	H. Brydger, Renfrew. ....	1 " ..	10	Ramsays, Ltd., Montreal.	.....
" 27	" ..	63632	P. J. Frood, Renfrew ..	1 box.	20	Canada Maple Exchange, Ltd., Montreal.	.....
" 30	" ..	63635	J. Bambrick, George st., Ottawa.	1 cake	50	L'Asso. Co-Op. Agr., 27 William st., Montreal.	Moyneur's, Ltd., Ottawa.
" 30	" ..	63636	Moyneurs, Ltd., Ottawa..	1 "	20	.....	L. Assoc. Co-Op. Agr., Montreal.
" 30	" ..	63640	Wall & Co., Byward Market, Ottawa.	1 "	20	.....	Moyneur's, Ltd., Ottawa.
" 30	" ..	63642	L. Malette, Dalhousie st., Ottawa.	1 "	10	Maple's, Ltd., Toronto.	J. G. Whyte & Sons, Ottawa.

SESSIONAL PAPER No. 14

MAPLE SUGAR.

Inspector's Report, (Is not an expression of opinion.)	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Results on dry basis.			
		Total Ash.	Lead Number. (Canadian).		
<i>Concluded.</i>					
.....	p. c. 4.24	p. c. 1.31	4.74	57916	Genuine.
.....	6.64	1.36	4.34	57917	"
.....	2.84	1.16	4.16	57918	"
.....	2.42	1.26	4.29	57919	"
.....	7.24	0.17	0.07	57920	Adulterated.—Note 1.
.....	2.68	1.01	3.24	57921	Genuine
.....	6.41	0.82	2.62	57922	"
.....	8.04	0.84	2.73	57923	"
.....	5.47	1.23	3.79	57924	"
.....	4.72	0.05	2.46	57925	"
.....	4.59	1.05	3.69	57926	"
.....	4.25	0.96	3.59	57927	"
.....	6.44	0.74	2.19	57928	"
.....	5.78	0.91	3.42	57929	"
.....	8.18	1.02	3.39	57930	"

J. A. RICKEY, INSPECTOR.

.....	5.63	0.81	2.35	63601	Genuine.
.....	2.46	1.10	3.40	63604	"
.....	4.07	0.88	3.59	63605	"
.....	8.59	0.91	2.81	63625	"
Labelled Small's Genuine, Pure Standard Maple Sugar.	5.45	1.06	4.18	63628	"
.....	3.40	0.53	1.64	63660	Adulterated.
Granulo, .....	1.32	0.18	0.32	63692	— Note 2
.....	6.97	0.96	2.41	63695	Genuine.
.....	8.11	0.95	3.62	63696	"
.....	3.46	0.93	2.96	63640	"
Sample from Box labelled, Pure Maple Sugar.	2.48	0.40	0.90	63642	Adulterated.—Note 4

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF KINGSTON—

1915.							
April 28	Maple Sugar.	68011	J. R. B. Gage, Kingston.	1 lb.	30	Sugars & Cannery, Ltd., Montreal.	
May 4	"	68012	McGinty & Lynch, Belleville.	1 "	25		Warne Bros., Toronto.
" 4	"	68013	R. Elvins, Belleville.	1 "	30		J. Sloane & Co., Belleville.
" 4	"	68014	W. M. Fox & Co., Cobourg.	1 "	30	Maple Tree Producers, Ltd., Montreal.	
" 4	"	68015	E. Guillet, Cobourg	1 "	45		Stevens & Soloman Hamilton.
" 4	"	68016	W. Burnet, Cobourg.	1 "	30		Arinstrong & Pafford, Toronto.
" 5	"	68017	F. H. Brown, Port Hope.	1 "	30		White & Co., Toronto.
" 5	"	68018	W. D. Stephens, Port Hope.	1 "	30		H. P. Eckardt & Co., Toronto.
" 5	"	68019	A. Pearson, Peterboro.	1 "	30		Rishors, Ltd., Peterboro.
" 5	"	68020	J. Sutherland, Peterboro.	1 "	40	Sugars & Canner's Ltd., Montreal.	

DISTRICT OF TORONTO—

May 19	Maple Sugar.	67024	J. Bigley, 104 Queen st., Toronto.	2 bars	20		A. Mayer, Toronto.
" 19	"	67025	J. C. Craig, 468 Spadina ave., Toronto.	2 "	20		Sugars & Cannery, Ltd., Toronto.
" 20	"	67026	B. S. McMurty, 2511 Yonge st., Toronto.	2 "	20	Maple Tree Producers Association, Montreal.	
" 22	"	67027	F. E. Cleland, 400 Bloor st. w., Toronto.	2 "	20		A. Mayer, Toronto.
" 22	"	67028	C. N. Allen, 551 Bloor st. w., Toronto.	2 "	20		Unknown
" 11	"	67029	Thos. Hook, Markham.	2 "	20		F. W. Humphrey, Toronto.
" 12	"	67030	J. Cherpaw, Uxbridge	2 "	20		John Sloan & Co., Toronto.
" 12	"	67031	Willard & Co., Port Perry.	2 "	20		F. W. Humphrey, Toronto.
" 14	"	67032	J. J. Hatley, Orillia.	1 lb.	20	Mrs. Weir, Tudhope.	
" 15	"	67033	H. E. Gladstone, Midland.	2 bars.	20		W. H. Gillard & Co., Hamilton.

DISTRICT OF HAMILTON—

April 26	Maple Sugar.	66948	A. H. Foote, Fergus.	2 bars	20		McLaughlan & Sons, Owen Sound.
" 27	"	66949	J. S. Ireland, Mount Forest.	$\frac{3}{4}$ lb.	20		Geo. E. Bristol & Co., Hamilton.
" 29	"	66950	A. Fedy, Mildmay.	2 bars	20		T. B. Escott, London.
" 29	"	66951	Ballachey Laidlow & Co., Paisley.	$\frac{3}{4}$ lb.	20		Unknown.

SESSIONAL PAPER No. 14

MAPLE SUGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Results on dry basis.			
		Total Ash.	Lead Number (Canadian).		

JAS. HOGAN, INSPECTOR.

	p. c.	p. c.			
.....	4.86	1.22	4.92	68011	Genuine.
.....	3.85	0.53	1.87	68012	Meets legal requirements.
.....	4.57	0.58	2.00	68013	Genuine.
.....	7.27	0.86	3.05	68014	"
.....	1.70	0.58	1.82	68015	Meets legal requirements.
.....	0.83	0.69	2.74	68016	Genuine.
.....	3.19	0.57	2.01	68017	"
Vendor stated that sugar was last year.	4.36	0.40	1.08	68018	Adulterated.—Note 4.
.....	4.23	1.10	4.50	68019	Genuine.
.....	5.02	1.46	5.58	68020	"

H. J. DAGER, INSPECTOR.

	p. c.	p. c.			
.....	3.93	0.64	2.32	67024	Genuine.
.....	5.04	0.92	3.17	67025	"
.....	1.91	0.81	3.07	67026	"
.....	3.50	0.64	2.26	67027	"
.....	3.16	0.69	2.58	67028	"
.....	3.27	1.25	4.75	67029	"
.....	3.08	0.52	1.57	67030	Adulterated.—Note
.....	3.16	0.49	1.15	67031	" —Note 4.
.....	3.93	0.94	3.48	67032	Genuine.
.....	3.14	0.65	2.34	67033	"

H. J. DAGER, ACTING INSPECTOR.

	p. c.	p. c.			
.....	4.21	0.59	1.76	68048	Meets legal requirements.
.....	3.05	0.39	0.98	68049	Adulterated.—Note 4.
.....	3.92	0.36	0.96	68050	"
.....	3.21	0.60	2.12	68051	Genuine.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF HAMILTON—

1915.							
April 30	Maple Sugar.	66952	S. Bourge-man, Chisley...	2 bars	20		McCormick Mfg. Co., London.
" 30	"	66953	D. A. McClean, Owen Sound.	2 "	20		McLaughlan Sons Co., Owen Sound
May 4	"	66954	B. H. Walsh, Oakville...	2 "	20		Laing & Sons, Hamilton.
" 4	"	66955	W. W. Cume, Burlington.	2 "	20		" " ..
" 5	"	66956	P. J. Galvin, 45 York st., Hamilton.	2 "	30		McClatchie Bros., Cowansville, P.Q.
" 5	"	66957	Holmwood Produce Dairy Co., 477 King st. E., Hamilton.	2 "	20		

DISTRICT OF WINDSOR—

April 21	Maple Sugar.	54767	J. P. Sheppard, Clinton...	3 bars	30		E. Adams & Co., London.
" 21	"	54769	W. T. O'Neil, Clinton...	3 "	30		H. P. Eckhardt, Toronto.
" 21	"	54774	E. E. Hunniford, Clinton	3 "	30	Maples Ltd., Toronto	
" 22	"	54781	R. S. Clark, Seaforth ....	3 "	30		M. Masurett & Co., London.
" 22	"	54788	W. R. Cole, Mitchell....	3 "	30		Unknown
May 3	"	54601	W. H. Tricker, Sarnia....	3eakes	30		McCormick Mfg. Co., London.
" 3	"	54602	Jas. Galbraith, Sarnia....	3 "	55	A. W. Westover, Sutton Junction.	
" 3	"	54603	R. Wanless & Co., Sarnia	3 "	25	Geo. Setler, Arcona.	

DISTRICT OF MANITOBA—

April 28	Maple Sugar.	61262	The T. Eaton Co. Ltd., Winnipeg.	1 lb..	30	Jas. Davidson, Waterloo Jct.	
" 28	"	61263	Hudson Bay Co., Winnipeg.	1 " ..	30	Can. Maple Exchange Ltd., Montreal.	
" 29	"	61264	W. J. Sutherland, Winnipeg.	1 " ..	30		
" 29	"	61265	Hardy & Buchanan, Winnipeg.	1 " ..	20	Jas. A. Grubb, West Shefford, P.Q.	
May 10	"	61266	J. A. McDowell, Portage ave., Winnipeg.	1 " ..	30	Can. Maple Exchange Co., Montreal.	
" 11	"	61267	Rockwood Store, 476 Portage ave., Winnipeg.	1/2 " ..	15	Small's, Montreal...	
" 11	"	61268	H. E. Weidon & Co., Portage ave., Winnipeg.	1 " ..	20		
" 18	"	61269	P. W. Hutton, Minnedosa.	1 " ..	15		Telfer Bros., Winnipeg.
" 27	"	61270	Bentrand & Co., Brandon	1 " ..	30		
" 27	"	61271	Mutter Bros., Brandon...	1 " ..	35	Maple Tree Producers Assn., Montreal.	



SESSIONAL PAPER No. 14

MAPLE SUGAR.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.				No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Water.	Results on dry basis.		Solids.		
		Total Ash.	Lead Number (Canadian).			

*Concluded.*

	p. c.	p. c.		p. c.		
.....	3.07	0.08	0.03	.....	66952	Adulterated.—Notes 5 and 3.
.....	2.93	0.62	2.47	.....	65953	Genuine.
.....	3.26	0.52	1.13	.....	66954	Adulterated.—Notes 3 and 4.
.....	4.22	0.57	1.97	.....	66955	Genuine
.....	4.54	0.75	2.71	.....	66956	"
.....	4.58	0.84	2.87	.....	66957	"

JOHN TALBOT, INSPECTOR.

.....	3.80	0.68	2.58	.....	54767	Genuine.
.....	2.99	0.83	3.03	.....	54769	"
.....	3.72	0.92	3.81	.....	54774	"
.....	2.82	0.56	1.93	.....	54781	"
.....	3.76	0.48	1.49	.....	54788	Adulterated.—Note 4
.....	5.02	0.18	0.08	.....	54601	"
.....	4.66	0.89	2.95	.....	54602	Genuine.
.....	2.01	0.91	2.84	.....	54600	"

A. C. LARIVIERE, INSPECTOR.

.....	1.78	0.83	3.57	.....	61262	Genuine.
.....	3.50	0.95	2.62	.....	61263	"
Pride of Canada . . .	2.62	0.82	3.21	.....	61264	"
.....	4.53	0.64	1.19	.....	61265	Adulterated.
.....	7.16	.....	7.58	92.84	61266	Genuine.
.....	7.68	.....	4.20	92.32	61267	"
.....	5.43	.....	3.65	94.67	61268	"
Small's . . . . .	7.14	.....	3.51	92.86	61269	"
.....	8.70	.....	3.17	91.86	61270	"
.....	5.92	.....	3.29	94.48	61271	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF SASKATCHEWAN—

1915.							
April 28	Maple Sugar.	66365	Chalton & Tetreau, Gull Lake.	1 lb.	25	Paulin Chambers Co. Winnipeg.	.....
May 3	" ..	66375	A. McDonald Co., Moose Jaw.	1 "	15	Maples Ltd., Toronto.	.....

## DISTRICT OF ALBERTA—

May 18	Maple Sugar	52162	Hudson's Bay Co., Edmonton.	1 lb.	30	E. J. Berry, Brome, P.Q.	.....
" 20	" ..	52163	John Irwin Co., Edmonton.	1 "	25	" "	.....
" 21	" ..	52164	Pryce Jones (Canada) Ltd. Edmonton.	1 "	30	" "	.....
June 16	" ..	52165	Sprague & Williamson, Medicine Hat.	1 "	25	J. Brock, Bolton Centre, P.Q.	.....

## DISTRICT OF ROCKY MOUNTAINS—

April 26	Maple Sugar	61806	Trail Grocery, Trail . . .	1 lb.	40	Can. Maple Exchange, Montreal.	.....
May 20	" ..	61812	Ira R. Manning, Cranbrook.	1 "	30	Maples Ltd., Toronto.	.....
" 20	" ..	61824	E. G. Gwynne, Cranbrook	1 "	20	The Maple Tree Products Ass'n., Montreal.	.....

## DISTRICT OF VANCOUVER—

May 7	Maple Sugar	55246	The Fairview Grocery, 2242 Granville st., Vancouver.	2 cks.	30	Maples Ltd., Toronto.	.....
" 7	" ..	55247	Mills & McAdam, 2039 4th Ave. W., Vancouver	2 "	20	Sugars & Canners, Montreal.	.....
" 7	" ..	55248	Morrow & Deane, 7th Ave. and Yew st., Vancouver.	2 "	25	Maples Ltd., Toronto.	.....
" 10	" ..	55249	Dickie's Grocery, Ltd., 660 Hornby st., Vancouver.	2 "	20	Maple Tree Producers Ass'n., Montreal.	.....
" 10	" ..	55250	S. Pritchard, 950 Robson st., Vancouver.	2 "	20	Maples Ltd., Toronto.	.....
" 10	" ..	55251	I. X. L. Grocery, 1013 Robson st., Vancouver.	2 "	20	Maple Tree Producers Ass'n., Montreal.	.....
" 10	" ..	55252	Robson Grocery, 1028 Robson st., Vancouver.	2 "	20	" "	.....
" 10	" ..	55253	C. A. Welsh, Ltd., 681 Columbia st., New Westminster.	2 "	20	Maples Ltd., Toronto.	.....

SESSIONAL PAPER No. 14

MAPLE SUGAR.

Inspector's report. (Is not an expression of opinion).	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Results on dry basis.			
		Total Ash.	Lead Number (Canadian).		

L. H. HALL, INSPECTOR.

	p. c.	p. c.			
.....	2.15	0.97	0.93	66365	Adulterated.
.....	2.57	0.83	3.03	66375	Genuine.

A. W. R. MARKLEY, INSPECTOR.

.....	4.07	0.78	2.29	52162	Genuine.
.....	4.84	0.77	2.73	52163	"
.....	5.99	0.73	2.48	52164	"
.....	7.93	0.79	2.70	52165	"

THOS. PARKER, INSPECTOR.

Small's.....	2.88	0.95	3.03	61806	Genuine.
.....	5.87	0.74	2.86	61812	"
.....	2.07	0.93	3.83	61824	"

E. J. MORGAN, INSPECTOR.

.....	3.92	0.73	3.06	55246	Genuine.
.....	2.40	0.78	3.15	55247	"
.....	4.38	0.60	2.12	55248	"
.....	1.71	0.81	3.14	55249	"
.....	3.98	0.80	3.45	55250	"
.....	1.53	0.78	2.64	55251	"
.....	1.58	0.87	3.00	55252	"
.....	3.20	0.78	3.07	55253	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VANCOUVER—

1915.							
May 7	Maple Sugar.	55254	Overwaita Co., 746 Columbia st., New Westminster.	2 cks.	20	Maple Tree Producers Ass'n., Montreal.	.....
" 11	" ..	55255	Henderson's Groceries, Ltd., Pender and Nicola sts., Vancouver.	2 " .	20	" "	.....

DISTRICT OF VICTORIA—

May 31	Maple Sugar	66716	West End Grocery Co, Ltd., 1002 Govt. st., Victoria.	3 blks.	45	Maples Ltd., Toronto.	.....
June 8	" .	66722	Acton Bros., 1317 Douglas st., Victoria.	1 lb..	30	" "	.....
" 10	" ..	66736	The Cook St. Grocery, 1023 Cook st., Victoria.	1 " .	15	.....	R. P. Rithet & Co. Victoria.
" 21	" ..	66737	H. O. Kirkham & Co., Ltd. 1109 Govt. st., Victoria.	3 blks.	30	.....	" "

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## MAPLE SUGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Results on dry basis.			
		Total Ash.	Lead Number (Canadian).		

*Concluded.*

	p.c.	p.c.			
.....	2.02	0.86	2.46	55254	Genuine.
.....	2.43	0.86	3.11	55255	"

D. O'SULLIVAN, INSPECTOR.

.....	4.95	0.56	1.90	66716	Meets legal requirements.
.....	4.45	0.80	3.52	66722	Genuine.
.....	1.65	0.87	3.37	66736	"
.....	3.85	0.90	3.61	66737	"

## APPENDIX P.

## BULLETIN No. 325—MAPLE SYRUP.

OTTAWA, October 15, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister Inland Revenue.

SIR,—I beg to hand you a report dealing with two hundred and forty-three (243) samples purchased by our inspectors throughout the Dominion of Canada as Maple Syrup. This article is legally defined by Order in Council of April 15, 1915, and in force from May 15, 1915, and is required to meet the following specifications:—

## STANDARDS FOR MAPLE SYRUP.

“Maple syrup shall be syrup made by the evaporation of maple sap, or by the solution of maple concrete in water, and contain not more than thirty-five (35) per cent of water, and an imperial gallon of maple syrup, measured at ordinary temperature of the air, shall weigh not less than thirteen pounds three ounces. The dry substance of maple syrup shall meet all the standards for maple sugar.

Provided always that the Governor in Council may from time to time vary and change the said standards for maple sugar and maple syrup.”

Section 29a of the Amending Act, provides as follows:—

“1. No person shall manufacture for sale, keep for sale, offer or expose for sale, or sell, any article of food resembling or being an imitation of maple sugar or maple syrup, or which is composed partly of maple sugar or maple syrup, and which is not pure maple sugar or pure maple syrup.

“2. Any maple sugar or maple syrup which is not up to the standard prescribed by the sixth schedule to this Act, or, if such standard is changed by the Governor in Council, to such standard as the Governor in Council may from time to time prescribe, shall be deemed to be adulterated within the meaning of this Act.

“3. The word “maple” shall not be used, either alone or in combination with any word or words, or letter or letters, on the label or other mark, illustration or device on a package containing any article of food, or on any article of food itself, which is not pure maple sugar or pure maple syrup, and any article of food labelled or marked in violation of this subsection shall be deemed to be adulterated within the meaning of this Act.”

The standards referred to above as obtaining for maple sugar, and involved in the definition of maple syrup, are as below:—

“Maple sugar shall be entirely the solid product resulting from the evaporation of maple sap, or of maple syrup, and contain not more than ten (10) per cent of water; and yield not less than six-tenths (0.6) of one per cent of ash, reckoned

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on the dry matter of the sugar when incinerated in such a way as to assure the earths being present as salts and not as oxides and not less than twelve one-hundredths (0.12) of one per cent of ash, insoluble in water, employed as described below and yielding a lead number not less than one and seven-tenths (1.7) when worked by the Canadian method, nor less than one and two-tenths (1.2) when worked by the Winton method.

“Minute traces of substances such as gelatine, albumen, isinglass, etc., which may have been employed as refining or clarifying agents in manufacture shall not be regarded as adulterants.”

As judged by these standards, the samples herein reported give the subjoined results:—

	Samples.
Found genuine. . . . .	192
Meet legal requirements . . . . .	4
Doubtful. . . . .	1
Adulterated under Act . . . . .	42
Illegal articles . . . . .	4
	<hr/>
Total. . . . .	243

In four cases, while the analysts' numbers are within the legal minimum, they are such as to justify some doubt regarding the genuineness of the samples; and in one sample (No. 66961) the results are doubtfully convincing.

I would respectfully advise publication of this report as Bulletin No. 325.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
Chief Analyst.

Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
			Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA

1915.							
May 19	Maple Syrup	54011	H. A. Hart, Halifax....	1 qt.	40	Unknown. . . . .	E. W. Crease & Son, Halifax.
" 20	"	54012	Jas. McGregor, " ....	1 "	40	Can. Maple Exchange, Montreal.	John Tobin & Son, Halifax.
" 20	"	54013	H. J. Hopgood & Son, Halifax.	1 "	40	A. W. Westover, Sutton Jct., P. Q.	Mfr. . . . .
" 20	"	54014	F. S. Short, Halifax. ....	1 "	35	Maples Ltd., Toronto.	John Tobin & Son, Halifax.
" 21	"	54015	J. L. Wilson & Co., Halifax.	1 "	32	Ramsays Ltd., Montreal.	Mfr. . . . .
" 21	"	54016	Bauld Bros. Ltd., Halifax	1 "	30	Maples Ltd., Toronto.	" . . . . .
" 21	"	54017	T. F. Courtney & Co., "	1 pt.	20	Knox M. Dodge, Mapleton, N.S.	E. W. Crease & Son, Halifax.
" 21	"	54018	E. W. Crease & Son, "	1 qt.	50	" . . . . .	Mfr. . . . .
" 25	"	54019	John Tobin & Co., "	1 "	30	Can. Maple Exchange, Montreal.	" . . . . .

DISTRICT OF NOVA SCOTIA—

June 4	Maple Syrup	65856	A. A. McDonald, New Glasgow.	1 bot.	25	T. Upton Co., Hamilton.	Mfr. . . . .
" 4	"	65865	A. J. Roop, New Glasgow	1 "	40	Maples Ltd., Toronto.	R. McGregor & Sons, New Glasgow.
" 4	"	65866	D. J. Murray, "	1 "	35	Angus Fraser, Garden of Eden.	Mfr. . . . .

DISTRICT OF CAPE BRETON—

May 6	Maple Syrup	63809	Hennigers, Sydney. ....	1½ pt.	30	Milford Crowe, Mapleton, N. S.	.....
" 6	"	63812	Walters Confectionery, Sydney.	3 bots.	24	Maples Ltd., Toronto.	.....

DISTRICT OF PRINCE EDWARD ISLAND—

May 7	Maple Syrup.	69195	W. W. Walker, Charlottetown.	1 bot.	35	Sugars & Cannery, Ltd., Montreal.	.....
" 7	"	60196	J. C. Crabbe, "	1 "	35	.....	Carvell Bros., Charlottetown.



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MAPLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Calculated to Water Free Basis.						
			Lead Number Canadian.	Total Ash.	Water Soluble Ash.	Insoluble Ash.	Malic Acid Value.		

R. J. WAUGH, INSPECTOR.

.....	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
.....	30.67	69.33	3.20	0.95	.....	.....	.....	54011	Genuine.
Canada's Best	34.42	65.58	2.00	0.67	.....	.....	.....	54012	"
.....	33.38	66.62	2.28	0.86	.....	.....	.....	54013	"
Old Tynie	33.45	66.55	0.62	0.31	.....	.....	.....	54014	Adulterated.
Snowshoe	31.86	68.14	2.32	0.74	.....	.....	.....	54015	Genuine
Old Tynie	34.91	65.06	0.66	0.41	.....	.....	.....	54016	Adulterated.
.....	32.82	67.18	3.18	0.84	.....	.....	.....	54017	Genuine
.....	34.32	65.68	3.30	0.97	.....	.....	.....	54018	"
.....	32.10	67.90	1.73	0.58	.....	.....	.....	54019	Meets legal requirements.

W. A. PEPTIPAS, TEMPORARY INSPECTOR.

.....	33.76	67.24	0.99	0.60	.....	.....	.....	65856	Adulterated.
.....	36.07	63.93	1.04	0.40	.....	.....	.....	65861	"
.....	37.32	62.68	1.54	1.50	.....	.....	.....	65866	Genuine

E. F. McKEEN, TEMPORARY INSPECTOR.

.....	31.38	68.62	2.56	0.82	.....	.....	.....	65870	Genuine
.....	35.98	64.02	0.96	0.43	.....	.....	.....	65872	Adulterated

WM. A. WEEKS, INSPECTOR.

.....	32.08	67.92	1.87	0.66	0.44	0.32	.....	66137	Genuine.
.....	34.63	65.37	1.84	0.73	0.48	0.26	.....	66138	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NEW BRUNSWICK—

1915.								
May 6	Maple Syrup	66016	J. W. Parlee, St. John...	1 bot.	35	John Rossborough, Bear Island, N. B.		
" 6	" ..	66017	Slocum & Ferris, St. John	1 "	35	Sussex Mercantile Co., Ltd., Elgin, N. B.		
" 6	" ..	66018	L. S. Peters, St. John...	1 "	35	T. A. Groggin & Son, Elgin, N. B.		
" 8	" ..	66019	H. D. Farris, St. John...	1 "	35	Chester Morrison, Granite Hill, N. B.		
" 8	" ..	66020	W. A. Porter, St. John..	1 "	35	Fred Barr, Lower Line, Queensbury, N. B.		
" 14	" ..	66021	P. Nase & Son, St. John..	1 "	35	Brown Bros., Upper Bear Island, N. B.		
" 14	" ..	66022	McAlary & Co., Ltd., St. John.	1 "	40	John Inch & Son, Burts Corners, N. B.		
" 14	" ..	66023	R. Jones, St. John. ...	1 "	30	Tait Rabkin Co., Elgin, N. B.	Wm. Fenwick, St. John.	
" 25	" ..	66024	Johnston & Kitchen, Fredericton.	1 "	35	Jones & Nelson Cliff Lower Queensbury		
" 25	" ..	66025	A. E. Eardley, Fredericton.	1 "	30	Yerxa Bros., Lower Line, Queensbury.		
" 25	" ..	66026	Jerxa Grocery Co., Woodstock.	1 "	30	Wesley Sennett, Granite Hill.		
June 8	" ..	66027	S. B. Hunter, Harvey Station.	1 "	30	C. S. Brown, Lower Queensbury.		
" 16	" ..	63028	Sussex Mercantile Co., Sussex.	1 "	30	Vendors.....		
" 16	" ..	66029	H. H. Keirstead, Sussex.	1 qt.	50	Sussex Mercantile Co.		
" 17	" ..	66030	David Steaves, Moncton..	1 bot.	30	" ..		

DISTRICT OF QUEBEC CITY—

April 20	Sirap d'erable	56330	O. Lacroix, 19 rue St. Joseph, Quebec.	1 chop	15	Jos. M. Paquet, (E. B. Squibb), New York.	Jos. M. Paquet...
" 20	" ..	56331	Ez. Turcotte, 74 Defoses, Quebec.	1 "	27	Jos. M. Paquet.....	O. Blouin.....
" 21	" ..	56332	Myrant & Pouliot, Quebec	1 "	20	Mr. Dupuis, St. Jean Isle, Orleans.	O. Blouin, St. Jean Ile, Orleans.
" 21	" ..	56333	" " ..	1 "	20	M. Desfrere, Ile Orleans.	" ..
" 21	" ..	56334	Chas. Riverin, 55 Couronne, Quebec.	1 "	18	Gervais, Pont Rouge.	Manufacturer ....
" 22	" ..	56335	Arthur Drolet, 764 St. Valier, Quebec.	1 "	30	Unknown.....	Unknown.....
" 22	" ..	56336	T. Bedard, 728 St. Valier, Quebec.	1 "	40	Ludger Leclerc, Cap. Sante.	Manufacturer.....

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MAPLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Calculated to water free basis.					
			Lead Number (Canadian)	Total Ash.	Water Soluble Ash.	Insoluble Ash.		

JOHN C. FERGUSON, INSPECTOR.

.....	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
.....	36.30	63.70	3.02	0.88	0.50	0.38	.....	66016	Genuine
.....	36.36	63.64	2.50	0.79	0.41	0.38	.....	66017	"
.....	31.77	68.23	2.58	0.74	0.48	0.26	.....	66018	"
.....	32.55	67.45	3.03	0.89	0.53	0.36	.....	66019	"
.....	31.95	68.05	2.56	0.76	0.50	0.26	.....	66020	"
.....	32.14	67.86	2.92	0.90	.....	.....	.....	66021	"
.....	31.54	68.46	2.04	0.79	.....	.....	.....	66022	"
.....	30.88	69.11	3.20	1.05	.....	.....	.....	66023	"
.....	31.94	68.06	4.40	0.85	.....	.....	.....	66024	"
.....	35.62	64.38	2.60	0.82	.....	.....	.....	66025	"
.....	32.14	67.86	2.20	0.79	.....	.....	.....	66026	"
.....	32.22	67.78	1.98	0.88	.....	.....	.....	66027	"
.....	34.42	65.58	3.00	0.60	.....	.....	.....	66028	"
.....	32.62	67.38	2.60	0.92	.....	.....	.....	66029	"
.....	32.62	67.38	2.80	0.93	.....	.....	.....	66030	"

F. X. W. E. BELAND, INSPECTOR.

.....	33.59	66.41	3.54	1.05	.....	.....	.....	56330	Genuine
.....	33.19	66.81	2.98	0.92	.....	.....	.....	56331	"
.....	34.39	65.61	4.12	1.09	.....	.....	.....	56332	"
.....	32.54	67.46	3.06	1.08	.....	.....	.....	56333	"
.....	32.54	67.46	2.50	0.87	.....	.....	.....	56334	"
.....	35.16	64.84	2.10	1.02	.....	.....	.....	56335	"
.....	33.59	66.41	2.88	0.92	.....	.....	.....	56336	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC CITY—

1915.							
April 22	Sirap d'é-rable.	56337	Cantin & Frere, 271 St. Joseph, Quebec.	1 chop	25	M. Blouin, Ile Or-leans.	Manufacturer.....
" 22	"	56338	" " " "	1 "	25	Leger Hardy.....	Leger Hardy, St. Basile.
" 23	"	56339	A. Pichet, 176 Dorchester, Quebec.	1 "	20	Unknown.....	Unknown.....
" 23	"	56340	J. D. Marier, 136 Dorchester, Quebec.	1 "	15	Mad. Poulin, St. Fe-rèole.	Manufacturer.....
" 23	"	56341	F. Paquet & Cie, 134 Du Pont, Quebec.	1 "	15	Tremblay.....	" .....
" 23	"	56342	J. L. Letourneau, 133 Du Pont, Quebec.	1 "	18	Unknown.....	Unknown .....
" 26	"	56344	C. O. Simard, 8 St. Jean, Quebec.	1 "	20	Selvurt Nanis. ....	Albert Nanis, Ste. Cecile, Hamilton
" 26	"	56356	Jos. Savard, 35 " "	1 "	35	D. Drolet, Ancienne Lorette.	Manufacturer .....
" 26	"	56359	L. Grenier, 94 " "	1 "	17	Arthur Huot, Auge Gardien.	" .....

## DISTRICT OF QUEBEC PROVINCE—

April 20	Sirap d'é-rable.	3829	N. Fortier, Ste. Claire....	1 pte.	25	.....	.....
" 21	"	3831	H. Bernier, Ste. Margue-rite.	1 "	25	.....	.....
" 21	"	3834	J. Gagnon, Ste. Henedine	1 "	25	.....	.....
May 3	"	3541	Alfred Pouliot, St. Phile-mon.	1 chop	15	Pierre Gagnon, St. Philemon.	.....
" 3	"	3545	Octave Tanguay, " "	1 "	15	Vendor .....	.....
" 5	"	3552	Louis Lavediere, St. Ma-gloire.	1 "	12	Jos. Lavediere, St. Magloire.	.....
" 6	"	3558	Alfred Audet, St. Damien	1 "	13	Wm. Guilmet, St. Damien.	.....
" 7	"	3559	Alfred Gagne, " "	1 "	13	Guillaume Chabot, St. Damien.	.....
" 8	"	3567	Jean Lantagne, St. Ra-phael.	1 "	15	Aventure Roy, St. Raphael.	.....
" 10	"	3574	Francois Cote, Armagh.	1 "	14	Pierre Cote, Armagh	.....
" 10	"	3578	Pierre Isabel, " "	1 "	15	Francois Isabel, Ar-magh.	.....
" 10	"	3581	Donat & Brochu, " "	1 "	15	Jos. Racheford Ar-magh.	.....
April 21	"	3832	Clovis Carbonneau, St. Marguerite.	1 "	25	.....	.....
" 27	"	2763	A. Caron, St. Pierre Montmagny.	1 "	19	Vendor.....	.....
" 29	"	2767	Dame O. Gagné. ....	1 "	15	Wilfred Vezina, Cap St. Ignace.	.....
" 24	"	267	Jos. Richer, Ste. Jerome..	1 "	13	.....	.....

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MAPLE SYRUP.

Inspector's Rep. rt. (Is not an expression of opinion).	Results of Analysis.							No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Water.	Solids.	Calculated to Water Free Basis.				Malic Acid Value.		
			Lead Number Canadian.	Total Ash.	Water Sol- uble Ash.	Insoluble Ash.			

Concluded.

.....	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
.....	34.71	65.29	3.58	1.08	.....	.....	.....	56337	Genuine.
.....	33.79	66.21	3.10	1.25	.....	.....	.....	56338	"
.....	33.49	66.51	3.69	1.07	.....	.....	.....	56339	"
.....	33.79	66.21	3.92	1.10	.....	.....	.....	56340	"
.....	33.46	66.54	3.59	0.85	.....	.....	.....	56341	"
.....	31.83	68.17	2.28	0.99	.....	.....	.....	56342	"
.....	33.59	66.41	3.09	0.75	.....	.....	.....	56344	"
.....	32.51	67.46	4.84	1.30	.....	.....	.....	56356	"
.....	32.14	67.86	4.89	1.28	.....	.....	.....	56359	"

J. E. AUDET, O. BROCHU, T. GENDKEAU, N. CADIEUX, TEMPORARY INSPECTORS.

.....	32.20	67.80	2.10	0.89	.....	.....	.....	3829	Genuine.
.....	29.55	70.45	3.64	0.81	.....	.....	.....	3831	"
.....	29.90	70.10	3.24	1.04	.....	.....	.....	3834	"
.....	29.88	70.11	3.24	1.04	.....	.....	.....	3844	"
.....	30.71	69.26	3.30	0.74	.....	.....	.....	3846	"
.....	31.39	65.51	3.36	1.02	.....	.....	.....	3852	"
.....	32.51	67.46	3.40	1.32	.....	.....	.....	3858	"
.....	33.88	66.11	3.46	0.80	.....	.....	.....	3866	"
.....	31.94	65.06	4.01	0.98	.....	.....	.....	3867	"
.....	33.88	66.11	4.01	1.04	.....	.....	.....	3874	"
.....	31.39	68.61	5.20	0.93	.....	.....	.....	3878	"
.....	33.60	67.00	3.94	1.09	.....	.....	.....	3881	"
.....	30.85	69.15	2.78	1.14	.....	.....	.....	3883	"
.....	34.49	65.51	3.81	1.16	.....	.....	.....	3796	"
.....	31.33	68.67	2.40	0.82	.....	.....	.....	3797	"
.....	33.51	66.49	3.48	1.32	.....	.....	.....	3807	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC PROVINCE—

1915.							
April 24	Sirop d'erable.	268	Hormisdas Laborte, Ste. Jerome.	1 chopin.	15		
" 24	"	269	Evangeliste Lafrance, St. Canut Comte des deux Mont.	1 "	15		
" 27	"	271	Staniolas Desormeaux, Ste. Jerome.	1 "	15	Alp. Bastien.....	
" 28	"	272	Dr. Em. Fournier, Ste. Jerome.	1 "	....	Em. Mahaise.....	
May 4	"	283	Roderie Fouchette, Ste. Agathe des Monts.	3 bot.	35	Raymond.....	
" 4	"	285	H. Monette, Ste. Aagthe des Monts.	1 chop	25	Esdias Raymond, St. Jerome.	
" 20	"	56448	Hellam & Bros, Rimouski	1 "	15	F. H.....	
" 22	"	56449	Pierre Denyon, Rimouski.	1 "	25		Quebec Preserving.
" 22	"	56459	Damien & Cie, Rimouski	1 "	40	L. J. A. Dupius, St. Roch des Aulnais.	
June 1	"	56465	Louis Levasseur, Fraser-ville.	1 "	25	Maple Producers Assn., Montreal.	
" 2	"	56472	Francois Pelletier, Fraser-ville.	1 "	20	J. A. Lord, St. Roch des Aulnais.	
" 2	"	56477	H. J. Lyrois, Cacouna..	1 "	25	Ulric Talbot, L'Islet	
" 4	"	56479	L. J. A. Dupius, St. Roch	1 "	25	Vendor.....	
" 4	"	56480	Alp. Caron, St. Roch.....	1 "	25	Alfred Jalbert, St. Louis.	
" 5	"	56481	Pamphile Pelletier, Ste. Perpetue.	1 "	25	Vendor.....	
" 11	"	56482	Rene & E. Morneau, Ste. Perpetue.	1 "	25	Vendors.....	
May 17	"	2486	Jos. Guimond, Matane...	1 "	27		N. Rioux, Quebec.
" 17	"	2487	Jas. Forbes, Matane.....	1 "	30	Montreal Biscuit Co., Montreal.	
" 19	"	2495	A. F. Bontin, Mont Joli.	1 "	20	L. J. A. Dupius, Jr., St. Roch D'Aulnais	
" 19	"	2497	Wm. Michaud, Mont Joli.	1 "	18	Leo. Bernard, St. Chas. Bellechasse.	

DISTRICT OF THREE RIVERS—

May 8	Maple Symp.	67985	Paul Champagne, St. Jean Matha.	1 lb.	15	Vendor.....	
" 8	"	67986	Wilfred Roy, St. Jean Matha.	1 "	15	".....	
" 10	"	67987	Louis Desroches, St. Jean Matha.	1 "	15	".....	
" 11	"	67988	Narcisse Roberge, St. Felix de Valois.....	1 "	15	".....	

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MAPLE SYRUP

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Calculated to Water Free Basis.				Maltic Acid Value.		
			Lead Number (Canadian.)	Total Ash.	Water Soluble Ash.	Insoluble Ash.			

*Concluded.*

	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
.....	31.76	68.24	3.70	0.63	.....	.....	.....	268	Genuine.
Purchased at Ste. Jerome market.	31.16	68.84	3.56	1.06	.....	.....	.....	269	"
.....	31.41	68.59	1.94	0.83	.....	.....	.....	271	"
.....	31.31	68.69	2.96	0.92	.....	.....	.....	272	"
.....	36.16	63.82	2.06	1.02	.....	.....	.....	283	"
.....	33.79	66.21	2.44	0.86	.....	.....	.....	285	"
.....	34.07	65.93	2.58	0.90	.....	.....	.....	56448	"
.....	30.51	69.49	0.37	0.28	.....	.....	.....	56449	Adulterated. Manufacturer's claim, sold as Table syrup, not maple.
.....	33.13	66.87	2.90	1.14	.....	.....	.....	56459	Genuine.
.....	33.97	66.03	3.06	0.95	.....	.....	.....	56465	"
.....	33.13	66.87	4.06	1.06	.....	.....	.....	56472	"
.....	33.13	66.87	3.22	1.20	.....	.....	.....	56477	"
.....	35.17	64.83	3.46	1.28	.....	.....	.....	56479	"
.....	36.92	63.08	3.14	1.11	.....	.....	.....	56480	"
.....	35.17	64.83	3.46	0.90	.....	.....	.....	56481	"
.....	35.17	64.83	2.64	0.86	.....	.....	.....	56482	"
.....	31.63	68.27	3.00	1.02	.....	.....	.....	2486	"
.....	31.72	68.28	0.06	0.14	.....	.....	.....	2487	Adulterated. Manufacturer's claim, was sold as Syrup not maple.
.....	32.67	67.33	4.00	1.30	.....	.....	.....	2495	Genuine.
.....	33.82	66.18	3.50	1.09	.....	.....	.....	2497	"

DR. V. P. LAVALLEE, INSPECTOR.

.....	30.63	69.37	3.08	0.92	.....	.....	.....	67986	Genuine.
.....	34.83	65.17	2.86	0.87	.....	.....	.....	67986	"
.....	31.18	68.82	2.04	0.83	.....	.....	.....	67987	"
.....	30.33	69.67	2.76	1.10	.....	.....	.....	67988	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF THREE RIVERS—

1915.							
May	11	Maple Syrup.	67989	Louis Boucher, Castel Hill	1 lb.	15	Vendor .....
"	12	"	67990	Alexis Lepicier, Ste. Cecile.	1 "	15	" .....
"	12	"	67991	Michel Lepicier, Ste. Cecile.	1 "	15	" .....
"	14	"	67992	Veuve V. Ducharme, St. Cleophas des Brandon.	2 "	20	" .....
"	14	"	67993	Edouard Joly, St. Cleophas des Brandon.	1 "	15	" .....
"	18	"	4000	Joseph Belleville, Domain	1 "	25	" .....

## DISTRICT OF EASTERN TOWNSHIPS—

May	5	Maple Syrup.	58101	J. B. St. Pierre, St. Hyacinthe.	1 bot.	30	.....
"	5	"	58102	Walter Jutras & Cie, St. Hyacinthe.	1 "	25	.....
"	5	"	58103	L. Gendreau, St. Hyacinthe.	1 pint.	15	.....
"	5	"	58104	J. Leduc, St. Hyacinthe.	1 "	15	J. Ducharme, Wil- low, P. Q.
"	16	"	58105	P. J. Girard, Richmond, P. Q.	1 "	13	E. Roger, Rich- mond.
"	10	"	58106	A. M. Hutton, Richmond, P. Q.	1 "	15	.....
"	10	"	58107	Ginn & Elliott, Richmond, P. Q.	1 "	15	J. Duclou, Dom. Mills
"	11	"	58108	E. E. Biron, Sherbrooke.	1 bot.	20	.....
"	11	"	58109	Herbert Fortin, Sherbrooke.	1 pint.	15	J. Lapointe, Comp- ton, P. Q.
"	11	"	58110	Alp. Lanctot & Fils, Sherbrooke.	1 "	16	.....
"	11	"	58111	Thériault & Leclere, Sherbrooke.	1 "	17	.....
"	11	"	58112	H. Lacroix, Sherbrooke.	1 "	16	R. Johnson, East- man, P. Q.
"	11	"	58113	Geo. F. Moore, Sherbrooke.	1 "	20	.....
"	12	"	58114	Woodman & McKee, Coaticook.	1 bot.	35	Walter Parker, Coa- ticook.
"	12	"	58115	A. Vaillancourt, Coaticook.	1 pint.	16	J. Poulin, Compton, P. Q.

## DISTRICT OF MONTREAL—

May	7	Maple Syrup.	67151	D. Milard, 191 First Ave., Maisonneuve.	1½ pt.	27	..... P. Doré.....
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SESSIONAL PAPER No. 14

MAPLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Calculated to Water Free Basis.				Mucic Acid Value.		
			Lead Number (Canadian.)	Total Ash.	Water Soluble Ash.	Insoluble Ash.			

Concluded.

.....	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
.....	36.33	63.67	3.62	1.05	.....	.....	.....	67989	Genuine.
.....	32.30	67.70	2.34	0.89	.....	.....	.....	67990	"
.....	30.33	69.67	2.40	0.81	.....	.....	.....	67991	"
.....	35.12	64.88	2.54	1.08	.....	.....	.....	67992	"
.....	37.62	62.38	5.16	1.44	.....	.....	.....	67993	"
.....	31.98	68.02	2.42	0.90	.....	.....	.....	4000	"

J. J. COSTIGAN, ACTING INSPECTOR

.....	32.69	67.40	2.86	0.88	.....	.....	.....	58101	Genuine.
.....	32.39	67.61	2.56	0.83	.....	.....	.....	58102	"
.....	35.39	64.61	3.40	1.05	.....	.....	.....	58103	"
.....	32.60	67.40	2.86	0.97	.....	.....	.....	58104	"
.....	32.39	67.61	4.39	1.06	.....	.....	.....	58105	"
.....	33.80	66.20	2.92	1.01	.....	.....	.....	58106	"
.....	31.64	68.36	2.98	1.02	.....	.....	.....	58107	"
.....	33.39	64.61	3.30	0.79	.....	.....	.....	58108	"
.....	36.45	63.55	4.42	1.35	.....	.....	.....	58109	"
.....	31.76	68.24	3.14	1.02	.....	.....	.....	58110	"
.....	32.45	67.55	2.40	1.18	.....	.....	.....	58111	"
.....	35.49	64.51	3.92	0.86	.....	.....	.....	58112	"
.....	31.55	68.45	5.36	1.10	.....	.....	.....	58113	"
.....	33.60	66.40	1.92	0.95	.....	.....	.....	58114	"
.....	32.65	67.35	2.48	0.83	.....	.....	.....	58115	"

D. J. KEARNEY, INSPECTOR.

.....	31.98	68.02	2.00	0.74	.....	.....	.....	67111	Genuine.
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Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MONTREAL—

1915.							
May 7	Maple Syrup.	67152	H. A. E. Morin, 121 St. Catherine St., Maisonneuve.	1 qt.	25	.....	A. Raymond & Co.
" 7	" ..	67153	L. P. Gates, 71 Notre Dame St., Maisonneuve.	1½ pt.	30	.....	Unknown. ....
" 14	" ..	67155	L. Archambault, 2850 Mason St. Parc, Mont La Salle, Montreal.	1½ "	24	.....	A. Raymond & Co.
" 14	" ..	67156	A. Desjardins, 2353 Bourbonnais St., Maisonneuve.	1½ "	15	.....	M. Bonhomme...
" 14	" ..	67157	Mont LaSalle Cash Grocery, 2753 Boule Rosemount, Montreal.	1½ "	18	.....	Unknown. ....
" 15	" ..	67158	C. H. Fournier, 1127 Mt. Royal Ave. E., Montreal.	1½ "	20	.....	V. Brosseau. ....
" 15	" ..	67159	R. Corbeil, 1081 Mt. Royal Ave. E., Montreal.	1½ "	27	.....	Em. Bastien ..
" 15	" ..	67160	Trudeau & Frere, 1036 Mt. Royal Ave. E., Montreal.	1½ "	27	.....	H. Pepin & Co....
" 15	" ..	67161	S. Jacques, 874 Mt. Royal Ave. E., Montreal.	1½ "	27	.....	M. Lavellee. ....
" 17	" ..	67162	Choquette & Frere, 32 Craig St. E., Montreal..	1½ "	20	.....	N. Sirois.....
" 17	" ..	67163	P. H. Theoret, 21 Vitre St. E., Montreal.	1 qt.	35	.....	Unknown. ....
" 17	" ..	67164	D. Kouri, 72 Lagauchetiere St. E., Montreal.	1½ pt.	30	.....	" .....
" 17	" ..	67165	S. Dionne, 140 Dorchester St. E., Montreal.	1½ "	30	.....	" .....
" 18	" ..	67126	Paquette & Co., 185 St. Paul St., Montreal.	1½ "	30	.....	" .....

DISTRICT OF VALLEYFIELD—

April 21	Maple Syrup.	57901	Joseph Miron, Hawkesbury.	1 pt.	15	Arthur Aubrey, Mont Oscar.	.....
" 21	" ..	57902	Laurin & Frere, Hawkesbury.	1 "	15	Eugene Cusson, Hawkesbury.	.....
" 22	" ..	57903	Graham & Hunter, St. Lambert.	1 bot.	35	A. W. Westover, Sutton Jct.	.....
" 22	" ..	57904	J. A. Tremblay & Cie, Lambert.	1 tin.	1'00	A. T. Stone, Glen Sutton.	.....
" 23	" ..	57905	W. R. Simpson, St. Johns.	1 bot.	25	A. V. Desrochers, North Stanbridge.	.....
" 27	" ..	57906	C. Hambault, Valleyfield.	1 "	25	Vendor.....	.....
" 27	" ..	57907	E. Bougie, Valleyfield....	1 pt.	15	J. Thibault, St. Antoine.	.....

SESSIONAL PAPER No. 14

MAPLE SYRUP.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Lead Number Canadian.	Calculated to water free basis.					
				Total Ash.	Water Soluble Ash.	Insoluble Ash.	Malic Acid Value.		

*Concluded.*

Purchased as compound.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.	67152	Illegal.
	35.00	65.00	0.10	0.10					
.....	30.00	70.00	3.36	0.78				67153	Genuine.
Pure Maple and Cane Syrup.	33.26	66.74	0.13	0.06				67155	Illegal.
.....	35.06	65.94	0.08	0.20				67156	Vendor claims to have sold as syrup only.
Purchased as compound.	33.83	66.17	0.18	0.32				67157	Illegal.
" "	34.13	65.87	0.04	0.14				67158	"
.....	34.68	65.32	3.04	0.97				67159	Genuine.
.....	32.97	67.03	2.40	0.87				67160	"
.....	31.99	68.01	2.96	0.94				67161	"
.....	34.82	65.18	0.09	0.18				67162	Vendor claims to have sold as compound, and hence is illegal.
.....	32.38	67.62	3.50	0.91				67163	Genuine.
.....	36.82	63.18	2.96	0.90				67164	"
.....	32.38	67.62	3.36	0.87				67165	"
.....	31.22	68.78	2.64	0.74				67126	"

J. J. COSTIGAN, ACTING INSPECTOR.

.....	33.11	66.89	2.28	0.90				57901	Genuine.
.....	36.18	63.82	5.38	1.03				57902	"
.....	32.61	67.39	3.06	0.90				57903	"
.....	33.71	66.29	4.60	0.89				57904	"
.....	32.19	67.81	1.01	0.50				57905	Adulterated. Manufacturer claims that he sold only pure syrup.
.....	38.89	61.11	2.44	0.90				57906	Genuine, but some excess water; pass.
.....	35.80	64	3.32	1.10				57907	Genuine.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF VALLEYFIELD—

1915.							
April 27	Maple Syrup.	57908	A. R. Biron, Valleyfield.	1 pt.	15		
" 27	"	57909	W. J. McPherson, Valleyfield.	1 "	15	W. Watson	
" 27	"	57910	J. Z. Daoust, Valleyfield.	1 "	15		
May 2	"	57911	A. Anderson, Herdman.	1 tin.	1 00	Nelson Forquhar, Herdman, P.Q.	
" 2	"	57912	Pringle, Stack & Co., Huntingdon.	1 "	1 25	Jos. Arthur, Rockburn, P.Q.	
" 3	"	57913	Chas. Lord, Longueuil.	1 pt.	18		
" 3	"	57914	V. Dore, Longueuil.	1 "	20	J. Letebvre, St. Placide, P.Q.	
" 3	"	57915	L. H. Lamarre, Longueuil.	1 bot.	25	G. Gagnon, Laurenceville.	

## DISTRICT OF OTTAWA—

April 20	Maple Syrup.	63602	A. B. Scott Co., Smith's Falls.	1 pt.	15	M. Whitmore, Toledo, Ont.	
" 20	"	63606	Mrs. J. Sutherland, Perth.	1 "	20	Mr. Best, Elmsley, Ont.	
" 21	"	63612	A. V. McLean, Perth.	1 qt.	35	Sugars & Cannery, Ltd., Montreal.	
" 27	"	63624	Dempsey & Co., Renfrew.	1 1/4 pt.	20	Muskoka Maple Syrup Co., Hamilton.	
" 27	"	63629	A. E. Leach, Renfrew.	1 bot.	30	Can. Maple Exchange Ltd., Montreal.	H. N. Bate & Sons, Ottawa.
" 27	"	63631	Stewarts, Ltd., Renfrew.	1 pt.	20	T. Kenny & Sons, Hallerton, P.Q.	
" 29	"	63633	Calderone & Bossio, Ottawa.	3 bots.	50	A. W. Westover, Sutton Junction.	
" 30	"	63634	J. Bambrick, Ottawa.	3 "	75	Garrett Safford, Sutton, P. Q.	
" 30	"	63641	Wall & Co., Ottawa.	1 "	35	Can. Maple Exchange Ltd., Montreal.	
May 4	"	63651	A. Stein, Albert St., Ottawa.	1 "	35	Maples Ltd., Toronto.	

SESSIONAL PAPER No. 14

MAPLE SYRUP.

Inspector's Report. (Is not an Expression of opinion).	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst
	Water.	Solids.	Calculated to Water Free Basis.				Malic Acid Value.		
			Lowest Number (Canadian).	Total Ash.	Water Soluble Ash.	Insoluble Ash			

Concluded.

	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
.....	29.65	79.35	3.20	1.20	.....	.....	.....	57908	Genuine.
.....	40.60	69.60	3.44	1.03	.....	.....	.....	57909	Genuine, but excess water; pass.
.....	35.35	64.65	3.10	0.93	.....	.....	.....	57910	Genuine.
.....	36.00	64.00	2.94	0.89	.....	.....	.....	57911	"
.....	35.80	64.20	3.09	1.17	.....	.....	.....	57912	"
.....	35.15	64.85	0.88	0.54	.....	.....	.....	57913	Adulterated.
.....	34.70	65.30	2.88	0.84	.....	.....	.....	57914	Genuine.
.....	31.30	68.70	2.76	0.90	.....	.....	.....	57915	"

J. A. RICKEY, INSPECTOR.

.....	31.31	65.69	4.62	1.11	.....	.....	.....	63602	Genuine.
.....	33.86	66.14	2.80	0.80	.....	.....	.....	63606	"
Silver Sheaf Brand Pure Maple Syrup. Guaranteed absolutely pure.	40.00	60.00	1.84	0.96	.....	.....	.....	63612	Genuine, but excess water; pass.
Sold as Maple Syrup, but invoiced to vendors as Muskoka Syrup.	33.41	66.59	0.52	0.35	.....	.....	.....	63624	Adulterated. Manufacturer's name not to sell as maple syrup.
Monument Brand Pure Maple Syrup.	32.91	67.09	1.39	0.63	0.72	0.11	0.20	63629	Adulterated.
.....	35.98	64.02	3.80	1.06	.....	.....	.....	63631	Genuine.
.....	35.63	64.47	2.70	0.92	.....	.....	.....	63635	"
Guaranteed pure.	33.18	66.82	1.82	0.78	.....	.....	.....	63636	"
Canada's Best Pure Maple Syrup.	32.83	67.17	1.92	0.92	.....	.....	.....	63641	"
Old Fyme Pure Sap Maple Syrup guaranteed absolutely pure.	33.41	66.59	0.80	0.42	.....	.....	.....	63644	Adulterated.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF KINGSTON—

1915.							
April	24	Maple Syrup.	68001	W. Horning, Eginburg...	1 qt.	25	.....
"	28	"	68002	Jno. M. Gordon, Kingston.	1 "	40	Can. Maple Exchange Ltd., Montreal.
"	28	"	68003	J. A. Lemmon, Kingston.	1 "	35	..... W. J. Crothers, Kingston.
"	28	"	68004	Harry Thompson, Kingston.	1 "	30	..... Robertson & Nicolle, Kingston.
"	29	"	68005	J. Gilbert, Kingston.....	1 "	35	E. Day, Sydenham..
"	29	"	68006	J. E. Purday, Kingston..	1 "	35	Unknown .....
"	29	"	68007	Chas. Saunders, Kingston	1 "	35	Mr. Miller, Ernestown
May	4	"	68008	Wallbridge & Clarke, Belleville.	1 "	45	C. A. Westover, Frelyhsburg, P. Q.
"	4	"	68009	Wm. H. Fox & Co., Cobourg.	1 "	40	Maple Tree Producers Ltd., Montreal.
"	4	"	68010	E. Guillet, Cobourg .....	1 "	40	..... Macdonald Co., Lanark.

## DISTRICT OF TORONTO—

May	11	Maple Syrup.	67019	H. Wright, Markham....	1 bot.	25	Maple Tree Producers Assn.	H. P. Echardt Co., Toronto.
"	12	"	67020	J. O. Bartlet, Uxbridge..	1 qt..	45	East Townships M. S. & S. Exchange Sutton, P. Q.	.....
"	13	"	67021	The Estate of F. McRae, Beaverton.	1 pt..	25	.....	G. B. Hall, Barnston, P. Q.
"	14	"	67022	T. B. Cramp, Orillia.....	1 "	25	Unknwn.....	.....
"	15	"	67023	G. Hager, Midland .....	1 "	20	.....	The McCormick Mfg. Co. London
"	20	"	67034	J. Pettigrew, 1372 Queen st. W., Toronto.	1 "	25	R. S. Trotter, Chanty	.....
"	20	"	67035	E. S. Bullock, 147 Roncesville ave., Toronto.	1 qt..	35	Ramsays Ltd, Montreal.	.....
"	20	"	67036	J. J. Cayle, 1867 Yonge street, Toronto.	1 pt..	23	Maples Ltd., Toronto.	.....
"	20	"	67037	S. G. Windey, 2509 Yonge street, Toronto.	1 "	25	.....	Unknown.....
"	22	"	67038	The Loblaw Stores, 208 Christie street, Toronto.	1 Jar.	16	.....	G. B. Hall, Barnston, P. Q. ....

SESSIONAL PAPER No. 14

MAPLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Water.	Solids.	Lead Number Canadian.	Calculated to Water Free Basis.					
				Total Ash.	Water Soluble Ash.	Insoluble Ash.	Malic Acid Value.		

JAMES HOGAN, INSPECTOR.

	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.		
Taken from tin on Kingston market.	30.96	69.04	2.16	1.04	.....	.....	.....	68001	Genuine.
.....	32.81	67.79	1.36	0.70	.....	.....	.....	68002	Adulterated.
.....	39.66	60.34	3.44	1.00	.....	.....	.....	68003	Genuine, but excess water; pass.
.....	36.26	63.74	3.38	1.25	.....	.....	.....	68004	Genuine.
.....	40.60	60.00	3.04	1.13	.....	.....	.....	68005	Genuine, but excess water; pass.
.....	34.71	65.29	3.76	1.19	.....	.....	.....	68006	Genuine.
.....	35.16	64.84	3.32	0.82	.....	.....	.....	68007	"
.....	33.82	66.17	2.92	0.98	.....	.....	.....	68008	"
.....	31.38	68.62	2.56	0.82	.....	.....	.....	68009	"
.....	35.63	64.37	3.30	0.85	.....	.....	.....	68010	"

H. J. DAGER, INSPECTOR

Pride of Canada Pure Maple Syrup.	33.89	66.11	3.28	1.02	.....	.....	.....	67019	Genuine.
Guaranteed pure on original package.	33.99	66.01	2.32	0.88	.....	.....	.....	67020	"
.....	34.07	65.93	4.44	1.31	.....	.....	.....	67021	"
.....	36.78	63.22	4.94	1.28	.....	.....	.....	67022	"
Open Kettle Brand Guaranteed Absolutely pure.	35.06	64.94	1.05	0.64	0.41	0.23	0.16	67023	Adulterated.
.....	30.96	69.04	1.43	0.72	0.46	0.26	0.26	67034	"
Snowshoe Brand	36.78	63.22	1.96	0.78	.....	.....	.....	67036	Genuine.
Old Tyme	36.93	63.07	1.15	0.60	0.50	0.16	0.16	67038	Adulterated.
.....	32.73	67.27	2.54	0.74	.....	.....	.....	67037	Genuine.
.....	34.74	65.26	2.92	0.86	.....	.....	.....	67038	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF HAMILTON—

1915.							
April 26	Maple Syrup.	66958	Bell Bros., Elora.....	1 pt..	25	.....	Unknown .....
" 27	"	66959	Ford Melvin, Palmerston.	1 "	25	Wm. Darvock, Palmerston.	.....
" 27	"	66960	T. H. Ellis & Co., Mount Forest.	1 1/2 "	35	James Robb, Mount Forest.	.....
" 28	"	66961	E. Walker, Harriston ..	1 "	25	East Townships, Maple Exchange, Sutton, P.Q.	.....
" 29	"	66962	Hunstein & Willick, Mildmay.	1 "	38	Unknown. ....	.....
" 29	"	66963	F. Carter & Son, Paisley..	1 ..	22	.....	McCormick Mfg., Co. London.
" 30	"	66964	Ross & Wormington, Chesley.	1 "	25	The Maple Tree Producers Assn. Ltd., Montreal.	.....
" 30	"	66965	A. W. McFaul, Owen Sound.	1 "	33	J. H. Gowan, Frankland Centre, P. Q.	.....
May 1	"	66966	R. D. Little, Owen Sound	1 qt..	35	Maples Ltd. Toronto	.....
" 4	"	66967	E. O. Taylor, Oakville. .	1 pt..	30	.....	Kelly & Bullock, Gananoque,

DISTRICT OF WINDSOR—

April 20	Maple Syrup.	54761	O. C. Whittey, Goderich.	3 jars.	35	J. McClarty .....	.....
" 20	"	54762	Dean Bros., Goderich ...	3 "	25	Bissett Bros., Salford.	.....
" 20	"	54763	John Spahr, Goderich....	3 "	40	Unknown .....	.....
" 20	"	54764	John Cutt, Goderich....	3 "	25	R. Linklater .....	.....
" 20	"	54765	O. Neill & Co., Goderich	3 "	45	J. R. Vargoe, Carlow, Ont.	.....
" 21	"	54768	H. Bartleff, Clinton.....	3 "	45	Unknown .....	.....
" 21	"	54770	W. T. O'Neill, Clinton..	3 "	20	W. W. Cooper, Kippen.	.....
" 21	"	54771	Johnson & Co., Clinton ..	3 "	....	V. M. Deihl, Stanley Tp.	.....
" 21	"	54773	E. E. Hunniford, Clinton.	3 "	20	Jas. Mann .....	.....
" 21	"	54775	Thos. Daly, Seaforth....	3 "	20	Peter McKay, Tuckersmith.	.....



SESSIONAL PAPER No. 14

MAPLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Calculated to Water Free Basis.					
			Lead Number (Canadian.)	Total Ash.	Water Soluble Ash.	Insoluble Ash.		

H. J. DAGER, ACTING INSPECTOR.

.....	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.	66958	Adulterated.
.....	30.89	69.11	0.08	0.28				66959	Genuine as to sugar, but great excess water, and on this account is adulterated.
.....	46.33	53.47	3.80	1.22				66960	Genuine, but excess water; pass
.....	39.33	60.67	5.10	1.41				66961	Doubtful.
Sample from can labelled pure.	32.99	67.01	1.60	0.74	0.40	0.34	0.19	66962	Genuine; but excess water; pass
.....	40.80	59.20	6.06	1.28				66963	Adulterated.
.....	33.89	66.11	0.36	0.27				66964	Genuine
Pride of Canada pure Maple Syrup.	33.98	66.02	3.20	0.92				66965	"
.....	34.88	65.12	2.26	0.92				66966	Adulterated.
Old Tyme Pure Sap Maple Syrup.	32.19	67.81	0.34	0.40				66967	Genuine.
.....	37.76	62.24	2.38	1.16					

JOHN TALBOT, INSPECTOR.

.....	30.96	69.04	3.40	1.15				54761	Genuine.
.....	34.36	65.64	2.84	0.88				54762	"
.....	32.46	67.54	2.94	0.84				54763	"
.....	34.51	65.49	3.14	1.08				54764	"
Labelled Pure Maple Syrup.	34.71	65.29	3.40	1.00				54765	"
.....	37.76	62.24	4.02	1.06				54766	"
.....	32.81	67.19	2.74	0.90				54767	"
.....	38.00	62.00	4.84	1.09				54768	"
.....	31.41	68.59	2.32	0.90				54769	"
.....	32.61	67.39	2.70	0.83				54770	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MANITOBA—

1915.							
April 26	Maple Syrup.	61252	A. S. Coyle, Sargent Ave., Winnipeg.	1 can.	90	Maple Tree Producers' Assn.	
" 26	"	61253	B. Aranson, Sargent Ave., Winnipeg.	1 qt.	50	" "	
" 26	"	61254	J. Yost, Sargent Ave., Winnipeg.	1 bot.	50	Can. Maple Exchange Ltd., Montreal.	Telfer Bros., Winnipeg.
" 27	"	61255	S. Myers, Ellice St., Winnipeg.	1 can.	50	Ramsays Ltd., Montreal.	
" 27	"	61256	E. Feir, Ellice St., Winnipeg.	1 bot.	50	Maple Tree Producers' Assn., Ltd.	
" 28	"	61257	The T. Eaton Co., Ltd., Winnipeg.	1 can.	85	James Davidson, Waterloo, P.Q.	
" 28	"	61258	Hudson's Bay Co., Winnipeg.	1 "	45	Ramsays, Ltd., Montreal	
" 29	"	61259	W. J. Sutherland, Grosvenor and Stafford Sts., Winnipeg.	1 bot.	50		
" 29	"	61260	Hardy & Buchanan, Winnipeg.	1 qt.	50	James A. Grubb, West Shefford, P.Q.	
May 25	"	61261	Gallagher Bros., Elmwood P.O.	3 bots.	75		Jobin, Marin & Co., Winnipeg.

DISTRICT OF SASKATCHEWAN—

April 27	Maple Syrup.	66355	Bertins Ltd., Swift Current.	1 pt.	30	Maples Ltd., Toronto	Swift Current Grocery.
" 27	"	66356	W. W. Cooper Co., Swift Current.	1 "	50	Maple Tree Producers Assn., Montreal.	" "
" 28	"	66362	Thomas Brothers, Gull Lake.	1 "	20	Unknown	Campbell, Wilson & Strathdee, Regina.
May 3	"	66377	Kent & Brown Co., Moose Jaw.	1 "	30	Ramsay's Ltd., Montreal.	
" 4	"	66381	W. G. Dey, Pense	1 qt.	50	McCormick Mfg. Co., London.	Mfrs.
" 6	"	66388	S. B. Yerxa, Regina	1 pt.	25	Unknown	
" 10	"	66392	Curry Grocery, Moose Jaw.	1 qt.	50	Edmund J. Berry, Brome, P.Q.	Mfr.
" 19	"	66393	Innis Co., Moose Jaw	1 pt.	25	Garrett Stafford Co., Sutton, P.Q.	"

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MAPLE SYRUP.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.						No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Water.	Solids.	Calculated to Water Free Basis.					
			Lead Number (Canadian).	Total Ash.	Water Soluble Ash.	Insoluble Ash.		

A. C. LARIVIÈRE, INSPECTOR.

	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
.....	34.11	65.89	3.00	0.93	.....	.....	.....	61252	Genuine.
.....	33.41	66.59	2.30	0.83	.....	.....	.....	61253	"
.....	34.76	65.24	2.06	0.74	.....	.....	.....	61254	"
.....	39.00	61.00	1.41	0.76	0.54	0.22	0.25	61255	Adulterated as to sugar and excess water.
.....	33.56	66.44	3.08	0.80	.....	.....	.....	61256	Genuine.
.....	31.41	68.59	1.92	0.82	.....	.....	.....	61257	"
.....	36.03	63.97	1.52	0.70	0.42	0.28	0.34	61258	Adulterated.
Pride of Canada ..	32.23	67.77	2.94	0.80	.....	.....	.....	61259	Genuine.
.....	33.06	66.94	0.92	0.71	0.52	0.14	0.25	61260	Adulterated. Manufacturer claim to have sold pure syrup
Old Tyme .....	34.80	65.20	1.75	.....	.....	.....	.....	61261	Meets legal requirement.

L. H. HALL, INSPECTOR.

Old Tyme .....	32.61	67.39	0.16	0.27	.....	.....	.....	66855	Adulterated.
.....	31.03	68.97	3.08	1.06	.....	.....	.....	66856	Genuine.
.....	32.46	67.54	0.49	0.44	.....	.....	.....	66862	Adulterated.
Snowshoe Brand	33.13	66.87	0.58	0.54	.....	.....	.....	66877	"
Open Kettle Brand	36.06	63.94	0.24	0.26	.....	.....	.....	66881	"
.....	42.03	57.97	1.84	0.83	.....	.....	.....	66885	Genuine as to sugar, but adulterated by excess water.
.....	33.64	66.36	2.76	0.96	.....	.....	.....	66892	Genuine.
.....	33.13	66.87	2.72	1.03	.....	.....	.....	66895	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF ALBERTA—

1915.							
April 30	Maple Syrup.	52120	Hallier & Aldridge, Edmonton.	1 tin	60	Maple Tree Producers Assn., Montreal.	
" 30	" ..	52121	Johnston Walker Ltd., Edmonton.	3 bots.	90	Maples Ltd., Toronto	
" 30	" ..	52122	Hudson's Bay Co., Edmonton.	1 tin	50	Maple Tree Producers Assn., Montreal.	
May 1	" ..	52123	I. H. Morris & Co., Edmonton.	1 bot.	55	Can. Maple Exchange	
" 18	" ..	52124	Hudson's Bay Co., Calgary	1 pt.	30	E. J. Berry, Brome, P.Q.	
" 18	" ..	52125	S. G. Freeze, Calgary ...	1 bot.	35	Maple Tree Producers Assn., Montreal.	
" 20	" ..	52126	John Irwin Co., Calgary..	1 can	35	Sugar & Cannery, Ltd., Montreal.	
" 21	" ..	52127	Pryce Jones (Canada) Ltd. Calgary.	1 bot.	35	Maples Ltd., Toronto	
June 17	" ..	52128	Geo. Kerr, Lethbridge....	1 "	65	Maple Tree Producers Assu., Montreal.	

## DISTRICT OF ROCKY MOUNTAINS—

April 26	Maple Syrup.	61805	Trail Grocery, Trail.....	3 bots.	1.95	Can. Maple Exchange	
May 20	"	61811	Ira R. Manning, Cranbrook.	1 "	60	Sugars & Cannery, Ltd., Montreal.	
" 20	"	61817	J. Manning, Cranbrook..	1 tin.	60	W. C. Strong, North Sutton, P.Q.	
" 20	"	61818	Cranbrook Trading Co., Cranbrook.	3 jars.	1.00	McCormick Mfg. Co., London.	
June 10	"	61830	A. Hobson, Revelstoke...	1 bot.	60	Maple's, Ltd., Toronto.	
" 10	"	61831	G. W. Bell, Revelstoke..	1 tin.	1.25	Sugar & Cannery, Ltd., Montreal.	
" 16	"	61832	" " ..	1 "	1.25		A. P. Slade & Co., Vancouver,
" 10	"	61837	L. C. Masson, Revelstoke	3 "	1.95	Kelly Confection. Co., Vancouver.	

## DISTRICT OF VANCOUVER—

May 3	Maple Syrup.	55234	T. W. Turner, 890 Pender st., Vancouver.	1 tin.	50	Maple Tree Producers Assn., Montreal.	
" 3	"	55235	Almas Grocery, 444 Robson st., Vancouver.	1 bot.	40	Sugars & Cannery, Ltd., Montreal.	
" 3	"	55236	J. A. Lowe, 1002 Seymour st., Vancouver.	1 "	25	Maple's, Ltd., Toronto.	

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MAPLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Lead Number Canadian.	Calculated to water free basis.					
				Total Ash.	Water Soluble Ash.	Insoluble Ash.	Malic Acid Value.		

A. W. R. MARKLEY, INSPECTOR.

	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
Pride of Canada...	32.62	67.28	2.94	0.83				52120	Genuine.
Old Tyme .....	35.17	64.83	1.04	0.47				52121	Adulterated.
Pride of Canada..	34.32	65.68	2.58	0.88				52122	Genuine.
.....	34.98	66.02	0.38	0.45				52123	Adulterated.
.....	32.77	67.23	2.42	0.84				52124	Genuine.
Pride of Canada.	28.82	71.18	3.14	0.90				52125	
Silver Sheaf	36.16	63.84	0.53	0.43				52126	Adulterated.
.....	33.51	66.49	1.14	0.54				52127	
Pride of Canada...	32.22	67.78	3.30	1.07				52128	Genuine.

THOS. PARKER, INSPECTOR.

	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
Small's .....	35.05	65.00	3.04	0.90				6180	Genuine
Silver Sheaf ..	36.96	63.04	1.64	0.81	0.66	0.15	0.17	61811	Meets legal requirements.
.....	32.54	67.46	2.14	0.80				61817	Genuine.
Open Kettle	32.08	67.92	0.25	0.10				61818	Adulterated.
Old Tyme .....	32.88	67.12	0.40	0.22				61820	
Silver Sheaf	33.07	66.93	0.42	0.40				61821	
.....	32.62	67.38	3.06	0.90				61822	Genuine.
.....	33.52	66.48	2.06	0.79				61825	

E. J. MORGAN, INSPECTOR

	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
Pride of Canada, Pure Maple Syrup	34.33	65.67	2.84	1.11				70254	Genuine.
Silver Sheaf Brand, Pure Maple Syrup	36.00	64.00	2.00	0.98				70255	
Old Tyme, Pure Sap Maple Syrup	32.38	67.62	0.81	0.59	0.55	0.54	0.15	70256	Adulterated.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF VANCOUVER—

1915.							
May	4	Maple Syrup.	55237	A. & C. Grocery Co., 520 Granville st., Vancouver	1 tin.	50	KellyConfection.Co., Ltd., Vancouver.
"	4	"	55238	W. H. Walsh, Seymour and Davie sts., Vanc.	1 bot.	50	Can. Maple Exchange Ltd.
"	4	"	55239	Fliou, Ltd., 204 Carrall st., Vancouver.	3 jars.	40	St. Jacques, St. Her- mas, P.Q.
"	7	"	55240	G. Boyd, 6th and Gran- ville sts., Vancouver.	1 bot.	30	East. Tps. M. S. & S. Exchange, Sut- ton, P.Q.
"	10	"	55241	S. Pritchard, 950 Robson st., Vancouver.	3 jars.	30	Maple's, Ltd., Tor- onto.
"	10	"	55242	Annandale Supply Co., Columbia st., NewWest- minster.	1 tin.	50	KellyConfection.Co., Ltd., Vancouver.
"	11	"	55243	Mount Pleasant Grocery, 2425 Main st., Vanc.	1 bot.	25	Maple's, Ltd., Tor- onto.

## DISTRICT OF VICTORIA—

May	27	Maple Syrup.	66711	Windsor Grocery, Ltd., 817 Govt. st., Victoria.	1 qt. .	50	Maple's, Ltd., Tor- onto.
"	28	"	66714	D. H. Ross & Co., 1317 Govt. st., Victoria.	1 " .	60	W. R. Horner, Gran- by, P.Q.
"	31	"	66718	West End Grocery Co., Ltd., 1002 Govt. st., Victoria.	1 " .	50	Maple's, Ltd., Tor- onto.
June	8	"	66723	Acton Bros., 1317 Dou- glas st., Victoria.	1 " .	50	MapleTreeProducers Assn., Montreal.
"	8	"	66724	Ersine & Co., 861 John- son st., Victoria.	1 " .	55	Maple's, Ltd., Tor- onto.
"	9	"	66728	H. O. Kirkham & Co., 741 Fort st., Victoria.	1 tin.	50	KellyConfection.Co., Ltd., Vancouver.
"	9	"	66729	Henry W. Driver, 856 Yates st., Victoria.	1 qt. .	60	MapleTreeProducers Assn., Montreal.
"	10	"	66732	Linden Grocery, Linden and May st., Victoria.	1 " .	50	Sugars & Cannery, Ltd., Montreal.
"	10	"	66735	The Cook st. Grocery, 1023 Cook st., Victoria.	1 " .	50	Can. Maple Exchange Montreal.
"	21	"	66757	H. O. Kirkham, 1109 Govt. st., Victoria.	1 " .	55	KellyConfection.Co., Ltd., Vancouver.

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MAPLE SYRUP.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Solids.	Calculated to water free basis.				Maltic Acid Value.		
			Lead Number (Canadian)	Total Ash.	Water Soluble Ash.	Insoluble Ash.			

Concluded.

	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
Canadian Brand, Pure Maple Syrup	33.13	66.87	2.64	1.04	.....	.....	.....	55237	Genuine.
Small's Map. Syrup Guaranteed pure.	34.78	65.22	2.00	0.75	.....	.....	.....	55238	"
.....	35.90	64.10	2.54	0.99	.....	.....	.....	55239	"
Labelled guaranteed pure.	33.43	66.57	2.20	1.10	.....	.....	.....	55240	"
.....	34.53	65.47	1.00	0.45	.....	.....	.....	55241	Adulterated.
Kelly's Pure Maple Syrup.	34.23	65.77	2.00	0.97	.....	.....	.....	55242	Genuine.
Old Tyme, Pure Sap Maple Syrup	35.43	64.57	2.80	0.70	.....	.....	.....	55243	"

D. O'SULLIVAN, INSPECTOR.

Old Tyme .....	36.41	63.59	0.84	0.47	.....	.....	.....	66711	Adulterated.
.....	33.86	66.14	2.94	1.04	.....	.....	.....	66714	Genuine.
.....	38.31	61.69	0.90	0.64	.....	.....	.....	66718	Adulterated.
Pride of Canada ..	33.86	66.14	3.34	0.74	.....	.....	.....	66723	Genuine.
.....	38.46	61.54	1.01	0.70	.....	.....	.....	66724	Adulterated.
Canadian. . . . .	33.41	66.59	2.46	0.74	.....	.....	.....	66728	Genuine.
Pride of Canada ..	32.41	67.59	3.08	0.85	.....	.....	.....	66729	"
Silver Sheaf .....	36.41	63.59	1.69	0.89	.....	.....	.....	66732	Meets legal requirements.
Small's Selected. .	32.61	67.39	2.04	0.75	.....	.....	.....	66735	Genuine.
Canadian Brand. .	34.41	65.59	2.52	1.03	.....	.....	.....	66737	"

## APPENDIX Q.

## BULLETIN No. 326—MALT EXTRACTS.

OTTAWA, 21st February, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report upon one hundred and fifty-two (152) samples purchased as Malt Extracts by our various Inspectors.

Malt Extract is not defined by the British Pharmacopœia. The British Pharmaceutical Codex of 1911 does, however, define Malt Extract (*Extractum Malti*) as follows:—

“A brown-yellow or light amber-coloured, thick, viscid liquid, having a faint, pleasant characteristic odour, a sweet, mucilaginous taste, and a distinct acid reaction. Its diastatic activity is destroyed at temperatures above 65°C Specific Gravity about 1.375. Soluble in all proportions in water, the solution being precipitated by strong alcohol. Malt Extract consists chiefly of maltose (50 per cent or more) and dextrin, with some dextrose, and should also contain a fair proportion of diastase.”

This account of the article may be regarded as descriptive rather than definitive.

Malt Extract is described to much the same effect, in the United States Pharmacopœia (Eighth revision, 1900). No constants as to density, diastatic value, sugar content, etc., are stated.

Liquid Extract of Malt; is not a pharmacopœal preparation. It is described in the B. P. Codex as prepared from Extract of Malt, alcohol and distilled water. 100 parts of the liquid extract contain about 7.5 parts of alcohol. The specific gravity should be about 1.2.

With regard to the action and uses of Malt Extract I quote the following from the B.P. Codex of 1911, p. 402.

“The medicinal value of malt extract depends upon the proportion of total solid nutritive carbohydrates it contains, and upon its diastatic action, the latter enabling it to convert the starchy constituents of food into soluble carbohydrates, chiefly maltose. But the diastase becomes inactive in an acid medium such as obtains in the stomach during digestion. The extract is given to children and adults for its nutritive properties. Many of the extracts on the market contain no diastase, the ferment having been destroyed during evaporation.”

Among other reasons for the present (the first) systematic inspection of Malt Extracts, was the question whether a number of preparations more or less closely resembling Malt Extract were to be regarded, for purposes of revenue, as Drugs or as Foods. Malt Extract is very frequently employed as a vehicle for the administration of drugs, such as Cod Liver Oil, Phosphates, Quinine, etc., and, of course, in such combinations it must be classified as a drug. When used *per se*, its main, if not its only claim to medicinal properties, is based upon its containing active diastase. In its sugar content it must be regarded as a food.



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Of one hundred and fifty-two (152) samples now reported, only sixteen (16) can be regarded as fulfilling in any satisfactory degree, the requirements of an Extract of Malt. These contain solids varying from about 70 to 80 per cent, and the solids in question are mainly malt sugar, dextrin and dextrose. The characteristic results of these sixteen (16) samples are summarized in the following table:—

TABLE A.  
*Malt Extracts.*

No.	Solids.	Specific Gravity.	Diastatic Value.	Alcohol (Weight).
54053	71·30	1·330	0·7	6·10
52140	80·36	1·418	112·6	Nil.
54054	78·20	1·403	56·0	"
66051	77·80	1·395	56·0	"
56366	78·20	1·400	56·0	"
67327	81·00	1·423	90·0	"
63610	78·84	1·403	53·0	"
66745	81·60	1·427	111·0	"
52143	82·16	1·431	99·9	"
63611	73·70	1·317	15·0	3·88
52145	71·84	1·322	39·1	3·11
66741	70·80	1·321	54·8	3·25
61302	81·60	1·424	54·6	N.L.
55277	81·72	1·425	54·7	"
61838	81·96	1·429	13·4	"
66754	83·16	1·447	13·6	"

It should here be stated that five samples of medicated Malt Extracts, purchased in error by Mr. Inspector Beland are not inserted in the above table. These bear numbers 56368 to 56372 inclusive.

*Liquid Extract of Malt*, is prepared as follows; under directions given in the B. P. Codex of 1911—(page 1180):—

Extract of Malt, by volume .....	67·50 parts.
Alcohol .....	7·50
Distilled water to make .....	100 "

The specific gravity should be about 1·2. Two alternative methods are given for preparation of Liquid Malt Extract. One from an aqueous infusion of malt, when the specific gravity of the resulting extract should be about 1·275; the other by percolation of the malt, in coarse powder, with alcohol diluted with three times its volume of water, until the percolate weighs three-fourths the weight of the malt used.

In order to obtain certain constants for Liquid Malt Extract, as described in the B. P. Codex, two samples were prepared in the laboratories, from samples of Malt Extract numbered 63610 and 67327.

No. 63610 is a Kepler Extract, made by the Burroughs, Wellcome Co., has specific gravity 1·408; contains 78·84 per cent solids; has a diastatic value of 53 degrees Lintner, and is free from alcohol.

No. 67327 is also a Kepler Extract, manufactured by Burroughs, Wellcome Co. It has specific gravity 1·423, contains 81·00 p.c. total solids; has diastatic value 90° Lintner and is free from alcohol.

The Liquid Extracts were prepared strictly according to the directions of the B.P. Codex as above and gave following results:—

	LIQUID EXTRACT OF MALT	
	From 63610	From 67327
Specific gravity .....	1·2898	1·2845
Alcohol (volume p.c.) .....	6·75	6·75
Specific gravity of extract de-alcoholized .....	1·2082	1·2107
Extractive (calculated) .....	82·5	84·7

An examination of the analytical results found for 128 samples purchased as Malt Extract or as Liquid Malt Extract and comprising all the samples of this collection, except 16 which are reported in Table A, shows that only three samples can be regarded as Liquid Malt Extracts, in the sense of the B. P. Codex. The three samples in question bear the numbers 66050, 63655 and 52144, and give the following results:—

TABLE B.

*Liquid Malt Extract.*

No.	Solids.	Specific Gravity.	Diastatic Value.	Alcohol (Weight).
66050	55.50	1.250	25.6	8.22
63655	58.51	1.245	20.0	9.43
52144	58.44	1.243	9.2	8.60
Samples Prepared in Laboratory from—				
63610	53.20	1.260	....	5.37
67327	54.70	1.263	....	5.57

The present report deals with 152 samples, which may be classified as follows:—

Genuine Extract of Malt .....	16 samples.
Genuine Liquid Extract of Malt .....	3 “
Medicated Extract of Malt .....	5 “
Beverages sold as Malt Extract .....	128 “
<b>Total .....</b>	<b>152 samples.</b>

Of the 128 samples which cannot be classed either as Malt Extract, or as Liquid Extract, the following may be said:—

1. They usually contain alcohol; the amount of which, stated as proof spirit, varies from about 4 per cent to about 12 per cent.

2. Extractive matter varies from about 5 to about 12 per cent—only 14 samples showing as much as 13 per cent.

3. Ordinary Ale (or beer) is required to contain at least 3.5 per cent solids, and an examination of published results (See I. R. Bulletins No. 52, 196 and 283) shows that the solids in Canadian made Ales, of good quality usually range from 4 to 6 per cent while alcohol (expressed as proof spirit) varies from about 7 to about 10 per cent.

4. None of these samples possess any diastatic value; consequently, in this respect, they do not differ from ordinary Beer or Ale.

In order to facilitate comparison between the so-called Malt Extracts of the class now under consideration, and ordinary Ales or Beers, the following table has been prepared.

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TABLE C.

Brand.	Number Samples Examined.	Alcohol as Proof Spirit.	Solids.
1. Malt Nutritive...	5	2.94	15.67 tonic.
2. Dr. Kilborn's...	1	7.36	6.19 beer.
3. B. A. Brewery...	1	5.61	10.67 tonic.
4. Cremo Malt...	2	10.88	2.64 beer.
5. Carling's...	20	7.09	6.14 beer.
6. Maltovin...	7	5.33	12.44 tonic.
7. Diamond...	1	7.49	6.93 beer.
8. Goebel...	2	2.68	12.74 tonic.
9. Hoffman...	1	9.18	5.35 beer.
10. Prima Tonic...	1	10.26	8.48 beer.
11. Blue Ribbon...	2	9.78	6.51 beer.
12. Malta Labattine...	1	10.81	5.48 beer.
13. Diastatic...	9	7.36	10.28 tonic.
14. M. Bole...	1	7.87	9.00 beer.
15. Miller's...	2	10.51	9.68 tonic.
16. Dow's...	3	8.00	11.57 tonic.
17. Oregon...	1	8.00	11.48 tonic.
18. O'Keefes...	5	11.40	9.27 beer.
19. Pabst...	16	7.66	11.19 tonic.
20. Salvador...	7	7.65	5.30 beer.
21. Dr. Charles...	1	5.98	10.72 tonic.
22. Hofman...	1	8.00	5.04 beer.
23. Schlitz...	2	7.93	9.11 beer.
24. Silver Springs...	3	8.42	4.76 beer.
25. Sleeman's Springs...	3	7.95	12.31 tonic.
26. Walkerville...	2	11.62	6.39 beer.
27. Wyeths...	26	4.81	12.83 tonic.

These samples apparently represent 27 different brands; and I have already pointed out that none of them meet requirements for Liquid Malt Extract, under which name most of them are sold.

In several cases it would appear that the manufacturer has sought to produce a beverage somewhat more nutritious than ordinary beer; while in most cases the article does not essentially differ from a strong ale.

If we draw the line between an ordinary commercial ale, and a special ale, claiming tonic or nutritive qualities above ordinary ale, where may the line be drawn? This is, of course, a question which can only be acceptably answered after consultation with all parties interested in the matter.

I have ventured, to suggest that unless at least 10 per cent of nutritive solids remain in the product, it has no claim to be recognized as a special or tonic beverage. Many ordinary ales contain from 5 to 6 per cent of nutritive solids; and it would seem reasonable to require at least double of this amount to constitute a malt beverage, claiming any medicinal or tonic value.

On the above assumption, I find that 15 out of 27 brands named in Table C—should be sold as ale or beer; and should be placed on the market under the same conditions as ale or beer.

This conclusion has at present, no legal recognition, but I would respectfully ask for its careful consideration of this department.

I would further suggest publication of this report as Bulletin No. 326.

I have the honour to be, sir,

Your Obedient Servant,

A. MCGILL,  
Chief Analyst.

BULLETIN No. 326—TABLE I, PART I.—MALT EXTRACTS.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		
DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.									
1915.									
June 18	Malt Extract..	54051	National Drug and Chem. Co., Halifax.	3	55	Carling B. and M. Co., London, Ont.	Mfrs.....		
" 23	"	54052	John Tobin & Co., Halifax.	3	80	Pabst Brew. Co., Milwaukee.	" .....		
" 30	"	54053	B. F. Trask, Yarmouth.	1 bot.	1 00	Parke, Davis Co., Walkerville.	" .....		Malt Extract. Low diastatic values and somewhat low solids.
July 9	"	54054	Taylor Drug Co., Bridge water.	1 "	1 25	Barrourghs, Wellcome Co., London, Eng.	" .....		Malt Extract. Genuine.
DISTRICT OF PRINCE EDWARD ISLAND—WM. WEEKS, INSPECTOR.									
May 7	Malt Extract..	60190	E. A. Foster, Charlottetown.	3 bots.	43	Reinhardt, Salvador Brewery Co., Toronto.	" .....		
" 7	"	60191	" " "	3 "	96	Pabst Brewery Co., Milwaukee.	" .....		
" 7	"	60192	C. D. Rankin, Charlottetown.	3 "	78	Carling B. and M. Co., London, Ont.	" .....		
" 10	"	60193	George E. Hughes, Charlottetown.	3 "	1 11	John Wyeth & Bros., Philadelphia.	" .....		

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DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

May 10	Malt Extract.	6946	National Drug and Chem. Co., St. John.	Chem. 3	1 lots.	90 Pabst, Milwaukee.			
" 13	"	6947	Cormou & Sheehan, St. John.	St. John 3	"	1 05 Anheuser, Busch Brew. Assn., St. Louis.			
" 17	"	6948	National Drug and Chem. Co., St. John.	Chem. 3	"	90 Carling Brew. Co., London, Ont.			
" 17	"	6949	"	"	3	1 05 Wyeth's	Lynnan's Ltd., Montreal.		
" 20	"	6950	R. T. Mack, Fredericton.	Fredericton 3	"	2 25 Allen & Hanbury, Ltd., London, Eng.			
" 26	"	6951	C. A. McKee, Weststock.	Weststock 3	"	2 34 Burroughs, Wellcome Co., London, Eng.			
June 17	"	6952	C. O. Steves, Moncton.	Moncton 3	"	75 Lynnan's Ltd., Montreal.			
" 19	"	6953	National Drug and Chem. Co., St. John.	Chem. 3	"	75 Silver Spring Brewery, Sherbrooke.			Malt Extract liquid. Genuine. Malt Extract. Genuine.

DISTRICT OF QUEBEC CITY—F. X. W. E. BELAND, INSPECTOR.

April 20	Extract Malt.	6017	Elz Turante, 74 Desfosses, Quebec.	Desfosses, Quebec 3	1 lot.	75 Pabst Brew. Co.			
" 26	"	6018	"	"	3	54 Silver Spring Brewery.			
" 27	"	6019	Myrant Poullet, Quebec.	Quebec 3	"	69 Miller & Co.	Laporte, Martin.		
" 27	"	6020	A. Grenier, 94 St. Jean, Quebec.	St. Jean 3	"	75 C. J. Oregan, Quebec.	Mfr.		
" 27	"	6021	J. Masson, 815 St. Valer, Quebec.	St. Valer 3	"	76 John Wyeth & Sons, Philadelphia.	L. E. Murtel		
" 27	"	6022	"	"	3	75 Carling	National Drug		
" 28	"	6023	D. Germain, 387 St. Joseph, Quebec.	St. Joseph 3	"	3 00 Burroughs, Wellcome.	Mfr.		Malt Extract. Genuine.
" 28	"	6024	"	"	3	3 90	"		" Medicated.
" 28	"	6025	"	"	3	3 00	"		"
" 28	"	6026	"	"	3	2 70 Burroughs, Wellcome Co.	Mfr.		Malt Extract. Medicated.
" 28	"	6027	"	"	3	2 70	"		"
" 28	"	6028	"	"	3	90	"		"

BULLETIN No 326—TABLE 1, PART 1.—MALT EXTRACTS.

Date of Collection.	Name of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		
DISTRICT OF QUEBEC PROVINCE—N. CADIEUX, A. PELLETIER, TEMPORARY INSPECTORS.									
1915.									
April 28	Extrait de Malt	273	J. N. Desjardins, St. Jérôme	3 bots.	1.11	John Wyeth & Bros., Montreal.			
May 4	"	281	F. D. Hall, Ste. Agathe des Monts	3 "	96	Carling			
"	"	287	Dr. Ed. Grignon, Ste Agathe des Monts.	3 "	78	Lyman's, Ltd.			
"	Malt Extract.	56457	Fraserville Drug Co., Fraserville.	3 "	75	Lyman's, Ltd., Montreal.			
"	"	56463	Ed. Cloutier, Fraserville.	3 "	90	The Carling Co., London, Ont.			
June 1	"	56467	John Kaine, Fraserville.	3 "	1.05	John Wyeth, Philadelphia.			
DISTRICT OF THREE RIVERS—DR. V. P. LAVAILLEE, INSPECTOR.									
May 1	Malt Extract.	67952	Camille Barrett, Joliette.	3 bots.	75	Wyeth Bros., Philadelphia.	Lyman's, Montreal.		
"	"	67959	J. T. Gaudet, Joliette.	3 "	75	Davis & Lawrence			
"	"	67960	A. L. Boucher, Joliette.	3 "	90	Pabst Brew. Co., Milwaukee.	Lyman Knox, Montreal.		
"	"	67961	C. L. Rivest, Joliette.	3 "	75	Lyman's Ltd., Montreal.			
"	"	67962	J. O. Daviault, Berthierville.	3 "	90	Wyeth Bros., Philadelphia.	Lyman's, Montreal.		

No.	Name	Address	Quantity	Brand	Manufacturer	Inspector	Remarks
24	67996 L. P. Crepeau, Joliette.....	3 "	75 "	"	"	"	"
25	67997 William Ferreault, Joliette..	3 "	75 "	"	"	"	"
27	68105 R. W. Williams, Three Rivers	3 "	90	Lyman's, Ltd., Montreal.			
31	68109 D. Carignan Fils, Three Rivers	3 "	75	Wyeth Bros., Philadelphia.	Lyman's, Montreal.		
June 1	68113 J. A. Bosvert, Joliette.....	3 "	90	"	"	"	"

No.	Name	Address	Quantity	Brand	Manufacturer	Inspector	Remarks
April 29	67316 Dr. Miller, 1860 Masson St., Rosemont.	3 lbs.	78	National Breweries, Ltd.			Dow's.....
"	67317 J. E. Marin, 927 Mt. Royal Ave., E., Montreal.	3 "	70	"	Nat. Drug Co.		Carling's.....
"	67318 N. Cloux, 738 Mt. Royal Ave., E., Montreal.	3 "	75	John Wyeth & Bros.			Wyeth's.....
"	67319 A. Lalonde, 586 Mt. Royal Ave., E., Montreal.	3 "	75	Pabst Brewing Co.			Pabst.....
"	67320 O'Rourke's Pharmacy, 1195 3/4 Bernard St., Outremont.	3 "	75	Lyman's, Ltd.			Lyman's.....
"	67321 Martineau's Drug Store, 1098 3/4 St. Denis St., Montreal.	3 "	75	Co. Medicale St. Charles			St. Charles.....
"	67322 " " " "	3 "	75	"			Hohman's.....
"	67323 J. H. Roberts, 1185 St. Denis St., Montreal.	3 "	78	Fred Miller Brew. Co.			Miller's.....
"	67324 P. E. Thomas, 384 Bleury St., Montreal.	3 "	78	Reinhardt Salvador Brewing Co.			Hofbrau.....
"	67325 Fraser, Viger & Co., Montreal.	3 "	90	Anheuser Bush.			Malt Nutrine..
"	67326 J. R. Thomas, 384 Bleury St., Montreal.	3 "	1 1/11	O'Keefe's Brew. Co.			O'Keefe's.....
"	67327 Barron's Walloway Co., 384 3/4 Bleury St., Montreal.	3 "	1 30	Vendors			Kopler.....

DISTRICT OF EASTERN TOWNSHIPS—J. J. COSTIGAN, ACTING INSPECTOR.

No.	Name	Address	Quantity	Brand	Manufacturer	Inspector	Remarks
May 31	68140 D. W. Simpson, Sherbrooke.	3 lbs.	1 66	Davis Lawrence Co., Montreal.			Maltovin.....
" 31	68141 " " " "	3 "	45	Silver Springs Brewery, Sherbrooke.			Silver Spring....

Malt Extract. Genuine.







BULLETIN No. 326—TABLE I, PART I.—MALT EXTRACTS.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report s. (Is not an expression of opinion.)	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		
DISTRICT OF TORONTO—Concluded.									
1915.									
May 15	Malt Extract.	67063	G. A. Ramsden, Midland Ave., Toronto.	3	78	Carling B. & M. Co., London.			
" 19	"	67064	Geo. Marshall, 137 Ave. Toronto.	"	47	Walkerville Brew. Co., Ltd., Walkerville.			
" 19	"	67065	The J. A. Lannon Drug Store, Jarvis & Queen, Toronto.	"	43	Berlin Lion Brewery, Berlin.		Dr. Kibbons	
" 19	"	67066	F. S. Taylor, 292 Spadina Ave., Toronto.	"	78	O'Keefe Brew. Co., Toronto.		O'Keefe's	
" 20	"	67067	R. H. Thompson, 1470 Yonge St., Toronto.	"	78	Gosbel Brew. Co., Detroit.			
" 21	"	67068	A. J. McCall & Co., Queen and Church sts., Toronto.	"	78	Lyman's Ltd., Montreal.		Diatic	
" 21	"	67077	The Robt. Simpson Co., Ltd. Yonge and Queen St., Toronto.	"	78	Lyman Bros. & Co., Ltd., Toronto.		Wyeth's	
DISTRICT OF HAMILTON—H. J. DAGER, ACTING INSPECTOR.									
April 26	Malt Extract.	66394	R. Phillips & Son, Fergus.	3	75	Carling B. & M. Co., London.			
" 29	"	66395	P. B. Moore, Paisley.	3	78	Unknown		Pabst	
" 30	"	66396	D. A. Cameron & Co., Owen Sound.	3	78	Nat. Drug & Chem. Co., Toronto.		Gosbel	

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May 1	Malt Extract	66297 H. E. Middleboro, Owen Sound.	3 bats.	Sleeman & Sons, Guelph.		
-	4	66298 T. A. La Patrouille, Burlington.	3 "	Reinhardt Salvador Brew Co., Toronto.		Hofbrau
-	7	66299 J. W. Gericke, 32 1/2 James st. N., Hamilton.	3 "		Nat. Drug & Chem. Co., Hamilton.	O'Keefe's
-	5	67000 Parke & Parke, Market Square, Hamilton.	3 "	Grant Spring Brew. Co., Hamilton.		Diamond Mfg. for vendor.
-	6	67001 Nat. Drug & Chem. Co., Hamilton.	3 "	J. Labatt & Co., London.		Blue Ribbon
-	6	67002 Parke & Parke, Market Square, Hamilton.	3 "	John Wyeth & Bros., Philadelphia.		Wyeth's

DISTRICT OF WINDSOR—JOHN TALBOT, INSPECTOR.

April 21	Malt Extract	54772 W. R. Holmes, Clinton	3 bats.	O'Keefe's, Toronto.		O'Keefe's
-	2	54773 Alex. Wilson, Seaforth	3 "	John Wyeth & Bros., Montreal.		
-	2	54774 Chas. Alberhart, Seaforth	3 "	Carling B. & M. Co., London.		
-	2	54775 C. Cunningham, St. Mary	3 "	John Labatt, London		Malto Labattine
-	2	54776 Standard Drug Co., London	3 "	Reinhardt Salvador Brew Co., Toronto.		Hofbrau
-	2	54777 T. N. Sumner, London	3 "	Walkerville Brew. Co., Walkerville.		
-	2	54778 W. T. Strong, London	3 "	Pabst Brew. Co., Milwaukee.		Pabst
May 4		54613 D. Bernabini, Sarnia	3 "	Brit. Amer. Brew. Co., Windsor.		
-	6	54619 J. M. Robie, Petrolia	3 "	Sleeman & Sons, Guelph.		

DISTRICT OF MANITOBA—A. C. LARIVIERE, INSPECTOR.

April 20	Malt Extract	61291 Whiskey Drug Store, Sargeant av. Winnipeg.	3 bats.	Nat. Drug & Chem. Co., Hamilton.		
-	25	61292 J. E. Robinson, Ellise st., Winnipeg.	3 "	John Wyeth Bros., Montreal.		
May 11		61293 P. F. Prasad, Portage av., Winnipeg.	3 "	Carling, London		
-	26	61294 Souths Drug Store, Souris	3 "	L. E. Martin, Polo, Wynne Co., Winnipeg.		
-	26	61295 MacLennan & Burnett, Souris	3 "	P. Davis & Lawrence, Montreal.		

BULLETIN No. 326—TABLE I, PART I.—MALT EXTRACT.

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				Cents.	Quantity.	Manufacturer.	Furnisher.		
DISTRICT OF SASKATCHEWAN—L. H. HALL, INSPECTOR.									
1915.									
April 27	Malt Extract.	66358	Rooney's Pharmacy, Swift Current.	3 bts.	1.20	John Wyeth & Bro., Philadelphia.	Nat. D. & C. Co.		
" 28	"	66361	C. H. Morrison, Gull Lake.	3 "	1.10	Carling B. & M. Co., London.			
May 1	"	66373	L. C. Gilmour, Moose Jaw.	3 "	1.06	Lynman's Ltd., Montreal.			
DISTRICT OF ALBERTA—A. W. R. MARKLEY, INSPECTOR.									
April 30	Malt Extract.	52140	G. H. Graydon, Edmonton.	3 bts.	3.00	Parke, Davis Co., Waukegan, Ill.			Malt Extract genuine.
" 30	"	52141	" "	3 "	1.20	Pabst, Milwaukee.			
" 30	"	52142	" "	3 "	1.20	John Wyeth & Bro., Montreal.		Wyeth's	Malt Extract genuine.
" 30	"	52143	Findley Drug Co., Calgary.	3 "	2.25	Burrough Wellcome Montreal.		Kepler	Malt Extract Liquid genuine.
May 18	"	52144	McDermid Drug Co., Calgary.	3 "	1.50	Allen & Hanbury, London, Eng.		Bynn	Malt Extract genuine.
" 18	"	52145	" "	3 "	3.45	Maltine Mfg. Co., Toronto.		Maltine	Malt Extract genuine.
" 21	"	52153	Nat. Drug & Chem. Co., Calgary.	3 "	55	Carling B. & M. Co., London.			
June 15	"	52183	P. W. McNabb, Brooks.	3 "	1.05	" "		Carling's	

DISTRICT OF ROCKY MOUNTAINS—THOS. PARKER, INSPECTOR.

April 26	Malt Extract.	61801	E. W. Hazewood, Trail.	3 bats.	1 05	Carling B. & M. Co., London, Ont.			
"	"	61802	" "	3 "	1 50	National Drug & Chemical Co., Vancouver			Malt Extract, genuine.
May 20	"	61819	Cranbrook Drug Co., Cranbrook.	3 "	1 00	Davis & Lawrence, Montreal.			
"	"	61823	Beattie Murphy Co., Cranbrook.	3 "	1 50	John Wyeth & Bros., Montreal.			
June 10	"	61838	W. Lewis, Revelstoke.	3 "	3 10	Lortimer & Co., London, England.			Malt Extract. Distasteful value. Low, otherwise genuine.
"	"	61850	" "	3 "	1 10	" "	J. A. Teepoorten & Co., Vancouver.		Cremo Malt.

DISTRICT OF VANCOUVER—E. J. MORGAN, INSPECTOR.

May 26	Malt Extract.	55276	H. Ryal, Columbia St., Westminster.	3 bats.	1 00	Carling, London.			
"	"	55277	D. S. Curtis, & Co., Columbia St., Westminster.	3 bats.	1 00	National Drug & Chemical Co., Vancouver.			Mals Extract, genuine.
"	"	55278	M. Lennan's Drug Store, Columbia St., New Westminster.	3 bats.	1 00	Unknown.		Sold as Cremo Malt.	
"	"	55279	Old Drug Co., Dumasair and Grenville St., Vancouver.	3 "	1 00	John Wyeth & Bros., Montreal.			
"	"	55280	Georg Pharmacy, George and Granville Sts., Vancouver.	3 "	1 00	Pabst Brewing Co., Milwaukee.			
"	"	55281	Hudson Bay Co., Granville St., Vancouver.	3 "	75	Jno. Schlitz Brewing Co., Milwaukee.			Schlitz's Malt Tonic.
"	"	55282	W. M. Harrison & Co., 14th St., Vancouver.	3 "	1 00	Davis & Lawrence Co., Montreal.			Maltovin.
"	"	55283	" "	3 "	1 00	Carl Hoffman, Hamburg, Germany.			
"	"	55284	Woodworth, Dept. Store, Hastings St., Vancouver.	3 "	1 00	Ambrosius Busch Brewing Assn., St. Louis.			Malt Mixture.

DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

"	Malt Extract.	99702	Whitaker Grocery Co., 417 Grand St., Victoria.	3 bats.	1 00	Pabst Brewing Co., Milwaukee.			Eubac.
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BULLETIN No. 326—TABLE I, PART I.—MALT EXTRACTS.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		
DISTRICT OF VICTORIA—Concluded.									
1915.									
June 11	Malt Extract.	66741	F. J. Williams, 613 Fort St., Victoria.	1 bot.,	1 25	R. L. Gibson, Toronto.		Maltine .....	Malt Extract, genuine,
" 14	"	66745	Terry's Drug Store, 765 Fort St., Victoria.	" 1 "	" 75	Burroughs Wellcome London, Eng.		Kepler.....	Malt Extract, genuine.
" 14	"	66747	Hall & Co., 702 Yates St., Vancouver.	3 pks.,	1 00	Carlton B. & M. Co. London.		.....	.....
" 15	"	66751	W. Jackson & Co., Douglas St., Vancouver.	1411 2 bots.	" 80	John Wyeth & Bros., Montreal.		.....	.....
" 15	"	66753	John Cochrane, 1300 Douglas St., Vancouver.	3 pks.,	1 20	Anbeuser Busch, St. Louis.		.....	.....
" 15	"	66754	National Drug & Chemical Co., Victoria.	1 "	75	Holden & Co., Montreal.		Barlex .....	Malt Extract. Diastatic value. Low, otherwise genuine.
" 21	"	66758	H. O. Kirkham & Co., Fort St., Victoria.	741 3 "	" 75	Jno. Schlitz Brewing Co. Milwaukee.		.....	.....



BULLETIN No. 326—TABLE I, PART II—MALT EXTRACTS.

Name of Inspectoral District.	No. of Sample.	Results of Analysis.													Remarks and Opinion of the Chief Analyst.							
		Sp. gr. at 15°C.	Alcohol.		Proof spirit.		Extract by weight.		Sp. gr. of Original Wort.		Extract in Original Wort.		Degree of fermentation.	Reducing Sugar as Maltose.		Ash.	Phosphate P <sub>2</sub> O <sub>5</sub>	Preservatives.	Diatatic value.	No. of Sample.		
		p.c.	By weight.	By volume.	p.c.	p.c.	p.c.	p.c.	Hypo-hosphites.	p.c.	Hydroglobin.	Cod Liver Oil.	p.c.	Sp. gr.	Sp. gr.	p.c.	p.c.	p.c.	p.c.	p.c.		
Quebec City.....	56370	Kepler	2.00	2.51	4.40	12.38	1.0619	15.56													56370	Malt Extract medicated.
"	56371	"	3.29	4.12	7.23	6.24	1.0473	11.97													56371	"
Quebec Province...	56372	"	3.18	3.98	6.97	10.20	1.0624	15.67													56372	"
"	273	"	3.33	4.18	7.32	6.21	1.0475	12.01													273	"
"	281	"	2.42	3.04	5.32	12.31	1.0649	15.23													281	"
"	287	"	1.81	2.27	3.99	12.77	1.0621	15.60													287	"
"	56457	"	3.71	4.63	8.13	10.93	1.0635	17.35													56457	"
"	56463	"	3.53	4.42	7.74	11.57	1.0707	17.63													56463	"
"	56467	"	2.17	2.72	4.76	13.19	1.0665	16.62													56467	"
Three Rivers.....	67952	"	1.81	2.27	3.99	12.77	1.0621	15.60													67952	"
"	67959	"	3.00	3.00	5.35	11.70	1.0622	15.63													67959	"
"	67960	"	3.71	4.63	8.13	10.93	1.0635	17.35													67960	"
"	67961	"	3.53	4.42	7.74	11.57	1.0707	17.63													67961	"
"	67962	"	2.17	2.72	4.76	13.19	1.0665	16.62													67962	"
"	67996	"	1.81	2.27	3.99	12.77	1.0621	15.60													67996	"
"	67997	"	2.56	3.21	5.61	12.41	1.0664	16.59													67997	"
"	69105	"	4.12	5.16	9.04	8.61	1.0635	15.92													69105	"
"	69109	"	2.39	3.00	5.25	12.77	1.0666	16.64													69109	"
"	69113	"	1.87	2.35	4.12	12.85	1.0629	15.78													69113	"
"	67316	"	4.06	5.08	8.90	11.00	1.0726	18.06													67316	"
Montreal.....	67317	"	3.41	4.27	7.49	6.02	1.0474	11.99													67317	"
"	67318	"	2.33	2.93	5.13	15.65	1.0778	19.19													67318	"
"	67319	"	3.06	3.83	6.72	10.85	1.0641	16.05													67319	"
"	67320	"	2.50	3.14	5.49	9.50	1.0540	13.61													67320	"
"	67321	"	2.72	3.42	5.98	10.72	1.0609	15.34													67321	"
"	67322	"	3.65	4.56	8.00	5.04	1.0454	11.50													67322	"
"	67323	"	4.69	5.86	10.26	9.36	1.0723	17.68													67323	"
"	67324	"	3.82	4.78	8.38	4.82	1.0460	11.65													67324	"
"	67325	"	1.25	1.57	2.75	15.35	1.0688	17.18													67325	"



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Sample No.	Weight	4.87	6.10	10.67	12.72	1.0863	21.13	"	90	Remarks
67326	1.0420	4.87	6.10	10.67	12.72	1.0863	21.13	None	58146	alt Extract Genuine.
67327	1.420	4.87	6.10	10.67	12.72	1.0863	21.13	None	67327	
58146	1.0546	1.75	2.26	3.26	4.34	1.0688	17.48	"	58146	
58147	1.0100	4.06	5.06	8.77	4.39	1.0458	11.60	"	58147	
58148	1.0516	1.87	3.12	3.35	4.12	1.0669	16.72	"	58148	
58149	1.0391	2.72	3.42	5.48	11.13	1.0225	15.69	"	58149	
58150	1.0181	3.32	4.20	7.36	6.24	1.0478	12.09	"	58150	
58151	1.0317	3.30	4.49	7.87	9.69	1.0635	15.92	"	58151	
58152	1.0434	3.20	4.12	7.23	12.43	1.0723	17.89	"	58152	
58153	1.0424	2.22	2.79	4.89	11.70	1.0609	15.34	"	58153	
40972	1.0088	2.80	3.62	6.34	10.62	1.0318	15.54	"	40972	
40973	1.0411	2.06	2.58	4.52	11.33	1.0580	14.62	"	40973	
57944	1.0328	1.81	2.27	3.69	14.11	1.0675	16.86	"	57944	
57945	1.0382	3.50	4.49	7.87	11.28	1.0700	17.48	"	57945	
57947	1.0292	4.69	5.84	10.26	8.48	1.0676	16.89	"	57947	
63609	1.0480	1.81	2.27	3.30	12.92	1.0627	15.74	None	63609	Malt Extract, Genuine. Malt Extract, Diastatic val- ue low, otherwise genuine.
63610	1.408	3.88	4.85	8.51	73.70	1.3520		53	63610	
63611	1.3174	3.88	4.85	8.51	73.70	1.3520		15	63611	
63644	1.0203	3.41	4.27	7.49	3.95	1.0394	10.62	None	63644	
63645	1.0187	2.83	3.55	6.22	6.11	1.0432	10.95	"	63645	
63646	1.0280	5.19	6.48	11.35	12.11	1.0865	21.19	"	63646	
63647	1.0340	4.62	5.78	10.13	10.65	1.0757	18.74	"	63647	
63654	1.0201	0.89	1.13	1.97	15.54	1.0673	16.81	"	63654	
63655	1.244	9.43	11.70	20.50	58.51	1.3307		20	63655	Malt Extract; Liquid Gen- uine.
68046	1.0187	2.72	3.42	5.48	6.07	1.0421	10.67	None	68046	
68047	1.0338	3.94	4.53	8.64	10.82	1.0710	17.70	"	68047	
68048	1.0444	2.50	3.13	5.49	12.33	1.0536	16.40	"	68048	
68049	1.0128	3.18	3.98	6.97	5.04	1.0416	10.55	"	68049	
68050	1.0114	2.67	3.35	5.80	11.67	1.0543	16.09	"	68050	
68051	1.0411	4.94	6.17	10.81	12.60	1.0864	21.16	"	68051	
67039	1.0182	3.06	3.83	6.72	6.11	1.0450	11.40	"	67039	
67040	1.0412	2.61	3.28	5.74	11.00	1.0635	15.92	"	67040	
67041	1.0288	3.33	4.42	7.71	11.31	1.0818	20.10	"	67041	
67042	1.0286	2.94	3.14	5.49	6.44	1.0118	10.60	"	67042	
67043	1.0187	4.62	5.70	10.13	6.91	1.0201	15.23	"	67043	
67044	1.0181	3.25	4.26	7.36	6.19	1.0176	12.04	"	67044	
67045	1.0182	6.19	6.48	11.35	7.01	1.0657	16.42	"	67045	
67046	1.0472	1.72	1.42	2.48	12.46	1.0583	14.18	"	67046	
67047	1.0286	2.25	2.86	5.01	10.04	1.0546	13.76	"	67047	
67048	1.0477	2.17	2.76	4.76	12.90	1.0657	16.42	"	67048	
67049	1.0376	3.20	4.11	7.23	6.55	1.0485	12.26	"	67049	
66994	1.0400	3.44	3.67	5.37	12.45	1.0657	16.42	"	66994	
66995	1.0400	1.21	1.60	2.80	13.04	1.0590	15.11	"	66995	
66996	1.0286	3.76	4.71	8.20	11.43	1.0720	17.95	"	66996	
66997	1.0400	3.41	4.27	7.49	5.50	1.0450	11.50	"	66997	
66998	1.0400	3.21	4.63	11.62	7.08	1.0660	16.72	"	66998	

BULLETIN No. 326—TABLE I, PART II—MALT EXTRACTS.

Name of Inspectoral District.	Results of Analysis.										No. of Sample.	Remarks, and Opinion of the Chief Analyst.			
	Alcohol.		Proof Spirit.	Extract by weight.	Sp. gr. of Original Wort.	Extract in (Original Wort.	Degree of fermentation.	Reducing Sugar as maltose.	Ash.	Phosphates P <sub>2</sub> O <sub>5</sub> .			Preservatives.	Diastatic Value Degrees Linnæus.	No. of Sample.
	By weight.	By volume.													
Hamilton—Con.	Sp. gr. at 15° C.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.					
	1.0208	3.41	4.27	7.49	6.93	1.0509	12.83				None.	67000			
	1.0182	3.06	5.08	8.90	6.52	1.0545	13.73				"	67015			
	1.0434	2.17	2.72	4.76	11.94	1.0611	15.48				"	67018			
		5.75	7.17	12.57	16.39	1.0702	17.52				"	54772			
Windsor	Sp. gr. at 15° C.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.					
	1.0183	2.39	3.00	5.25	13.24	1.0685	17.11				"	54782			
	1.0164	3.41	4.27	7.49	5.80	1.0405	11.77				"	54784			
	1.0126	4.94	6.17	10.81	5.48	1.0576	14.52				"	54790			
	1.0121	3.47	4.31	7.61	4.71	1.0427	10.82				"	54795			
Manitoba	Sp. gr. at 15° C.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.					
	1.0125	6.00	7.48	13.11	5.87	1.0578	16.91				"	54796			
	1.0374	3.29	4.12	7.23	10.95	1.0663	16.57				"	54798			
	1.0376	2.51	3.21	5.61	10.67	1.0594	14.99				"	54813			
	1.0378	3.59	4.49	7.87	11.18	1.0596	17.38				"	54619			
Alberta	Sp. gr. at 15° C.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.					
	1.0168	4.87	6.10	10.67	6.50	1.0611	15.38				"	61291			
	1.0476	2.11	2.62	4.64	12.94	1.0651	16.27				"	61292			
	1.0198	3.29	4.12	7.23	5.56			1.16	0.21	0.060	None.	61293			
	1.0316	3.59	4.49	7.87	9.00			7.65	0.27	0.057	Sulphites	61294			
Saskatchewan	Sp. gr. at 15° C.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.					
	1.0168	2.50	3.14	5.49	11.91			8.56	0.38	0.168	Trace.	61295			
	1.0483	1.91	2.43	4.26	13.04	1.0641	16.05				None.	66358			
	1.0202	2.78	3.49	6.10	6.47	1.0442	11.20				"	66361			
	1.0349	3.07	3.07	5.37	9.97	1.0336	14.01				"	66374			
Alberta	Sp. gr. at 15° C.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.					
	1.0374	4.44	5.00		80.36			62.16	2.00	0.90	112.6	52140	Malt Extract. Genuine.		
	1.0374	5.60	4.5	7.9	11.24			2.57	0.37	0.18	None.	52141			
	1.0441	2.24	2.8	5.0	12.35			6.38	0.31	0.14	Salicylic acid.	52142			
	1.431	0.00			82.16			61.20	1.52	0.62	99.9	52143	Malt Extract. Genuine.		
Alberta	Sp. gr. at 15° C.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.					
	1.2434	8.60	10.7	18.8	58.44			59.96	0.32	0.34	9.2	52144	" Liquid. Genuine.		
	1.3216	3.11	3.9	6.8	71.84			37.40	1.20	0.48	39.1	52145	Malt Extract. Genuine.		
Alberta	Sp. gr. at 15° C.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.					
	1.0173	3.36	4.2	7.4	5.81			1.70	0.25	0.06	None.	52153			



## APPENDIX R.

## BULLETIN No. 327—BLEACHING POWDER.

(*Chlorinated Lime; Chloride of Lime; Chlorure de Chaux; Calx Chlorinata*).

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue,

OTTAWA, November 15, 1915.

SIR,—

The article referred to under the names given is generally known in Canada as Bleaching Powder or as Chlorure de Chaux. It is greatly in demand in washing linen, and for disinfecting purposes. The British Pharmacopoeia (Edition 1914) describes it under the names *Calx Chlorinata* and *Chlorinated Lime*; and gives the following characters and tests:—

“A dull white powder with a characteristic chlorinous odour, becoming moist and gradually decomposing on exposure to air. Partially soluble in water. The solution yields the reactions characteristic of calcium and of chlorides, and evolves chlorine copiously upon the addition of an acid. 0.5 gramme of Chlorinated Lime, mixed with 1.5 grammes of potassium iodide dissolved in 200 millilitres of water, gives, when acidified with 6 millilitres of hydrochloric acid, a reddish solution, which requires for decoloration not less than 42.3 millilitres of N/10 solution of sodium thiosulphate, corresponding to not less than 30 per cent of available chlorine.”

The one hundred and one (101) samples now reported may be classified as follows:—

Yielding 30 per cent of chlorine.....	21 samples.
“ 25 per cent of chlorine.....	41 “
“ 20 per cent of chlorine.....	26 “
“ 10 per cent of chlorine.....	8 “
“ less than 10 per cent chlorine.....	5 “
	-----
Total.....	101 “
	-----

Attention was directed to this subject by certain work reported to me by Mr. G. M. Land, of the Ontario Agricultural College, Guelph, who found, in ten market samples of Bleaching Powder, amounts of available Chlorine varying from 14.90 per cent to 23.40 per cent; and who adds: “I should like to know from you, if possible, if my tests are representative of the chloride of lime as retailed in pound and half pound packages, throughout the Province; as it seems to me that it is a question of low test, and short-weight all round.”

The results of this inspection show the article to be, as a rule, of very poor quality, only about 20 per cent of the samples meeting pharmacopoeal requirements; and many samples being practically worthless. It is well understood that Bleaching Powder is a perishable article, in the ordinary sense of that word. It can only be kept for any length

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of time, in good condition, by being carefully packed, and stored in a cool and dry place. But dealers should be fully aware of the nature of the goods they handle. It will be understood that the finding of the analyst does not necessarily mean that the article as originally manufactured, or as furnished to the retail dealer, was below standard strength. It does however mean that the article, as furnished to the consumer (the public) was below standard strength, and that the public has a just cause for complaint.

In the case of twenty samples the gross and net weight has been determined. As a rule the net weight meets the guarantee given on the label.

I beg to recommend publication of this report as Bulletin No. 327.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the vendor.	
				Quantity	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NOVA SCOTIA—

1915.							
Sept. 9	Bleaching Powder.	64226	Nat. Drug and Chem. Co., Halifax.	3 pkgs	12	A. Mendleson's Sons, Albany.	

## DISTRICT OF CAPE BRETON—

Sept. 8	Bleaching Powder.	63830	F. & J. Morley, Sydney.	3 lb.	30	White Swan S. & C. Ltd., Toronto.	
" 8	Chloride of Lime.	63831	G. F. Miles, Sydney.	3 "	30	Alpha Chem. Co., Berlin, Ont.	
" 8	"	63832	J. J. Turnbull, Sydney.	3 "	30	E. G. West & Co., Toronto.	
" 8	"	63833	Earl S. Auld, Sydney.	3 "	60	A. Mendleson's Sons, Albany, N.Y.	

## DISTRICT OF PRINCE EDWARD ISLAND—

Sept. 10	Chloride of Lime.	60323	Coffin & Co., Charlottetown.	3 pkgs	45	Alpha Chem. Co., Berlin, Ont.	
" 14	"	60324	Johnson & Johnson, Charlottetown.	3 "	60	Lyman's, Ltd., Montreal.	
" 24	"	60325	C. D. Rankin, Charlottetown.	3 "	60	A. Mendleson's Sons, Albany, N.Y.	
" 24	"	60326	McKinnon Drug Co., Charlottetown.	3 "	30	" " "	
" 24	"	60327	Beer & Goff, Charlottetown.	3 "	45	United Alkali Co., St. Helens, Eng.	

## DISTRICT OF NEW BRUNSWICK—

July 15	Bleaching Powder.	66111	Nat. Drug and Chem. Co., St. John.	3 pkgs	60	Mendleson's Sons, Albany, N.Y.	
" 20	"	66112	O. Neill Co., Pharmacy, St. John.	3 "	30	" " "	
Aug. 11	"	66113	Estate of A. J. Waterson, St. Stephen.	3 "	50	" " "	
" 17	"	66114	Charles Burchill, Fredericton.	3 "	45	" " "	
" 24	"	66115	C. H. Fairweather, Sussex.	3 "	51	Lyman's, Ltd., Montreal.	

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BLEACHING POWDER.

Inspector's Report. (Is not an expression of opinion.)	Brand.	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Available Chlorine.		Container.	Condition of Powder.		
		Claim.	Found.				

R. J. WAUGH, INSPECTOR.

		p. c.	p. c.			
Labelled Chloride of Lime.	Hudson	30 0	28 3			61226

E. T. McKEEN, INSPECTOR.

	White Swan	29 3				63830
		4 1	Cardboard		Container Broken.	63831 Below standard.
	West's	16 3	"			63832
	Hudson	30 0	24 8			63833

WM. A. WEEKS, INSPECTOR.

		11 15	Cardboard			60323 Below standard.
	Crescent	30 0	27 6			60324
	Hudson	30 0	30 15			60325
	"	30 0	25 0			60326
	Greenbank	25 7				60327

JOHN C. FERGUSON, INSPECTOR.

		p. c.	p. c.			
	Hudson	30 0	27 10			60111
	"	30 0	28 20			60112
Hudson Brand	"	30 0	29 70			60113
"	"	30 0	28 40			60114
Crescent	Crescent	30 0	30 40			60115

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC PROVINCE—J. E. AUDET, O. BROCHU

1915.							
July 7	Bleaching Powder.	3606	Dorchester Lumber, Ste. Malachie, Co. Dorchester.	3 pkgs	15	Mendleson's Sons, Albany.	
" 15	Chlorure Chaux.	3621	A. Caillouette, Ste. Justine.	3 "	30	Sultana Lemeated, Montreal.	
" 23	Bleaching Powder.	3632	P. T. Renaud, Beauceville.	3 "	30		
" 26	Chloride of Lime.	3633	J. A. Poulin, Valley Jct.	3 "	30	J. B. Renaud & Co., Quebec.	
" 22	Chlorure Chaux.	3600	Geo. Roy, St. Michel.	3 "	45	A. Mendleson's Sons, Albany.	
" 12	"	292	Avila Lauzon, St. Jerome.	3 "	15	United Alkali Co.	
" 19	"	305	Hon. Giroux, Ste. Agathe des Monts.	3 "	15	Hudson	
" 12	"	316	H. Côté, St. Faustin Station.	3 "	30	Northrup & Lyman.	
" 19	Chloride of Lime.	2776	Alphonse Letourneau, St. Pierre, Montmagny.	3 "	30	J. A. Blanchard, New York.	
" 20	"	2781	Ivanhoe Caron, Cap St. Ignace.	3 "	30	" "	
" 21	"	2786	Jos. Fournier, St. Thomas, Montmagny.	3 "	30	Northrup & Lyman, Toronto.	

## DISTRICT OF THREE RIVERS—

July 9	Bleaching Powder.	69144	Monahan Bros., St. Lin.	3 pkgs	15	Chaput Son, Montreal.	
" 9	"	69145	Alfred Henri, St. Lin.	3 "	13	Hudson Co., Ltd., Montreal.	
" 10	"	69146	R. Charbonneau, St. Esprit.	3 "	15	Northrup, Lyman, Toronto.	
" 22	"	69148	L. O. Lassalle, St. Jacques.	3 "	15	Hudson Co., Ltd., Montreal.	
" 13	"	69149	L. Pauze, L'Assomption.	3 "	30	Greenbank, Why, St. Helen's, Eng.	
" 14	"	69150	W. H. Lacasse, L'Assomption.	3 "	15	Hudson Co., Ltd., Montreal.	Jos. Dufresne, Joliette.

## DISTRICT OF EASTERN TOWNSHIPS—

Aug. 24	Bleaching Powder.	63094	L. D. Girard, Drummondville.	3 tins.	35	Lyman, Ltd., Montreal.	
" 24	"	63095	" " "	3 "	15	United Alkali Co., England.	
" 25	"	63096	J. H. E. Brodeur, St. Hyacinthe.	3 "	45	A. Mendleson Son, Albany, N.Y.	
" 25	"	63097	S. Bourgeois & Co., St. Hyacinthe.	3 "	45	United Alkali Co., England.	
" 25	"	63098	C. Pagnuch, St. Hyacinthe.	3 "	30	S. J. Carter Co., Montreal.	



SESSIONAL PAPER No. 14  
BLEACHING-POWDER.

Inspector's Report. (Is not an expression of opinion).	Brand.	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Available Chlorine.		Container.	Condition of Powder.		
		Claim.	Found.				

N. CADIEUX AND T. GENDREAU, TEMPORARY INSPECTORS.

		p. c.	p. c.				
.....	.....	.....	13.5	Can	Dry	.....	3606 Below standard.
.....	.....	.....	31.8	"	"	.....	3621
.....	.....	30.0	29.4	"	"	.....	3632
.....	.....	.....	24.0	"	"	.....	3633
.....	.....	.....	0.14	"	Very pasty.	.....	3600 Below standard.
.....	.....	.....	31.6	Tin	Dry	.....	292
.....	.....	.....	9.7	Can	Fairly dry	.....	305 Below standard.
.....	.....	.....	26.4	"	Dry	.....	316
.....	.....	.....	18.6	Paste-board.	Like paste	Top eaten off.	2776 Below standard.
.....	.....	.....	6.8	"	Very pasty.	.....	2781
.....	.....	.....	17.6	Can	Moist	.....	2786

DR. V. P. LAVALLEE, INSPECTOR.

.....	.....	.....	29.74	Can	Dry	.....	69144
.....	.....	.....	25.45	"	Fairly dry	.....	69145
.....	.....	30.0	29.17	"	Dry	.....	69146
.....	.....	.....	26.45	"	Fairly dry	.....	69148
.....	.....	.....	29.46	"	Dry	.....	69149
.....	.....	.....	19.73	"	Fairly dry	.....	69150 Below standard.

J. J. COSTIGAN, ACTING INSPECTOR.

Crescent	.....	.....	22.65	Tin	Slightly moist	.....	63094 Below standard
.....	.....	.....	27.46	"	Dry and powdered	.....	63095
Hudson	.....	.....	24.36	"	Dry	.....	63096
.....	.....	.....	21.28	"	"	.....	63097 Below standard
.....	.....	30.0	27.59	"	Slightly moist	.....	63098

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF MONTREAL—								
1915.								
Aug. 26	Bleaching Powder.	67416	Murphy & Riordon, 871 St. Catherine St. W., Montreal.	3 pkgs	15	A. Mendleson Sons.		
" 26	"	67417	W. J. Brown, 888 St. Catherine St. W., Montreal.	3 "	45	Alpha Chem. Co.		
" 26	"	67418	Jas. Graham, 4451 St. Catherine St., Westmount.	3 "	45		Hudon, Hebert & Co.	
" 30	"	67419	C. E. Box, 4846 Sherbrooke St., Westmount.	3 "	45	United Alkali Co.		
" 30	"	67420	J. S. Benoit, 1379 Green Ave., Westmount.	3 "	45	Sultana Ltd		
DISTRICT OF VALLEYFIELD—								
Aug. 28	Bleaching Powder.	67201	A. Bissonnette, St. Zotique, P.Q.	3 tins.	45	Sultana, Ltd.		
" 28	"	67202	G. Pilon, St. Zotique, P.Q.	3 "	30	United Alkali Co., Ltd.		
" 30	"	67203	L. C. Dumesnil, River Beaudette.	3 "	45	Sultana, Ltd.		
" 31	"	67204	Miss P. Guimond, Beauharnois, P. Q.	3 "	30	United Alkali Co.		
" 31	"	67205	J. A. Faubert, Beauharnois, P. Q.	3 "	15	A. Mendleson		
DISTRICT OF OTTAWA—								
July 14	Bleaching Powder	51683	W. F. Gibson, 1105 Bank St., Ottawa.	3 Lb.	45	A. Mendleson's Sons.	Lymans Ltd., Montreal.	
" 14	"	51684	A. S. Moreland, 819 Bank St., Ottawa.	3 pkg.	30	The Alpha Chem. Co., Berlin, Ont.		
Aug. 12	"	51685	A. Bourguignon, Booth St., Ottawa.	3 tins.	30	Unknown.	S. J. Major, Ltd., Ottawa.	
July 10	"	63684	S. E. Johnston, Arnprior	3 "	30	A. Mendleson's Sons, Albany, NY.	Nat. Drug. & Chem. Co., Ottawa.	
" 13	"	63685	Wm. Hughes, Carleton Place.	3 box.	40	E. G. West & Co., Toronto.		
DISTRICT OF KINGSTON—								
Sept. 1	Chloride of Lime.	61081	W. W. Gibson, Kingston.	3 tins.	30		N. C. Polson Co., Kingston.	
" 1	"	61082	Jas. B. McLeod, Kingston	3 "	30			
" 1	"	61083	L. T. Best, Kingston.	3 "	30			
" 1	"	61084	A. P. Chown, Kingston.	3 "	45	A. Mendleson's, New York.		
" 1	"	61085	T. H. Sargent, Kingston.	3 "	30			

SESSIONAL PAPER No. 14

BLEACHING POWDER

Inspector's Report. (Is not an expression of opinion.)	Brand.	Results of Analysis.				No. of Sample.	Remarks and Opinions of the Chief Analyst.
		Available Chlorine.		Container.	Condition of Powder.		
		Chain.	Found.				

D. J. KEARNEY, INSPECTOR.

Purchased as Chloride of Lime.		p. c.	p. c.	Can	Dry, coarse.	67416	
" "			13.6	Paste-board.	Fine, dry.	67417	Below standard.
" "			30.1	Can	Dry and caked.	67418	
" "			30.2	"	"	67419	
" "			31.1	Enameled can.	"	67420	

D. J. KEARNEY, ACTING INSPECTOR.

Purchased as Chloride of Lime.			28.6	Can	Hard dry cake.	67201	
" "			0.8	"	Very wet paste.	67202	Below standard.
" "			26.5	"	Hard cake and coarse.	67203	
" "			30.2	"	Fine, dry.	67204	
" "			18.3	"	Dry, coarse.	67205	Below standard.

J. A. RICKEY, INSPECTOR.

Crescent High Test.		30.0	27.1	Tin	Dry	51683	
30 avail Chlorine.							
Moody's Royal.			14.1	Paste-board	"	51684	Below standard.
Reina High Test			29.0	Can	"	51685	
High Test			30.4	Tin	"	63684	
"			18.7	Paste-board	"	63685	Below standard.

JAMES HOGAN, INSPECTOR.

			30.1	Tin	Dry and well powdered.	61081	
Moody's Royal			16.75	Paste-board	Dry but solid.	61082	Below standard.
"			16.5	"	Dry powdered on top.	61083	
			35.0	Tin	Dry	61084	
Moody's Royal			19.77	Paste-board	Dry but solid.	61085	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF TORONTO—

1915.							
Aug. 10	Bleaching Powder.	69913	T. Park, 954 St. Clair Ave., Toronto.	3 pks.	30	.....	White Swan S. & C. Co., Ltd., Toronto.
" 11	" ..	69914	E. F. Sears, 330 Danforth Ave., Toronto.	3 "	15	W. Wilson, Toronto.	.....
" 14	" ..	69916	Hill & Shields, Weston ..	3 "	30	Alpha Chem. Co., Berlin, Ont.	.....

DISTRICT OF HAMILTON—

July 21	Bleaching Powder.	70031	Roddy & Walker, St.3 Catharines.	3 pks.	15	Alpha Chem. Co., Ltd., Berlin.	.....
" 23	" ..	70033	F. A. Berriman, 149 Queen St., Niagara Falls.	3 "	30	Eaze Mfg. Co., Ltd., Toronto.	.....
Aug. 5	" ..	70063	Jas. J. McQuarrie, 11 King William St., Hamilton.	3 "	25	The Canadian Crystal Co., Toronto.	.....

DISTRICT OF WINDSOR—

Sept. 3	Chloride of Lime.	54672	R. N. Thurtell, Ingersoll.	3 s.	30	Alpha Chem. Co., Berlin, Ont.	.....
" 3	" ..	54673	A. G. Law, Ingersoll.....	3 "	30	Nat. Drug & Chem. Co.	.....
" 3	" ..	54674	A. J. Gill, Ingersoll.....	3 "	30	Alpha Chem. Co., Berlin, Ont.	.....
" 3	" ..	54675	John E. Gayfeer, Ingersoll.	3 "	30	"	.....
" 3	" ..	54676	H. Avery, Ingersoll.....	3 "	30	John B. Paine Co., Toronto.	.....
" 3	" ..	54677	F. McDougall, Ingersoll..	3 "	30	Nat. Drug Co.....	.....
" 3	" ..	54678	Bruce Phillips, Ingersoll..	3 "	30	John B. Paine Co., Toronto.	.....
" 4	" ..	54679	B. A. Mitchell, London ..	3 "	30	Nat. Drug Co.....	.....

SESSIONAL PAPER No. 14

BLEACHING POWDER.

Inspector's Report. (Is not an expression of opinion.)	Brand.	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Available Chlorine.		Container.	Condition of Powder.		
		Claim.	Found.				

H. J. DAGER, INSPECTOR.

		p. c.	p. c.				
Labelled White Swan Chloride & Lime or Bleaching Powder.	White Swan	30.0	20.4	Can. ....	Dry. ....	69913	Below standard.
Labelled Wilson's Chloride of Lime.	Wilson's....		36.75	Paste-board.	" .....	69914	
Labelled Moody's Royal Chloride of Lime.	Moody's Royal.		18.60	" .....	" .....	69916	

H. J. DAGER, ACTING INSPECTOR.

Moody's Royal Carbonized Chloride of Lime.	Moody's Royal.	.....	17.5	Paste-board.	Dry, very light.	70031	Below standard.
The Home Bleacher Triple X.	Triple X. ....		21.8	" .....	Dry .....	70033	
The Canadian Chloride of Lime.	Canadian....	.....	26.3	" .....	Not extra dry.	70063	

JOHN TALBOT, INSPECTOR.

Moody's Royal Carbonized Chloride of Lime.	Moody's Royal.	.....	17.06	Paste-board.	Dry hard cake.	54672	Below standard.
N. D. & C. Co. ....	N. D. & C. Co.	...	27.77	" .....	Soft coarse grained.	54673	
Moody's Royal Carbonized Chloride of Lime	Moody's Royal.	.....	15.36	" .....	Dry, fine.	54674	Below standard.
" .....	" .....	.....	13.11	" .....	" .....	54675	
Bull Dog Brand Chloride of Lime.	Bull Dog .....	.....	31.5	Enamelled metallic.	Coarse, dry.	54676	
N. D. & C. Co. ....	N. D. & C. Co.	.....	18.78	Paste-board.	" .....	54677	Below standard.
Bull Dog Brand Chloride of Lime.	Bull Dog .....	.....	31.7	Enamelled metallic.	" .....	54678	
Chloride of Lime N. D. & C. Co.	N. D. & C. Co.	.....	27.3	Paste-board.	" .....	54679	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF MANITOBA—

1915.								
Aug. 30	Bleaching Powder.	61370	Argue & Co., Roland	3 pkgs	60	Martin Bole, Wynne Co., Winnipeg.		
Sept. 1	"	61371	Dunlop Drug Dept., 448 Main St., Winnipeg.	3 "	30	A. Mendleson Co.		
" 1	"	61372	Gordon Mitchell Drug Co., Winnipeg.	3 "	30	Vendors ....		
" 1	"	61373	W. W. Starr, 807 Portage Ave., Winnipeg.	3 "	25	Martin Bole, Wynne Co., Winnipeg.		
" 1	"	61374	W. McCulloch, 647 Portage Ave., Winnipeg.	3 "	45	John B. Paine & Co., Toronto.		

DISTRICT OF SASKATCHEWAN—

ept. 21	Chloride of Lime	66432	Regina Trading Co., Regina.	3 pkgs	40	E. G. West & Co., Toronto.	Mfr .....	
" 21	"	66432	Canada Drug and Stationery Co., Regina.	3 "	50	Nat. Drug and Chem. Co., Toronto.	" .....	
" 21	"	66434	E. L. Colling, Moose Jaw.	3 "	40	Martin Bole & Wynne, Winnipeg.	" .....	
" 21	"	66435	F. Marlatt, Moose Jaw.	3 "	45	J. B. Paine Co., Toronto.	Martin Bole & Wynne, Winnipeg.	
" 21	"	66436	Moose Jaw Drug and Stationery Co., Moose Jaw.	3 "	40	E. G. West, Toronto.	Mfr .....	

DISTRICT OF ALBERTA—

Sept. 10	Bleaching Powder.	52216	Nat. Drug and Chem. Co., Calgary.	3 pkgs	35		J. B. Paine Co., Ltd., Toronto.	
" 10	"	52217	Oliver Bros., Ltd., Calgary.	3 "	40		Nat. Drug & Chem. Co., Calgary.	
" 10	"	52218	Perry Drug Co., Calgary.	3 "	40	J. B. Paine Co., Ltd., Toronto.		
" 10	"	52219	J. D. J. McDonald, Calgary.	3 "	30		Nat. Drug & Chem. Co., Calgary	
" 10	"	52220	J. Findlay Drug Co., Calgary.	3 "	30	United Alkali Co., St. Helens, Eng.		

SESSIONAL PAPER No. 14

BLEACHING POWDER.

Brand.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Available Chlorine.		Container.	Condition of Powder.	Weight.			
	Claim.	Found.			Claimed.	Net as found in ounces.		

J. B. COSGROVE, TEMPORARY INSPECTOR.

	p. c.	p. c.				p. c.	p. c.	
.....	.....	33.2	Pasteboard.	Dry.	.....	.....	.....	61370
.....	.....	32.2	Tin	"	.....	.....	.....	61371
.....	.....	34.7	Pasteboard	"	.....	.....	.....	61372
.....	.....	34.7	"	"	.....	.....	.....	61373
.....	.....	29.7	Tin	"	.....	.....	.....	61374

L. H. HALL, TEMPORARY INSPECTOR.

.....	.....	15.6	Pasteboard.	Very dry	.....	.....	.....	66432	Below standard.
.....	.....	25.1	"	Partially wet.	.....	.....	.....	66433	
.....	.....	35.3	"	Dry	.....	.....	.....	66434	
.....	.....	31.7	"	"	.....	.....	.....	66435	
.....	.....	16.1	"	"	.....	.....	.....	66436	Below standard

A. W. R. MARKLEY, INSPECTOR

.....	.....	25.75			1 lb full weight.	15.20	16.77	32216	
.....	.....	23.65			"	15.34	16.90	32217	Below standard
.....	.....	31.30				11.01	14.15	32218	
.....	.....	17.40			$\frac{1}{2}$ lb full weight.	6.81	7.94	32219	Below standard
.....	.....	18.50				9.83	11.06	32220	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF ROCKY MOUNTAINS—

1915.								
July 20	Bleaching Powder.	61860	Agnew & Co., Ross-land.	3 tins.	60	The F. F. Dalley Co., Hamilton.		
Aug. 6	"	61863	The Okanagan Grocery, Vernon.	3 pkgs	40	The W. H. Mal-kin Co., Van-couver.		
" 6	"	61864	W. R. Megan, Ver-non.	3 "	40	Wilson Bros., Victoria.		
" 10	"	61871	R. McColl, Kam-loops.	3 "	45	The Columbia Chem. Co., New York.	McLennan & McFeely Vanc.	
" 10	"	61879	Hudson's Bay Co., Kamloops.	3 "	30	Hudson's Bay Co., Vancou-ver.		

DISTRICT OF VANCOUVER—

July 20	Bleaching Powder.	55323	H. Ryall, Columbia St., New West-minster.	3 tins.	45	A. Mendleson's Sons, New York.		Hudson High Test.
" 20	"	55324	C. A. Welsh, Ltd., 681 Columbia St., New Westminster.	3 "	40	Col. Chem. Co., New York.		Columbia Brand.
" 20	"	55325	Annandale Supply Co., Columbia St., New Westminster.	3 "	40		W. H. Mal-kin Co., Ltd., Van-couver.	Sanitary Brand.
" 20	"	55326	Fraser River Supply Co., 548 Columbia St., New West-minster.	3 "	30		A. Macdon-ald & Co., Vancou-ver.	White Star Brand.
" 21	"	55327	David Spencer, Van-couver.	3 "	30			Tiger Brand, spe-cially packed for vendor.

DISTRICT OF VICTORIA—

July 29	Bleaching Powder.	66779	F. J. Williams, 613 Fort St., Victoria.	3 tins.	50	A. Mendleson's Sons, Albany, N.Y.		Hudson's High Test. Chloride of Lime.
" 29	"	66781	H. O. Kirkham Co., 741 Fort St., Vic-toria.	3 "	40	Columbia Chem. Works, Chicago.		Columbia Chlor-inated Lime.
" 30	"	66785	Acton Bros., 1117 Douglas St., Vic-toria.	3 "	45	"		"
Sept. 22	"	66786	Nat. Drug & Chem. Co., 512 Yates St., Victoria.	3 pkgs	30	Alpha. Chem. Co., Berlin, Ont.		Chloride of Lime
" 23	"	66788	Windsor Grocery Co., 817 Government St., Victoria.	3 "	35		R. P. Rit-het & Co., Victoria.	St. James Chlor-inated Lime.



SESSIONAL PAPER No. 14  
BLEACHING POWDER.

Brand.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Available Chlorine.		Container.	Condition of Powder.	Weight.				
	Claim.	Found.			Claimed.	Net as found in ounces.			Gross as found in ounces.

THOS. PARKER, INSPECTOR.

Royal . . . .	p. c.	p. c.				p. c.	p. c.	
	30.0	30.45	.....	.....	12 ounces net weight.	12.08	14.61	61890
Sanitary . . . .	30.0	28.90	.....	.....	"	11.31	13.90	61893
Wilson's . . . .	30.0	28.80	.....	.....	"	12.98	15.37	61894
Columbia . . . .	.....	20.95	.....	.....	"	12.63	15.24	61871 Below standard
Imperial . . . .	.....	25.80	.....	.....	"	13.61	16.47	61879

E. J. MORGAN, INSPECTOR.

Hudson . . . .	35.0	25.10	.....	.....	14 ounces net weight.	12.78	15.64	55325
Columbia . . . .	30.0	28.90	.....	.....	12 ounces net weight.	12.80	15.4	55324
Sanitary . . . .	30.0	27.50	.....	.....	"	12.98	15.63	55325
White Star . . . .	30.0	29.50	.....	.....	"	11.98	14.78	55326
Tiger . . . . .	30.0	29.75	.....	.....	"	12.98	15.77	55327

D. O'SULLIVAN, INSPECTOR.

Hudson . . . .	35.0	27.10			14 ounces net weight.	12.18	15.06	66779
Columbia . . . .	25.0	19.05	Cardboard ..	Damp and lumpy.	"	15.63	17.80	66781 Below standard
" . . . . .	25.0	19.80	"	"	"	15.61	18.04	66782
.....	.....	18.00	.....	.....	1 lb. full weight	13.23	14.91	66780
St. James . . . .	30.0	25.20	.....	.....	12 ounces net weight.	13.44	16.23	66788

## APPENDIX S.

## BULLETIN No. 328—SALAD OIL.

OTTAWA, November 25, 1915.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue,

SIR,—I beg to hand you a report upon the examination of one hundred and fifty-nine (159) samples sold as Salad Oil. This collection was made in July, August and September of the present year, and covers all the Inspectoral Districts.

Edible Vegetable Oils are defined by an Order in Council of March 28, 1912, published as Circular G. 1002, in the following terms.

28.	G. 1002.
FOOD.	10,000.

## DEPARTMENT OF INLAND REVENUE.

OTTAWA, April 9th, 1912.

## MEMORANDUM.

Under the authority of an Order of His Royal Highness, in Council, bearing date the twenty-eighth day of March ultimo. and in virtue of the provisions of the twenty-sixth section of the "Adulteration Act," the following standards of quality have been established for "Edible Vegetable Oils":—

## EDIBLE VEGETABLE OILS.

1. *Olive Oil, Sweet Oil*, is entirely a product of the fruit of the olive tree.  
 Its specific gravity, at 15.5° C., is not less than 0.9140 nor more than 0.9196.  
 Its specific refractive index, at 15.5° C., is not less than 1.4700 nor more than 1.4718.  
 Its Maumene number lies between 42 and 52.  
 Its iodine absorption number (using the Hubl solution) lies between 77% and 94%.  
 Its saponification number (Koettstorfer number) lies between 185.0 and 195.0.  
 It does not contain above 3.5% of free fatty acids.
2. *Cotton Seed Oil* is the oil obtained from the seeds of cotton plants and subjected to refining processes. It is free from rancidity; has specific gravity, at 15.5° C., between 0.9216 and 0.9300; has a refractive index (at 25° C.) not less than 1.4700 and not more than 1.4725, and an iodine number not less than 104 nor more than 110 (Hubl solution).
3. *Salad Oil*. Either of the above may be sold as salad oil; but when Cotton Seed Oil is offered as Salad Oil, the fact that the article is Cotton Seed Oil must be declared on the label.
4. Mixtures of *Cotton Seed Oil* with *Olive Oil* must be so declared on the label.  
 The standards above defined take effect on the 13th May proximo.

W. J. GERALD,  
Deputy Minister.

## SESSIONAL PAPER No. 14

Since the effective date of the above Order in Council (May 13, 1912), two systematic inspections have been reported. In December 1912 and January 1913, thirty-six samples of Olive Oil were collected and examined, (See Bulletin 256). On the whole, the results of this inspection were satisfactory, only two samples being found adulterated. During the summer of 1914, one hundred and fourteen (114) samples of Olive Oil and Salad Oil were examined (Bull. 294). Eleven of these samples were found to be adulterated as containing cotton seed oil without declaration of the fact. Ample time has been given for manufacturers and importers to make themselves acquainted with the regulations which govern the sale of Salad Oil; and it is unsatisfactory to record forty-three (43) samples of the present collection, as adulterated, under the Act. In addition to this number, thirty-five (35) samples contain the word *coton* in very small type on the label. Section 24 of the Act requires that mixtures should be labelled *in conspicuous characters*, and it is certain that this requirement is not met in these cases. I have, for the present, judged these samples as *doubtful*; but it is questionable whether or not I am justified in thus describing them. Most of these samples are labelled "Huile Douce", equivalent to "Sweet Oil", which is identified with Olive Oil by the Order in Council of the 28th of March, 1912.

Adulteration, consists in selling as Salad Oil an article which consists of, or which contains, cotton seed oil, without notification thereof. This violates the requirements of the Order in Council quoted above; and constitutes adulteration under the terms of section 3 of the Adulteration Act, which reads as follows:—

"Food shall be deemed to be adulterated within the meaning of the Act:—  
 "(d) if it is an imitation of, or is sold under the name of another article;

"(g) if its strength or purity falls below the standard, or its constituents are present in quantity not within the limits of variability fixed by the Governor in Council, as hereinafter provided."

The subjoined synopsis presents the results of the present inspection:

<i>Meet Legal Requirements:</i>	
as being Olive Oil.....	67 samples.
as declaring cotton seed oil.....	14 "
<i>Doubtful</i> , as containing the word "coton" in small type.....	35 "
<i>Adulterated as containing</i> cotton seed oil without declaration.....	43 "
Total.....	159 samples

I would respectfully recommend publication of this report as Bulletin No. 328

I have the honour to be, Sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1915.							
Aug. 11	Salad Oil...	69816	R. M. Sutherland, New Glasgow.	3 bots.	1 50	France Conserves Co., Paris, France.	R. McGregor & Sons, New Glasgow.
" 13	" ...	69817	James McArthur .....	3 "	1 20	E. & A. Jonas, Hanart Anseri, Nordet, Bruxelles.	Henri Jonas, Montreal.
" 13	" ...	69818	C. Grant, New Glasgow..	3 "	1 35	H. J. Heinz, Seville, Spain.	Unknown ....

DISTRICT OF CAPE BRETON—

July 20	Salad Oil...	63826	Earl S. Auld, Sydney....	3 bots	1 11	Antoine Guiat, France.	.....
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DISTRICT OF PRINCE EDWARD ISLAND—

July 16	Salad Oil..	60313	J. G. Passmore, Charlottetown.	3 bots.	90	F. B. & A. Artand Freres, Marseilles.	Carvell Bros., Charlottetown.
" 24	" ...	60314	Mathew & McLean, Ltd., Souris.	3 "	75	Lazenby's, London, Eng.	.....
" 24	" ...	60315	" ..	3 "	50	Frasier Thornton & Co., Cookshire, P.Q.	.....

DISTRICT OF NEW BRUNSWICK—

July 14	Salad Oil...	66101	W. A. Simonds, St. John.	3 bots.	90	Crosse & Blackwell, London, Eng.	.....
" 16	" ...	66102	McBeath's Grocery, St. John.	3 "	1 05	A. Gaillard & Fils, Marseilles, France.	.....
" 19	" ...	66103	Baird & Peters, St. John.	3 "	90	Lazenby's, London, Eng.	.....
" 20	" ...	66104	McPherson Bros., St. John.	3 "	1 05	E. & A. Jonas, Hanart, Brussels.	.....
" 20	" ...	66105	W. A. Porter, St. John..	3 "	1 05	Barton Guestier, Bordeaux, France.	.....
" 21	" ...	66106	G. E. Barbour & Co., Ltd., St. John.	3 "	66	.....	A. Gaillard & Fils, Marseilles, France.
" 21	" ...	66107	Puddington, Wetmore, Morrison, Ltd, St. John.	3 "	60	Boy Piere & Fils, Soton, France.	C. A. Munro, agent, St. John.
Aug. 11	" ...	66108	A. V. Cheechi, St. Stephen.	3 "	75	P. Pastene & Co., Montreal.	.....
" 17	" ...	66109	E. G. Hoben, Fredericton.	3 "	75	E. Loubon, Nice....	.....
" 26	" ...	66110	G. A. Robertson, Moncton.	3 "	84	Crosse & Blackwell, London, Eng.	.....

SESSIONAL PAPER No. 14

SALAD OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Refractive In at 15.5° C.	Iodine Number.	Nitric Acid Colour Test.	Halphen Colour Test.	Specific Gravity at 15.5°.		

W. A. PETIPAS, TEMPORARY INSPECTOR.

.....	p. c.	p. c.					
.....	1.4697	.....	Light brown.	.....	0.9168	69816	Olive Oil. Meets legal requirements.
.....	1.4698	.....	"	.....	0.9175	69817	" "
.....	1.4696	.....	Green	.....	0.9163	69818	" "

E. T. McKEEN, INSPECTOR.

.....	1.4714	91.3	Brown	Red	0.9179	63826	Adulterated under Sec. 3 (d) and (g), and Sec. 37.
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WM. A. WEEKS, INSPECTOR.

.....	1.4702	.....	Green	.....	0.9163	60313	Olive Oil. Meets legal requirements.
.....	1.4700	.....	"	.....	0.9160	60314	" "
.....	1.4734	109.9	Brown	Red	0.9222	60315	Cotton seed oil declared. Meets legal requirements.

JOHN C. FERGUSON, INSPECTOR.

.....	1.4699	.....	Green	.....	0.9159	66101	Olive Oil. Meets legal requirements.
.....	1.4704	88.8	Brown	.....	0.9166	66102	" "
.....	1.4702	.....	Green	.....	0.9163	66103	" "
.....	1.4702	.....	"	.....	0.9163	66104	" "
.....	1.4699	.....	"	.....	0.9158	66105	" "
Imported in bulk and bottled by vendor	1.4704	81.2	Brown	.....	0.9168	66106	" "
Bottled by vendor	1.4704	.....	Green	.....	0.9171	66107	" "
.....	1.4700	.....	"	.....	0.9157	66108	" "
.....	1.4729	106.5	Brown	Red	0.9232	66109	Adulterated under Sec. 3 (d) and (g), and Sec. 37.
.....	1.4702	.....	Green	.....	0.9156	66110	Olive Oil. Meets legal requirements.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF QUEBEC PROVINCE—							
1915.							
July 6	Huile a Salade.	3601	A. Audet, Ste. Claire....	3 bots.	30	Ed. Couture, Levis.	
" 7	"	3605	Dorchester Lumber Co...	3 "	27	Standard Imports, Ltd., Montreal.	
" 8	"	3608	D. Towel, St. Leon.....	3 "	30	Dorchester Lumber Co.	
" 9	"	3609	A. H. Hilaire, St. Anges Beauce.	3 "	25	Livernois, Que..	
" 12	"	3612	J. L. Audet, St. Edward.	3 "	25	Dorchester Lumber Co.	
" 13	"	3614	J. A. Cloutier, St. Odilon.	3 "	30	A. B. Dupuis, Quebec.	
" 14	"	3618	P. C. M. Decline, St. Germain.	3 "	25	Carrier & Fils, Levis.	
" 16	"	3622	P. K. Prevots, Ste. Rose.	3 "	30	Dr. Morin, Quebec.	
" 17	"	3628	Ganipe, Ste. Prosperé....	3 "	30	Carrier & Fils, Levis.	
" 27	"	3635	T. Dalblain, Ste. Marie...	3 "	25	Dr. Morin, Quebec.	
" 28	"	3636	J. E. Gagne, Scotts...	3 "	30	"	
" 20	Salad Oil.	3586	Michel Lacroix, St. Raphael.	1 chop	50	The "Besser" Oil Co.	
" 22	Huile Table.	3597	Geo. Roy, St. Michel....	3 bots.	75	Roy Pere & Fils, Salon France.	
" 22	"	4405	J. A. Lemieux, St. Michel	3 "	90	Beaumarchand Brand, Nice, France.	
" 22	"	4415	Gervais Carrier, St. Gervais.	1 chop	95	W. Brunet & Cie.	
" 22	"	4419	Alphonse Audet, St. Lazare.	3 bots.	75	Tussier Freres, Province France.	
" 12	Huile a manger.	290	Pierre Simard, St. Jerome	3 "	150	Barton & Guestier, Bordeaux.	
" 12	"	291	Chas. Elie Laflamme, St. Jerome.	3 "	60	L. Chaput, Fils, & Cie.	
" 19	"	302	Damien Hetu, Ste. Agathe des Monts.	3 "	75	H. Ely.....	
" 19	"	303	L. W. Brissette.....	3 "	75	Talbot Frere.....	
" 19	Huile d'Olive.	315	H. Gareau, St. Justin Station.	3 "	30	Hudon & Orsali.	
" 19	"	320	F. X. Asselin, St. Faustin	3 "	45	" "	
Sept. 14	Huile a manger.	323	E. St. Maurice, St. Eustache C. des Deux Montagnes.	3 "	30	" "	
" 14	"	327	Belair & Paquette, St. Eustache Co., des Deux Montagnes.	3 "	75	H. J. Heinz, Pittsburg.	
" 14	"	329	E. H. Champagne, St. Eustache Co., des Deux Montagnes.	3 "	54	Crosse & Blackwell..	
July 16	Huile a Salade.	2772	Georges Roy, Berthier...	3 bots.	45	E. Lonbon, Nice....	
" 21	"	2787	F. B. C. Toudreau, Montmagny.	3 "	30	J. B. Reneaud, Quebec.	
" 28	"	2796	Nap. Fournier, St. Paul, Montmagny.	3 "	30	Turcot Frere....	
" 30	"	2800	Emile Dube, Montmagny.	3 "	30	E. Lonbon & Cie....	

SESSIONAL PAPER No. 14

## SA LAD OIL.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.					No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Refractive Index at 15.5°C.	Iodine Number.	Nitric Acid Colour Test.	Halphen Colour Test.	Specific Gravity at 15.5°.		
	p. c.	p. c.					
.....	1.4738	.....	Brown....	Red .....	.....	3601	Cotton seed oil declared in small type. Doubtful.
.....	1.4738	.....	" .....	" .....	.....	3605	Cotton seed oil declared. Meets legal requirements
.....	1.4738	.....	" .....	" .....	.....	3608	" .....
.....	1.4738	.....	" .....	" .....	.....	3609	Cotton seed oil declared in small type. Doubtful.
.....	1.4740	.....	" .....	" .....	.....	3612	Cotton seed oil declared. Meets legal requirements
.....	1.4740	.....	" .....	" .....	.....	3614	Cotton seed oil declared in small type. Doubtful.
.....	1.4738	.....	" .....	" .....	.....	3618	" .....
.....	1.4738	.....	" .....	" .....	.....	3622	" .....
.....	1.4738	.....	" .....	" .....	.....	3628	" .....
.....	1.4738	.....	" .....	" .....	.....	3635	" .....
.....	1.4740	.....	" .....	" .....	.....	3636	" .....
.....	1.4737	107	" .....	" .....	.....	3586	Adulterated under sec. 3, (d) and (g), and sec. 37.
.....	1.4707	.....	Straw Yellow.	.....	.....	3597	Olive Oil. Meets legal requirements.
.....	1.4703	.....	Green .....	.....	.....	4405	" .....
.....	1.4706	.....	" .....	.....	.....	4415	" .....
.....	1.4708	.....	" .....	.....	.....	4419	" .....
.....	1.4706	.....	" .....	.....	.....	280	" .....
.....	1.4698	.....	Straw Yellow.	.....	.....	24	" .....
.....	1.4709	.....	" .....	.....	.....	302	" .....
.....	1.4708	.....	" .....	.....	.....	303	" .....
.....	1.4773	.....	Brown.	Red .....	.....	315	Cotton seed oil declared in small type. Doubtful.
.....	1.4750	.....	" .....	" .....	.....	320	" .....
.....	1.4738	109	" .....	" .....	.....	325	Adulterated under sec. 3, (d) and (g), and sec. 37.
.....	1.4698	.....	Green .....	.....	.....	327	Olive Oil. Meets legal requirements.
.....	1.4703	.....	" .....	.....	.....	329	" .....
Coton	1.4738	.....	Brown.	Red .....	.....	2772	Cotton seed oil declared in small type. Doubtful.
.....	1.4738	.....	" .....	" .....	.....	2787	" .....
.....	1.4738	.....	" .....	" .....	.....	2796	" .....
Coton	1.4763	.....	" .....	.....	.....	2799	" .....

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF THREE RIVERS.—

1915.								
July	9	Salad Oil...	69134 Monahan Bros., St. Lin..	3 bots.	30	.....	Chaput & Son, Montreal.	
"	12	" ...	69135 Armand Amirault, L'Epiphanie.	3 "	30	Chem. Co., Hervey, St. Basile du Portf.	.....	
"	26	" ..	69165 Alphonse Goulet, St. Thomas.	3 "	30	.....	Jos. Desfresne, Joliette.	
"	27	" ..	69166 Giroux & Bellefeuille, Three Rivers.	3 "	75	St. Etienne Boulli, France.	Laporte Martin, Montreal.	
"	28	" ...	69169 O. Carignan Cie, Three Rivers.	3 "	90	Barton Guestier, France.	"	
"	31	" ...	69174 Joseph Racette, L'Epi- phanie.	3 "	30	E. Loubon Cie, Nice.	.....	
"	31	" ...	69175 Anna Laviolette, L'Epi- phanie.	3 "	30	" " ..	"	
Aug.	2	" ...	69177 Edmond Bourgre, L'Epi- phanie.	3 "	30	" " ..	Jos. Desfresne, Joliette.	
"	3	" ...	69178 E. Laurion, L'Epiphanie.	3 "	30	" " ..	Hudon & Orsali, Montreal.	
"	3	" ...	69180 L. Provost, L'Epiphanie.	3 "	30	.....	Hervey Chem. Co., St. Basile, Portneuf.	
"	4	" ...	69181 Dame P. A. Guibeault, St. Norbert.	3 "	30	E. Loubon & Cie, Nice.	J. Desfresne & Chevalier, Pon- liot, Joliette.	
"	15	Huile a Manger.	69182 C. Barrette, Joliette. ....	3 "	90	Barton Questier, Bor- deaux.	Laporte Martin, Montreal.	

DISTRICT OF EASTERN TOWNSHIPS.—

Aug.	11	Salad Oil ..	63070 S. & W. Fortier, Sher- brooke.	3 bots.	38	.....	.....
"	12	" ...	63071 D. S. Bachand, Coaticook.	3 "	25	.....	.....
"	17	" ...	63072 Mercure & Frere, Granby.	3 "	30	Fraser Thornton Co., Coaticook.	.....
"	18	" ...	63073 N. Hamel, Magog. ....	3 "	30	.....	.....
"	18	" ...	63074 A. Provencher, Windsor Mills.	3 "	30	.....	.....
"	24	" ...	63075 J. O. Gauthier, Drum- mondville.	3 "	30	Chance & Cie, Mont- real.	.....



SESSIONAL PAPER No. 14

SALAD OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Refractive Index at 15.5° C.	Iodine Number.	Nitric Acid Colour Test.	Halphen Colour Test.	Specific Gravity at 15.5°.		

DR. V. P. LAVALLEE, INSPECTOR.

	p. c.	p. c.				
.....	1.4740	.....	Brown.	Red.	.....	69134 Cotton seed oil declared in small type. Doubtful.
.....	1.4738	106	"	"	.....	69135 Adulterated, under Sec. 3, (d) & (g) and Sec. 37.
.....	1.4736	.....	"	"	.....	69165 Adulterated under Sec. 3 (d) & (g). A sticker with words "Quality guaranteed" covers the word <i>Cotton</i> on the label.
.....	1.4707	.....	Green	.....	.....	69166 Olive oil. Meets legal requirements.
.....	1.4705	.....	"	.....	.....	69169
.....	1.4740	105	Brown.	Red	.....	69174 Adulterated under Sec. 3 (d) & (g) and Sec. 37.
.....	1.4738	106	"	"	.....	69175
.....	1.4745	.....	"	"	.....	69177 Cotton seed oil declared in small type. Doubtful.
.....	1.4739	.....	"	"	.....	69178
.....	1.4738	.....	"	"	.....	69180 Cotton seed oil declared. Meets legal requirements.
.....	1.4739	.....	"	"	.....	69181 Cotton seed oil declared in small type. Doubtful.
.....	1.4702	.....	Green	.....	.....	69182 Olive oil. Meets legal requirements.

J. J. COSTIGAN, ACTING INSPECTOR

.....	1.4738	.....	Brown.	Red	.....	69670 Cotton seed oil declared in small type. Doubtful.
.....	1.4738	.....	"	"	.....	69671
The word Cotton is stencilled on label, and the words "Pure Salad Oil" printed.	1.4738	.....	"	"	.....	69672
.....	1.4738	.....	"	"	.....	69673
.....	1.4738	.....	"	"	.....	69674
.....	1.4740	.....	"	"	.....	69675

Date of Collection.	Nature of Sample.	No of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF MONTREAL—

1915.							
Aug. 26	Salad Oil...	67406	A. Silverstone, 640 St. Catherine st., W. Montreal.	3 bots.	45	.....	P. Adelstein....
" 26	" ..	67407	H. Russell, 847 St. Catherine st., W. Montreal.	3 "	45	Cross & Blackwell...	.....
" 26	" ..	67408	W. J. Brown, 888 St. Catherine st., Montreal.	3 "	75	.....	W. G. Patrick..
" 26	" ..	67409	Warren Henderson, 1017 St. Catherine st., W. Montreal.	3 "	30	.....	Hudon Hebert..
Sept. 1	" ..	67410	Prince Arthur Liquor Grocery, 20 Prince Arthur st., E. Montreal.	3 "	42	.....	Joseph Edelberg
" 1	" ..	67411	A. Vallaincourt, 45 Prince Arthur st., E. Montreal.	3 "	75	.....	Hudon & Orsali.
" 1	" ..	67412	S. Dever, & Son, Prince Arthur & Colonial ave., Montreal.	3 "	85	.....	Laporte & Martin.
" 1	" ..	67413	J. Gariopy, 101 Prince Arthur st., E. Montreal.	3 "	30	.....	Hudon & Orsali.
" 1	" ..	67414	M. Caplan, 221 Colonial ave., Montreal.	3 "	42	.....	Unknown.....
" 1	" ..	67415	N. Goldenzeig, 1024 St. Lawrence Boul, Montreal.	3 "	24	.....	P. Adelstein....

## DISTRICT OF VALLEYFIELD—

July 15	Salad Oil...	51370	Victor Gregoire, St. Johns P. Q.	3 bots.	30	.....	Hudon Hebert & Cie Ltd.
" 15	" ..	51371	M. A. Coutois, St. Johns P. Q.	3 "	30	.....	.....
" 15	" ..	51372	Joseph Chartier, St. Johns P. Q.	3 "	30	.....	.....
" 20	" ..	51373	W. Plante, Valleyfield.	3 "	30	.....	.....
" 20	" ..	51374	E. Beauchamp, St. Lambert.	3 "	30	.....	.....
" 22	" ..	51375	J. Miron, Hawkesbury.	3 "	30	.....	.....
Aug. 18	" ..	51376	J. L. Marleau, St. Telephore, P. Q.	3 "	30	.....	L. Chaput Fils & Cie.
" 18	" ..	51377	T. S. Montgomery, Dalhousie Station, P. Q.	3 "	30	.....	T. W. Chamberlain Co.
" 21	" ..	51378	Gerrier & Caza, St. Anicet, P. Q.	3 "	30	.....	L. Chaput Fils & Cie.
" 21	" ..	51379	E. Dixon, Port Levis, P. Q.	3 "	30	.....	Unknown....

SESSIONAL PAPER No. 14

SALAD OIL.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.					No. of Sample.	Remarks, and opinion of the Chief Analyst.
	Refractive Index at 15.5° C.	Iodine Number.	Nitric Acid Colour Test.	Halphen Colour Test.	Specific Gravity at 15.5°.		

D. J. KEARNEY, INSPECTOR.

	p. c.	p. c.				
.....	1-4735	.....	Brown	.....	.....	67406 Cotton seed oil declared in small type. Doubtful.
.....	1-4699	.....	Green	.....	.....	67407 Olive oil meets legal requirements.
.....	1-4698	.....	"	.....	.....	67408 " " "
.....	1-4731	.....	Brown	.....	.....	67409 Cotton seed oil declared in small type. Doubtful.
.....	1-4736	.....	"	.....	.....	67410 Cotton seed oil declared. Meets legal requirements.
.....	1-4698	.....	Green	.....	.....	67411 Olive Oil. Meets legal requirements.
.....	1-4706	.....	"	.....	.....	67412 " " "
.....	1-4771	83.5	Brown	Red	.....	67413 Cotton seed oil declared in small type. Doubtful.
.....	1-4733	.....	"	.....	.....	67414 Cotton seed oil declared. Meets legal requirements.
.....	1-4733	.....	"	.....	.....	67415 Cotton seed oil declared in small type. Doubtful.

D. J. KEARNEY and J. J. COSTIGAN, ACTING INSPECTORS.

.....	1-4744	.....	Brown	Red	.....	51370 Cotton seed oil declared in small type. Doubtful.
.....	1-4738	.....	"	"	.....	51371
.....	1-4738	107	"	"	.....	51372 Adulterated under Sec. 3 (f and g), and Sec. 37.
.....	1-4738	.....	"	"	.....	51373 Cotton seed oil declared in small type. Doubtful.
.....	1-4738	.....	"	"	.....	51374
.....	1-4738	.....	"	"	.....	51375 Adulterated under Sec. 3 (f and g), and Sec. 37.
.....	1-4740	.....	"	"	.....	51376 Cotton seed oil declared in small type. Doubtful.
.....	1-4740	105	"	"	.....	51377 Adulterated under Sec. 2 (f and g), and Sec. 37.
.....	1-4740	.....	"	"	.....	51378 Cotton seed oil declared in small type. Doubtful.
.....	1-4740	.....	"	"	.....	.....

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF OTTAWA—

1915.							
July 17	Salad Oil. . .	51686	W. C. Johnston, Brockville.	3 bots.	25	E. Loubon, Nice ..	T. W. Chamberlin & Co., Prescott.
" 17	" ..	51687	Thos. Nappy, Brockville.	3 "	45	" " .....	H. I. Jonas, Montreal.
" 17	" ..	51688	T. H. Clifford, Brockville.	3 "	30	" " .....	Gilmour & Co., Brockville.
" 24	" ..	51689	R. Runions, Cornwall....	3 "	30	" " .....	.....
" 31	" ..	51690	E. F. Budd, Pembroke....	3 "	75	Gorman Eckert & Co. Ltd., London, Ont.	Mfrs. ....
" 12	" ..	63686	R. A. Murdock, Milleroche.	3 "	30	Standard Imports Co., Montreal.	.....

DISTRICT OF KINGSTON—

July 29	Salad Oil. . .	70201	N. C. Polson & Co., Kingston.	3 bots.	30	Vendors.....	.....
Aug. 2	" ..	70202	The Belleville Pharmacy, Belleville.	3 "	45	.....	Lynan, Montreal.
" 2	" ..	70203	D. M. Waters, Belleville.	3 "	50	.....	Lynan.....
" 2	" ..	70204	A. L. Green, Belleville....	3 "	45	.....	Drug Trading Co., Toronto.
" 3	" ..	70205	O. G. Johns, Cobourg....	3 "	45	.....	.....
" 3	" ..	70206	W. H. Semples, Cobourg1	3 "	25	.....	Drug Trading Co., Toronto.
" 3	" ..	70207	A. J. Gould, Cobourg....	3 "	40	.....	N. C. Polson Co., Kingston.
" 3	" ..	70208	T. Geo. Watson, Port Hope.	3 "	45	.....	Nat. Drug Co., Toronto.
" 3	" ..	70209	Nugent Drug Co., Peterborough.	3 "	30	.....	Drug Trading Co., Toronto.
" 3	" ..	70210	The Douros Co., Peterborough.	3 "	40	.....	Armstrong & Pafford, Toronto.

DISTRICT OF TORONTO—

Aug. 26	Salad Oil. . .	69922	J. D. Cassie, 3203 Yonge St., Toronto.	3 bots.	30	The Carter Drug Co., Toronto.	.....
" 26	" ..	69923	A. B. Cork, 2611 Yonge St., Toronto.	3 "	75	Berniers & Cie., Malines.	Medland Bros., Toronto.
" 26	" ..	69924	J. J. Coyle, 1867 Yonge St., Toronto.	3 "	30	The Carter Drug Co., Toronto.	.....
" 8	" ..	70094	The Loblaw Stores, 1388 Bathurst St., Toronto.	3 "	30	.....	The Carter Drug Co., Toronto.
" 11	" ..	70095	J. C. Sharp, 1592 Danforth Ave., Toronto	3 "	30	.....	" "

SESSIONAL PAPER No. 14

SALAD OIL

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Refractive Index at 15.5° C.	Iodine Number.	Nitric Acid Colour Test.	Halphen Colour Test.	Specific Gravity at 15.5°.		

J. A. RICKEY, INSPECTOR.

	p.c.	p.c.					
.....	1.4720	112	Brown	Red	.....	51686	Adulterated under sec. 3 (d) and (g) and sec. 37.
.....	1.4738	102	"	"	.....	51687	"
.....	1.4730	106	"	Deep red.	.....	51688	"
.....	1.4728	106	"	Red	.....	51689	"
Labelled Pure Salad Oil.	1.4740	105	"	"	.....	51690	"
Labelled Huile Douce A Salade Supérieure Loubon, Quality Guaranteed.	1.4738	.....	"	"	.....	63686	Adulterated under sec. 3 (d) and (g) A sticker with the words Quality Guaranteed covers the word <i>Olton</i> on the label.

JAMES. HOGAN, INSPECTOR.

.....	1.4694	.....	Green	.....	.....	70201	Olive oil. Meets legal requirements.
.....	1.4728	108	Brown	Red	.....	70202	Adulterated under sec. 3 (d) and (g) and sec. 37.
.....	1.4711	93	Very slight brown.	Slight red.	.....	70203	Olive oil. Meets legal requirements.
.....	1.4690	.....	Green	.....	.....	70204	"
.....	1.4728	106	Brown.	Red.	.....	70205	Adulterated under sec. 3 (d) and (g) and sec. 37.
.....	1.4728	105	"	"	.....	7020	"
.....	1.4738	115	"	"	.....	70207	"
.....	1.4700	.....	Green	.....	.....	70208	Olive oil. Meets legal requirements.
.....	1.4728	102	Brown.	Red	.....	70209	Adulterated under sec. 3 (d) and (g) and sec. 37.
.....	1.4728	105	"	"	.....	70210	"

H. J. DAGER, INSPECTOR.

Labelled Pure Salad Oil.	1.4740	108	Brown	Red	.....	69922	Adulterated under sec. 3 (d) and (g) and sec. 37.
Labelled Extra Choice Acme Imperial Table Oil.	1.4714	.....	Brownish green.	.....	.....	69923	Olive oil. Meets legal requirements.
Labelled Pure Salad Oil.	1.4740	108	Brown	Red	.....	69924	Adulterated under sec. 3 (d) and (g) and sec. 37.
"	1.4740	111	"	"	.....	70001	"
"	1.4740	110	"	"	.....	70002	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF TORONTO—

1915.							
Aug. 17	Salad Oil...	70096	A. Ferguson, 2070 Queen St., East Toronto.	3 bots.	60	F. Lazenby & Sons, Ltd., London, Eng.	.....
" 20	" ..	70097	Clairo Bros., 968 Queen St., East Toronto.	3 "	75	.....	Unknown .....
" 20	" ...	70098	Mrs. A. Burbidge 894 Queen St., East Toronto.	3 "	60	L. A. Price, Nice, Bordeaux, France,	.....
" 23	" ...	70099	Mary Watson, 49 Davenport Rd., Toronto.	3 "	50	Carter Drug Co., Toronto.	.....

DISTRICT OF HAMILTON—

July 21	Salad Oil...	70001	J. Becker, 101 Geneva Street, St. Catharines.	3 bots.	30	I. X. L. Spice and Coffee Mills, Ltd., London.	.....
" 21	" ...	70002	Bentham & Bradley, St. Paul and Geneva Sts. St. Catharines.	3 "	30	.....	Unknown .....
" 23	" ...	70003	O. L. Kirtner, 10 Centre St., Niagara Falls.	3 "	30	Gorman Eckert, London.	.....
" 23	" ...	70004	W. H. Martin, 810 Ferry Street, Niagara Falls, South.	3 "	30	.....	Unknown .....
Aug. 5	" ...	70005	Win. Keating, 337 York Street, Hamilton.	3 "	30	.....	Lumsden Co., Hamilton.
" 5	" ...	70006	C. Thomas, 300 King St., West, Hamilton.	3 "	30	.....	I. X. L. Spice & Coffee Mills, London.

DISTRICT OF WINDSOR—

Aug. 4	Salad Oil...	54641	R. W. Jones, London ..	3 bots.	30	I. X. L. Spice Co., London.	.....
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DISTRICT OF MANITOBA—

Sept. 1	Salad Oil...	61380	Winnipeg Drug Co., 407 407 Portage Ave. Winnipeg.	3 bots.	60	.....	Nat. Drug Co...
" 2	" ..	61381	Gordon Mitchell Co., Portage Ave. Winnipeg.	3 "	30	Vendors .....	.....
" 2	" ...	61382	Mercy F. Braun, 462 Portage Ave., Winnipeg.	3 "	60	Nat. Drug Co., Winnipeg.	.....
" 2	" ...	61383	Ultra Druggists, 725 Main St., Winnipeg.	3 "	100	.....	Societe Legeran Nice, France.
" 2	" ...	61384	Norquay Pharmacy, 876 Main St., Winnipeg.	3 "	45	.....	McClure & Langley Co., Winnipeg.
" 2	" ...	61385	T. Eaton Co., Winnipeg..	3 "	60	Vendors .....	.....

## SESSIONAL PAPER No. 14

## SALAD OIL.

Inspector's Report (Is not an expression of opinion).	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Refractive Index at 15.5° C.	Iodine Number.	Nitric Acid Test.	Halphen Test.	Specific Gravity at 20° C.		

*Concluded.*

	p.c.	p.c.					
Labelled Finest Luc- cia Oil.	1.4708	.....	Green .....	.....	.....	70096	Olive Oil. Meets legal re- quirements.
.....	1.4708	.....	" .....	.....	.....	70097	" .....
Labelled Finest Cream Pure Luccia Olive Oil.	1.4704	.....	" .....	.....	.....	70098	" .....
Labelled, Pure Salad Oil.	1.4740	108.0	Brown....	Red .....	.....	70099	Adulterated under Sec. 3, (d) and (g) and Sec. 37.

## H. J. DAGER, ACTING INSPECTOR.

Labelled Pure Salad Oil.	1.4728	105.0	Brown....	Red .....	.....	70001	Adulterated under Sec. 3 (d) and (g) and Sec. 37.
Labelled Huile à Salade, Extra, E. Lubon, Nice.	1.4728	105.0	" .....	" .....	.....	70002	" .....
Labelled Pure Salad Oil.	1.4728	105.0	" .....	Deep red..	.....	70003	" .....
Labelled, Huile à Salade, Extra, E. Lubon, Nice.	1.4728	104.0	" .....	Red .....	.....	70004	" .....
Labelled R. U. Um- berto Brand, Pure Italian Olive Oil.	1.4705	.....	Green .....	.....	.....	70005	Olive Oil. Meets legal re- quirements.
Labelled, Pure Salad Oil.	1.4728	106.0	Brown....	Red .....	.....	70006	Adulterated under Sec. 3 (d) and (g) and Sec. 37.

## JOHN TALBOT, INSPECTOR.

Labelled, Pure Salad Oil.	1.4730	108.0	Brown ..	Red .....	.....	54641	Adulterated under Sec. 3, (d) and (g) and Sec. 37.
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## J. B. COSGROVE, TEMPORARY INSPECTOR.

.....	1.4722	112.6	Brown ..	Red .....	0.9212	61380	Adulterated under Sec. 3 (d) and (g) and Sec. 37.
.....	1.4720	114.4	" .....	" .....	0.9206	61381	" .....
.....	1.4724	110.0	" .....	" .....	0.9204	61382	" .....
.....	1.4680	.....	Green ..	Clear .....	0.9135	61383	Olive Oil. Meets legal re- quirements.
.....	1.4682	.....	" .....	" .....	0.9140	61384	" .....
.....	1.4721	.....	Brown ..	Red .....	0.9200	61385	Custom See Oil. Declared Meets legal requirements.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MANITOBA—

1915.							
Sept.	3	Salad Oil...	61386	J. B. Coyle, 1116 Main St., Winnipeg.	3 bots.	75	Glazer Kohn Co., Chicago.
"	3	"	61387	A. J. Kemball, 785 Main St., Winnipeg.	3 "	45	Crosse & Blackwell Co., England.
"	3	"	61388	J. W. Wright, 820 St Mathews Ave., Winnipeg.	3 "	75	Pompiean Co., Baltimore.
"	3	"	61395	Mineons & Wilson Co., 571 Ellice Ave., Winnipeg.	3 "	75	Gaillard & Fils, Winnipeg.

DISTRICT OF ALBERTA—

Aug.	11	Salad Oil...	52206	Hudson's Bay Co., Edmonton.	3 bots.	45	Biet Fils, Aine Salon, France.
"	11	"	52207	"	3 "	90	Mfd. in Bordeaux...
"	11	"	52208	"	3 "	90	L. A. Price & Co., Bordeaux, France.
"	13	"	52209	A. Urquhart & Co., Ltd., Lacombe.	3 "	90	Crosse & Blackwell, London, Eng.
"	16	"	52210	The John Irwin Co., Ltd., Calgary.	3 "	75	John Vitucci Co....
"	16	"	52211	"	3 "	75	H. J. Heinz Co., Pittsburg, Pa.
"	19	"	52212	Geo. I. Wood, Calgary...	3 "	1 05	John Vitucci Co., Italy.
"	19	"	52213	Hudson's Bay Co., Calgary	3 "	1 05	Biet Fils, Aine Salon, France.
"	19	"	52214	"	3 "	1 05	L. A. Price & Co., Bordeaux, France.
"	19	"	52215	"	1 "	50	E. Lazenby & Sons, London, Eng.

DISTRICT OF ROCKY MOUNTAINS—

July	20	Salad Oil...	61840	Trail Grocery Co., Trail..	3 jars	1 60	.....
"	20	"	61848	T. Lauriente & Son, Calgary.	3 bots.	1 50	..... The W. H. Malkin Co., Vasse.
"	20	"	61852	Hunter Bros., Rossland..	3 "	90	A. Durand, Bordeaux



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SALAD OIL.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.					No. of Sample.	Remarks and opinion of the Chief Analyst.
	Refractive Index at 15.5° C.	Iodine number.	Nitric Acid Colour Test.	Halphen Colour Test.	Specific Gravity at 20° C.		

Concluded.

.....	1 4721	114.7	Brown ...	Red .....	0.9200	61386	Cotton Seed Oil declared. Meets legal requirements.
.....	1 4680	.....	Green ...	Clear.....	0.9137	61387	Olive Oil. Meets legal re- quirements.
.....	1 4682	.....	Green ...	Clear ...	0.9137	61388	Olive Oil. Meets legal requirements.
.....	1 4681	.....	" .....	" .....	0.9141	61395	

A. W. R. MARKLEY, INSPECTOR.

La Perle Brand .....	1 4711	.....	Green ...	Yellow..	(At 15.5°) 0.9160	52206	Olive Oil. Meets legal requirements
Pinard Brand Olive Oil.	1 4712	.....	" .....	" .....	0.9160	52207	" .....
Virgin Oil Gaston Monde Brand.	1 4709	.....	" .....	" .....	0.9158	52208	" .....
Pure Lucia Oil....	1 4710	.....	" .....	" .....	0.9155	52209	" .....
Vittuccia Brand Vir- gin Olive Oil.	1 4710	.....	" .....	" .....	0.9158	52210	" .....
Heinz Pure Olive Oil. Bot. 158.	1 4711	.....	" .....	" .....	0.9159	52211	" .....
Vituccia Brand Vir- gin Olive Oil.	1 4710	.....	" .....	" .....	0.9158	52212	" .....
La Perle Pure Olive Oil.	1 4711	.....	" .....	" .....	0.9160	52213	" .....
Gaston Monde Brand	1 4708	.....	" .....	" .....	0.9160	52214	" .....
Elizabeth Lazenby Finest Lucia Oil	1 4708	.....	" .....	" .....	0.9161	52215	" .....

THOS. PARKER, INSPECTOR.

Columbic .....	1 4749	112.7	Brown ...	Crimson..	0.9228	61840	Adulterated under Nos. 3 (1) and (2), and No. 37.
.....	1 4750	110.4	" .....	Red .....	0.9216	61848	" .....
.....	1 4749	111.2	" .....	Crimson	0.9230	61852	" .....

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF VANCOUVER—							
1915.							
July 15	Salad Oil...	55300	Dickie's Grocery Ltd., 660 Hornby St., Vancouver.	3 bots.	60	Holbrook & Co., London, Eng	
" 16	"	55301	W. H. Edgett Co., Ltd., 118 Hastings St., Vancouver.	3 tins.	45	John Vittucci Co...	
" 16	"	55302	Woodward Dept. Stores, Vancouver.	3 bots.	75	Kelly, Douglas & Co., Ltd., Vancouver.	
" 16	"	55303	" " "	3 "	75	W. K. Houston & Co., Victoria.	
" 16	"	55304	Hudson's Bay Co., Vancouver.	3 "	60	Biet Fils, Amé Salon en Provence, France.	
" 21	"	55305	S. Goranson, 328 Hastings St., Vancouver.	3 "	75	.....	Kelly, Douglas & Co., Ltd., Vancouver.
" 22	"	55306	Gruchy & Carlaw, 5th Ave. and Granville St., Vancouver	3 "	120	H. J. Heinz Co., Leamington, Ont.	
" 23	"	55307	Merilees Cash Grocery, 2640 Main St., Vancouver.	3 "	75	McLately Mfg. Co., Vancouver.	
" 23	"	55308	" " "	3 "	75	A. Magnano Co. ....	
" 23	"	55309	Calladine's Grocery, 1588 Commercial Drive, Vancouver.	3 "	75	Libby, McNeill & Libby, Toronto.	
DISTRICT OF VICTORIA—							
July 21	Salad Oil...	66760	Windsor Grocery Co., 817 Govt. St., Victoria.	3 bots.	90	.....	John Vittucci Co., Vancouver.
" 21	"	66761	West End Grocery Co., 1002 Govt. St., Victoria.	3 "	120	A. Gillard & Fils, Marseilles, France.	
" 21	"	66766	Dixi H. Ross & Co., 1317 Govt. St., Victoria.	3 pts.	75	Armour & Co., Seattle, Wash.	
" 23	"	66769	Erskine & Co., 861 Johnson St., Victoria.	3 bots.	75	L. Noel & Sons, London, Eng.	
" 23	"	66772	Henry W. Driver, 856 Yates St., Victoria.	3 "	75	.....	Wilson Bros., Victoria.
" 27	"	66774	Linden Grocery, Linden and May Sts., Victoria.	3 "	45	Seattle & Puget Sound Pkg. Co., Seattle.	
" 28	"	66776	Gladstone Grocery, Gladstone and Fernwood, Victoria.	3 "	75	J. C. Kubias, Redland, Cal.	
" 28	"	66778	H. O. Kirkham & Co., Ltd., 1109 Govt. St., Victoria.	3 "	75	Kelly Confection Co., Vancouver.	
" 30	"	66784	Acton Bros., 1317 Douglas St., Victoria.	3 "	45	W. K. Houston & Co., Victoria.	
Sept. 20	"	66787	H. Schroeder, 300 Menzies St., Victoria.	3 "	45	Seattle & Puget Sound Pkg. Co., Seattle.	

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## SALAD OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Refractive Index at 15.5° C.	Iodine Number.	Nitric Acid Colour Test.	Halphen Colour Test.	Specific Gravity at 15.5° C.		
E. J. MORGAN, INSPECTOR.							
Pure Olive Oil .....	1.4711	...	Green	Yellow	0.9161	55300	Olive Oil. Meets legal requirements.
Vittucci Brand Virgin Olive Oil.	1.4711	.....	"	.....	0.9162	55301	"
Labelled Columbia Brand Salad Oil.	1.4748	111.4	Brown	Red	0.9227	55302	Adulterated under Sec. 3 (d) and (g), and Sec. 37.
Labelled Finest Salad Oil.	1.4748	111.2	"	.....	0.9224	55303	"
Warranted Pure ....	1.4710	.....	Green	Yellow	0.9161	55304	Olive Oil. Meets legal requirements.
Angeline Brand. Guaranteed pure.	1.4712	.....	"	.....	0.9162	55305	"
Heinz Pure Olive Oil.	1.4711	.....	"	.....	0.9163	55306	"
Labelled Salad Oil. Vendor said it was cotton seed oil.	1.4749	111.7	Brown	Red	0.9222	55307	Adulterated under Sec. 3 (d) and (g), and Sec. 37.
Napoleon Brand Olive Oil.	1.4710	.....	Green	Yellow	0.9160	55308	Olive Oil. Meets legal requirements.
Libby's Pure Olive Oil.	1.4712	.....	"	.....	0.9157	55309	"
D. O'SULLIVAN, INSPECTOR.							
Virgin Olive Oil ...	1.4710	.....	Green	Yellow	0.9162	66760	Olive Oil. Meets legal requirements.
Olive Oil .....	1.4711	.....	"	.....	0.9162	66764	"
Taken from 50 gallon barrel marked sterilized Cotton Seed Oil.	1.4748	109.9	Brown	Red	0.9218	66766	Cotton Seed Oil declared. Meets legal requirements.
Finest Lucea Oil.	1.4709	.....	Green	Yellow	0.9162	66769	Olive Oil. Meets legal requirements.
Beaumarchant Brand.	1.4711	.....	"	.....	0.9163	66772	"
.....	1.4741	108.7	Brown	Pink	0.9216	66774	Cotton Seed Oil declared. Meets legal requirements.
Bohemian Club Brand.	1.4716	.....	Green	Yellow	0.9173	66776	Olive Oil. Meets legal requirements.
Reception Brand. (Cotton Seed.)	1.4747	110.2	Brown	Red	0.9219	66778	Cotton Seed Oil declared. Meets legal requirements.
Finest Salad Oil (Cotton Seed.)	1.4748	111.2	"	.....	0.9220	66781	"
Extra Quality Cotton Seed Oil.	1.4741	108.9	"	Pink	0.9219	66787	"

## APPENDIX T.

## BULLETIN No. 329—POT AND PEARL BARLEY.

OTTAWA, January 6, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue,

SIR,—

I beg to hand you a report of work done upon one hundred and ninety one samples, purchased as Pot Barley (*Orge Mondé*) or as Pearl Barley (*Orge Perlé*) throughout Canada in May, June and July of 1915.

One hundred and eight of these samples are sold as Pot Barley and eighty three as Pearl Barley.

From the *Encyclopoedia Britannica*, Eleventh Edition, under article "Barley", I find the following:—

"Barley is now chiefly cultivated for Malting, to prepare spirits and beer, but it is also largely employed in domestic cookery. For the latter purpose, the hard somewhat flinty grains are preferable, and they are prepared by grinding off the outer cuticle, which forms "pot barley". When the attrition is carried further, so that the grain is reduced to small round pellets, it is termed "pearl barley."

Webster's Dictionary (1911) defines Pot Barley as *Hulled Barley*; and Pearl Barley, as "Kernels of barley, ground to the form of small round grains, used in soups, etc."

Church (Foods, etc.) states that 100 pounds of barley yields about 37 pounds of pearl barley.

Wiley (Foods, etc., p. 217) quotes the weight of 100 Kernels of unhulled barley as 4.83 grammes, equivalent to an average of 20.7 Kernels per gramme.

J. A. Dawson has determined the number of Kernels per gramme for thirteen (13) samples of pot barley and for eight (8) samples of pearl barley. This number varies from 27 to 47, average 39 for pot barley, and from 121 to 140, average 136 for pearl barley. Calculating from these figures, the loss in weight of the Kernel in production of pot barley, is 46 per cent; in production of pearl barley is 84.6 per cent. This is a much greater loss of weight than is indicated by Church's figures (63 per cent).

Nineteen (19) samples, which Mr. Dawson regards as mixtures of pot and pearl barley, vary from 42 to 138 Kernels per gramme, averaging 68 Kernels. Nearly all of these samples are sold as pearl barley; and it is probable that they more truly represent the pearl barley of the market, than the eight specially selected by Mr. Dawson, and above referred to. On this assumption, the loss of weight in manufacture of pearl barley would be 69 per cent of the weight of the Barley Kernel in the raw state.

It appears from the literature of the subject, that it is common practice to use sulphur dioxide to whiten pearl barley, and talc or some similar substance, to give

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brightness and a pearl-like appearance; moistening with a dilute solution of glucose in order to secure adhesion of the talc is also said to be practised. It has been claimed that these additions are made to prevent the growth of micro-organisms upon the grain; but Pluecker and Flebbe (*Z.-Nahr-Genussm.* 1914, 28) have demonstrated that this claim has no foundation in fact. The authors conclude that sulphur and talc are employed primarily to bleach the grain, and to secure uniformity of appearance which permits the use of inferior barley in manufacture.

Liverseege and Hawley (*Journal of the Society of Chemical Industry*, 1915, 203) report upon seventy three (73) samples of English pearl barley, and conclude that there appears to be an increase in the use of mineral facing. The insoluble ash found for sixty seven (67) samples is below 0.22 per cent; while six samples show amounts varying between 0.22 and 0.82 per cent. The authors point out that fifty (50) samples contain less than 0.05 per cent insoluble ash, and that only one of these contained more than 1.10 per cent of total ash. They consider that 0.10 per cent of insoluble ash is a very reasonable allowance, and that samples containing a larger proportion than this should be regarded as adulterated with mineral facing. The total ash should not exceed 1.10 per cent. Talc (soapstone) is the mineral substance generally employed in facing of this sort; and being absolutely indigestible and totally devoid of food value, must be regarded as an adulterant, quite possibly harmful to health.

Rice starch is another article employed in the facing of pearl barley. It cannot be regarded as harmful to health, but undoubtedly must be regarded as an adulterant under Section 3, h, of the Act, being used "to conceal damage, or to make the article appear better or of greater value than it really is." Even the use of barley starch in facing pearl barley must be regarded as adulteration, since the object is mainly to conceal inferiority.

Sixty-four (64) per cent of the samples herein reported as having been sold under the term *Pot Barley*, are found to yield more than 1.10 per cent of total ash; while only twenty-one (21) per cent of those sold as *pearl barley*, yield more than 1.10 per cent of total ash. These figures however, must be interpreted in connection with the above mentioned fact, that many of the samples are doubtfully true to name; in other words, until we are able to distinguish sharply between what is to be regarded as a pot barley, and what as a pearl barley, the commercial nomenclature is too indefinite for purposes of definition.

This report must be regarded mainly as a study of the subject, rather than as furnishing material for departmental action. It may enable us to define Pot Barley and Pearl Barley in such a way as to definitely distinguish these important articles of food; and to establish regulations which shall guide in the interpretation of work done in the future. With exception of eight (8) samples, which are faced with talc, and must be regarded as adulterated under section 3, h, of the Act, I have not felt justified in passing judgment upon the samples now reported.

I would respectfully recommend its publication as Bulletin No. 229.

I have the honour to be,

Sir,

Your Obedient Servant,

A. McGILL,

*Chief Analyst*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NOVA SCOTIA—

1915.							
June 18	Barley (Pot) . .	54031	A. L. Doyle & Co, Halifax.	2 lb. . .	12	Unknown . . . . .	J. B. Shaffner & Co., Halifax.
" 23	" " . .	54032	Wm. Moore, Halifax. . . .	2 " . .	12	" . . . . .	Unknown . . . . .
" 25	" " . .	54033	Corkum & Ritcey, Ltd., Halifax.	2 " . .	10	Tillsonburg Mills Co., Tillsonburg, Ont.	T. H. Taylor & Co., Chatham, Ont.
" 25	" (Pearl). . . .	54034	Wentzell's Ltd., Halifax. . .	2 " . .	12	John McKay, Bowmanville.	Pyke Bros., Halifax.
" 25	" " . .	54035	John Scott & Co., Halifax. .	2 " . .	15	Quaker Oats Co. . . . .	Bauld Bros., Halifax.
" 25	" (Pct) . . . .	54036	Knoche & Nicolle, Halifax.	2 " . .	12	Unknown . . . . .	John Tobin & Co., Halifax.
" 28	" (Pearl). . . .	54037	Allison's Ltd., Halifax. . . .	2 " . .	16	John McKay, Bowmanville.	" "
July 2	" " . .	54038	Turnbull & Co., Digby. . . .	2 " . .	24	Unknown . . . . .	Baird & Peters, St. John.
" 2	" (Pot) . . . .	54039	H. G. Warne, Digby. . . . .	2 " . .	24	" . . . . .	Unknown . . . . .
" 13	" (Pearl). . . .	54040	S. Thomson, Dartmouth. . . .	2 " . .	16	" . . . . .	R. B. Seeton & Co., Halifax.

## DISTRICT OF NOVA SCOTIA—

June 3	Barley (Pot) . .	65843	James Cavanagh, New Glasgow.	2 lb. . .	10	Hayme Mill. Co., Bridgeton, Ont.	R. McGregor & Sons, New Glasgow.
" 3	" " . .	65844	2 Barkers Ltd., New Glasgow.	2 " . .	10	McLeod Mill. Co., Stratford, Ont.	Unknown . . . . .
" 3	" (Pearl). . . .	65845	James McArthur, New Glasgow.	2 " . .	16	Unknown . . . . .	R. B. Seeton, Halifax.
" 3	" (Pot) . . . .	65846	" " . . . .	2 " . .	10	Ogilvie M. Co., Montreal.	. . . . .
" 4	" " . .	65847	A. J. Roop, New Glasgow. . . .	2 " . .	12	Unknown . . . . .	R. McGregor & Sons, New Glasgow.
" 4	" " . .	65848	S. M. Lockhart, New Glasgow.	2 " . .	10	" . . . . .	" "
" 4	" (Pearl). . . .	65849	" " . . . .	2 " . .	16	" . . . . .	R. B. Seeton, Halifax.
" 4	" (Pot) . . . .	65850	R. M. Sutherland, New Glasgow.	2 " . .	10	" . . . . .	R. McGregor & Sons, New Glasgow.
" 4	" " . .	65851	A. A. McDonald, New Glasgow.	2 " . .	10	" . . . . .	" "
" 4	" " . .	65852	D. J. Murray, New Glasgow.	2 " . .	10	" . . . . .	R. B. Seeton, Halifax.

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BARLEY (POT AND PEARL.)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture.	Ash.		Facing.		
		Total.	Insoluble.			

R. J. WAUGH, INSPECTOR.

	p. c.	p. c.	p. c.			
.....	0.99	0.05	.....	.....	.....	54031
.....	1.22	0.06	.....	.....	.....	54032
.....	1.23	0.06	.....	.....	.....	54033
.....	1.28	0.24	Rice and talc.	.....	.....	54034
.....	0.88	0.05	.....	.....	.....	54035
.....	1.36	0.09	.....	.....	.....	54036
.....	0.80	0.06	.....	.....	.....	54037
.....	0.98	0.06	Rice.	.....	.....	54038
.....	1.38	0.07	.....	.....	.....	54039
.....	0.80	0.06	.....	Contains 5% rice grains.	.....	54040

W. A. PETIPAS, TEMPORARY INSPECTOR.

.....	1.46	0.09	.....	.....	.....	65843
.....	1.12	0.07	.....	.....	.....	65844
.....	1.10	0.06	.....	.....	.....	65845
.....	0.82	0.05	.....	.....	.....	65846
.....	1.27	0.09	.....	.....	.....	65847
.....	1.38	0.07	.....	.....	.....	65848
.....	0.78	0.04	.....	.....	.....	65849
.....	1.22	0.11	.....	Contains 3% unmilled barley.	.....	65850
.....	1.26	0.10	.....	.....	.....	65851
.....	1.43	0.09	.....	.....	.....	65852

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Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF PRINCE EDWARD ISLAND—

1915.							
April 30	Barley (Pot)..	60170	John G. Passmore, Charlottetown.	2 lb..	12		J. A. Farquharson, Charlottetown.
May 7	" " ..	60171	E. Toombs, Charlottetown.	2 " ..	12		N. Rattenbury & Co., Charlottetown.
" 7	" (Pearl).	60172	W. W. Walker, Charlottetown.	2 " ..	12		Carvell Bros., Charlottetown.
" 7	" (Pot)..	60173	J. C. Crabbe, St. John...	2 " ..	12		Auld Bros., Charlottetown.
" 8	" " ..	60174	Beer & Goff, Charlottetown.	2 " ..	10		Carvell Bros., Charlottetown.

## DISTRICT OF NEW BRUNSWICK—

May 10	Barley (Pot)..	66066	2 Barkers Ltd., St. John	1 lb..	6	Haynes M. Co., Brigden, Ont.	
" 10	" (Pearl).	66067	Walter Gilbert, St. John.	1 " ..	12		R. H. Cole, St. John.
" 17	" (Pot)..	66068	Baird & Peters, St. John	1 " .	4	John McKay, Bowmanville, Ont.	
" 18	" " ..	66069	G. E. Barbour Co., Ltd., St. John.	1 " ..	5	Can. Cereal Co., Ont.	
" 18	" (Pearl).	66070	" " ..	1 " .	10		S. Hansen & Son, London, Eng.
" 19	" " ..	66071	Puddington, Wetmore & Morrison, St. John.	1 " ..	6		Standard Import Co., Montreal.
" 27	" " ..	66072	B. Beveridge, Andover...	1 " ..	10		John & Scofield, St. John.
June 8	" (Pot)..	66073	W. W. E. Smith, Harvey Station.	1 " ..	7		G. E. Barbour, Ltd., St. John.
" 9	" " ..	66074	H. J. Burton & Co., St. Andrews.	1 " ..	5		H. W. Cole, Ltd., St. John.
" 17	" " ..	66075	Doyle's Ltd., Moncton...	1 " ..	10		Reed Co., Moncton.

## DISTRICT OF QUEBEC CITY—

April 20	Orge (Mondé).	56385	Elz. Turcotte, 74 Desfosés, Quebec.	2 lb..	24	W. Brunette Cie..	Mfr.....
" 20	" " ..	56386	Myrand, Pouliot, Quebec.	2 " ..	30	" ..	" ..
" 20	" " ..	56387	Chs. Riverin, 55 Couronne, Quebec.	2 " ..	30	Jos. Villeneuve, Charlesbourg.	" ..
" 22	" " ..	56388	Arthur Drolet, 714 St. Valier, Quebec.	2 " ..	25	Simmers, Toronto.	" ..
" 22	" " ..	56389	Art. Bedard, 728 St. Valier, Quebec.	2 " ..	20	Jos. Contière, Lor- mière.	" ..
" 23	" " ..	56390	L. D. Marier, 174 Dor- chester, Quebec.	2 " ..	24	Unknown .....	Unknown .....



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BARLEY (POT AND PEARL.)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture.	Ash.		Facing.		
		Total.	Insoluble.			

WM. WEEKS, INSPECTOR.

	p. c.	p. c.	p. c.			
.....		1.32	0.08	.....		60170
.....		1.43	0.11	.....		60171
.....		0.96	0.07	.....		60172
.....		1.44	0.08	.....		60173
.....		1.35	0.09	.....		60174

J. C. FERGUSON, INSPECTOR.

.....		1.18	0.07	.....		60066
.....		0.86	0.04	.....		60067
.....		1.20	0.05	.....		60068
.....		1.18	0.05	.....		60069
.....		0.94	0.05	.....		60070
.....		1.16	0.07	Rice.		60071 Facol with rice
.....		0.92	0.05	.....		60072
.....		1.34	0.07	.....		60073
.....		1.36	0.06	.....		60074
.....		1.19	0.10	.....		60075

F. X. W. E. BELAND, INSPECTOR

.....		2.10	0.06	.....		60081
.....		2.04	0.06	.....		60082
.....		1.81	0.10	.....		60083
.....		1.67	0.05	.....		60084
.....		2.01	0.05	.....		60085
.....		2.29	0.08	.....		60086

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC CITY—

1915.							
April 26	Orge (Perlé) . .	56391	Jos. A. Grenier, 94 St. Jean, Quebec.	2 lb..	16	Dunlop Bros., Glasgow.	Mfr . . . . .
" 27	" (Mondé) . . .	56392	E. Robitaille, 48 Victoria, Quebec.	2 " . .	20	W. Brunette Cie..	" . . . . .
" 27	" " . . . . .	56393	I. Pepin, 142 Massue, Quebec.	2 " . .	20	Unknown . . . . .	Unknown . . . . .
" 28	" " . . . . .	56394	Jos. Boiteau, 27 Sutherland, Quebec.	2 " . .	20	" . . . . .	" . . . . .

DISTRICT OF QUEBEC PROVINCE—

April 28	Barley (Pearl).	276	Charlemagne Taillon, St. Jerome.	2 lb..	10	Ogilvie's, F. M . . . . .	. . . . .
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DISTRICT OF THREE RIVERS—

May 5	Orge (Perlé) . .	67978	A. L. Boucher, Joliette. .	2 lb..	25	. . . . .	Lyman Knox, Montreal.
" 5	" " . . . . .	67979	J. O. Daviault, Berthierville.	2 " . .	12	. . . . .	Laporte, Martin, Montreal.
" 7	" " . . . . .	67980	O. Paquette, Berthierville.	2 " . .	12	. . . . .	Hudon, Hebert, Montreal.
" 7	" " . . . . .	67981	A. L. Caisse, Berthierville.	2 " . .	12	. . . . .	" "
" 15	" " . . . . .	67982	J. A. Jubinville, Joliette.	2 " . .	12	. . . . .	Jos. Desfresnes, Joliette.
" 15	" " . . . . .	67983	C. Barrette, Joliette . . . .	2 " . .	10	. . . . .	" "
" 15	" " . . . . .	67984	William Perrault . . . . .	2 " . .	12	. . . . .	Chevalier & Magnan, Joliette.
" 19	" " . . . . .	60995	Arcade Brault, Ste. Mélanie.	2 " . .	12	. . . . .	" "
" 31	" " . . . . .	69110	O. Carignan Fils, Three Rivers.	2 " . .	16	. . . . .	Chaput Fils, Montreal.
June 1	" " . . . . .	69112	J. A. Boisvert, Joliette . .	2 " . .	12	. . . . .	Chevalier & Pouliot, Joliette.

SESSIONAL PAPER No. 14

BARLEY (POT AND PEARL.)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture.	Ash.		Facing.		
		Total.	Insoluble.			

Concluded.

	p. c.	p. c.	p. c.			
.....		0.86	0.04	.....		56391
.....		2.16	0.08	.....		56392
.....		1.94	0.14	.....		56393
.....		2.44	0.23	.....		56394 Faced with talc. Adul- terated.

N. CADIEUX, TEMPORARY INSPECTOR.

.....						276
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DR. V. P. LAVALLE, INSPECTOR.

.....		0.92	0.03	.....		67978
.....		0.92	0.04	.....		67979
.....		1.17	0.07	.....		67980
.....				.....		67981
.....		1.27	0.07	.....		67982
.....		1.09	0.06	.....		67983
.....		1.10	0.06	.....		67984
.....		0.82	0.04	.....		68085
.....		1.01	0.25	Talc		68110 Faced with talc. Adul- terated.
.....		1.18	0.07	.....		68112

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MONTREAL—

1915.							
April 30	Barley (Pearl).	67181	J. A. Labelle, 1927 Masson St., Rosemount.	2 lb..	16	.....	Unknown .....
" 30	" "	67182	Jos. Mathieu, 373 Fifth Ave., Rosemount.	2 " ..	11	.....	" .....
" 30	" "	67183	Martin & Fils, 1718 Masson St., Rosemount.	2 " ..	15	.....	Hudon, Hebert..
" 30	" "	67184	N. Trudeau, 245 Dandurand St., Rosemount.	2 " ..	14	.....	Unknown .....
" 30	" (Pot)	67185	J. E. Normandeau, 2252 Rosemount Boulevard.	2 " ..	15	.....	Hudon & Orsali.
" 30	" " ..	67186	A. Petit, 2424 Rosemount Boulevard.	2 " ..	10	.....	Hudon, Hebert..
" 30	" (Pearl)	67187	H. Pepin, Cor. Dandurand and 9th Ave., Rosemount.	2 " ..	14	.....	Unknown .....
" 30	" (Pot) ..	67188	Mount Royal Grocery, 1296 Mt. Royal Ave., Montreal.	2 " ..	10	.....	P. Adelstein....
" 30	" " ..	67189	M. Desrosiers, 1340 Messier St., Montreal.	2 " ..	12	.....	Couvette & Sau riol.
" 30	" " ..	67190	W. Hawthorne, 1155 Mt. Royal Ave. E., Montreal.	2 " ..	12	.....	Unknown .....

DISTRICT OF EASTERN TOWNSHIPS—

May 11	Barley (Pot) ..	58156	Herbert Fortier, Sherbrooke.	2 lb..	10	.....	.....
" 11	" " ..	58157	Bernard & Cie, Sherbrooke.	2 " ..	10	.....	.....
" 11	" " ..	58158	Theriault & Leclerc, Sherbrooke.	2 " ..	10	.....	.....
" 11	" " ..	58159	H. Lacroix, Sherbrooke ..	2 " ..	10	.....	.....
" 11	" (Pearl).	58160	Geo. F. Moore, Sherbrooke.	2 " ..	10	.....	.....
" 11	" " ..	58161	J. Audet, Coaticook.....	2 " ..	10	.....	.....
" 12	" " ..	58162	Woodman & McKee, Coaticook.	2 " ..	14	.....	.....
" 12	" (Pot) ..	58163	J. Durand, Coaticook ...	2 " ..	10	.....	.....
" 12	" (Pearl).	58164	Farley & Burroughs, Coaticook.	2 " ..	10	.....	.....
" 12	" (Pot) ..	58165	Gerin & Boulay, Coaticook.	2 " ..	10	.....	.....

SESSIONAL PAPER No. 14

BARLEY (POT AND PEARL.)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture.	Ash.		Facing.		
		Total.	Insoluble.			

D. J. KEARNEY, INSPECTOR.

	p. c.	p. c.	p. c.		
.....	0.80	0.03	.....	.....	67181
.....	0.94	0.04	.....	.....	67182
.....	0.87	0.02	.....	.....	67183
.....	0.86	0.05	.....	.....	67184
.....	1.10	0.05	.....	.....	67185
.....			.....	.....	67186
.....	0.75	0.02	.....	.....	67187
.....	1.34	0.08	.....	.....	67188
.....	0.93	0.05	.....	.....	67189
.....			.....	.....	67190

J. J. COSTIGAN, ACTING INSPECTOR.

.....	1.08	0.04	.....	.....	58156
.....	1.28	0.08	.....	.....	58157
.....	1.11	0.07	.....	.....	58158
.....	1.25	0.07	.....	.....	58159
.....	1.25	0.08	.....	.....	58160
.....	1.23	0.07	.....	.....	58161
.....	0.75	0.02	.....	.....	58162
.....	1.18	0.07	.....	.....	58163
.....	1.10	0.07	.....	.....	58164
.....	1.30	0.07	.....	.....	58165

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VALLEYFIELD—

1915.							
May 19	Barley (Pot)..	58135	George Bougie, Alexandria.	2 lb..	10		
" 19	" " ..	58136	F. J. Dever, Alexandria..	2 " ..	10		
June 9	" " ..	58137	D. H. Conner, Bedford..	2 " ..	10		
" 9	" (Pearl).	58138	Best Bros., Bedford...	2 " ..	15		
" 9	" " ..	58139	C. O. Jones, Bedford....	2 " ..	20		
" 9	" " ..	57936	A. Nadeau, Bedford....	2 " ..	14		
" 9	" (Pot)..	57937	J. Dagenais, Farnham...	2 " ..	12		
" 9	" " ..	57938	J. E. Baillargeon, Farnham.	2 " ..	8		
" 15	" " ..	40970	Tourrangeau & Champagne, Buckingham.	2 " ..	10		
" 15	" " ..	40971	Lahaie & Son, Buckingham.	2 " ..	10		

DISTRICT OF OTTAWA—

April 20	Barley (Pearl).	63603	A. B. Scott & Co., Smith's Falls.	1 lb..	8		Robertson, Nicolle, Smith's Falls.
" 20	" (Pot)..	63007	P. J. Doyle, Perth. ....	1 " ..	5		Unknown .....
" 30	" " ..	63643	L. Mallette, Murray St., Ottawa.	2 " ..	10		S. J. Major, Ltd., Ottawa.
May 4	" (Pearl).	63649	J. P. Lapensee, Albert St., Ottawa.	2 " ..	15		Provost & Allard.
" 4	" (Pot).	63650	A. Stein, Albert St., Ottawa.	2 " ..	10	Unknown .....	Unknown .....
" 5	" (Pearl).	63656	Cherry & Craig, 1184 Wellington St., Ottawa.	1 " ..	8		F. J. Castle Co., Ottawa.
" 5	" (Pot)..	63657	H. Richardson, 1087 Wellington St., Ottawa.	2 " ..	14		Unknown .....

DISTRICT OF KINGSTON—

Apr. 29	Barley (Pot)..	68021	James Crawford, Kingston	1 lb .	5		Geo. Robertson & Son, Kingston.
" 29	" " ..	68022	J. R. B. Gage, Kingston..	1 " ..	5		Andrew McLean, Kingston.
" 29	" " ..	68023	G. D. Vallean, Kingston..	1 " ..	5		Robertson & Nicolle, Kingston.
4	" " ..	68024	Q. G. Vermilyea, Belleville	1 " ..	5		J. Sloan & Co., Belleville.

SESSIONAL PAPER No. 14

BARLEY (POT AND PEARL.)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture.	Ash.		Feeding.		
		Total.	Insoluble.			

J. J. COSTIGAN, ACTING INSPECTOR.

	p. c.	p. c.	p. c.		
.....	1.26	0.08	.....	.....	58135
.....	1.12	0.04	.....	.....	58136
.....	1.24	0.07	.....	.....	58137
.....	1.15	0.05	.....	.....	58138
.....	0.82	0.01	.....	.....	58139
.....	0.97	0.05	.....	.....	57936
.....	1.16	0.06	.....	.....	57937
.....	1.15	0.07	.....	.....	57938
.....	1.33	0.07	.....	.....	40970
.....	1.09	0.04	.....	.....	40971

J. A. RICKEY, INSPECTOR.

.....	0.83	0.05	.....	.....	63603
.....	.....	.....	.....	.....	63607
.....	.....	.....	.....	.....	63643
.....	0.85	0.04	.....	.....	63649
.....	1.18	0.06	.....	.....	63650
.....	0.92	0.04	.....	.....	63656
.....	1.07	0.06	.....	.....	63657

JAMES HOGAN, INSPECTOR.

.....	1.39	0.06	.....	.....	68021
.....	0.90	0.05	.....	.....	68022
.....	.....	.....	.....	.....	68023
.....	1.10	0.06	.....	.....	68024

7 GEORGE V, A. 1917

BULLETIN No. 329—

Date of Collection.	Nature of Sample.	No. Sample.	Name and Address of Vendor	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cost.	Manufacturer.	Furnisher.

## DISTRICT OF KINGSTON—

1915.							
May	4	Barley (Pot)..	68026	F. O. Diamond & Son, Belleville.	1 lb..	5	J. Sloan & Co., Belleville
"	4	" " "	68026	Ed. A. Kellaway, Belle- ville.	1 " ..	5	J. E. Walmsley, Belleville.
"	4	" " "	68027	H. A. Fairfield, Belleville.	1 " ..	5	White Swan Ltd Toronto.
"	4	" " "	68028	M. C. Nicols, Cobourg....	1 " ..	5	Eby Blain, Tor- onto.
"	4	" " "	68029	The Thompson MacDon- old, Cobourg.	1 " ..	5	Larkins Ince Co. Pererboro.
"	5	" " "	68030	F. H. Brown, Port Hope.	1 " ..	8	MacDonald & Morris Co., Oshawa.

## DISTRICT OF TORONTO—

May	11	Barley (Pearl)	67049	S. M. Warriner, Stouff- ville.	1 lb..	8	Thos. Kinnear & Co., Toronto.
"	11	" (Pot)..	67050	G. W. Resor, Markham..	1 " ..	5	Unknown. ....
"	12	" (Pearl)	67051	Dobson & Grosby, Ux- bridge.	1 " ..	10	" .....
"	12	" (Pot)..	67052	F. C. Collacutt, Port Perry.	1 " ..	6	" .....
"	13	" " "	67054	J. G. French, Beaverton .	1 " ..	5	Eby Blain, Tor- onto.
"	14	" " "	67055	The Georgian Bay Lum- ber Co., Waubausheue.	1 " ..	6	Unknown.....
"	15	" " "	67056	J. A. Gill, Midland.	2 " ..	10	" .....
"	19	" (Pearl)	67057	Chas. Godfrey, 371 Spa- dina Ave., Toronto.	2 " ..	16	Jos. Prager, Tor- onto.
"	20	" " "	67058	Girvin & Robinson, 1556 Queen St., West, Toron- to.	2 " ..	16	Unknown. ....

## DISTRICT OF HAMILTON—

April	26	Barley (Pearl).	66978	Burt Bros., Elora.....	2 lb..	10	Unknown.....
"	26	" (Pot)..	66979	Pritchard & Lunn, Fergus	2 " ..	10	Geo. E. Bristol & Co., Hamil- ton.
"	27	" (Pearl).	66980	W. J. Gilroy, Mount For- rest.	2 " ..	10	Unknown .....
"	28	" (Pot)..	66981	Stewart & Hucks, Ham- stow.	2 " ..	10	McLauchlan & Sons, Owen Sound.
"	29	" " "	66982	F. Weiler, Mildmay. ....	2 " ..	10	Stratford Whole- sale Grocery. Stratford.
"	29	" " "	66983	M. J. Campbell, Paisley..	2 " ..	10	A. M. Smith & Co., London.



SESSIONAL PAPER No. 14

BARLEY (POT AND PEARL).

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture.	Ash.		Facing.		
		Total.	Insoluble.			

Concluded.

	p. c.	p. c.	p. c.			
.....		1.06	0.05	.....	.....	68025
.....		1.04	0.06	.....	.....	68026
.....		1.02	0.07	.....	.....	68027
.....		0.99	0.05	.....	.....	68028
.....		1.04	0.06	.....	.....	68029
.....		1.09	0.07	.....	.....	68030

H. J. DAGER, INSPECTOR.

.....		0.85	0.05	.....	.....	67049
.....		1.18	0.08	.....	.....	67050
.....		0.83	0.05	.....	.....	67051
.....		1.03	0.04	.....	.....	67052
.....		1.13	0.07	.....	.....	67053
.....		1.26	0.08	.....	.....	67055
.....		1.98	0.06	.....	.....	67056
.....		0.71	0.03	.....	.....	67057
.....		0.77	0.03	.....	.....	67058

H. J. DAGER, ACTING INSPECTOR.

.....		1.11	0.06	.....	.....	66978
.....		.....	.....	.....	.....	66979
.....		1.21	0.07	.....	.....	66980
.....		1.04	0.07	.....	.....	66981
.....		1.07	0.06	.....	.....	66982
.....		1.11	0.06	.....	.....	66983

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF HAMILTON—

1915.							
April 30	Barley (Pearl)	66984	Liebeck & Heimmler, Chesley.	2 lbs.	10	.....	Unknown .....
" 30	" "	66985	D. J. Cunningham, Owen Sound.	2 " ..	20	.....	W. T. Harris & Co., Ltd., Owen Sound.
May 4	" "	66986	Austen & Grice, Oakville.	2 " ..	20	.....	John Sloane & Co., Toronto.
" 4	" "	66987	Hicks & Bamford, Burlington.	2 " ..	14	.....	Macpherson Glasses & Co., Hamilton.

## DISTRICT OF WINDSOR—

April 21	Barley (Pearl).	54776	M. Williams, Seaforth....	1½ lbs.	8	.....	E. Adams & Co., London.
" 21	" (Pot) .	54777	H. Sivins, Seaforth. ....	1½ " ..	8	.....	T. B. Escott & Co., London.
" 21	" " ..	54778	Cardno Bros., Seaforth...	1½ " ..	8	.....	Archibald M. Co., Woodstock.
" 22	" " ..	54780	Sproat & Sproat, Seaforth	1½ " ..	9	.....	" .....
" 22	" " ..	54783	W. R. Smith, Seaforth...	1½ " ..	8	.....	Seaforth M. Co., Seaforth.
" 22	" " ..	54785	Geo. C. Sawyer, Mitchell.	1½ " ..	8	.....	Stratford Wholesale Grocers, Stratford.
" 22	" " ..	54786	Ed. Kern, Mitchell....	1½ " ..	8	.....	J. Sloan & Co., Berlin.
" 22	" " ..	54787	W. J. Sevoy, Mitchell....	1½ " ..	8	.....	Unknown ..
" 23	" " ..	54792	Cappa & Nethercott, St. Marys.	1½ " ..	8	.....	Elliott & Marr, London.

## DISTRICT OF MANITOBA—

April 26	Barley (Pearl).	61311	A. S. Coyle, Sargent Ave., Winnipeg.	2 lb..	15	.....	.....
" 26	" (Pot)..	61312	B. Arnason, Sargent Ave., Winnipeg.	2 " ..	15	.....	.....
" 27	" " ..	61313	S. Myers, Ellice St., Winnipeg.	2 " ..	10	.....	.....
" 27	" (Pearl).	61314	E. Feir, Ellice St., Winnipeg.	2 " ..	20	.....	.....
May 10	" (Pot)..	61315	J. A. McDowall, Portage Ave., Winnipeg.	2 " ..	10	.....	.....
" 10	" " ..	61316	John M. McMillan, Portage Ave., Winnipeg.	2 " ..	15	.....	.....
" 10	" " ..	61317	Arney Bros., Portage Ave., Winnipeg.	2 " ..	15	.....	.....
" 10	" (Pearl).	61318	The Wesley Grocery, 547 Portage Ave., Winnipeg.	2 " ..	15	.....	.....
" 11	" " ..	61319	Rockwood Store, 476 Portage Ave., Winnipeg.	1 " ..	20	.....	.....
" 11	" " ..	61320	H. E. Weldon & Co., Portage Ave., Winnipeg	2 " ..	15	.....	.....

SESSIONAL PAPER No. 14

BARLEY (POT AND PEARL)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture.	Ash.		Facing.	—		
		Total.	Insoluble.				
<i>Concluded.</i>							
	p. c.	p. c.	p. c.				
		1.06	0.04			66984	
		1.02	0.03			66985	
		0.77	0.07			66986	
		0.84	0.05			66987	

JOHN TALBOT, INSPECTOR.

						54776	
		1.87	0.07		Contains S <sup>1</sup> rice grains	54777	
		1.13	0.05			54778	
		1.45	0.08			54780	
						54783	
		1.00	0.06			54785	
		1.03	0.06			54786	
		1.00	0.07			54787	
		1.01	0.04			54792	

A. C. LARIVIÈRE, INSPECTOR.

		0.79	0.03			61311	
		0.88	0.05			61312	
		1.49	0.09			61313	
		0.90	0.04			61314	
	10.3	1.48	0.12			61315	
	10.7	1.14	0.08			61316	
	10.8	0.92	0.02			61317	
	10.5	1.01	0.04			61318	
	10.8	0.58	0.02			61319	
	10.6	0.90	0.02			61320	

7 GEORGE V, A. 1917  
BULLETIN No. 329—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF SASKATCHEWAN—

1915.							
April 26	Barley (Pearl).	66352	N. E. Petch, Swift Current.	2 lbs.	15	.....	Swift Current Grocery.
" 27	" " ..	66353	M. Moncrieff, Swift Current.	2 " ..	10	.....	" "
" 27	" " ..	66354	Bertins, Ltd., Swift Current.	2 " ..	20	.....	Codville Co., Moosejaw.
" 28	" (Pot)..	66363	Thomas Bros., Gull Lake.	2 " ..	15	.....	Moose Grocery, Moosejaw.
" 28	" " ..	66364	J. S. Tweed, Gull Lake..	2 " ..	15	.....	Codville Co., Moosejaw.
" 29	" " ..	66365	Chevalier & Pollock, Maple Creek.	2 " ..	15	.....	Medicine Hat Grocery Co.
" 29	" " ..	66369	Cool Bros., Maple Creek.	2 " ..	15	.....	Swift Current Grocery Co.
" 29	" " ..	66370	Dixon Bros., Maple Creek.	2 " ..	15	.....	Medicine Hat Grocery Co.
May 5	" " ..	66386	H. T. Baker Co., Lumsden.	2 " ..	10	.....	Campbell, Wilson & Strathdee, Regina.
" 5	" " ..	66387	Balfour Bros., Lumsden..	2 " ..	20	.....	Unknown ..

## DISTRICT OF ALBERTA—

April 30	Barley (Pearl).	52130	Hallair & Aldridge, Edmonton.	2 lbs.	20	.....	Campbell, Wilson & Horne, Edmonton.
" 30	" " ..	52131	Johnstone Walker, Ltd., Edmonton.	2 " ..	20	.....	Brackman Ker, Edmonton.
" 30	" (Pot) ..	52132	" " ..	2 " ..	15	.....	" ..
May 18	" " ..	52133	Hudson's Bay Co., Calgary.	2 " ..	8	.....	Brackman Ker, Calgary.
" 18	" (Pearl).	52134	" " ..	2 " ..	16	.....	" ..
June 16	" " ..	52135	Spencer Todd, Ltd., Medicine Hat.	2 " ..	20	.....	Med. Hat Grocery.
" 16	" " ..	52136	Taylor Bros., Medicine Hat.	2 " ..	20	.....	" ..
" 16	" (Pot)..	52137	" " ..	2 " ..	16	.....	" ..
" 17	" " ..	52138	Geo. Kerr, Lethbridge..	2 " ..	20	.....	Brackman Ker, Calgary.
" 17	" (Pearl).	52139	" " ..	2 " ..	20	.....	" ..

SESSIONAL PAPER No. 14

BARLEY (POT AND PEARL).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture.	Ash.		Facing.		
		Total.	Insoluble.			

L. H. HALL, INSPECTOR.

	p. c.	p. c.	p. c.		
.....		0.88	0.05	.....	66352
.....		0.92	0.05	.....	66353
.....		0.74	0.02	.....	66354
.....		1.04	0.05	.....	66363
.....				.....	66364
.....		1.30	0.08	.....	66368
.....		1.19	0.07	.....	66369
.....		0.92	0.06	.....	66370
.....		0.90	0.06	.....	66380
.....		1.22	0.08	.....	66387

A. W. R. MARKLEY, INSPECTOR.

.....	14.85	1.20	0.02	.....	52130
.....	15.31	1.04	0.02	.....	52131
.....	15.28	1.16	0.04	.....	52132
.....	15.13	0.97	0.02	.....	52133
.....	15.14	1.00	0.03	.....	52134
.....	15.57	1.04	0.03	.....	52135
.....	15.06	0.80	0.04	.....	52136
.....	15.03	1.48	0.06	Contains pieces of straw	52137
.....	15.00	1.26	0.00	.....	52138
.....	15.06	0.82	0.03	.....	52139

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF ROCKY MOUNTAINS

1915.							
April 26	Barley (Pearl).	61799	Co-op. Italiana Assn. Trail.	2 lbs.	20	.....	Kelly Douglas & Co., Vanc.
" 26	" (Pot)..	61800	City Grocery, Trail	2 "	20	.....	"
" 26	" (Pearl).	61807	Trail Grocery, Trail	2 "	20	Brackman Ker Co., Victoria.	.....
May 20	" (Pot)..	61814	Ira R. Manning, Cranbrook.	2 "	15	.....	West. Can. F. M., Calgary.
" 20	" (Pearl).	61815	" "	2 "	20	.....	"
" 20	" "	61816	J. Manning, Cranbrook	2 "	15	.....	W. H. Malkin & Co., Vanc.
" 20	" (Pot)..	61822	Sure Grocery Co., Cranbrook.	2 "	15	.....	Cranbrook Jobbers, Ltd.
June 10	" (Pearl).	61828	A. Hobson, Revelstoke	2 "	20	West. Can. F. M., Winnipeg.	.....
" 10	" (Pot)..	61833	G. W. Bell, Revelstoke	2 "	20	.....	W. H. Malkin Co., Vanc.
" 10	" (Pearl).	61834	L. C. Masson, Revelstoke	2 "	20	.....	"

DISTRICT OF VANCOUVER—

May 22	Barley (Pearl)	55256	J. Lowenthal, 2243 Main St., Vancouver.	2 lbs.	20	Kelly, Douglas & Co., Vancouver.	.....
" 22	" "	55257	Barker & Miller, 233 Main St., Vancouver.	3 "	20	"	.....
" 22	" (Pot)	55258	Mt. Pleasant Grocery, 2425 Main St., Vancouv.	2 "	20	Unknown	.....
" 22	" "	55259	W. H. Parsons, 2539 Main St., Vancouver.	2 "	20	"	.....
" 22	" (Pearl)	55260	Efford Bros., 246 Broadway E., Vancouver.	2 "	15	W. N. Malkin Co., Vancouver.	.....
" 22	" "	55261	A. G. Page, 3024 Westminster Rd., Vancouver	2 "	20	Kelly, Douglas & Co., Vancouver.	.....
" 22	" "	55262	Cochrane & Elliott, 657 15th Ave., Vancouver.	2 "	20	Leeson, Dickie, Gross & Co., Vanc.	.....
" 22	" "	55263	G. W. Bennett, 761 Kingsway, Vancouver.	2 "	20	A. Macdonald & Co., Vancouver.	.....
" 25	" (Pot)	55264	T. F. McDowell, 938 Granville St., Vancouver.	2 "	20	Kelly, Douglas & Co., Vancouver	.....
" 26	" "	55265	J. P. Sinclair, 2954 Commercial Drive, Vanc.	2 "	15	Unknown	.....

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BARLEY (POT AND PEARL.)

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture.	Ash.		Facing.		
		Total.	Insoluble.			

THOS. PARKER, INSPECTOR.

.....	12.95	1.10	0.28	.....	Microscope shown mineral matter.	61799	Faced with talc. Adulterated.
.....	13.85	1.25	0.05	.....	.....	61800	.....
.....	14.12	1.20	0.03	.....	.....	61807	.....
.....	14.29	0.75	0.02	.....	.....	61814	.....
.....	13.96	0.83	0.02	.....	.....	61815	.....
.....	13.84	0.77	0.02	.....	.....	61816	.....
.....	13.78	0.93	0.03	.....	.....	61822	.....
.....	13.96	0.84	0.03	.....	.....	61828	.....
.....	13.66	0.80	0.02	.....	.....	61833	.....
.....	13.58	0.80	0.01	.....	.....	61834	.....

E. J. MORGAN, INSPECTOR.

.....	13.51	1.03	0.20	.....	Microscope shows mineral matter.	55256	Faced with talc. Adulterated.
.....	13.94	1.25	0.35	.....	" " " "	55257	.....
.....	14.60	1.01	0.11	.....	.....	55258	.....
.....	15.07	0.96	0.03	.....	.....	55259	.....
.....	14.36	0.84	0.01	.....	.....	55260	.....
.....	14.21	1.07	0.06	.....	.....	55261	.....
.....	14.51	1.01	0.02	.....	.....	55262	.....
.....	13.80	1.09	0.26	.....	Microscope shows mineral matter.	55263	Faced with talc. Adulterated.
.....	14.08	0.86	0.02	.....	.....	55264	.....
.....	13.79	1.48	0.63	.....	Microscope shows mineral matter.	55265	Faced with talc. Adulterated.

Date of Collection.	Nature of Sample,	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VICTORIA—

1915.							
May	27	Barley (Pearl)	66713	Windsor Grocery Co., 817 Govt. St., Victoria.	2 lbs	20	Brackman Ker, Victoria.
"	28	" (Pot)	66715	D. H. Ross & Co., 1317 Govt. St., Victoria.	2 "	20	Wilson Bros., Victoria.
"	31	" "	66719	West End Grocery, 1002 Govt. St., Victoria.	2 "	20	R. P. Rithet Co., Victoria.
June	1	" (Pearl)	66720	Copas & Young, 631 Fort St., Victoria.	2 "	20	Brackman Ker, Victoria.
"	8	" "	66721	Acton Bros., 1317 Douglas St., Victoria.	2 "	20	"
"	8	" "	66725	Erskine & Co., 861 Johnson St., Victoria.	2 "	20	"
"	9	" "	66726	H. O. Kirkham Co., 741 Fort St., Victoria.	2 "	15	"
"	9	" "	66731	Henry W. Driver, 85 <sup>1</sup> / <sub>2</sub> Yates St., Victoria.	2 "	20	A. McDonald, Vancouver.
"	10	" (Pot)	66733	Fairfield Grocery, Cook St., Victoria.	2 "	20	Brackman Ker, Victoria.
"	10	" (Pearl)	66734	The Cook St. Grocery, 1023 Cook St., Victoria.	2 "	15	R. P. Rithet & Co., Victoria.



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BARLEY (POT AND PEARL).

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture.	Ash,		Facing.		
		Total.	Insoluble.			

D. O'SULLIVAN, INSPECTOR.

	p. c.	p. c.	p. c.			
.....	13.56	0.77	0.02	.....	.....	66713
.....	13.73	0.89	0.02	.....	.....	66715
.....	13.70	1.12	0.01	.....	.....	66719
.....	13.39	1.03	0.06	.....	.....	66720
.....	13.75	1.07	0.01	.....	.....	66721
.....	13.85	1.12	0.02	.....	.....	66725
.....	13.68	0.98	0.04	.....	.....	66729
.....	13.33	0.80	0.01	.....	.....	66731
.....	13.78	1.13	0.02	.....	.....	66733
.....	13.66	0.91	0.02	.....	.....	67734



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## APPENDIX U.

## BULLETIN No. 330—BREAKFAST FOODS.

OTTAWA, January 17, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to submit herewith a report upon thirty-three samples of so-called Breakfast Foods. These are, for the most part, cereals which have been to some extent manufactured by heat, moisture, the addition of malt, sugar, etc. The changes brought about by these various treatments are generally very slight; if we regard the nutritive value merely. It may be that a somewhat readier digestibility than would result from the usual preparation of the cereal as a breakfast dish (by boiling with water and a little salt) may be justly claimed for these foods, and it is undeniable that certain of them possess characteristic and more or less well defined flavours which are approved by the palate.

It remains, however, that if we take their cost into consideration, they must be regarded as food luxuries. Dr. E. F. Ladd, Food Commissioner for North Dakota, has made a calculation based upon the results of work done at the North Dakota Agricultural Experiment Station, and demonstrating that, wheat costing \$1.80 per bushel, represents a selling price in the form of certain breakfast foods of \$27 (Bulletin No. 23, Vol. III, December, 1915. It must, of course, be left to the purchaser to judge whether he is prepared to pay so considerable an increase in price for the slight, and sometimes equivocal, increase in food value represented. The cost of all foods has become so greatly enhanced consequent upon world-wide disturbed conditions, that it is a duty to point out facts like the foregoing, for the guidance of those to whom economy is a matter of concern.

A very full discussion of this subject will be found in Inland Revenue Bulletin No. 84 (1902), in which appear the results of work upon 30 samples of Breakfast Foods, representing 11 different brands. In Bulletin 132 (1907) a further study of 99 samples, representing 18 different brands, will be found. The present report upon 33 samples indicates that a small number of new brands which have been placed on the market since 1907, differ in no essential feature from those previously reported.

A fairly correct notion of the relative nutritive values of these foods (assuming them to be perfectly digested and assimilated) may be obtained from inspection of the numbers in the column headed Calorific value per gram. It will be seen that, as in earlier reports above mentioned, this ranges from about 3,800 to 4,000.

There can be no doubt that oatmeal, preferably flaked or finely ground, and well-cooked by boiling, shows a food value which places it quite at the head of the list.

I beg to suggest publication of this report as Bulletin No. 330.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
Chief Analyst.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NOVA SCOTIA—

1915.								
Sept.	9	Cereal Breakfast Food.	64211	Payzant & King, Halifax	1 pkg.	18	Cream of Wheat Co., Minneapolis.	Manufacturers
"	21	"	64212	J. L. Wikon & Co. Halifax.	1 "	10	Can. Postum Cereals Co., Windsor.	"
"	21	"	64213	R. B. Seeton & Co., Halifax.	1 "	10	Shredded Wheat, Niagara Falls.	"
"	22	"	64214	John Tobin & Co., Halifax.	1 "	10	Battle Creek Corn Flake Co., London, Ont.	"
"	23	"	64215	Bauld Bros. Co., Ltd., Halifax.	1 "	12	Quaker Oats Co., Peterboro.	"

## DISTRICT OF MONTREAL—

Aug.	25	Breakfast Food.	67401	Jas. McShane, 146 Ottawa St., Montreal.	1 pkg.	28	Quaker Oats Co.	
"	25	"	67402	G. Brouillet, 105 Colborne St., Montreal.	1 "	10	Cream of Wheat Co.	
"	25	"	67403	J. Thibault, 98 Murray St., Montreal.	1 "	10	Kelloggs Co.	
"	25	"	67404	P. Collins, 87 Ottawa St., Montreal.	1 "	15	The H. O. Mills Co.	
"	25	"	67405	F. J. McCrory, 73 Ottawa St., Montreal.	1 "	13	Can. Shredded Wheat Co.	

## DISTRICT OF TORONTO—

Aug.	8	Malt Breakfast Food.	69902	C. Webb, 18 Vaughan Rd., Toronto.	1 pkg.	20	Malted Cereals Co., Burlington, Vt.	
"	10	Roman Meal.	69903	M. D. Turner, 683 St. Clair Ave., Toronto.	1 "	25	Roman Meal Co., Toronto.	
"	12	Hecker's Farina.	69904	The Robt. Simpson Co. Ltd., Queen & Yonge Sts., Toronto.	1 "	13	Hecker Cereal Co., Toronto.	
"	13	Gusto	69905	R. E. Willis, 1891 Dundas St. Toronto.	1 "	10	The H. O. Co., Hamilton.	
"	13	Robin Hood Porridge Oats	69906	R. Paget & Co., 1805 Dundas St., Toronto.	1 "	10	Robin Hood Mills, Moose Jaw.	

## DISTRICT OF OTTAWA—

Dec.	20	Roman Meal.	70611	H. Richardson, Ottawa.	3 pkgs	75		
"	21	"	70618	J. Bambrick, Ottawa.	3 "	30		
"	22	"	70621	H. Racine, Ottawa.	3 "	30	Roman Meal Co., Toronto.	

SESSIONAL PAPER No. 14  
BREAKFAST FOODS.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.								Microscopical Examination.	Calorific Value per Gram.	No. of Sample.
	Total Proteids N x 6.25.	Moisture.	Petroleic ether extract. (Fat.)	Alcohol Extract. (Sugars, &c.)	Water Extract. (Dextrines.)	Crude Fibre.	Total Ash.	Starch by difference.			

R. J. WAUGH, INSPECTOR.

Cream of Wheat.	11.56	10.45	0.83	1.37	6.80	0.35	9.71	67.93	.....	3955.4	64211
Port Toasties....	8.00	6.25	0.30	0.75	24.65	0.12	2.77	56.17	.....	3925.8	64212
Shredded Wheat.	10.19	10.20	0.99	1.70	8.25	2.16	1.59	64.92	.....	3837.8	64213
Corn Flakes. ....	7.50	9.60	0.25	2.00	28.30	0.20	1.39	59.70	.....	3870.2	64214
Puffed Rice.....	6.19	9.85	0.25	.....	13.15	0.20	0.42	69.94	.....	3878.2	64215

D. J. KEARNEY, INSPECTOR.

Quaker Oats....	17.5	8.40	3.44	..	8.06	1.25	1.62	59.73	Oat Starch. . . .	4199.6	67401
Cream of Wheat.	12.4	19.92	0.89	.....	5.55	0.11	0.37	69.76	Wheat Starch..	3977.4	67402
Toasted Corn Flakes.	8.1	9.28	0.27	.....	30.45	0.30	1.36	50.18	Broken Maize Starch.	3894.4	67403
Toasted Wheat Flakes.	10.5	9.36	1.37	.....	36.10	1.32	2.70	38.65	Granules broken beyond identification.	3886.4	67404
Shredded Wheat.	11.0	9.40	1.35	..	20.83	1.94	2.08	53.40	Wheat Starch..	3838.2	67405

H. J. DAGER, INSPECTOR.

Compound of Wheat & Malt.	14.7	9.55	1.56	.....	9.80	1.52	1.40	61.47	Broken Wheat Starch.	4005.7	69802
Roman Meal.	14.8	10.84	2.16	.....	15.87	1.35	2.94	49.04	Appar. Wheat, Rye & Linnseed	3800.0	69803
Hecker's Farma	12.9	11.36	0.88	.....	9.58	0.57	0.42	63.19	Wheat Starch..	3920.1	69804
Gusto . . . . .	9.9	10.40	1.18	.....	33.71	0.91	2.78	41.52	Granules much broken.	3829.8	69805
Porridge Oats..	10.6	9.08	4.01	.....	8.12	0.75	1.34	59.36	Oat Starch..	4200.8	69806

J. A. RICKEY, INSPECTOR.

.....	12.5	10.00	2.46	.....	15.70	5.34	3.10	51.00	Appar. Wheat, Rye & Linnseed	3795.7	70601
.....	13.7	9.96	2.38	.....	15.40	5.02	2.80	50.00	.....	3811.7	70602
.....	13.7	9.96	2.76	.....	15.20	5.00	2.80	50.00	.....	3820.1	70603

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF LONDON—

1915.							
July	27	Breakfast Food.	54625	Kerr's Grocery, London..	3 pkgs	39	Quaker Oats Co., Peterboro. ....
"	27	" ..	54626	B. L. Smith, London.....	"	39	W. H. Kellogg, Battle Creek. ....
"	27	" ..	54627	R. J. Denny, London. ...	"	45	Can. Postum Co., Windsor. ....
"	27	" ..	54628	Thos. Shaw, London.....	"	40	Can. Shredded Wheat, Niagara Falls. ....
"	27	" ..	54629	P. Sands, London.....	"	30	Battle Creek Toasted Corn Flakes Co., London, Ont. ....

## DISTRICT OF MANITOBA—

Aug.	13	Force.....	61351	J. H. Grainger Co., Cor. Westminster & Evanson, Winnipeg.	1 pkg.	15	H. O. Mills Co., Hamilton. ....
"	14	Corn Flakes..	61352	" ..	1 "	15	Krinkle Co., Ontario. ....
"	14	Shredded Wheat.	61353	" ..	1 "	15	Shredded Wheat Co., Niagara. ....
"	14	Grape Nut....	61356	" ..	1 "	15	Can. Postum Co., Windsor, Ont. ....
"	14	Puffed Wheat.	61357	" ..	1 "	15	Quaker Oats Co., Peterboro. ....

## DISTRICT OF VANCOUVER—

July	15	Cereal Breakfast Food.	55295	D. McGregor, Cor. Bute and Pender Sts., Vancouver.	1 pkg.	15	Kellogg's Toasted Corn Flakes Co., Battle Creek. ....
"	15	" ..	55296	" ..	1 "	15	Can. Shredded Wheat Co., Niagara Falls. ....
"	15	" ..	55297	W. Conling, 1374 Pender St., Vancouver.	1 "	15	Battle Creek Toasted Corn Flakes Co., London, Ont. ....
"	15	" ..	55298	Frank Wright, 645 Seymour St., Vancouver....	1 "	15	Can. Postum Cereal Co., Windsor. ....
"	16	" ..	55299	N. Janes Granville Market, Vancouver.	1 "	15	Quaker Oats Co., Chicago. ....

SESSIONAL PAPER No. 14  
BREAKFAST FOODS.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								Microscopical Examination.	Calorific Value per Gram	No. of Sample.
	Total Proteids N x 6.25.	Moisture.	Petrolic Extract. (Fat.)	Alcohol Extract. (Sugars, .)	Water Extract. (Dextrines.)	Crudo Fibre.	Total	Starch by difference.			

JOHN TALBOT, INSPECTOR.

Puffed Wheat...	15.0	8.88	1.59	...	31.4	2.23	1.67	39.28	Granules much broken.	4001.4	54625
Krumbles. All Wheat .....	12.2	8.58	0.86	...	19.4	1.46	2.47	55.09	Wheat Starch much broken.	3929.2	54625
Grape Nuts.....	12.0	6.74	0.46	...	41.2	0.91	1.64	37.05	Granules much broken.	4037.2	54627
Shredded Wheat	11.1	10.28	1.20	.....	20.4	1.97	1.16	53.44	Wheat Starch...	3907.8	54628
Toasted Corn Flakes.	8.3	9.78	0.24	.....	25.7	0.30	0.98	54.70	Granules broken, Maize.	3888.8	54629

J. B. COSGROVE, TEMPORARY INSPECTOR.

.....	9.10	6.95	1.46	7.74	27.18	2.85	2.40	42.32	.....	3916.7	61351
.....	8.23	7.40	0.54	8.66	29.52	0.50	0.80	44.80	.....	4025.9	61352
.....	9.54	8.10	1.54	2.34	9.06	2.26	1.30	65.86	.....	3951.0	61353
.....	11.29	4.70	0.66	19.14	28.23	1.43	1.60	32.95	.....	4100.9	61356
.....	14.88	4.80	2.06	6.86	30.73	2.25	1.70	36.72	.....	4190.5	61357

E. J. MORGAN, INSPECTOR.

Toasted Wheat Biscuit.	11.97	10.58	0.68	11.50	12.92	2.05	3.04	47.34	Wheat Starch.	3780.4	55290
Shredded Whole Wheat.	9.63	12.04	0.78	2.58	16.61	2.20	1.56	54.60	..	3739.8	55296
Toasted Corn Flakes.	6.77	13.26	0.14	7.82	20.45	0.35	1.88	49.33	Apparently Maize.	3671.6	55297
Grape Nuts ..	10.20	10.70	0.76	14.56	36.37	1.10	1.94	24.37	Wheat and Barley Starch.	3835.1	55298
Pettijohn's Breakfast Food.	7.29	13.22	1.40	4.02	7.94	1.40	1.48	63.25	Wheat Starch.	3719.1	55299





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## APPENDIX V.

## BULLETIN No. 331—TURPENTINE, AS A PAINT MATERIAL.

OTTAWA, January 8, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue,

SIR,—By an Order in Council of June 6, 1912, Turpentine for uses in the Arts, was defined as follows:—

PRIVY COUNCIL, CANADA.

AT THE GOVERNMENT HOUSE, OTTAWA.

THURSDAY, the 6th day of June, 1912.

PRESENT

HIS ROYAL HIGHNESS THE GOVERNOR GENERAL IN COUNCIL :

His Royal Highness the Governor General in Council, in virtue of the provisions of Section 27 of Chapter 133, Revised Statutes of Canada, 1906, "An Act respecting the Adulteration of Food and other Articles," is pleased to order as follows:—

Turpentine is hereby added to Schedule 4 of the above described Act and the definition thereof shall be as hereinafter set forth:—

## STANDARDS FOR TURPENTINE.

I. When turpentine is sold as a drug, for medicinal purposes or to the order of a physician, it shall meet pharmacopoeal requirements as provided by section 7 of the said Act.

II. When turpentine is sold under any other conditions than for purposes of medicine, as above, it shall meet the following requirements:—

- (1) It shall be entirely free from mineral oil.
- (2) Unless sold as wood turpentine, it shall absorb not less than 340 times its weight of iodine (Hull Solution and Method). If sold as wood turpentine it shall absorb not less than 240 times its weight of iodine by same method.
- (3) The undissolved (unpolymerized) residue on treatment of 10cc with 40cc of a sulphuric acid containing 20 per cent of the fuming acid, shall not exceed 10 per cent by volume of the sample.
- (4) The refractive index of this residue shall be not less than 1.4950 at 20° C.

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- (5) The refractive index of the sample at 20°C. shall lie between 1.4680 and 1.4730.
- (6) The specific gravity of the sample at 20°C. shall not be less than 0.860.
- (7) The initial boiling point shall not be lower than 150°C. under ordinary atmospheric pressure.
- (8) At least 75 per cent by volume shall distil below 160°C.
- (9) The residue on evaporation over a steam bath shall not exceed two (2) per cent.

RODOLPHE BOUDREAU,  
*Clerk of the Privy Council.*

No systematic inspection of the article, as thus defined, has been made since the date of the Order in Council as above. An extensive study of the subject was made in 1910, and the results are published in Bulletin No. 211. At that time the only legal standards existent had regard to turpentine (Oil of Turpentine) as a drug; and although many of the samples then reported failed to meet the requirements as given in the British Pharmacopoeia, it was considered inadvisable to apply these very stringent constants to turpentine sold for purposes other than medicinal.

The present inspection embraces careful and, in most cases exhaustive work upon two hundred and twelve (212) samples which were purchased throughout the Dominion in July, August and September of last year; and were specially obtained from dealers in paint materials. They are therefore to be judged by the standards fixed for turpentine supplied for other uses than as a drug. Fifty (50) of these samples fail to meet the above requirements and must be described as adulterated under the Act. (*See note on page 5.*)

A very large number of complaints from users of turpentine have been received in recent years; and the results of this inspection indicate that ample ground for complaint exists. The chief adulterant is found to be a petroleum product; but rosin oil is also used for the purpose.

Wood turpentine, that is the product obtained by distillation from resinous woods, as distinguished from that obtained in the regular way from the gum of various species of pine, cannot be regarded as an adulteration, provided that it is properly described when offered for sale. It possesses in a high degree, the desirable properties of true turpentine, but is not, in every respect, its equal for paint purposes. Samples indicating (by their lower iodine number, and other characters) admixture with wood turpentine, have not been judged as adulterated in this report. It must be noted, however, that vendors are not as careful as they should be in properly distinguishing these articles from true (gum) turpentine.

I would respectfully recommend publication of this report as Bulletin No. 331.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

OTTAWA, March 22, 1916.

NOTE.—The term adulteration, as used here, must be understood to mean that the sample does not meet the standards for turpentine fixed by Order in Council of June 6, 1912.

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*Section 21* of the Adulteration Act, as this appears in the Revised Statutes of 1906, has been introduced into this Act from an older Act of 1894, entitled "An Act in restraint of Fraudulent Sale or Marking."

*Section 21*, is as follows:—

"No person shall mark, brand or label any article or any package containing any article mentioned in the first column of the fourth schedule to this Act, with the word Pure, Genuine, or any word equivalent thereto, or sell, or offer or expose for sale, any such article or package so marked, branded, stamped or labelled, unless such article or the contents of such package are pure within the meaning of the second column of the said schedule."

It will be noted that, unless the article has been sold as *Pure* or *Genuine*, the penalties imposed by Section 33 (Section 3 of the Act in restraint of Fraudulent Marking) do not apply.

The samples of turpentine herein reported were simply sold as turpentine, and not as pure turpentine or genuine turpentine. It is reasonable to interpret the word turpentine, used simply, as meaning pure or genuine turpentine; but the technical difficulty introduced by the peculiar wording of section 21, makes procedure uncertain, and perhaps unadvisable until such time as an amendment of the Act is secured.

BULLETIN No. 331—TURPENTINE.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
					Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1915.	Sept. 28	Turpentine.	64256	Wm. Stairs Son & Morrow, 1½ pt. Halifax.	15	Unknown	Carrutte Patterson Co., Halifax.	
"	28	"	64257	Wm. Robertson & Son, Halifax. 1½ "	15	(Georgia Tur pentine Co. . . . .	J. C. Calder, Agent, Halifax.	
"	28	"	64258	A. M. Bell & Co., Halifax. . . . . 1½ "	15	" Montreal. . . . .	Mfr. . . . .	
"	28	"	64259	Jas. Simmonds, Ltd., Halifax . . . . 1½ "	15	" . . . . .	J. C. Calder, Agent, Halifax.	
"	28	"	64260	Geo. F. Smith & Co., Halifax. . . . . 1½ "	15	Unknown . . . . .	" . . . . .	

DISTRICT OF NOVA SCOTIA—W. A. PETIPAS, TEMPORARY INSPECTOR.

Aug. 13	Turpentine.	69841	J. S. Fraser, New Glasgow. . . . . 3 pts.	45	Unknown . . . . .	DeB. Carrutte, St. John. . . . .	
"	13	"	69842	Thompson & Sutherland, New Glasgow. . . . . 3 "	38	Imperial Oil Co., Halifax. Mfr. . . . .	
"	13	"	69843	Bent & Cahoon, New Glasgow. . . . . 3 "	37	Unknown . . . . .	DeB. Carrutte, St. John. . . . .

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DISTRICT OF CAPE BRETON—E. F. McKEEN, INSPECTOR.

July 27	Turpentine	6381	C. P. Myers, Sydney	3 pks.	45	Georgia Turpentine Co., Montreal.	
- 27	-	6381a	Thompson Sutherland Co., Sydney.	3 pks.	45	Imperial Oil Co.	

DISTRICT OF PRINCE EDWARD ISLAND—WM. A. WEEKS, INSPECTOR.

July 14	Turpentine	60262	Prosser & Son, P.E.I.	Murray Harbour, 3 pks.	35	Imperial Oil Co., Halifax.	Rogers Hardware Co., Charlottetown.
- 17	-	60264	S. W. Crabb, P.E.I.	Charlotte-town, 3 "	30	Imperial Oil Co., Halifax.	DeB. Carritte, St. John.
- 17	-	60265	Fennell & Chandler, P.E.I.	Charlotte, 3 "	35		"
- 19	-	60266	Rogers Hardware Co., P.E.I.	Char-3 "	35		"
- 19	-	60267	P. J. Berrigan, P.E.I.	Dunsmiden, 3 "	35		Rogers Hardware Co., Charlottetown.
- 20	-	60268	Russell Con, P.E.I.	3 "	35	Can. Paint Co., Montreal.	
- 20	-	60269	H. H. Con, P.E.I.	3 "	35		Rogers Hardware Co., Charlottetown.
- 24	-	60270	Matthew, P.E.I.	St. Louis, 3 "	35	Unknown	
- 24	-	60271	J. J. Hughes, P.E.I.	Co., Ltd., St. Louis, 3 "	35	A. M. Bell & Co., Halifax	
- 26	-	60272	D. F. Keys, P.E.I.	Bay field, P.E.I. 3 "	45		Stemp Bros., Ltd., Souris, P.E.I.

DISTRICT OF NEW BRUNSWICK—JOHN C. FERGUSON, INSPECTOR.

July 14	Turpentine	60131	Nat. Drug & Chem. Co., John.	St. John, 3 pks.	40		Prov. Chem. Fert. Co., St. John.
Aug 2	-	60132	Hedden, John.	Foster & South, St. John, 3 "	40		DeB. Carritte, St. John.
- 3	-	60133	F. A. Young, John.	St. John, 3 "	40		Imperial Oil Co., St. John.
- 3	-	60134	T. McAvoy & Sons, John.	St. John, 3 "	40		DeB. Carritte
- 4	-	60135	W. H. Thorne, John.	A. Co., Ltd., St. John, 3 "	45		
- 6	-	60136	H. J. A. J. T. McGowan, John.	St. John, 3 "	40		Wood Bros., St. John.
- 14	-	60137	The World Hardware Co., St. John.	3 "	45		DeB. Carritte, St. John.

BULLETIN No. 331—TURPENTINE

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				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NEW BRUNSWICK—JOHN C. FERGUSON, INSPECTOR.—*Concluded.*

1915.	Aug. 17	Turpentine.	66158	R. Chestnut & Son, Fredericton	3	pts.	45	Apothecary's Hall Co., Waterbury, Conn., U.S.A.	
	" 24	"	66159	Sussex Mercantile Co., Sussex	3	"	45	Imperial Oil Co., St. John.	
	" 26	"	66160	Sumner & Co., Moncton.	3	"	30	DeB. Carritee, St. John.	

DISTRICT OF QUEBEC PROVINCE—J. AUDET, O. BROCHU, N. CADIEUX AND S. GENDREAU, TEMPORARY INSPECTORS.

July	7	Terebentine.	3603	Dorchester Lumber, Ste. Malachie.	3	pts.	21	Brit. Amer. Oil.	
	" 12	"	3610	J. L. Audet, St. Edward.	3	"	25	Dorchester Lumber, Ste. Malachie.	
	" 13	"	3615	J. A. Cloutier, St. Odilon.	3	"	25	Herman Young, Quebec.	
	" 16	"	3624	P. K. Prevot, Ste. Rose.	3	"	15	"	
	" 17	"	3627	Gariepie, St. Prosper.	3	"	25	Fratingham, Montreal.	
	" 20	"	3584	Antoine Picard, St. Raphael.	1	pt.	20	Herman Young, Quebec.	
	" 20	"	3588	Antoine Labrecque, St. Raphael.	1	"	25	"	
	" 20	"	3593	L. A. Roy, St. Valier.	1	"	25	Jos. Lemieux, Quebec.	

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21	4401	Geo. Roy, St. Michel	3	25	Martin-Senour Co., Montreal	
22	4403	J. A. Lemieux, St. Michel	3	25	"	
23	4408	Jos. Labonte, St. Charles	1 pie.	24	W. M. Doyle	
24	4410	J. B. Lacroix, St. Charles	1 "	30	Sherwin-Williams Co., Ltd.	
25	4413	J. E. Rouillard, St. Gervais	1 "	30	Imperial Oil	
26	4416	Arthur Arsensault, St. Gervais	1 "	23	Can. Paint Co., Montreal	
27	4423	Napoleon Aubin, St. Damien	1 "	32	Dorchester Co.	
28	226	Alexandre Villeneuve, St. Jérôme	3 Choix	60	Georgia Turpentine Co.	
29	300	Charlesmagne Taillon, St. Jérôme	3 "	50	Sherwin Williams	
30	311	Adolphe Segouin, St. Agathe des Monts	3 "	50	"	
31	313	F. Labrecque, St. Agathe des Monts	3 "	60	R. C. Jameson	
32	322	Ernest Lahaie, St. Estache	3 "	30	Prud'homme Montreal	
33	3769	Anselme Provot, Montmagny	1 "	15	Can. Paint Co.	
34	2771	George Roy, Parthier, Montmagny	1 "	15	Joseph E. Lemieux, Que.	
35	2773	Alphonse Letourneau, St. Pierre	1 "	15	"	
36	2777	Joseph Leduc	1 "	15	Green Tree Co., Montreal	
37	2783	Jos. Fournier, St. Thomas	1 "	15	Jos. B. Lemieux, Quebec	
38	2788	Alphonse Labarge, Montmagny	1 "	15	Can. Paint Co., Montreal	
39	2792	Ludger Gallant, N. D. Rossaire	1 "	15	"	
40	2794	G. P. Letourneau, St. Paul	1 "	15	N. Lemieux & Fils, Que.	
41	2797	G. Plass & Co., Ltd., St. Thomas, Montmagny	1 "	15	Sherwin Williams, Montreal	

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				Quantity.	Cents.	Manufacturer.	Furnisher.	
1915								
July 8	Turpentine.	69121	S. Costello, Joliette.	3 Pts.	35	R. L. Jamieson, Montreal.		
" 7	"	69125	Edm. Wodon, Joliette.	3 "	38	Ramsay Sons, Ltd., Montreal.		
" 9	"	69126	Monahan Bros., St. Lin.	3 "	49	Imperial Oil Co., Montreal.		
" 9	"	69127	Alfred Henri, St. Lin.	3 "	45	Can. Paint Co., Montreal.		
" 10	"	69128	R. Charbonneau, St. Esprit.	3 "	45	" " "		
" 10	"	69129	George Beaudoin, St. Esprit.	3 "	45	Can. Paint Co., Montreal.		
" 9	"	69130	W. Gendreau, St. Roch Achigan.	3 "	40	Couillard Auguste, Montreal.		
" 12	"	69131	L. Provost, L'Epiphanie.	3 "	30	Ramsay's Sons, Montreal.		
" 12	"	69132	T. A. Mercier, L'Epiphanie.	3 "	40	" " "	L. H. Hebert, Montreal.	
" 13	"	69133	L. Pauré, L'Assomption.	3 "	60	Can. Paint Co., Montreal.	Bedard & C <sup>ie</sup> , L'Assomption.	
Aug. 7	"	69184	S. Costello, Joliette.	3 "	38	R. E. Jamieson, Montreal.		

DISTRICT OF THREE RIVERS—DR. V. P. LAVALLÉE, INSPECTOR.



DISTRICT OF EASTERN TOWNSHIPS—J. J. COSTIGAN, ACTING INSPECTOR.

Aug 11	Turpentine	Geo W. Barque, Sherbrooke	3 Pts.	35		Sold as Georgia Turpentine
" 11	"	Geo N. Labrecque, Sherbrooke	3 "	40		"
" 11	"	Geo E. Jas. Lacombe & Fils, Sherbrooke	3 "	40	Brit. Amer. Oil Co., Ltd.	"
" 17	"	Geo J. Pagnia & Girard, Granby	3 "	25		"
" 19	"	Geo S. Cadars & Fils, Inc., Sherbrooke	3 "	45	Standard Oil Corporation	"
" 19	"	Geo J. R. Dunne, Coaticook	3 3	40		"
" 20	"	Geo A. Seguin, St. Hyacinthe	3 "	38	Brit. Amer. Oil Co., Ltd.	"
" 20	"	Geo E. Desnoyer & Lalme, St. Hyacinthe	3 "	38	Can. Paint Co., Ltd.	"
" 20	"	Geo J. H. St. Pierre, St. Hyacinthe	3 "	37	Imperial Oil Co.	"
" 20	"	Geo G. Godron & Lonsay, St. Hyacinthe	3 "	45	Can. Paint Co.	"

DISTRICT OF MONTREAL—D. J. KEARNEY, INSPECTOR.

Aug 4	Turpentine	Geo The People's Hardware Co., 152 St. Lawrence St., Montreal	3 pds	45	Unknown	"
" 4	"	Geo Berger Hardware Co., 126 St. Lawrence St., Montreal	3 "	45	Imperial Oil Co.	"
" 4	"	Geo A. Lacombe, 1200 St. Lawrence St., Montreal	3 "	38	Can. Paint Co.	"
" 4	"	Geo J. O. Robit, & Co., 1324 St. Lawrence St., Montreal	3 "	37	Brit. Amer. Oil Co.	"
" 10	"	Geo Baucourt Freres, 336 St. Lawrence St., Montreal	3 "	45	Imperial Oil Co.	"
" 20	"	Geo A. Gauthier, 203 St. Paul St., Montreal	3 "	30	Georgia Turpentine	"
" 20	"	Geo J. O. Desno, 239 St. Paul St., Montreal	3 "	30	McArthur Irwin Co.	"
" 20	"	Geo Lemaire & Leduc, 157 Church St., Verden	3 "	40	Mount Royal Colour & Varnish Co.	"
" 20	"	Geo The Raymond Hardware, 144 St. Nicholas St., Montreal	3 "	37	Georgia Turpentine Co.	"
" 20	"	Geo L. J. Lacombe, 194 St. Paul St., Montreal	3 "	37	"	"

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				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VALLEYFIELD—J. J. COSTIGAN, ACTING INSPECTOR.

1915.								
July 22	Turpentine..	57391	L. P. Beaulne, Hawkesbury .....	3 pks.	35	Can. Paint Co.....		
" 22	"	57392	J. G. Higginson, Hawkesbury..	3 "	25	Imperial Oil Co. ....		
" 22	"	57393	J. O. Phenix, Hawkesbury.....	3 "	45	Can. Paint Co.....		
" 27	"	57394	A. Morand, Valleyfield.....	3 "	45	"		
" 27	"	57395	V. Leger, Valleyfield .....	3 "	35			
" 27	"	57396	Besner & Chasle, Valleyfield.....	3 "	36			
" 27	"	57397	N. Langevin, Valleyfield .....	3 "	35			
" 27	"	57398	A. Lebeuf, Valleyfield .....	3 "	40			
" 28	"	57399	Cote & Cie, St. Johns.....	3 "	30	McArthur Irwin. Montreal		
" 28	"	58000	C. O. Gervais & Fils, St. Johns..	3 "	35			

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DISTRICT OF OTTAWA—J. A. RICKEY, INSPECTOR.

July 16	Turpentine	51083	E. J. McIarry, Renfrew	3 pts.	35	Ottawa Paint Works, Ottawa.	Manufacturer.
"	"	51024	Irvine & Legrew, Renfrew	3 "	45	R. C. Jamieson Co., Montreal.	"
"	"	51046	French & Co., Renfrew	3 "	45	Can. Paint Co., Montreal.	"
"	"	51066	The Jennings Co., Renfrew	3 "	40	Can. Oil Co., Toronto	"
"	"	51097	A. G. Ibbell & Co., Brockville	3 "	40	Georgia Turpentine Co., Montreal	"
"	"	51068	B. D. Steacy, Brockville	3 "	45	Can. Paint Co., Montreal	"
"	"	51096	Denip & Co., Ltd., Pembroke	3 "	45	E. Fielding & Son, Toronto.	"
"	"	62085	Griffin & Brennan, Arnprior	3 "	37	Ottawa Paint Works, Ottawa.	"
"	"	62004	John S. Moir, Arnprior	3 "	35	Can. Paint Co., Montreal	"
"	"	62001	W. J. Marshall, Carleton Place	3 "	35	Ottawa Paint Works, Ottawa.	"
"	"	62002	Taylor Bros., Carleton Place	3 "	40	Can. Paint Co., Montreal	"
"	"	62003	B. H. Smart, Brockville	3 "	30	Midland, Toronto	"

DISTRICT OF KINGSTON—JAMES HOGAN, INSPECTOR.

July 20	Turpentine	70251	Savage & Wightman, Kingston	3 pts	18	Stangeron & Percy Co., Toronto.	.....
"	"	70252 <th>Robinson Bros., Kingston</th> <td>3 "</td> <td>27</td> <td>J. H. Morin, Toronto</td> <td>.....</td>	Robinson Bros., Kingston	3 "	27	J. H. Morin, Toronto	.....
"	"	70253 <th>A. Green &amp; Co., Kingston</th> <td>3 "</td> <td>15</td> <td>.....</td> <td>Mixture of two kinds.</td>	A. Green & Co., Kingston	3 "	15	.....	Mixture of two kinds.
"	"	70254 <th>John Laird &amp; Sons, Kingston</th> <td>3 "</td> <td>20</td> <td>.....</td> <td>Dalton &amp; Son, Kingston</td>	John Laird & Sons, Kingston	3 "	20	.....	Dalton & Son, Kingston
"	"	70255 <th>W. J. Vinn, Kingston</th> <td>3 "</td> <td>20</td> <td>.....</td> <td>H. W. Marshall, Kingston</td>	W. J. Vinn, Kingston	3 "	20	.....	H. W. Marshall, Kingston
"	"	70256 <th>H. W. Marshall, Kingston</th> <td>3 "</td> <td>45</td> <td>Georgia Turpentine Co., Montreal.</td> <td>.....</td>	H. W. Marshall, Kingston	3 "	45	Georgia Turpentine Co., Montreal.	.....
"	"	70257 <th>J. B. Hunt &amp; Co., Kingston</th> <td>3 "</td> <td>35</td> <td>.....</td> <td>Dalton &amp; Son, Kingston</td>	J. B. Hunt & Co., Kingston	3 "	35	.....	Dalton & Son, Kingston
"	"	70258 <th>W. A. Mitchell, Kingston</th> <td>3 "</td> <td>30</td> <td>.....</td> <td>"</td>	W. A. Mitchell, Kingston	3 "	30	.....	"
"	"	70259 <th>Isabel &amp; Sons, Kingston</th> <td>3 "</td> <td>45</td> <td>J. A. Cooey Co., New York</td> <td>.....</td>	Isabel & Sons, Kingston	3 "	45	J. A. Cooey Co., New York	.....
"	"	70260 <th>M. Kalfrey &amp; Herb, Kingston</th> <td>3 "</td> <td>30</td> <td>Oil &amp; Rawson Co., Savannah, Ga.</td> <td>.....</td>	M. Kalfrey & Herb, Kingston	3 "	30	Oil & Rawson Co., Savannah, Ga.	.....

BULLETIN No. 331—TURPENTINE.

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				Quantity.	Cents.		

DISTRICT OF TORONTO—H. J. DAGGER, INSPECTOR.

1915.	Aug. 8	Turpentine.	70074	W. A. Stephenson, 25 Vaughan 3 Rd., Toronto.	3	bois.	25	Unknown	.....
"	10	"	70075	R. H. Hudson, 1199 St. Clair, Ave., Toronto.	3	"	25	Can. Oils, Ltd., Toronto.	.....
"	11	"	70076	Toms Bros., 1612 Danforth Toronto.	3	"	25	Ottawa Paint Co., Toronto.	.....
"	13	"	70077	Nadon, Hall et Johnson, 1623 Dundas St. W., Toronto.	3	"	30	Reynolds & Co., Toronto.	.....
"	14	"	70078	James Huggill, Weston.	3	"	35	Glidden Varnish Co., To- ronto.	.....
"	16	"	70079	E. W. Chard, 324 College St., Toronto.	3	"	30	Sherwin-Williams Co., Ltd., Toronto.	.....
"	17	"	70080	T. H. Boyd, 2232 Queen St. E., Toronto.	3	"	25	Royal Commission, To- ronto.	.....
"	17	"	70081	C. G. Bailey, 1958 Queen St. E., Toronto.	3	"	30	Imperial Oil Co., Ltd., Toronto.	.....
"	18	"	70082	G. H. Wall, 305 Roncesville Ave., Toronto.	3	"	25	Turpentine Producers, Ltd., Toronto.	.....
"	20	"	70083	J. W. Peacock, 1026 Queen St., W., Toronto.	3	"	25	"	.....

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DISTRICT OF HAMILTON—H. J. DAGER, ACTING INSPECTOR.

July 21	Turpentine	70641	Clapton, 285 St. Paul St., 3 pts	40	Pinchen & Johnson Co., Ltd., Toronto.	Arthur Irwin Co., Montreal.
"	"	70642	St. Catharines, W. R. McKinnis & Co., Niagara Falls, 3 "	60	"	Empire Commission Co., Toronto.
"	"	70643	L. L. Hunt & Son, Thorold, 3 "	35	"	Can. Paint Co., Ltd., Toronto.
"	"	70644	H. Clark, 54 Erie Ave., Nia. Falls, 3 bds.	50	"	Unknown
"	"	70645	McEvers & Henry, 485 Victoria Ave., Niagara Falls, 3 "	35	"	Brit. Amer. Oil Co., Toronto.
"	"	70646	Pringle & Son, N. Hamilton, 3 pts	45	"	Imperial Oil Co., Toronto.
"	"	70647	W. P. Gasham & Sons, Roblin, 3 bds.	35	"	Sanderson, Percy Co., Ltd., Toronto.
Aug 2	"	70648	W. E. Anthony, Brampton, 3 "	60	"	Unknown
"	"	70649	J. W. Kennedy, Georgetown, 3 "	35	"	Wood, Valance Co., Ltd., Hamilton.
"	"	70650	Aveda, Ltd., 45 James St., N. Hamilton, 3 "	36	"	"

DISTRICT OF WINDSOR—JOHN TALBOT, INSPECTOR.

Aug 2	Turpentine	70644	(old) & Mitchell, London, 3 bds.	20	West, Resin & Turpentine Co., Detroit.	"
"	"	70646	Lavo Hardware Co., London, 3 "	25	"	Howden Hardware Co., London.
"	"	70647	L. C. Steele & Co., London, 3 "	25	"	Taylor & Loewenstein & Co., Mobile, Alta.
"	"	70648	A. Wortman, London, 3 "	25	"	Howden Hardware Co., London.
"	"	70649	Edgecomb Bros., London, 3 "	20	"	"
"	"	70650	F. J. Jones, London, 3 "	10	West, Resin & Turpentine Co., Detroit.	"
"	"	70651	Paul & Kay, Woodstock, 3 "	20	"	"
"	"	70652	N. Peakey Woodstock, 3 "	20	"	Howden Hardware Co., London.
"	"	70653	Dwyer & McLean, Woodstock, 3 "	25	"	International Varnish Co., Toronto.
"	"	70654	McMurry Hardware, St. Thomas, 3 "	15	"	"
"	"	70655	Johnson & Park, St. Thomas, 3 "	50	West, Resin & Turpentine Co., Detroit.	"
"	"	70656	K. Campbell, St. Thomas, 3 "	17 1/2	Serwin Williams Co., Montreal.	Hold Hardware Co., London.

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				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF MANITOBA—J. B. COSGROVE, TEMPORARY INSPECTOR.

1915.	Aug. 4	Turpentine..	61325	Walter Johnson, 533 Sherbrooke, 3 pts.	60	Miller-Morse, Winnipeg.....		
	" 4	"	61326	Andrews & Sons, Victor St., Win-3	60	Can. Paint Co., Winnipeg ..		
	" 4	"	61327	R. Steiman Hardware Co., 541 3 Selkirk Ave., Winnipeg	60	Can. Oil Co., Winnipeg.....		
	" 4	"	61329	Talley & Davey, 1772 Main St., 3 Winnipeg.	60			
	" 5	"	61331	R. Thornton, 262 Tache Ave., 3 Norwood.	45	Wood, ValanceCo., Winnipeg ..		
	" 5	"	61333	Allaire & Bleau, 568 Tache Ave., 3 St. Boniface.	60	G. F. Stephen, Winnipeg....		
	" 7	"	61334	H. R. Wood, Napinka..... 3	60	Snowdon Oil Co.....		
	" 9	"	61338	Myers & Williams, 655 10th St., 3 Brandon.	60	Sherwin, Williams, Winni-peg.		
	" 12	"	61339	A. J. Bond & Co., 1763 Portage 3 Ave., St. James.	60	Merrick Anderson, Winnipeg		
	" 12	"	61340	Alkenhead-Clark Hardware Co., 3 Boyd Building, Winnipeg.	60	Scarfe & Co., Winnipeg ..		

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DISTRICT OF SASKATCHEWAN—L. H. HALL, TEMPORARY INSPECTOR.

July 10	Tarjantown	66254	C. T. Laird, Regina	3	pts.	60	Unknown	Unknown
"	"	66255	Regina Trading Co., Regina	3	"	60	Continental Oil Co.	Continental Oil Co.
"	"	66256	Armstrong Synthe & Dowsell, Regina	3	"	60	Winnipeg Oil Co., Regina	Winnipeg Oil Co., Regina
"	"	66257	John G. Bell, Melville	3	"	60	Winnipeg Oil Co., Melville	Winnipeg Oil Co., Melville
"	"	66411	E. Smith, Melville	3	"	60	"	"
"	"	66412	Wm. Anderson Melville	3	"	40	Sherwin Williams Co., Winnipeg	Sherwin Williams Co., Winnipeg
"	"	66413	Chas. Beck, Yorkton	3	"	50	Winnipeg Oil Co., Yorkton	Winnipeg Oil Co., Yorkton
"	"	66414	D. A. Sands, Yorkton	3	"	75	G. F. Stephens & Co., Winnipeg	G. F. Stephens & Co., Winnipeg
"	"	66415	Isahator & Prety, Saskatoon	3	"	60	"	"
"	"	66416	Fawcett Hardware Co., Saskatoon	3	"	40	Prairie City Oil Co., Saskatoon	Prairie City Oil Co., Saskatoon

DISTRICT OF ALBERTA—A. W. R. MARKLEY, INSPECTOR.

Aug 10	Tarjantown	9224	Northern Hardware Co., Edmonton	3	pts.	45	Brit. Amer. Paint Co., Edmonton	Brit. Amer. Paint Co., Edmonton
"	"	9237	Chas. Hardware Co., Edmonton	3	"	60	G. F. Stephens Co., Winnipeg 1885	G. F. Stephens Co., Winnipeg
"	"	9244	A. Werner, Edmonton	3	"	60	Brit. Amer. Paint Co., Edmonton	Brit. Amer. Paint Co., Edmonton
"	"	924	Sumerville Hardware Co., Edm.	3	"	60	Marshall Wells Alberta Co., Edmonton	Marshall Wells Alberta Co., Edmonton
"	"	9250	Geo. D. Wallace, Ltd., Wetaskiwin	3	"	50	G. F. Stephens Winnipeg	G. F. Stephens Winnipeg
"	"	9251	Merrison & Johnston, Ltd., Lethbridge	3	"	45	Marshall Wells Winnipeg	Marshall Wells Winnipeg
"	"	9252	A. M. Campbell, Lacombe	3	"	40	G. F. Stephens Co., Winnipeg	G. F. Stephens Co., Winnipeg
"	"	9253	J. R. Auldman Hardware Co., Calgary	3	"	50	Prairie City Oil Co., Winnipeg	Prairie City Oil Co., Winnipeg
"	"	9254	Marshall Hardware, Ltd., Calgary	3	"	60	Calgary Paint & Glass Co.	Calgary Paint & Glass Co.
"	"	9255	Harold Hardware Co., Calgary	3	"	25	Brit. Amer. Paint Co., Calgary	Brit. Amer. Paint Co., Calgary

BULLETIN No. 331—TURPENTINE.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	
1915.								
July 20	Turpentine	61847	F. Wilmes, Trail	3	60	Sherwin Williams Co., Montreal.		
" 20	"	61854	Hunter Bros., Rossland	3	40		Jones & Dillingham, Spokane.	
Aug. 6	"	61866	W. R. Megaw, Vernon	3	50		McLennan & McFeely, Vancouver.	
" 6	"	61867	Vernon Hardware Co., Vernon	3	60		Wood, Vallance & Leggett, Vancouver.	
" 10	"	61872	Wilcox Hall Co., Kamloops	3	50		McLennan & McFeely, Vancouver.	
" 10	"	61875	Marlatt & McKenzie, Kamloops	3	50	Imperial Oil Co., Vancouver.		
" 10	"	61876	N. S. Dalgleish, Kamloops	3	50	" "		
" 16	"	61882	Merritt Mercantile Co., Merritt	3	65		Johnson Paint & Varnish Co., Vancouver.	
" 16	"	61883	Armstrong's Departmental Stores, Merritt	3	50		Cunningham Hardware New Westminster.	
" 16	"	61886	A. Jackson, Merritt	3	60	Imperial Oil Co., Vancouver.		

DISTRICT OF ROCKY MOUNTAINS—THOS. PARKER, INSPECTOR.



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DISTRICT OF VANCOUVER—E. J. MORGAN, INSPECTOR.

July 28 Turpentine	5524 W. C. Sturman, 613 Granville St., Vancouver.	60	Imperial Oil Co., Vancouver.	.....
" 28 "	5524 Hester Horsman Paint Co., 642 3/4 Granville St., Vancouver.	60	British American Paint Co., Victoria.	.....
" 28 "	5525 F. R. Legg & Co., Ltd., 167 3/4 Fraser St., W., Vancouver.	50	A. Ramsay & Son, Montreal.	.....
" 28 "	5527 Imperial Varnish & Colour Co., 43 Pender St. W., Vancouver.	60	.....	.....
" 28 "	5532 Wood, Vinton & Leggett, Ltd., 811 Columbia St. W., Vancouver.	40	Imperial Oil Co., Vancouver.	.....
" 28 "	5533 Gordon Freen & Co., 2021 Granville St., Vancouver.	85	R. C. Jamieson & Co., Montreal.	.....
" 28 "	5534 Crown Paint Co., 24 Cordova St., E., Vancouver.	50	Turpentine Co., Remlig, Texas, U.S.A.	.....
" 28 "	5535 .....	55	.....	.....
" 28 "	5536 H. T. Kirk, Columbia St., New Westminster.	60	.....	.....
Aug 2 "	5537 Vancouver Hardware Co., 815 3/4 Pender St., Vancouver.	60	A. Ramsay & Son, Montreal.	.....
				Sold as near turpentine.
			Crown Paint Co., Vancouver.	
			McLennan & McPeely & Co., Vancouver.	

DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

Aug 24 Turpentine	6070 Muller Bros., Ltd., P.O. Box 346 and Victoria.	60	Imperial Oil Co., Victoria.	.....
" 28 "	6072 The Standard Co., 840 Fort St., Victoria.	75	Agent at Seattle, .....	.....
" 28 "	6073 O. Hartman & Son, 919 Pandora St., Victoria.	75	B. A. Paint Co., Victoria.	.....
" 28 "	6074 J. P. Parsons, 1051 Douglas St., Victoria.	75	"	.....
" 28 "	6076 F. Alcock & Son, 1214 Water St., Victoria.	75	The Standard Co., Victoria.	.....
" 28 "	6078 K. J. Murray & Co., 1002 Water St., Victoria.	75	Imperial Oil Co., Victoria.	.....
" 28 "	6080 The Manning Co., Ltd., 1015 Fort St., Victoria.	25	A. Harbace & Co., New Orleans.	.....
" 28 "	.....	60	Imperial Oil Co., Victoria.	.....



SESSIONAL PAPER No. 14

PART II—TURPENTINE.

ANALYSIS.

IV	20° C. of Fractions Residues.		Volumes Obtained from 100cc.								Residue on Evaporation.	Iodine Number.	Flash Point.	No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Residual 10cc.	Residual 25cc.	Under 150° C.	150° to 154°.	155° to 159°.	160° to 164°.	165° to 169°.	170° to 174°.	175° to 179°.	180° to 184°.						185° to 189°.
		1-4738	4	5	8	14	14	11	6	5	5	3			64256	Adulterated. See note on page 5.
		1-4742	3	3	6	17	15	9	8	5	5	4			64257	" "
		1-4741	3	4	7	16	15	9	7	5	3	1			64258	" "
		1-4743	2	4	9	14	14	10	6	5	4	1			64259	" "
		1-4737	3	4	8	13	13	11	7	4	5	7			64260	" "
	1-4708	1-4804	3	4	7	6	7	..	..	..	..	..			69841	
	1-4708	1-4798	3	7	7	10	..	..	..	..	..	..			69842	
	1-4713	1-4787	..	7	7	8	..	..	..	..	..	..			69843	
	4-4712	1-4850	..	6	7	8	..	..	..	..	..	..			63814	
	1-4700	1-4902	..	4	8	2	..	..	..	..	..	..			63816	
	1-4708	1-4849	..	4	7	9	..	..	..	..	..	..			60363	
	1-4705	1-4894	..	3	7	14	..	..	..	..	..	..			60364	
	1-4712	1-4806	..	1	7	12	..	..	..	..	..	..			60365	
	1-4715	1-4777	..	1	7	10	..	..	..	..	..	..			60366	
	1-4743	1-5137	2	5	4	2	6	3	2	1	1	..			60367	
		1-4841	5	17	4	6	..	..	..	..	..	..			60368	
	1-4669	1-4920	2	11	3	2	9	3	1	..	..	..			60369	Adulterated. See note on page 5.
	1-4692	1-4811	2	10	7	4	..	..	..	..	..	..			60370	" "
		1-4746	3	10	9	7	13	5	7	5	16	..			60371	Adulterated. See note on page 5.
	1-4723	1-5090	2	14	5	8	9	4	2	1	..	..			60372	" "
	1-4694	1-4773	1	10	7	..	..	..	..	..	..	..			66151	
	1-4700	1-4763	1	3	8	6	..	..	..	..	..	..			66152	
	1-4713	1-4828	..	5	8	3	..	..	..	..	..	..			66153	
	1-4688	1-4782	..	5	4	1	..	..	..	..	..	..			66154	
	1-4703	1-4794	..	5	8	3	..	..	..	..	..	..			66155	
	1-4695	1-4850	..	6	8	3	..	..	..	..	..	..			66156	
	1-4711	1-4794	..	5	7	6	..	..	..	..	..	..			66157	
	1-4702	1-4813	..	7	8	2	..	..	..	..	..	..			66158	
	1-4710	1-4809	..	2	7	15	..	..	..	..	..	..			66159	
	1-4702	1-4781	..	2	7	17	..	..	..	..	..	..			66160	
	1-4638	1-4784	1	5	3	2	14	7	6	1	1	..			3603	Adulterated. See note on page 5.
	1-4632	1-4780	3	9	5	2	4	1	1	..	..	..			3610	" "
	1-4698	1-4902	3	1	7	11	10	10	3	2	1	12			3615	
	1-4715	1-49+	2	1	10	14	21	15	3	2	1	21			3627	
	1-4730	1-49+	2	7	12	15	10	11	5	6	3	19			3684	
	1-4688	1-4804	1	2	2	2	20	17	8	9	4	7			3588	
															3598	
															4401	
	1-4728	1-4925	1	7	4	14	1	..	..	..	..	..			4403	
															4408	
	1-4724	1-5044	1	3	2	4	2	10	4	1	..	..			4410	
															4413	
	1-4788	1-5	6	3	9	14	14	6	5	2	1	3			4416	
															4423	
	1-4720	1-4948	9	6	9	4	2	..	..	..	..	..			299	
															300	
															311	
															313	
	1-4712	1-4922	12	3	4	11	15	5	4	7	7	12			322	Adulterated. See note on page 5.
															2709	" "
															2771	
															2773	
	1-4730	1-49	2	2	13	17	15	9	4	4	4	20			2777	Adulterated. See note on page 5.
															2783	" "









BULLETIN No, 331—TABLE I

RESULTS OF

Name of Inspectoral District.	No. of Sample.	Sp. Gr. at 15° C.	Residue 10 cc. cc. acid.	Ref. Index 20° C. Residue.	Ref. Index 20° C. Turpentine.	Boiling Point of Fractions from 100cc.				Refractive Index and			
						1st, 25cc.	2nd, 25cc.	3rd, 25cc.	Next, 15cc.	I	II	III	
Saskatchewan— Con.	66402	0.8685	0.52	1.5020	1.4700		Initial Boiling Point. 152°						
	66410	0.8681	0.48	1.5022	1.4701		149°						
	66412	0.8684	0.64	1.5094	1.4699		152°						
	66416	0.8696	0.48	1.5020	1.4708		152°						
	66418	0.8691	0.56	1.5100	1.4710		149°						
		Sp.gr. at 20° C.											
Alberta.....	52246	0.8599	1.60	1.4518	1.4671	152—160	163	-171	-217	1.4648	1.4660	1.4669	
	52247	0.8652	0.32	1.5005	1.4711	156—158	159	-160	-165	1.4689	1.4692	1.4702	
	52248	0.8548	1.76	1.4540	1.4665	152—157	-161	-167	-189	1.4648	1.4660	1.4666	
	52249	0.8652	0.36	1.4950	1.4710	154—157	-158	-160	-164	1.4689	1.4693	1.4703	
	52250	0.8652	0.36	1.4891	1.4708	155—158	-160	-163	-175	1.4682	1.4690	1.4700	
	52251	0.8658	0.36	1.4970	1.4700	152—156	-156	-158	-160	1.4683	1.4689	1.4695	
	52252	0.8733	0.56	1.4701	1.4711	152—157	-160	-166	-184	1.4666	1.4681	1.4690	
	52253	0.8624	0.48	1.4792	1.4700	154—157	-158	-160	-163	1.4683	1.4689	1.4699	
	52254	0.8669	0.32	1.5040	1.4711	154—157	-158	-159	-163	1.4690	1.4694	1.4701	
	52255	0.8554	1.60	1.4501	1.4663	155—162	-164	-170	-189	1.4649	1.4661	1.4663	
	Rocky Moun- tains.	61847	0.8684	0.48	1.5048	1.4708	153—157	-158	-160	-167	1.4684	1.4691	1.4700
		61854	0.8648	0.72	1.5092	1.4711	154—158	-159	-160	-161	1.4693	1.4700	1.4709
61866		0.8654	0.40	1.5023	1.4719	154—157	-158	-159	-164	1.4699	1.4706	1.4710	
61867		0.8681	0.48	1.5048	1.4710	153—157	-158	-160	-164	1.4686	1.4696	1.4698	
61872		0.8004	6.83	1.4246	1.4420	100—133	-152	-169	-187	1.4208	1.4305	1.4451	
61875		0.8530	2.32	1.4498	1.4661	154—160	-161	-169	-194	1.4639	1.4656	1.4661	
Vancouver.. . . .	61876	0.8695	0.36	1.5080	1.4709	153—158	-159	-160	-165	1.4681	1.4691	1.4700	
	61882	0.7972	7.84	1.4315	1.4411	145—157	-167	-179	-196	1.4371	1.4402	1.4447	
	61883	0.8682	0.52	1.4649	1.4700	150—156	-158	-162	-169	1.4629	1.4680	1.4699	
	61886	0.8780	0.32	1.4987	1.4729	153—160	-163	-167	-187	1.4680	1.4697	1.4706	
	55248	0.8676	0.24	1.5030	1.4710	152—156	-157	-159	-164	1.4687	1.4698	1.4701	
	55349	0.8542	1.68	1.4543	1.4667	153—159	-161	-166	-180	1.4651	1.4661	1.4670	
	55350	0.8643	0.84	1.4568	1.4690	150—156	-160	-164	-181	1.4630	1.4676	1.4689	
	55351	0.8567	0.76	1.4559	1.4660	147—153	-157	-159	-164	1.4579	1.4659	1.4679	
	55352	0.8667	0.30	1.4903	1.4703	153—159	-160	-162	-165	1.4669	1.4690	1.4699	
	55353	0.8284	5.48	1.4464	1.4543	147—163	-172	-191	-214	1.4453	1.4521	1.4562	
	55354	0.8651	0.24	1.5039	1.4700	154—157	-157	-157	-161	1.4684	1.4688	1.4691	
	55355	0.8668	0.54	1.4716	1.4695	148—156	-156	-160	-174	1.4620	1.4680	1.4699	
55356	0.8340	7.00	1.4491	1.4581	147—169	-184	-205	-220	1.4442	1.4519	1.4582		
Victoria... . . . .	55357	0.8713	0.50	1.4722	1.4702	150—159	-162	-168	-182	1.4631	1.4680	1.4700	
	66790	0.8661	0.36	1.5002	1.4710	152—157	-157	-159	-164	1.4687	1.4697	1.4702	
	66792	0.8700	0.36	1.5062	1.4711	154—157	-158	-159	-164	1.4689	1.4698	1.4701	
	66793	0.8573	1.84	1.4649	1.4681	154—161	-164	-167	-181	1.4658	1.4668	1.4679	
	66795	0.8503	2.30	1.4480	1.4648	155—159	-162	-169	-184	1.4639	1.4649	1.4653	
	66797	0.8691	0.52	1.5040	1.4710	154—158	-160	-161	-167	1.4686	1.4690	1.4700	
	66799	0.8775	0.36	1.5008	1.4719	149—156	-157	-162	-184	1.4662	1.4688	1.4699	
	66601	0.8639	0.36	1.5021	1.4704	154—157	-157	-158	-160	1.4690	1.4697	1.4703	
	66603	0.8461	3.24	1.4523	1.4630	153—160	-160	-172	-187	1.4612	1.4633	1.4640	



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PART II—TURPENTINE.

ANALYSIS.

20° C. of Fractions Residues.		Volumes Obtained from 100cc.								Residue on Evaporation.	Iodine Number.	Flash Point.	No. of Sample.	Remarks and Opinion of the Chief Analyst.		
IV	Residual 10cc.	Residual 25cc.	Under 150° C.	150 to 151°	155 to 159	160 to 164	165 to 169	170 to 174	175 to 179						180 to 184	185 to 189
					92							1.53	348.6	...	66402	
					86							2.03	329.4	...	66410	
					86							1.57	348.2	...	66412	
					87							1.98	346.7	...	66416	
					93							1.68	338.6	...	66418	
1.4670	1.4969			1	18	39	14	7	4	3	1	3	312.2	35.5	52246	Adulterated. See note on page 5.
1.4719	1.4919				64	24	2						378.2	32.5	52247	Adulterated. See note on page 5.
1.4662	1.4786			1	38	28	13	5	3	1	1		314.7	35.5	52248	Adulterated. See note on page 5.
1.4717	1.4880				68	22							377.0	33.0	52249	
1.4720	1.4989				47	33	6	3	1				373.1	32.5	52250	
1.4709	1.4893				2	79	9						373.1	31.5	52251	
1.4721	1.5041				2	37	28	15	4	2	2		342.6	33.0	52252	
1.4708	1.4788				71	19							371.8	31.5	52253	
1.4713	1.4879				77	13							375.7	34.0	52254	
1.4668	1.4797				16	43	14	7	4	3	3		315.9		52255	Adulterated. See note on page 5.
1.4712	1.4960				1	69	17	3					387.1	33.5	61847	
1.4718	1.4839				65	25							388.6	34.5	61854	
1.4722	1.4903				83	7							387.1	34.5	61866	
1.4715	1.4894				1	68	21						376.0	33.5	61867	
1.4650	1.4889	47	8	8	7	5	5	4	3	3			60.3	5.0	61872	Adulterated. See note on page 5.
1.4653	1.4810				17	40	18	7	4	2	1	1	291.8	35.5	61873	
1.4714	1.4945				1	0	35	5					386.7	32.5	61876	
1.4569	1.4625		3	10	18	12	11	11	9	6	5	5	9.5	32.0	61882	
1.4721	1.5001				10	48	25	7					345.7	29.0	61885	
1.4732	1.5090				1	4	59	16	5	3	1	1	364.9	33.0	61886	
1.4719	1.4910				2	76	12						387.1	33.0	55348	
1.4668	1.4721				1	24	15	11	6	2	1		320.4	34.5	55349	
1.4702	1.4981				8	37	29	9	3	2	2		336.2	30.7	55350	
1.4697	1.4857		8	21	44	7							345.7	29.5	55351	
1.4712	1.4838				1	19	65						374.4	32.0	55352	
1.4662	1.4720		2	1	9	13	14	13	9	5	4	17	133.2	34.0	55353	Adulterated. See note on page 5.
1.4706	1.4827				84	6							383.9	34.0	55354	
1.4721	1.5021		3	10	50	14	4	3					345.7	29.0	55355	
1.4639	1.4788		4	5	6	6	6	7	7		8	33	53.9	32.0	55356	Adulterated. See note on page 5.
1.4724	1.5031				6	14	49	11	5	3	2		344.8	30.5	55357	
1.4718	1.4611				3	72	15						364.9	33.0	66726	
1.4712	1.4897				78	12							374.4	34.0	66727	
1.4672	1.4778				6	49	25	6	3	1			325.2	35.5	66728	
1.4642	1.4695				25	37	13	5	3	3			287.1	35.5	66729	Adulterated. See note on page 5.
1.4713	1.4900				39	16	5						376.0	34.0	66737	
1.4736	1.5096		2	10	58	10	4	3	2	1			350.5	31.0	66739	
1.4712	1.4822				85	5							388.6	34.5	66741	
1.4628	1.4662				1	10	50	9	9	6	4	2	269.7	35.0	66742	Adulterated. See note on page 5.

APPENDIX W.

BULLETIN No. 332—RAW LINSEED OIL.

OTTAWA, January 14, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to submit a report dealing with two hundred and ten (210) samples of raw linseed oil, obtained by our inspectors throughout Canada in July, August and September of last year.

These samples were purchased from dealers in paint materials, the object being to ascertain to what extent, if at all, surrogates are offered on the market. The fourth schedule to the Adulteration Act defines *White Lead in Oil* as “Dry white lead ground in pure linseed oil, etc,” thus involving the identification of linseed oil as a paint material.

In September, 1913 (see Bulletin No. 266), I reported upon fifty-three samples of linseed oil, and from this report I quote the following:—

“Owing to the fact that commercial linseed is never pure, it follows that the oil expressed from such seed varies in character, within limits, depending upon the nature and amount of foreign seeds in admixture. The following extremes are quoted from Allen’s Commercial Organic Analysis, 4th edition, vol. II, p. 70:—

Specific gravity at 15.5°C . . . . .	0.9315 to 0.9410
Solidifying point. . . . .	16° 27°C.
Melting point of fatty acids. . . . .	17° 24°C.
Saponification value. . . . .	190 201
Reichert-Meißl value. . . . .	0
Hehner value. . . . .	95.0 95.5
Iodine value. . . . .	175 201

Owing to the great variety and diverse character of available adulterants for linseed oil, and to the inevitable variability of the article, even when commercially genuine, the detection (and particularly the specific identification) of adulteration in linseed oil is far from being a simple matter. Large buyers of linseed oil would do well to furnish specifications of the article they demand, or purchase by sample. The American Society for Testing Materials fixed the following specifications for the year 1910 (*Oil and Colour Journal*, 1909, 36):—

RAW LINSEED OIL.

	Maximum.	Minimum.
Specific gravity at 15°C. . . . .	0.936	0.932
“ “ 25°C. . . . .	0.931	0.927
Acid number. . . . .	6.000	
Saponification value . . . . .	192	189
Unsapoifiable residue. . . . .	1.5	
Refractive index at 25°C. . . . .	1.4805	1.4790
Hanus iodine value. . . . .	190	178

## SESSIONAL PAPER No. 14

As judged by the above quoted standards, which, however, have no direct legal approval for Canada, the samples now reported appear as below:—

	Samples.
Genuine... . . . . .	190
Doubtful... . . . . .	9
Adulterated... . . . . .	11
Total... . . . . .	210

Allen (Com. Org. Analysis, Vol. II, 339) quotes the following list of adulterants for linseed oil: Mineral hydrocarbons, cottonseed oil, nigerseed oil, tung oil, fish oil, hempseed oil; rosin and rosin oil, rape oil, ravison oil, safflower oil, and candle nut oil. Of course the particular adulterant selected in a given case will depend upon the cheapness of the adulterant. Mineral hydrocarbons and rosin oil appear most usually in adulterated linseed oil as offered on Canadian markets.

A material which may become available as a substitute for, or possibly as an adulterant of, linseed oil, is a fraction of the oils obtained in the destructive distillation of wood. (Pritchard, *Journal Industrial and Engineering Chemistry*, 1912, 333.) The author says: "We have had these oils tested out for the commercial purposes that rosin oils are used for, and they seem to serve admirably. They can be produced at much less cost."

Teeple (*Journal Industrial and Engineering Chemistry*, 1913, p. 682), writing of the utilization of wood waste, says: "The light oils from resinous woods, which are between tar oil and turpentine in their character, find a very limited market."

I beg to recommend publication of this report as Bulletin No. 332.

I have the honour to be, Sir,

Your obedient servant,

A. MCGILL,  
Chief Analyst.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1915.							
Sept. 28	Raw Linseed Oil.	64246	Wm. Stairs, Son, & Morrow, Halifax.	1½ pts.	15	Can. Linseed Oil Co., Montreal.	Mfrs .....
" 28	"	64247	Wm. Robertson & Son, Halifax.	1½ "	15	Dom. Linseed Oil Co., Montreal.	" .....
" 28	"	64248	A. M. Bell & Co., Halifax..	1½ "	15	Can. Linseed Oil Mill Co., Montreal.	" .....
" 28	"	64249	Jas. Simmonds, Ltd., Halifax.	1½ "	15	" "	" .....
" 28	"	64250	Geo. E. Smith & Co., Halifax.	1½ "	15	Dom. Linseed Oil Co., Montreal.	" .....

DISTRICT OF NOVA SCOTIA—

Aug. 13	Raw Linseed Oil.	69831	J. L. Fraser, New Glasgow.	3 pts.	45	Imperial Oil Co., Halifax.	Mfrs.....
" 13	"	69832	Thompson & Sutherland, New Glasgow.	3 "	37	Sherwin-Williams Co., Montreal.	" .....
" 13	"	69833	Bent & Cohoon, New Glasgow.	3 "	38	Can. Paint Co., Montreal.	" .....

DISTRICT OF CAPE BRETON—

July 27	Raw Linseed Oil.	63813	C. P. Moore, Sydney.....	3 pts.	45	Dom. Linseed Oil Co., Montreal.	.....
" 27	"	63815	Thompson, Sutherland Co., Sydney.	3 "	45	Sherwin-Williams Co., Montreal.	.....

DISTRICT OF PRINCE EDWARD ISLAND—

July 15	Raw Linseed Oil.	60353	Prowse & Sons, Murray Harbour.	3 pts.	25	.....	Thompson & Sutherland, New Glasgow.
" 17	"	60354	S. H. Crabbe, Charlottetown.	3 "	30	Sherwin-Williams, Montreal.	.....
" 17	"	60355	Fennell & Chandler, Charlottetown.	3 "	35	Dom. Linseed Oil Co., Montreal.	.....
" 19	"	60356	Rogers Hardware Co., Charlottetown.	3 "	35	The Can. Linseed Oil Mills, Ltd., Montreal.	.....
" 19	"	60357	P. J. Benigan, Dunceden, Lot 31.	3 "	35	.....	Rogers Hardware Co., Charlottetown.
" 19	"	60358	A. J. McNevin, Bonshaw, Lot 0	3 "	35	.....	"

SESSIONAL PAPER No. 14

RAW LINSEED OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Refractive Index at 20° C.	Specific Gravity at 15.5° C.	Saponification Number.	Spot Test.	Unsaponifiable Matter.		

R. J. WAUGH, INSPECTOR.

.....	1.4807	0.933	191.6	Linseed	.....	64246	Genuine.
.....	1.4810	0.934	192.5	"	.....	64247	"
.....	1.4808	0.933	190.8	"	.....	64248	"
.....	1.4808	0.933	189.0	"	.....	64249	"
.....	1.4809	0.933	190.8	"	.....	64250	"

WALTER A. PETIPAS, TEMPORARY INSPECTOR.

.....	1.4808	0.933	190.8	Linseed	.....	69831	Genuine.
.....	1.4810	0.933	193.2	"	.....	69832	"
.....	1.4809	0.933	194.8	"	.....	69833	"

E. F. McKEEN, INSPECTOR.

.....	1.4808	0.933	193.0	Linseed	.....	63813	Genuine.
.....	1.4810	0.932	193.9	"	.....	63815	"

WM. A. WEEKS, INSPECTOR.

.....	1.4808	0.932	192.0	Linseed	.....	60453	Genuine.
.....	1.4800	0.929	187.5	"	1.17	60354	Specific gravity low. Doubtful.
.....	1.4804	0.933	192.3	"	.....	60454	Genuine.
.....	1.4811	0.933	193.8	"	.....	60455	"
.....	1.4819	0.930	192.0	Foreign oil.	1.90	60257	Doubtful. Non-saponifiable more than high.
.....	1.4812	0.933	195.3	Linseed	.....	60456	Genuine.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF PRINCE EDWARD ISLAND—

1915.							
July	23	Raw Linseed Oil.	60359	Russell Car, Morell .....	3 pts.	35	Can. Paint Co., Montreal.
"	23	"	60360	H. H. Cox, Morell .....	3 "	35	Can. Linseed Oil Mills, Ltd., Montreal.
"	23	"	60361	Lestock, Anderson, St. Peters.	3 "	35	A. M. Bell Co., Halifax.
"	23	"	60362	Matthew & McLean, Ltd., Souris.	3 "	35	Sherwin-Williams, Montreal.

DISTRICT OF NEW BRUNSWICK—

Aug.	2	Raw Linseed Oil.	66141	Robertson, Foster & Smith, St. John.	3 pts.	40	Dom. Linseed Oil Co., Montreal.
"	3	"	66142	F. A. Young, St. John....	3 "	40	The Can. Oil Co., Ltd., Montreal.
"	3	"	66143	T. McAvity & Sons, St. John.	3 "	40	Dom. Linseed Oil Co., Montreal.
"	4	"	66144	W. H. Thorne & Co., Ltd., St. John.	3 "	45	Can. Linseed Oil Mills, Montreal.
"	4	"	66145	H. L. & J. T. McGowan, St. John.	3 "	50	"
"	11	"	65146	The De Wolfe Hardware Co., St. Stephen.	3 "	45	Robertson, Foster & Smith, St. John.
"	17	"	66147	R. Chestnut & Son, Fredericton.	3 "	45	Dom. Linseed Oil Co., Montreal.
"	18	"	66148	W. F. Dibley & Son, Woodstock.	3 "	45	Can. Paint Co., Ltd., Montreal.
"	24	"	66149	Sussex Mercantile Co., Ltd., Sussex.	3 "	45	Can. Linseed Oil Co., Ltd., Montreal.
"	26	"	66150	Sumner & Co., Moncton.	3 "	30	De B. Carritte, St. John.

DISTRICT OF QUEBEC PROVINCE—

July	6	Huile de lin.	3602	A. Audet, Ste. Claire ...	3 pts.	35	The Beaver Co., Ltd., Montreal.
"	7	"	3604	Dorchester Lumber, St. Malachi.	3 "	21	Sherwin-Williams.
"	12	"	3611	J. L. Audet, St. Edward..	3 "	25	William Doyle....
"	16	"	3625	P. K. Prevost, Ste. Rose...	3 "	15	Herwin Young, Quebec.
"	17	"	3626	Ganipie, Ste. Prosperie. .	3 "	25	Fratingham, Montreal.

SESSIONAL PAPER No. 14

RAW LINSEED OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Refractive Index at 20° C.	Specific Gravity at 15.5° C.	Saponification Number.	Spot Test.	Unsapnifiable Matter.		

Concluded.

.....	1.4808	0.932	195.1	Linseed	.....	60359	Genuine.
.....	1.4811	0.933	197.3	"	.....	60360	"
.....	1.4811	0.934	193.5	"	.....	60361	"
.....	1.4811	0.934	196.8	"	.....	60362	"

JOHN C. FERGUSON, INSPECTOR.

.....	1.4811	0.932	191.9	Linseed	.....	66141	Genuine.
.....	1.4808	0.933	190.7	"	.....	66142	"
.....	1.4811	0.933	193.5	"	.....	66143	"
.....	1.4809	0.933	192.4	"	.....	66144	"
.....	1.4807	0.933	192.2	"	.....	66145	"
.....	1.4810	0.933	192.0	"	.....	66146	"
.....	1.4805	0.933	193.2	"	.....	66147	"
.....	1.4806	0.932	192.0	"	.....	66148	"
.....	1.4813	0.933	195.7	"	.....	66149	"
.....	1.4804	0.933	193.2	"	.....	66150	"

J. E. AUDET, D. BROCHU, N. CADICUX, T. GENDREAU, TEMP. INSPECTORS

.....	.....	0.944	189.7	Doubt- ful	6.14	3602	Adulterated. Saponification too low.
.....	.....	0.934	189.8	Linseed	.....	3604	Genuine.
.....	.....	0.930	183.2	"	1.28	3611	Doubtful. Saponification low.
.....	.....	0.939	176.9	Doubt- ful	5.89	3625	Adulterated. Saponification too low.
.....	.....	0.935	173.7	India tea adul- terated	8.49	3627	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF QUEBEC PROVINCE—							
1915.							
July 20	Huile de lin. crue.	3587	Michel Lacroix, St. Raphael.	1 pt.	20	Sherwin-Williams	
" 20	Huile de lin.	3590	Archille Lamarie, St. Valier.	1 "	23	Can. Paint, Montreal.	
" 20	"	3592	L. A. Roy, St. Valier.	1 "	24	"	
" 22	Huile lin bouillie,	4402	Geo. Roy, St. Michel.	3 bots.	23	Martin Senour Co., Montreal.	
" 22	"	4404	J. A. Lemieux, St. Michel.	3 "	23	Sherwin-Williams Co., Montreal.	
" 22	Huile de lin.	4411	J. B. Lacroix, St. Charles.	1 pt.	25	Can. Paint Co.	
" 22	"	4412	J. E. Rouillard, St. Gervais.	1 "	30	Sherwin-Williams Co.	
" 22	Huile de lin.	4417	Arthur Arsenaault, St. Gervais.	1 Pte.	23	Can. Paint Co., Montreal.	
" 23	" " "	4421	Charles Gagnon, St. Damien.	1 "	32	Dorchester Lambert Co., Montreal.	
" 23	" " "	4422	Napoleon Aubin, St. Damien.	1 "	32	" "	
" 12	" " "	297	Alexandre Villeneuve, St. Jerome.	3 chop	60	Mount Royal Colour & Varnishing Co., Ltd. Montreal.	
" 12	" " "	298	Charlesmagne Taillon, St. Jerome.	3 "	51	Sherwin Williams	
" 19	" " "	310	Adelard Sigonin Ste. Agathe des Mont.	3 "	50	Mount Royal.	
" 19	" " "	312	F. Lebreque, Ste. Agathe des Mont.	3 "	60	R. C. Jameson.	
" 15	" " "	2768	Anselme Provost, St. Francois Montmagny.	1 "	15	Can. Paint Co., Montreal.	
" 16	" " "	2770	George Roy, Berthier.	1 "	15	Martin Senour, Montreal.	
" 18	" " "	2774	Alphonse Letourneau, St. Pierre, Montmagny.	1 "	15	Sanson & Filion, Quebec.	
" 20	" " "	2778	Joseph Dube, Cap. St. Ignace.	1 "	15	Stark Seybold Ltd. Montreal.	
" 21	" " "	2784	Joseph Fournier, St. Thomas Montmagny.	1 "	15	J. E. Lemieux, Quebec.	
" 26	" " "	2790	Alphonse Labarge, Montmagny.	1 "	15	Can. Paint Co., Montreal.	
" 27	" " "	2791	Ludger Godbout, St. Rosaire, Montmagny.	1 "	15	Livingstone Linsed Oil, Montreal.	
" 28	" " "	2795	J. P. Letourneau, St Paul, Montmagny.	1 "	15	Can. Paint Co., Montreal.	
" 29	" " "	2798	G. Blais, St. Ephemie, Montmagny.	1 "	15	Sherwin Williams, Montreal.	
Sept. 14	Huile de peinture	321	Ernest Lahaie, St. Eustache, Comte des deux Mont.	3 "	30	Prudhomme, Montreal.	



SESSIONAL PAPER No. 14

RAW LINSEED OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of sample.	Remarks and Opinion of the Chief Analysis.
	Refractive Index at 20°C.	Specific Gravity 15-15°C.	Saponification Number.	Spot Test.	Unsaponifiable Matter.		

Concluded.

.....	0.935	191.4	Linseed	.....	3587	Genuine.
.....	0.937	187.4	"	1.64	3590	"
.....	0.938	188.1	"	1.64	3592	"
.....	0.938	182.0	"	2.42	4402	Doubtful. Unsaponified residue is high.
.....	0.938	189.9	"	.....	4404	Genuine.
.....	0.937	184.8	"	1.48	4411	"
.....	0.938	183.2	"	1.28	4412	"
.....	0.950	187.8	"	1.10	4417	Abnormal, Specific gravity, doubt- ful.
.....	0.936	187.6	"	0.90	4421	Genuine.
.....	0.939	186.8	"	1.24	4422	"
.....	0.934	183.2	Doubt- ful.	2.94	297	Doubtful, Unsaponified residue high.
.....	0.937	183.8	Linseed	68	298	Genuine.
.....	0.935	190.3	"	.....	310	"
.....	0.937	191.4	"	.....	312	"
.....	0.938	185.6	"	.....	2768	"
.....	0.940	186.0	"	3.80	2770	"
.....	0.938	189.8	"	.....	2774	"
.....	0.935	177.5	Indices normal oil	4.82	2778	Adulterated, saponification low
.....	0.936	180.2	"	6.28	2784	"
.....	0.937	184.4	Linseed	1.20	2790	Genuine.
.....	0.937	180.7	Doubt- ful	5.88	2791	Adulterated. Saponification low
.....	0.936	185.7	Linseed	1.50	2795	Genuine.
.....	0.935	190.2	"	.....	2798	"
.....	0.937	184.5	"	.....	321	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF THREE RIVERS—

1915.							
July	7	Linseed Oil Crude.	69106	Chas. Leblanc, Joliette....	3 pts.	45	Can. Paint Co., Montreal.
"	8	"	63115	S. Costello, Joliette.....	3 "	38	"
"	7	"	69116	Edm. Wodon, Joliette.....	3 "	38	The Joliette Steel Co., Joliette.
"	9	"	69117	Monahan Bros., St. Lin....	3 "	40	Imperial Oil Co., Montreal.
"	10	"	69118	George Beaudoin, St. Esprit.	3 "	45	Can. Paint Co., Montreal.
"	12	"	69119	E. Lamion, L'Epiphanie...	3 "	45	"
"	22	"	69120	L. O. Lassalle, St. Jacques.	3 "	45	Caverhill Learning, Montreal.
"	13	"	69121	Bedard Cie, L'Assomption...	3 "	40	Can. Paint Co., Montreal.
"	23	"	69163	J. A. Bellerose, St. Felix de Valois.	3 "	48	Lewis Bros, Montreal.
"	23	"	69164	Wilfred Bonin, St. Felix de Valois.	3 "	48	Can. Paint Co., Montreal.

DISTRICT OF EASTERN TOWNSHIPS—

Aug.	11	Raw Linseed Oil.	63060	W. Bourque, Sherbrooke...	3 pts.	40	.....
"	11	"	63061	Jos. Lacombe et fils, Sherbrooke.	3 "	35	Mount Royal Colour & Varnish Co., Montreal.
"	11	"	63062	Marc. E. Cadieux, Sherbrooke.	3 "	45	Georgia Turpentine Co.
"	11	"	63063	Coderie & fils, Inc., Sherbrooke.	3 "	45	Martin Senour Co., Ltd., Montreal.
"	11	"	63064	J. S. Mitchell & Co., Sherbrooke.	3 "	60	Dom. Linseed Oil Co., Montreal.
"	13	"	63065	Beaunoyer & Lalime, St. Hyacinthe.	3 "	37	Can. Paint Co., Montreal.
"	13	"	63066	J. B. St. Pierre, St. Hyacinthe.	3 "	38	.....
"	17	"	63067	N. Mitchell & Co., Granby	3 "	35	Sherwin-Williams, Ltd., Montreal.
"	18	"	63068	E. E. Gauvin & Co., Magog	3 "	35	.....
"	18	"	63069	W. McKenna, Magog.....	3 "	35	Ramsay Sons & Co., Montreal.

SESSIONAL PAPER No. 14

RAW LINSEED OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Refractive Index at 20°C.	Specific Gravity at 15.5°C.	Saponification Number.	Spot Test.	Unsaponifiable Matter.		

Dr. V. P. LAVALLEE, INSPECTOR.

.....	0.936	192.1	Linseed.	.....	69106	Genuine.
.....	0.933	190.9	"	.....	69115	"
.....	0.930	159.1	Indica- tes min- eral oil	10.80	69116	Adulterated. Saponification too low. Some uncertainty in identi- fication of sample.
.....	0.933	192.1	Linseed.	.....	69117	Genuine.
.....	0.940	192.1	"	.....	69118	"
.....	0.935	192.8	"	.....	69119	"
.....	0.933	192.8	"	.....	69120	"
.....	0.933	191.5	"	.....	69121	"
.....	0.932	192.8	"	.....	69163	"
.....	0.933	192.1	"	.....	69164	"

J. J. COSTIGAN, ACTING INSPECTOR.

.....	0.935	190.9	Linseed.	.....	63060	Genuine.
.....	0.933	190.3	"	.....	63061	"
.....	0.934	166.8	Doubt- ful.	10.88	63062	Adulterated. Saponification too low.
.....	0.935	189.8	Linseed.	.....	63063	Genuine.
.....	0.935	189.1	"	.....	63064	"
.....	0.935	189.8	"	.....	63065	"
.....	0.935	189.1	"	.....	63066	"
.....	0.934	189.8	"	.....	63067	"
.....	0.933	190.3	"	.....	63068	"
.....	0.935	192.0	"	.....	63069	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF MONTREAL—

1915.								
Aug. 4	Raw Linseed Oil.	67446	The People's Hardware Co., 152 St. Lawrence Boul., Montreal.	3 pts.	45	Unknown .....		
" 4	" ..	67447	L. J. A. Surveyor, 52 St. Lawrence Boul., Montreal	3 "	45	Mount Royal Colour and Varnish Co.		
" 16	" ..	67448	A. Brouillet, 1390 St. Lawrence Boul., Montreal.	3 "	38	Can. Paint Co. ....		
" 16	" ..	67449	O. Rollin & Co., 1324 St. Lawrence Boul., Montreal	3 "	38	Martin Senour Co. ....		
" 16	" ..	67450	Beauvais Freres, 336 St. Lawrence Boul., Montreal	3 "	45	Unknown .....		
" 23	" ..	67451	J. O. Denis, 239 St. Paul St. E., Montreal.	3 "	30	Mount Royal Colour & Varnish Co		
" 24	" ..	67452	Levac & Lalonde, 187 Church Ave., Verdun.	3 "	40	Martin Senour Co.		
" 24	" ..	67453	Fauteux Ltd., 1365 Wellington St., Verdun.	3 "	40	Can. Paint Co. ....		
" 24	" ..	67454	The Raymond Hardware, Ltd., 343 Notre Dame St. W., Montreal.	3 "	38	Unknown .....		
" 24	" ..	67455	I. L. Lafleur, 366 Notre Dame St. W., Montreal.	3 "	38	Dom. Linseed Oil Co.		

## DISTRICT OF VALLEYFIELD—

July 22	Raw Linseed Oil.	57981	L. P. Beaulne, Hawkesbury.	3 pts.	40	Can. Paint Co. ....		
" 22	" ..	57982	J. G. Higginson, " ..	3 "	25	Brandram Henderson Co.		
" 22	" ..	57983	J. O. Phenix, " ..	3 "	45	Can. Paint Co ..		
" 27	" ..	57984	Victor Leger, Valleyfield..	3 "	40	.....		
" 27	" ..	57985	Besner Chasle, " ..	3 "	36	.....		
" 27	" ..	57986	N. Langevin, " ..	3 "	35	.....		
" 27	" ..	57987	A. Leboef, " ..	3 "	35	McColl Bros. Montreal.		
" 28	" ..	57988	August Forget, St. Johns..	3 "	30	" "		
" 28	" ..	57989	C. O. Gervais & Frere " ..	3 "	40	.....		
" 28	" ..	57990	E. Laberge, Sherville....	3 "	35	.....		

SESSIONAL PAPER No. 14

RAW LINSEED OIL.

Inspector's Report (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinions of the Chief Analyst.
	Refractive Index at 20° C.	Specific Gravity at 15.5° C.	Saponification Number.	Spot Test.	Unsaponifiable Matter.		

D. J. KEARNEY, INSPECTOR.

.....	0.939	189.8	Linseed.	.....	67446	Genuine.
.....	0.936	186.7	"	2.52	67447	Doubtful; Unsaponified residue high.
.....	0.936	191.4	"	.....	67448	Genuine.
.....	0.934	190.9	"	.....	67449	"
.....	0.935	189.8	"	.....	67450	"
.....	0.935	189.8	"	.....	67451	"
.....	0.935	190.2	"	.....	67452	"
.....	0.933	191.4	"	.....	67453	"
.....	0.935	190.9	"	.....	67454	"
.....	0.934	190.9	"	.....	67455	"

J. J. COSTIGAN, ACTING INSPECTOR.

.....	0.938	192.1	Linseed.	.....	57981	Genuine.
.....	0.935	193.4	"	.....	57982	"
.....	0.934	190.2	"	0.82	57983	"
.....	0.934	190.2	"	.....	57984	"
.....	0.934	191.5	"	.....	57985	"
.....	0.933	190.9	"	.....	57986	"
.....	0.909	193.8	Doubtful	23.30	57987	Adulterated; Saponification too low.
.....	0.935	192.8	Linseed.	.....	57988	Genuine.
.....	0.930	148.4	Doubtful	30.96	57989	Adulterated; Saponification too low.
.....	0.934	189.6	Linseed.	0.78	57990	Genuine.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name And Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF OTTAWA—

1915.								
July	16	Raw Linseed Oil.	59292	E. J. Mc'Garry, Renfrew.	3 pts.	35	Ottawa Paint Works, Ottawa.	Mfrs. ....
"	16	" " ..	59293	Devine & Legree, Renfrew.	3 "	45	Livingstone Linseed Oil Co., Montreal.	" .....
"	17	" " ..	59294	R. H. Smart, Brockville.	3 "	30	Sherwin Williams, Montreal.	" .....
"	17	" " ..	59295	A. G. Dobbie & Co., Brockville.	3 "	40	Can. Linseed Oil Mills, Montreal.	" .....
"	17	" " ..	59296	B. D. Steacy, Brockville.	3 "	45	Can. Paint Co., Montreal.	" .....
"	24	" " ..	59297	Austin Jarvo, Cornwall.	3 "	35	Livingstone Linseed Oil Co., Montreal.	Stark, Seybold Ltd., Montreal
"	24	" " ..	59298	N. Turner, & Son, Cornwall.	3 "	35	Ottawa Paint Works, Ottawa.	Mfrs. ....
"	31	" " ..	59299	J. M. Taylor, Pembroke.	3 "	45	" " .....	" .....
"	31	" " ..	59300	Dunlop & Co., Lt 1, Pembroke.	3 "	45	" " .....	" .....
Aug.	7	" " ..	51700	Stephen Pilon, Rockland.	3 "	30	" " .....	" .....
"	13	" " ..	63694	Taylor Bros., Carleton Place	3 "	35	McArthur & Irvine, Montreal.	" .....
"	13	" " ..	63695	W. J. Muirhead, Carleton Place.	3 "	35	" " .....	" .....

## DISTRICT OF KINGSTON—

July	28	Raw Linseed Oil.	70241	Savage & Wightman, Kingston.	3 pts.	18	Sanderson & Percy Co., Toronto.	.....
"	23	" " ..	70242	Robinson Bros., Kingston.	3 "	32	.....	J. H. Morin, Toronto.
"	28	" " ..	70243	A. Chown & Co., Kingston.	3 "	15	Livingstone, Montreal.	.....
"	28	" " ..	70244	John Laird & Son, Kingston.	3 "	20	.....	Dalton & Son, Kingston.
"	23	" " ..	70245	H. W. Marshall, Kingston.	3 "	45	.....	" "
"	28	" " ..	70246	Simmons Bros., Kingston.	3 "	20	Sherwin Williams, Montreal.	.....
"	23	" " ..	70247	J. B. Bunt & Co .....	3 "	35	.....	Dalton & Son, Kingston.
"	23	" " ..	70248	W. A. Mitchell, Kingston.	3 "	30	.....	" "
"	28	" " ..	70249	Batsford & Nicol, Kingston.	3 "	45	.....	W. A. Mitchell, Kingston.
"	23	" " ..	70250	McKelvey & Birch, Kingston.	3 "	30	McArthur & Irvine, Montreal.	.....

SESSIONAL PAPER No. 14

RAW LINSEED OIL

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Refractive Index at 20° C.	Specific Gravity at 15.5° C.	Saponification Number.	Spot Test.	Unsaponifiable Matter.		

J. A. RICKEY, INSPECTOR.

.....	0.934	188.2	Linseed	.....	59292	Genuine.
.....	9.934	188.2	"	1.60	59293	"
.....	0.933	188.8	"	.....	59294	"
.....	0.934	188.8	"	.....	59295	"
.....	0.935	190.9	"	.....	59296	"
.....	0.933	190.9	"	.....	59297	"
.....	0.934	190.9	"	.....	59298	"
.....	0.933	191.5	"	.....	59299	"
.....	0.933	190.9	"	.....	59300	"
.....	0.935	189.8	"	.....	51700	"
.....	0.934	192.1	"	.....	63094	"
.....	0.934	191.5	"	.....	63095	"

JAMES HOGAN, INSPECTOR.

.....	0.933	189.4	Linseed	.....	70241	Genuine.
.....	0.934	194.0	"	.....	70242	"
.....	0.933	193.4	"	.....	70243	"
.....	0.934	194	"	.....	70244	"
.....	0.933	192.8	"	.....	70245	"
.....	0.933	193.4	"	.....	70246	"
.....	0.934	193.4	"	.....	70247	"
.....	0.934	192.3	"	.....	70248	"
.....	0.934	190.8	"	.....	70249	"
.....	0.934	190.8	"	.....	70250	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF TORONTO—

1915.							
Aug. 8	Raw Linseed Oil.	70064	H. Stainton, 44 Vaughan Rd., Toronto.	3 bts.	30	Can. Linseed Oil Co., Baden.	
" 10	"	70065	R. P. Freek, 681 St. Claire Toronto.	3 "	40		H. H. Broadfield, Toronto.
" 11	"	70066	McMillan & Costin, 166 Main St., Toronto.	3 "	30	Sherwin-Williams, Ltd., Toronto.	
" 13	"	70067	Cutts Hardware Co., 1824 Dundas St. W., Toronto.	3 "	30		Martin, Senour, Ltd., Toronto.
" 14	"	70068	A. M. Oldham, Weston	3 "	45	Sherwin-Williams, Ltd., Toronto.	
" 16	"	70069	Geo. Garrett, 582 College St., Toronto.	3 "	30		Stewart & Wood, Toronto.
" 16	"	70070	J. Jolly, 702 College St., Toronto.	3 "	45		" "
" 8	"	70071	Johnson & Co., 1000 Dundas St., Toronto.	3 "	30	Sherwin-Williams, Ltd., Toronto.	
" 18	"	70072	M. Toose, 121 Roncesville Ave., Toronto.	3 "	40	Turpentine Producers, Ltd., Toronto.	
" 20	"	70073	P. J. Madigan, 1130 Queen St. W., Toronto.	3 "	35	Sherwin-Williams, Ltd., Toronto.	

DISTRICT OF HAMILTON—

July 21	Raw Linseed Oil.	70051	W. W. McClelland & Co., Niagara-on-the-Lake.	3 pts.	20	Sherwin-Williams Co., Montreal.	
" 22	"	70052	Coy Bros., 73 St. Paul St., St. Catharines.	3 "	45		Unknown
" 23	"	70053	J. T. Henderson, 43 Queen St., Niagara Falls.	3 "	40		Hobbs Hardware Co., Ltd., London.
" 23	"	70054	Garner Bros., 122 Main St., Niagara Falls S.	3 "	35	Sherwin-Williams Co., Ltd., Toronto.	
" 24	"	70055	Chas. Kister, Chippawa	3 "	38		Unknown
" 28	"	70056	Smith & Schaefer, Bolton	3 "	25		Sanderson, Pearey Co., Toronto.
Aug. 3	"	70057	J. A. Hendeson, Brampton.	3 "	35		Sherwin-Williams Co., Toronto.
" 4	"	70058	L. Y. Reid, Georgetown	3 "	40	Sherwin-Williams Co., Toronto.	
" 5	"	70059	A. J. Wright, 205 James St. N., Hamilton.	3 "	25	Livingstone Linseed Oil Co., Baden.	
" 5	"	70060	A. Oliver, 248 York St., Hamilton.	3 "	25		Wood & Valance Co., Ltd., Hamilton.



SESSIONAL PAPER No. 14

RAW LINSEED OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.						Remarks and Opinion of the Chief Analyst.
	Refractive Index at 20° C.	Specific Gravity at 15.5 C.	Saponification Number.	Spot Test.	Unsapoifiable Matter.	No. of Sample.	

H. J. DAGER, INSPECTOR.

.....	0.934	191.5	Lin-seed.	.....	70064	Genuine.
.....	0.936	192.1	"	.....	70065	"
.....	0.933	192.1	"	.....	70066	"
.....	0.934	192.1	"	.....	70067	"
.....	0.933	191.5	"	.....	70068	"
.....	0.936	187.7	"	0.62	70069	"
.....	0.933	192.8	"	.....	70070	"
.....	0.935	192.1	"	.....	70071	"
.....	0.925	169.9	Doubtful.	9.68	70072	Adulterated. Saponification too low.
.....	0.933	192.8	Lin-seed.	.....	70073	Genuine

H. J. DAGER, ACTING INSPECTOR.

.....	0.934	190.9	Lin-seed.	.....	70051	Genuine.
.....	0.935	192.8	"	.....	70052	"
.....	0.934	191.5	"	.....	70053	"
.....	0.931	189.6	"	.....	70054	"
.....	0.940	191.5	"	.....	70055	"
.....	0.932	191.5	"	.....	70056	"
.....	0.933	192.8	"	.....	70057	"
.....	0.934	191.5	"	.....	70058	"
.....	0.934	192.1	"	.....	70059	"
.....	0.933	192.1	"	.....	70060	"

7 GEORGE V, A. 1917

BULLETIN No. 332—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vender.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF WINDSOR—							
1915.							
Aug. 9	Raw Linseed Oil.	54643	Odell & Mitchell, London..	3 bots.	20	Livingstone Oil Co., Baden.	.....
" 9	"	54645	Love Hardware Co., London.	3 "	25	" "	.....
" 9	"	54647	J. G. Steele & Co., London.	3 "	25	.....	Howden Hardware Co., London.
" 10	"	54649	A. Westman, London.....	3 "	20	.....	" "
" 10	"	54651	Kilpatrick Bros., London...	3 "	20	.....	" "
" 10	"	54653	F. E. Jones, London East.	3 "	10	.....	G. A. Burdick & Son, London.
" 12	"	54656	Fred W. Karn, Woodstock.	3 "	20	Livingstone Linseed Oil Co., Baden.	.....
" 12	"	54658	J. N. Smiley, Woodstock..	3 "	20	.....	Davidson & McInnes, Woodstock.
" 12	"	54661	Davidson & McInnes, Woodstock.	3 "	25	.....	T. N. Dunn, Ingersoll.
" 13	"	54663	McMurtry Hardware Co., St. Thomas.	3 "	12½	Sherwin Williams Co., Toronto.	.....
" 13	"	54665	Jackson & Firth, St. Thomas	3 "	30	" "	.....
" 13	"	54668	A. E. Campbell, St. Thomas	3 "	17½	.....	Hobb's Hardware Co., London.

## DISTRICT OF MANITOBA—

Aug. 4	Raw Linseed Oil	61328	R. Steiman Hardware Co., 541 Selkirk Ave., Winnipeg.	3 pts.	60	.....	S. F. Stephens Co., Winnipeg.
" 4	"	61330	Tulley & Davey, 1772 Main St., Winnipeg.	3 "	60	.....	Marshall Wells, Winnipeg.
" 5	"	61332	R. Thornton, 262 Tache Ave Norwood.	3 "	60	.....	Wood Valasee Co., Winnipeg
" 4	"	61335	Walter Johnson, 563 Sherbrooke St., Winnipeg.	3 "	60	.....	" "
" 4	"	61336	Andrew & Sons, Victor St., Winnipeg.	3 "	60	.....	Can. Paint Co., Winnipeg.
" 5	"	61337	Allaire & Bleau, 568 Tache Ave., St. Boniface.	3 "	60	.....	Sherwin Williams, Winnipeg.
" 7	"	61341	H. R. Wood, Napinka, Man.	3 "	45	.....	" "
" 9	"	61342	C. J. Wyers, 763 13th St., Brandon.	3 "	60	.....	Winnipeg Oil Co., Winnipeg
" 12	"	61343	A. J. Bond & Co., 1763 Portage Ave., St. James.	3 "	60	.....	Merrick Anderson, Winnipeg
" 12	"	61344	Aikenhead Clarke Hardware, Boyd Building, Winnipeg.	3 "	60	.....	Scrape & Co., Winnipeg.

SESSIONAL PAPER No. 14

RAW LINSEED OIL.

Inspector's Report (Is not an expression of Opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Refractive Index at 20° C.	Specific Gravity at 15.5° C.	Saponification Number.	Spot Test.	Unsaponifiable Matter.	Iodine Number.	Time of drying at 70° C.		
JOHN TALBOT, INSPECTOR.									
.....	0.934	190.9	Linseed	.....	.....	.....	.....	54643	Genuine.
.....	0.934	190.9	"	.....	.....	.....	.....	54645	"
.....	0.933	192.7	"	.....	.....	.....	.....	54647	"
.....	0.935	191.4	"	.....	.....	.....	.....	54649	"
.....	0.935	191.5	"	.....	.....	.....	.....	54651	"
.....	0.936	192.1	"	.....	.....	.....	.....	54653	"
.....	0.934	192.1	"	.....	.....	.....	.....	54656	"
.....	0.934	192.1	"	.....	.....	.....	.....	54658	"
.....	9.933	190.9	"	.....	.....	.....	.....	54661	"
.....	0.934	192.1	"	.....	.....	.....	.....	54663	"
.....	0.934	190.2	"	.....	.....	.....	.....	54665	"
.....	0.934	192.1	"	.....	.....	.....	.....	54668	"

J. B. COSGROVE, TEMP. INSPECTOR.

		Sp. Gra. vary 15° 6° C.							
.....	1.4809	0.9275	180.0	Linseed	.....	180.5	30 hrs. 3 days	61328	Doubtful Boston Co
.....	1.4814	0.9333	192.1	"	.....	189.3	30 " 3 "	61330	Genuine.
.....	1.4822	0.9340	191.8	"	.....	196.7	48 " 3 "	61332	"
.....	1.4814	0.9330	193.4	"	.....	190.8	48 " 3 "	61333	"
.....	1.4814	0.9334	191.7	"	.....	190.8	48 " 3 "	61336	"
.....	1.4820	0.9342	191.4	"	.....	197.7	48 " 3 "	61337	"
.....	1.4811	0.9332	190.0	"	.....	191.2	48 " 3 "	61341	"
.....	1.4820	0.9321	190.2	"	.....	193.7	48 " 3 "	61342	"
.....	1.4810	0.9338	192.7	"	.....	192.0	48 " 3 "	61343	"
.....	1.4818	0.9337	193.1	"	.....	194.0	50 " 3 "	61344	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents	Manufacturer,	Furnisher.

## DISTRICT OF SASKATCHEWAN—

1915.							
July	19	Raw Linseed Oil.	66397	Peart Bros., Regina.....	3 pts.	50	Unknown .....
"	20	"	66399	John Goebel, Melville.....	3 "	50	Winnipeg Oil Co., Melville.....
"	20	"	66401	E. Smith, "	3 "	50	Can. Paint Co.....
"	20	"	66403	Wm. Anderson, "	3 "	40	Sherwin Williams Co., Winnipeg.....
"	21	"	66411	Chas. Beck, Yorktown.....	3 "	50	Winnipeg Oil Co., Yorktown.....
"	21	"	66414	Clemm & Lange, "	3 "	60	" " .....
"	22	"	66417	Isbister & Pretty, Saskatoon	3 "	60	Marshall Wells, Winnipeg.....
"	23	"	66419	Fawcett Hardware Co. "	3 "	40	J. H. Ashdowne, Winnipeg.....
"	23	"	66420	Saskatoon Hardware Co., Saskatoon.	3 "	30	Winnipeg Oil Co., Saskatoon.....
"	23	"	66421	Burnett Bros., Saskatoon...	3 "	30	J. H. Ashdowne, Winnipeg.....

## DISTRICT OF ALBERTA—

Aug.	10	Raw Linseed Oil.	52256	Northern Hardware Co., Edmonton.	3 pts.	40	Sherwin Williams Winnipeg.....
"	10	"	52257	Chown Hardware Co., Edmonton.	3 "	60	G. F. Stephen & Co., Winnipeg.....
"	10	"	52258	Somerville Hardware Co., Edmonton.	3 bots.	60	Marshall Wells Alberta Co, Edmonton n.....
"	10	"	52259	Cameron Co. Ltd., Edmonton.	3 "	50	B. A. Paint Co., Edmonton.....
"	12	"	52260	G. D. Wallace, Ltd., Wetaskiwin.	3 "	50	J. H. Ashdown & Co., Winnipeg.....
"	13	"	52261	A. M. Campbell, Lacombe..	3 "	40	" " .....
"	13	"	52262	Morrison & Johnston Ltd., Lacombe.	3 "	35	Alta. Linseed Mills Medicine Hat.....
"	20	"	52263	J. H. Ashdown Hardware Co., Calgary.	3 "	30	" " .....
"	20	"	52264	Marshall Hardware Ltd., Calgary.	3 "	60	Calgary Paint and Glass Co.....
"	20	"	52265	Hall Hardware Co., Calgary	3 "	25	Sherwin Williams Calgary.....

SESSIONAL PAPER No. 14

RAW LINSEED OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Refractive Index at 20° C.	Specific Gravity at 15.6° C.	Saponification Number.	Spot Test.	Unsaponifiable Matter.	Iodine Number.	Time of Drying at 70° C.		

L. H. HALL, INSPECTOR.

.....	1.4810	0.9333	189.4	Linseed.	.....	188.0 36 hrs.	3 day.	66397	Genuine.
.....	1.4812	0.9330	190.3	"	.....	188.6 30 "	3 "	66399	"
.....	1.4824	0.9355	194.0	"	.....	197.4 30 "	3 "	66401	"
.....	1.4820	0.9345	191.7	"	.....	184.1 36 "	3 "	66403	"
.....	1.4810	0.9323	190.3	"	.....	187.0 48 "	3 "	66411	"
.....	1.4810	0.9325	192.2	"	.....	185.3 48 "	3 "	66414	"
.....	1.4813	0.9337	191.7	"	.....	191.5 48 "	3 "	66417	"
.....	1.4809	0.9336	191.8	"	.....	188.3 48 "	3 "	66419	"
.....	1.4809	0.9335	192.7	"	.....	187.0 30 "	3 "	66420	"
.....	1.4809	0.9333	193.1	"	.....	189.0 30 "	3 "	66421	"

A. W. R. MARKLEY, INSPECTOR.

	Refractive Index at 20° C.	Specific Gravity at 15.6° C.							
.....	1.4805	0.9356	188.0	.....	.....	185.0 13 hrs.	.....	52256	Genuine.
.....	1.4802	0.9330	189.0	.....	.....	191.0 13 "	.....	52257	"
.....	1.4800	0.9343	186.0	.....	.....	189.0 13 "	.....	52258	"
.....	1.4795	0.9317	189.0	.....	.....	187.0 13 "	.....	52260	"
.....	1.4800	0.9338	189.0	.....	.....	187.0 13 "	.....	52261	"
.....	1.4808	0.9335	180.0	.....	.....	186.0 20 "	.....	52261	"
.....	1.4802	0.9335	186.0	.....	.....	183.0 13 "	.....	52262	"
.....	1.4807	0.9335	180.0	.....	.....	188.0 13 "	.....	52263	"
.....	1.4803	0.9339	188.0	.....	.....	188.0 19 "	.....	52264	"
.....	1.4796	0.9330	188.0	.....	.....	182.0 19 "	.....	52265	"

7 GEORGE V, A. 1917

BULLETIN No. 332—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF ROCKY MOUNTAINS—							
1915.							
July 20	Raw Linseed Oil.	61846	N. Wilmes, Trail .....	3 pts.	60	Sherwin-Williams Co., Montreal.	.....
" 20	"	61853	Hunter Bros., Rossland ....	3 "	40	.....	Jones & Dillingham, Spokane.
Aug. 6	"	61868	Vernon Hardware Co., Vernon.	3 "	60	.....	Woods, Vallance & Leggett, Vancouver.
" 10	"	61873	Wilcox Hall, Kamloops ..	3 "	50	.....	McLellan & McFeely, Vancouver.
" 10	"	61874	Marlatt & McKenzie, Kamloops.	3 "	50	B. A. Paint Co., Victoria.	.....
" 10	"	61877	N. S. Dalglish, Kamloops..	3 "	50	Sherwin-Williams Co., Montreal.	.....
" 16	"	61881	Merritt Mercantile Co., Merritt.	3 "	65	.....	Woods, Vallance & Leggett, Vancouver.
" 16	"	61884	Armstrong's Deptl. Stores, Merritt.	3 "	50	.....	E. G. Prior & Co., Victoria.
" 16	"	61885	J. A. Menzie's, Ltd., Merritt.	3 "	50	.....	McLellan & McFeely, Vancouver.
DISTRICT OF VANCOUVER—							
July 28	Raw Linseed Oil.	55338	W. C. Stearman, 613 Granville St., Vancouver.	3 bots.	60	Sherwin-Williams Co., Montreal.	.....
" 28	"	55339	Hunter, Henderson Paint Co., 642 Granville St., Vancouver.	3 "	60	B. A. Paint Co., Victoria.	.....
" 29	"	55340	F. R. Begg & Co., Ltd., 167 Pender St. W., Vancouver.	3 "	50	A. Ramsay & Son, Montreal.	.....
" 29	"	55341	Imperial Varnish and Colour Co., Ltd., 42 Pender St. W., Vancouver.	3 "	60	Vendors.....	.....
" 29	"	55342	Wood, Vallance & Leggett, 8 Cordova St. W., Vancouver.	3 "	40	Unknown .....	.....
" 30	"	55343	R. C. Jamieson & Co., 1073 Hamilton St., Vancouver.	3 "	40	Vendors.....	.....
" 30	"	55344	Crown Paint Co., 24 Cordova St. E., Vancouver.	3 "	50	Strathelyde Oil and Grease Works, Glasgow, Scot.	.....
" 31	"	55345	Cunningham Hardware Co., Columbia St., New Westminster.	3 "	45	B. A. Paint Co., Victoria.	.....
" 31	"	55346	T. J. Trapp & Co., Ltd., Columbia St., New Westminster.	3 "	50	Unknown .....	.....
" 31	"	55347	H. T. Kirk, Columbia St., New Westminster.	3 "	60	Alberta Linseed Oil Mills, Medicine Hat.	.....

SESSIONAL PAPER No. 14

## RAW LINSEED OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Refractive Index at 25° C.	Sp. Gr. at 15.5° C.	Saponification Number.	Spot Test.	Unsapomifiable Matter.	Iodine Number (Hanus).	Time of Drying at 70° C.		

THOS. PARKER, INSPECTOR.

.....	1.4795	0.9327	188.0	.....	.....	188.0	19 hrs.	.....	61846	Genuine.
.....	1.4806	0.9337	189.0	.....	.....	189.0	19 "	.....	61853	"
.....	1.4802	0.9311	189.0	.....	.....	188.0	19 "	.....	61868	"
.....	1.4897	0.9335	188.0	.....	.....	189.0	19 "	.....	61871	"
.....	1.4802	0.9337	189.0	.....	.....	186.0	19 "	.....	61874	"
.....	1.4808	0.9348	189.0	.....	.....	190.0	19 "	.....	61877	"
.....	1.4798	0.9330	190.0	.....	.....	183.0	24 "	.....	61881	"
.....	1.4805	0.9338	189.0	.....	.....	188.0	19 "	.....	61884	"
.....	1.4802	0.9338	190.0	.....	.....	186.0	19 "	.....	61885	"

E. J. MORGAN, INSPECTOR.

.....	1.4803	0.9350	189.0	.....	.....	193.0	13 hrs.	.....	55328	Genuine.
.....	1.4801	0.9311	188.0	.....	.....	190.0	13 "	.....	55329	"
.....	1.4800	0.9311	188.0	.....	.....	186.0	39 "	.....	55340	"
.....	1.4790	0.9257	174.0	.....	0.86	177.0	19 "	.....	55341	Doubtful; superior cutters low.
.....	1.4800	0.9339	190.0	.....	.....	181.0	19 "	.....	55342	"
.....	1.4798	0.9333	190.0	.....	.....	186.0	19 "	.....	55343	"
.....	1.4787	0.9320	188.0	.....	.....	175.0	20 "	.....	55344	"
.....	1.4800	0.9319	188.0	.....	.....	180.0	20 "	.....	55345	"
.....	1.4800	0.9333	186.0	.....	.....	185.0	19 "	.....	55346	"
.....	1.4802	0.9342	189.0	.....	.....	188.0	19 "	.....	55347	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher

## DISTRICT OF VICTORIA—

1915.							
Sept.	24	Raw Linseed Oil.	66789	Mellon Bros., P.O. Box 382, Victoria.	3 pts.	60	F. R. Begg, Ltd., Vancouver.
"	24	"	66791	The Staneland Co., 840 Fort St., Victoria.	3 "	75	Burrell & Co., London, Eng.
"	27	"	66794	H. Harkness & Son, 919 Pandora St., Victoria.	3 "	75	B. A. Paint Co., Victoria.
"	27	"	66796	J. L. Forrester, 1304 Douglas St., Victoria.	3 "	45	" "
"	28	"	66798	P. McQuade & Son, Ltd., 1214 Wharf St., Victoria.	3 "	50	Sherwin-Williams, Winnipeg.
"	28	"	66800	E. B. Marvin & Co., 1202 Wharf St., Victoria.	3 "	45	B. A. Paint Co., Victoria.
"	29	"	66602	British-American Paint Co., Laurel Point, Victoria.	3 "	25	Alberta Linseed Oil Mills, Medicine Hat.
"	29	"	66604	The Melrose Co., Ltd., 618 Fort St., Victoria.	3 "	60	A. Ramsay & Co., Montreal.



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RAW LINSEED OIL.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								Remarks and Opinion of the Chief Analyst.
	Refractive Index at 25° C.	Sp. Gr. at 15.5° C.	Saponification Number.	Spot Test.	Unsaponifiable Matter	Iodine Number (Hanus).	Time of Drying at 70° C.	Time of Drying in Air.	

D. O'SULLIVAN, INSPECTOR.

.....	1.4800	0.9342	190.0	.....	.....	185.0	19 hrs.	.....	66789	Genuine.
.....	1.4792	0.9324	189.0	.....	.....	178.0	19 "	.....	66791	"
.....	1.4802	0.9342	189.0	.....	.....	182.0	19 "	.....	66794	"
.....	1.4802	0.9343	189.0	.....	.....	183.0	19 "	.....	66796	"
.....	1.4800	0.9338	189.0	.....	.....	185.0	19 "	.....	66798	"
.....	1.4800	0.9339	189.0	.....	.....	185.0	19 "	.....	66800	"
.....	1.4800	0.9335	190.0	.....	.....	186.0	19 "	.....	66602	"
.....	1.4805	0.9342	189.0	.....	.....	189.0	19 "	.....	66604	"



## APPENDIX X.

## BULLETIN No. 333—FORMALIN.

OTTAWA, January 21, 1916.

J. U. VINCENT, Esq.

Deputy Minister of Inland Revenue.

SIR,—Solution of Formaldehyde (Liquor Formaldehydi) of the British Pharmacopœia is defined as an aqueous solution of Formaldehyde, containing in 100 millilitres (cubic centimetres) not less than 36 and not more than 38 grammes of formaldehyde. This is a quantitative statement of weight in volume.

Squires' Companion to the Pharmacopœia adds: "The commercial article *Formol* or *Formalin* is stated to be a 40 per cent solution. Since the specific gravity of this solution is about 1.080, it follows that a weight in volume solution of 36 per cent formaldehyde would represent only 33.3 per cent by weight in 100 parts by weight.

Manufacturers claim that they furnish a 40 per cent solution weight in volume; that is, a solution of 40 parts formaldehyde by weight in 40 parts of Formalin by volume. This is equivalent to a weight in weight percentage of about 37.

Formalin is largely used as a disinfectant, for all the purposes of this class of articles; but is perhaps chiefly in demand for treatment of seed grain.

The present report deals with sixty-eight (68) samples, purchased in October and November last, in consequence of complaints received by this department (L. 134431). Examination shows all of the samples to be genuine if regarded as Liquor Formaldehydi of the Pharmacopœia.

If regarded as 40 per cent solutions (weight in volume) of formaldehyde—said to be the commercial Formalin—four (4) samples are found to be slightly below requirements. Since, however, *Formalin* has no legal status under the Adulteration Act, I am unable to declare adulteration in these cases. The report, as a whole, shows that commercial Formalin, as sold in Canada, is of very good quality.

I beg to recommend publication of this report as Bulletin No. 333.

I have the honour to be, Sir,

Your obedient servant,

A. MCGILL,  
Chief Analyst.

BULLETIN No. 333—FORMALIN.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, As given by the Vendor.		Inspector's Report (Is not an expression of Opinion.)	Results of Analysis.		Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		Formaldehyde by Weight.	Formaldehyde Weight in Volume.	

DISTRICT OF MONTREAL—D. J. KEARNEY, INSPECTOR.

1915.												
Nov. 29	Formalin.	67271	J. A. Harte, 118 Notre Dame St., West, Montreal	12 ozs.	75	Lyman-Knox Co.			p. c.	40.3	67271	Meets legal requirements.
"	"	67272	Leduc's Drug Store, Chabillez Square, Montreal	12 "	60	Unknown			p. c.	43.1	67272	"
"	"	67273	A. LeBeau, 465 St. James Square, Montreal.	9 "	75	Lyman's Ltd.			p. c.	42.4	67273	"
"	"	67274	National Drug & Chemical Co., Montreal.	12 "	30	Vendor			p. c.	41.3	67274	"
"	"	67275	Clas. E. Frost & Co., Montreal.	3bots	100	"			p. c.	40.9	67275	"
"	"	67276	Clapman-Dart Co., Montreal.	12 ozs.	50	Unknown			p. c.	42.2	67276	"
"	"	67277	Parke-Davis & Co., Montreal.	12 "	40	Vendors			p. c.	44.4	67277	"
"	"	67278	Lyman-Knox & Co., Montreal.	12 "	27	"			p. c.	39.2	67278	"
"	"	67279	J. A. D. Gadbout, 54 Craig St., West, Montreal.	12 "	50	Lyman's Ltd.			p. c.	36.0	67279	"
"	"	67280	Pharmacie Robert, Craig & St., Lawrence St., Montreal.	12 "	75	National Drug & Chemical Co.			p. c.	37.2	67280	"

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DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

Oct. 12	Formalin	69955	T. J. Watson, Sayner	1 lb.	80	.....	National Drug & Chemical Co. of Canada. Drug Trading Co., Toronto.	37.6	41.3	69955	Meets Legal Requirements.
"	"	69956	Jury & Gregory, Collingwood.	1 "	50	.....	"	38.4	42.2	69956	"
"	"	69957	Dr. E. J. Connolly, Collingwood.	1 "	50	.....	"	36.4	40.0	69957	"
"	"	69958	H. J. Robertson, Barrie	1 "	50	.....	National Drug & Chemical Co. of Canada.	36.8	40.5	69958	"
"	"	69959	Geo. W. Mankman, Barrie	1 "	40	Standard Chemical Co., Ltd., Toronto	.....	37.2	40.9	69959	"
"	"	69960	A. E. Paterson, Allanvale	1 "	40	"	.....	34.2	31.7	69960	Slightly below accepted formalin strength.
"	"	69961	W. J. McGuire, Allanvale	1 "	50	Unknown	.....	37.8	41.6	69961	Meets Legal Requirements.
"	"	69962	Dr. P. A. McDonald, Port Hope	1 "	35	.....	E. G. West & Co., Toronto.	37.6	41.3	69962	"
"	"	69963	H. S. McCartney, Midland	1 "	35	.....	National Drug & Chemical Co., Ltd., Hamilton.	37.6	41.3	69963	"
"	"	69964	J. S. Fraugh, Midland	1 "	35	The Standard Chemical Co., Ltd., Toronto.	.....	38.0	41.8	69964	"

DISTRICT OF HAMILTON—J. J. COSTIGAN, ACTING INSPECTOR.

Oct. 2	Formalin	58436	V. E. Christian, St. James St. N., Hamilton, Ont.	1 lb.	75	H. K. Wampole Co., Ltd.	.....	" For-mulid."	.....	58436	.....
"	"	58437	Porter's Drug Store, 241 St. James St. N., Hamilton, Ont.	1 "	35	.....	.....	35.8	39.4	58437	Meets legal requirements.
"	"	58438	James M. Walker, St. Paul St., St. Catharines, Ont.	1 "	50	Standard Chem. Co., Ltd.	.....	40.4	44.4	58438	"
"	"	58439	W. Jeff, King St., St. Catharines, Ont.	1 "	50	N. D. and Chem. Co., Ltd.	.....	36.6	40.3	58439	"
"	"	58440	Ally & McNayra, 391 Queen St., St. Catharines, Ont.	1 "	50	H. K. Wampole Co., Ltd.	.....	38.0	41.8	58440	"
"	"	58441	Geo. A. C. Cameron, 141 George St., Trafalburg, Ont.	1 "	50	Nat. Drug and Chem. Co., Ltd., Hamilton	.....	38.6	42.4	58441	"
"	"	58442	Charles Gordon, Dundas St. E., Hamilton, Ont.	1 "	50	.....	.....	39.0	42.9	58442	"

BULLETIN No. 333—FORMALIN.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.		Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.		No. of Sample.	Remarks and Opinion of the Chief Analyst.
			Quantity.	Cents.	Manufacturer.	Furnisher.	Formaldehyde by Weight.	Formaldehyde Weight in Volume.					

DISTRICT OF HAMILTON—J. B. COSTIGAN, ACTING INSPECTOR—Concluded.

1915.	Oct.	4	Formalin.	58443	A. W. Smiley, Market St., Brantford, Ont.	1 lb.	40	.....	.....	.....	38.2	P. C.	58443	Meets legal requirements.
	"	4	"	58444	S. Tapscott & Co., 24 Market St., Brantford, Ont.	1 "	50	Nat. Drug and Chem. Co., Ltd.	.....	.....	36.6	"	58444	"
	"	4	"	58445	T. George Bobs, Colborne St., Brantford, Ont.	1 "	50	.....	.....	.....	38.6	"	58445	"

DISTRICT OF MANITOBA—J. B. COSGROVE, TEMPORARY INSPECTOR.

Oct.	5	Formalin.	61416	McLellan Pharmacy, Solicit Ave. and McKenzie, Winnipeg.	1½ lb.	60	.....	.....	.....	.....	35.10	"	61416	Slightly below accepted formalin strength.
"	5	"	61417	H. D. Campbell, 958 Main St., Winnipeg.	1½ "	60	.....	.....	.....	.....	35.87	"	61417	Meets legal requirements.
"	6	"	61418	J. K. Brown, 308 Nairn Ave., Elmwood, Winnipeg.	1 "	35	.....	.....	.....	.....	36.14	"	61418	"
"	6	"	61419	Kildonan Pharmacy, 2061 Hespler Ave., Winnipeg.	1 "	50	.....	.....	.....	.....	36.88	"	61419	"
"	6	"	61420	Louis A. Rice, 1693½ Portage Ave., Winnipeg.	12 oz.	40	.....	.....	.....	.....	36.24	"	61420	"
"	6	"	61421	Ralph Magee, 1849½ Portage Ave., Winnipeg.	1 lb.	40	.....	.....	.....	.....	35.15	"	61421	Slightly below accepted formalin strength.

61422	A. T. Freshing, 116 Osborne 1 <sup>st</sup> St., Fort Reage, Winnipeg.	60	Nat. Drug Co., Winnipeg.	35.75	39.3	61422	Meets legal requirements.
61423	H. L. Brown, 175 Osborne 1 <sup>st</sup> St., Fort Reage, Winnipeg.	75	Martin Bole & Wynn Co., Winnipeg.	36.93	40.6	61423	"
61424	W. B. Davis, 217 Nassau 1 <sup>st</sup> St., Fort Reage, Winnipeg.	50	Nat. Drug Co., Winnipeg.	36.14	39.7	61424	"
61425	Payntz Co., Westminster 1 <sup>st</sup> Ave., Winnipeg.	45	Bole & Wynn Co.	36.13	39.7	61425	"

DISTRICT OF SASKATCHEWAN—L. H. HALL, INSPECTOR.

66437	Massaw Drug and Stal 1 <sup>st</sup> Storey, Moosejaw.	20	Standard Chem. Co., Winnipeg.	36.91	40.6	66437	Meets legal requirements.
66438	F. Marlat, Moosejaw.	25	"	39.10	43.0	66438	"
66439	H. A. Davidson, Moosejaw.	25	"	36.46	40.1	66439	"
66440	E. L. Chilling, Moosejaw.	25	"	36.96	40.6	66440	"

DISTRICT OF ALBERTA—A. W. R. MARKLEY, INSPECTOR.

52271	E. M. Cawker, Medicine Hat.	50	Standard Chem. Iron and Lumber Co., Toronto.	36.8	40.4	52271	Meets legal requirements.
52272	P. Smart, Medicine Hat.	50	Standard Chem. Co., Winnipeg.	36.5	40.1	52272	"
52273	Alberta Drug and Stationery Co., Lethbridge.	40	J. D. Higginbotham & Co., Lethbridge.	37.0	40.7	52273	"
52274	Kennel & Allen Co., Lethbridge.	60	Nat. Drug and Chem. Co., Calgary.	36.8	40.4	52274	"
52275	J. H. Higginbotham & Co., Lethbridge.	50	Standard Chem. Iron and Lumber Co., Winnipeg.	37.3	41.0	52275	"
52276	H. McCready, Lethbridge.	35	"	56.7	40.3	52276	"
52277	W. Fisher Drug Co., Lethbridge.	45	Nat. Drug and Chem. Co., Calgary.	37.7	41.4	52277	"

BULLETIN No. 333—FORMALIN.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.		Cost.		Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.		Remarks and Opinion of the Chief Analyst.
			Quantity.	Cents.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Furnisher.		Formaldehyde by Weight.	Formaldehyde by Weight in Volume.	

DISTRICT OF ALBERTA—A. W. MARKLEY, INSPECTOR—Concluded.

1915.	Nov. 19	Formalin.	52278	MacFarlane Drug Stores, 3 bots. Calgary.	45		Standard Chem., Iron and Lumber Co., Winnipeg.	36.6	40.2	52278	Meets legal requirements.
	"	"	52279	McDermid Drug Co., Ltd., 3 Calgary.	35		"	37.3	41.0	52279	"
	"	"	52280	Oliver Bros., Ltd., Calgary 3 "	35		Nat. Drug and Chem. Co., Winnipeg.	37.0	40.7	52280	"

DISTRICT OF ROCKY MOUNTAINS—THOS. PARKER, INSPECTOR.

	Oct. 18	Formalin.	61887	Fort George Drug Co., 1 lb., Prince George.	75		H. K. Wampole Co., Perth, Ont.	37.6	41.3	61887	Meets legal requirements.
	Nov. 16	"	61894	A. F. Rankine Merritt, 1 B.C.	65		Nat. Drug and Chem. Co., Vancouver.	35.9	39.4	61894	"
	Dec. 6	"	68104	Woodland & Quinn, Grand Forks	65		Nat. Drug and Chem. Co., Vancouver.	34.9	38.3	68104	Slightly below accepted formalin strength.
	"	6	68105	The Mann Drug Co., Grand Forks.	65		"	35.9	39.4	68105	Meets legal requirements.



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DISTRICT OF VANCOUVER—E. J. MORGAN, INSPECTOR.

Date	Sample No.	Manufacturer	Weight	Source	Inspector	Analysis	Remarks
1915							
Oct. 33	55386	Fernald... Marrant & Reid, 157 Hast- ing St., West, Vanc., B.C.	1 lb.	75	J. A. Teпоорten, Ltd., B.C.	36.2	55386 Meets legal require- ments.
"	55387	" " Woodward Dept. Stores, Ltd., Vanc., B.C.	1 "	50	Standard Chem. Iron and Lumber Co., Montreal.	36.2	"
Nov. 1	55388	" " Oval Drug Co., Ltd., Gran- ville and Dunsmuir Sts., Vanc., B.C.	1 "	50	" " " " " " " "	36.5	"
"	55389	" " Perrin Drug Co., Ltd., 732 Granville St., Vanc., B.C.	1 "	75	J. A. Teпоорten, Ltd., B.C.	36.0	"
"	55390	" " W. M. Harrison & Co., Ltd., Granville and Rob- son Sts., Vanc., B.C.	1 "	75	Standard Chem. Iron and Lumber Co., Montreal.	36.8	"
"	55391	" " Campbell's Ltd., Hasting and Granville Sts., Vanc., B.C.	1 "	75	" " " " " " " "	38.1	"
"	55392	" " Woods Pharmacy, 601 Hasting St., Vanc., B.C.	1 "	50	J. A. Teпоорten, Ltd., B.C.	37.5	"
"	55393	" " D. S. Curtis & Co., 659 Columbia St., New West- minster, B.C.	1 "	75	Unknown.....	37.0	"
"	55394	" " F. T. Hill, 628 Columbia St., New Westminster, B.C.	1 "	50	Nat. Drug & Chem. Co.	36.5	"
"	55395	" " C. S. Davis, 42 Sixth St., New Westminster.	1 "	50	Standard Chem. Iron and Lumber Co., Montreal.	36.2	"



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## APPENDIX Y.

## BULLETIN No. 334—BUTTER.

OTTAWA, January 28, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report upon one hundred and thirty-eight (138) samples of Butter, purchased by our inspectors in October, November and December of last year.

The results of this inspection may be recapitulated as below:—

Found genuine. . . . .	122 samples.
“ adulterated. . . . .	4 “
“ slightly below standard requirements. . . . .	12 “
	—
Total. . . . .	138 “

In no instance has any fat other than milk fat been found.

Water is required not to exceed 16 per cent by weight. Even this amount of water is in excess of the normal content found in good butter. This fact may be verified by a study of the accompanying tables, as well as by noting previous reports. (See Bulletins 238 and 281.)

Butter fat is required to be not less than 82.5 per cent of the weight of the butter. Objection has been taken to this requirement, as excessive; and it is undeniable that, if the other components of butter are present in maximum legalized amount, the fat cannot reach 82.5 per cent. Thus if water be 16 per cent, salt 6 per cent (which may be regarded as the highest percentage tolerated by the palate) and curd 1 per cent the butter fat content cannot reach more than 77 per cent.

An inspection of our reports upon butter shows, however, that genuine butter is seldom if ever found to show all along the line maximum amounts of other substances than fat. In the present report, nearly 90 per cent of the samples reported contain more than 82.5 per cent of fat; and most of them notably exceed this limit. It could only be by strict supervision, with intent, that water, salt and curd could be adjusted to reach legal maxima.

Slight discrepancies in twelve (12) samples, herein reported, are regarded as negligible, and are not judged as adulterated.

I beg to recommend publication of this report as Bulletin No. 334.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
Chief Analyst

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1915.								
Oct. 21	Butter.....	64286	Rooney & Lovett, Halifax..	1½ lb.	57	Brookfield Creamery Co., Brookfield, N.S.	Manufacturer...	
" 21	" . . . .	64287	Smith & Proctor, " ..	1½ "	50	.....		
" 27	" .....	64288	A. D. Bruce, " ..	1½ "	57	Lahave Creamery Co., Bridgewater, N.S.	R. B. Colwell, Halifax.	
" 28	" .....	64289	P. T. Shea, " ..	1½ "	57	Crapaud Creamery Co., Crapaud, P. E. I.	Manufacturer...	
Dec. 7	" .....	64290	C. J. Cochrane, Windsor...	2 "	70	Meadowbank Creamery Co., Hamilton, Ont.	F. W. Fearnmen Co., Hamilton, Ont.	
" 7	" .....	64291	Lamont & Steadman, Kentville.	1½ "	45	S. C. McDonell, Canaan, N.S.	Manufacturer...	
" 13	" .....	64292	E. O. Bishop, Dartmouth.	1½ "	57	Robt. Ramsay, Steviacka, N.S.	" ..	
" 13	" .....	64293	G. A. Orman, " ..	1½ "	60	Lahave Creamery Co., Bridgewater, N.S.	R. B. Colwell, Halifax.	
" 13	" .....	64294	Coleman & Eisener, Dartmouth.	1½ "	60	Acadia Dairy Co., Wolfville.	Smith & Proctor Halifax.	

DISTRICT OF PRINCE EDWARD ISLAND—

Oct. 11	Butter.....	60378	P. J. Berrigan, Dunedin Lot 31.	1½ lb.	40	M. & K. McNeill, New Dunedin.	.....	
" 13	" .....	60379	Beer & Goff, Charlottetown.	1½ "	48	Dunstaffnage Cheese & Butter Factory, Dunstaffnage.	.....	
" 13	" .....	60380	J. C. Crabbe, " ..	1½ "	42	Edgar Easter, Hampshire, P. E. I.	.....	
" 14	" .....	60381	P. A. Smith, " ..	1½ "	45	Mrs. Stead, Wheatley River, P. E. I.	.....	
" 14	" ...	60382	" " ..	1½ "	45	.....	Market Dairy, Charlottetown	

DISTRICT OF NEW BRUNSWICK—

Oct* 7	Butter.....	66166	Walter Gilbert, St. John, N.B.	1 lb..	54	Prince Crest Farm, St. John Co.	.....	
" 12	" .....	66167	McBeath's Grocery, St. John, N.B.	1½ "	47	.....	Dearborn & Co., St. John.	
" 14	" .....	66168	People's Dairy, R. H. Crothers, prop., St. John, N.B.	1½ "	54	Vendor .....	.....	
" 14	" .....	66169	G. L. Craig, St. John, N.B.	1½ "	51	.....	W. Fenwick, City Market, St. John.	
" 19	" .....	66170	M. E. Doohan, Fredericton.	1½ "	90	Unknown .....	Unknown .....	
" 19	" .....	66171	A. E. Eardley, " ..	1½ "	55	Chas. Kee, Island View, York Co., N.B.	.....	

SESSIONAL PAPER No. 14

BUTTER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Cherl.	Water.	Ash.	Buylro-re- fractometer at 40° C.	Fat by difference.		

R. J. WAUGH, INSPECTOR.

	p. c.	p. c.	p. c.		p. c.		
.....		11.55	3.86	44.1	84.59	64286	Genuine.
.....		14.11	3.02	43.4	82.87	64287	"
.....		13.28	4.50	43.0	82.22	64288	"
.....		12.74	2.78	43.9	84.48	64289	"
.....		11.64	2.50	42.9	85.86	64290	"
.....		14.11	1.95	41.6	83.94	64291	"
.....		15.16	1.75	41.7	83.09	64292	"
.....		14.18	4.10	41.5	81.72	64293	"
.....		12.92	1.11	41.4	85.94	64294	"

WM. A. WEEKS, INSPECTOR.

.....		8.22	2.05	42.7	89.73	60378	Genuine.
.....		10.67	2.73	43.1	86.60	60379	"
.....		11.70	2.31	42.8	85.99	60380	"
.....		10.62	2.18	43.2	87.20	60381	"
.....		7.98	2.10	43.6	89.92	60382	"

JOHN C. FERGUSON, INSPECTOR.

Slab.....		16.30	3.96	43.2	79.74	66166	Water slightly in excess, and fat correspondingly low.
Tub.....		9.21	3.13	42.9	87.66	66167	Genuine.
Prints.....		11.73	2.70	43.8	85.57	66168	"
Box.....		12.43	1.21	44.9	86.36	66169	"
Dairy Bricks.....		9.37	6.86	44.3	84.83	66170	"
"    Prints.....		10.74	3.93	44.1	85.33	66171	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NEW BRUNSWICK—

1915.							
Oct. 20	Butter.....	66172	Woodstock Creamery Co., Woodstock.	1 print	60	Vendors.....	
	"	66173	Maritime Dairy Co., Sussex, N.B.	1½ lb.	55	"	
" 26	"	66174	Mills Eveleigh Co., Maple-town, Sussex.	1½ "	55	Sussex Cheese & Butter Co., Sussex	
" 27	"	66175	J. S. Dunlop, Moncton.....	1½ "	45	John Hennessy Malden, Westmoreland Co., N.B.	

## DISTRICT OF QUEBEC CITY—

Oct. 4	Beurre.....	56536	A. Drolet, 714 St. Valier, Quebec.	2 lb.	70	Edmond Coté, Quebec.	
" 4	"	56537	J. Art. Bedard, 728 St. Valier, Quebec.	2 "	70	S. Gagnon, Quebec.	
" 4	"	56538	P. Larberge, 465 St. François St., Quebec.	2 "	70	J. B. Renaud, Quebec.	
" 4	"	56539	M. Tremblay, 8 St. Agnes, Quebec.	2 "	68	Emond Coté, Quebec.	
" 6	"	56540	Theo. Lebel, 86 Rue du Rocher, Quebec.	2 "	68	Ed. Sylvain.....	
" 6	"	56541	Jeremie Pepin, 132 Rue Massue, Quebec.	2 "	70	J. B. Renaud.....	
" 7	"	56543	O. Bacon, 28 Rue Hermine, Quebec.	2 "	70	Emond & Coté....	
" 7	"	56544	E. Robitaille, 48 Rue Victoria, Quebec.	2 "	66	Dom. Fish and Fruit.	
" 6	"	56549	Jos. Vezina, 914 St. Valier, Quebec.	2 "	74	Dom. Fish Co.....	
" 7	"	56551	A. Larn, 35 Victoria, Quebec.	2 "	70	J. B. Renaud.....	

## DISTRICT OF QUEBEC PROVINCE—

Oct. 13	Beurre.....	4427	Frs. Morin, Ste. Claire....	1½ lb.	51	Vendor.....	
" 14	"	4429	Arthur Fradet, Armah.....	1½ "	55	P. Beauliam, St. Philemon Co., Bellechasse.	
" 1	"	330	Dme. Joseph Beauchamp, Ste. Jerome.	1½ "	48	E. Brosseau, Rivière à Gagnon.	
" 1	"	332	Chs. Elie Laflamme, Ste. Jerome.	2 "	64	J. B. Lanthier....	
" 1	"	334	T. Lapointe, Ste. Jerome..	1½ "	51	Delphis Dion, La-chapelle.	
" 2	"	336	Damien Hetu, Ste. Agathe des Monts.	1½ "	64	Beurre Lacosse....	
" 2	"	337	Hormisdas Monette, Ste. Agathe des Monts.	1½ "	60	Jos. St. Louis.....	

SESSIONAL PAPER No. 14

BUTTER.

Inspector's Report (Is not an expression of opinion).	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Card.	Water.	Ash.	Butyro-re- fractometer at 40° C.	Fat by Differ- ence.		

*Concluded.*

	p. c.	p. c.	p. c.		p. c.		
Prints .....	.....	13.10	2.60	43.9	84.30	66172	Genuine.
" .....	.....	9.27	3.27	43.7	87.46	66173	"
.....	.....	9.80	2.58	43.6	87.62	66174	"
.....	.....	14.15	7.42	43.0	78.43	66175	"

F. X. W. E. BELAND, INSPECTOR.

.....	.....	14.52	3.12	43.5	82.36	56536	Genuine.
.....	.....	11.37	4.65	43.4	83.98	56537	"
.....	.....	12.15	2.96	43.0	84.89	56538	"
.....	.....	13.18	1.77	43.4	85.05	56539	"
.....	.....	11.75	5.90	41.3	82.35	56540	"
.....	.....	10.25	1.87	42.7	87.88	56541	"
.....	.....	12.45	2.36	43.5	85.19	56542	"
.....	.....	21.49	1.79	41.5	76.72	56544	Water content high; low Adulterated.
.....	.....	14.00	2.04	43.0	83.96	56549	Genuine.
.....	.....	12.50	2.80	43.3	84.70	56551	"

O. BROCHU AND N. GADLEUX, TEMPORARY INSPECTORS

.....	.....	7.64	1.03	41.6	91.33	447	Genuine.
.....	.....	14.61	3.29	41.6	82.10	418	"
.....	.....	11.76	3.05	42.2	85.19	389	"
.....	.....	14.85	1.64	41.8	83.51	382	"
.....	.....	14.36	5.28	42.0	86.36	394	Fat slightly below standard.
.....	.....	12.37	1.90	41.2	85.73	386	Genuine.
.....	.....	12.10	2.20	41.8	85.70	387	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF EASTERN TOWNSHIPS—

1915.								
Oct.	25	Butter.....	58456	W. W. Emery, Sherbrooke..	1½ lb.	50	.....	Mathews Blackwell Co., Ltd.
"	25	" .....	58457	" .....	1½ "	54	.....	
"	25	" .....	58458	Edmond Lanctot, Sherbrooke.	1½ "	53	.....	
"	25	" .....	58459	Joseph Thibault, Sherbrooke	1½ "	52	.....	
"	25	" .....	58460	" .....	1½ "	55	Raboin & Raboin, Compton, P. Q.	
"	25	" .....	58461	L. Pinard, Sherbrooke .....	2bl'ks	70	A. Bedard, Stoke Centre, P.Q.	
"	25	" .....	58463	C. J. Lane & Sons, Lennoxville.	2 "	66	F. R. Bartlette, Lennoxville.	
"	25	" .....	58464	McMurray & Hall, Lennox-	1½ "	64	.....	
"	25	" .....	58465	George Bolduc, Lennoxville.	1½ "	48	.....	

DISTRICT OF OTTAWA—

Sept.	29	Butter.....	70511	J. J. Hourigan, Almonte...	1½ lbs.	50	Cobden Creamery .....	
Oct.	1	" .....	70512	J. E. Cook, Winchester ...	1½ "	50	Alex. Hess, Wil- liamsburg, Ont.	
"	1	" .....	70513	Chester Casselman, Chester- ville.	1½ "	50	The Harris Abat- air Co., Toronto	
"	1	" .....	70514	T. McGee, Chesterville.....	1½ "	51	The Whyte Pack- ing Co., Toronto.	
"	7	" .....	70515	Mathews-Blackwell Ltd., Ottawa.	1½ "	47	Moyneurs Ltd., Ottawa.	
"	7	" .....	70516	E. & J. Gougeon. Ottawa..	1½ "	50	Davies, Toronto..	
"	7	" .....	70517	J. Dover & Sons, Ottawa...	1½ "	51	.....	Hodgson's Bros., Montreal.
"	7	" .....	70518	Moyneurs Ltd., Ottawa ...	1½ "	50	Vendors .....	
"	12	" .....	70519	The A. E. Rea Co. Ltd., Ottawa.	1½ "	56	" .....	
"	12	" .....	70520	" .....	1½ "	56	Valley Creamery of Ottawa, Ottawa.	
"	13	" .....	70524	Soublier & Tremblay, Hull..	1½ "	51	Ottawa Dairy Co., Ottawa.	
"	14	" .....	70525	M. J. Ade, Main St., Ot- tawa East.	1½ "	54	" .....	
"	14	" .....	70597	The Ottawa Dairy Co., Ltd. Ottawa.	1½ "	53	Vendors.....	



SESSIONAL PAPER No. 14

BUTTER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample	Remarks and Opinion of the Chief Analyst.
	Curd.	Water.	Ash.	Butyro-re- fractometer at 40° C.	Fat by difference.		

J. J. COSTIGAN, ACTING INSPECTOR.

	p. c.	p. c.	p. c.		p. c.		
Dairy .....	14.29	4.50	41.0	81.21	58456	Genuine.	
Creamery.....	13.52	3.46	42.5	83.01	58457	"	
Choice Dairy.....	14.08	1.93	42.2	83.99	58458	"	
Dairy.....	10.97	2.50	41.8	86.33	58459	"	
Creamery .....	13.44	2.09	42.4	84.47	58460	"	
.....	12.22	3.96	42.3	83.82	58461	"	
Dairy.....	9.98	2.46	43.4	87.56	58463	"	
.....	13.11	1.90	41.8	84.99	58464	"	
.....	14.64	2.33	41.6	83.03	58465	"	

J. A. RICKEY, INSPECTOR

Creamery.....	15.08	2.93	42.7	81.99	70511	Genuine.	
Whey.....	10.73	1.50	42.3	87.77	70512	"	
Creamery.....	13.08	1.33	43.2	85.59	70513	"	
" .....	11.71	2.63	40.6	85.66	70514	"	
Dairy .....	8.54	5.75	41.3	85.71	70515	"	
" .....	15.46	2.98	40.3	81.56	70516	"	
Creamery.....	12.80	1.91	42.4	85.29	70517	"	
Creamery Chateau .....	12.21	2.51	42.2	85.28	70518	"	
Creamery.....	11.55	2.02	42.2	86.43	70519	"	
" .....	12.55	3.29	43.0	84.16	70520	"	
" .....	11.89	4.50	41.0	83.61	70524	"	
" .....	13.39	3.80	42.3	82.81	70525	"	
" Ottawa Dairy .....	12.73	3.60	42.2	83.07	70527	"	

7 GEORGE V, A. 1917

BULLETIN No. 334—

Date of Collections.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF KINGSTON—							
1915.							
Oct. 27	Butter.....	70266	W. E. Hopkinson, Kingston	1 lb..	38	James Stonehouse, Port Perry Creamery.	
" 27	" .....	70267	Geo. Gibson, Kingston....	1 " .	32	Gold Spring Fresh Dairy.	
" 27	" .....	70268	L. W. Murphy, Kingston ..	1 " ..	35	Meadow-Brook Creamery.	
" 27	" .....	70269	Wm. Davies, Kingston....	1 " ..	33	Mayflower Dairy..	
" 27	" .....	70270	Ben Lee, Kingston.....	1 " ..	38	Eastern Dairy School, Kingston	
DISTRICT OF TORONTO—							
Oct. 12	Butter.	69945	C. J. McRae, Stayner.....	2 lbs.	54	M. G. Knetchel, Stayner.	
" 13	" ..	69946	Darrouch Bros., Collingwood.	1½ "	42	Mrs. Knuff .....	
" 13	" ..	69947	Cauthiers & Currie, Collingwood.	1½ "	45	Mrs. Wm. Neil, Nottawa.	
" 14	" ..	69948	E. Armstrong, Barrie .....	1 "	32	Peter Kerns, Barrie	
" 15	" ..	69949	J. M. Bothwell Estate, Allendale	2 "	60	Mrs. Gibson .....	
" 15	" ..	69950	H. C. Channon, Barrie....	1½ "	45	Mrs. I. H. Luke, Barrie.	
" 19	" ..	69951	M. L. Lawson, Elmvale....	2 "	54	Mr. B. French, Waveley.	
" 20	" ..	69952	D. A. Lahey & Co., Penetang.	1½ "	45	Mrs. H. Richardson, Fergusonsville.	
" 20	" ..	69953	H. J. Kiettle, Midland....	1½ "	48	Mrs. John McMahon, Midland.	
" 20	" ..	69954	A. D. Parsons, Midland ..	2 "	62	Mrs. John Farquharson, Elliott-Corners.	
DISTRICT OF HAMILTON—J. J. COSTIGAN,							
Oct. 1	Butter.	58406	J. D. Harrison, City Market, Hamilton.	1½ lbs.	48	.....	
" 1	" ..	58407	A. J. Lambert, City Market Hamilton.	1½ "	48	C. W. Kaufman...	
" 1	" ..	58408	" ..	1½ "	45	.....	
" 1	" ..	58409	M. Freeman, City Market, Hamilton.	1½ "	48	.....	
" 1	" ..	58410	" ..	1½ "	45	.....	
" 1	" ..	58411	D. Green, City Market, Hamilton.	1½ "	48	R. Bond, York....	
" 1	" ..	58412	" ..	1½ "	42	.....	
" 1	" ..	58413	A. Norman, City Market, Hamilton.	1½ "	52	John Scott, Exeter.	
" 2	" ..	58414	O. W. Bessey, City Market, Hamilton.	1½ "	45	R. J. McGee, Auburn.	
" 2	" ..	58415	Dundalk Produce Co., City Market, Hamilton.	1½ "	49	.....	

## SESSIONAL PAPER No. 14

## BUTTER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Curd.	Water.	Ash.	Butyro-ref. ractometer at 40° C.	Fat by differ- ence.		
<b>JAMES HOGAN, INSPECTOR.</b>							
	p. c.	p. c.	p. c.		p. c.		
.....		15.78	3.45	42.9	80.77	70266	Fat, slightly below standard
.....		10.67	3.71	42.3	85.62	70267	Genuine.
.....		12.25	2.97	42.6	84.78	70268	"
.....		10.47	4.98	41.3	84.55	70269	"
.....		14.46	2.95	42.8	82.59	70270	"

**H. J. DAGER, INSPECTOR.**

.....		10.98	4.42	42.8	84.60	69945	Genuine.
Dairy		6.88	3.27	43.1	89.85	69946	"
.....		12.45	3.71	43.3	83.84	69947	"
Choice Dairy		14.34	6.82	42.3	78.84	69948	Fat too low, due to excess of salt.
"		11.65	2.41	43.1	85.94	69949	Genuine.
Dairy		11.76	2.54	42.4	85.70	69950	"
Choice Dairy		11.03	7.85	45.0	81.12	69951	"
.....		10.46	2.31	42.6	87.20	69952	"
.....		10.44	6.15	40.6	83.41	69953	"
Dairy		8.28	3.63	43.0	88.09	69954	"

**ACTING INSPECTOR.**

Dairy		11.42	3.54	42.0	85.04	58406	Genuine.
Creamery		15.77	3.52	42.2	80.71	58407	"
Dairy		11.47	0.47	42.2	88.06	58408	"
Creamery		15.72	1.76	42.0	82.52	58409	"
Dairy		8.43	2.80	43.4	88.77	58410	"
Creamery		15.45	1.91	42.7	82.04	58411	"
Dairy		14.04	1.35	42.6	84.01	58412	"
Creamery		15.13	2.37	43.6	82.50	58413	"
Dairy		16.50	2.16	43.1	81.26	58414	Water slightly in excess of standard.
Creamery		15.03	1.61	43.1	82.40	58415	Genuine.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF WINDSOR—

1915.							
Oct. 13	Butter.....	54691	G. W. Sawyer, Leamington.	1½ lbs.	48	Harrow Creamery, Harrow.	.....
" 13	" .....	54694	Robinson Bros., Leamington	1½ "	50	Harrow Butter & Cheese Co.	.....
" 13	" .....	54501	C. W. Hendershot, Ltd., Kingsville.	2 "	66	Farmer's Friend Creamery, Essex.	.....
" 13	" .....	54502	Munroe Wigle, Kingsville..	1½ "	48	Harrow Butter & Cheese Factory, Harrow.	.....
" 13	" .....	54503	T. J. Salmoni, Kingsville...	1½ "	50	" " ..	.....

DISTRICT OF MANITOBA—

Oct. 15	Butter.....	61401	Roy Robertson, Melita.....	1½ lbs.	50	Melita Creamery Co., Melita.	.....
" 20	" .....	61402	C. H. Manishin, 519 Armetta Ave., W., Kildonan.	1½ "	55	Swifts Canadian Co., Winnipeg.	.....
" 20	" .....	61403	H. R. Beaven, 530 Polson Ave., Winnipeg.	1½ "	50	Shoal Lake Co., Manitoba.	.....
" 20	" .....	61405	Booth Bristow, 535 Bannerman Ave., Winnipeg.	1½ "	55	Brookfield Co., Winnipeg.	.....
" 21	" .....	61407	J. Donnelly & Son, 123 Marion St., Norwood.	2 "	75	Devon Dale Co., Winnipeg.	.....
" 21	" .....	61408	Collin, C. O. D. Store, 13 Provencher Ave., St. Boniface.	1½ "	55	City Dairy Co., Winnipeg.	.....
" 21	" .....	61409	Pelletier Co., 551 Tache Ave. St. Boniface	2 "	60	Thomas Gagnon...	.....
" 22	" .....	61410	R. Manson, Grand Vital P. O., St. Mary's Road.	1½ "	55	St. Boniface Creamery Co.	.....
" 22	" .....	61432	A. Irish, Grand Vital P. O.	1½ "	55	Clover Dale Creamery Co.	.....
" 22	" .....	61433	Blair & Scott, St. Vital, Tache, Ave.	1¼ "	50	Dingle & Stewart, St. Vital.	.....

DISTRICT OF SASKATCHEWAN—

Oct. 12	Butter.....	66441	S. D. McMichen Co. Moose Jaw.	1½ lbs	45	W. Bennie, Moose Jaw.	.....
" 12	" .....	66442	The Innis Co., Moose Jaw..	1½ "	55	Saskatchewan Creamery, Moose Jaw.	.....
" 12	" .....	66443	Moose Jaw Trading Co., Moose Jaw.	1½ "	55	Swift Canadian Co. Moose Jaw.	.....
" 12	" .....	66444	Western Meat Market, Moose Jaw.	1½ "	55	Souris Valley Creamery, Estevan Saskatchewan.	.....
" 12	" .....	66445	G. A. Whitelock, Moose Jaw.	1½ "	50	Gorden Ironside & Fares, Moose Jaw.	.....

SESSIONAL PAPER No. 14

BUTTER.

Inspector's Report. (Is not an expression of opinion.)	Results of analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Curd.	Water.	Ash.	Butyro-re- fractometer at 40° C.	Fat by Difference.		

JOHN TALBOT, INSPECTOR.

	p. c.	p. c.	p. c.		p. c.		
.....		11.61	2.71	43.6	85.68	54691	Genuine.
.....		16.82	2.07	43.1	81.11	54694	Water slightly excessive.
.....		12.28	2.85	43.6	84.87	54501	Genuine.
.....		19.89	3.41	42.8	76.70	54502	Water in excess and fat too low. Adulterated.
.....		20.63	2.08	43.6	77.26	54503	Water in excess and fat too low. Adulterated.

J. B. COSGROVE, TEMPORARY INSPECTOR.

.....		10.07	1.38	43.5	88.55	61401	Genuine.
.....		9.26	0.96	43.4	89.78	61402	"
.....		10.05	2.35	43.3	87.60	61403	"
.....		10.75	0.74	43.2	88.53	61405	"
.....		13.27	2.42	43.4	84.31	61407	"
.....		12.38	0.84	43.4	86.78	61408	"
.....		7.14	1.95	44.2	91.91	61409	"
.....		10.03	2.08	43.0	87.80	61410	"
.....		11.47	2.04	43.4	86.49	61432	"
.....		11.04	2.43	42.7	86.59	61433	"

L. H. HALL, INSPECTOR.

.....		8.53	7.05	42.8	84.42	66441	Genuine.
.....		13.43	0.60	42.6	85.97	66442	"
Brookfield .....		13.33	1.16	42.6	85.51	66443	"
.....		12.05	1.26	42.6	86.69	66444	"
Cloverdale .....		12.34	0.80	42.7	86.84	66445	"

7 GEORGE V, A. 1917

BULLETIN No. 334—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF ALBERTA—

1915.							
Nov. 16	Butter.....	52281	Spencer Todd, Ltd., Medicine Hat.	2 lbs.	80	Carlyle's Fancy Creamery, Medicine Hat.	
" 17	" .....	52282	E. S. Bowden, Taber .....	2 "	80	R. Bowden, Purple Springs.	
" 17	" .....	52283	The Good Co., Lethbridge..	2 "	80	Magrath Creamery Assn., Magrath.	
" 24	" .....	52284	Geo. D. Wood, Calgary....	2 "	80	Carlyle Dairy Co., Calgary.	
" 24	" .....	52285	The John Irwin Co., Calgary	2 "	70	P. Pallisen, Calgary.	

## DISTRICT OF ROCKY MOUNTAINS—

Nov. 16	Butter.....	61896	J. A. Menzies Ltd., Merritt.	1½ lbs.	70	J. Beckman, Lower Nicola.	
" 16	" .....	68101	Merritt Mercantile Co., Merritt.	1½ "	60	F. R. Stewart & Co., Vancouver.	
" 16	" .....	68102	Merritt and Dist. Ind. Co. of Soc., Merritt.	2 "	90		
Dec. 6	" .....	68107	N. L. McInnes Co., Grand Forks.	2 "	90	Grand Forks Creamery.	
" 6	" .....	68108	" " ..	2 "	75	Lindsay Creamery Co., Lindsay.	

## DISTRICT OF VANCOUVER—

Nov. 4	Butter.. ...	55406	David Spencer, Ltd., Vancouver.	1½ "	51	A. P. Slade & Co., Vancouver.	
" 4	" .....	55407	Vancouver-Prince Rupert Meat Co., 152 Hastings St. W., Vancouver.	1½ "	50	Swift Can., Ltd., Vancouver.	
" 4	" .....	55408	Woodward Dept'l Stores, Vancouver.	1½ "	53	" " ..	
" 4	" .....	55409	Powell's Market, 58 Hastings St. E., Vancouver.	1½ "	50	F. R. Stewart & Co., Vancouver.	
" 11	" .....	55410	W. H. Walsh, Davie and Seymour Sts., Vancouver.	1½ "	55	" " ..	
" 11	" .....	55411	Jones' Egg, Butter and Prov. Store, 1186 Granville St., Vancouver.	1½ "	60	Parsons Haddock Co., Ltd., Vancouver.	
" 11	" .....	55412	Clover Leaf Butter Store, Granville Nelson and Sts., Vancouver.	1½ "	55	F. R. Stewart & Co., Vancouver.	
" 12	" .....	55413	Larsen and Anne, 601 Front St., New Westminster	2 "	70	" " ..	
" 12	" .....	55414	Fraser River Supply Co., 548 Columbia St., New Westminster.	2 "	60	A. P. Slade & Co., Vancouver.	
" 12	" .....	55415	C. A. Walsh, Ltd., 681 Columbia St., New Westminster.	2 "	70	F. R. Stewart & Co., Vancouver.	

SESSIONAL PAPER No. 14

BUTTER.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.					No. of Sample.	Remarks, and opinion of the Chief Analyst.
	Chard.	Water.	Ash.	Butyro-ref. ractometer at 40° C.	Fat by differ- ence.		

A. W. R. MARKLEY, INSPECTOR.

	p. c.	p. c.	p. c.		p. c.		
Dairy .....	0.96	13.78	2.95	42.9	82.31	52281	Genuine.
" .....	1.02	9.86	2.65	42.6	86.47	52282	"
Creamery.....	0.86	13.34	2.12	42.4	83.68	52283	"
Scotia Thistle Brand..	0.86	16.26	3.00	42.8	79.88	52284	Water slightly in excess, and fat low.
Fancy Creamery Butter	0.86	16.26	3.00	42.8	79.88	52285	Water in excess, and fat low. Adulterated.
Pure Creamery.....	0.76	21.56	2.70	42.5	74.98		

THOS. PARKER, INSPECTOR.

.....	1.06	14.64	2.31	42.3	81.99	61806	Genuine.
Mercer .....	0.70	16.20	3.08	42.8	80.02	68101	Water slightly in excess.
Ayreshire Rose .....	0.72	15.62	2.18	43.3	81.48	68102	Genuine.
Maple Leaf. ....	1.02	12.50	2.25	43.0	84.23	68107	"
Victoria Creamery ...	0.64	15.08	2.19	44.8	82.09	68108	"

E. J. MORGAN, INSPECTOR.

.....	1.00	14.92	1.47	42.8	82.61	55406	Genuine.
.....	0.88	15.52	2.30	43.0	81.30	55407	"
.....	0.74	15.52	2.49	43.2	81.25	55408	"
.....	0.68	14.92	1.61	42.9	82.79	55409	"
.....	1.16	15.44	3.21	43.2	80.19	55410	Fat slightly below standard.
.....	0.92	15.12	1.45	42.5	82.31	55411	Genuine.
.....	0.74	16.72	1.89	43.1	80.65	55412	Water in slight excess of standard.
.....	0.64	15.84	2.93	43.0	80.50	55413	Fat slightly below standard.
.....	0.98	11.84	2.43	42.1	84.75	55414	Genuine.
.....	0.70	14.04	2.38	43.4	82.69	55415	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VICTORIA—

1915,							
Nov. 10	Butter.....	66616	Windsor Grocery Co., 817 Govt. St., Victoria.	1½ lb.	55	.....	B. Wilson Co., Ltd., Victoria.
" 10	" .....	66622	The West End Grocery, Co., 1002 Govt. St., Victoria.	1½ "	67½	The Comox Creamery Assn., Courtney, B.C.	.....
" 10	" .....	66623	" " ..	1½ "	67½	Salt Spring Island Creamery Assn., Ganges, B.C.	.....
" 11	" .....	66624	Dixi H. Ross & Co., 1317 Govt. St., Victoria.	1½ "	70	Cowichan Creamery Assn., Duncan, B.C.	.....
" 11	" .....	66625	" " ..	1½ "	70	Salt Spring Island Creamery Assn., Ganges, B.C.	.....
" 12	" .....	66629	Acton Bros., 1317 Douglas St., Victoria.	1½ "	60	Salmon Arm Creamery, Salmon Arm.	.....
" 12	" .....	66633	H. O. Kirkham & Co., Ltd., 1109 Govt. St., Victoria.	1½ "	56	.....	B. Wilson Co., Ltd., Victoria.
" 15	" .....	66640	Henry W. Driver 856 Yates St., Victoria.	1½ "	55	Swift Can. Co., Ltd., Victoria.	.....
" 23	" .....	66641	Wellburn's Cash Grocery, 1058 Pandora Ave., Victoria.	1½ "	60	.....	B. Wilson Co., Ltd., Victoria.
" 23	" .....	66642	E. B. Jones, 1800 Cook St., Victoria.	1½ "	70	Cowichan Creamery Assn., Duncan, B.C.	.....



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BUTTER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Curd.	Water.	Ash.	Butyro- refractometer at 40° C.	Fat by Difference.		

D. O'SULLIVAN, INSPECTOR.

	p. c.	p. c.	p. c.		p. c.		
Clover Leaf Creamery.	0.72	16.12	2.64	42.3	80.52	66616	Water slightly excessive and fat correspondingly low. Genuine.
.....	1.16	12.40	2.32	43.1	84.12	66622	
.....	1.06	13.48	2.41	42.1	83.05	66623	"
.....	1.08	12.92	1.46	42.5	84.54	66624	"
.....	1.14	14.20	1.93	42.6	82.73	66625	"
Fresh Creamery Butter.	0.98	13.52	1.66	43.2	83.84	66629	"
.....	0.80	15.78	2.50	42.4	80.92	66633	"
.....	0.88	12.76	1.51	43.5	84.85	66640	"
Special Creamery ....	1.02	14.28	1.54	43.6	83.16	66641	"
.....	1.00	12.36	1.98	42.6	84.66	66642	"

## APPENDIX Z.

## BULLETIN No. 335—CREAM OF TARTAR.

OTTAWA, April 11, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue,

SIR,—I beg to hand you a report dealing with the results of analysis of 180 samples purchased as Cream of Tartar in October to December of last year.

Cream of Tartar was last inspected in February and March, 1913 (see Bulletin 263). Since that date commercial conditions have seriously changed as regards this article and prices have greatly increased. In consequence of this fact, various substitutes for Cream of Tartar are offered; and of this class of goods some thirty seven (37) samples have been more or less fully, analysed. They are found to consist chiefly of acid phosphate of lime, and for the most part contain alum, (soda-alum) as well. The acidity is reduced to that of Cream of Tartar by addition of starch. No particular objection to these articles can be urged, except that the price at which they are sold is exorbitant, usually from 30 to 40 cents per pound. This is the price at which it has been customary to sell cream of tartar; and the fact that some of these substitutes contain small percentages of Cream of Tartar or tartaric acid, and that others are offered under names which more or less distantly resemble Cream of Tartar, suggests a willingness to accept the price of Cream of Tartar for an article which should be sold at a lower price. It may be found desirable more fully to investigate the substitutes for Cream of Tartar now so much in evidence.

So far as the present inspection of Cream of Tartar is concerned, the results are as below:—

Samples found genuine and of B. P. standard. . . . .	62
“ “ but of commercial grade. . . . .	100
“ judged doubtful. . . . .	2
“ sold as compound. . . . .	2
“ found adulterated under the Act. . . . .	14
	<hr/>
Total. . . . .	180
	<hr/>

The standard of the British Pharmacopœia requires 97.5 per cent. true bi-tartrate of potash.

The so-called commercial grade proposed by myself in 1910 (See Bull. 222) contains at least 90 per cent. of bi-tartrate of potash.

Two samples contain foreign matter in so small quantity as to suggest accident. These I have marked doubtful.

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Fourteen samples sold as Cream of Tartar, are mixtures which should be sold as substitutes for this article. These must be judged as adulterated under the Act.

I beg to recommend publication of this report as Bulletin No. 335.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1915.							
Oct. 18	Cream of Tartar.	64266	Wm. Moore, Halifax.....	3 1/4 lb..	39	Herron Leblanc, Montreal.	Mfrs.....
" 19	"	64267	John P. Mott & Co., Halifax.	4 3/8 "	40	Vendor . . . . .	
" 20	"	64268	Wentzells, Ltd., Halifax.	3 1/2 "	45	John P. Mott & Co., Halifax.	Mfrs.....
" 20	"	64269	Jas. Scott & Co., Halifax.	4 3/8 "	40	W. H. Schwartz & Son, Halifax.	" .....
" 27	"	64270	Corkum & Ritcey, Ltd., Halifax.	4 3/8 "	45	.....	" .....
" 27	"	64271	R. B. Seeton & Co., Halifax.	3 3/4 "	45	E. W. Gillett & Co., Ltd., Toronto.	" .....
" 27	"	64272	National Drug Co., Halifax.	4 3/8 "	42	Vendors.....	
" 28	"	64273	W. H. Schwartz & Sons, Halifax.	4 3/8 "	37	" .....	
Dec. 7	"	64274	Wentworth Stores, Windsor.	3 3/4 "	50	McCready & Sons, St. John, N.B.	Mfrs.....
" 7	"	64275	Cross & DeWolfe, Kentville.	3 3/4 "	45	G. E. Barbour Co., St. John, N.B.	" .....

DISTRICT OF PRINCE EDWARD ISLAND—

" 6	Cream of Tartar.	60383	W. A. Poole & Co., Lower Montague.	1 lb..	50	G. E. Barbour Co., Co., St. John.	
" 6	"	60384	McDonald Bros., Georgetown.	1 "	60	.....	Carvell Bros., Charlottetown
" 11	"	60385	P. J. Berrigan, Dunedin, Lot 31.	1 "	45	John P. Mott & Co., Halifax.	
" 12	"	60386	Beer & Goff, Charlottetown.	1 "	60	W. H. Schwartz, Halifax.	
" 12	"	60387	Coffin & Co., Charlottetown.	1 "	60	McCready & Son, St. John	
" 12	"	60388	W. W. Walker, Charlottetown.	1 "	60	.....	J. A. Farquharson & Co., Charlottetown
" 12	"	60389	Jenkins & Son, Charlottetown.	1 "	45	E. W. Gillett Co., Ltd., Toronto.	
" 12	"	60390	J. C. Crabbe, Charlottetown.	1 "	60	McCready & Son, St. John.	
" 12	"	60391	J. G. Passmore, Charlottetown.	1 "	60	.....	J. A. Farquharson & Co., Charlottetown
" 12	"	60392	P. A. Smith, Charlottetown.	1 "	55	E. W. Gillett Co., Toronto.	

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CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Acidity C. C. in per 100 grams.	Bicarbonate of potash expressed as weight.	Lime (Ca O).	Phosphates.	Sulphates.	Starch.		

R. J. WAUGH, INSPECTOR.

.....	503	.....	7.70	4.46	7.95	.....	.....	64266	Adulterated.
.....	531	99.8	.....	.....	.....	.....	.....	64267	Genuine. Meets B. P. require-
.....	530	99.7	.....	.....	.....	.....	.....	64268	" " "
.....	481	90.5	Pre-	.....	.....	.....	.....	64269	" Commercial Grade.
.....	462	.....	sent.	10.26	12.20	8.95	.....	64270	Adulterated.
.....	531	99.8	.....	.....	.....	.....	.....	64271	Genuine. Meets B. P. require-
.....	479	90.2	Pre-	.....	.....	.....	.....	64272	Genuine. Commercial Grade.
.....	480	90.4	"	.....	.....	.....	.....	64273	" " "
.....	498	93.5	"	.....	.....	.....	.....	64274	" " "
.....	479	90.2	"	.....	.....	.....	.....	64275	" " "

WM. A. WEEKS, INSPECTOR.

.....	495	93.2	Pre-	.....	.....	.....	.....	60383	Genuine. Commercial Grade.
.....	495	93.2	"	.....	.....	.....	.....	60384	" " "
.....	479	90.2	"	.....	.....	.....	.....	60385	" " "
.....	484	91.0	"	.....	Trace	.....	.....	60386	" " "
.....	497	93.5	"	.....	.....	.....	.....	60387	" " "
.....	482	90.7	"	.....	.....	.....	.....	60388	" " "
.....	531	99.8	.....	.....	.....	.....	.....	60389	Genuine. Meets B. P. require-
.....	504	94.9	Pre-	.....	Trace	.....	.....	60390	Genuine. Commercial Grade.
.....	484	91.0	"	.....	.....	.....	.....	60391	" " "
.....	502	94.5	"	.....	.....	.....	.....	60392	" " "

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer	Furnisher.

## DISTRICT OF NEW BRUNSWICK—

1915.								
Jan. 19	Cream of Tartar.	59646	Baird & Peters, St. John, N.B.	1 lb.	40	Vendors.....		
" 19	"	59647	Puddington, Wetmore, Morrison, Ltd., St. John, N.B.	$\frac{3}{4}$ "	30	" .....		
" 19	"	59648	Jones & Schofield, St. John, N.B.	$\frac{3}{4}$ "	30	" .....		
" 19	"	59649	G. E. Barbour Co., Ltd., St. John, N.B.	$\frac{3}{4}$ "	30	" .....		
" 20	"	59650	2 Barkers, Ltd., St. John, N.B.	1 lb.	45	C. H. Cochrane & Co., Ottawa, Ont.		
" 20	"	59651	Dearborn & Co., St. John, N.B.	1 "	45	Vendors.....		
" 21	"	59652	Northrup & Co., St. John, N.B.	1 "	38	.....	C. H. Cochrane & Co., Ottawa, Ont.	
" 21	"	59653	T. C. Collins & Co., St. John, N.B.	1 "	50	Vendors.....		
" 22	"	59654	McPherson Bros., St. John, N.B.	1 "	60	.....	G. E. Barbour & Co., St. John, N.B.	
" 22	"	59655	M. E. Grass, St. John, N.B.	1 "	50	.....	G. Bent & Sons, St. John.	

## DISTRICT OF NEW BRUNSWICK—

Oct. 5	Cream of Tartar.	66176	2 Barkers, Ltd., St. John.	1 lb.	55	Vendors.....		
" 5	"	66177	H. W. Cole, St. John...	3 pkg.	45	" .....		
" 6	"	66178	Dearborn & Co., St. John..	1 lb.	50	" .....		
" 7	"	66179	Baird & Peters, St. John..	1 "	55	" .....		
" 12	"	66180	Puddington, Wetmore & Morrison, St. John.	3 pkg.	38	" .....		
" 13	"	66181	G. E. Barbour Co., Ltd., St. John.	1 lb.	50	" .....		
" 20	"	66183	W. H. Fleming, Woodstock.	1 "	60	G. E. Barbour, Ltd., St. John.		
" 26	"	66184	W. B. McKay, Co., Sussex.	1 "	60	H. W. Cole, St. John		
" 26	"	66185	Sussex Mercantile Co., Sussex.	1 "	50	" .....		
" 27	"	66195	Reed Co., Ltd., Moncton.	3 pkg.	45	J. P. Mott & Co., Halifax.		

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CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Acidity C. C. in per 100 grams.	Bitartrate of pot. ash expressed as weight.	Lime (Ca O).	Phosphates.	Sulphates.	Starch.	Alumina (Al <sub>2</sub> O <sub>3</sub> ).		

J. C. FERGUSON, INSPECTOR.

.....	491	92.4	Present.	.....	.....	.....	.....	59646	Genuine.	Commercial Grade.
.....	493	92.8	"	.....	.....	.....	.....	59647	"	"
" Holly " Brand.	493	92.8	"	.....	.....	.....	.....	59648	"	"
" Acorn " .....	516	97.1	Trace.	.....	.....	.....	.....	59649	Genuine	Meets B. P. require-
.....	526	99.0	.....	.....	.....	.....	.....	59650	"	"
.....	530	92.7	.....	.....	.....	.....	.....	59651	"	"
.....	527	99.2	.....	.....	.....	.....	.....	59652	"	"
.....	504	94.9	Present.	.....	.....	.....	.....	59653	Genuine.	Commercial Grade.
.....	500	91.1	"	.....	.....	.....	.....	59654	"	"
.....	486	91.5	"	.....	.....	.....	.....	59655	"	"

JOHN C. FERGUSON, INSPECTOR.

.....	486	91.5	Present.	.....	.....	.....	.....	66176	Genuine.	Commercial Grade.
.....	497	93.0	"	.....	.....	.....	.....	66177	"	"
National Brand	529	99.6	.....	.....	.....	.....	.....	66178	"	Meets B. P. require-
.....	484	91.0	Present.	.....	.....	.....	.....	66179	"	Commercial Grade.
.....	530	99.7	.....	.....	.....	.....	.....	66180	"	Meets B. P. require-
.....	530	99.7	.....	.....	.....	.....	.....	66181	"	"
.....	482	90.7	Present.	.....	.....	.....	.....	66182	"	Commercial Grade.
.....	496	93.3	"	.....	.....	.....	.....	66183	"	"
.....	493	92.9	"	.....	.....	.....	.....	66184	"	"
.....	487	91.6	"	.....	.....	.....	.....	66185	"	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC CITY—

1915.								
Oct.	6	Creme de tarte.	56542	J. Pepin, 132 Rue Mas- sue, Quebec.	1 lb.	60	Unknown.....	Turcotte Frere..
"	7	"	56545	A. Larue, 35 Rue Vic- toria, Quebec.	1 "	60	" .....	.....
"	4	"	56546	A. Drolet, 714 Rue St. Valier, Quebec.	1 "	75	Nat. Drug. Co.....	Mfrs.....
"	4	"	56547	N. Tremblay, 8 Rue St. Agnes, Quebec.	1 "	80	Unknown.....	.....
"	6	"	56548	Jos. Vezina, Enr., 914 Rue St. Valier, Quebec.	1 "	50	" .....	.....
"	7	"	56550	E. Bascon, 28 Rue St. Hernine, Quebec.	1 "	60	Langlais.....	E. Paradis.....
"	7	"	56552	J. N. Rousseau, 185 Rue Massue, Quebec.	3 pkg.	30	Unknown.....	J. B. Renaud...
"	7	"	56553	G. A. Gagnon, 52 Rue St. Luc, Quebec.	1 lb	40	Turcotte Frere.....	Mfrs.....
"	8	"	56554	Abel Turcotte, 272 Rue St. Jean, Quebec.	1 "	50	Unknown.....	.....
"	8	"	56555	L. Tardif, 175 Rue St. Jean, Quebec.	1 "	80	" .....	J. B. Renaud...

DISTRICT OF QUEBEC PROVINCE—

Oct.	13	Creme tarte.	4425	Joe Brown, St. Claire .....	1½ lbs.	1.05	J. B. Renaud & Fils Quebec.	.....
"	14	"	4428	Cleophas Beandoin, Ar- magh.	1½ "	90	Quebec Preserving Co., Quebec.	.....
"	1	Creme de tarte.	331	J. N. Desjardius, St. Jer- ome.	1 "	80	Hudon Hebert, Mon- treal.	.....
"	1	"	333	Chas. Elic Laflamme, Ste. Jerome.	1 "	80	E. W. Gillett & Co., Toronto.	.....
"	1	"	335	T. Lapointe, Ste. Jerome..	1 "	60	.....	.....
"	2	"	338	Damien Hetu, St. Agathe, de Monte.	1 "	50	.....	.....
"	2	"	339	Hormisdas Giroux, St. Agathe des Montes.	1 "	40	.....	.....

DISTRICT OF EASTERN TOWNSHIPS—

Oct.	21	Cream of Tartar	58446	W. Jutras, St. Hyacinthe.	1 lb..	50	.....	.....
"	21	"	58447	Lassonde & Frere, St. Hy- acinthe.	1 "	80	.....	.....
"	26	"	58448	Gerin & Boulay, Coaticook	1 "	60	.....	.....
"	26	"	58449	Woodman & McKee, Coati- cook.	3 pkg.	45	Pure Gold Mfg. Co..	.....
"	26	"	58450	B. J. Smith & Son, Coati- cook.	1 lb..	60	.....	.....



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CREAM OF TARTAR.

Inspector's Reports. (Is not an expression of opinion.)	Results of Analysis						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Acidity C.C. in per 100 grams.	Bicarbonate of potash expressed as weight.	Lime (Ca O).	Phosphates.	Sulphates.	Starch.		

F. X. W. E. BELAND, INSPECTOR.

		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
.....	468	88.1	Pre-sent.	..	Trace.	.....	.....	56542	Genuine. Commercial Grade.
.....	481	.....	11.10	8.48	9.63	3.90	0.20	56545	Adulterated.
.....	495	93.2	Pre-sent.	.....	.....	.....	.....	56546	Genuine. Commercial Grade.
.....	518	.....	15.70	18.93	10.31	12.55	0.50	56547	Adulterated.
.....	313	.....	20.00	.....	36.56	.....	1.70	56548	"
.....	496	93.3	Pre-sent.	.....	.....	.....	.....	56550	Genuine. Commercial Grade.
.....	490	92.3	"	.....	.....	.....	.....	56552	" "
.....	492	92.7	"	.....	.....	.....	.....	56553	" "
.....	493	92.9	"	.....	.....	.....	.....	56554	" "
.....	496	93.3	"	.....	.....	.....	.....	56555	" "

O. BROCHU AND D. CADIEUX, TEMPORARY INSPECTORS.

.....	488	91.7	.....	.....	Trace	1.30	...	4125	Genuine. Commercial grade. Starch probably accidental.
.....	495	93.2	.....	.....	.....	.....	.....	4128	Genuine. Commercial grade
.....	501	94.3	.....	.....	.....	.....	.....	331	" "
.....	531	99.9	.....	.....	.....	.....	.....	333	Genuine. Meets B. P. requirements.
.....	514	..	12.80	8.34	9.10	4.52	0.50	335	Adulterated.
.....	478	90.0	.....	.....	.....	.....	.....	338	Genuine. Commercial grade
.....	.....	.....	27.88	35.60	14.10	5.46	1.13	339	Adulterated.

J. J. COSTIGAN, ACTING INSPECTOR.

.....	.....	.....	20.78	22.57	20.08	5.35	0.28	58446	Adulterated.
.....	499	93.8	.....	.....	.....	.....	.....	58447	Genuine. Commercial grade.
.....	491	92.4	.....	.....	.....	.....	.....	58448	"
.....	528	99.3	.....	.....	.....	.....	.....	58449	Genuine. Meets B. P. requirements.
.....	510	.....	14.70	11.49	10.90	2.50	1.00	58450	Adulterated.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF EASTERN TOWNSHIPS—

1915.							
Oct. 29	Cream of Tartar.	58451	Davian & Laose, Granby.	1 lb.	70		
" 29	"	58452	H. Cyr, Granby . . . . .	1 "	60		
" 29	"	58453	L. M. Marcaurale, Granby	1 "	60		
" 29	"	58454	Mercure & Frere, Granby.	1 "	50		
" 29	"	58455	A. Z. Cote, Granby.....	1 "	60		Hudon & Orsali.

DISTRICT OF QUEBEC PROVINCE—

Dec. 23	Crème de tarte.	3663	J. E. Gagne, St. Maxime.	3 . . . .	45	Dr. Ed. Morin, Que-	bec.
1916.							
Jan. 10	Crème de tarte.	3670	G. E. Dussault, St. Marguerite.	1 . . .	60	N. Turcotte, Quebec....	
" 12	"	3673	G. A. Cloutier, St. Odilon	3 . . . .	30		

DISTRICT OF MONTREAL—

1915.							
Nov. 25	Cream of Tartar.	67291	D. Maloney, 80 Sherbrooke St. W., Montreal.	3 tins.	60	Herron, Le Blanc, Ltd.	
" 25	"	67292	L. S. Guay, 236 Sherbrooke St. W., Montreal.	6 pkg.	60		L. Chaput, Fils & Co.
" 25	"	67293	Westmount Grocery Co., 4783 Sherbrooke St., Westmount.	3 tins.	60	S. H. Ewing & Son.	
" 25	"	67294	R. Grier, 1161 St. Antoine St., Montreal.	12 ozs.	45		Howe, McIntyre.
" 25	"	67295	D. Lachane, 256 St. Margaret St. Montreal.	1 lb..	40		Nap. Longpré...
" 25	"	67296	N. Vian, 1116 St. Antoine St., Montreal.	3 tins.	30	McLaren's, Ltd.	
" 25	"	67297	J. A. Groulx, 1073 St. Antoine St., Montreal.	1 lb.	75		Hudon, Hebert & Co.
" 25	"	67298	J. Bouthillier, 1018 Antoine St., Montreal.	12 ozs.	45		Laporte, Martin & Co.
" 25	"	67299	E. Leroux, 1920 St. James St., Montreal.	10 "	35		Hudon & Orsali.
" 26	"	67300	W. J. Roberts, 919 Wellington St., Verdun.	3 pkg.	45		Wm. Galbraith & Son.

SESSIONAL PAPER No. 14

CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Acidity C. C. in per 100 grams.	Bitartrate of pot. ash expressed as weight.	Lime (Ca O).	Phosphates.	Sulphates.	Starch.	Alumina $Al_2O_3$ .		

Concluded.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
.....	532	100.0	.....	.....	.....	.....	.....	58451	Genuine. Meets B. P. requirements.
.....	.....	.....	28.30	30.81	16.54	.....	0.76	58452	Adulterated.
Key Brand .....	.....	.....	31.57	35.06	17.04	1.50	0.98	58453	"
.....	467	87.8	.....	Trace	.....	.....	.....	58454	Genuine. Commercial grade.
.....	492	92.5	.....	.....	.....	.....	.....	58455	"

J. E. AUDET, TEMPORARY INSPECTOR.

.....	485	91.1	2.2	0.50	Trace	.....	.....	3663	Genuine. Commercial grade.
.....	496	93.2	Pre-sent	.....	.....	.....	.....	3670	"
.....	498	93.6	"	.....	.....	.....	.....	3673	"

D. J. KEARNEY, INSPECTOR.

.....	499	88.2	.....	Trace	.....	.....	.....	67291	Genuine. Commercial grade.
.....	531	99.8	.....	.....	.....	.....	.....	67292	Meets B. P. requirements.
.....	472	88.8	.....	Trace	.....	.....	.....	67293	Genuine. Commercial grade.
.....	515	96.8	.....	.....	.....	.....	.....	67294	Meets B. P. requirements.
.....	512	.....	8.80	6.20	5.94	2.20	0.08	67295	Adulterated.
.....	532	100.0	.....	.....	.....	.....	.....	67296	Genuine. Meets B. P. requirements.
.....	472	88.7	.....	.....	Trace	.....	.....	67297	Genuine. Commercial grade.
.....	488	91.7	.....	.....	.....	.....	.....	67298	"
.....	488	91.8	.....	.....	.....	.....	.....	67299	"
.....	468	88.0	.....	.....	.....	.....	.....	67300	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF OTTAWA—

1915.							
Sept. 29	Cream of Tartar.	70501	Taber & Gemmill, Almonte.	1 lb..	60	Pure Gold Co., Toronto.	
" 29	"	70502	Fred W. Robertson, Almonte.	1 " ..	60	" ..	
Oct. 1	"	70503	A. Sweet & Co., Winchester.	1 " ..	50		T. W. Chamberlain & Co. Prescott.
" 1	"	70504	Hugh Fraser and Son, Winchester.	1 " ..	60	Gillett's, Toronto....	
" 1	"	70505	Fulton Bros., Chesterville.	1 " ..	60		Hudon, Hebert & Cie, Montreal.
" 2	"	70506	Fred. A. Davis, Quyon...	1 " ..	80	Unknown .....	Unknown.....
" 9	"	70507	H. H. Layng, Smith's Falls.	1 " ..	60		Robertson, Nicolle, Smith's Falls.
" 9	"	70508	J. T. Conway, Perth .....	1 " ..	60	Unknown .....	Unknown.....
" 16	"	70509	John Hughes, Prescott...	1 " ..	80		J. M. Lowes, Toronto.
" 16	"	70510	Doyle Bros., Prescott....	3 pkg.	45	S. H. Ewing & Son, Montreal.	

DISTRICT OF KINGSTON—

Oct. 27	Cream of Tartar.	70271	W. E. Hopkinson, Kingston.	1 lb..	80	E. W. Gillett, Toronto.	
" 27	"	70272	Ben Lee, Kingston.....	1 " ..	60		Geo. Robertson Co., Ltd., Kingston.
" 28	"	70273	A. S. Kimmerly, Napanee.	1 " ..	80	Unknown .....	
" 28	"	70274	The Fair, Napanee.....	1 " ..	60		F. Newmen, Picton.
" 28	"	70275	J. H. Fish, Napanee....	1 " ..	40	J. M. Lowes Co., Toronto.	
" 28	"	70276	H. W. Kelly, Napanee...	1 " ..	55	Fodhunter & Mitchell Toronto.	
" 28	"	70277	F. H. Perry, Napanee....	3pkgs.	60	Matthewson Sons, Montreal.	
" 28	"	70278	J. G. Oliver, Napanee....	1 lb..	50	Ewing Co., Montreal	
" 28	"	70279	Scrimshaw & Mills, Napanee.	1 " ..	60	McLaren's, Ltd., Hamilton.	
" 28	"	70280	G. P. Sproule & Co, Napanee.	1 " ..	60	Unknown.....	

SESSIONAL PAPER No. 14

CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Acidity CC in per 100 grams.	Bicarbonate of potash expressed as weight.	Lime (Ca O.)	Phosphates.	Sulphates.	Starch.		

J. A. RICKEY, INSPECTOR.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
.....	488	91.8	.....	.....	.....	.....	.....	70501	Genuine. Commercial grade.
.....	490	92.2	.....	.....	.....	.....	.....	70502	" "
.....	528	99.3	.....	.....	.....	.....	.....	70503	" Meets B. P. requirements.
.....	523	98.3	.....	.....	.....	.....	.....	70504	" "
.....	458	86.2	3.85	.....	2.88	.....	.....	70505	Doubtful.
.....	523	98.4	.....	.....	.....	.....	.....	70506	Genuine. Meets B. P. requirements.
.....	496	.....	1.70	0.31	0.33	None.	0.21	70507	Doubtful.
.....	524	98.6	.....	.....	.....	.....	.....	70508	Genuine. Meets B. P. requirements.
.....	489	91.9	.....	.....	.....	.....	.....	70509	Genuine. Commercial grade.
.....	531	99.9	.....	.....	.....	.....	.....	70510	" Meets B. P. requirements.

JAMES HOGAN, INSPECTOR.

.....	532	100.0	.....	.....	.....	.....	.....	70271	Genuine. Meets B. P. requirements.
.....	527	99.2	.....	.....	.....	.....	.....	70272	" "
.....	506	95.2	.....	.....	.....	.....	.....	70273	Genuine. Commercial grade.
.....	492	92.5	.....	.....	.....	.....	.....	70274	" "
Sold as com pound.	.....	.....	25.15	23.59	22.63	9.83	0.31	70275	Sold as compound.
.....	493	92.8	.....	.....	.....	.....	.....	70276	Genuine. Commercial grade.
.....	527	99.2	.....	.....	.....	.....	.....	70277	Genuine. Meets B. P. requirements.
.....	495	93.2	.....	.....	.....	.....	.....	70278	Genuine. Commercial grade.
.....	488	91.8	.....	.....	.....	.....	.....	70279	" "
.....	481	90.4	.....	.....	.....	.....	.....	70280	" "

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	- Cost.		Name and address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF TORONTO—

1915.							
Oct.	12	Cream of Tartar.	69935	Bell's Grocery, Stayner...	1 lb.	60	Dalton Bros., Toronto.
"	13	"	69936	Prentice & Sproule, Collingwood.	1 "	50	McLaren's, Ltd., Hamilton.
"	13	"	69937	T. N. Brown, Collingwood.	1 "	65	Unknown
"	14	"	69938	H. J. Buchanan, Barrie.	1 "	75	Eby Blain, Ltd., Toronto.
"	14	"	69939	Jas. Cheeseman, Barrie.	1 "	60	Perkins Ince Co., Toronto.
"	15	"	69940	Wisdom & Co., Allendale.	1 "	50	Unknown
"	19	"	69941	James Drysdale, Elmsdale.	1 "	60	E. W. Gillett & Co., Toronto.
"	20	"	69942	W. M. Thompson, Penetang.	1 "	80	" "
"	20	"	69943	A. D. G. Hager, Midland.	1 "	60	Unknown
"	20	"	69944	The Clayfair Preston Co., Ltd., Midland.	1 "	60	McLaren's, Ltd., Hamilton.

## DISTRICT OF HAMILTON—

Sept.	30	Cream of Tartar.	58426	P. F. Gage, 331 King St., E. Hamilton.	1 lb.	50	McLaren's Ltd.
"	30	"	58427	Wm. Carroll, 94 John St., S. Hamilton.	6 pkgs	42	"
"	30	"	58428	A. R. McLachlin, 72 King St., W. Hamilton.	6 "	30	Young-Winfield, Ltd.
Oct.	1	"	58429	S. G. Lyne, Barton St., Hamilton.	1 lb.	60	"
"	1	"	58430	L. J. Hill, 367 Barton St., Hamilton.	1 "	50	"
"	4	"	58431	Herbert J. Wells, 50 King St., St. Catharines.	1 "	60	"
"	4	"	58432	Lawrence & Co., 204 St. Paul St., St. Catharines.	1 "	60	Todhunter & Mitchell, Toronto.
"	4	"	58433	Roddy & Walker, 135 Queenston St., St. Catharines.	1 "	60	Gorman-Ecker Co., Toronto.
"	4	"	58434	Henry Glachin, Church St., St. Catharines.	1 "	55	McLaren's Ltd.
"	4	"	58435	Arthur Harp, 66 Colborne St., Brantford.	1 "	75	Brantford Coffee & Spice Co.

SESSIONAL PAPER No. 14

CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Acidity C. C. in per 100 grams.	Bitartrate of potash expressed as weight.	Lime (Ca O).	Phosphates.	Sulphates.	Starch.	Alumina (A <sub>2</sub> O <sub>3</sub> ).		

H. J. DAGER, INSPECTOR.

		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
.....	485	91.2	.....	.....	.....	.....	.....	69935	Genuine. Commercial grade.
.....	490	92.1	.....	.....	.....	.....	.....	69936	" "
.....	487	91.6	.....	.....	.....	.....	.....	69937	" "
.....	492	92.5	.....	.....	.....	.....	.....	69938	" "
.....	521	98.0	.....	.....	.....	.....	.....	69939	Genuine. Meets B. P. requirements.
.....	.....	29.95	17.85	32.47	1.10	0.16	.....	69940	Adulterated.
.....	489	92.0	.....	.....	.....	.....	.....	69941	Genuine. Commercial grade.
.....	531	99.9	.....	.....	.....	.....	.....	69942	Genuine. Meets B. P. requirements.
.....	488	91.8	.....	.....	.....	.....	.....	69943	Genuine Commercial grade.
.....	503	94.7	.....	.....	.....	.....	.....	69944	" "

J. J. COSTIGAN, ACTING INSPECTOR.

.....	492	92.5	.....	.....	.....	.....	.....	58426	Genuine. Commercial grade.
Alliance Brand	497	93.4	.....	Trace.	Trace.	0.45	.....	58427	Genuine Commercial grade. Starch probably accidental.
.....	531	99.9	.....	.....	.....	.....	.....	58428	Genuine. Meets B. P. requirements.
.....	500	.....	3.80	3.09	.....	3.83	.....	58429	Adulterated.
.....	492	92.6	.....	.....	.....	.....	.....	58430	Genuine. Commercial grade.
.....	494	92.9	.....	.....	.....	.....	.....	58431	" "
.....	524	98.5	.....	.....	.....	.....	.....	58432	Genuine. Meets B. P. requirements.
.....	477	89.7	.....	Trace.	.....	.....	.....	58433	Genuine. Commercial grade.
.....	474	88.6	.....	.....	.....	.....	.....	58434	" "
.....	469	88.3	.....	.....	.....	.....	.....	58435	" "

7 GEORGE V, A. 1917

BULLETIN No. 335—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF WINDSOR—							
1915.							
Oct. 12	Cream of Tartar.	54680	A. M. Milton, Ridgetown.	1 lb.	1.00	.....	National Drug Co., London.
" 12	"	54682	W. & E. Atworth & Son, Ridgetown.	3 pkgs	30	Gorman Eckert & Co., London.	.....
" 12	"	54684	Orendorf Bros., Ridgetown.	1 lb.	75	Unknown.....	.....
" 12	"	54686	Clark & Sons, Ridgetown.	1 "	85	Gorman-Eckert Co., London.	.....
" 12	"	54687	P. Bawden, Ridgetown...	1 "	75	Gillett Co., Toronto.	.....
" 13	"	54689	C. S. Thornton, Leamington.	1 "	60	Gorman-Eckert Co., London.	.....
" 13	"	54690	W. W. Ames, Leamington.	1 "	80	Unknown.....	.....
" 13	"	54693	Robinson Bros., Leamington.	1 "	75	Todhunter & Mitchell, Toronto.	.....
" 14	"	54506	Theodore B. S. Tweedale, Essex.	1 "	50	Unknown.....	.....
" 14	"	54507	S. H. Sadler, Essex.....	1 "	60	"	.....
DISTRICT OF MANITOBA—							
Oct. 11	Cream of Tartar	61426	Thomas Lawrence, Lyleton.	1½ lb.	1.05	E. W. Gillett, Toronto.	.....
" 11	"	61427	R. A. Laing, "	1 "	55	Gold Standard Co., Winnipeg.	.....
" 13	"	61428	De'Long & May, Reston.	1 "	90	Novary Products Co., Toronto.	.....
" 13	"	61429	G. S. Munroe Co., Ltd. Reston.	1 "	90	McLaren's Ltd., Winnipeg.	.....
" 15	"	61430	W. J. Bower, Melita....	1 "	1.05	E. W. Gillett, Co., Toronto.	.....
" 28	"	61434	J. A. Harvie & Co., Treaherne.	3 cans	1.05	Gold Standard Co., Winnipeg.	.....
" 28	"	61435	P. R. McLachlin, Rathwell.	3 "	1.05	Campbell Bros. & Wilson, Winnipeg.	.....
Nov. 1	"	61436	Erickson Bros., Selkirk...	3 pkgs	45	Todhunter, Mitchell Co. Toronto.	.....
" 2	"	61437	A. Thornton, 1583 Main St., Kildonan.	3 "	45	Gorman Eckert Co., Winnipeg.	.....
" 2	"	61438	Kildonan Cash Supply Co., 1741 Main St., Kildonan	3 "	45	Blue Ribbon Co., Toronto.	.....
DISTRICT OF SASKATCHEWAN—							
Oct. 13	Cream of Tartar.	66446	McLean Grocery, Moosejaw.	1 lb.	60	White Star Mfg. Co., Winnipeg.	.....
" 13	"	66447	E. E. Ard, Moosejaw....	1 "	60	Gold Standard Mfg. Co. Winnipeg.	Codville Co., Moosejaw.
" 13	"	66448	E. F. Cassidy, ".....	1 "	65	.....	Todhunter & Mitchell Toronto.
" 13	"	66449	J. R. Kelly, ".....	1 "	60	.....	McDonald Crawford Co. Moosejaw.
" 13	"	66450	Geo. A. Tapley, ".....	1 "	60	White Star Mfg. Co. Winnipeg.	.....



SESSIONAL PAPER No. 14  
CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No of Sample.	Remarks and Opinion of the Chief Analyst.
	Acidity (C. C. in per 100 grams.	Bitartrate of potash expressed as weight.	Lime (Ca O).	Phosphates.	Sulphates.	Starch.	Alumina (Al <sub>2</sub> O <sub>3</sub> ) <sub>2</sub>		

JOHN TALBOT, INSPECTOR.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	491	92.3	.....	.....	.....	.....	.....	54680	Genuine.	Commercial grade.
.....	481	90.4	.....	.....	.....	.....	.....	54682	"	"
.....	485	91.3	.....	.....	.....	.....	.....	54684	"	"
.....	486	91.4	.....	.....	.....	.....	.....	54686	"	"
.....	532	100.0	.....	.....	.....	.....	.....	54687	Genuine.	Meets B. P. require- ments.
.....	475	89.3	.....	Trace.	.....	.....	.....	54689	Genuine.	Commercial grade.
.....	495	93.1	.....	.....	.....	.....	.....	54690	"	"
.....	528	99.4	.....	.....	.....	.....	.....	54693	Genuine.	Meets B. P. require- ments.
.....	494	92.9	.....	.....	.....	.....	.....	54696	Genuine.	Commercial grade.
.....	478	90.0	.....	.....	.....	.....	.....	54697	"	"

J. B. COSGROVE, TEMPORARY INSPECTOR.

.....	522	98.2	.....	.....	.....	.....	.....	61426	Genuine.	Meets B. P. require- ments.
.....	526	98.9	.....	.....	.....	.....	.....	61427	"	"
.....	475	89.3	Pre- sent.	.....	.....	.....	.....	61428	Genuine.	Commercial grade.
.....	489	92.0	"	.....	.....	.....	.....	61429	"	"
.....	519	97.6	.....	.....	.....	.....	.....	61430	Genuine.	Meets B. P. require- ments.
.....	520	97.8	.....	.....	.....	.....	.....	61434	"	"
.....	528	99.3	.....	.....	.....	.....	.....	61435	"	"
.....	486	91.4	Pre- sent.	.....	.....	.....	.....	61436	Genuine.	Commercial grade.
.....	484	91.0	.....	.....	.....	.....	.....	61437	"	"
.....	474	89.2	.....	.....	.....	.....	.....	61438	"	"

L. H. HALL, TEMPORARY INSPECTOR

.....	526	98.9	.....	.....	.....	.....	.....	66446	Genuine.	Meets B. P. require- ments.
.....	524	98.6	.....	.....	.....	.....	.....	66447	"	"
.....	484	91.0	Pre- sent.	.....	.....	.....	.....	66448	Genuine.	Commercial Grade.
.....	526	98.9	.....	.....	.....	.....	.....	66449	Genuine.	Meets B. P. require- ments.
.....	524	98.6	.....	.....	.....	.....	.....	66450	"	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer	Furnisher.

## DISTRICT OF ALBERTA—

1915.							
Nov. 16	Cream of Tartar.	52286	Spencer Todd, Ltd., Medicine Hat.	1 lb.	60	Dalley's Hamilton	.....
" 16	"	52287	Sprague & Williamson, Medicine Hat.	3 tins.	60	F. F. Dalley & Co., Hamilton.	.....
" 17	"	52288	E. S. Bowden, Taber. ....	3 pkg.	60	Campbell Bros. & Wilson, Winnipeg	.....
" 17	"	52289	Vickery & Co., Taber....	1 lb.	70	Campbell, Wilson & Horne, Lethbridge	.....
" 17	"	52290	The Good Company, Lethbridge.	1 "	75	A. Macdonald Co., Lethbridge.	.....
" 18	"	52291	J. D. Higginbotham & Co., Ltd., Lethbrdge.	1 "	1 00	Lyman's Ltd., Montreal.	.....
" 23	"	52292	The John Irwin Co., Calgary.	1 "	80	Georgeson & Co., Ltd., Calgary.	.....
" 23	"	52293	Geo. I. Wood, Calgary . .	1 "	65	Georgeson & Co., Ltd., Calgary.	.....
" 24	"	52294	J. T. Macdonald, Calgary	3pkts.	60	E. W. Gillett Co., Toronto.	.....
" 24	"	52295	S. G. Freeze, Calgary. .	3 "	60	Blue Ribbon, Ltd., Winnipeg.	.....

## DISTRICT OF ROCKY MOUNTAINS—

Oct. 18	Cream of Tartar.	61891	M. Penney, Prince George	3 tins.	1.20	Kelly Douglas & Co., Vancouver.	.....
" 18	"	61892	Hood's Ltd., Prince George	3 "	75	White Star Mfg., Winnipeg.	.....
Nov. 16	"	61897	J. A. Menzies, Ltd., Merritt.	3pkgs.	1.20	E. W. Gillett, Co., Toronto.	.....
" 16	"	61898	Merritt Mercantile Co., Merritt.	3 "	60	Win. Braid & Co., Vancouver.	.....
Dec. 6	"	68109	N. L. McInnes, Grand Forks.	1 lb.	75	F. F. Dalley, Co., Hamilton.	.....
" 6	"	68110	Jeff Davis & Co., Grand Forks.	1 "	75	Kelly Douglas & Co., Vancouver.	.....

## DISTRICT OF VANCOUVER—

Oct. 27	Cream of Tartar.	55376	David Spencer, Ltd., Vancouver.	1 lb..	70	Empress Mfg. Co., Vancouver.	.....
" 27	"	55377	W. H. Edgett, 118 Hastings St., W., Vancouver.	1 "	70	" "	.....
" 28	"	55378	Slater Bros., 131 Hastings St., E., Vancouver.	1 "	60	Kelly, Douglas & Co., Ltd., Vancouver.	.....
" 28	"	55379	The Cow Butter Store, 195 Hastings St., E., Vancouver.	3 tins.	45	Empress Mfg. Co., Vancouver.	.....

SESSIONAL PAPER No. 14  
CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Acidity C.C. ÷ per 100 grams.	Bicarbonate of potash expressed as weight.	Lime (Ca O).	Phosphates.	Sulphates.	Starch.		

A. W. R. MARKLEY, INSPECTOR.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
Sold in bulk . . .	474	89.2	Present	....	....	....	....	52286	Genuine. Commercial Grade.
Guaranteed Pure	496	93.2	"	....	....	....	....	52287	"
Royal Shield Brand.	532	100.0	....	....	....	....	....	52288	Meets B. P. requirements.
Sold in bulk.	498	93.6	Present.	....	....	....	....	52289	Commercial Grade.
"	494	92.8	"	....	....	....	....	52290	"
"	532	100.0	....	....	....	....	....	52291	Meets B. P. requirements.
Tuxedo Brand.	528	99.2	....	....	....	....	....	52292	"
"	532	100.0	....	....	....	....	....	52293	"
Guaranteed Chemically Pure.	532	100.0	....	....	....	....	....	52294	"
Pure Cream of Tartar.	532	100.0	....	....	....	....	....	52295	"

THOS. PARKER, INSPECTOR.

Nabob.	528	99.2	....	....	....	....	....	61891	Genuine. Meets B. P. requirements.
"	489	92.0	Present	....	....	....	....	61892	Commercial Grade.
"	532	100.0	....	....	....	....	....	61897	Meets B. P. requirements.
"	530	99.0	....	....	....	....	....	61898	"
"	496	93.1	Present	....	....	....	....	68199	Commercial Grade.
"	530	99.6	....	....	....	....	....	68110	Meets B. P. requirements.

E. J. MORGAN, INSPECTOR.

Sold in bulk	110	....	....	....	....	16.40	....	55250	Contains sulphate. Is a baking powder. Falsified by mistake.
"	530	99.6	Present	....	....	....	....	60877	Genuine. Meets B. P. requirements.
"	517	97.2	"	....	....	....	....	60878	"
Empress Brand	532	100.0	....	....	....	....	....	60879	"

7 GEORGE V, A. 1917  
BULLETIN No. 335—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF VANCOUVER—

1915.							
Oct.	28	Cream of Tartar.	55380	A. & C. Grocery, 520 Granville St., Vancouver.	1 lb..	65	Empress Mfg. Co., Vancouver.
"	28	"	55381	Jas. A. Lowe, 1002 Seymour St., Vancouver.	3 pkgs	45	Wm. Braid & Co., Vancouver.
Nov.	11	"	55382	W. H. Walsh, Seymour and Davie Sts., Vancouver.	1 lb..	70	" "
"	11	"	55383	London Grocery Co., 1048 Granville St., Vancouver	3 pkgs	45	Kelly, Douglas & Co., Vancouver.
"	12	"	55384	New Westminster Co-Operative Association, New Westminster.	1 lb..	60	" "
"	12	"	55385	Fraser River Supply Co., 548 Columbia St., New Westminster.	1 "	25	" "

## DISTRICT OF VICTORIA—

Nov.	10	Cream of Tartar.	66615	Windsor Grocery Co., 817 Govt. St., Victoria.	1 lb..	80	Pioneer Coffee and Spice Mills, Victoria.
"	10	"	66621	The West End Grocery Co., Ltd., 1002 Govt. St., Victoria.	3 tins.	45	Empress Mfg. Co., Vancouver.
"	11	"	66626	Dixi H. Ross & Co., 1317 Govt. St., Victoria.	1 lb..	40	E. W. Gillett & Co., Co., Toronto.
"	12	"	66631	Acton Bro., 1317 Douglas St., Victoria.	1 "	90	Wm. Braid & Co., Vancouver.
"	12	"	66634	H. O. Kirkham & Co., 1109 Govt. St., Victoria.	1 "	75	..... Kelly, Douglas Co., Vancouver.
"	15	"	66638	Copas & Young, 631 Fort St., Victoria.	1 "	70	E. W. Gillett & Co., Toronto.
"	15	"	66639	Henry W. Driver, 856 Yates St., Victoria.	1 "	60	..... W. H. Malkin Co., Vancouver
"	23	"	66643	E. B. Jones, 1800 Cook St., Victoria.	1 "	70	..... W. A. Jameson, Coffee Co., Victoria.
"	23	"	66644	Wellburn's Cash Grocery Store, 1058 Pandora Ave., Victoria.	1 "	60	E. W. Gillett Co., Toronto.
"	24	"	66615	W. A. Jameson Coffee Co., 754 Broughton Ave., Victoria.	3 tins.	55	Nat. Aniline and Chem. Co., Chicago, U.S.A.

SESSIONAL PAPER No. 14

CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Acidity C. C. in per 100 grams.	Bicarbonate of potash expressed as weight.	Lime (Ca O).	Phosphates.	Sulphates.	Starch.		

Concluded.

		p.c.	p.c.	p c	p.c.	p.c.	p.c.		
Sold in bulk....	485	91.2	Pre-sent.	.....	Pre-sent.	.....	.....	55380	Genuine. Commercial grade.
.....	525	98.8	"	.....	.....	.....	.....	55381	" Meets B. P. requirements.
Sold in bulk....	498	93.6	"	.....	.....	.....	.....	55382	Genuine. Commercial grade.
Nabob Brand....	487	91.6	"	.....	.....	.....	.....	55383	" "
Sold in bulk....	525	98.8	.....	.....	.....	.....	.....	55384	Genuine. Meets B. P. requirements.
Sold as compound.	436	..	.....	.....	21.2	36.36	.....	55385	Sold as compound.

D O'SULLIVAN, INSPECTOR.

.....	523	98.4	Pre-sent.	.....	.....	.....	.....	66615	Genuine. Meets B. P. requirements.
Empress Brand.	530	99.6	.....	.....	.....	.....	.....	66621	" " "
Bulk.....	532	100.0	.....	.....	.....	.....	.....	66626	" " "
Braid's Best....	504	94.8	Pre-sent.	.....	.....	.....	.....	66631	Genuine. Commercial Grade.
Nabob.....	481	90.4	"	.....	.....	.....	.....	66634	" " "
.....	532	100.0	.....	.....	.....	.....	.....	66638	" Meets B. P. requirements.
Dalley's Pure...	487	91.6	Pre-sent.	.....	.....	.....	.....	66639	Genuine. Commercial Grade.
.....	532	100.0	.....	.....	.....	.....	.....	66643	Genuine. Meets B. P. requirements.
Gillett's Ground Cream of Tartar.	532	100.0	.....	.....	.....	.....	.....	66644	" " "
Jamison's Victoria Brand.	532	100.0	.....	.....	.....	.....	.....	66645	" " "

APPENDIX Z<sup>1</sup>.

## BULLETIN No. 336—TINCTURE OF GINGER.

OTTAWA, March 29, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue,

SIR,—The accompanying report has to do with sixty-five (65) samples purchased as Tincture of Ginger, between September and December of last year.

This tincture is a solution of the oleo-resin of ginger in strong alcohol. The British Pharmacopœia prescribes alcohol of 90 per cent; that of the United States, alcohol of 94.9 per cent, both by volume. Unless strong alcohol is employed, the oleo-resin of ginger is not obtained in solution.

Experimental work recorded in Bulletin No. 110, demonstrated that the resins in solution, from different varieties of ginger, may vary from 0.260 per cent. (weight) to 0.499 per cent. Moor (*Suggested Standards*, p. 140) quotes many authorities who find from 0.290 to 0.680 per cent. Siggins (*The National Dispensatory*) finds from 0.480 to 0.700 per cent. T. Barclay (*Pharm. Jour.*, December, 1898) proposes 0.400 per cent oleo-resin as a standard below which a satisfactory tincture should not be recognized.

The specific gravity of the tincture should lie between 0.835 and 0.840. The loss of alcohol in making the tincture need not exceed one per cent. (See Bulletin 110, p. 13).

Reasonable allowance must be made for variation due to the natural differences found in commercial ginger, for losses in manufacture, and in dispensing. With these considerations in mind I would suggest the following limits:—

Specific gravity of tincture. . . . .	0.830 to 0.850
Alcohol content (vol. p.c.) . . . . .	80.00 to 90.00 +
Oleo-resins, per cent. . . . .	0.250 to 0.700

The limits suggested allow a very wide margin, and it is hoped that experience will justify a closer approximation to a definite standard. Our experience of this article as found on the Canadian market is restricted to reports contained in Bulletins Nos. 34, 110, 179, and the present report.

It is to be remembered that the different pharmacopœias describe alcoholic preparations of ginger, which more or less resemble the B.P. tincture. This last is made with the use of 100 grammes of ginger to 1,000 cubic centimetres of alcohol, or, 1 part by weight in 10 parts by volume.

The U. S. P. tincture, is made with 200 grammes ginger to 1,000 cubic centimetres of alcohol, 1 part by weight to 5 parts by volume.

The U.S. Pharmacopœia (8th revision) describes a Fluid Extract of Ginger, made by the use of 1,000 grammes of ginger percolated with 1,000 cubic centimetres of alcohol, or, 1 part by weight to 1 part by volume.

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The British Pharmacopœia of 1885 defined a strong tincture of ginger (essence of ginger) made from 50 parts by weight of ginger and 100 parts of alcohol (volume), or 1 part by weight, to 2 parts by volume.

Finally the Canadian Formulary of 1900, defines a solution of ginger (Liquor Zingiberis) made from 50 parts of the strong tincture, 33.5 parts sugar and distilled water to produce 100 parts by volume.

It is quite apparent from the results of analysis here recorded, that our inspectors have, in many instances, been supplied, with one or other of these preparations, instead of the Tincture.

The following summary gives the results of analysis in brief:—

Samples found to meet legal requirements. . . . .	41
“ but slightly below requirements. . . . .	9
“ Essence, not Tincture of Ginger. . . . .	13
“ below requirements, and adulterated under the Act. . . . .	2
	—
Total. . . . .	65
	—

I beg to recommend publication of this report as Bulletin No. 336.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF NOVA SCOTIA—

1915.							
Oct. 20	Tincture of Ginger.	64276	C. A. Barnstead, Halifax, N.S.	12 ozs.	1.30	Vendor	
" 27	" ..	64277	Nat. Drug Co., Halifax, N.S.	12 "	1.02	Vendors	
" 28	" ..	64278	Brown Bros. & Co., Halifax, N.S.	12 "	1.05	"	
Dec. 7	" ..	64279	H. E. Wilson, Windsor, N.S.	12 "	1.00	Vendor	
" 8	" ..	64280	L. C. Gardner, Yarmouth, N.S.	12 "	90	"	
" 8	" ..	64281	B. F. Trask, Yarmouth, N.S.	12 "	1.00	"	

## DISTRICT OF QUEBEC CITY—

Oct. 6	Extrait Gingembre.	56556	Jos. Masson, 808 St. Valier, Quebec.	12 ozs.	2.50	Parke, Davis Co.	Mfrs.
" 12	" ..	56557	Willis, 4 St. Jean, Quebec.	12 "	1.50	Vendor	
" 13	" ..	56558	E. D. Morin & Cie, 113 Cote de la Montagne, Quebec.	12 "	1.50	Parke, Davis Co.	Mfrs.
" 13	" ..	56559	V. Giroux, 11 St. Pierre, Quebec.	12 "	2.40	Horners	Mfr
" 15	" ..	56570	W. Brunet, 140 St. Joseph, Quebec.	12 "	2.50	Prost Co.	"
" 15	" ..	56560	J. B. Giroux, 387 St. Joseph, Quebec.	12 "	2.75	Frank W. Horner, Montreal.	"
" 15	" ..	56561	J. P. Plamondon, 122 St. Joseph, Quebec.	12 "	2.50		
" 15	" ..	56562	L. E. Martel, 51 St. Joseph, Quebec.	12 "	1.80	Davis, Lawrence Co.,	E. Lachance
" 16	" ..	56563	M. Dion, 107 Rue Commercial, Quebec.	12 "	2.90	Parke, Davis Co.	Mfrs.

## DISTRICT OF MONTREAL—

Nov. 29	Tincture of Ginger.	67281	J. A. Harte, 148 Notre Dame St. W., Montreal.	12 ozs.	1.20	Vendor	
" 29	" ..	67282	Birk's Pharmacy, 340 Notre Dame St. W., Montreal.	12 "	1.50	Lyman's Ltd.	
" 29	" ..	67283	Leduc's Drug Store, Chaboillez Square, Montreal.	12 "	1.25	"	
" 29	" ..	67284	A. LeBeau, 465 St. James St, Montreal	12 "	1.50	"	
" 29	" ..	67285	Nat. Drug and Chem. Co., Montreal.	12 "	90	Vendors	
" 30	" ..	67286	Davis & Lawrence, Montreal.	12 "	1.00	"	



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## TINCTURE OF GINGER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. Gr. at 15.5° C.	Alcohol by weight.	Alcohol by volume.	Total Solids.		

R. J. WAUGH, INSPECTOR.

		p.c.	p.c.	p.c.		
.....	0.8309	.....	89.44	0.35	64276	Meets legal requirements.
.....	0.8448	.....	85.92	3.37	64277	Essence of ginger.
.....	0.8267	.....	92.40	0.52	64278	Meets legal requirements.
.....	0.8276	.....	90.80	0.50	64279	" "
Made from Smarts & Co., Fluid Extract. B.P.	0.8341	.....	89.28	0.42	64280	" "
.....	0.8348	.....	89.72	0.52	64281	" "

F. X. W. E. BELAND, INSPECTOR.

.....	0.8512	.....	82.20	4.48	56556	Essence of ginger.
.....	0.8255	.....	92.04	0.41	56557	Meets legal requirements.
.....	0.8564	.....	81.48	5.43	56558	Essence of ginger.]
.....	0.8412	.....	86.36	3.00	56559	" "
.....	0.8326	.....	89.36	3.62	56560	" "
.....	0.8445	.....	86.77	2.98	56560	" "
.....	0.9706	.....	29.12	1.21	56561	Adulterated. Alcohol too low
.....	0.8810	.....	74.32	5.02	56562	Essence of ginger. Alcohol rather low.
.....	0.8470	.....	84.76	4.42	56563	Essence of ginger.

D. J. KEARNEY, INSPECTOR.

.....	0.8509	81.05	86.36	0.76	67281	Meets legal requirements.
.....	0.8717	72.08	78.72	0.17	67282	Residual alcohol slightly too low
.....	0.8300	87.75	91.28	0.73	67283	Meets legal requirements.
.....	0.8269	90.32	93.52	0.76	67284	" "
.....	0.8393	85.40	89.84	0.23	67285	" "
.....	0.8417	86.92	90.20	0.31	67286	" "

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MONTREAL—

1915.							
Nov. 30	Tincture of Ginger.	67287	Chas. E. Frosst & Co., Montreal.	12 oz.	1.05	.....	.....
" 30	" ..	67288	Chapman Dart Co., Montreal.	12 "	1.00	.....	.....
" 30	" ..	67289	Parke, Davis & Co., Montreal.	12 "	1.20	.....	.....
" 30	" ..	67290	Lyman, Knox & Co., Montreal.	12 "	1.00	.....	.....

DISTRICT OF OTTAWA—

Sept. 30	Tincture of Ginger.	70526	T. Payment, Dalhousie St., Ottawa.	12 oz.	1.35	Vendor .....	.....
" 30	" ..	70527	Brethour's Drug Store, Bronson Ave., Ottawa.	12 "	1.35	" .....	.....
" 30	" ..	70528	C. H. Lewis, Bay St., Ottawa.	12 "	1.35	" .....	.....
Oct. 14	" ..	70529	Blair C. Roger, Main St., Ottawa East.	12 "	1.35	" .....	.....
" 15	" ..	70530	W. A. Henderson, Bank St., Ottawa.	12 "	1.35	" .....	.....
" 15	" ..	70531	F. W. Day, Bank St., Ottawa.	12 "	1.35	" .....	.....
" 15	" ..	70532	A. J. Brownlee, Bank St., Ottawa.	12 "	1.35	" .....	.....
" 15	" ..	70533	Allan & Cochrane, Bank and Sparks Sts., Ottawa.	12 "	1.35	" .....	.....
" 15	" ..	70534	E. D. Story, Bank St., Ottawa.	12 "	1.95	Nat. Drug Co., Ottawa.	.....
" 19	" ..	70545	P. J. Nolan, Wellington St., Ottawa.	12 "	1.35	Vendor .....	.....

DISTRICT OF TORONTO—

Oct. 25	Tincture of Ginger.	69925	Owl Drug Stores, Ltd, 336 Bloor St. west, Toronto.	12 oz.	1.25	Nat. Drug and Chem. Co., Ltd., Toronto.	.....
" 25	" ..	69927	Tanblyns, Ltd., 972 Bloor St. west, Toronto.	10 "	1.25	Vendors .....	.....
" 25	" ..	69928	W. H. C. Summerfeldt, 1096 Bloor St. west, Toronto.	12 "	1.35	E. B. Shuttleworth Co., Ltd., Toronto.	.....
" 25	" ..	69929	M. P. Rose, 1204 Bloor St. west, Toronto.	12 "	1.00	Vendor .....	.....
" 26	" ..	69930	F. B. Bunting, 221 Wellesley St., Toronto.	12 "	1.00	Unknown .....	.....
" 26	" ..	69931	S. M. Green, 556 Parliament St., Toronto.	12 "	1.00	Vendor .....	.....
" 26	" ..	69932	W. H. Robson, 296 Gerrard St. east, Toronto.	12 "	1.20	Nat. Drug and Chem. Co. Ltd., Toronto.	.....

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TINCTURE OF GINGER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. at 15.5° C.	Alcohol by weight.	Alcohol by volume.	Total Solids.		

Concluded.

		p. c.	p. c.	p. c.		
.....	0.8292	90.32	93.52	0.39	67287	Meets legal requirements.
.....	0.8819	67.11	74.32	0.32	67288	Slightly below strength in alcohol.
.....	0.8348	85.46	89.84	0.92	67289	Nearly meets legal requirements.
.....	0.8799	67.56	74.72	3.17	67290	Slightly below strength in alcohol. Is essence; not tincture of ginger.

J. A. RICKEY, INSPECTOR.

.....	0.8297	88.81	92.40	0.38	70526	Meets legal requirements.
.....	0.8282	90.88	93.92	0.46	70527	" "
.....	0.8269	10.32	93.52	0.60	70528	" "
.....	0.8251	92.01	94.72	0.35	70529	" "
Made from Burrows & Welleome's concentrate.	0.8254	90.88	93.92	0.39	70530	" "
.....	0.8279	89.30	92.76	0.59	70531	" "
.....	0.8276	92.56	95.12	0.52	70532	" "
.....	0.8228	88.81	92.40	0.40	70533	" "
.....	0.8398	83.57	88.36	0.52	70534	" "
.....	0.8263	89.36	92.76	0.44	70540	" "

H. J. DAGER, INSPECTOR

.....	0.8497	80.16	85.61	3.24	69925	Essence of ginger.
.....	0.8240	91.43	94.32	0.47	69927	Meets legal requirements.
Bottle labelled 'Tincture Ginger fort.	0.8339	87.35	91.28	2.60	69928	Essence of ginger.
.....	0.8365	85.92	90.20	0.82	69929	Meets legal requirements.
.....	0.8985	60.67	68.32	1.99	69930	Alcohol too low and solids high. Alcali-treated.
.....	0.8281	88.36	92.04	0.54	69931	Meets legal requirements.
.....	0.8403	84.04	88.72	0.32	69932	" "

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF TORONTO—							
1915.							
Oct. 26	Tincture of Ginger.	69933	Liggetts, Ltd., 224 Yonge st., Toronto.	12 ozs.	1.00	Unknown.....	.....
" 26	" ..	69934	T. Eaton Co., Ltd., Yonge and Queen sts., Toronto.	12 "	75	Vendors .....	.....
" 26	" ..	69935	The Hennessey Drug Stores, Ltd., 117 Yonge st., Toronto.	12 "	1.25	E. B. Shuttleworth Co., Ltd., Toronto.	.....
DISTRICT OF VANCOUVER—							
Oct. 30	Tincture of Ginger.	55396	Vancouver Drug Co., 405 Hastings st., W., Vancouver, B.C.	12 ozs.	1.20	Vendors.....	.....
" 30	" ..	55397	E. S. Knowlton, 1 Hastings st., E., Vancouver, B.C.	12 "	1.50	Vendor.....	.....
" 30	" ..	55398	Owl Drug Co., Ltd., 399 Powell st., Vancouver, B.C.	12 "	1.20	Vendors.....	.....
" 30	" ..	55399	Capitala Pharmacy, 1100 Davie st., Vancouver B.C.	12 "	1.00	" .....	.....
Nov. 1	" ..	55400	Georgia Pharmacy, 699 Granville st., Vancouver, B.C.	12 "	1.50	" .....	.....
" 1	" ..	55401	David Newall, 991 Granville st., Vancouver, B.C.	12 "	1.20	Vendor.....	.....
" 2	" ..	55402	Woods' Pharmacy, 601 Hastings st., W., Vancouver, B.C.	12 "	1.50	" .....	.....
" 2	" ..	55403	Red Star Drug Store, 53 Cordova st., W., Vancouver, B.C.	12 "	1.00	" .....	.....
" 2	" ..	55404	MacLennan's Drug Store, 750 Columbia st., New Westminster, B.C.	12 "	1.50	" .....	.....
" 2	" ..	55405	H. Ryall, New Westminster, B.C.	12 "	1.50	" .....	.....
DISTRICT OF VICTORIA—							
Nov. 8	Tincture of Ginger.	66605	John Cochrane, 1300 Douglas st., Victoria, B.C.	12 ozs.	1.25	May & Baker, Ltd., Battersea, London, S.W.	.....
" 8	" ..	66606	W. Jackson & Co., 1411 Douglas st., Victoria, B.C.	12 "	1.20	Lymans, Ltd., Montreal.	.....
" 8	" ..	66607	Hall & Co., 702 Yates st, Victoria, B.C.	12 "	1.25	Vendors.....	.....
" 8	" ..	66608	Cyrus H. Bowes, 1228 Government st., Victoria, B.C.	12 "	1.25	Vendor .....	.....
" 8	" ..	66609	F. J. Williams, Fort and Government sts., Victoria, B.C.	12 "	1.25	" .....	.....
" 8	" ..	66610	Geo. H. Fraser & Co., 912-914 Government st., Victoria, B.C.	12 "	1.25	Vendors.....	.....
" 8	" ..	66611	W. S. Terry, P.O., Box 504, Victoria, B.C.	12 "	1.20	Nat. Drug and Chem. Co., Victoria, B.C.	.....
" 8	" ..	66612	D. E. Campbell, Douglas and Fort sts., Victoria, B.C.	12 "	1.25	Vendor .....	.....
" 8	" ..	66613	Ivel's Pharmacy, 1415 Government st., Victoria, B.C.	12 "	1.20	" .....	.....
" 8	" ..	66614	Aronson & Elwin, Fort & Cook sts., Victoria, B.C.	12 "	1.20	Vendors .....	.....

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TINCTURE OF GINGER.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. at 15° C.	Alcohol by weight.	Alcohol by volume.	Total Solids.		

Concluded.

		p. c.	p. c.	p. c.		
.....	0.8538	78.63	84.36	0.68	69933	Meets legal requirements.
.....	0.8243	92.56	95.12	0.46	69934	" "
.....	0.8446	82.09	87.16	1.84	69935	Essence of Ginger.

E. J. MORGAN, INSPECTOR.

Prepared from Concentrated Extract.	0.8253	.....	91.60	0.83	55396	Meets legal requirements.
" "	0.8346	.....	88.20	2.21	55397	Essence of Ginger.
" "	0.8271	.....	90.80	0.80	55398	Meets legal requirements.
" "	0.8506	.....	83.40	1.00	55399	Nearly meets legal requirements.
" "	0.8252	.....	91.00	0.90	55400	" " "
" "	0.8228	.....	91.60	0.68	55401	Meets legal requirements.
" "	0.8232	.....	91.00	0.84	55402	" "
" "	0.8335	.....	88.80	0.75	55403	" "
" "	0.8272	.....	90.00	0.83	55404	" "
" "	0.8320	.....	88.40	0.95	55405	Nearly meets legal requirements.

D. O'SULLIVAN, INSPECTOR.

.....	0.8293	.....	91.00	0.83	66605	Meets legal requirements.
.....	0.8255	.....	91.00	1.08	66606	Nearly meets legal requirements.
.....	0.8431	.....	85.80	0.90	66607	" "
.....	0.8230	.....	92.40	0.73	66608	Meets legal requirements.
.....	0.8261	.....	91.60	0.63	66609	" "
.....	0.8256	.....	92.20	1.00	66610	Nearly meets legal requirements.
.....	0.8272	.....	92.20	0.68	66611	Meets legal requirements.
.....	0.8244	.....	92.20	0.66	66612	" "
.....	0.8254	.....	92.40	0.66	66613	" "
.....	0.8538	.....	85.20	0.87	66614	" "



APPENDIX Z<sup>2</sup>.

## BULLETIN No. 337—LEMON FLAVOURING EXTRACT.

OTTAWA, March 31, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue,

SIR,—I have the honour to report upon the results of analysis of an inspection of Lemon Flavouring Extract.

This comprises 223 samples obtained by our inspectors in July, August and September of last year.

Lemon Flavouring Extract has been made the subject of inspection on three former occasions and results reported as follows:—

Bulletin 89, 1903— 27 samples.  
Bulletin 114, 1906—110    "  
Bulletin 198, 1910— 75    "

The last named report contains information intended to furnish a basis for standardization of the article, and this information is summarized thus:—

1. Extract of lemon is valued for its characteristic flavour.
2. This flavour depends upon the presence of certain constituents of lemon oil.
3. The terpenes which constitute more than 90 per cent of lemon oil, are not important from the point of view of contributing flavour to the oil.
4. It is mainly to dissolve the terpenes of lemon oil that strong alcohol is used as a solvent.
5. The citral, citronellal, and other flavour giving components of lemon oil, constitute less than 10 per cent of the oil, and may be effectively got into solution, from the oil, by weak alcohol.
6. If these flavouring components are derived immediately from fresh peel, a strong alcohol must be employed, on account of the water present in the peel. The alcohol content of the finished extract will, however, be low.
7. A good flavouring extract can be prepared either from fresh lemon peel, from lemon oil, or from so called terpeneless lemon oil. It is according to commercial usage to prepare it from the lemon oil, rather than from the peel.
8. A weak alcohol (proof strength) suffices to dissolve the flavour giving constituents from the oil; and the employment of a stronger alcohol merely adds to the cost of the extract, without corresponding improvement of quality.
9. The citral of lemon-grass oil is not to be confounded with that from true lemon oil. Both citrals are more or less indefinite bodies, being essentially aldehydic, but associated with aromatic substances which are lemon-like in one case and more or less verbena-like in the other. The distinction between them is not, at present, evident to chemical methods.

10. Methods for the quantitative determination of citral are being studied; and it is hoped that a practical method may be discovered, thus enabling Lemon Extract to be judged by determination of the component to which it owes its commercial importance.

By an Order in Council of 17, Oct. 1912 (published as Departmental Circular G. 1045) Lemon Extract is defined as below:—

“Lemon Extract is the flavouring Extract prepared from lemon peel, or from oil of lemon, and contains, along with more or less of the terpenes of Lemon Oil, not less than two tenths (0.2) of one per cent of citral derived from Oil of Lemon.”

This definition recognizes that the terpene content of lemon oil (consisting of above 90 per cent of the whole) is of secondary importance as a flavouring material. The flavour-giving components of lemon oil are essentially citral and citronellal, with smaller amounts of other substances. It remains true, however, that some difficulty is found in fully removing these flavour-giving components of the oil, without at the same time taking into solution a large portion, or even the whole of the terpenes; and the successful manufacture of a terpeneless lemon flavouring extract demands great care, and experience, as will be seen in the further study of this report.

The Order in Council just mentioned defines a Terpene Lemon Extract, as follows:—

“Terpene lemon extract is the flavouring extract prepared as above described, and contains not less than five (5) per cent of Oil of lemon, and not less than two tenths (0.2) of one per cent of Citral, derived from oil of lemon.”

This article (terpene lemon extract), is identical with the ordinary lemon extract of the U.S.A. regulations. Its manufacture demands the use of strong alcohol, without which the terpene content of oil of lemon cannot be held in solution. It has the advantage of assuring the corresponding citral content; while, in order to obtain the required amount of citral in solution where a weaker alcohol is employed, a high degree of care and skill are demanded on the part of the manufacturer.

The method employed in Citral determination in these extracts is that described by Hiltner (Jour. Ind. and Engin. Chemistry, 1909, p. 798). The method appears in Leach, Food Inspection and Analysis, Second Edition, p. 868; also in Parry's "Food and Drugs", 1911, p. 264; and in Abstract. Journ. Soc. Chem. Industry, 1910, p. 172.

Hiltner's work indicates a degree of accuracy which makes possible the determination of citral within 0.01 gramme per 100 cc. where amounts varying from 0.025 to 0.200 are present.

Work done in this laboratory shows that a somewhat less degree of accuracy than that indicated above, is obtainable with commercial extracts, possibly due to progressive oxidation of the aldehyde in presence of sunlight, and on prolonged keeping. Still another difficulty appears where the article is artificially coloured, a concession permitted without declaration by Order in Council of 9th January, 1915 (G. 1167).

The total error due to combination of all these causes may amount to 0.03 citral; and I have taken the precaution of allowing a departure of 0.05 from the standard requirements of 0.20 citral per 100 cc. before declaring the sample adulterated, under the Act. In no case has this conclusion been reached until two more determinations were made upon the sample.

It is regrettable that the term *adulterated* must apply to samples sold as genuine, but found to contain less than the minimum amount of citral. Section 3 (g) of the Act, defines as adulteration any failure to reach a standard prescribed by Order in Council. To the ordinary reader, the word implies purposeful addition of a fraudulent kind. This meaning must not be read into the word as used in this report. It is certain that the large number of failures to meet our standards are mainly due to faulty methods of manufacture, and not to intentional fraud. As I have already



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pointed out, the attempt to get into solution a proper amount of citral by use of a weak alcohol (less than 50 per cent. strength) makes demands that can only be successfully met by much experience and acquired skill. That the great majority of these extracts are intended to be trpeneless, is shown by the following facts:—

Out of 223 samples, only 10 samples contain above 5 per cent lemon oil, only 15 samples above 4 per cent, only 23 samples above 3 per cent, and only 40 samples above 2 per cent. All samples containing as much as 3 per cent lemon oil are found to contain the required minimum amount of citral. It is also noteworthy that, with exception of three or four samples, all those found to contain less than the standard minimum amount of citral are made with alcohol of less than 50 per cent strength.

The results of this inspection may be summarized as follows:—

Samples found to meet standard. . . . .	83
“ sold as compound . . . . .	68
“ sold mistakenly. . . . .	3
“ adulterated under the Act. . . . .	69
	<hr/>
Total. . . . .	223
	<hr/>

I beg to recommend publication of this report as Bulletin No. 337; and I would further respectfully suggest that for this first inspection of Lemon Extract since legalization of Standards, the presence of 0.10 per cent of citral be recognized as proving good faith on the part of the manufacturer. This without prejudice to later inspections.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NOVA SCOTIA—

1915.								
Sept. 9	Lemon Flavouring Extract.	64236	Payzant & King, Halifax.	3 bts.	24	E. Gass, Halifax.	Mfr . . .	Maker's name on label stated Tangalla Messina, Perfecto Brand.
" 9	"	64237	Nat. Drug and Chem. Co., Halifax.	3 "	40	Vendors . . . . .	"	Queen Brand.
" 21	"	64238	J. L. Wilson & Co., Halifax.	3 "	30	Nat. Drug and Chem. Co., Halifax.	Mfrs. . . . .	Sovereign Brand.
" 21	"	64239	R. B. Secton & Co., Halifax.	3 "	40	Robinson Mfg. Co., Toronto.	"	"
" 22	"	64240	John Tobin & Co., Halifax.	3 "	59	Vendors . . . . .	"	"

DISTRICT OF NOVA SCOTIA—

Aug. 10	Lemon Extract.	69806	A. J. Roop, New Glasgow.	3 bts.	30	G. E. Barbour Co., Ltd., St. John.	Mfrs. . . . .	"
" 10	"	69807	Jas. Cavanagh, New Glasgow.	3 "	30	Hemi Jonas & Co., Montreal.	"	"
" 11	"	69808	S. M. Lockhart & Co., New Glasgow.	3 "	30	G. E. Barbour Co., Ltd., St. John.	"	"
" 11	"	69809	" " "	3 "	75	Pure Gold Mfg. Co., Toronto.	"	"
" 11	"	69810	2 Barker's Co., New Glasgow.	3 "	30	H. C. & S. Co.	"	"
" 13	"	69811	James McArthur, New Glasgow.	3 "	75	Shirriff's, Ltd., Toronto.	"	"
" 13	"	69812	C. Grant, New Glasgow.	3 "	45	Maritime S. & C. Mills, St. John.	"	"
" 14	"	69813	F. W. Curry, Stellarton.	3 "	30	F. F. Dalley Co., Hamilton, Ont.	R. McGregor & Sons, New Glasgow	"
" 14	"	69814	C. A. Fraser & Co., Stellarton.	3 "	30	Baird Co., Ltd., Woodstock, N.B.	"	"
" 17	"	69815	Abraham Myette, Tracadia, N.S.	"	30	The Regal Mfg. Co., St. John, N.B.	Mfrs. . . . .	"

## SESSIONAL PAPER No. 14

## LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific gravity at 15.5° C.	Alcohol by volume.	Polarization in 2 dm. tube at 20° C.	Equivalent Lemon Oil.	Citral.	Refractive Index of oil.		

R. J. WAUGH, INSPECTOR.

		p. c.		p. c.	p. c.			
Tangalla & Co. Perfecto Lemon Essence.	0.9774	18.8	0.0	0.00	0.08		64236	Below standard in citral. Adulterated.
Nat. Drug and Chem. Co. Queen Mixture Extract Lemon.	0.9141	59.6	0.4	0.12	0.22		64237	Sold as Mixture. Contains 0.22 p.c. citral.
Nat. Drug and Chem. Co. Sovereign Pure Extract Lemon.	0.9249	54.7	0.5	0.16	0.15		64238	Genuine.
Robinson Mfg. Co. Quint Essence Pure Lemon Extract.	0.9555	37.7	0.0	0.00	0.10		64239	Below standard in citral.
Jno. Tobin & Co. Lemon Flavouring Extract.	0.8951	67.9	0.4	0.12	0.15		64240	Genuine.

WALTER O. PETIPAS, TEMPORARY INSPECTOR.

Lemon Extract . . . . .	0.9340	50.3	0.0	0.0	0.17		64266	Genuine.
Lemon Mixture . . . . .	0.8771	72.4	7.8	2.41	0.18		64267	Sold as Mixture. Contains 2.41 p.c. lemon oil and 0.18 citral.
G. E. Barbour Co. Lemon Extract. Acorn Brand.	0.9316	50.0	0.1	0.12	0.18		64268	Genuine.
Pure Gold Co. Pure Gold Flavouring Extract Lemon.	0.9338	50.3	0.5	0.16	0.16		64269	
Labelled Artificial . . . . .	0.9770	19.3	0.0	0.00	0.10		64270	Sold as artificial.
True Lemon Extract . . . . .	0.9266	49.1	0.5	0.16	0.20		64271	Genuine.
Labelled Compound . . . . .	0.9141	25.0	0.0	0.0	0.08		64272	Sold as compound.
Pure Lemon Extract . . . . .	0.8511	86.6	12.8	4.00	0.10		64273	Genuine, with 4 per cent. lemon oil.
Baird Co., Ltd. Superior Flax Extract Lemon Highly Concentrated	0.9702	25.1	1.4	0.47	0.20		64274	Genuine.
Lemon Extract Compound	0.9670	28.8	0.0	0.00	Trace		64275	Sold as compound.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF CAPE BRETON—

1915.									
July	27	Lemon Flavouring Extract.	63818	H. V. Raymond, Sydney.	3	bots.	75	Gorman Eckert Co., London, Ont.	
"	28	"	63821	C. B. Wholesale Grocery Co., Sydney.	3	"	36	Pure Gold Mfg. Co., Toronto.	
"	28	"	63822	" " " " " "	3	"	39	G. E. Barbour Co., St. John.	
"	28	"	63823	" " " " " "	3	"	36	F. F. Dalley Co., Hamilton.	
"	28	"	63827	J. J. Turnbull, Sydney	3	"	33	Vendor	
"	28	"	63828	W. T. Cleary, Sydney	3	"	30	Heron Leblanc Co., Montreal.	

## DISTRICT OF PRINCE EDWARD ISLAND—

July	14	Lemon Extract.	60343	Beer & Goff, Charlottetown.	3	bots.	30	Nat. Drug and Chem. Co., Ltd., Halifax.	
"	14	"	60344	" " " " " "	3	"	30	Pure Gold Mfg. Co., Ltd., Toronto.	
"	14	"	60345	Jenkin & Son, Charlottetown.	3	"	75	Henri Jonas & Co., Montreal.	
"	15	"	60346	Prowse & Sons, Murray Harbour.	3	"	60	Chamberlain Med. Co., Toronto.	
"	15	"	60347	" " " " " "	3	"	30	G. E. Barbour Co., Ltd., St. John.	
"	15	"	60348	Mrs. Wm. Charon, Murray Harbour.	3	"	30	The Royal Standard Mfg. Co., Woodstock, N.B.	
"	15	"	60349	David Bull, Murray Harbour.	3	"	30	G. E. Barbour Co.	
"	16	"	60350	Coffin & Co., Charlottetown.	3	"	30		
"	16	"	60351	P. A. Smith, Charlottetown.	3	"	45	The Swan Mills, Toronto.	
"	16	"	60352	J. G. Passmore, Charlottetown.	3	"	30	McLaren's, Ltd., Hamilton.	

SESSIONAL PAPER No. 14

## LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific Gravity at 15.5° C.	Alcohol by Volume.	Polarization in 2 dm. Tube at 20° C.	Equivalent Lemon Oil.	Citral.	Refractive Index of Oil.		
E. T. MACKEEN, INSPECTOR.								
		p. c.		p. c.	p. c.			
Gorman, Eckert Co. Pure Flavouring Extract Lemon.	0.9341	59.1 + 0.5	0.16	0.11	.....	.....	63818	Below standard in citral.
Pure Gold Co. Gov. Standard Lemon. Pure Flavouring Extract.	0.9372	48.7	0.0	0.00	0.15	.....	63821	Genuine.
G. E. Barbour. Pure Flavouring Lemon Extract.	0.9361	49.1 + 0.5	0.16	0.12	.....	.....	63822	Below standard in citral.
Dalley's Pure Fruit Lemon Extract.	0.8514	80.1 + 14.0	4.37	0.20	.....	.....	63823	Genuine, with 4.37 p.c. lemon oil.
J. J. Turnbull. Essence Lemon.	0.8309	81.9 + 29.6	9.25	0.31	.....	.....	63827	Genuine. Double normal strength.
"Crown" Lemon Flav. Extract.	0.9641	31.3	0.0	0.00	0.11	.....	63828	Below standard in citral.
WM. A. WEEKS, INSPECTOR.								
Nat. Drug and Chem. Co. Sovereign Extract Lemon.	0.9168	58.0 + 1.6	0.56	0.25	.....	.....	60343	Genuine.
Pure Gold Mfg. Co. Pure Gold Flavouring Extract Lemon.	0.8934	68.6	0.0	0.0	0.21	.....	60344	
Henri Jonas & Co. Royal Quint Essences Pure Lemon.	0.8532	79.4 + 14.4	4.50	0.26	.....	.....	60345	Genuine, with 4.5 p.c. lemon oil.
Chamberlain & Co. Superfine Lemon Extract.	0.9385	47.8 + 0.4	0.12	0.12	.....	.....	60346	Below standard in citral.
.....	0.9350	49.8	0.0	0.0	0.18	.....	60347	Genuine.
The Royal Standard, manufacturers of Royal Standard Fruit Flavouring Ext. Lemon.	0.9294	52.4 + 0.6	0.18	0.15	.....	.....	60348	
G. E. Barbour Co. Acorn Brand Lemon.	0.9275	59.5	0.0	0.00	0.23	.....	60349	
Collin & Co. Lemon Pure Extract; colour added.	0.8551	77.6	18.0	5.62	0.36	.....	60350	Genuine, with 5.62 p.c. lemon oil.
White Swan M(11) Phoenix Est. Lemon Mixture.	0.9788	17.4	0.0	0.00	0.06	.....	60351	S-11 as a mixture.
McLaren's, Ltd. Dew Drop Lemon Mixture.	0.9773	19.0	0.0	0.00	0.12	.....	60352	

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BULLETIN No. 337—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF NEW BRUNSWICK—

1915.									
July	14	Lemon Flavouring Extract.	66131	W. A. Simonds, St. John.	3	bots.	36	Pure Gold Mfg. Co., Ltd., Toronto.	
"	14	"	66132	" " "	3	"	36	F. F. Dalley Co., Ltd., Hamilton.	
"	14	"	66133	Dearborn & Co., St. John.	3	"	30	Vendors.....	
"	15	"	66134	Nat. Drug and Chem. Co., St. John.	3	"	30	"	
"	16	"	66135	2 Barkers, Ltd., St. John.	3	"	60	Estey & Curtis Co., Ltd., Hartland, N.B.	Imperial Flavouring Mixture.
"	19	"	66136	Bard & Peters, St. John.	3	"	25	Gorman, Eckert & Co., London, Ont.	
"	19	"	66137	The Canadian Drug Co., Ltd., St. John.	3	"	25	Vendors.....	
"	21	"	66138	G. E. Barbour Co., Ltd., St. John.	"	"	54	"	Acorn Brand.
"	21	"	66139	Puddington, Wetmore & Morrison, Ltd., St. John.	3	"	50	"	Signet Brand.
Aug.	18	"	66140	The Baird Co., Ltd., Woodstock.	3	"	45	"	

## DISTRICT OF QUEBEC PROVINCE—J. E. AUDET, O. BROCHU

July	7	Lemon Extract.	3607	Dorchester Lumber Co., St. Malachi, Dorchester County.	3	bots.	30		Golden Star Brand, Montreal.
"	13	Extract Lemon.	3613	J. A. Clontier, St. Odilon.	3	"	30		Herron & Leblanc.
"	14	"	3917	P. C. M. Dechine, St. Germain.	3	"	25	Northrop & Lyman Co., Toronto.	
"	15	"	3619	A. Caillouette, St. Justine.	3	"	30		E. Morin, Quebec.
"	16	"	3623	P. K. Prevots, Ste. Rose.	3	"	30		Dr. Morin, Quebec.

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LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific Gravity at 15.5 C.	Alcohol by Volume.	Polarization in 2 dm. Tube at 20° C.	Equivalent Lemon Oil.	Citral.	Refractive Index of Oil.		

JOHN C. FERGUSON, INSPECTOR.

		p. c.		p. c.	p. c.			
Pure Gold Co. Pure Gold Lemon.	0.8907	69.6	0.6	0.00	0.25	...	66131	Genuine.
F. F. Dalley Co. Pure Fruit Extract Lemon.	0.8455	82.9	+11.4	3.56	0.15	...	66132	Genuine, with 3.56 p.c. lemon oil.
Dearborn's Superior Lemon Extract.	0.8299	89.1	+7.6	2.06	0.17	...	66133	Genuine, with 2.06 p.c. lemon oil.
Nat. Drug and Chem. Co. "Star Extract" Lemon.	0.8262	85.8	+21.2	6.62	0.30	...	66134	Genuine, with 6.62 p.c. lemon oil.
Estey & Curtis Co. Imperial Lemon Flavouring Extract.	0.8279	86.0	+19.2	6.00	0.32	...	66135	Genuine, with 6 p.c. lemon oil.
Gorman, Eckert & Co. Oriental Lemon Extract Compound.	0.9688	27.1	0.0	0.00	0.05	...	66136	Sold as compound
Canadian Drug Co. "Evangeline Brand" Lemon.	0.8246	89.8	+9.4	2.94	0.18	...	66137	Genuine, with 2.94 p.c. lemon oil.
G. E. Barbour Co. Acorn Brand Lemon Extract.	0.8246	86.0	+21.6	6.75	0.28	...	66138	Genuine, with 6.75 p.c. lemon oil.
Puddington, Wetmore, Morrison. "Signet Brand" Lemon Flavouring Extract.	0.9312	51.4	+1.0	0.31	0.15	...	66139	Genuine.
The Baird Co., Ltd. Lemon Superior Extract.	0.8255	85.4	+22.6	7.06	0.26	...	66140	Genuine, with 7.06 p.c. lemon oil.

N. CADIEUX, T. GENDREAU, TEMPORARY INSPECTORS.

Lemon Extract ..	0.9731	23.01	+0.7	0.2	0.04	...	2007	Below standard in citral. Adulterated.
" Extracts ...	0.9773	18.48	0.0	...	0.00	...	2015	Adulterated.
Northrop & Lyman Co. Lemon Concentrated Flavouring Extract.	0.9386	47.89	+0.2	...	0.20	...	2017	Genuine.
Windsor Spice Mills. Lemon Mixture "Roma"	0.9807	15.48	+0.8	0.20	None	...	2019	Sold as a mixture
Lemon Double Strength	0.9759	20.33	+0.0	...	0.00	...	2023	Adulterated.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF QUEBEC PROVINCE—								
1915.								
July 17	Extract Lemon.	3629	Gariépie, Ste. Prospère...	3 bots.	30	.....	Carriere & Fils, Lévis.	.....
" 26	"	3634	J. A. Poulin, Valley Jct.	3 "	30	J. B. Reneaud & Co., Quebec.	.....	.....
" 29	"	3639	J. O. Gagné, Ste. Hénédine.	3 "	30	.....	Carriere & Fils, Lévis.	.....
" 22	Lemon Extract.	3596	Louis Corriveau, St. Michel.	3 "	30	Integrity Mills, Toronto.	.....	.....
" 22	"	3599	Geo. Roy, St. Michel...	3 "	30	S. H. Ewing & Sons, Montreal.	.....	.....
" 22	"	4407	J. A. Lemieux, St. Michel.	3 "	60	Henri Jonas Co., Montreal.	.....	.....
" 22	"	4414	J. E. Bouillard, St. Gervais.	3 "	33	Imperial Flavouring.	.....	.....
" 22	"	4418	Benoît, Aubin, St. Lazare.	3 "	33	.....	Herron, Leblanc, Ltd., Montreal.	.....
" 22	"	4420	Alphonse Audet, St. Lazare.	3 "	33	.....	Drouin Freres, Rattray, Quebec.	.....
" 23	"	4424	Jean Ruel, Buckland ..	3 "	36	.....	J. B. Reneaud.	.....
" 12	Lemon Flavouring Extract.	296	J. B. Gougeon, St. Jerome.	3 "	60	.....	Hudon & Orsali.	.....
" 19	"	308	L. W. Brissette, Ste. Agathe des Monts.	3 "	30	Jonas.....	.....	.....
" 19	"	309	F. D. Hall, Ste. Agathe des Monts.	3 "	75	Dalley's ...	.....	.....
" 19	Lemon Extract.	314	H. Gareau, St. Faustin Station.	3 "	30	Jonas.....	.....	.....
" 19	"	317	H. Coté, St. Faustin Station.	3 "	30	Northrop & Lyman Co.	.....	.....
" 19	"	318	Jos. Gareau, St. Faustin.	3 "	30	"	.....	.....
Sept. 14	Extrait de Lemon.	325	E. St. Maurice, St. Eustache, Co. des deux Montagnes.	3 "	30	E. Lubon, Nice.	.....	.....
" 14	"	328	Belair & Paquette, St. Eustache, Co. des deux Montagnes.	3 "	54	Henri Jonas & Co.	.....	.....



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## LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and opinion of the Chief Analyst.
	Specific gravity at 15° C.	Alcohol by volume.	Polarization in 2 dm. tube at 20° C.	Equivalent Lemon Oil.	Citral.	Refractive Index of Oil.		

*Continued.*

		p. c.	p. c.	p. c.			
Morins' Citron Extract..	0.9667	29.04	+ 0.2	0.07		3629	Adulterated.
J. B. Renaud, Lemon Mixture.	0.9695	26.49	+ 0.8	0.20	0.04	3634	Sold as a mixture.
Lemon Mixture.....	0.9720	24.08	+ 0.2	0.03		3639	"
Lemon Extract.....	0.9699	26.13	0.0	0.10		3596	Below standard in citral.
Labelled Vanilla Mixture, Sample is Lemon.	0.9605	34.18	0.0	0.05		3599	Sold as a mixture.
Mixture .....	0.8765	19.78	+ 7.7	2.5	0.10	4407	Sold as a mixture. Contains 2.5 p.c. lemon oil.
Pure Gold Mfg. Co. Imperial Flavouring Mixture Extract.	0.9539	39.47	+ 0.1	0.08		4414	Sold as a mixture
Red Cross Lemon Extract.	0.9652	30.40	+ 0.1	0.05		4418	Adulterated.
Lemon Flavouring Extract.	0.9788	17.37	- 0.1	0.02		4420	"
Lemon Mixture, .....	0.9706	25.57	0.0	0.01		4424	Sold as Mixture.
Artificial Lemon Extract.	0.9562	37.20	+ 0.2	0.20		296	Sold as artificial, but contains 0.20 p.c. citral.
Lemon Extract.....	0.8721	76.91	+ 7.8	2.4	0.14	308	Below standard in citral, with 2.4 p.c. lemon oil.
Dalley's Pure Lemon Extract.	0.8479	85.63	+ 15.3	4.8	0.30	309	Genuine, with 4.8 p.c. lemon oil.
Lemon Mixture.....	0.8750	75.83	+ 7.0	2.1	0.16	314	Sold as a mixture. Contains 7.1 p.c. lemon oil and 0.16 citral.
Lemon Extract, .....	0.9476	42.92	- 0.3	0.10		317	Below standard in citral.
Gold Seal Lemon Extract.	0.9260	54.19	0.0	0.31		318	Genuine.
Triple Flavouring Extract Lemon.	0.9503	41.16	+ 0.2	0.15		325	"
Triple Concentrated Mixture Extract Lemon.	0.8727	76.68	+ 8.1	2.4	0.11	4710	Contains 2.4 p.c. lemon oil. Sold as a mixture.

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BULLETIN No. 337—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF QUEBEC PROVINCE—

1915.								
July	20	Essence Citron.	2779	Joseph Dubé, Cap St. Ignace.	3 bts.	30	Gagnon & Garent, Quebec.	
"	21	"	2782	Jean Bte. Poirier, Montmagny.	3 "	30	Herron, Leblanc, Quebec.	
"	21	"	2785	Jos. Fournier, St. Thomas, Montmagny.	3 "	30	The Chem. Wks., Hamilton.	
"	27	Extract Lemon.	2793	Desiré Fradette, N. D. du Rosaire.	3 "	30	Golden Star Brand, Montreal.	

## DISTRICT OF THREE RIVERS—

July	15	Lemon Flavouring Extract.	69122	W. H. Lacasse, L'Assomption.	3 bts.	25	Henri Jonas & Cie, Montreal.	
"	15	"	69123	Arthur Lafontaine, L'Assomption.	3 "	25	.....	Hudson, Orsali, Montreal.
"	14	"	69137	L. Pauze, L'Assomption.	3 "	25	International Food Co., Toronto.	
"	19	"	69138	W. Perreault, Joliette	3 "	45	Henri Jonas Cie, Montreal.	
"	20	"	69141	A. L. Caisse, Berthierville.	3 "	45	"	
"	20	"	69142	" " "	3 "	45	"	
"	20	"	69143	" " "	3 "	45	"	
"	21	"	69151	O. Paquette, Berthierville.	3 "	30	Litster, Toronto.	
"	21	"	69152	O. Daviault, Berthierville.	3 "	30	.....	Pierre Beaudoin, Berthierville.
"	"	"	69153	" " "	3 "	60	Henri Jonas Cie, Montreal.	

SESSIONAL PAPER No. 14

LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific Gravity at 15.5 C.	Polarization in 2 dm. tube at 20° C.	Equivalent Lemon Oil.	Citral.	Alcohol by Volume.	Refractive Index of Oil.		

Concluded.

			p. c.	p. c.	p. c.			
Gagnon & Garent. Seal Brand Lemon Extract Mixture.	0.9627	+ 0.1	.....	0.01	32.42	.....	.....	2779 Sold as a mixture
Herron, Leblanc. Red Cross Extract Lemon Mixture.	0.9807	0.0	.....	0.02	15.58	.....	.....	2782
Hamilton Chem. Works. Lemon Extract.	0.9639	0.0	.....	0.04	31.48	.....	.....	2785 Citral low. Adulterated.
Golden Star Brand Extract. Double Strength Lemon.	0.9741	0.0	.....	0.00	22.09	.....	.....	2795 Adulterated.

DR. V. P. LAVALLEE, INSPECTOR.

Lemon Mixture.....	0.8869	6.5	2.0	0.12	71.22	.....	.....	69122 Sold as a mixture. Contains 2 p.c. lemon oil and 0.12 citral.
Lemon Extract.....	0.9730	0.0	.....	0.06	23.10	.....	.....	69123 Adulterated.
Pure Fruit Extract Lemon.	0.8969	6.4	1.8	0.20	67.53	1.4740	.....	69137 Genuine, with 1.8 p.c. lemon oil.
Lemon Extract.....	0.8725	8.0	2.6	0.08	76.70	1.4736	.....	69138 Citral low. Adulterated. Contains 2.6 p.c. lemon oil.
Mixture.....	0.8748	8.0	2.4	0.06	75.90	1.4735	.....	69141 Sold as a mixture. Contains 2.4 p.c. lemon oil.
.....	0.9034	+ 0.5					.....	69142 Coloured by blue tabs.
.....							.....	69143
Artificial.....	0.9709	0.0	.....	0.04	25.17	.....	.....	69144 Sold as artificial.
Lemon Mixture.....	0.9717	0.6	0.18	None	24.38	.....	.....	69145 Sold as a mixture
Lemon Extract.....	0.8739	7.8	2.3	0.08	76.24	.....	.....	69146 Citral low. Adulterated (although contains 2.3 p.c. lemon oil).

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF EASTERN TOWNSHIPS—

1915.								
Aug. 11	Lemon Flavouring Extract.	51390	S. W. Fortier, Sherbrooke.	3 bots.	30	White Cross Mfg. Co., Toronto.	.....	Compound..
" 11	"	51391	A. Boisvert, Sherbrooke..	3 "	30	.....	.....	Bee brand ..
" 11	"	51392	G. E. Robitaille, Sherbrooke.	3 "	30	Hamilton Chem. Wks.	.....	Labelled mixture compound.
" 12	"	51393	Farley & Burroughs, Coaticook.	3 "	30	.....	.....	Bee brand ..
" 12	"	51394	D. S. Bashand, Coaticook.	3 "	25	S. H. Ewing & Sons, Montreal.	.....	Mixture ....
" 17	"	51395	Mercure & Frere, Granby.	3 "	30	Tropical Extract Co., Toronto.	.....	Artificial...
" 17	"	51396	Beandry & Beauchemin, Granby.	3 "	30	The Hamilton Chem. Wks.	.....	"
" 18	"	51397	W. Hamel, Magog ...	3 "	30	Integrity Mills, Toronto.	.....	Mixture ....
" 18	"	51398	B. E. Goyette, Magog ...	3 "	75	Litster Pure Food Co.	.....	.....
" 18	"	51399	I. M. Bacheldeur & Co., Magog.	3 "	45	Davis, Lawrence Co., Montreal.	.....	Royal brand.

DISTRICT OF MONTREAL—

Aug. 25	Lemon Flavouring Extract.	67436	J. A. Villeneuve, 195 Ottawa St., Montreal.	3 bots.	30	S. H. Ewing & Sons.	.....	.....
" 26	"	67437	A. Silverstone, 640 St. Catherine St. W., Montreal.	3 "	30	Henri Jonas & Co.	.....	.....
" 26	"	67438	H. Russell, 847 St. Catherine St. W., Montreal.	3 "	75	McLaren's, Ltd.	.....	.....
" 26	"	67439	Murphy & Riordon, 871 St. Catherine St. W., Montreal.	3 "	30	Holly Packing Co.	.....	.....
" 26	"	67440	J. G. Coté, 887 St. Catherine St. W., Montreal.	3 "	75	.....	Mr. Sillocks.	.....
" 26	"	67441	W. J. Brown, 888 St. Catherine St. W., Montreal.	3 "	75	The Allredie Pure Food Co.	.....	.....
" 26	"	67442	Jas. Graham, 4451 St. Catherine St., Westmount.	3 "	30	Imperial Extract Co.	.....	Sold as mixture. Not pure.
" 30	"	67443	G. Greenberg, 1221 Green Ave., Westmount.	3 "	75	L. Silverman..	.....	Sold as compound.
Sept. 1	"	67444	Prince Arthur Liquor Grocery, 20 Prince Arthur St. E., Montreal.	3 "	75	.....	Unknown.	.....
" 1	"	67445	S. Dever & Son, Prince Arthur St. and Colonial Ave., Montreal.	3 "	25	.....	"	.....

SESSIONAL PAPER No. 14

## LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific Gravity at 15° C.	Polarization in 2 dm. tube at 20° C.	Equivalent Lemon Oil.	Citral.	Alcohol by Volume.	Refractive Index at 20° C.		

J. J. COSTIGAN, ACTING INSPECTOR.

			p. c.	p. c.	p. c.			
White Cross Manufacturing Co. Compound Lemon.	0.9682	0.0	.....	0.02	27.68	.....	51390	Sold as compound.
.....	0.9708	0.0	.....	0.08	25.27	.....	51391	" mixture.
Hamilton Chemical Wks. Tropical Compound Extract Lemon.	0.9669	0.0	.....	0.06	28.86	.....	51392	" compound.
Mixture, "Bee Brand" Lemon Extract.	0.9706	0.0	.....	0.08	25.47	.....	51393	" mixture.
S. H. Ewing & Son. Lemon Mixture Flavouring Extract.	0.9668	0.0	.....	0.06	28.95	.....	51394	"
Tropical Extract Co. "Eagle Brand" Artificial Flavouring Ess., coloured.	0.9638	0.0	.....	0.06	31.57	.....	51395	.. artificial.
Hamilton Chemical Wks. Prime Extract Lemon. Artificial.	0.9668	0.0	.....	0.08	28.95	.....	51396	"
Integrity Mills. Lemon Extract Mixture.	0.9694	0.0	.....	0.08	26.58	.....	51397	" mixture.
Litster Pure Food Co. Lemon Extract.	0.9329	+ 0.1	.....	0.11	50.87	.....	51398	Too low in citral.
Davis, Lawrence. Royal Extract Lemon.	0.9171	0.0	.....	0.20	58.32	.....	51399	Genuine.

D. J. KEARNEY, INSPECTOR.

S. H. Ewing & Son. Club Lemon Extract.	0.9741	- 0.2	.....	0.02	22.09	.....	67436	Too low in citral, Adulterated.
Henri Jonas Co. Extract Lemon. Mixture.	0.8807	+ 6.9	2.2	0.12	73.65	1.4730	67437	Sold as mixture.
McLaren's Ltd. Invaluable True Lemon.	0.9396	+ 0.2	.....	0.16	47.35	.....	67438	Genuine.
Holly Packing Co. Artificial Coloured Compound. Concentrated Extract Lemon.	0.9714	- 0.1	.....	0.06	24.68	.....	67439	Sold as artificial.
Shriffin's Imperial Quint Essence True Lemon	0.9210	+ 1.1	.....	0.20	56.54	.....	67440	Genuine.
Alfredo P. F. Co. "Alfredo Brand" Lemon Extract.	0.9501	+ 0.1	.....	0.05	41.26	.....	67441	Citral too low Adulterated.
Imperial Extract Co. Our 1890 Mixture Lemon.	0.9827	0.0	.....	0.06	13.71	.....	67442	Sold as mixture.
Silverman's Compound Lemon.	0.9704	- 0.2	.....	0.20	25.67	.....	67443	Sold as compound contains 0.20 p.c. citral.
McLaren's "Dew Drop" Extract Lemon, Mfg. H. C. & S. Co., Ltd.	0.9477	0.0	.....	0.05	42.67	.....	67444	Citral too low Adulterated.
I. E. C. Our 1890 Soluble Extract Lemon.	0.9760	0.0	.....	0.04	20.24	.....	67445	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF VALLEYFIELD—

1915.								
July 15	Lemon Flavouring Extract.	58186	Victor Gregoir, St. Charles St., St. Johns.	3 bots.	30	Integrity Mills, Toronto.	.....	Labelled Artificial.
" 15	"	58187	" " "	3 "	30	Henri Jonas Co., Montreal.	.....	Mixture stencilled on label.
" 15	"	58188	M. A. Comtois, St. Charles St., St. Johns.	3 "	30	"	.....	"
" 15	"	58189	Joseph Chartier, Market Place, St. Johns.	3 "	60	"	.....	Triple concentrated.
" 15	"	58190	J. E. Lariviere & Co., St. Jacques St., St. Johns.	3 "	30	Herron Leblanc, Ltd.	.....	Labelled Mixture.
" 20	"	58191	W. J. McPherson, Cecil St., Valleyfield.	3 "	60	Pure Gold Co., Ltd., Toronto.	.....	Labelled Govt. Standard.
" 20	"	58192	" " "	3 "	60	F. F. Dalley Co., Ltd., Hamilton.	.....	.....
" 21	"	58193	J. A. Tremblay & Cie., Victoria St., St. Lambert.	3 "	30	.....	.....	Labelled Mixture.
" 21	"	58194	E. Beauchamp, Front St., St. Lambert.	3 "	30	Holly Packing Co., Montreal.	.....	Labelled Compound.
" 22	"	58195	D. Seward, Main St., Hawkesbury.	3 "	30	Birks Corner Co., Montreal.	.....	Labelled Artificially Coloured.

## DISTRICT OF OTTAWA—

July 12	Lemon Flavouring Extract.	63659	E. Carpenter, Mills Roches.	3 bots.	30	Vendor .....	.....	Labelled Lemon Quality Extracts.
" 13	"	63660	Wm. Jenkins, Carleton Place.	3 "	75	Shirriff's, Toronto.	Mfrs. ....	Labelled Imperial Quintessence True Lemon.
" 13	"	63661	Thos. Stevens, Carleton Place.	3 "	30	N. C. Polson & Co., Kingston.	" ....	Labelled Perfection Brand Pure.
" 13	"	63662	" " "	3 "	75	Pure Gold Mfg. Co., Toronto.	" ....	Pure Gold.

SESSIONAL PAPER No. 14

LEMON FLAVOURING EXTRACT.

Description from Label	Results of Analysis						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific gravity at 15.5° C.	Polarization in 2 dm. tube at 20° C.	Citral.	Separated Lemon Oil.	Refractive Index.	Alcohol by volume.		

J. J. COSTIGAN, ACTING INSPECTOR.

Integrity Mills. Artificial Coloured Lemon Extract.	0.9705	0.0	0.05	.....	.....	25.57	.....	58186	Sold as artificial.
H. Jonas & Co., Triple Concentrated Extract Lemon Mixture.	0.8809	+ 7.8	0.08	2.4	1.4739	73.57	.....	58187	Sold as mixture.
H. Jonas & Co., Ex. Lemon Mixture.	0.8775	+ 8.0	0.07	2.4	1.4735	74.89	.....	58188	" "
Henri Jonas Co., Jonas Triple Concentrated Lemon Extract.	0.8746	+ 8.0	0.10	2.7	1.4739	75.98	.....	58189	Citral too low
Herron Leblanc, Ltd. Lemon Mixture. Red Cross.	0.9816	0.0	0.04	.....	.....	14.74	.....	58190	Sold as mixture.
Pure Gold Co., Standard Ext. Lemon.	0.8937	0.0	0.18	.....	.....	68.44	.....	58191	Genuine.
F. F. Dalley Co., Lemon Pure Fruit Extract.	0.8459	+11.4	0.16	3.6	1.4739	86.32	.....	58192	"
Lemon Ext. Mixture ...	0.9775	0.0	0.04	.....	.....	18.78	.....	58193	Sold as mixture.
Holby Pack Co., Concentrated Ext. Lemon Compound.	0.9716	0.0	0.08	.....	.....	24.48	.....	58194	" compound.
Mixture. ....	0.9717	0.0	0.04	.....	.....	24.38	.....	58195	" mixture.

J. A. RICKEY, INSPECTOR.

Carpenter. Lemon Quality Extract.	0.9801	0.0	0.4	.....	.....	16.15	.....	63659	Citral low. Adulterated.
Shirriffs Imp. Quintessence True Lemon.	0.9490	0.0	0.10	.....	.....	41.84	.....	63660	Citral below standard.
N. C. Polson & Co., Perfection Brand Pure Conc. Flav. Extract Lemon.	0.9948	+10.2	0.02	.....	.....	18.58	.....	63661	Citral low. Adulterated.
Pure Gold Co., Pure Gold Lemon Ext.	0.9070	+ 0.2	0.17	.....	.....	48.75	.....	63662	Genuine.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF OTTAWA—

1915.									
July 16	Lemon Flavouring Extract.	63663	G. A. Ellis, Renfrew . . .	3 bots.	30	Integrity Mills, Toronto.	Mfrs. . . . .	World Brand	
" 16	"	63664	P. J. Campbell, Renfrew.	3 "	75	Gorman, Eckert & Co., Ltd., London, Ont.	" . . . . .	Double Strength Pure.	
" 16	"	63665	H. Brydge, Renfrew . . .	3 "	30	The J. M. Lowes Co., Ltd., Toronto.	" . . . . .	Monarch Concentrated True Fruit Flavour. Extract.	
" 24	"	63666	T. F. Dextras, Cornwall.	3 "	30	Gorman, Eckert & Co., Ltd., London, Ont.	.....	Oriental . . .	
" 24	"	63667	D. J. Gillies, Cornwall . . .	3 "	75	The F. F. Dalley Co., Ltd., Hamilton.	.....	Guaranteed Pure.	
" 26	"	63668	Wm. F. Nesbitt, Britannia Bay.	3 "	30	L. Crossman, Ottawa.	.....	Our 1910 Pure Concentrated Extract of Lemon.	
Aug. 7	"	63671	P. A. Gagne, South Indian.	3 "	30	Northop & Lyman Co., Ltd., Toronto.	.....		
" 7	"	63673	Stephen Pilon, Rockland.	3 "	75	International Food Co., Toronto.	.....	Reliance . . .	

DISTRICT OF KINGSTON—

July 29	Lemon Flavouring Extract.	70231	N. C. Polson & Co., Kingston.	3 bots.	30	Vendors . . . . .	.....		
Aug. 2	"	70232	H. C. Hampton, Belleville.	3 "	30	.....	R. Fenn & Co.	This sample was in stock when vendor bought the business.	



SESSIONAL PAPER No. 14

LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific gravity at 15.5° C.	Polarization in 2 dm. tube at 20° C.	Citral.	Separated Lemon Oil.	Refractive Index.	Alcohol by volume.		
<i>Concluded</i>								
Lemon Extract .....	0.9702	0.0	0.05			25.86	63663	Citral too low. Adulterated.
Gorman, Eckert Co. Lemon Ext.	0.9352	0.0	0.16			49.71	63664	Genuine.
J. M. Lowes Co. Lemon Concentrated. "Monarch."	0.9732	0.0	0.06			22.92	63665	Citral too low. Adulterated.
Gorman Eckert Co. Oriental Lemon Flav. Ext.	0.9599	0.0	0.05			34.61	63666	"
Dalley's Pure Fruit Extract Lemon.	0.8506	+10.8	0.15	3.6	1.4720	84.74	63667	Genuine.
L. Crossman. Concentrated Ext. Lemon.	0.9753	0.0	0.04			20.89	63668	Citral too low. Adulterated.
Northrop & Lyman. Red Seal Brand Lemon Extract.	0.9387	0.0	0.18			47.83	63671	Genuine.
Lemon Extract	0.8952	+5.6	0.16	1.5	1.4739	67.85	63673	

JAMES HOGAN, INSPECTOR.

	Specific Gravity at 15.5° C.	Polarization in 2 dm. tube at 20° C.	Alcohol by Volume.	Citral.	Equivalent Lemon Oil.	Refractive Index of Oil.			
									p. c.
N. C. Polson Co. Perfection Brand. Artificial Lemon.	0.9731	+34.4			0.25	0.4	1.4710	70231	Sold as artificial.
R. Fern & Son. Special Flavouring Extract Lemon.	0.9800	0.0	16.24	0.06				70232	Citral test by w. Adulterated.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF KINGSTON—								
1915.								
Aug. 2	Lemon Flavouring Extract.	70233	S. R. Artis, Belleville....	3 bts.	30	Vendor.....		
" 2	"	70234	R. Elvins, Belleville.....	3 "	30			
" 3	"	70235	S. P. Harvey & Sons, Cobourg.	3 "	75	McLaren's, Hamilton.		
" 3	"	70236	W. Burnet, Cobourg.....	3 "	75	"		
" 3	"	70237	Thompson, Macdonald, Cobourg.	3 "	25	Gorman, Eckert Co., London.		
" 3	"	70238	Sam Sleeman, Port Hope.	3 "	30	White Swan, Toronto.		
" 3	"	70239	F. Rosevear, Port Hope..	3 "	30	Vendor.....		
" 3	"	70240	F. H. Brown, Port Hope.	3 "	30	Tropical Ex- tract, To- ronto.		
DISTRICT OF TORONTO—								
Aug. 8	Extract of Lemon.	70084	David Bell, 1364 Bathurst St., Toronto.	3 bts.	75	Pure Gold Mfg. Co., Toronto.		
" 10	"	70085	W. Massen, 1346 St. Clair Ave., Toronto.	3 "	15	.....	Unknown.	Star brand..
" 10	"	70086	F. Kelsey, 1738 St. Clair Ave., Toronto.	3 "	15	.....	"	
" 11	"	70087	T. R. Franklin, 165 Dan- forth Ave., Toronto.	3 "	75	Imperial Ex- tract Co., To- ronto.		Shirriff's Imperial Quintess- ence true lemon.
" 12	"	70088	The T. Eaton Co., Ltd., Queen and Yonge Sts., Toronto.	3 "	45	G. F. Sutton Sons, Lon- don, Eng.		Labelled es- sence of lemon.
" 13	"	70089	Conway & Co., 1995 Dun- das St., Toronto.	3 "	30	Eby, Blain, Ltd., To- ronto.		Anchor brand.
" 16	"	70090	Mead's Grocery, 806 Col- lege St., Toronto.	3 "	75	McLaren's, Hamilton.		McLaren In- vincible.
" 17	"	70091	W. J. Snell, 2165 Queen St. E., Toronto.	3 "	75	Pure Gold Mfg. Co., Ltd., To- ronto.		
" 17	"	70092	W. Black, 1960 Queen St. E., Toronto.	3 "	60	"		
" 18	"	70093	W. Forster, 177 Ronces- ville Ave., Toronto.	2 "	20	Integrity Mills, To- ronto.		Integrity World brand. Double strength.

SESSIONAL PAPER No. 14

## LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific Gravity at 15° C.	Polarization in 2 dm. Tube at 20° C.	Alcohol by Volume.	Citral.	Separated Oil.	Refractive Index.	—		
<i>Concluded.</i>									
			p. c.	p. c.	p. c.				
S. R. Artis, Maple Leaf Artificial Lemon.	0.9774	0.0	18.88	0.10	.....	.....	.....	70233	Sold as artificial.
J. M. Lowes Co. Monarch Compound Flavouring Ext. Lemon.	0.9677	0.0	28.13	0.08	.....	.....	.....	70234	compound
True Lemon Extract....	0.9453	0.0	44.00	0.10	.....	.....	.....	70235	Citral low.
McLaren's True Lemon.	0.9493	0.0	41.69	0.10	.....	.....	.....	70236	"
Forest City Lemon Extract Mixture.	0.9648	0.0	30.73	0.20	.....	.....	.....	70237	Sold as mixture. Contains 0.20 p. c. citral.
Lemon Mixture.....	0.9775	0.0	18.78	0.10	.....	.....	.....	70238	Sold as mixture.
F. Rosevear, Maple Leaf Artificial Ext. Lemon	0.9758	0.1	18.48	0.10	.....	.....	.....	70239	artificial.
Tropical Extract Co. Oriental Artificial Coloured Lemon Extract Mixture.	0.9653	0.0	30.31	0.06	.....	.....	.....	70240	

## H. J. DAGGER, INSPECTOR.

Pure Gold Govt. Stand and Lemon Extract.	0.8937	0.4	68.44	0.15	.....	.....	.....	70084	Genuine.
Star Brand Lemon Flavouring Extract.	0.9819	0.6	14.46	0.06	.....	.....	.....	70085	Citral too low. Adulterated.
Strongest Flavouring Extract Lemon.	0.9783	2.3	17.92	0.05	.....	.....	.....	70086	"
Shirriff's Imperial Quint Essence True Lemon.	0.9214	0.9	60.34	0.18	.....	.....	.....	70087	Genuine.
G. F. Sutton & Son Co. Essence of Lemon.	0.9373	0.5	48.59	0.11	.....	.....	.....	70088	Citral too low.
Ely, Blain, Ltd. Finest Quality "Anchor Brand" Lemon Extract.	0.9090	2.1	61.84	0.25	.....	.....	.....	70089	Genuine.
McLaren's Invaluable True Lemon	0.9166	0.0	43.19	0.14	.....	.....	.....	70090	Citral too low and adulterated.
Pure Gold Mfg Co. Pure Gold Extract Lemon.	0.9402	0.2	47.02	0.19	.....	.....	.....	70091	Genuine.
Pure Gold Mfg Co. Pure Gold Extract Lemon.	0.9411	0.2	46.53	0.16	.....	.....	.....	70092	"
Double Strength Lemon Extract.	0.9690	0.0	26.95	0.08	.....	.....	.....	70093	Citral too low. Adulterated.

7 GEORGE V, A. 1917

BULLETIN No. 337—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF HAMILTON—

1915.								
July 21	Extract of Lemon.	70021	A. R. Phipps, 78 Queenston St., St. Catharines.	3 bots.	30	Vendor . . . . .		Labelled Our Leader, Mfg. expressly for vendor.
" 22	"	70023	E. Gander, King and Queen Sts., St. Catharines.	3 "	75	F. F. Dalley, Co., Hamilton.		
" 22	"	70024	L. McMann, Thorold . . .	3 "	30	Balfour Smye & Co., Hamilton.		Tartan Brand.
" 23	"	70025	John Muir, 29 Queen St., Niagara Falls.	3 "	75	Imperial Extract Co., Ltd., Toronto.		Shirriffs Imperial Quintessence True.
" 23	"	70026	O. E. Dores, 41 Queen St., Niagara Falls.	3 "	15	Gorman Eckert Co., Ltd., London.		Pure Concentrated.
" 23	"	70027	Extence & Norton, Bolton	3 "	30	Vendors. . . . .		
Aug. 3	"	70028	Deeves & Co., Brampton.	3 "	30	" . . . . .		Labelled Maple Leaf.
" 4	"	70029	McKay Bros., Georgetown.	3 "	60	Tropical Extract Co., Toronto.		Labelled Imperial. Prepared by Tropical Extract Co., Toronto.
" 5	"	70030	The F. F. Dalley Co., Ltd., 71 Hughson St., Hamilton.	3 "	45	Vendors. . . . .		
" 5	"	70034	Imperial Spice Co., Ltd., 33 McNabb St., N., Hamilton.	3 "	25	" . . . . .		Red Feather
" 5	"	70035	McLaren's, Ltd., Park and Merrick Sts., Hamilton.	3 "	30	" . . . . .		Invincible. . .
" 5	"	70062	Young Windfield Ltd., 87 Cannon St., W., Hamilton.	3 "	20	" . . . . .		Young's Improved.

SESSIONAL PAPER No. 14

## LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific gravity at 15.5° C.	Polarization in 2 <sup>3</sup> / <sub>4</sub> in. tube at 20° C.	Alcohol by volume.	Citral.	Separated Oil.	Refractive Index.		

H. J. DAGER, ACTING INSPECTOR.

			p.c.	p.c.	p.c.			
A. R. Phipps, Our Leader Pure Extract Lemon.	0.9731	+ 0.1	23.01	0.06	.....	.....	70021	Citral low. Adulterated.
Dalley's Pure Fruit Extracts Lemon.	0.8527	+11.7	84.04	0.15	3.51	4.740	70023	Genuine.
Balfour Smye Co. Pure Lemon Flav. Extract.	0.9649	0.0	30.65	0.14	.....	.....	70024	Citral below standard.
Shirriffs Imperial Quintessence True Lemon.	0.9358	- 0.2	49.40	0.16	.....	.....	70025	Genuine.
Pure Concentrated Extract Lemon.	0.9688	0.0	27.13	0.06	.....	.....	70026	Citral low. Adulterated.
Extence & Norton Lemon Flav. Extract.	0.9727	- 9.2	23.38	0.14	.....	.....	70027	Citral below standard.
Deeves & Co Maple Leaf Flav Ext Lemon.	0.9792	0.0	16.98	0.02	.....	.....	70028	Citral low. Adulterated.
Tropical Ext. Co. Imperial Flav Ext Lemon.	0.9469	- 0.1	43.01	0.08	.....	.....	70029	
Dalley's Pure Fruit Extract Lemon.	0.8482	+11.4	85.53	0.15	4.01	4.726	70030	Genuine.
Imp. Spice Co., Ltd Red Feather Quality Lemon Ext.	0.9395	0.0	47.40	0.25	.....	.....	70034	
Guaranteed a higher grade than Govt Standard McLarens, Ltd. Invincible True Lemon. This is the highest grade of extract made.	0.9414	+ 0.2	46.37	0.16	.....	.....	70035	
Young Winfield Improved Extract Lemon	0.9285	+ 0.6	33.01	0.11	.....	.....	70032	Citral low.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF WINDSOR—

1915.								
Aug.	2	Lemon Flavouring Extract.	54632	J. A. Kelly, Lambeth....	3 bts.	30	I. X. L. Spice Co., London	Honey Drip
"	2	"	54634	G. T. Carley, Lambeth ..	3 " "	30	"	Lemon Artificial Sweetheart Brand.
"	2	"	54635	Earle & Son, Lambeth. .	3 " "	30	E. Adams Co., London.	Fau Brand, Artificial.
"	4	"	54636	Willis & Co., London....	3 " "	30	Vendors.....	Willis Own Fruit Flav. Extract Mixture. Eagle.....
"	4	"	54637	Blinn Bros., London.....	3 " "	30	M. Masurett & Co., London.	Shirriff's Imperial Quintessence.
"	4	"	54638	Dan Carter, London.....	3 " "	75	Shirriffs, Toronto.	White Cross Pure.
"	4	"	54640	R. W. Janes, London ...	3 " "	30	White Cross Mfg., Co., Toronto.	Artificial....
"	13	"	54667	Butler Bros., St. Thomas	3 " "	25	Gorman Eckert Co., Toronto.	Eclipse.....
"	13	"	54671	W. E. Ross, St. Thomas.	3 " "	45	Imperial Extract Co., Toronto.	

DISTRICT OF MANITOBA—

Aug.	18	Lemon Flavouring Extract.	61345	Sutherland & Robertson, 136 Tenth St., Brandon.	3 bts.	75	McLaren's Ltd., Hamilton.	
"	18	"	61354	The A. I. Grocery, 416 Tenth St., Brandon.	3 " "	75	Codville Co., Winnipeg.	
"	18	"	61355	W. J. Younges, 1013 Rosser Ave., Brandon.	3 " "	75	Imperial Ext. Co., Toronto.	
"	18	"	61358	Smith & Burton, Brandon.	3 " "	75	Vendors.....	

SESSIONAL PAPER No. 14

LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific Gravity at 15.5° C.	Polarization in 2 dm. tube at 20° C.	Alcohol by Volume.	Citral.	Separated Oil.	Refractive Index.		

JOHN TALBOT, INSPECTOR.

			p. c.	p. c.	p. c.			
.....	Is a Syrup.							54632 Not lemon Extract. Collected by mistake.
I. X. L. Spice & Coffee Co. Sweetheart Brand. Lemon Ext. Artificial.	0.9776	0.0	18.68	0.06				54634 Sold as artificial.
Ed. Adam & Co. Artificial ext. Lemon. Coloured.	0.9869	+ 0.1	9.95	0.11				54635 " "
Willis & Co. Lemon Mixture.	0.9644	0.0	31.07	0.06				54636 " mixture.
M. Masuret & Co. Lemon Extract.	0.9761	+ 0.1	20.15	0.03				54637 Citral low. Adult crated.
Shirriff's Imp. Quintessence True Lemon.	0.9217	+ 0.9	56.21	0.21				54638 Genuine.
White Cross Mfg., Co. Lemon Ext.	0.9732	0.0	22.92	0.04				54640 Citral low. Adult crated.
Gorman, Eckert & Co. Artificial Lemon Flav. Ext.	0.9740	- 0.1	22.18	0.16				54667 Sold as artificial. Contains 0.16 citral.
Imperial Ext. Co. Lemon Pure Eclipse.	0.9424	0.0	45.77	0.08				54671 Citral low. Adult crated.

J. B. COSGROVE, TEMPORARY INSPECTOR.

	Specific Gravity at 15° C.	Rotation 2 dm. tube at 20° C.	Lemon Oil Cal. distilled.	St. Gr. of 1 lb. citrate to Vol. at 15.6° C.	Alcohol by Volume.	Citral.		
McLaren's Inimitable True Lemon.	0.9422	1.0	0.31	0.906	47.29	0.20		61241 Genuine.
Gold Stand Mfg. Co. Lemon artificially colored.	0.8501	20.0	0.25	0.891	82.16	0.22	Glycerine present.	61244
Shirriff's Imperial Quintessence True Lemon.	0.9379	1.0	0.31	0.951	40.76	0.14		61256
Smith & Barton, Ex. tract Lemon.	0.9699	1.0	0.31	0.964	29.31	0.19		61259 Citral low.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF MANITOBA—

1915.								
Aug. 18	Lemon Flavouring Extract.	61359	McDonald & Foreman, 829 Princess Ave., Brandon.	3 bots.	75	Gold Standard Mfg. Co., Winnipeg.		
" 20	"	61360	W. & D. Mayrs, 1056 Main St., Winnipeg.	3 "	75	Dysou Co., Winnipeg.		
" 20	"	61361	J. R. Royle, 1116 Main St., Winnipeg.	3 "	75	McLaren's, Ltd., Hamilton.		
" 20	"	61362	St. John's Grocery, 1238 Main St., Winnipeg.	3 "	75	Codville Co., Winnipeg.		
" 20	"	61363	Wilton & Conley, 1352 Main St., Winnipeg.	3 "	75	Blue Ribbon Co., Winnipeg.		
" 20	"	61364	W. H. Stone Co., 14103 Main St., Winnipeg.	" "	75	"		

DISTRICT OF SASKATCHEWAN—

July 20	Lemon Flavouring Extract.	66404	W. McLeod, Melville....	3 bots.	60	Pure Gold Mfg. Co., Toronto.		Pure Gold brand.
" 20	"	66405	A. W. Gumm & Co., Melville.	3 "	60	Campbell Bros. & Wilson, Winnipeg.		Royal Shield brand.
" 20	"	66406	J. D. Miller & Sons, Melville.	3 "	45	Gorman, Eckert & Co., London.		Jewel brand.
" 20	"	66407	Love & Waldman, Melville.	3 "	40	Unknown	Campbell Bros. & Wilson, Winnipeg.	
" 20	"	69408	M. Bay Company, Melville.	3 "	45	Gt. West Spice Mills, Winnipeg.	"	Baker's .....
" 21	"	66409	Hudson's Bay Co., Yorkton.	3 "	60	Vendors.....		
" 21	"	66413	Levi Beck, Yorkton....	3 "	75	Tropical Extract Co., Toronto.		Eagle brand.
" 22	"	66415	J. F. Cairns, Saskatoon...	3 "	75	Imperial Spice Co., Hamilton.	Mfr .....	Red Feather brand.
" 23	"	66422	Nicholls & Laidlay, Saskatoon.	3 "	45	White Star Mfg. Co., Winnipeg.		White Star brand.
" 23	"	66424	A. McDonald Co., Saskatoon.	3 "	50	Imperial Ex Co., Toronto.		Shirriff's....



SESSIONAL PAPER No. 14

LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific Gravity at 15° C.	Rotation 2 dm. Tube at 20° C.	Lemon Oil Calculated.	Sp. Gr. of Distillate to Vol. at 15° C.	Alcohol by Volume.	Citral.		

Concluded.

			p. c.		p. c.	p. c.			
Gold Standard Mfg. Co. Gold Standard Lemon.	0.8510	20.0	6.25	0.8581	82.16	0.22	Glycerine present.	61359	Genuine.
Dyson Co. Red Cross Lemon.	0.8544	16.0	5.00	0.8679	78.47	0.19	.....	61360	"
McLaren's Invincible True Lemon Extract.	0.9474	2.0	0.62	0.9453	44.0	0.10	.....	61361	Citral low.
Gold Standard Mfg. Co. Gold Standard Lemon.	0.8522	20.0	6.25	0.8581	82.16	0.22	Glycerine present.	61362	Genuine.
Blue Ribbon Co. True Lemon Extract.	0.9330	1.0	0.31	0.9334	50.62	0.28	.....	61363	"
Blue Ribbon Co. True Lemon Extract.	0.9367	1.0	0.31	0.9374	48.54	0.23	.....	61364	"

L. H. HALL, TEMPORARY INSPECTOR.

Pure Gold Mfg. Co. Govt. Standard Pure Gold Flavouring Extract Lemon.	0.8905	1.2	0.38	0.8916	69.26	0.20	.....	66404	Genuine.
Campbell Bros. & Wilson, Royal Shield Brand Flavouring Extract Lemon.	0.9114	38.0	2.50	0.8922	69.03	0.19	Cane sugar 7.78 p.c.	66405	"
Gorman, Eckert Co. "Jewel" Lemon Extract. Artificial.	0.9750	3.0	0.94	0.9729	23.19	0.15	"	66406	Sold as artificial. Contains 0.15 p.c. citral.
The Best Lemon Flavouring Extract	1.0149	46.0	0.31	0.9672	28.59	0.26	Cane sugar 12.80 p.c.	66407	Genuine.
The Great West Spice Mill, Baker's Extract Lemon. Artificial.	0.9828	2.0	0.62	0.9805	15.77	0.16	"	66408	Sold as artificial. Contains 0.16 p.c. citral.
Hudson's Bay Co. Pure Flavouring Extract Lemon.	0.9359	1.4	0.41	0.9367	48.91	0.20	"	66409	Genuine.
Tropical Extract Co. Eagle Brand Lemon Mixture.	0.9634	1.0	0.31	0.9603	34.33	0.16	"	66410	Sold as a mixture. Contains 0.16 p.c. citral.
Imported Spice Co. Red Feather Quality Flavouring Ext. Lemon	0.9391	1.0	0.31	0.9374	48.54	0.22	"	66411	Genuine.
White Star Mfg. Co. White Star Flavouring Extract Lemon	0.8915	5.0	1.50	0.8865	71.20	0.27	"	66422	"
Shirriff's Imperial Essence True Lemon.	0.9359	2.0	0.62	0.9342	50.16	0.20	"	66424	"

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF ALBERTA—

1915.								
Aug. 11	Lemon Flavouring Extract.	52236	J. H. Morris & Co., Edmonton.	3 bts.	75	Pure Gold Mfg Co., Toronto	Pure Go ..	
" 11	"	52237	Hallier & Aldridge, Edmonton.	3 "	60	McLaren's....	Invisible....	
" 11	"	52238	" " ..	3 "	1.00	Jas. Turner & Co.	.....	
" 11	"	52239	Johnston-Walker, Ltd., Edmonton.	3 "	60	Revillon Wholesale Ltd., Ed'n.	Molliver Brand.	
" 12	"	52240	Banner Grocery, Wetaskiwin.	3 "	75	Alberta Empress Co., Ltd. Calgary	Alberta's Best.	
" 12	"	52241	Lake & Co., Wetaskiwin..	3 "	75	Pure Gold Mfg Co., Toronto	.....	
" 13	"	52242	R. G. Gilmour, Lacombe.	3 "	75	Campbell Bros & Wilson, Winnipeg.	Royal Shield	
" 16	"	52243	The John Irwin Co., Calgary.	3 "	75	Georgeson & Co., Ltd., Calgary.	Tuxedo Brand	
" 19	"	52244	Pryce-Jones (Canada) Ltd. Calgary.	3 "	1.05	Seeley's, Windsor. Ont.	.....	
" 19	"	52245	" " ..	3 "	75	Imperial Extract Co., Toronto.	Shiriff's Supreme Quality.	

DISTRICT OF ROCKY MOUNTAINS—

July 20	Lemon Extract.	61844	Trail Grocery Co., Trail..	3 bts.	75	F. F. Dalley Co., Hamilton.	.....	
" 20	Lemon Flavouring Essence.	61845	" " ..	3 "	1.35	W.A. Jameson Coffee Co., Victoria.	.....	
" 20	Lemon Extract.	61849	T. Lauriente & Son, Trail	3 "	75	W. H. Malkin Co., Vancouver.	.....	
" 20	"	61855	Hunter Bros., Rossland ..	3 <sup>1</sup> "	60	Empress Mfg. Co., Vancouver.	.....	
" 20	"	61856	" " ..	3 "	1.20	Kelley Douglas, Vancouver.	Nabob.....	
" 20	Lemon Flavouring Extract.	61857	Agnew & Co., Rossland...	3 "	60	" ..	Columbia Mixture	

SESSIONAL PAPER No. 14

LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Specific gravity at 20° C.	Rotation in 2 dm. tube at 20° C.	Lemon Oil.	Alcohol by volume.	Citral.	Refractive Index of oil at 20° C.		

A. W. R. MARKLEY, INSPECTOR.

			p. c.	p. c.	p. c.			
Pure Gold Mfg. Co. Pure Gold Flavouring Extract Lemon.	0.8906	- 0.8	0.20	64.75	0.16	.....	52236	Genuine.
McLaren's Invincible "True Lemon".	0.9436	0.0	trace.	42.96	0.14	.....	52237	Citral below stand ard.
Jas. Turner & Co. Tri-angel Lemon.	0.9348	0.0	"	48.32	0.18	.....	52238	Genuine.
Revillon Ltd. Lemon Molliver Brand.	0.9368	+ 0.8	0.10	42.50	0.15	.....	52239	"
Alberta Empress Co. Flavouring Extract Lemon.	0.9524	0.0	trace.	37.60	0.12	.....	52240	Low in citral.
Pure Gold Mfg. Co. Pure and Lemon Flavouring Extract.	0.8920	0.0	"	67.80	0.14	.....	52241	Citral below stand ard.
Campbell Bros. & Wilson. Royal Shield Brand. Lemon Flav. Extract.	0.9053	36.6	2.90	67.00	0.12	1.4740	52242	Low in citral
Georgeson Co. Limited Tuxedo Lemon Flavouring Extract.	0.8267	14.8	3.80	83.25	0.21	1.4742	52243	Genuine.
Sesley's Extra Concentrated Lemon.	0.9600	14.7	1.50	62.50	0.11	1.4743	52244	Citral low.
Shariff's Supreme Quality Lemon. Imperial Extract Co.	0.9349	0.6	0.20	45.65	0.18	.....	52245	Genuine.

THOS. PARKER, INSPECTOR

F. F. Dalby & Co. Pure Fruit Lemon Extract.	0.8157	10.3	3.70	78.50	0.14	1.4740	61844	Citral below stand- ard.
Jamison's Flavouring Essence Lemon	0.9234	0.0	trace.	54.52	0.36	.....	61845	Genuine.
Malkins best finest quality. Flavouring Extract.	0.8652	12.0	3.70	72.00	0.23	1.4742	61846	"
Empress Mfg. (press Brand) Lemon Extract.	0.9464	0.0	trace.	42.52	0.12	.....	61847	Citral low.
Nabob Brand Flavouring Extract Lemon	0.8810	4.8	1.70	72.75	0.15	1.4742	61848	Genuine.
Columbia Powder Mixture Lemon Extract	0.9682	0.0	0.00	25.68	0.05	.....	61849	Sold as mixture

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF ROCKY MOUNTAINS—

1915.								
July 20	Artificial Lemon Extract.	61858	Agnew & Co. Rossland . . .	3 bots.	60	Hamilton Chem. Works Hamilton.		Oak Leaf....
" 20	Lemon Extract.	61859	" " . . .	3 "	60	Wilson Bros. Victoria.		Diamond W.
Aug. 6	Lemon Flavouring Extract.	61862	The O'Kanagan Grocery, Vernon.	3 "	30	Tropical Extract Co., Toronto.		Eagle. . . .
" 6	Lemon Extract.	61865	W. R. Megaro, Vernon . . .	3 "	1.30	Climax Extract Co., Vancouver.		

DISTRICT OF VANCOUVER—

July 15	Lemon Flavouring Extract.	55310	D. McGregor, Bute and Pender Sts., Vancouver.	3 bots.	30	Sterling Extract Co., Vancouver.		Sold as imitation.
" 15	"	55311	W. Couling, 1374 Pender St., Vancouver.	3 "	45	W. Braid & Co., Vancouver.		Big Four Brand. Sold as imitation.
" 15	"	55312	Almas Grocery, Robson and Richards Sts., Vancouver.	3 "	30	Pure Fruit Extract Co., Vancouver.		Sold as a mixture.
" 15	"	55313	The Home Grocery Co., Robson and Homer St, Vancouver.	3 "	30	Empress Mfg. Co., Vancouver.		Climax Brand. Sold as a mixture.
" 15	"	55314	" " . . .	3 "	60	" . . . . .		Empress Brand.
" 15	"	55315	L. Havird, 300 Dunsmuir St., Vancouver	3 "	30	..... Nelson, Shakespeare, Watkins, Ltd., Vancouver.		Quakers Brand. Sold as a compound
" 16	"	55316	Slater Bros., 126 Hastings St., W., Vancouver.	3 "	30	Kelly, Douglas & Co., Ltd., Vancouver.		Columbia Brand. Sold as a mixture.
" 16	"	55317	Woodward Dept. Stores, Vancouver.	3 "	75	" . . . . .		Nabob Brand.
" 16	"	55318	A. & C. Grocery Co., 520 Granville St., Vancouver.	3 "	75	W. Braid & Co., Vancouver.		Braid's Best.
" 16	"	55319	Clover Leaf Butter Store, Nelson & Granville Sts., Vancouver.	3 "	30	Royal Mfg. Co., Vancouver.		Royal Brand. Sold as mixture.

SESSIONAL PAPER No. 14

LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.						No. of Sample.	Remarks and opinion of the Chief Analyst.
	Specific gravity at 20° C.	Rotation in 2 dm. tube at 20° C.	Lemon Oil.	Alcohol by volume.	Citral.	Refractive Index of oil at 20° C.		

Concluded.

			p. c.	p. c.	p. c.			
Ham. Chemical Works. Oak Leaf Artificial Lemon Extract.	0.9724	0.0	0.00	22.20	0.17	.....	61858	Sold as artificial. Contains 0.17 p. c. citral.
Wilson Bros. Lemon Diamond Fla. Extract Compound, coloured, extra concentrated.	0.9618	0.0	0.00	34.76	0.10	.....	61859	Sold as compound.
Trop. Extract Co. Eagle Quintessence Lemon Extract.	0.9638	0.0	0.00	29.64	0.09	.....	61862	Citral low. Adulterated.
No Label.....	0.9751	0.0	0.00	19.88	0.02	.....	61865	"

E. J. MORGAN, INSPECTOR.

				p. c.	p. c.			
Sterling Ext. Co. Lemon. Imitation.	0.9666	0.0	0.00	28.12	0.12	.....	55310	Sold as imitation.
Wm. Braid & Co. Imitation Lemon.	0.9694	0.0	0.00	32.92	0.13	.....	55311	"
Pure Fruit Extract Co. Lemon Mixture.	0.9824	0.0	0.00	14.40	0.03	.....	55312	" mixture.
Empress Mfg. Co. Flav. Mixture, Lemon Climax.	0.9683	0.0	0.00	26.32	0.10	.....	55313	"
Emp. Mfg. Co. Empress Brand, Lemon Extracts.	0.9599	0.0	0.00	32.00	0.10	.....	55314	Citral low.
Quakeress Brand, Compound Lemon.	0.9585	0.0	0.00	33.08	0.10	.....	55315	Sold as compound.
Columba Brand, Best Flav. Ext. Mixture.	0.9725	0.0	0.00	22.32	0.03	.....	55316	" mixture.
Lemon Flav. Ext. Nubob Brand.	0.9282	1.0	0.10	48.80	0.18	.....	55317	Genuine.
Wm. Braid & Co. Best Flav. Ext. Lemon.	0.9063	1.1	0.50	57.85	0.16	1.4705	55318	"
Royal Mfg. Co. Royal Flav. Mixture, Lemon.	0.9769	0.0	0.00	19.00	0.03	.....	55319	Sold as mixture.

7 GEORGE V, A. 1917  
BULLETIN No. 337—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF VANCOUVER—

1915.								
July 19	Lemon Flavouring Extract.	55320	F. W. Walford, 950 Granville St., Vancouver.	3 bots.	75	W. H. Malkin & Co., Vancouver.	.....	Malkin's Best.
" 19	"	55321	City Cash Grocery, 712 Davie St., Vancouver.	3 "	30	Vendor.....	.....	Rose Brand. Sold as a mixture Packed specially for Vendor.

## DISTRICT OF VICTORIA—

July 21	Lemon Flavouring Extract.	66759	Windsor Grocery Co., 817 Govt. St., Victoria.	3 bots.	75	Wm. Braid & Co., Vancouver.	.....	Braid's Best.
" 21	"	66762	West End Grocery, 1002 Govt. St., Victoria.	3 "	1.05	Crosse & Blackwell, London, Eng.	.....	Essence of Lemon.
" 21	"	66763	" " "	3 "	75	Empress Mfg. Co., Vancouver.	.....	Empress Brand.
" 21	"	66767	Dixie H. Ross & Co., 1317 Govt. St., Victoria	3 "	75	Vendors .....	.....	Dixie Brand.
" 23	Extract of Lemon.	66768	Copas & Young, 631 Fort St., Victoria.	3 "	75	Pure Gold Mfg. Co., Toronto.	.....	Pure Gold Flavouring Extract.
" 23	Lemon Flavouring Extract.	66770	Erskine & Co., 861 Johnson St., Victoria.	3 "	75	Imperial Extract Co., Toronto.	.....	Shirriff's Imperial Quintessence True Lemon.
" 23	"	66771	Henry W. Driver, 856 Yates St., Victoria.	3 "	60	Pure Gold Mfg. Co., Toronto.	.....	Pure Gold Flavouring Lemon Extract.
" 27	"	66673	Linden Grocery, Linden and May Sts., Victoria.	3 "	60	Empress Mfg. Co., Vancouver.	.....	Empress Brand. Extract of Lemon.
" 28	"	66775	Gladstone Grocery, Gladstone and Fernwood Sts., Victoria.	3 "	75	W.A. Jameson Coffee Co., Victoria.	.....	Jameson's Victoria Brand.
" 28	"	66777	E. B. Jones, 1800 Cook St., Victoria.	3 "	75	Wm. Braid & Co., Vancouver.	.....	Braid's Best.

SESSIONAL PAPER No. 14

LEMON FLAVOURING EXTRACT.

Description from Label.	Results of Analysis.							No. of Sample.	Remarks and opinions of the Chief Analyst.
	Specific gravity at 20° C.	Rotation in 2 dm. tube at 20° C.	Lemon Oil.	Alcohol by volume.	Citral.	Refractive Index of oil at 20° C.	—		

Concluded.

			p. c.	p. c.	p. c.				
W. H. Malkins Co. Mal- kin's Best Flav. Ext. Lemon.	0.8671	+12.2	3.80	67.70	0.25	1.4742	.....	55320	Genuine.
City Cash Grocery. Le- mon Mixture.	0.9808	0.0	0.60	15.18	0.03	..	.....	55321	Sold as mixture.

D. O'SULLIVAN, INSPECTOR.

Wm. Braid & Co. Braid's Best Flav. Ext. Lemon.	0.8617	+2.3	0.60	69.45	0.14	1.4745	.....	66759	Citral below stand-ard.
.....	0.8218	+61.1	20.4	93.54	0.67	1.4774	.....	66762	Genuine.
Empress Mfg. Co. Em- press Brand. Lemon Extract.	0.8538	0.0	0.00	35.52	0.07	.....	.....	66763	Citral low. Adul- terated.
Dixie H. Ross & Co. "Dixie" Lemon Flav. Ext.	0.8568	+4.0	1.50	63.76	0.14	1.4740	.....	66767	Citral below stand-ard.
Pure Gold Mfg. Co. Pure Gold Flav. Ext. Le- mon.	0.9360	0.0	Trace.	46.22	0.11	.....	.....	66768	"
Shirriff's Imp. Quintes- sence True Lemon.	0.8154	+1.1	0.30	54.74	0.36	.....	.....	66770	Genuine.
Pure Gold Co. Pure Gold Lemon Extract.	0.9401	0.0	0.00	44.68	0.09	.....	.....	66771	Citral low. Adul- terated.
Empress Mfg. Co. Em- press Brand. Lemon Extract.	0.9015	+2.5	0.70	57.50	0.19	1.4743	.....	66772	Genuine.
Govt. Standard. W. A Jumeson Co. Lemon Ext. Artificial Col- oured.	0.9321	0.0	Trace.	53.31	0.31	.....	.....	66773	"
Wm. Braid & Co. Braid's Best Flav. Ext. Lemon	0.8915	+3.5	1.30	63.30	0.16	1.4740	.....	66774	"





REPORT

OF THE

MINISTER OF AGRICULTURE

FOR THE

DOMINION OF CANADA

FOR THE YEAR ENDED MARCH 31

1916

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1916



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# REPORT

OF THE

## MINISTER OF AGRICULTURE

### 1915-16

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*To Field Marshal His Royal Highness Prince Arthur William Patrick Albert, Duke of Connaught and of Strathearn, K.G., K.T., K.P., etc., etc., etc., Governor General and Commander in Chief of the Dominion of Canada.*

MAY IT PLEASE YOUR ROYAL HIGHNESS:

I have the honour to submit to Your Royal Highness a report of the Department of Agriculture for the fiscal year ended March 31, 1916.

#### I. GENERAL REMARKS.

Under the respective headings of the branches and divisions of this department will be found a synopsis of proceedings during the past year. The work in each branch has been efficiently carried on.

There has been no legislation affecting the department during this period.

By an Order in Council of date the 27th of April, 1915, the regulations under "The Animal Contagious Diseases Act," approved under date the 30th of November, 1909, and amendments thereto, were further amended by adding the following section:—

"Sec. 88½. The feeding of swine upon garbage or swill, either raw or cooked, obtained elsewhere than on the premises where fed, is prohibited, unless special permission in writing is first obtained from the Veterinary Director General.

"This amendment shall not come into force until three months after publication thereof in the *Canada Gazette*."

*Vide Canada Gazette*, Vol. xlviii, p. 3416.

This amendment came into force in the month of September, 1915.

By Order in Council approved under date the 18th day of August, 1916, the regulations under the Destructive Insect and Pest Act established by Order in

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Council under date the 4th November, 1914, were amended by inserting the following words after the eleventh line thereof:—

“Truro N.S., and Digby, N.S., for nursery stock destined to points in the province of Nova Scotia only; from March 15th to May 15th, and from October 7th to December 7th.”

*Vide Canada Gazette*, vol. xlix, p. 577.

In virtue of section 2 of “The Seed Control Act,” the following Order in Council was passed on the 30th September, 1915:—

Whereas, it is deemed desirable, in the execution of the powers conferred by section 2 of the Seed Control Act that special grades of grain should be established exclusively for seed purposes without affecting, of course, the commercial grades fixed under the authority of the Canada Grain Act;

And whereas, the primary purpose of providing a special grade of grain that may be suitable for seed is to create a substantial supply of Red Fife and Marquis wheat, white oats and six-rowed barley that is clean, of superior quality and reasonably pure as to variety or type of grain, so that such supply of grain may conveniently be made available to farmers, seed merchants or grain dealers who sell seed at the minimum cost; the main object is the improvement of field crops;

Therefore, the Governor General in Council, under and in virtue of the provisions of Section 2 of The Seed Control Act, is pleased to order, and it is hereby ordered as follows:—

The nomenclature of grades of grain for seed purposes shall be as follows—the same having been revised and approved by the chief inspector of grain, viz.:

No. 1. Canada Western seed oats shall be composed of 95 per cent of white oats, sound, clean and free from other grain; shall be free from noxious weed seeds within the meaning of the Seed Control Act, and shall weigh not less than 36 pounds to the bushel.

No. 3. Extra Canada Western seed barley shall be composed of the six-row variety, sound, plump, free from other grain, of fair colour, free from noxious weed seeds within the meaning of the Seed Control Act and shall weigh not less than 48 pounds to the bushel.

No. 1. Manitoba Northern seed wheat shall be composed of 85 per cent of Red Fife or 85 per cent of Marquis wheat, sound, clean and free from other grain, and free from noxious weed seeds within the meaning of the Seed Control Act weighing not less than 60 pounds to the bushel.

For seed purposes Red Fife and Marquis wheat shall be kept separate.

No grain shall be accepted for seed which will require a large dockage to clean.

Seed inspectors shall observe the foregoing regulations in the grading of grain for seed purposes, nevertheless inasmuch as the operations of seed inspectors are dependent upon and follow after the operations of grain inspectors in respect of the grain to be examined as to suitability for seed purposes, the seed inspectors will remain subject to the approval of the chief inspector of grain or his deputy in all matters of procedure and prompt attendance to duties and for efficiency and accuracy of technical work done seed inspectors shall be responsible to the Minister of Agriculture.

Seed inspectors are authorized to certify ex-elevator the grain graded for seed purposes pursuant to the foregoing regulations.

*Vide Canada Gazette*, vol. xlix, p. 1062.

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By Order in Council approved under date the 8th day of October, 1915, the regulations under The Destructive Insect and Pest Act established by Order in Council under date the 4th day of November, 1914, and amendment thereto, were further amended as follows:—

1. Section V of that part of said regulations bearing the title "General Regulations," is amended by adding thereto the words "and in the case of potatoes or potato crops," and subsection (b) of section X of said part of said regulations is amended by striking out the last line thereof, to wit, the word "Powdery Scab (*Spongorospora subterranea*)."

2. That part of said regulations bearing the title "Plant Disease Regulations" is amended by rescinding and striking out section IV thereof.

*Vide Canada Gazette*, vol. xlix, p. 1142.

By Order in Council approved under date the 25th day of December, 1915, the regulations under The Destructive Insect and Pest Act established by Order in Council under date the 4th day of November, 1914, and amendments thereto, were further amended by adding to that part of said regulations bearing the title "Plant Disease Regulations" the following section:—

IV. "Potatoes offered for export to the United States must be free from injurious diseases and insect pests."

*Vide Canada Gazette* vol. xlix, p. 2043.

By Order in Council of date the 14th day of February, 1916, the Orders and Regulations respecting Patents of Invention of date the 2nd October, 1914, made under and in virtue of the authority conferred by The War Measures Act, 1914, were amended as follows:—

1. That section 5 of the said Orders and Regulations be amended by adding thereto "and shall be valid notwithstanding any previous extension or extensions granted either under authority of the Patent Act or these Orders and Regulations."

2. That the following section be added:—

"10. In any case in which through circumstances arising from the present state of war, the Commissioner may deem it expedient, he may order that during the continuance of the war and for six months thereafter, neither the failure to construct or manufacture in Canada any patented invention, nor the importation of such invention into Canada shall in any way affect the validity of the patent granted in respect of such invention, notwithstanding anything in the Patent Act or in such patent."

A report from the Canadian Exhibition Commissioner for the fiscal year ended March 31, 1916, will be found as an appendix hereto. (See appendix No. 2.)

Having decided to participate in the Panama-California International Exposition held in San Diego, California, during 1916, the exhibits shown in the Canadian Pavilion at San Francisco in 1915 have been transported to San Diego and are now installed in one of the finest buildings on the Exposition Grounds, which has been placed at our disposal, free of charge, by the executive of the exposition.

This exposition is now in progress and will continue throughout the year 1916.

The Department was represented by Dr. Charles E. Saunders, Dominion Consul

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ist, at the joint session of the Co-operative Association of the Great Plains and the American Association of Agronomy, held at Mandan, N.D., July 14 to 16, 1915.

The department participated in the meetings of the American Association for the Advancement of Science, the Association of Economic Entomologists, and the Entomological Society of America, which were held in Columbus, Ohio, from December 27, 1915, to the 1st of January, 1916, and was represented thereat by Dr. C. G. Hewitt, the Dominion Entomologist.

His Majesty King George the Fifth graciously presented to the Canadian Government the thoroughbred stallion "Anmer" from his racing stud for the breeding of remounts in Canada.

The horse arrived in Canada in March last in fine condition, and I feel sure that he will do much to stimulate the breeding of good remounts in the Dominion

## II. ARTS AND AGRICULTURE.

### DAIRY AND COLD STORAGE BRANCH.

The activities of the Dairy and Cold Storage Branch will be reported in detail in a special report for the branch. The following summary will serve to indicate the nature of the work carried on under the direction of the Dairy and Cold Storage Commissioner:—

#### I. DAIRYING.

##### COW TESTING.

As a result of the continued encouragement given to the cow testing movement, there has been a noteworthy increase in the number of cow testing associations organized, especially in the province of Quebec, in the number of dairymen throughout the Dominion who are interested in the plan, and in the total number of cows whose actual yield of milk and fat is systematically checked.

Cow testing includes such attention to the feeding question that not only is a larger yield per cow being obtained, but the feed cost of milk and fat is being appreciably lowered in many herds through feeding more intelligently and more in proportion to the cow's actual capacity of economical yet profitable production.

##### DAIRY RECORD CENTRES.

All the thirty-five dairy record centres have continued in operation. Under the supervision of the expert in charge of each centre new members have been constantly added, while in numerous instances very substantial increases in the yield per cow have been obtained following two principles which dairy records prove to be profitable, the weeding out of poor cows, and the tendering of better care and feed to the whole herd.



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The immediate assistance to dairy record centres and cow testing associations includes:—

(1) The supply, free of charge, of blank record forms, preservative tablets and acid for testing, as well as cash payments to men who test milk samples; (2) the distribution of bulletins, circulars and reports on the work; (3) the publication in newspapers of numerous popular articles on varied aspects of cow testing; (4) the holding of frequent meetings when addresses and explanations are given by the recorders, provincial dairy instructors and members of the headquarters staff; (5) personal visitation of members and other dairymen by the recorders and the three provincial supervisors; (6) an extensive and increasing correspondence.

## DAIRY STATIONS: EXPERIMENTAL WORK.

The combined cheese factory and creamery at Finch, Ont., was operated during the entire year. The patrons delivered 61,808 pounds more milk and received \$5,013.06 more money than in 1914. The average price paid the patrons per 100 pounds of milk in 1914 was \$1.19. In 1915 they received \$1.35 per 100 pounds.

The Brome creamery, at Brome, Quebec, was burned down on July 11. Satisfactory arrangements were at once made with the Knowlton creamery, Knowlton, Que., to handle the cream from the two skimming stations at Owen's Corners and Brome Centre, as well as from the patrons at Brome. This arrangement was continued until December, when the business was closed down. The entire plant has since been disposed of.

The Madawaska creamery, situated at St. Hilaire, N.B., is operated under the supervision of the Dairy Division. The farmers in this district have very small herds of dairy cattle which makes the successful operation of the creamery a difficult problem, but with careful assistance it should in a few years be on a good paying basis. The output of the creamery in 1915 was 36,919 pounds of butter. An effort is being made to have the farmers along the different lines of railway ship their cream to St. Hilaire. The prospects are good for a substantial increase in the number of patrons in 1916.

## EXPERIMENTAL WORK.

Experiments were conducted at Finch on the "Causes of Variation in the Percentage of Fat in Hand separator Cream" and also on the "Value of Milk Containing Different Percentages of Fat for Cheesemaking." The information obtained was presented at the Dairymen's Associations in the different provinces and at many other meetings.

Experiments were made in manufacturing one-pound Cheddar cheese. These cheeses have become very popular in the city of Ottawa, and it looks as if there would be quite a demand for this style of cheese in the future. A 5-pound cheese was also made which sells very well both locally and in Ottawa.

## II. CREAMERY AND FARM COLD STORAGE.

A bonus of \$100 is paid to any creamery that erects suitable cold storage rooms according to plans and specifications furnished free by the department.

Working plans and specifications for small cold storages and dairies suitable for the use of farmers, hotels, and country merchants are also distributed free to all who apply for them.

There were thirty-nine applications for creamery cold storage bonuses received during the year, of which number thirty-three were approved. Since the year 1897 nine hundred and forty-seven creameries have received a bonus.

## III. REFRIGERATOR CAR SERVICES.

## FOR BUTTER.

The arrangement in force for several years past with the railway companies in Ontario, Quebec, and Nova Scotia, for refrigerator car services for butter, covering the period from the middle of March to the middle of October, was effective again last year. These cars are run weekly or fortnightly, according to the requirements of the route, on an advertised schedule, so that shippers can deliver their butter to the station with the least possible exposure to heat. A shipper may forward any quantity from one package upwards, and pay only the regular less-than-carload rate, without extra charge for icing. The department guarantees, on each car, two-thirds of the earnings of a minimum carload from starting point to destination, plus about two-thirds of the cost of icing. Inspectors are engaged at freight terminals in Montreal, Toronto, and Halifax to watch the unloading of these cars, to report on their condition, on the temperature of the butter and on the quantity of ice remaining in the bunkers. The reports are sent daily to headquarters at Ottawa, any defects or deficiencies in the service are then brought to the attention of the responsible railway authorities. In this way an efficient service is maintained.

## FOR CHEESE.

Commencing about the middle of June and extending for a period of eleven weeks, the department pays the icing charges, up to \$5 per car, on a limited number of refrigerator cars, when used for carload shipments of cheese from one station.

## FOR FRUIT.

A similar arrangement, except that there is no limit to the number of cars, is in force from the first of August to the first of October, for shipments of early apples and tender fruits, in carloads, consigned to Montreal and Quebec for export in cold storage.

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## IV. CARGO INSPECTION.

Cargo inspectors are stationed at Montreal, Quebec, Halifax, Liverpool, Bristol, London, and Glasgow, to report on the condition in which perishable goods are delivered to and discharged from the steamships, and to supervise the handling generally. A large number of self-recording thermometers, known as thermographs, are used in this service; the records of temperature thus obtained being available for interested shippers of fruit, cheese, meats, etc. A Canadian shipper may, by application to the Dairy and Cold Storage Commissioner, secure complete records of any consignment from the time the goods arrive at the loading port in Canada until they are delivered to the consignees in Great Britain. Owing to the scarcity of tonnage the number of sailings during the year between ports in Canada and in Great Britain was very considerably reduced.

## V. THE GRIMSBY PRE-COOLING AND EXPERIMENTAL FRUIT STORAGE WAREHOUSE.

The experimental cold storage warehouse, erected at Grimsby, Ont., under the direction of the Dairy and Cold Storage Commissioner, has been used the past season for:—

- (1) the pre-cooling of fruit for the general public;
- (2) demonstrations in fruit handling, packing and transportation;
- (3) experimental refrigeration tests with different varieties of fruit.

During the season, forty-three cars of fruit including strawberries, raspberries, plums, pears, cherries, and peaches were pre-cooled for western shipment. The cold storage space was available to growers, shippers and canners for the holding of fruit over the week-end, or at a time of glutted markets, and resulted in a large saving. Demonstrations were made in large lots with various packages for strawberries, cherries, tomatoes and peaches.

Valuable data have been secured and published in special bulletins as to various styles of packages, and the shipping qualities of different varieties of fruits.

Experimental work has been in progress with the rate of cooling fruit, with comparisons of refrigerator car temperatures, and with the degree of maturity at which fruits should be picked for pre-cooled shipments.

## VI. THE ENFORCEMENT OF LAWS.

## DAIRY LAWS.

The work of inspection of dairy products has been carried out during the past year along the same lines as in the previous year.

The staff has been the same, consisting of six inspectors, three of whom devote their entire time to the inspection of dairy products. Three inspectors devote part of their time to other lines of work for the department.

Those engaged in the manufacture and sale of dairy products have become familiar with the provisions of The Dairy Industry Act, 1914, and Regulations passed under authority of this Act.

Fewer samples of butter have been complained of on account of containing water, than during the previous year.

The fact that the Act and Regulations are being better observed is indicated by the decrease in the number of convictions. During the year ended March 31, 1915, there were forty-four convictions for violations of the Act and Regulations, while during the year ended March 31, 1916, there were only twenty-nine convictions.

#### COLD STORAGE LAWS.

The Cold Storage Act (chapter 6, 6-7 Edward VII), of which the details of administration are also in the hands of the Dairy and Cold Storage Commissioner, is intended chiefly to encourage the erection of small local public cold storage warehouses for the preservation of perishable food products. It provides that the Government may grant a sum not exceeding 30 per cent of the total cost of site, equipment and construction of such public cold storage warehouses. The subsidy is paid in instalments which are spread over a period of four years. No assistance is given to any company proposing to build in places where a public cold storage is already in existence. The rates charged in subsidized warehouses are subject to the approval of the Governor in Council.

The Cold Storage Warehouse Act of 1914 gives the Governor in Council power to make regulations respecting the operation and control of cold storage warehouses and the articles of food stored therein. No regulations have yet been made under this Act.

#### VII. PUBLICATIONS.

An annual report will be published giving in detail the work of the branch. During the year under review the following publications have been issued:—

- Bulletin 44. The Cold Storage of Food Products.
- “ 45. The Testing of Milk, Cream and Dairy By-products by means of the Babcock Test.
- “ 46. Determination of the Specific Gravity of Milk; The Percentage of Acid and Casein in Milk; Adulteration of Milk by Skimming and Watering; The Percentage of Water and Salt in Butter; The Percentage of Fat and Water in Cheese.
- “ 47. The Grimsby Pre-cooling and Experimental Fruit Storage Warehouse.
- “ 48. Pre-cooling, Shipment and Cold Storage of Tender Fruit.
- Circular 13. Commercial Pre-cooling and Storage of Fruit for the Season of 1915.
- “ 14. Causes of Variation in the Percentage of Fat in Hand-separator Cream.
- “ 15. Cherry Pre-cooling Possibilities.
- “ 16. Cow Testing Notes.
- “ 17. The Probable Scarcity of Rennet for the Manufacture of Cheese.

Frequent contributions are made to the Agricultural Gazette.

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Members of the staff address a large number of meetings during the year, they act as judges at dairy exhibitions and at milking competitions, and through correspondence, increasingly heavy, act in an advisory capacity on a variety of subjects.

Two of the staff, A. W. Sorensen and E. W. Painter, have enlisted for overseas service.

## THE SEED COMMISSIONER'S BRANCH.

The general policy of this branch, as outlined in previous reports, has been continued and some new work undertaken from which it is hoped much benefit to agriculture will be derived.

## SPECIAL GRADES FOR SEED GRAIN.

With the co-operation of my colleague, the Minister of Trade and Commerce, special grades for wheat, oats, and barley entering the government interior terminal elevators have been provided. A section of each of the elevators at Saskatoon, Moosejaw, and Calgary is set apart for ear-lots of grain that may be cleaned for seed. The grain is passed upon by a seed inspector as it comes into the elevator and is re-inspected during cleaning and when shipped out. The inspectors are responsible to the Seed Commissioner so far as certifying to the seed grades is concerned.

This grain is available to dealers or farmers at an advance over its commercial grade price sufficient to meet the extra dockage and the cost of storing, cleaning and sacking. On March 18, approximately the following quantities of seed grain were in store at the government elevators:—

Red Fife wheat. . . . .	8,500 bushels
Marquis wheat. . . . .	120,000 "
White oats. . . . .	71,000 "
Six-rowed barley. . . . .	3,900 "

Dealers and farmers have had great difficulty in securing, except at high prices, grain that was free from noxious weed seeds. One of the principal reasons was that in the ordinary course of handling grain through the terminal elevators, the clean was mixed with that badly contaminated with noxious weed seeds, so that practically none of it was fit for seed. It is anticipated that this difficulty will be to a great extent overcome when producers and purchasers are familiar with the new grades, and that large quantities of grain free from noxious weed seeds within the meaning of the Seed Control Act, and otherwise of high quality, will be available in Eastern Canada as well as in the West at a comparatively small advance above commercial grade prices.

## VOLUNTARY SEED CORN CONTROL.

Owing to the unusual weather conditions last fall, the corn crop did not mature normally and the supply of good seed, in Ontario as well as in the United States, promises to be short this year. In order to meet the present situation, and if possible

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to put the seed-corn trade in Canada on a more satisfactory basis, I authorized the Seed Commissioner to offer the growers the co-operation of the seed inspectors and laboratories for the introduction of a new system of seed-corn control.

The plan is based on the voluntary system which has been successfully employed in Europe. An agreement is provided whereby the grower undertakes to sell seed corn in the ear under clearly defined standards of quality and other guarantees. An alphabetical list of the growers under control is published by the department.

Many of the best and most extensive seed-corn growers are offering seed under the agreement and already something over 40,000 bushels of Extra No. 1 and No. 1 have been listed.

About 7,000 ear tests of corn have been made at the Ottawa laboratory in connection with the seed sampled for grading. Most of the lots have averaged above 90 per cent, and many above 95 per cent, the standard for Extra No. 1 seed corn. It is hoped that this system of marketing corn will prevent much of the misrepresentation that has been practised and that it will be mutually beneficial to growers and purchasers.

#### PAPER PACKET SEED INVESTIGATION.

An investigation into the paper packet seeds put on the market by the leading seedsmen has been commenced. Last spring about 2,500 samples were collected by the inspectors and sent to the Ottawa laboratory. They were tested for germination and examined to determine the comparative quantity supplied by different dealers and the range between packets from the same seedsman. The work will probably be continued for several seasons, but the results already obtained show that with most kinds of garden seeds contained in these showcase packets and marked at a given price per packet there was a substantial difference in the net weight and percentage vitality of the seeds put up by different seedsmen, and even with packets of the same variety filled in the same seed house the net weight of the seed was commonly found to be markedly variable. In many instances seed which was scant in quantity was also low in germination.

#### HOME PRODUCTION OF ROOT AND VEGETABLE SEEDS.

On account of the continuance of the European war, a serious situation has been created in respect to the supply of field root and vegetable seeds. Previous to the war, subvention was offered to growers to encourage the production of these seeds in Canada. When it became apparent that the European supplies would likely be cut off or greatly curtailed, further efforts were made to stimulate home production. Farmers and gardeners were advised to save parent stock for planting in the spring of 1915, and specially trained men were employed to direct growers and inspect their crops. During the summer of 1915, field root and vegetable seeds were grown by 163 farmers, and inspected by officers of this branch. Many of these farmers were growing only sufficient seed for their own use; sixty-four produced seed which passed inspection and for which subvention was paid. The seed produced on which subvention was paid amounted to over 36,300 pounds, the subvention being over

## SESSIONAL PAPER No. 15

\$1,500. The principal kinds and approximate amounts produced were: Sugar beet, 23,000 pounds; mangel, 8,200 pounds; sugar mangel, 1,500 pounds; swede, 3,000 pounds; radish, 400 pounds; garden beet, 350 pounds; onion, 350 pounds.

Owing to the accumulation of large stocks previous to the outbreak of war, it is not anticipated that there will be serious difficulty in supplying demands of most kinds of seed this spring; but unless much more seed than usual is grown in North America this year the situation may be serious for the spring of 1917. It is gratifying to be able to report that, on the whole, results in Canada are satisfactory, and it is to be hoped that a large number of farmers will grow at least sufficient seed for their own use this season in order to insure a supply for next spring.

## FIELD CROP COMPETITIONS AND SEED FAIRS.

The policy of paying subvention to the Provincial Departments of Agriculture on the basis of two-thirds of the money paid out for prizes in field crop competitions, seed fairs and provincial seed exhibitions, within certain limitations, has been continued and apparently with satisfactory results. The number of competitions continues to increase and reports indicate that they stimulate interest in the production and use of better seed.

During the summer of 1914, 357 field crop competitions were conducted, on which a total subvention of \$25,140.56 was paid. In the winter of 1914-15 the subvention for the 145 local seed fairs amounted to \$6,167.90, and \$1,251 was paid for ten provincial seed exhibitions. During the summer of 1915 there were 408 field crop competitions on which subvention amounted to \$25,847.18.

## SEED TESTING.

The work of testing seeds for dealers and farmers continues to increase. From September 1, 1915, to March 31, 1916, 10,228 samples were received at the Ottawa laboratory, compared with 9,022 for the same period last year.

During the fall and early winter most of the samples are from wholesalers. Later in the season a larger proportion comes from retail dealers and farmers. This year an unusually large proportion from wholesale dealers represents seed grown in the United States, as the Ontario crop of both common red and alsike clover seed is very poor. Scarcely 50 per cent of the red clover received from farmers this year has been sufficiently pure to be legally sold without re-cleaning. One difficulty that farmers have in preparing clover seed for market is that they find it almost impossible to get the proper screens with which to equip their fanning mills, as often they are not supplied by the manufacturers.

Most of the timothy seed sold in Canada is imported from the United States. The general quality varies considerably, depending on weather conditions. It is usually fairly pure, but during the past season most of it has been too badly hulled to grade No. 1. Some excellent Canadian-grown timothy has been received from Quebec and Western Canada. Much of the Alberta-grown seed put on the market has been badly hulled, but this apparently is due to lack of care in handling the crop. Seed can be

produced quite cheaply in parts of Western Canada, and there seems to be a good opportunity there, if care is taken to handle the crop properly.

The seed testing at the Calgary laboratory consists largely in testing samples from farmers for germination. Oats usually form a large percentage of the total received. Last fall, though serious frost was not general in the West until most of the grain was ripe, there was considerable injury in some districts. Of the samples of oats received at Calgary from Manitoba up to February 22, 41 per cent germinated less than 80 per cent, and 12 per cent less than 50 per cent; from Saskatchewan, 33 per cent germinated less than 80 per cent, and 16 per cent less than 50 per cent; from Alberta, 40 per cent germinated less than 80 per cent, and 12 per cent less than 50 per cent.

#### SEED INSPECTION.

It is gratifying to be able to report that improvement in the seed trade is clearly indicated by inspection work during recent years. Last spring there was a decided increase in the proportion of high grade seed on the market, and greater care was exercised by both wholesale and retail dealers to comply with the Seed Control Act.

Previous to the inception of seed control legislation, much of the seed distributed throughout Canada was badly contaminated with weed seeds and low in general quality, and in many cases the purchaser had little means of knowing the quality of the seed offered. It is now exceptional to find seed put out by any of the large dealers which is not properly marked with the grade and otherwise sold in conformity with the law. Defining definite standards of quality for timothy, red clover, aliske, and alfalfa offered for retail and having the grade number marked has resulted in a greatly increased demand for high-grade seed, and a wider spread in prices between the high and low grades. One result of this has been that farmers who attempt to grow clover seed on dirty land find that much of their crop is unmarketable, except at a low price, because of the heavy loss in cleaning to make it saleable for seeding purposes. On the other hand, farmers who have clean land and take the trouble to hand-weed their crops, find ready sale for their seed at good prices.

Last spring thirty-seven men were employed as temporary inspectors to assist the permanent district officers. The inspectors visited 2,268 places, compared with 1,861 in 1914, and 4,078 dealers or farmers. Many of these places were visited several times. Although the inspection was more thorough than ever before, fewer violations of the Act were detected, which is an excellent indication of improvement in the trade. In the spring of 1915, 666 violations of the Act were detected by the inspection staff, compared with 708 the previous season, and 839 in 1913. Most of the violations were of a minor character, such as failure to indicate the grade number.

#### GENERAL WORK.

The general educational work, including assistance at short judging courses, general farmers' meetings, the distribution of reference collections of weed and economic seeds and the publication of reports and bulletins, has been continued. The usual financial assistance has also been rendered to the Canadian Seed Growers' Association.



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## THE LIVE STOCK BRANCH.

In referring to the work of the Live Stock Branch, I am glad to be able to record a gratifying development of our export trade in live stock products with Great Britain and, to some extent also, with France. As will be pointed out later on, there were forwarded during the late fall and early winter, several shiploads of frozen beef which were purchased by the British Government on Army account. The bacon trade has again assumed important proportions and has absorbed all the surplus hogs of the country. During the year, also, Canada exported to the same destination eggs to the value of \$2,800,000.

Following the period of financial depression and the very striking curtailment of meat consumption in the country, just precedent to and following the outbreak of the war, the profitable development of this export business has been of very great financial advantage to the country. The value of the business itself has had an important effect in assisting to sustain our national credit, while to those engaged in the industry the export outlet has relieved a situation which might have become very grave had our farmers been under the necessity of finding a market for their surplus, at a time of money stringency and restricted local demand. As it is, prices have been driven to a very high level and, in consequence, there is, at present, very evident indications of an increased production in practically all classes of our farm animals.

The stimulus thus given to live stock production, notwithstanding the high price of grain and of other fodder, is likely to have an important bearing upon the future of our agriculture. The extensive resources of our Dominion, agriculturally, will probably never be fully realized except through the continuous and progressive extension of our live-stock industry. It has never before been so clearly demonstrated that the financial stability of farming is dependent upon the breeding and feeding of live stock. This fact has been demonstrated not only to the farmer himself but, as well, to the banker and business man. It will at once be evident therefore, how significant, at the present moment, is the development of a live-stock export trade. It will be clear also how important it is that every reasonable assistance should be given toward promoting the industry as a whole and the increased activities of the Live Stock Branch are in keeping with our general policy, therefore, as relating to the department's attitude toward agricultural development.

## HORSE DIVISION.

During the year this division continued the work of loaning stallions to associations in districts requiring this aid, throughout the Dominion. Forty-three stallions in all were purchased and placed. The department now owns 146 horses, placed throughout the various provinces. Over 75 per cent of the associations have sent in their renewal applications, while of the remainder, at least 15 per cent have asked that the stallions be exchanged, some of these being horses that have been placed two or three years. During the year many letters have been received expressing the thanks of associations, and telling of the improvement that was being brought about in the

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horse stock in the districts, through the use of the pure bred stallions loaned by the department. The stallions, as a whole, have been remarkably healthy and have invariably proven sure foal-getters. During the year only one horse was lost, due to catching cold while being shipped. Considering the number of horses and the widely different conditions under which they are kept the showing is an extraordinary one. Already, a large number of applications have been received for 1916-17, and it is evident that a goodly number of horses will be required for distribution.

*Federal Assistance to Clubs.*—A number of districts during the year organized for the purpose of hiring stallions for the use of members and to take advantage of the grant made by the department. These clubs were formed chiefly in the western provinces, and have proven very satisfactory, wherever tried. Judging from inquiries a large number should take advantage of the offer this year. Some of the best horse-men in the Dominion have written in to say that, in their opinion, the scheme is one of the best that has ever been inaugurated in any country in aid of the horse industry.

During the year an official of the Commonwealth of Australia, having seen a brief outline of the policy in one of the agricultural papers of that country, wrote for fuller information, which was accordingly sent. In his letter, acknowledging receipt of the booklets, he pointed out that, in his opinion, Canadian horsemen might very well look to Australia as a pure-bred market for Clydesdales, after the war. He suggested that a trial shipment should be sent over for the purpose of establishing a horse trade between the two countries.

During the first part of the fiscal year the horse trade was somewhat slow, and prices were accordingly lower than they had been some years previously. However, during the last three months of the year, conditions changed very materially and demand for good farm chunks increased, particularly in the West. During these three months almost 6,000 horses went through Winnipeg into the western provinces. During the same period almost 2,000 horses were exported to the United States, and from the outlook it would appear that buyers from across the line would continue to come for some time at least. Prices for good farm chunks and street horses have risen accordingly, and it would appear that these prices will be maintained for some time to come. Since the outbreak of war upwards of 50,000 horses have been purchased for army purposes. Buyers now report that horses are becoming scarcer and harder to get.

Through the Live Stock Branch, therefore, I have considered it advisable, to urge, by means of the agricultural press and otherwise, that farmers should not only keep their good mares, but breed them, as there is every likelihood of there being a scarcity of horses in the very near future.

#### CATTLE DIVISION.

##### DISTRIBUTION OF PURE-BRED BULLS.

The number of pure-bred bulls loaned by the Department through the Live Stock Branch to farmers' associations throughout Canada has increased year by

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year since the inauguration of the policy in 1913. On December 31, 1915, the number in the hands of associations was as follows:—

Breed.	B.C.	Alta.	Sask.	Man.	Ont.	Que.	N. B.	N.S.	P. E. I.	Total.
Shorthorn.....	8	124	221	44	68	94	1	9	22	591
Ayrshire.....	8	3	4	.....	4	125	5	21	7	178
Holstein.....	8	4	20	10	13	29	1	3	2	90
Hereford.....	.....	9	2	9	2	5	.....	.....	.....	27
Angus.....	1	1	2	4	1	.....	.....	.....	.....	9
Canadian.....	.....	.....	.....	.....	.....	9	.....	.....	.....	9
Jersey.....	1	.....	.....	.....	.....	2	1	3	.....	7
Guernsey.....	1	.....	.....	.....	.....	.....	.....	2	.....	3
Red Polled.....	1	.....	1	.....	.....	.....	.....	.....	.....	2
	28	141	250	67	88	265	8	38	31	916

These sires are loaned for only one year at a time, and an association is required to meet the cost of maintaining an animal as long as it remains in its hands. The department reserves the right to inspect the animals at any time and withdraw assistance in the event of it being found that an association is not living up to its agreement. An association may renew its application for the loan of the same animal at the expiration of its term, and, if all the requirements have been complied with, such applications are promptly approved. When necessary the sires are exchanged, but only for animals of the same breed. The advantage of systematic inspections of bulls loaned has been demonstrated during the past three years. Our inspectors have, by their advice and recommendations, been able to do much towards promoting the objects of the associations, and have in many instances prevented organizations from disbanding after a year or two of effort. In addition it has been found that our bulls are kept in much more satisfactory condition when inspections are made regularly. Usually one visit in the course of a year is sufficient, but where it is found necessary, two and even three visits are paid.

Upwards of 500 associations have been in operation for two years or over, and there is now some opportunity to judge of the results obtained. In this connection it is gratifying to note that the annual reports which have been received from associations in the spring of 1916 have, with very few exceptions, indicated that the use of the sires supplied has resulted in a very material improvement in the calf crop of the districts and has increased interest in live stock production. The reports of our inspectors this year so far as they have been received also indicate that the bulls are being much better handled than even a year ago, and that the quality of their progeny is very superior to that of the ordinary stock of the district. An effort is being made to encourage the members of the associations to feed their young stock properly so that the advantage obtained by superior blood will not be lost through unintelligent handling.

PURCHASING BREEDING STOCK IN CARRIAGE LOTS.

To effect a more equal distribution of our live-stock population the granting of assistance through the Live Stock Branch to farmers wishing to secure good breed-

ing stock has been authorized. Under this policy the department pays reasonable travelling expenses of the representative of individuals or associations from any section of Canada desiring to purchase one or more carloads of breeding stock in any part of the country, the expenses allowed to cover railway transportation and living expenses from the home of the purchaser to the point at which it is expected that the purchase will be made, also hotel expenses and livery expenses for the time which should be sufficient to purchase the consignment. No assistance in the payment of freight is rendered, nor is any responsibility assumed by the branch in connection with the purchase price of the consignment. Further, no assistance under this policy is rendered if stock is purchased for speculative purposes. If desired, a suitable person is nominated by the Live Stock Commissioner to accompany the purchasing agent and assist him in buying and shipping the consignment.

This policy has been widely taken advantage of during the early spring months of 1916, and it is expected that the plan will have an important influence in conserving the breeding stock of the country and in increasing our live stock production.

#### RECORD OF PERFORMANCE.

During the year 1915-16 the interest previously exhibited in this work has been fully sustained. There has been a larger increase in the number of applications than for any previous year, and also fewer withdrawals. The number of cows qualifying has also been greater. The record of average production of cows of all breeds have shown an increase so that, not only are more cows qualified, but the average production is larger. These two facts indicate that more care is being taken in the breeding and feeding of pure-bred dairy cattle than formerly, the credit for which is, to some extent at least, due to this work.

The Record of Performance is now being recognized in other countries to be sufficiently accurate as a yearly test for all practical purposes.

The following is a short summary of the work for the year:—

##### Number of cows entered in the test—

Ayrshires.....	677
French-Canadians.....	43
Guernseys.....	19
Holstein-Friesians.....	713
Jerseys.....	198
Shorthorns.....	121

Total..... 1,771

##### Number of cows qualified—

Ayrshires.....	175
French-Canadians.....	8
Guernseys.....	7
Holstein-Friesians.....	233
Jerseys.....	57
Shorthorns.....	34

Total..... 514

##### Number of bulls qualified—

Ayrshires.....	14
Holstein-Friesians.....	9
Jerseys.....	4
Shorthorns.....	1

Total..... 28

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## APPENDIX.

The records tabulated in the appendix are for cows which have produced sufficient milk and fat to qualify, but which have failed to freshen within fifteen months after the commencement of the test:—

Ayrshires.. . . . .	18
Guernseys.. . . . .	2
Holstein-Friesians.. . . . .	50
Jerseys.. . . . .	10
Shorthorns.. . . . .	3
Total.. . . . .	83

## SHEEP AND GOAT DIVISION.

The policy of loaning pure-bred sires to farmers' associations has now been in operation three years. Assistance of this nature is confined to districts where the farmers have difficulty in securing well-bred sires, or are in financial circumstances which restrict their ability to purchase the most suitable type of breeding male. In pursuing this work, it has been the purpose of the department to limit an association to a single breed, and advise persistent use of the original selection. Adherence to this system by societies has already shown results of the greatest benefit in fostering not only a keen desire amongst members to produce a better class of live stock, but in creating, as well, a uniform type within a district. An advance toward the establishment of the community system of breeding, which obtains so satisfactorily in Great Britain, is a direct result of this policy of the department.

Over four hundred rams of all the most prominent breeds were distributed in 1915. A decrease from the previous season occurred in the number of boars, namely, from 168 to 48. This was due to the diminished production of breeding hogs in the western provinces, from which many of the applications for boars had other years been received.

As a means of creating a greater interest in sheep production and more particularly of drawing attention to the most approved methods of preparing the fleece, an exhibit of wools has been collected together and presented at a large number of fairs throughout the Dominion. Many features, illustrating successful systems of pursuing sheep raising in this country, are also included. The interest alone displayed by the public in this exhibit augurs well for the future development of the sheep industry.

Still further encouragement is offered to sheep raisers through the medium of prizes for wool in the fleece by many of the exhibitors. This represents an innovation which is fully appreciated by wool growers and has tended to awaken a lively interest in the production of an improved product of wool. I feel that exhibits of this nature will very shortly assume equal proportions at our fairs to those of fat and pure-bred sheep.

The sheep industry generally has never been in a more flourishing condition. The upward trend of prices for both wool and mutton which has occurred has been most wholesome in the way of attracting interest to the sheep industry. Sheep are beginning to form a permanent asset in farming operations. For years, during the period of low prices, the industry was looked upon as a side issue, and farmers paid

little attention to the maintenance of their sheep. They had nothing before them to set as an incentive either to enter into the business or, if pursuing it, to improve their product. The opposite condition obtains to-day. A redevelopment of the industry is occurring upon a basis which will mean not only a steady increase in numbers but the production of a class of sheep and wool which will bring recognition throughout the world to Canadian flocks.

#### POULTRY DIVISION.

The most marked feature affecting the development of the poultry industry during the year has been the unprecedented demand for Canadian eggs and poultry on the part of the British market. Fortunately this demand occurred at a time Canada had a surplus for export. For some years previous to 1914, owing to the unusual demand in the western provinces, Canada had been importing eggs in quantities. The high prices prevailing, as a result, had the usual effect, however, and greatly increased production took place, not only in the eastern, but also in the western provinces as well. Some idea of the extent of the increase in production may be obtained from the following table showing the exports and imports of eggs during the past four years:—

CANADIAN Exports and Imports of Eggs.

Fiscal Year ending March 31.	Exports, Domestic Pro- duce.	Imports.
	Doz.	Doz.
1913.....	147,419	13,240,111
1914.....	124,002	11,274,036
1915.....	3,592,899	4,493,396
1916.....	7,898,322	3,783,952

It will be noted that the exports last year were more than double those of the previous year and at the same time Canada reduced her imports by nearly a million dozen. Since 1913 the increase in production has amounted to nearly 18,000,000 dozen, and it is estimated that the egg crop of Canada for the year 1915 was worth at least \$30,000,000.

During the year, in addition to continuing the egg and poultry trade improvement campaign initiated previously, special inquiry has been made into the requirements of the British market, and everything possible done during the time to insure that the quality of Canadian eggs going forward is such as will serve as a fitting advertisement for the Canadian product.

Within the Dominion, in addition to activity along lines of co-operative organization, the work of interesting both producers and consumers in the matter of improved quality has been continued.

During the year the Egg Candling Demonstrations were given at a number of the larger exhibitions and winter fairs in the eastern provinces and in British Columbia. In several instances the Egg Exhibit of the branch was also displayed.

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In all, a total of some sixty-three thousand people attended the demonstrations, and most of these left their names for candling appliances. An interesting feature of note was the increasing number of consumers who were learning to determine quality in eggs by candling. This was noted particularly in Toronto, Ottawa, Montreal, and Amherst, N.S.

*Egg Classes at Exhibitions.*—With a view of acquainting people more generally with the standards for Canadian eggs, arrangements were made with a number of the larger exhibition associations to offer prizes for eggs in accordance with these standards. The response was particularly gratifying, especially in the instance of the Canadian National Exhibition at Toronto, where over seven thousand dozen were entered for competition, and at the Ottawa Winter Fair in January when over 500 dozen fresh-gathered eggs were shown. This year classes for eggs graded in accordance with the standards are being included in the premium lists of fifteen of the larger exhibitions in Canada.

*Meetings attended.*—During the year officers of the Poultry Division took part in no less than two hundred and seventy-two meetings, at which it is estimated that 19,791 persons were in attendance, apportioned as follows by provinces:—

Province.	No. of meetings.	No. of in attendance
Ontario.. . . . .	74	4,458
Quebec.. . . . .	17	311
Manitoba.. . . . .	21	694
Saskatchewan.. . . . .	1	250
Alberta.. . . . .	27	2,206
British Columbia.. . . . .	5	226
Prince Edward Island.. . . . .	127	11,646
<b>Total.. . . . .</b>	<b>272</b>	<b>19,791</b>

AID TO FAIRS.

During the year, it had been brought to my attention, from various sources, that, owing to the financial depression, the larger agricultural fairs and exhibitions throughout Canada were likely to find themselves in a very embarrassing position as regards their financial obligations. Having to face greatly lessened receipts, through diminishing attendances and decreased entries, certain of them proposed to cancel their exhibitions entirely. Believing that this would be a very unfortunate development, particularly at a time when every sound agricultural movement needed to be fostered and encouraged, I thought it advisable to enter upon a policy of aid to the larger and more important fairs of the country. With this object in view, it was decided to grant assistance to fairs and exhibitions which should open their prize lists in all the utility classes of live stock and poultry to entries from any part of the Dominion and which had distributed for prizes in these classes, at their last preceding show, a minimum of \$5,000. By this means it seemed possible to draw a reasonably distinct and logical line as between the shows which should receive aid under this policy and the shows of a more or less provincial nature which had been receiving assistance in one form or another through Provincial Departments of Agriculture. To shows qualifying for the grant a sum equivalent to half the amount paid in prizes in the classes

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mentioned at the last preceding show, was given, it being understood that in no case should the grant exceed the maximum of \$5,000. It was decided to require that the prize lists in each case should be submitted to the Live Stock Commissioner for approval.

Under this policy, thirty-two shows in all participated in the aid given and received in the aggregate the sum of \$114,787.26.

#### THE MARKETS POLICY.

During the course of the summer, a new feature in connection with the work of the department was initiated. I refer to the organization of a markets policy, to consider and deal with matters affecting or relating to the marketing of live stock and live stock products.

It has been responsibly predicted that there will be an unprecedented demand for live stock following, and as a direct result of, the war. The very heavy drain upon the Australian and the Argentine herds for the filling of army contracts; the wholesale destruction of the stocks of cattle in Germany, Belgium, and France, together with the increasing interest which is being evidenced by Great Britain in purchasing supplies within her own dominions and, particularly, in Canada, would seem to indicate that this country may expect to be called upon to furnish, for the world's market both meats and meat products to an extent and volume never before experienced. I would refer at this point, especially, to the opportunities for the development of an egg trade, a bacon trade, and a chilled or frozen beef trade, as well as to the possibility of building up a substantial export business, even if only temporary, in such commodities as frozen pork, beef offal, corned beef, and army rations of various descriptions. Anything that can now be done, therefore, to place Canada in a stronger position to take advantage of this prospective trade should not only result in better returns to our farmers but, as well, in materially strengthening the financial and commercial position of the country.

To secure this end, in so far as it is possible to do so, and to obviate many of the difficulties which at present exist, I have felt justified in providing that definite attention be given to the whole marketing problem as related to live stock. To make clear the scope of the markets policy as it is being organized, it may be pointed out that, amongst other things, it will involve the consideration of:—

1. A comprehensive intelligence system.

2. The organization of a system which shall provide for the dissemination of the information thus acquired to farmers, feeders, produce men, and others interested in the live-stock trade.

3. The extension of the system of organization of farmers for co-operative action in the sale of their products.

In addition to these important lines of activity, attention will be directed:—

1. To the promotion of a system of sale by grade and payment according to quality.

2. To the problems of transportation by railroad or steamship, as affecting live stock trade.

3. To an improvement in the method of handling stock from producer to packing house, with the view of avoiding losses by injury, of providing against waste and of safeguarding the position of the farmer in the sale of his stock.



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4. To the development of an export trade by such means as may reasonably and practically be undertaken and to the securing of a national reputation for the products which we may have to offer for sale on the export market.

The work has been placed in charge of the Assistant Live Stock Commissioner. The programme will be carried into effect through the utilization of the existing machinery in the Live Stock Branch and by the appointment of special additional officers who will assume responsibility for certain new and important features of the work already alluded to.

During the short interval since the initiation of the policy, considerable work has been accomplished. The most definite results have been achieved in connection with the co-operative sale of wool and of eggs, and in the improvement of conditions affecting the egg trade as considered from the standpoint of produce business. It should be explained that these particular phases of the work have been in operation for a considerable period and, as introductory to the extended programme which has now been undertaken, they have reached the status of complete and successful units in the movement which is being carried forward. There follows a statement of what has been accomplished during the current year in this direction.

## SHEEP AND WOOL.

Similar assistance as last year was extended to sheep-raisers in the preparation of their wool for market. This comprises instruction in the grading or classification of the wool at the time or very shortly after shearing. Grading, it has been found, comprehends one of the most effective means of demonstrating to wool growers the variation in quality and condition which obtains in wool, and shows clearly the necessity of observing the utmost cleanliness if a high price is to be attained. A fleece containing an excessive quantity of extraneous material, as straw or burrs, is included in the "reject" class which sells considerably lower than the first grades. The spirit of emulation which is created amongst members of associations, to produce the highest type of wool, in itself makes grading a valuable and beneficial practice. Besides, purchasers can recognize more readily the character of graded wool and its real value in manufacture, and are assured of securing a uniform product.

In order to take advantage of the benefits of grading and at the same time of the facilities of disposing of large quantities of wool in a co-operative fashion, sheep-raisers in many districts have banded themselves together in associations. Organizations of this character have now been formed in every province, and in many instances cover a very extensive area. Approximately a million pounds of wool were classified for them by the experts of the department. Little difficulty obtained in disposing to advantage of the graded product, which was sold through avenues devised and controlled solely by members of the associations. It is estimated that the grading enhanced the price to the producers about 4 cents per pound, which alone should constitute ample evidence of the effectiveness of this course.

## EGGS.

Canadian eggs have found favour on the British market, as is apparent from the many favourable reports received and the enhanced price which the Canadian product

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has commanded in comparison with that of the United States. Some difficulty has occurred through the fact that large quantities of United States eggs have been repacked in Canada for export, and sold in Canadian cases. Last year an arrangement was made with the Customs Department whereby it was required that all packages containing foreign eggs coming into Canada and intended for export, should be branded with the name of the country in which they originated. The regulations governing this matter may have to be made more stringent, in order to adequately safeguard the interests of the Canadian product on the export market.

#### THE CO-OPERATIVE ORGANIZATION OF PRODUCERS.

As has been intimated last year, the work of the department in this connection has now been extended to the western provinces. Last fall Mr. T. A. Benson, who had been in charge of the movement in Prince Edward Island, since its inception, was transferred to Alberta. Mr. R. J. Allen, a graduate of the Ontario Agricultural College, was secured for the work in Manitoba, while Mr. J. H. Hare, previously associated with the egg trade improvement work has given general supervision of co-operative organization as connected with the marketing of eggs and poultry.

In Prince Edward Island, a general consolidation of the movement has taken place. A central candling station has been opened up in Charlottetown by the Producers' Association, and arrangements completed such that practically all the product of the local associations passes through this depot. This has resulted in a much more uniform article being placed on the market, and has given the members generally a feeling of greater confidence in the undertaking. As an indication of the solidarity of the movement in this province, it may be pointed out that, during the two months previous to the holding of the annual meeting in March, collateral to the extent of some \$10,000 had been subscribed by the members, with the view of placing the business on a more substantial basis.

In Ontario and Quebec, while no decided attempt has taken place to organize any number of new associations, the old associations have increased their membership considerably, and the value of the product marketed has been more than doubled. This is due not only to an increase in production but, as well, to the increased price obtainable for the improved quality of the goods marketed. In this connection, special reference might be made to the activity of a number of local units which have become affiliated under the name of the Lansdowne Farmers' Association and which last year marketed eggs and poultry to the value of over \$14,000.

#### THE EGG TRADE IMPROVEMENT CAMPAIGN.

The adoption of definite standards for Canadian eggs by the Canadian Produce Association in January, 1915, gave this work a decided impetus. Previously while a "loss off" system of buying eggs had come into quite general use throughout a considerable portion of the Dominion, the adoption of a system of "quality payment" had been seriously handicapped through lack of any definite or generally recognized standards. Although actually accepted by the trade in the eastern provinces, the produce firms in the province of Alberta were the first to really apply these standards in a practical manner. The lead taken by Alberta was shortly followed by

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Saskatchewan and, while not definitely put in force by the Winnipeg Produce Association in purchasing direct from producers, the standards were used in making inspections of carload lots intended for interprovincial trade.

Last year, for the first time in the history of the Dominion, fresh-gathered eggs were shipped in carlot quantities from Western Canada to the eastern provinces. Owing to the fact that the trend of trade previously had been entirely in the other direction, it required some time to establish a feeling of confidence on the part of eastern buyers in the western product. A medium of assistance in this connection was extended by the department through the location of an officer, temporarily, in Winnipeg, who, at the request of the Winnipeg Produce Association, gave a statement of grading on any lots of eggs intended for shipment. By so doing, the movement of eggs from the producing centres of the Central West was greatly facilitated, and the department was instrumental, early in the summer, in assisting in the movement of a large quantity of eggs to the eastern provinces. These, otherwise, would have been thrown on the Chicago market or left in the hands of local receivers, to the serious impediment of the poultry industry in the Prairie Provinces.

## THE INTELLIGENCE SERVICE.

This being a new and somewhat unique undertaking, some time has been required in its organization. A definite programme, however, is steadily being rounded into shape, and officers have already been located at the leading market centres. In addition to the information furnished from this source, reporting upon conditions from country points has now been begun. A large amount of statistical and market data are being regularly received at the office, and it is expected that, within a very short time, the issuing of printed market reports will be commenced. This feature of the work is in charge of Mr. A. P. Westervelt, formerly Director of the Live Stock Branch, Ontario Department of Agriculture.

## THE SALE OF FROZEN AND CANNED BEEF TO THE BRITISH WAR OFFICE.

Following an investigation of the conditions obtaining last fall as regards the export outlet for fresh and tinned beef, it became evident that the department was in a position to render material assistance in the development of our meat trade, through a representation of the claims of Canada to the British War Office. During the fall months, a great proportion of the Canadian supply of cutter and canner cattle finds its way to market. During the same period and before the closing in of winter, large numbers of grass cattle, both in the East and in the West, are offered for sale. Owing to the shortage of shipping space and to the fact that little connection had, as yet, been established for our beef and beef products on the British market, it became clear that, unless some definite action were taken, a serious glut would be occasioned, with consequent low prices to the producer. It is true that the American market has remained open to our stock, but the finding of an outlet through that channel, unless the product be sold as dressed beef, does not help Canada to realize the full return either to the producers, on the one hand, or, on the other, upon the investment of capital and labour in our packing-houses and railways.

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Steps were, therefore, immediately taken toward an improvement of this situation and, through the Acting High Commissioner for Canada in London, communication was entered into with the British War Office. As a result of the representations which were made, an initial sale of in the neighbourhood of 6,000,000 pounds of canned corned beef was speedily completed. Following the joint contract, the packers individually have been able to obtain additional sales of this and related products. As an immediate result of our action, the price to the farmers for cutter and canner cattle was held very steady and firm throughout the fall.

While the tender offered through the department by our packers in connection with the sale of fresh frozen beef was not accepted, we were able to secure the recognition by the British Board of Trade of the supplies which could be obtained from this country. As a direct result of the correspondence, there have been allotted to Canadian packers a number of refrigerator steamers for the transportation of cargoes, the sale of which was effected by the packers during the fall and winter. The outlet for the beef thus obtained has relieved the congestion which existed, and has given promise of a very strong market during the approaching season.

#### INVESTIGATION OF THE BRITISH MARKET.

Following upon the work already undertaken, I instructed the Assistant Live Stock Commissioner in December last to visit England and France, partly with the view of investigating the market for Canadian meat products in these two countries, and partly with the object of improving the connection of Canada with those charged with the purchase of supplies for the British Government and for the allied armies. During the trip, Mr. Arkell was able to obtain a reasonably accurate conception of the opportunity which exists of securing a satisfactory and profitable outlet for our produce. His review of the situation will be found in the current issue of the *Agricultural War Book*. I am happy to be able to state that his report indicates that the practicability of finding a remunerative market in Great Britain and France rests upon a very secure foundation.

While in London, through the good offices of the Acting High Commissioner, he had interviews with the Director of Contracts for the British Army; the Chairman of the Committee charged with the purchase of frozen beef for the British and allied Governments, and with the member of the Board of Trade having direction of the shipping space commandeered for the carriage of meats and other food products. These interviews assisted in initiating further business for Canada and in providing a basis of understanding which, no doubt, will prove an effective help in securing sale for this year's product.

#### DOMINION EXPERIMENTAL FARMS AND STATIONS.

Another active year is to be recorded in the operations of this branch. The regular lines of experimental work have been carried on at all the fully-equipped Farms and Stations.

Greater emphasis has been laid upon certain features of the work, and preparations made to study them in a more complete and accurate manner. Among these

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lines may be instanced the qualitative and quantitative study of commercial fertilizers. Field work in this connection is being carried on at several of the eastern Farms and Stations.

Plant pathology laboratories have been established at Fredericton, N.B., and at Charlottetown, P.E.I. These are in charge of qualified men, who will devote their energies to the study of the plant diseases found in those provinces, and in the provinces of Nova Scotia and Quebec.

With a view to ascertaining the possibilities of producing fibre flax with profit in Canada, a preliminary investigation was carried on during 1915. Fibre of good quality was obtained from flax grown on the Central Farm and by certain growers in western Ontario. Preparations have been made for a wide test of the possibilities of this industry.

During the year the Division of Extension and Publicity and the Division of Illustration Stations have been thoroughly organized. The former division takes charge of the exhibition work carried on by the Experimental Farms system and also uses many other means of making the work of the Farms more widely known. It has already done excellent work in both these directions. On the Illustration Stations the plan of work mapped out was put into operation successfully and much interest has already been shown by the farmers living near.

On the newer Stations, the introduction of these has been going on as rapidly as the land can be got into condition and the necessary buildings erected. Delays under the latter head have again hampered the work, especially with live stock.

Small areas have been added to the Experimental Stations at Charlottetown, P.E.I., Lennoxville, Que., and Rosthern, Sask.

An Experimental Farm site has been chosen at Kapuskasing, Ont., and one at Spirit Lake, Que., both in connection with the internment camps located at those points. Preparatory work in clearing and draining is being done by the interned prisoners of war.

During the year the following publications have been issued or are in the press:—

The Annual Report of the Experimental Farms for 1914-15.

In the Regular Series—

No. 86.—The Cultivation and Improvement of the Apple in Canada, by W. T. Macoun.

In the Second Series of Bulletins—

No. 24.—Plant Diseases of Southern Ontario, by W. A. McCubbin.

No. 25.—Tobacco Growing in Canada, by F. Charlan.

No. 26.—Bees and How to Keep Them, by F. W. L. Sladen.

Circulars issued—

No. 10.—The Late Blight and Rot of Potatoes, by Paul A. Murphy.

No. 11.—The Black Leg Disease of Potatoes, by Paul A. Murphy.

Pamphlets issued—

No. 5.—Asparagus, Celery and Onion Culture, Revised edition.

Numbers 2, 3 and 4 of "Seasonable Hints" were issued. Large editions of this pamphlet, and, indeed, of all Experimental Farm publications, are now needed, owing to the great expansion of the mailing lists.

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In connection with the exhibition work, the number of exhibition circulars has been increased materially, and new editions of many of those issued last year have been prepared.

In March there was received at the Central Farm, the horse "Anmer," a gift from His Majesty to the Government of Canada.

## EXPERIMENTAL STATION, CHARLOTTETOWN, P.E.I.

Spring opened late in Prince Edward Island, and seeding of cereals was not completed until the end of the first week in June. Ample rainfall and good growing weather brought crops on rapidly. The hay crop was heavy except on low-lying land. The yields of cereals were among the best in many years. On the Experimental Station, they averaged the highest of any year since its organization. Potatoes were considerably below the normal crop. Roots were an average yield. Fall pastures were good, and live stock went into the stable for wintering in good condition.

Experimental steer and lamb feeding was carried on at the Station during the winter. Good prices for the finished animals were realized in March.

During the year a poultry administration building and a 100-hen poultry house were erected. A plant pathology building was also put up and will be used as headquarters for the officer studying diseases affecting plants in Prince Edward Island.

An area of about five acres was added to the Experimental Station under a five-year lease with option of purchase.

## EXPERIMENTAL STATION, FREDERICTON, N.B.

The winter of 1914-15 was comparatively mild, but the following spring was late. Almost no sowing was done in April, and wet weather in May delayed main seeding operations until the latter part of that month. June and July were also very wet, and many low-lying areas were drowned out. August was unfavourable for haying and harvesting, and but little grain was cut that month.

The hay harvest was finished in September, and the grain crops cut under good weather conditions. The yield of hay was fair and grain gave a good crop. Corn gave a small yield owing to the wet, cool season. Potatoes were considerably below average.

Pasture was abundant throughout the summer, and fall operations were carried on under most favourable conditions.

An implement shed, a bee building, two colony poultry houses and a poultry administration building were built during the year.

## EXPERIMENTAL FARM, NAPPAN, N.S.

Spring was late, with much wet weather, and seeding was greatly delayed. Hay was a heavy crop, though there was some difficulty experienced in saving it. Grain harvesting was finished in October. The yields of cereals were fair. Corn was a light crop, and potatoes a good one.

Some 150 interned prisoners of war were set at work on this Farm, on August 25, at clearing and breaking new land. The number was afterwards increased to

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200. After the clearing was finished they were employed putting in a new water system.

An extension to the horse barn was made, a new sheep barn built, and the farm buildings painted. A large amount of general repair work was done to the older buildings.

Experimental feeding of steers was carried on during the winter, and a good price was obtained this spring.

## EXPERIMENTAL STATION, KENTVILLE, N.S.

Seeding was late owing to a cool and wet spring. The first good weather for farm work was the first week of June, when the main seeding was done, except on light, high land which had been sown the previous month. Hay was a heavy crop, but harvesting it was slow owing to lack of bright weather, and much of the crop was damaged.

Cereals yielded less than 1914. Potatoes were a light crop in many locations, especially where planted late. The apple crop was also light.

Owing to the heavy hay crop, more live stock than usual has been wintered. Experimental feeding of steers was carried on at the Station. The finished steers were sold in March, and a good margin of profit shown.

No building operations of importance were carried on at this Station.

## EXPERIMENTAL STATION, STE. ANNE DE LA POCATIERE, QUE.

The spring was very cold, and all growth was retarded by some two weeks.

Haying was completed July 21, at the Station and the crop was very light. Grain crops were good. Fodder corn gave an excellent yield as did roots also.

A large amount of tile draining and fencing was done during the season.

An implement shed, granary, root cellar, poultry administration building and a poultry house were built.

## EXPERIMENTAL STATION, LENNOXVILLE, QUE.

Preparatory work was commenced during the year, and some field crops grown and variety tests carried on. A large amount of tile draining and fencing was accomplished. Delay in erection of buildings prevented live stock work being taken up beyond the experimental feeding of steers and lambs.

## EXPERIMENTAL STATION, CAP ROUGE, QUE.

Very little work was done on the land during April, but nearly all sowing and planting were finished by June 1. The season was a favourable one. Hay was only a fair crop but of excellent quality. Cereal crops gave good yields. Fall work was favoured by a long period of good weather.

A considerable amount of fencing, draining and road making was done. A new 100-ton silo was put up, and a wagon shed, brooder house, and a 100-hen poultry house built, as well as some alterations and repairs made.

## EXPERIMENTAL FARM, BRANDON, MAN.

Farming operations were general by April 9, and seeding was well on toward completion by the close of the month.

The weather remained somewhat cool until August when a hot, dry period hastened ripening, and cutting was general by the 12th. Yield and quality of cereals were good. Fodder corn was a poor crop owing to cool weather in June and July. Potatoes were fairly good. Field roots yielded well. Work on the land continued until November 7, when frost stopped the ploughs. A poultry administration building and a colony poultry house were erected and some painting of the farm buildings done.

## EXPERIMENTAL STATION, MORDEN, MAN.

Preparatory work was carried on at this new Station under the supervision of a foreman manager. Field crops were grown and orchards and other plantations set out. During the winter experimental steer feeding has been carried on and a flock of sheep placed on the Station this spring.

The Assistant in Horticulture at Brandon has been transferred to Morden to take charge of that line of work.

No Station buildings have yet been erected at Morden.

## EXPERIMENTAL FARM, INDIAN HEAD, SASK.

Seeding commenced on April 1. May, June and July were cool, with a fair amount of rainfall. Hay was a light crop. August weather hastened ripening, and about 80 per cent of cereal crops was in stook by the close of the month. Threshing was delayed by unfavourable weather in September, but was very generally completed by the end of October; wheat on fallow averaged about 30 bushels per acre, and on stubble about 18 bushels.

A poultry administration building, bee building, two colony houses, and a brooder house were built this year.

## EXPERIMENTAL STATION, ROSTHERN, SASK.

Seeding was well advanced by the end of April. April, May and June were very dry, with severe frosts during the latter month; the hay crop was very poor as a result. Small fruits were injured and some sorts of vegetables killed. Rain in July benefited the grain crops, roots, and vegetables.

Grain harvest was completed in August. Wheat gave 18 bushels per acre, oats 30 bushels, and barley 24 bushels. The yields throughout the district were below the average. Potatoes were a very small crop, and fodder corn a failure.

A considerable amount of fall ploughing has been done.

Steers have been put under feeding test this winter, and sheep breeding experiments are under way.

## EXPERIMENTAL STATION, SCOTT, SASK.

Seeding was general by April 13. Germination was good and growth satisfactory. Hay was a good crop and high August temperatures hastened ripening of



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cereals. The highest yield of wheat on the Station was 54.6 bushels, grown on well-worked summer-fallow, packed after sowing. Oats were a good crop, barley only medium, potatoes and roots gave an average yield. Little fall ploughing was done in the district, owing to the time taken up by harvesting, and the hard, dry condition of the soil.

A flock of sheep was placed on the Station for experimental breeding work.

## EXPERIMENTAL STATION, LETHBRIDGE, ALTA.

Seeding began about April 8, and was well on toward completion by the end of the month. Rainfall was ample during May and June, and growth was excellent. Alfalfa cutting was general by July 1, and the crop was a heavy one.

August was favourable to ripening the grains, and cutting was well advanced by the end of the month. Yields of cereals were good and in some cases very high. The potato crop was fair. Field roots were an average in yield. Less fall ploughing than usual was done.

As in previous year, experiments were carried on in duplicate, one set on irrigated land, the other under dry-farming conditions. The ample rainfall of last season lessened very materially the amount of irrigation required.

Feeding experiments with steers and lambs have been carried on during the winter.

A bee building was put up at this Station.

## EXPERIMENTAL STATION, LACOMBE, ALTA.

Seeding commenced April 10, under good conditions as to preparation of land and abundance of moisture. Growth was rapid. Pastures were excellent and grass-fed live stock kept in first-class condition. Clover hay gave the heaviest crop in the history of the Station. Alfalfa was a fairly good crop. Yields of grain were remarkably high, reports up to 70 bushels per acre being received.

A piggery was built this season at Lacombe.

## EXPERIMENTAL STATION, SUMMERLAND, B.C.

Preparatory work was continued at this Station. Some field crops were grown, and orchards were set out. A considerable amount of breaking and grading was done. The pipe-line from the municipal water-works to the Station was laid and a large quantity of fluming put up, leading from this main line.

None of the permanent buildings has yet been built on the Station.

## EXPERIMENTAL FARM, AGASSIZ, B.C.

The growing season opened favourably, with sufficient rainfall and good weather for sowing. The hay crop was heavy as was also the return from grains. Fodder corn gave a heavy yield, of good quality. Potatoes were a fair crop, as were also mangels. Turnips were injured by aphids.

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The usual experimental work was carried on with live stock, special attention being paid to the experimental feeding of swine.

A sheep barn, piggery, and a poultry administration building were erected, and an additional silo put up.

## EXPERIMENTAL STATION, INVERMERE, B.C.

Ample and timely rainfall reduced the amount of irrigation required in this district. Yields of clover and alfalfa were heavy, both under dry-farming conditions and under irrigation. Yields of grain were good. Potatoes were a heavy crop, as were all garden vegetables.

A poultry house and a bee building were built.

## EXPERIMENTAL STATION, SIDNEY, B.C.

The laying out of the areas for the various lines of work on this Station was continued and satisfactory progress made. Additional orchards and ornamental plantations have been set out, roads made, fencing put up, and draining done. Field crops of cereals and forage crops were grown and variety tests of fruits and vegetables made. Hay and grains all gave returns above the average. Small fruits gave good crops. Husking and ensilage corn did well. The potato harvest was, in general, light. Yields of vegetables were good.

Preparation of land for fall sowing was hindered by dry weather.

A poultry administration building and a bee house were erected.

## SUBSTATIONS.

Experimental work was continued at Forts Vermilion, Smith, Resolution, and Providence, and at Grouard and Grande Prairie, in Alberta. In British Columbia, Mr. Thos. A. Sharpe continued experimental work on his farm. At Minto Bridge, Yukon Territory, some tests were made, and it is hoped to extend these during the coming year.

Making allowance for the climatic extremes of many of these localities, and the difficulties under which experimental work must necessarily be conducted at such remote points, the results obtained are most valuable and speak well for the interest taken by the experimenters engaged.

## FIELD CROPS OF THE DOMINION.

A combination of favourable circumstances resulted in the grain harvest of 1915 being the greatest ever recorded in Canada. The factors referred to were:—

- (1) the large amount of fall ploughing done in 1914;
- (2) the excellent wintering of the fall wheat crop;
- (3) the prospects of high prices and the appeals for greater production leading to increased acreage being sown; and
- (4) the favourable growing and harvesting conditions of 1915.

The total estimated value of the field crops of Canada in 1915 is \$797,669,500.

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The acreage yield and value of the principal field crops are tabulated below from data obtained from the Census and Statistics Monthly:—

AREAS and Estimates of Yield and Value of Field Crops, 1915.

Crop.	Area.	Yield per Acre.	Total Yield.	Weight per Measured Bushel.	Average Price per Bushel.	Total Value.
	Acres.	Bush.	Bush.	Lb.	§ cts	§
Fall wheat .....	1,208,700	29.41	35,551,000	59.71	0 90	32,091,500
Spring wheat .....	11,777,700	28.93	340,752,000	60.31	0.83	280,567,900
All wheat .....	12,986,400	28.98	376,303,000	60.19	0 83	312,569,400
Oats .....	11,365,000	45.76	520,103,000	36.61	0 34	176,894,700
Barley .....	1,500,350	35.33	53,331,300	48.26	0 50	26,704,700
Rye .....	112,300	21.32	2,394,100	56.32	0 79	1,899,900
Peas .....	196,210	17.73	3,478,850	60.74	1 06	5,730,700
Beans .....	43,310	16.70	723,400	59.61	3 05	2,206,800
Buckwheat .....	343,800	22.88	7,865,900	48.02	0 75	5,913,000
Mixed grains .....	466,800	37.54	17,523,100	44.98	0 57	10,034,700
Flax .....	806,600	13.18	10,628,000	55.28	1 50	15,965,000
Corn for husking .....	253,300	56.72	14,368,000	56.32	0 71	10,243,000
Potatoes .....	478,600	130.81	62,604,000	.....	0 57	34,964,000
Turnips, mangels, etc .....	172,700	372.21	64,281,000	.....	0 26	16,700,000
		Tons.	Tons.		Per ton.	
Hay and clover .....	7,875,000	1.39	10,953,000	.....	14.22	155,807,000
Fodder corn .....	343,400	10.00	3,429,870	.....	4.96	16,999,100
Sugar beets .....	18,000	7.83	141,000	.....	5.50	775,000
Alfalfa .....	92,685	2.83	261,955	.....	12.98	3,402,000

The following table gives the numbers of the principal classes of live stock in the Dominion for the years 1911-15, inclusive:—

NUMBER OF FARM LIVE STOCK IN THE DOMINION, 1911-15.

Live Stock	1911.	1912.	1913.	1914.	1915.
	No.	No.	No.	No.	No.
Canada:					
Horses .....	2,595,912	2,692,357	2,866,008	2,917,738	2,981,000
Milk cows .....	2,591,179	2,604,488	2,749,434	2,673,286	2,666,846
Other cattle .....	3,939,257	3,827,373	3,915,687	3,863,531	3,899,153
Sheep .....	2,175,302	2,082,381	2,128,531	2,098,046	2,068,082
Swine .....	3,610,428	3,477,310	3,148,326	3,404,261	3,111,900

DIVISION OF CHEMISTRY.

The purely investigational work of this division has been rather severely interfered with during the past year, owing to the enlistment of several members of the Chemical staff for military service overseas. This temporary deferment in certain lines of research is to be regretted, but under the circumstances was unavoidable for it was found impossible to obtain, at short notice and for temporary employment, capable men to take the place of those who had gone to the front.

Every effort has been made with the reduced staff to keep up what might be termed the routine work of the laboratory and to satisfy the ever-increasing demands

of farmers for chemical assistance. Though it has not been possible to prevent a rather large accumulation of work, both chemical and clerical, the laboratory records show that a great deal of very useful work, for widely distant parts of the Dominion, has been accomplished.

The correspondence of the division continues to increase, clearly indicating a growing and ever keener appreciation of the value of chemical knowledge as applied to agriculture.

During the year, 4,393 agricultural samples have been received and entered for examination. These include samples collected in connection with investigations carried on by the division and those forwarded by the Meat Inspection Division, but by far the greater number have been sent in by farmers. The corresponding number of samples received the previous year (1914-15) was 3,829.

The work in connection with the chemical and microscopical examination of samples submitted by the Meat Inspection Division, Health of Animals Branch, has been continued. These samples collected at the various packing houses in Canada include preserved meats, lards, colouring matters, preservatives, spices and condiments, evaporated apples, etc., and numbered, during the past year 1,180. In the preceding year 662 samples were examined.

Very considerable progress has been made in the examination of the soils from the several irrigation tracts in Alberta. The chief object of this investigation has been to ascertain the suitability of the areas in question for farming under irrigation, and this has called more especially for a determination of the "alkali" where such has been found. In the reclassification by the officers of the Department of the Interior of the areas under examination, the reports from this division have been of the greatest assistance.

The influence of soil and climatic conditions on the composition of wheat has again been studied, wheat from the same stock being sown on the Farms and Stations of the Experimental Farm and the harvested grain analyzed. It has been demonstrated that seasonal conditions may profoundly modify the gluten content, a moderately dry soil and fairly high temperatures during the period in which the kernel is filling out being conducive to a hard berry of first quality.

The work with sugar beets has again shown the suitability of soil and climatic conditions in many widely distant points in the Dominion for the production of sugar beets for factory purposes. These results are of particular interest at the present time when so many inquiries are being received as to the possibilities of Canada as a sugar-producing country.

The investigation to determine the feasibility of preparing a nitro-potassic fertilizer by a process of drying and grinding Atlantic coast seaweed has been concluded. During the brief period of a factory operations, approximately 50 tons of seaweed fertilizer were produced from the experimental plant in Nova Scotia. It now remains to establish, through a comprehensive scheme of field experiments arranged for the year 1916, the fertilizing value of the material.

The ever-increasing demand for information on the nature and use of fertilizers necessitated the employment of expert assistance to undertake the supervision of investigational work in this connection and to deal with correspondence, etc., on the

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subject. Such assistance has been procured, and the division is accordingly extending its experimental work with fertilizers on several of the Experimental Farms and Stations. It will also be able to answer more promptly the large number of inquiries that are constantly being sent in regarding manures and fertilizers and the question generally of the up-keep and increase of soil fertility.

The widespread interest at the present time in the question of "liming" as a means of increasing the soil's productiveness has rendered desirable the analysis of many limestones sent by farmers and Provincial Governments for valuation. Limestones are variable as to composition, but it is evident from the results obtained that rock of excellent quality and quite suitable for the manufacture or preparation of crushed limestone or for burning to quicklime, occurs in many parts of Canada.

The examination of waters from farm homesteads continues as an important branch of the division's activities. Much has been done in impressing upon our farmers the importance of pure water, but the results obtained in the Farm laboratories indicate that the campaign against the use of waters from polluted wells must not yet be abandoned.

## THE DIVISION OF FIELD HUSBANDRY.

The scope of the work of this division as relating to all Experimental Farms and Stations for the past four years includes:—

- (1) Studies in the methods of culture and curing of field crops.
- (2) Investigations of the relative merits of different crop rotations.
- (3) Determinations of the costs of growing field crops under regular farm conditions.
- (4) Tests of the influence of size and character of cultural implements on cost of crop production.
- (5) Comparisons (in a limited way) of varieties of grain and forage crops as food producers.
- (6) Experiments to show the value of underdrainage and irrigation.

The division at the Central Experimental Farm, Ottawa, is hampered in its work due to the fact that suitable land is not available for carrying on several lines of the experimental work that should naturally be included. However, besides providing supplies of grain and fodder for the up-keep of the live stock on the Farm, the following experimental work was conducted during the year.

## WEATHER CONDITIONS AND CROP YIELDS.

The season of 1915 was characterized by an early seeding and a wet harvest. Spring seeding was in progress on April 21 and was continued uninterrupted until finished on the 29th of April. The temperatures, lower than usual during the month of May, retarded the growth of grain which had made a promising start. Corn planting, too, was delayed, on account of the cool weather, until the end of the month. The forepart of June was dry, and during the month the first cut of hay was taken. In July, corn, roots, and grain made good growth, but the latter was harvested with difficulty in August when the heaviest rainfall in years for that month was recorded. On September 26 severe winds damaged the corn crop, making the harvest tedious.

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more especially where the corn was allowed to grow too thickly. The weather continued fine throughout the month of October, providing a favourable opportunity for the harvesting of roots and potatoes and the finishing of autumn ploughing.

## COST OF PRODUCTION OF FIELD CROPS.

In the following table is summarized the yields and costs of production of mangels, corn, oats, and hay:—

Cost of Production of Field Crops, Central Farm, 1915.

Crop.	Area.	Yield per Acre.		Cost to Produce.		
				Per Acre.	Per Ton.	Per Bush.
	Acres.	Tons.	Bush.	£ cts.	£ cts.	cts.
Mangels.....	1·00	21·87	72·91	33 90	1 55	4 65
Ensilage corn.....	32·3	16·53	.....	23 99	1 45	.....
Oats.....	38 5	.....	69·4	69 17	.....	19 39
Oat straw.....	38·5	1 19	.....	.....	2 28	.....
Hay.....	30·0	3·67	.....	18 34	5 00	.....

## ROTATION OF CROPS.

The most important investigation work at present in progress at the Central Farm is the testing of rotations considered suitable for live-stock farming. Thirteen rotations varying in duration and treatment are now permanently located which are being studied, keeping in mind the following points of merit:—

- (1) Their ability to supply different crops in the proper proportions for certain needs.
- (2) Their power to keep weeds in check.
- (3) Their comparative profit.
- (4) Their effect on the fertility of the soil.

*Rotation "A" (five years' duration).*—Hoed crop, manured; grain, seeded down with clovers and grass; clover hay, top dressed with manure in autumn; timothy hay, field ploughed in August, top worked and ribbed up in October; grain, seeded down with red clover to be ploughed under the following spring when the succeeding hoed crop is corn.

*Rotation "B" (five years' duration).*—Hoed crop, manured; grain, seeded down with clovers and grass, seeds top dressed with manure in autumn; clover hay, ploughed in autumn; grain seeded down with clovers and grass; clover hay.

*Rotation "C" (four years' duration).*—Hoed crop, manured; grain, seeded down with clover and grass; clover hay; timothy hay, field ploughed in August, top worked and ribbed up in October.

*Rotation "D" (three years' duration).*—Hoed crop, manured; grain, seeded down with clovers and grass; clover hay.

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*Soiling Crop, Rotation "R" (three years' duration).*—Corn for early fall feed, manured; peas and oats to cut green, seeded down with clovers and grass; clover hay, to cut green.

Some characteristics of the above solutions desirable under almost any conditions, are as follows:—

(1) Grain fields are always seeded down with clover, even though it be used only as a fertilizer, as in the case of the fifth year of rotation "A."

(2) Grass and clover seedings are heavy. Increased crops of hay and rare failures of a catch have justified them.

(3) Hoed crops form a large proportion of every rotation. An attempt to farm a small area without a hoed crop was not successful. Weeds could not readily be kept in check.

(4) No field is left in hay for more than two years. Our records show that the second crop almost always costs more than the first per ton, and that succeeding crops are very liable to be grown at a loss.

(5) Barnyard manure is applied frequently in comparatively small quantities, rather than at long intervals in large quantities.

The following record shows the comparison of the chief items in connection with these rotations:—

Cost, Returns and Net Profits of Rotations, "A," "B," "C," "D," and "R."

Rotation.	Cost to operate	Value of returns	Profit.
	per acre.	per acre.	per acre.
	\$ cts.	\$ cts.	\$ cts.
A (five years' duration).....	18 22	23 01	4 79
B (five years' duration).....	17 78	18 75	97
C (four years' duration).....	18 10	22 44	4 34
D (three years' duration).....	20 44	23 47	3 03
R (three years' duration).....	21 57	28 79	7 22

SHALLOW PLOUGHING AND SUBSOILING VERSUS DEEP PLOUGHING.

Two four-year rotations differing only in the preparation of the sod land for roots or corn as mentioned above are used, but the results of twelve years have failed to show any decided advantage in favour of either method. In the past year the results were in favour of shallow ploughing, while the average for the period of twelve years has shown a slight advantage in favour of the deep ploughing.

COMMERCIAL FERTILIZERS AS A PART SUBSTITUTE FOR BARNYARD MANURE.

This experiment, started in 1913, was designed to supply information concerning the relative fertilizing merits of:—

- (1) No manure of any kind, but pastured one year in four.
- (2) Barnyard manure.
- (3) Complete commercial fertilizer.
- (4) Barnyard manure, together with commercial fertilizer.

The results show a distinct advantage in barnyard manure over commercial fertilizer alone for this soil, but point to the possibility of combining the two to good advantage when barnyard manure is scarce or high in price.

## ANIMAL HUSBANDRY DIVISION.

The Animal Husbandry Division of the Experimental Farms has made a satisfactory expansion in the scope of its work during the past fiscal year. The lines of work which fall to this division are the laying out and superintending of feeding, breeding, purchasing, management, and housing of farm animals; the manufacturing and marketing of their products, together with all experimental and demonstrational work connected therewith on the Central Experimental Farm, and, in consultation with the Director of the Experimental Farms and the Superintendants of branch Farms, the supervision of similar work on branch Farms and Stations throughout Canada.

## LIVE STOCK ON THE CENTRAL FARM.

The horses on this Farm are all of draught type excepting the necessary drivers. Amongst the draught horses are a number of excellently bred Clydesdale mares which are used not only for general farm work but also for breeding purposes. Although in the past grave difficulties have been met in breeding operations with horses, yet the future of this work is more promising. Feeding experiments, both with the working horses and breeding stock, are being continued on the Central Farm in conjunction with somewhat similar work on the branch Farms.

The extremely important work with beef cattle is of necessity still curtailed for lack of sufficient housing accommodation. However, a few choice young steers are being finished for baby beef, not only to demonstrate the profits from such work, but also that these animals may be used for demonstrational purposes in lectures to the many visitors.

The herds of dairy cattle have progressed rapidly during the past year. Good representatives may be found of four breeds, namely, Ayrshires, French Canadians, Holsteins, and Jerseys, as well as a few choice grades of the Ayrshire and Holstein breeds. The milk production per cow has amongst all breeds increased largely during the past year. Some splendid records have been made by animals which were entered both in the Record of Performance and Record of Merit, all breeds showing a marked increase in maximum production and maximum profits. Many pure-bred animals from the herds are annually sold for a moderate price to breeders throughout Canada, it being the object in the making of these sales to place this stock where the greatest amount of good may be done. A large number of experiments in the feeding, breeding, and handling of dairy cattle have been conducted during the past year. An increasing number of experiments with equipment, such as milking machines, have been conducted. Special attention has also been paid to the feeding and rearing of young stock, and a large number of calf-feeding experiments have been conducted.

Experimental work along the lines of dairy manufacturing is continuing to hold a very prominent place in the work of this division. The manufacturing, curing, and marketing of many dairy products, such as butter, fancy cheeses, Cheddar cheeses, and the like, has received all attention possible under the existing circumstances. The gross receipts from this department during the past year have



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exceeded \$10,000. With the construction of a more commodious dairy, the amount of experimental work and the gross output may be increased. From this division also has been distributed a large amount of information regarding dairying, as well as free forms for the keeping of cow records, to thousands of Canadian farmers.

The sheep on the Central Experimental Farm have again shown a marked improvement both as to numbers, quality, condition, and profits. Only two breeds, namely, Shropshires and Leicesters, are represented on this Farm. However, from these flocks a number of excellent breeding animals have been distributed to branch Farms or sold to breeders throughout Eastern Canada. A number of experiments in the feeding and finishing of sheep for the market have again been conducted. It might be worthy of mention that lambs finished in winter on the Central Experimental Farm have for the past two years been sold on the Toronto market at the top market price. In March, 1916, lambs finished on this Farm created a new record price of \$13.75 per hundredweight, live weight, on the Toronto market.

Swine raising has again demonstrated itself as one of the good paying branches in this division. Three breeds are represented in this herd, namely, Yorkshire, Berkshire, and Tamworth. A large number of pure-bred animals has been sold during the past year for breeding purposes. Feeding experiments have been conducted both under summer, fall, and winter conditions. These experiments have dealt with more economical feeding, the choosing of superior foodstuffs both for raising on the farm and to be purchased on the markets, the saving of labour in the feeding of the hogs, and other such economic problems.

## ASSISTANCE TO BRANCH FARMS.

The Dominion Animal Husbandman has visited the branch Farms and Stations throughout Canada and continued to be of assistance to the superintendents of these Farms. In conjunction with the superintendents many new lines of live-stock work have been undertaken. In addition, a large number of sketch plans of buildings proposed for these branch Farms and Stations have been made by this division, which plans have been approved of and completed by the Department of Public Works. By such means of co-operation, building work on the branch Farms has been facilitated. It may be again recorded that the modern buildings on the Dominion Experimental Farms are being copied, in their essentials at least, by a large number of both the small and extensive live-stock breeders throughout Canada.

## MISCELLANEOUS.

The regular correspondence of this division has again increased more than 25 per cent over the previous year. Every possible assistance has been given inquiring farmers along the lines of maintenance of live stock, feeds, feeding, methods of breeding, and general management for improved health and increased profits.

A most gratifying result of the work in this division is the increasing interest of the Canadian farmer in the improving of his live-stock buildings. This division has continued to assist Canadian farmers in every way possible toward the planning of new or the remodelling of old farm buildings. Over 840 blue-prints of modern

farm structures to suit the individual needs of farmers inquiring, as well as photographs and brief specifications, have been distributed during the past year.

Members of the staff of this division have judged at a large number of agricultural fairs and have addressed meetings throughout Eastern Canada during the year ended March 31, 1916.

#### HORTICULTURAL DIVISION.

There are four main features or subdivisions of the work of the Horticultural Division at Ottawa, pomology, vegetable gardening, ornamental gardening, and plant breeding, to each of which an expert devotes most of his time, the Dominion Horticulturist supervising the whole and paying especial attention to the work of the branch Farms and Stations.

The crops of fruit at the Central Farm, while not as good as in some years, were fair on the whole. Owing to the large number of varieties of apples under test, there is always a considerable proportion which bear, so that there never has been a failure of this crop in recent years. The information which has been accumulated on varieties of apples is very great. Yields have been kept annually of individual trees since 1898, so that it is possible to tell a prospective orchardist what trees of certain varieties are likely to bear at different ages. Marked differences have been found in the yields of trees of the same variety of the same age and planted the same year, and experiments are in progress to determine if these characteristics are repeated when the trees are propagated. Young trees propagated from such stock were fruiting in 1915, and each year's test will make this experiment more valuable. It has been possible as a result of experiments covering a long period to recommend a reliable list of varieties for places where the climate is somewhat similar to that at Ottawa. As an example, there is the McIntosh apple which has been under test at Ottawa since 1888. The value of this fine Canadian variety was soon demonstrated, and for many years the planting of it has been strongly advocated.

*Plums.*—It has been shown by the experience of the past twenty-seven years that the European or Domestic plums and the Japanese plums are not satisfactory over that large part of Canada which has a winter climate very similar to that at Ottawa. Occasionally trees will bear a good crop of fruit, but on the whole they are not a commercial success. In 1915, as in most other years, there was a good crop of the improved native and American varieties of plums, although the yield was not as good as usual owing to late spring frosts. For many years these varieties have been recommended instead of the European which, when planted, rarely bear fruit. The Cheney plum, one of the improved varieties of the Canadian wild species and one which has for a long time been recommended by the Horticultural Division, is grown very successfully over a wide area. The Omaha, a hybrid between the Japanese and American plums, is one of the most promising of the newer varieties, having the hardiness of the American and the firmness of the Japanese. As among the wild native plums there are some which ripen early, especial attention is being paid to these, and some very promising ones fruited in 1915.

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*Pears.*—Much expense must have been saved to prospective pear growers in the colder parts of Canada by the reports on experiments with varieties of pears at the Central Farm. In the original orchard most of the well-known varieties of good quality were tried, but none of them, with the exception of the Flemish Beauty, ever reached a fruiting age, and the Flemish Beauty never bore many crops before it succumbed. There was a good, but limited, crop of the Flemish Beauty in 1915, and this is the only good pear which, from the experiments at Ottawa, is likely to succeed where the climate is as cold as it is here. A few Russian varieties have proved hardy and practically immune from blight, but they are of inferior quality. They are, however, being used for crossing with the less hardy sorts.

*Cherries.*—Cherries, like pears, do not do well at Ottawa. Some varieties are hardier than others, among the hardiest being the Russian sorts, but, as a rule, the flower buds are killed in winter, hence they cannot be recommended for commercial planting in cold climates. There was a light crop in 1915. A wild Japanese bush cherry gives promise of being a valuable addition to the list of fruits for the colder sections. There was a fair crop of these in 1915.

*Other fruits.*—Much information has been obtained in regard to grapes, raspberries, currants, gooseberries, and strawberries at Ottawa, and the lists of varieties furnished and the methods of cultivation recommended have been published from time to time in the reports and bulletins. There was a good crop of all of these in 1915.

*Vegetables.*—The experiments in vegetables are of interest to many people, and it is planned to make them as useful as possible. In 1915 an overhead irrigation system covering 7 acres was installed at Ottawa for the purpose of determining what crops were benefited by artificial watering of this kind and whether it would prove economical for the average market gardener to install such a system. Owing to the wet weather in most of the growing season, the vegetable crops did not need any artificial watering, but at the time of setting out a strawberry plantation there was very dry weather when, without the irrigation, a large proportion of the plants would doubtless have died, but as a result of having the water, practically a perfect stand was secured.

As a result of the campaign for "Patriotism and Production" at the meetings of which the Dominion Horticulturist advocated the growing of more vegetables in backyards, a bulletin on "The Home Vegetable Garden" was published, for which there were many applications, a second edition becoming necessary in a few weeks after the publication of the first.

*Ornamental Gardening.*—Since the war began a marked increase has been observed in the number of letters received by the Horticultural Division in which the writers desire information in regard to the improvement of their home grounds. The war and the cessation of speculating in real estate have evidently turned the attention of Canadians more to the value of home life and attractive home surroundings than formerly, and many questions are asked in regard to the laying out of grounds and the varieties and care of ornamental plants. In 1915 a bulletin on "The Cultivation

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of Hardy Roses" was published for which there has been a great demand. The trial grounds for flowers at the Central Experimental Farm are of much interest to visitors.

*Plant Breeding.*—The work in plant breeding was continued in 1915, crossings being made with fruits, vegetables, and flowers. Hardier and better fruits; earlier and better vegetables; and more beautiful flowers are needed in Canada, and some good material has already been obtained. Seedlings of Northern Spy and McIntosh apples having different seasons from their parents, but with their characteristic flavour, are among some of the most promising new fruits.

#### BRANCH FARMS AND STATIONS.

In last year's report an outline was given of the horticultural work in progress at the branch Farms and Stations and most of this work was continued in 1915, but in addition an extensive series of cultural experiments with vegetables at these Farms and Stations to cover a period of from three to five years was planned and experiments begun.

The Dominion Horticulturist visited most of the Farms and Stations twice in 1915 to discuss horticultural matters with the superintendents. Special mention should be made of the work at some of the newer Experimental Stations in 1915.

At Lennoxville, Que., orchards of 22 acres in extent, consisting of apples, pears, plums, and cherries were planted in 1915. One apple orchard was planned for cultural work only, a comprehensive series of plots having been laid out. Experiments were also begun with small fruits, vegetables, and flowers.

At the internment camps at Spirit Lake, Que., and Kapuskasing, Ont., tests were made with vegetables and flowers, and some small fruits were set out to obtain information as soon as possible which will prove useful to intending settlers to Northern Ontario. In the autumn of 1915 trees of hardy varieties of apples and bush fruits were sent to these camps which may ultimately be Experimental Stations.

The first horticultural work was done at the new Experimental Station at Morden, Man., in 1915, when hedges for windbreaks were planted. It is proposed to plant orchards and small fruit plantations and carry on other horticultural work there in 1916.

Owing to lack of water in the spring of 1915, the irrigation system not having been installed, practically no planting was done at the new Experimental Station at Summerland, B.C., but early in the summer the water was available and a fair crop of beans was harvested on part of the horticultural area. Plans for extensive plantings of fruit trees have been made for 1916.

#### CEREAL DIVISION.

The season of 1915 is noteworthy for the high yields per acre and the general good quality of the grain produced throughout the Dominion. While some sections were adversely affected, it is impossible to expect equal and uniform production in a country like Canada, possessing as it does, such widely differing meteorological conditions. In the Maritime Provinces, a cold wet spring retarded seeding and

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growth, a setback which fair weather in July and August could not overcome. The yields throughout these provinces were below those of 1914, while the grain was only of fair quality, due to the lateness of seeding. Exceptional weather conditions prevailed throughout the western provinces, resulting in a very high yield per acre of grain of splendid quality. Although a few districts through the lack of moisture, did not produce as abundantly as the major part of the provinces, on the whole the season was extraordinarily successful. In Ontario and Quebec early seeding was generally possible. A rather cold period prevailed in May and the beginning of June, accompanied by drought, but was followed by warm rains and pleasant weather. Judging from the growing grain, a maximum crop would have been produced, but unfortunately heavy rains, with hot, damp weather intervening, prevailed throughout the harvest season. The resulting damage was large, much grain being ruined, while that which was threshed was dark in colour and often low in vitality.

## NEW CEREAL BUILDING.

Through fire of accidental origin, the main building of the division was destroyed by fire at the beginning of the harvest season. This building was used for the threshing and storage of seed grain, the selection and preparation of seed for distribution, and the general work of the division. With it, the implements and machinery of the division were lost, including the flour-mill and the stationary grain cleaner but recently installed. In addition to the pecuniary loss of equipment, seed of recent crosses and selections, as well as all seed of varieties under test held in reserve was also destroyed. This latter loss can scarcely be estimated. Immediate steps were taken for the erection of another, and it is now a pleasure to record that a larger and more commodious building has just been completed and placed at the disposal of the division.

## MARQUIS WHEAT.

This wheat still stands as the champion of hard red wheat in America. Last autumn, at Denver, Colorado, for the fifth successive time, it won the world's championship. That this wheat still maintains its extraordinary record, is proof of its enduring quality, and justifies the universal popularity accorded to it in the western provinces.

## NEW VARIETIES AND SELECTIONS.

Since the introduction of Prelude and Pioneer wheats, continued favourable reports have shown their ability to succeed under the climatic conditions for which they were chosen. Prelude, on account of its extreme earliness and splendid quality, has become increasingly popular in the northern districts, and as the settlement of these areas progresses, the use of this variety will become more general. Other new wheats designed to meet the peculiar needs of certain districts are now under test at our different Stations, while the work of selection from extensive crosses of the best of the present varieties is receiving the most careful attention.

Unfortunately the main stock of seed of the new oats was lost in the fire, and this work is of necessity retarded for a time.

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Many recent crosses in barley, peas, beans, and flax are being studied. It is expected, especially with the hull-less varieties of barley, that out of the promising material now on hand, some new varieties of striking value will be introduced.

#### THE MILLING AND BAKING WORK.

This work has had to be discontinued for a time, owing to the loss of the flour-mill and the enlistment of the milling and baking assistant for oversea service. The investigations along these lines now include not only the tests of new varieties and promising strains of wheat grown under different conditions, but also researches into commercial flours, bread improvers, etc. These investigations will be taken up again as soon as practicable.

#### DISTRIBUTION OF SEED GRAIN AND POTATOES.

The usual distribution of small lots of improved seed has been somewhat limited this last season, owing to the necessarily restricted space available for the work of the division while the erection of the new building was in progress. The insistence of the farmers on having seed of the highest quality is one of the most pleasing features of the work, showing that a keen appreciation of good seed is steadily increasing. The distribution seems to have its greatest value in the comparatively new settlements in the western provinces, numerous favourable reports giving evidence of its benefit there. Before the close of the present distribution, over thirty-six hundred samples of grain and twelve hundred samples of potatoes will have been sent out to various applicants throughout Canada.

#### DIVISION OF BOTANY.

##### DESTRUCTIVE INSECT AND PEST ACT WORK.

The potato inspection begun the year before was continued, so far as the Dominion was concerned, till about July, 1915. In view of the fact that the disease, powdery scab, had not been specially studied on the continent of America, there was carried out in Eastern Canada a series of uniform experiments, which clearly showed that the disease is only of minor importance, but naturally, where it has not yet occurred, it is desirable to use every precaution to prevent it and most vigorous and systematic efforts have been undertaken to stamp out the disease where present.

##### NEW FIELD LABORATORIES ESTABLISHED.

Two new field laboratories have been established, one in Fredericton, N.B., in charge of Mr. G. C. Cunningham, B.S.A.; and one in Charlottetown, P.E.I., in charge of Mr. Paul A. Murphy, G.A. These officers, by demonstrations, field experiments, lectures, and other means, are engaged in educating farmers to practise disease control. This work, although in its initial stages, has shown most satisfactory results; since, at a time when good seed potatoes are scarce, there are, as a result, enough sources of disease-free crops available to start the coming season with sound seed.

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Co-operation with farmers has been established throughout Prince Edward Island, Nova Scotia, Quebec, and New Brunswick; and it is confidently expected that powdery scab and many other potato diseases will shortly be greatly reduced or practically eliminated.

The field laboratories are not only devoting their time to potatoes, but also to any other plant pathological problem of economic importance.

## ST. CATHARINES FIELD LABORATORY.

The work of this laboratory is making steady progress. Some years ago a very troublesome disease of peaches—peach canker—appeared, and spread rapidly throughout the peninsula. It is gratifying to be able to report that the assistant-in-charge, Mr. W. A. McCubbin, M.A., has now demonstrated that this disease can be controlled. Considerable research and experimental work are involved in the location of the outbreak of white pine blister rust recently observed in this locality. During the year a very useful treatise on "Fruit Tree Diseases" has been prepared by Mr. McCubbin, and was issued as Bulletin No. 24 (2nd series). During the winter the course in plant pathological instruction inaugurated last year was again held.

## CENTRAL LABORATORY.

Among other special studies taken up during the year were preliminary investigations into the culture of medicinal and drug plants in Canada, and into the growing of flax for fibre. Mr. John Adams, M.A., Assistant Dominion Botanist, who has had some twenty years of close connection with the flax industry of Ireland, has devoted much time and attention to this work during the year.

During 1915 a number of plots of flax were grown on the Central Experimental Farm, seed for this purpose having been obtained from Holland through the Dominion Botanist and the good offices of Dr. Ritzema-Bos, by special permission of the Dutch Government.

In the month of September several samples of flax were collected at various points in southwestern Ontario and sent to Ottawa to be retted. Others were sent in from the Prairie Provinces by the superintendents of the different branch farms. Sixteen samples were received from southwestern Ontario and fifty-three from the Prairie Provinces. Of the latter, four were from Brandon, Man.; nine from Morden, Man.; seventeen from Indian Head, Sask.; ten from Scott, Sask.; three from Rosthern, Sask.; nine from Lethbridge, Alta.; and one from Lacanville, Alta. One sample was grown at Ground Hog River Provincial Experimental Farm in Northern Ontario.

Sixteen samples were also retted for Dr. C. E. Saunders, Dominion Cerealist. These were grown on the Experimental Farms at Cap Rouge, Ste. Anne de la Pointière, Fredericton, Indian Head, Rosthern, Lacanville, Lethbridge, and Agassiz.

All the samples were pulled, except one which was cut. With one exception, all were dried before being sent to Ottawa.

The bulk of the seeds appeared to have been ripe or nearly so at the time of pulling, but this was more difficult to determine after the bundles were dried.

For the purpose of retting the various samples, small ponds about three feet deep were excavated in the corner of the Botanic Gardens near the Rideau canal.

The flax was immersed in these, and the ponds were several times pumped dry, and refilled with fresh water from the canal.

The time of immersion varied from three to nine days. At the time of immersion of a considerable number of the samples, the water was becoming too cold for satisfactory retting. The flax, after removal from the pond, was spread on the grass for several days to dry. It was then sent to the mill of the Ontario Flax Co., Ltd., at Parkhill, Ont., to be scutched and valued. The scutched fibre was arranged in six classes according to merit, class 1 being the best quality. None of the flax grown at the Central Experimental Farm was valued as class 1, and only one sample was placed in class 2. Nine of the samples grown in southwestern Ontario were valued as class 1, and four were placed in class 2.

Of the samples from the Prairie Provinces none were placed in class 1, and only two in class 2.

Of the sixteen samples tested for Dr. Saunders two were placed in class 1, namely, those from Agassiz, B.C. None of the others attained the rank of second class.

The ordinary routine work of the division is ever increasing, and, from the close contact with farmers and their special problems, beneficial results are becoming more and more apparent.

A new phase of work has been added during the year, viz., the preparation of cultures for the inoculation of leguminous crops with nitrogen-fixing bacteria.

#### THE BEE DIVISION.

The work of the Bee Division has continued to develop rapidly during the past year. A much-needed apicultural building, 27½ feet by 32 feet, with 2,100 square feet of floor space, has been erected at the Central Experimental Farm, and was occupied on February 11, 1916. The building contains a laboratory, offices and three bee cellars. The gathering of the work into one building with the apiary near at hand will greatly facilitate the experiments that are being conducted with bees.

The apiary work at the branch Farms and Stations, thirteen of which now keep bees, has been further organized during the year. The apiarist inspected each apiary during the warm weather in 1915, and gave advice to the superintendents and to the men in charge of the bees. Returns have been prepared showing the comparative profitableness of the bees at each Farm or Station, and steps have been taken to systematize means for the control, by manipulation, of swarming which is one of the principal causes preventing larger returns in the majority of apiaries in Canada.

Progress has been made in the study of the principal honey-producing plants of Canada, the conditions affecting the abundance of their yield, the duration of the yield and the quality of the honey. Some of this work has been done in temporary out-apiaries in the open country where the particular honey plants it has been found desirable to study are abundant. These temporary apiaries have been established in connection with the Central Farm and two of the branch Farms. It is expected that the information obtained will prove of considerable value to bee-keepers, showing them where bees may be kept with greater profit.



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The formation of collections of specimens of the honey plants of Canada, and samples of the honeys produced by them has been commenced.

Experiments in the breeding of bees have been continued, and useful data have been secured.

The subject of humidity in the bee cellar during the winter has been investigated in detail, and it has been found that in cellars where the relative humidity is low, such as are to be often met with in dwelling houses in the interior of Canada, a heavy mortality of bees may occur under certain conditions. Experiments have been made to ascertain the effect of supplying moisture when deficient, and also how such a deficiency may be best prevented.

Since some of the conditions for important features of bee investigation work are not met with in the Experimental Farm apiaries, co-operative experiments have been started with several enlightened bee-keepers in different places.

## DIVISION OF FORAGE PLANTS.

The scope of the work of the Division of Forage Plants is gradually being extended, new lines being added each year. The most important new work taken up by the division this year is experiments with growing of field roots for seed.

## VARIETY TESTS.

Since 1913, practically all varieties of Indian corn, mangels, turnips, carrots and sugar beets, grown at the Farms and Stations of the Experimental Farms system, have been tested in duplicate plots. By this arrangement the influence of soil variation on the yield of different varieties has been almost eliminated. As a consequence, the possible errors in the determination of the yielding capacity of the different varieties, as resulting from lack of soil uniformity in the experimental field, have been greatly reduced. Since the inauguration of the duplicate-plot system more uniform results have been obtained and more definite information secured as to the relative yielding capacity of different varieties in different parts of the Dominion.

Beginning with 1914, the value of varieties of field roots, tested at the Central Experimental Farm, Ottawa, has been calculated from the yield per acre and dry-matter content, taken together. By this arrangement the Division of Forage Plants has been able to come to a much clearer understanding of the real food value of the various varieties tested, and has, as a consequence, been able to advise farmers, more positively, to grow certain varieties in preference to others.

## BREEDING WORK.

The breeding work with clovers, alfalfa, and grasses, started in 1912, is progressing very satisfactorily.

As mentioned in last year's report, the breeding work with clovers and alfalfa, so far under way, is being largely done with the object of producing hardy varieties, i.e., varieties able to come through the most severe Canadian winters without being wholly or partially killed. Breeding for hardiness is being based upon the assumption that what is called a variety of any clover or alfalfa is in reality a mixture of

a very great number of strains distinct not only as to morphological characters but also with regard to biological qualities. It consists chiefly in elimination of all tender strains and in propagation of the hardy ones, the result being ultimately the creation of a "variety" composed of hardy strains only.

The importance of using hardy varieties has been clearly demonstrated as far as red clover is concerned, experiments at Ottawa having shown that there exists a most pronounced relation between hardiness and yield. The use of seed of hardy varieties of forage plants therefore means higher yields, i.e., larger revenue from the farm and increased stock-carrying capacity of a given acreage.

The breeding work for hardiness has also furnished proofs of the correctness of the statement, often made from theoretical grounds, that home-grown seed produces better crops than seed imported from somewhere else.

The breeding work with grasses, having for its main object the production of high-yielding and uniform varieties, is progressing satisfactorily. Most advanced is the work with timothy and Western rye grass, of which perfectly uniform varieties, superior to those now available commercially, are expected to be ready for comparative tests in a year or two.

#### FIELD ROOT SEED GROWING.

In order to secure data bearing on the possibility of growing field root seed profitably in Canada, experiments were undertaken at the Central Farm, Ottawa; Experimental Station, Charlottetown, P.E.I.; Experimental Station, Kentville, N.S.; Experimental Station, Fredericton, N.B.; Experimental Station, Lennoxville, Que.; and Experimental Farm, Agassiz, B.C. The results of the experiments not only show that seed of good quality can be raised in Canada, but they also indicate, most decidedly, that seed growing, if taken up by experienced men, familiar with field roots, may prove a very profitable business.

#### COLLECTIONS.

The herbarium material of grasses and other plants necessary for the proper understanding of the nature and value of natural pastures, and of hay made from wild grasses and kindred plants, is steadily being increased. Unfortunately, the division suffered a considerable loss this year, a large number of grasses and duplicates, intended to be used for exchange purposes, being destroyed in the fire which laid the cereal building in ashes. In this fire large quantities of various cultivated forage plants, collected for exhibition purposes, were also lost.

#### RANGE INVESTIGATIONS.

In co-operation with officers of the Forestry Branch, Department of Interior, Ottawa, the Dominion Agrostologist investigated the cause of cattle poisoning in the Crowsnest Forest Reserve, special attention being paid to the grazing areas in the Livingstone valley and the Porcupine hills. The investigation revealed that the only plant really dangerous to cattle in the districts mentioned, is the larkspur. A report, accordingly, was prepared and submitted to the Forestry Commissioner, Department of Interior, Ottawa.

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PUBLICATIONS ISSUED OR WITH THE PRINTERS.

Exhibition circulars—

- No. 10. Awnless Brome Grass versus Western Rye Grass, by M. O. Malte, Ph.D. (revise).
- 14. Sweet Clover, by M. O. Malte, Ph.D. (revise).
- 55. Alfalfa Growing in Eastern Canada, by M. O. Malte, Ph.D.
- 57. Pitting Roots, by F. S. Browne, B.S.A.
- 58. Mangel Seed Growing, by F. S. Browne, B.S.A.

DIVISION OF ILLUSTRATION STATIONS.

In April, 1915, farms for illustration purposes were selected and work started at the following places:—

*In Saskatchewan.*—Assiniboia, Cabri, Herbert, Kindersley, Maple Creek, Pambrum, Prelate and Shaunavon.

*In Alberta.*—Bow Island, Carmangay, Empress, Foremost, Grassy Lake, Jenner, Macleod, Magrath, Manyberries, Medicine Hat, Milk River, Pincher Creek and Whitla.

In July additional Stations were selected at the following places, work to commence in 1916:—

*In Saskatchewan.*—Moosejaw, Weyburn, Radville, Biggar and Lloydminster.

*In Alberta.*—Munson and High River.

It was also decided to establish Illustration Stations in the province of Quebec, and during the months of September and October selections were made at the following places, work to commence in 1916:—

Nominougue, Aubrey, St. Julie de Vercheres, Drummondville, Stanbridge East, Rimouski, St. Gedeon, New Carlisle and Lac a la Tortue.

The work of the Division of Illustration Stations has been carried on with the following objects in view:—

To put into operation under the supervision of the division, on farms owned and operated by farmers:—

(a) Methods of cultivation and crop rotations which have been found to give the best results on the Dominion Experimental Farms and Stations.

(b) To grow the grain, grasses and other crops most suitable to each particular soil and locality and at a minimum cost.

During the past year the following rotations were started at the various Illustration Stations, 45 acres being selected on each farm for the work.

ROTATIONS.

*One-Year Rotation.*

Wheat continuously.

*Two-Year Rotation.*

Summer-fallow

Wheat

Wheat alternately

Summer-fallow alternately.

*Two-Year Rotation.*

Corn	Wheat alternately
Wheat	Corn alternately.

*Three-Year Rotation.*

Summer-fallow	Wheat	Oats
Wheat	Oats	Summer-fallow
Oats	Summer-fallow	Wheat.

## FODDER CROPS.

*Alfalfa*.—On a number of the Illustration Stations, alfalfa was grown for the following purposes:—

- (a) To produce the heaviest crop at a minimum cost.
- (b) Growing it in rows, two feet apart and growing it broadcast.
- (c) To produce a hardy strain of alfalfa seed.
- (d) To ascertain the amount of fertility added or taken from the soil.

*Western rye grass*.—Western rye grass was also sown, chiefly for fodder, on each of the Illustration Stations, and it, as well as alfalfa, made a very strong growth during the whole season.

*Corn*.—As mixed-farming is being encouraged, the growing of fodder crops will be necessary, hence varieties of corn considered suitable to the several districts are being grown. It is also felt that such a crop could be grown profitably and at the same time the soil cultivated sufficiently so as to eradicate weeds, conserve moisture, and minimize summer-fallowing. To illustrate this corn and wheat were grown alternately

## MEETINGS.

During the year seventeen meetings were held in Ontario, Quebec, Alberta, and Saskatchewan. The meetings in Alberta and Saskatchewan were held in connection with the illustration work, the work being fully described by Mr. John Fixter; also several addresses were given by Mr. J. F. Irwin, Assistant to the Supervisor for the Western Provinces, Mr. W. H. Fairfield, Superintendent of Experimental Station at Lethbridge, Alta., and Mr. M. J. Tinline, Acting Superintendent of Experimental Station at Scott, Sask. Many inquiries were made by those in attendance, and much interest taken in the work, particularly in the different rotations and methods of cultivation.

Mr. J. F. Irwin gave interesting addresses on "The Value of Selection" and the "Cleaning of Seed Grain." He laid particular stress on the advisability of sowing the variety of grain suitable to the soil and conditions of the district. Mr. Irwin also gave statistics showing the marked difference in yields in favour of large plump seed, compared with the medium plump seed, also unclean seed.

Mr. W. H. Fairfield took part in the meetings held in Alberta and gave results of experiments in summer-fallowing. From experience Mr. Fairfield found ploughing on an average of 8 inches deep to have given the best results, also working the summer-fallow as early in the season as possible.

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Mr. M. J. Tinline gave results of experiments in "Crop Rotation," "Soil Cultivation," and "Seed Selection." Much interest was taken in the discussions following the addresses.

The results of 1915 were most encouraging, as on the whole heavy crops and a good quality of grain were produced, thus placing at the disposal of the farmers a supply of good seed at reasonable prices. This was one of the main objects of the illustration work.

The growing crops were a source of much interest to the neighbourhoods surrounding the different Illustration Stations. Many inquiries were received regarding the methods of cultivation and the varieties of seed sown, which goes to show that farmers are gradually realizing the necessity of more thorough methods in cultivation and the value of sowing the best seed.

## DIVISION OF EXTENSION AND PUBLICITY.

Early in the spring of 1915 the Division of Extension and Publicity was formed under the Dominion Experimental Farms Branch, to continue and develop the publicity work begun and carried out during 1914 under the supervision of the Director of the Dominion Experimental Farms.

The excellent results which followed the placing of a Dominion Experimental Farms' Exhibit at some of the principal exhibitions held during 1914 confirmed past experience as to the educational value of carefully selected exhibits, and when planning the work for this year arrangements were made to attend 160 exhibitions and fairs in Canada; including a large number of the smaller fairs, for the benefit of the many thousands of farmers who seldom have an opportunity of visiting the larger exhibitions. Although for various reasons some of the exhibitions and fairs were cancelled by their respective managements, a Dominion Experimental Farms' Exhibit was shown at 145 places throughout the Dominion, beginning with the summer fairs in the Prairie Provinces about the middle of June and continuing until the close of the exhibition season towards the end of October.

By means of circular letters, correspondence with individuals, and attractive educational exhibits, wide publicity has this year been given to the Dominion Experimental Farms system, and attention has been specially directed to the locations of the branch Farms and Stations in every province with the object of having the farmers apply to those branch institutions nearest to them when seeking information or advice concerning their farm operations.

As a direct result of the work of this division, during 1915 applications were received from 54,870 persons who desired to have their names entered on the mailing list for the Farms' publications. There was also an increase very considerably above the normal in the number of letters from farmers asking for information on agricultural matters, the branch Farms and Stations, as well as the Central Farm, having been called upon to a greater extent than heretofore for practical advice on all lines of farm activity. In 1914 the Central Farm received 84,334 letters, an increase of forty-five over the previous year. During the past year 128,597 communications from all parts of the Dominion were received at the Central Farm. This

increase of more than 44,000 was made up largely of inquiries from farmers who through the publicity work of the past year had learned that they were free to apply to the Dominion Experimental Farms' staff of specially trained men for advice and suggestions or for information regarding the work of the Experimental Farms and Stations.

There are yet in Canada many thousands of people on the land who have never heard of these Experimental Farms. Every effort will be made through the various channels of publicity to reach these people, and to keep them informed of the results of investigations and experiments concerning which they may be more particularly interested.

#### POULTRY DIVISION.

##### THE WORK IN GENERAL.

The work of the Poultry Division this year has been one of development rather than of extension, though a certain number of new experiments have been undertaken.

It has been the aim to complete the equipment of the branch Farms that have been in operation, and with two or three exceptions these eleven farms are now capable of housing the 300 laying hens that are kept at each Farm, and of conducting the operations necessary on the poultry plant.

A start was made this year on two more farms—Sidney, B.C., and Ste Anne de la Pocatière, Que.

##### THE EXPERIMENTAL WORK.

While most of the experiments already under way in the division have been continued, considerable new work of an investigational nature has also been started. Among the new experiments might be mentioned: Cost of rearing different breeds, crossing in both hens and geese for table purposes, limited vs. farm range for growing turkeys, testing for brooding purposes, individual hovers, stove brooders and pipe brooders, the feeding of pituitary substances to increase egg production, etc.

##### THE BREEDING STOCK.

At the Central plant, Ottawa, the breeding stock of Rocks, Leghorns, and Wyandottes has been increased so that larger numbers of the varieties in which the experimental work is being conducted will be on hand. A number of other breeds are represented, but by only single pens. These are kept to illustrate the various popular breeds, and for crossing purposes.

In ducks there are three or four of the best egg and table breeds that are used to experiment on the production of eggs and meat. Several varieties of geese are experimented with for table purposes, and the crossing of the wild and domestic is being tested to better, if possible, the table qualities.

During the year turkeys were reared in semi-confinement. The results were very satisfactory. Over 40 per cent of those hatched were reared to maturity, and the average dressed weight of a number killed when 7 months old was over 16 pounds, one weighing as high as 19 pounds 2 ounces.

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## THE BUILDINGS AT THE CENTRAL PLANT.

Four permanent buildings have been erected during the year. A water fowl house, on the duck plant, a commercial laying house for 100 hens, and two farmer's poultry houses holding 100 hens each. These latter two houses are similar to the farmer's poultry houses that have been erected on the branch Farms, and which have proved quite satisfactory.

## BRANCH FARMS.

Work has been started on two more branch Farms, Ste. Anne de la Pocatière, Que., and Sidney, C.B. At Ste. Anne an administration building, one farmer's poultry house, and several colony houses were built, 100 Wyandotte pullets installed, and hatching and rearing will be conducted there this spring. At Sidney an administration building, a brooder house, and several colony houses were put up during the fall and winter. No hatching will be done there this spring, but day-old chicks purchased and reared.

## EQUIPMENT COMPLETED.

The buildings and equipment have been completed at most of the Farms that have prior to this year kept poultry. At Agassiz, B.C., an administration building was constructed, a permanent poultry house at Indian Head, Sask., an administration building at Brandon, Man. At Cap Rouge, Que., one farmer's poultry house and a pipe brooder house have been erected, and at Charlottetown an administration building and one farmer's poultry house were added to the plant.

## TOBACCO DIVISION.

For tobacco growing, the season of 1915 was one of the most unfavourable in many years. Speaking generally, the weather was too cool, and frequent heavy cold rains kept the tobacco plantations from drying off, thereby inviting attacks from plant diseases.

In Ontario, as in the United States, "Root Rot" (*Thielavia basicola*) did considerable damage. This was especially noticeable on "White Burley" plantations which had already, for some years, shown signs of infection.

Fortunately, as far as Ontario was concerned, the yellow tobaccos of the Virginia type, kiln-dried, and grown generally on new and better drained land were almost free from "root rot" and, as a whole, gave a more abundant yield and of better quality than the preceding year. In some parts of southern Ontario these tobaccos are gradually taking the place of the "White Burleys," the growing of which is becoming more and more risky.

In Quebec, although the plantations were not attacked by root rot, the tobaccos suffered considerably from atmospheric conditions.

On the Station of St. Jacques l'Achigan and in the surrounding district the yields were below the average and except for the early varieties, the ripening was imperfect and the quality of the crop thereby lowered.

At the Farnham Station, of all the varieties grown in 1915, the "Big Ohio Sumatra" alone gave satisfactory yields.

This new variety of wrapper tobacco tried this year for the first time on a fairly large scale (two arpents) showed itself very resistant to those adverse conditions which so seriously affected the other tobaccos like the Comstock Spanish and Havana Seed Leaf, which had been considered as early, hardy, and perfectly acclimatized. They were, however, completely washed out, and gave leaves of remarkably dry tissue, without body or elasticity, but little suited to use as "binders." Naturally, the weight of crop of these "washed out" tobaccos was below the average.

The drying process was carried on with some difficulty owing to that danger of fermentation in the curing barn, to which such tobaccos are peculiarly liable.

The method of hot-air curing, tried at Farnham in 1914, was again used this year. It has been proved that, in a favourable year, one may obtain from an early crop of Virginia a certain proportion of yellow leaves. This proportion, however, will always be less than that obtained under similar conditions in southern Ontario. Moreover, the yield in weight is generally higher in Ontario than in Quebec. It should be added that, in Quebec, the season is shorter and tobaccos of a slow growth, and which should commence to yellow before harvesting, may not mature. Moreover the harvesting period (mid-September) has much colder nights than has southern Ontario, which makes temperature control difficult. Also, in Quebec there is always danger of frost after the end of August.

Definite results were obtained in the study of the use of charcoal heaters in curing White Burley. These permit of the reduction of the humidity in the curing barn and prevent the tobacco spoiling from too slow curing.

Experiments in the treating of tobaccos on the field were prevented by weather conditions.

Special attention was paid to attempts to produce a commercially satisfactory tobacco for a cigar filler. Several varieties of tobacco suitable for use as fillers can be easily grown in Quebec, and others in Ontario where they might be planted in those districts not specially devoted to White Burley or the yellow tobaccos.

Generally speaking, after fermentation in bulk, these tobaccos have proved to be much too heavy in texture, although their flavour was admitted to be good.

Inquiry was made as to the methods employed in southern Ohio in dealing with filler tobaccos of heavy texture, and these were applied to the varieties grown in Quebec. The resulting product was suited for use as a "filler," although there is yet room for improvement.

Some 3,250 samples of tobacco seed were sent out to growers during the winter.

## HEALTH OF ANIMALS BRANCH.

### CONTAGIOUS DISEASES DIVISION.

A great deal of anxiety has been experienced during the past year owing to the continued outbreaks of foot-and-mouth disease in the United States. It has been necessary to exercise the utmost vigilance and enforce suitable restrictions to protect our live-stock interests.

In view of the importance of facilitating the shipments of British and French remounts from the United States, and appreciating fully the possibility of intro-



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ducing infection by this means, special measures were taken to guard against this danger. A very large number of these horses have arrived in Canada during the past year and have been fed and rested under the supervision of my officers in special yards reserved for this purpose. The cars in which they have been conveyed have all been disinfected before loading, and as a further safeguard, hay and straw in these cars have been removed at the boundary line and burned. Foot baths have also been supplied when considered advisable for the disinfection of the horses' feet. It is very fortunate, indeed, that the prompt and energetic measures taken by my officers have so far prevented an epizootic in this country of one of the most serious contagious diseases of live stock. An outbreak of this disease would cost this country a vast sum of money to eradicate. It would result in an enormous wastage in live stock and would also cripple the live-stock industry for an unlimited period. It is therefore very gratifying to learn that the United States authorities are now confident that they have eradicated this troublesome disease, and I sincerely trust that they will not again experience another such outbreak.

I regret to say that it has also been necessary to prohibit the importation of cattle, sheep, and swine from the United Kingdom, owing to the existence of foot-and-mouth disease in that country. Fortunately, however, the outbreaks have not been extensive, and the British authorities have been able to deal with them expeditiously. I have quite recently received official information that the disease has now been eradicated, and I will, therefore, be prepared to consider issuing permits for these importations directly sufficient time has passed to confirm this statement.

The statistics for the year 1915-16, which will be found in the special report of the Veterinary Director General, indicate that the aggressive policy now pursued has resulted in the safe control of maladies which come under the operation of the Animal Contagious Diseases Act.

With the increased duties devolving upon my staff, due to the United States foot-and-mouth situation, there has been a very marked activity on the part of all my field and boundary officers. It is pleasing to find that these men have performed their work, even under very trying circumstances, with diligence and despatch.

I am very glad to report that it has not been necessary to destroy so many horses for glanders as during the previous year. This serious disease of horses, asses, and mules has given the department a great deal of trouble and anxiety during past years. It was very prevalent in Saskatchewan, and a special effort was made a few years ago to eradicate this malady in that province. Although this has not so far been possible, it is quite evident that the disease is now under full control, and there is reason to believe that in the near future glanders will not be more common in Saskatchewan than in any other part of the Dominion.

There were approximately two hundred and twenty-eight (228) horses slaughtered for this disease throughout Canada during the past year, one hundred and seventy-eight (178) of these being in the province of Saskatchewan.

Owing to the compensation policy followed by my department in controlling this malady, it has been necessary to exercise care and to enforce suitable regulations in connection with the importation of horse stock from outside my boundaries. Horses

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entering this country from the United States are either detained at our quarantine stations along the boundary, and tested there, or they are tested at points of entry by officers appointed by the United States Federal authorities, whose charts the inspectors of my department are authorized to accept. The detection of glandered horses from time to time at the boundary has fully justified these precautionary measures.

I have to report that the very insidious and troublesome malady dourine still exists in the provinces of Alberta and Saskatchewan, more particularly in Alberta.

The infection of this disease was introduced into Alberta many years ago, and although all possible measures have been taken to eradicate it, this has not so far been possible. The department has, however, been able to control it and to prevent the extension of the infected area. This work has required very close attention, and it has been necessary to inspect before shipment every horse from any part of the infected area in Alberta and Saskatchewan. Range conditions have made it most difficult to deal with this malady.

It is indeed very fortunate that the research laboratory at Lethbridge was established a number of years ago. Dr. Watson, the pathologist in charge, with the facilities provided was able to perfect a system of diagnosis by the complement fixation test. Prior to the use of this test it was necessary to hold horses in quarantine for years, as the disease frequently assumes a very chronic form. It is not uncommon in these cases to find no symptoms whatever of the disease, although the affected animals readily transmit infection.

It is now possible, by testing the blood serum, which must be carefully collected, to detect horses affected with this malady, which from physical examination are apparently in perfect health. Very many thousand samples of serum have been tested at the Lethbridge laboratory. It is gratifying to report that there has been a marked decrease in the number of horses destroyed for this disease during the past year.

Mange in cattle and horses is still to be found to a limited extent throughout the Dominion. The outbreaks, however, with the exception of those in the mange area in Alberta and Saskatchewan, have been very few in number and in limited areas. My officers have not experienced any undue trouble in controlling and eradicating this disease in any part of the Dominion except the mange area. There are, however, many difficulties to overcome in dealing with mange on the range. It is almost impossible to isolate effectively mangy animals, and the weather conditions also regulate to a large extent our dipping operations. It is not at all an uncommon occurrence to be unable to treat mangy cattle for weeks and sometimes months. It is not surprising, therefore, that my officers are still dealing with this disease in districts where such unfavourable conditions exist.

The Veterinary Director General's figures show, in spite of these difficulties, very favourable progress has been made in dealing with cattle mange. There has been a very marked decrease in the number of cattle found affected with this malady during the past year. The improvement is so obvious that I am considering the advisability of removing the mange restrictions from a portion of the mange area. This action is very desirable at any time it is justified. The mange area covers a

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large territory and requires careful and systematic riding of the range by a large staff of range riders, who work directly under the direction of Veterinary Inspectors. As soon as this area is materially reduced it will be possible to make much better progress.

I am glad to find that the majority of stockmen are only too willing to follow the instructions of my officers, and the improvement which has taken place is largely due to their hearty co-operation.

Horse mange is still found largely in Saskatchewan, and while there has been as large a number of horses found affected throughout the Dominion as in the previous year, this is largely due to an outbreak in a limited territory in Saskatchewan. Fortunately the infection has not been widespread, and in many parts of the Dominion the disease has not been detected for many years.

Sheep scab has not been dealt with in any province except Manitoba. The disease was found in this province a year ago, and although all possible steps were taken to ascertain the source of infection, this was not determined. As the parasites producing this disease are known to survive very long periods in debris and in crevices in buildings or fence posts, it is reasonable to presume that reinfection occurred by this means. A special effort is being made to eradicate this disease, so that this country can be declared free from it.

My officers have been called upon to deal with outbreaks of hog cholera in each province excepting New Brunswick and Prince Edward Island. The number of hogs slaughtered, however, has been very much smaller than for many years. The recent changes in our policy in dealing with this disease have not yet been in force for a sufficient length of time to obtain reliable statistics with regard to the economy in the slaughter of hogs in eradicating these outbreaks. I am of the opinion, however, that if the regulations governing the feeding of swine upon garbage or swill are effectively enforced the number of outbreaks of this disease will be considerably lessened.

The treatment with serum by my officers of apparently healthy contact hogs on infected premises has already resulted in a material saving to the hog owner. There have been very few fatalities among the serum-treated hogs and they have all been fattened for the block successfully, and upon slaughter a very large percentage found to be fit for food purposes. The hogs have consequently netted the owner much more than he would have received from the department if the animals had been slaughtered as contacts at the same time as the diseased ones. It is also interesting to find that the holding of these hogs under quarantine for periods ranging up to three months has not resulted in fresh outbreaks of the disease.

The greatest care has, of course, been exercised by the inspectors in dealing with these cases. The premises are very thoroughly disinfected directly the diseased hogs have been slaughtered. I am of the opinion, therefore, that the department is quite justified in anticipating far better results in the future, in dealing with this troublesome malady, under this progressive policy.

Rabies has fortunately not been detected in any part of the Dominion except the province of Ontario. In this province it has been limited to small areas. Quite recently an outbreak was reported near the United States boundary in the county of

Welland, and in view of the danger of transmitting this disease to the human race, it was thought advisable to enforce a muzzling order covering one of the townships in this county. This action has had very satisfactory results, and the outbreak was promptly controlled. Although my inspectors were unable to find any definite evidence with regard to the origin of this outbreak, it is quite possible that the infection was brought over from United States territory, as this disease is known to exist in localities adjacent to the international boundary.

Outbreaks of anthrax have occasionally been reported in the provinces of Quebec and Ontario. These outbreaks, however, with very few exceptions, have occurred on old infected premises. It is quite evident that the protective vaccination, which is systematically practised on infected premises, is responsible for the limited number of these cases.

Blackquarter in young cattle continues to account for a large number of fatalities throughout the Dominion. This disease does not come under the operation of the Animal Contagious Diseases Act. The Department does, however, manufacture blackleg vaccine at the biological laboratory in this city, which is supplied at cost price to stock owners, upon request.

The problem of the control of bovine tuberculosis is unquestionably a most serious one. This disease is well known to be widely distributed throughout all civilized countries, and, generally speaking, stock owners are not yet prepared to co-operate with official bodies in the enforcement of any radical measures for its suppression.

While I am most anxious to follow a modern progressive policy in dealing with this disease, I fully appreciate the futility of endeavouring to enforce measures which would not meet with the hearty support of our stockmen. I have, therefore, followed the customary practice in so far as the testing of cattle is concerned and the supplying of tuberculin manufactured at our biological laboratory free of charge to veterinarians. There has been an increased demand for departmental tuberculin, a little over five thousand doses having been sent to veterinary practitioners upon the request of stockmen. Three hundred and fifty-three of the cattle tested with this tuberculin reacted and were permanently ear-marked by my officers. The inspectors of my department have, however, only tested eight hundred and five (805), and ninety-three (93) of these reacted, although during the previous year nearly three thousand more official tests were made.

The lack of interest shown by the stockmen in this connection is quite apparent when it is considered that although the department has for many years been prepared to take charge of herds with a view to the eradication of tuberculosis, for which no charge is made, there are at the present time not more than thirty herds under its supervision. This is the more surprising in view of the fact that no compulsory measures are taken in dealing with these herds. The owner is quite at liberty to keep reactors, provided they are constantly isolated, but the department insists upon supervising whatever disposal the owner may decide to make of these animals.

In view of the great economic and sanitary significance of bovine tuberculosis to the live-stock industry of this country, the Veterinary Director General and myself have given this question very serious thought. I fully realized, owing to the

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fact that public sentiment is not favourable for the adoption of drastic legislation, that suitable control measures must be developed in a progressive way. As the owner's co-operation in this work is without doubt a very essential feature of this great task, it has been necessary to bear in mind the condition of public sentiment and information on this subject, when arriving at a decision for definite action. After thoroughly going into the whole matter with the Veterinary Director General it was finally decided in the year 1914 to recommend to Council the passing of an order providing assistance to municipalities for the eradication of tuberculosis in the dairy herds. I considered that such a measure would be beneficial to the public interests in many ways, especially as it is well known that this disease can be transmitted to the human race through the consumption of milk and meat from tuberculous animals. This order was passed in May, 1914, but so far my department has only had the opportunity of assisting one municipality. The city of Saskatoon, Sask., was the first official body to take advantage of this order. A request for assistance has quite recently been received from the city of Regina, and the Veterinary Director General is at present arranging for the first test of the cattle supplying milk to that city.

The order in question applies only to cities or towns having a population of not less than 5,000 persons. The department further requires the municipalities to respect certain conditions which are essential to satisfactory work in dealing with this troublesome disease. All reactors must be immediately separated from the healthy animals. The cattle are tested free of charge as frequently as necessary, and the department insists upon the immediate slaughter of all reactors which, in the opinion of the inspector, are distributing the germs of the disease through the milk, faeces, or sputum. This class of animals is an exceptionally dangerous source of infection, and the sooner they are destroyed the better for all concerned. Compensation is, however, paid to the owners at the rate of one-half the appraised value of the cow. This value is limited by the Act to \$150 for pure-breds and \$60 for grades. In view of the circumstances, however, this is a very liberal remuneration, especially so as in many cases lesions are localized, and it is possible to obtain a fair salvage from a good percentage of the carcasses. The salvage obtained from the carcasses of these animals is given to the owner in addition to compensation, provided the salvage and compensation together do not exceed the maximum value provided by the Act.

Reactors which are not in the opinion of the inspector suffering from a dangerous form of the disease can be either slaughtered immediately, prepared for the block, or kept on the premises, and the milk or cream which they produce pasteurized before being offered for sale.

The department only allows one-third the appraised value for all reactors which are slaughtered at the request of the owner. In these cases the salvage is much higher, and the owner, therefore, receives a very fair return for any of the animals which are destroyed.

In the city of Saskatoon there were tested under this order approximately 1,800 cattle for the first time and the percentage of reactors marked was a little over six. These results are very encouraging, and it is especially gratifying to know that the city authorities, and the dairymen, are well satisfied with the enforcement of the order.

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I was glad to learn from the Veterinary Director General that he has received a communication from the city clerk, advising him that the city of Saskatoon appreciated the work of his branch. It is, therefore, evident that this order is a practical one and can be enforced without undue irritation and annoyance. Its more general enforcement which is sure to follow directly municipal authorities realize its true benefits will, I am satisfied, pave the way for some splendid work in the eradication of this disease.

The system of inspection of all foxes entering Prince Edward Island was changed early in the year in so far as our regulations now require that all foxes entering the island must be quarantined at Charlottetown only. Previous to the inauguration of this system owners could take their foxes to Charlottetown, Summerside, or Georgetown for thirty days' quarantine. It was, however, found advisable to eliminate the latter two points. There have been forty-six foxes brought on to the island during the past year, all having passed through the quarantine at Charlottetown. During this period no evidence of disease has been detected.

The pathologists in the laboratories at Agassiz, B.C., and Lethbridge, Alta., have been busily engaged in investigating the causes of diseases in their respective provinces, while the biological laboratory staff here has been occupied with the manufacture of vaccines, the analyses of disinfectants, and the examination of numerous specimens for diagnostic purposes.

The necessary repairs have been made to our quarantine buildings situated along the international boundary, but no new structures have been erected during the past year. It may, however, be advisable to erect accommodation in the near future at a few points where at present buildings are rented.

A good deal of work has, however, been accomplished at the Quebec Quarantine Station in connection with building good roads. This is the most important quarantine station in this country, as the majority of the most valuable animals from overseas undergo detention there. The department has, therefore, provided suitable sanitary accommodation, and as there is always a possibility of serious diseases being introduced, it is essential that no pains are spared in making this station modern in every respect.

Many of my officers have left important positions to serve their country in the European struggle, and I am proud to be able to say that Dr. Evans, of the Biological Laboratory staff here, has been awarded the Military Cross. The response to the call for recruits was so great that it threatened to disorganize the service. Much as I appreciate this sign of loyalty among my officers, it was nevertheless necessary, in view of the importance of enforcing suitable regulations for the protection of our live stock, to discourage the enlistment of those whose positions in the army could be suitably filled by individuals outside the service.

#### MEAT AND CANNED FOODS DIVISION.

The increase in the work of this division, mentioned in my last report, has continued. This is due, no doubt, to the European war. The demands for meat foods were never so great as at the present time, in consequence of which the prices being paid to the producer are very attractive.

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After a careful survey of the whole situation, it appears to me that the demand will continue, and that prices, if they change at all, will be inclined to go up rather than down.

The high price of bacon in England has caused our exports of that product to increase 50 per cent. This has caused a corresponding increase in the work of inspection in establishments operating under the provisions of the Meat and Canned Foods Act, which has been carried on by our regular staff. While our officers have been called upon to perform this extra amount of work without remuneration, they have done so without complaint, and in this way, while not in uniform at the front, they have done "their bit." Their loyalty and faithfulness in this time of stress is very much appreciated.

The killings for the year are approximately as follows:—

Cattle . . . . .	538,000
Swine . . . . .	2,355,000
Sheep . . . . .	404,000
	<hr/>
Total . . . . .	3,297,000

The sanitary condition of the plants has been very fair in view of the volume of business. Much new equipment has been installed, and changes and alterations have been made with the object of better sanitation.

Many rulings have been made and decisions given in connection with the work, which have facilitated matters and prevented friction between our officers and the management of inspected establishments.

The prospects are that this branch will have another busy year, which will in all probability necessitate further appointments to the staff.

The fruit and vegetable canneries were not nearly so busy as in previous years, this being due, no doubt, to the surplus pack of the year previous. Sanitary conditions were well maintained, while the quality of the raw material and of the finished product were equal to those of former packs.

The condensed and evaporated milk factories were operated as usual, and maintained their previous good record for cleanliness and the manufacture of a high-class food product.

## FRUIT BRANCH.

In order to keep in touch with the widely separated fruit-growing interests of the Dominion, the commissioner spent a good deal of his time in visiting the different districts. During the summer he took an extended trip to the West, interviewing the wholesale and retail dealers of the Prairie Provinces as to their needs. At Calgary he attended a three days' convention called by the Board of Trade for the purpose of discussing methods of increasing consumption, the cost of production and the cost of fruit to the consumer. Representatives of the grain growers' associations of the three Prairie Provinces, of the retail associations, Boards of Trade and consumers' leagues of the surrounding towns, and of the British Columbia Fruit Growers' Association, together with Government and railway officials, made this an

important convention. In British Columbia, accompanied by our Chief Fruit Inspector Clarke, Mr. Johnson visited the leading growers and fruit associations of the various fruit-growing districts, and also inspected the basket and box manufacturing establishments of New Westminster. He also investigated the growing and marketing methods in Washington and Oregon and had an opportunity of studying some of the up-to-date systems which they employ so successfully in bringing their fruit before the commercial world. At San Francisco he saw Canadian fruit in competition with that of other countries, and was assured on all sides that there was no better collection anywhere than that displayed by this Dominion: in fact, so artistic and original was the display that it attracted the universal admiration of the visitors to the exposition. The deciduous fruit districts of California and the Kansas City and Chicago markets were also visited.

Later in the season the commissioner spent some time in New York state, which is the largest producing state in the Union, and which corresponds very closely to Ontario. While the commissioner found many excellent packs in New York state, yet he was convinced that the Inspection and Sale Act had done more for Canadian growers than was generally understood, as it caused a uniformity of pack which did not exist in the United States.

Numerous trips were also made to the commercial fruit districts of Ontario, Quebec, and Nova Scotia. Mr. Johnson was pleased to find that in almost every district the fruit trade declared its confidence in the fruit inspectors, and expressed appreciation of the help given in the standardization of the pack. He found that, owing to the inauguration of inspection at the point of shipment, a spirit of harmony existed between the inspectors and the growers which it was impossible to obtain under any other system.

#### THE FRUIT SEASON.

The apple season of 1915 will be remembered as one of low production and poor quality. These features were not in evidence until the latter part of the summer, when very heavy rains throughout the country superinduced the development of apple scab and other fungous diseases.

In the province of Ontario there was a very heavy blossom, but even in June there was no expectation of a large crop. Later in the season an almost incessant rainfall not only reduced the crop of apples actually produced but also rendered the quality of those remaining on the trees very poor indeed.

British Columbia produced a crop slightly above average, with the quality very much reduced by scab.

The Ontario peach crop was the largest ever produced. Grapes were reduced by mildew to about 65 per cent of a standard crop. Pears and plums were light.

#### FAULTS IN PACKING SMALL FRUITS.

In 1914, the fruit inspectors in the large city markets had found numerous violations of the Inspection and Sale Act; baskets of berries were often only three-quarters full and sometimes little more than half full; fruit was put into these pack-



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ages which was immature and utterly unfit for consumption; packages were overfaced in many instances. Complaints were made, at that time, by the consuming public and by the wholesale and retail trade.

With the opening of the small fruit season in June, 1915, it became obvious that immediate steps be taken to avoid a repetition of this condition, by impressing upon the growers of these fruits the necessity of improving their system of packing. Inspectors were therefore sent out to visit the growers during the packing season, and do what they could to improve conditions. They found that almost all the above faults were due to ignorance on the part of the growers, and after the latter had received a warning letter from Ottawa and instructions from the inspector, the situation immediately improved. In fact the improvement was so complete and rapid that the wholesale fruit trade freely admitted that the small fruit season of 1915 was one of the most successful they had experienced in many years.

## FRUIT CROP REPORTS.

These were published on the first day of each month, between June and October, inclusive, and were compiled from information received from fruit growers in all parts of the country. They dealt with every phase of the industry, but were chiefly devoted to the condition of the various fruits in the principal producing districts.

The success which had attended the publication in 1914, on a small scale, of telegraphic reports, warranted an extension of that work. Arrangements were made early in the year with prominent fruit growers, both in Canada and the United States, provincial officials, fruit inspectors, Canadian trade commissioners, and others, to send in telegrams and letters to reach Ottawa every Tuesday and Friday morning commencing August 17. These messages were summarized, printed, and distributed by mail the same day they were received, and were sent to about 1,200 fruit growers and distributors—in fact to anyone who expressed a desire to receive them. The information distributed in this way included the following:—

1. Crop conditions in producing districts.
2. Quantities and varieties of fruits ready for shipment.
3. Destination of shipment.
4. Wholesale prices in leading Canadian and British markets.
5. Condition of fruit at points of distribution.
6. Weather conditions.
7. Dates of steamship sailings.
8. Quantities of fruit in storage.
9. Advice to shippers, general information, etc.

The publication of these reports was continued until March 31, when sixty-eight had been sent out. The system has proved very successful and has met with the greatest support on the part of the fruit growers. There is no doubt that when the value of such information becomes better known there will be a large increase in our mailing list.

The Fruit Branch is very fortunate in having the assistance of the Department of Trade and Commerce, through whose trade commissioners we are enabled to keep in close touch with the British markets.

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In the autumn of 1915 the Department of Trade and Commerce created the office of Fruit Trade Commissioner for Great Britain, and appointed Mr. J. Forsyth Smith. Cables were sent direct to the Fruit Branch by Mr. Smith at frequent intervals after the beginning of the export fruit season, giving the sale price of all varieties of apples, and other information which could advantageously be embodied in the telegraphic reports.

The same system of crop reporting will be carried on next year, and a special effort made to give these reports more publicity and thereby widen their distribution. There are comparatively few fruit growers who know that such reports are published, and now that their usefulness is assured, efforts will be made to encourage a demand for them.

#### INSPECTION OF BASKET FACTORIES.

Complaints were made by the fruit growers during 1913 and 1914 regarding the poor quality and lack of uniformity in fruit packages manufactured in Ontario. It was suggested at the Fourth Conference of Fruit Growers in 1914 that steps should be taken to remedy the situation. An officer of the Fruit Branch therefore visited, in March and in April, 1915, all the factories operating in Ontario. Much improvement resulted, and as the season developed it was apparent that the strength and quality of the packages were better than in any previous season.

The main faults have been: (1) lack of uniformity in the size of veneer used at different factories, (2) inadequate nailing, and (3) the use of poor veneer. These faults were all corrected and further inspection will insure the purchase of fruit packages suitable to requirements.

#### INSPECTION WORK.

Previous to the season of 1914-15, practically all the examinations under the Inspection and Sale Act, Part IX, were made at the export and distributing points. This system has been most satisfactory as long as the original purpose of the Act (inspection of fruit for export) remained the more important work of our inspectors. With the widening of markets in the West, however, and the growth of a demand for inspection of fruit intended for domestic sale, some change in the method of inspection was necessary, as it was not practicable to enlarge our staff sufficiently to cover the innumerable consuming points. For many years the growers had been agitating for "inspection at point of shipment." They claimed that if their fruit was the only practicable method of protecting both the grower and the consumer rather than after it had travelled hundreds or thousands of miles and was beyond their control. After careful consideration the Fruit Commissioner decided that this was the only practicable method of protecting both the grower and the consumer and, as noted in my report of last year, inspection at shipping point was given a trial in Nova Scotia during the season 1914-15. Its success there led to an extension this year covering Ontario and British Columbia. In these provinces an increase in the staff had to be made to do the work, and ten additional temporary inspectors were employed for a period of some two months.

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Inspection at point of shipment has proved so satisfactory that it will be further extended during the coming season. Under the new system, the greater part of the inspection work is done in the orchards and packing houses, and thus our inspectors combine instruction and inspection. During the past season they have been able to assist the packers and shippers in all matters pertaining to the grading, packing, and loading of fruit. Notwithstanding the fact that the crop last year was short and generally of poor quality, making the temptation to pack and grade dishonestly greater than usual, the bulk of the fruit which appeared upon the market was packed and graded in accordance with the provisions of the law, and this I consider may be fairly attributed to the presence of our inspectors in the shipping district.

During the past season the appointment of several of the inspectors in southern Ontario was authorized somewhat earlier than usual in order that special attention might be given to the packing of early fruits. The effect of their work and the result of the twenty-one convictions secured in connection with the overfacing of strawberries, currants, peaches, etc., will doubtless be the adoption of a higher standard in the packing of these fruits.

While the permanent staff of inspectors remained the same as last year, it was necessary as noted above, to appoint some additional temporary inspectors, who were employed for a period of from two to two and a half months in the producing districts.

PROSECUTIONS.

The convictions secured under Part IX of the Inspection and Sale Act were 103 as compared with 78 during 1914-15. While the number is greater this season than last, this does not necessarily mean a retrograde step in the packing and grading of our fruit. There were ten more convictions this year than last with respect to imported fruit and, in addition, twenty-one of the above convictions were in connection with basket fruits, which this season have received more attention from our inspectors than ever before. The prosecutions were as follows:—

Imported fruit. . . . .	25
British Columbia . . . . .	2
Ontario . . . . .	48
Quebec . . . . .	16
Nova Scotia. . . . .	10
Total. . . . .	103

## INSPECTION STATISTICS.

The following table gives comparative statements of the number of lots inspected and the number of packages inspected for the season 1908-9—1915-16 inclusive:—

Variety.		Number of lots inspected.	Number of packages in lots inspected.	Number of packages inspected.
1908-9.				
Apples.....	brls.	9,940	682,657	42,223
".....	boxes.	248	100,792	2,701
Pears.....	"	88	54,150	7,924
Peaches.....	"	91	140,976	16,005
Plums.....	baskets.	54	16,505	1,474
Tomatoes.....	"	53	11,381	779
Small Fruits.....	quarts.	863	1,184,651	154,874
Total.....				225,980
1909-10.				
Apples.....	brls.	7,736	859,572	63,232
".....	boxes.	902	157,939	7,363
Pears.....	"	248	31,459	2,733
Peaches.....	"	410	60,248	3,817
Plums.....	baskets.	264	62,883	4,257
Tomatoes.....	"	149	50,043	3,241
Apricots.....	boxes.	11	12,495	481
Small fruits.....	quarts.	2,491	2,310,264	240,751
Total.....				325,880
1910-11.				
Apples.....	brls.	4,527	360,768	26,890
".....	boxes.	1,347	234,182	9,829
".....	baskets.	171	17,551	10,393
Pears.....	boxes.	371	40,681	2,750
Peaches.....	"	11	2,269	36
".....	baskets.	383	70,564	5,932
Tomatoes.....	"	56	6,570	601
Plums.....	"	189	50,575	5,144
Small fruits.....	quarts.	1,502	568,510	155,048
Total.....				216,623
1911-12.				
Apples.....	brls.	13,548	1,085,300	67,706
".....	boxes.	1,235	162,249	10,178
Pears.....	"	389	32,252	2,655
Peaches.....	"	38	3,487	268
".....	baskets.	365	34,606	2,864
Plums.....	"	336	88,894	7,554
Tomatoes.....	"	66	48,530	2,012
Small fruits.....	quarts.	2,120	2,729,143	298,591
Total.....				391,828
1912-13.				
Apples.....	brls.	18,457	1,321,440	80,102
".....	boxes.	2,101	204,971	33,578
".....	baskets.	119	16,249	2,719
Crab apples.....	boxes.	62	12,186	695
".....	baskets.	17	1,395	660
Pears.....	boxes.	272	36,356	2,202
Peaches.....	"	65	25,592	1,557
".....	baskets.	121	18,837	2,139
Plums.....	"	186	67,751	7,254
Tomatoes.....	"	264	39,174	9,940
Small fruits.....	quarts.	1,187	2,264,559	172,945
Total.....				310,791

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Variety.		Number of lots inspected.	Number of packages in lots inspected.	Number of packages inspected.
1913-14.				
Apples.....	brls.	11,725	799,510	59,643
".....	boxes.	2,631	341,679	29,879
".....	baskets.	105	11,908	1,219
Crab apples.....	boxes.	192	13,250	1,462
Pears.....	"	977	48,274	8,559
Peaches.....	"	806	35,494	12,657
".....	baskets.	353	60,771	7,584
Plums.....	"	679	133,159	15,200
Tomatoes.....	"	173	59,707	8,305
Small fruits.....	quarts.	736	1,128,907	95,841
Total.....				239,329
1914-15.				
Apples.....	brls.	8,926	765,445	59,602
".....	boxes.	2,769	457,055	36,118
".....	baskets.	191	29,476	3,994
Crab apples.....	boxes.	38	2,443	951
Pears.....	"	894	91,121	9,760
Peaches.....	"	735	183,952	10,035
".....	baskets.	147	17,797	2,422
Plums.....	"	643	180,154	12,294
Tomatoes.....	"	305	103,742	12,171
Small fruits.....	quarts.	1,162	1,529,598	151,559
Grapes.....	baskets.	244	308,728	22,344
Total.....				321,300
1915-16.				
Apples.....	brls.	8,882	710,858	60,248
".....	boxes.	4,297	758,337	46,791
".....	baskets.	204	14,319	1,797
Pears.....	boxes.	1,062	121,414	8,816
Peaches.....	"	1,022	270,508	12,575
".....	baskets.	838	106,569	10,796
Plums.....	"	998	482,416	22,231
Tomatoes.....	"	637	200,343	7,926
Small fruits.....	quarts.	1,724	2,670,984	275,234
Grapes.....	baskets.	260	382,332	11,395
Total.....				457,809

PUBLICITY.

During the past season this branch undertook a special campaign with the object of increasing the home consumption of Canadian fruit. It was obvious that, on account of the conditions existing in Great Britain and Europe there would be a restricted demand in those countries for fruit. More than that, there was also certain to be difficulty in securing vessel space for exporting apples, owing to the fact that ships were being commandeered at short notice by the British Government. These circumstances were sufficient to emphasize the necessity of increasing consumption in this country.

It was thought, too, that a certain degree of publicity was needed in order to educate the public as to: (1) the uses of certain kinds of fruits, (2) the names of varieties, (3) the period during which certain apples were in the best condition, (4) dates of shipment, and (5) methods of preserving. These features had never been brought to public attention, and consequently several unnecessary situations

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had arisen in former years. Householders had been uncertain as to the proper date upon which to purchase their stock for preserving, and had often delayed until some varieties were either off the market or too high in price. It was also noticeable that the more popular apples, such as the Northern Spy, were so much in demand that the sale of other varieties, which were quite as good in quality, was very limited.

By judicious advertising, these and other situations were dealt with, and at the same time the merits of Canadian fruit were sufficiently made known to increase consumption and also to sustain a sale at very satisfactory prices.

#### APPLE PRODUCTION IN ONTARIO IN 1915.

Owing to the number of inquiries which we receive from time to time regarding the quantity of apples produced in Ontario, a special effort was made this year to secure that information. The freight departments of the various railways operating in Ontario were kind enough to give their assistance, and in this way we were able to secure from all their stations the quantity of apples shipped. In addition to this it was necessary, in order to arrive at an estimate of the total quantity marketed, to secure from the evaporators and canning factories figures showing the tonnage used by them. The information we have gathered together in this way is, we think, as accurate as can be obtained by any means. Next year we propose to secure this information monthly during the shipping season so that the railways and others concerned will have less difficulty in compiling the necessary figures. Similar information will also be received from the other fruit-growing provinces.

Last season the production of apples in Ontario, based on the quantities carried by the railroads of Ontario, and used by the evaporators and canning factories, amounted to 6,286 cars. This does not include any fruit consumed in the local markets of producing districts.

It is only fair to add that the Ontario apple crop in 1915 was not, in our opinion, more than 40 per cent of an average crop.

#### CANADIAN FRUIT AT EXPOSITION.

In connection with the Panama Exposition held at San Francisco during 1915, Canada sent 2,000 boxes of apples. This fruit was collected from all provinces of the Dominion early in the season of 1914, carefully packed and shipped in insulated refrigerator cars to prevent any danger of damage by frost.

During the course of the exposition many reports were received regarding the quality and appearance of the Canadian fruit exhibit, and the consensus of these was that it surpassed in every way all the other exhibits.

Late in the season of 1915 the fruit commissioner received instructions to be prepared to ship one thousand additional boxes of apples to San Diego. Owing to the fact that practically all of the better grades had already been marketed, it was impossible to secure the required quantity in Ontario. The province of British Columbia furnished 450 boxes, and the balance of the exhibit at San Francisco was re-packed to furnish the remainder. The fruit arrived at San Diego in excellent condition, and was most satisfactory.

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## MEETINGS, ETC.

In addition to their regular inspection duties, the fruit inspectors and other members of the staff assisted at numerous meetings, and in many cases acted as judges of fruit at local fairs and exhibitions. P. J. Carey, the apple-packing expert of the department, continues to do good work in connection with demonstrations.

In order to secure what we could consider reliable information as to the production and marketing problems in the West, Mr. A. H. Flack, Chief Fruit Inspector for the Prairie Provinces, was instructed to spend some time in British Columbia and Washington during the harvesting and marketing season, for the purpose of going into the details of production and marketing. In this he was able to secure a great deal of most valuable information which has given us an insight into the requirements of those markets and into the up-to-date methods employed by the most progressive fruit growers of the Pacific Coast.

## ENTOMOLOGICAL BRANCH.

The work of this branch has comprised the administration of the Insects and Pests Regulations of the Destructive Insect and Pest Act; the suppression of the brown-tail moth in Nova Scotia and New Brunswick and the introduction of its parasitic and predaceous insect enemies and those of the gipsy moth into Eastern Canada; the conducting of investigations upon insects affecting farm, garden, and orchard crops, forest and shade trees, domestic and other animals, household and public health, mills and stored products, and the answering of inquiries and giving of advice concerning the control of such insects; the naming of collections of insects for institutions and individuals; and the administration of an appropriation of the Department of Indian Affairs for the care of the orchards on the Indian reservations in British Columbia. In addition the Dominion Entomologist has been called upon to advise on questions relating to the protection of birds and the conservation of our wild life generally, in the interests of which he has been active.

Under the Destructive Insect and Pest Act, nursery stock originating in countries in which the San José Scale occurs was fumigated at our various fumigation stations. During the year an arrangement was concluded with the Government of the province of Nova Scotia whereby they undertook to fumigate, under the supervision of my officer, foreign nursery stock, and accordingly, Truro, N.S., and Digby, N.S., were declared ports of entry for such nursery stock by Order in Council on August 18, 1915. During the statutory importation season of 1914-15, 2,358,352 imported trees and plants originating in Europe, Japan, and the New England States, were inspected for gipsy and brown-tail moths and other foreign insect pests to which they are subject. Owing to the disturbed conditions in Europe, particularly in Belgium and France from which we are accustomed to import the larger portion of our nursery and florists' stock, the number of plants imported during the season 1914-15 was about half of the number imported during the previous season.

The brown-tail moth situation in Nova Scotia and New Brunswick is in a satisfactory condition. In spite of an increase of the infested area, owing to the

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spread of the adult insects from the New England States, the intensity of the infestation has been decreased in both provinces by the careful work of the officers in charge. The careful scouting carried out each winter has prevented the establishment of the insect in New Brunswick and any serious increase of infestation in Nova Scotia. I am pleased to take this opportunity of acknowledging the continued co-operation of the Provincial Governments, who employ half the number of men engaged on this work under the direction of my officers.

Fortunately, the gipsy moth has not yet reached Canada, although in its north-easterly spread in Maine it has now arrived within fifty miles of the international boundary, and its arrival in New Brunswick is merely a matter of time.

In order to be prepared for the arrival of the gipsy moth and to assist in establishing a natural control of the brown-tail moth, we have continued the importation of the parasitic and predaceous insect enemies of these pests from the New England States, which work has been possible through the co-operation of the United States Department of Agriculture. The insects were collected in Massachusetts and the parasites were reared by my officers at the gipsy moth laboratory, Melrose Highlands, Mass., and shipped to our entomological laboratory at Fredericton, N.B., from which point they were taken and placed at strategical points in the provinces of Nova Scotia, New Brunswick and Quebec. Up to date over 72,000 parasites and 3,400 predaceous beetles have been imported and liberated.

The success of the work of the trained field officers in charge of the entomological field laboratories in different parts of the Dominion, and the demand on the part of the agriculturists for further assistance in controlling insect pests and outbreaks, rendered it necessary to place a further number of these laboratories on a permanent basis by erecting permanent buildings to take the place of the small temporary buildings which had hitherto served as headquarters for the work. Entomological laboratories providing adequate accommodation for the officers and the work that they are carrying on were erected during 1915 at the following places:—Annapolis Royal, N.S., on a site provided by the town of Annapolis Royal; Fredericton, N.B., on a site provided by the University of New Brunswick; Treesbank, Man., on a site provided by Mr. Percy Criddle; and Lethbridge, Alta., on the Experimental Farm. The co-operation of the authorities and gentleman mentioned is greatly appreciated.

The following is a list of the entomological field laboratories showing the investigations that are being carried on by my officers in charge:—

*Annapolis Royal, N.S.*—Investigations on the brown-tail moth, the introduction and breeding of its parasites and control work. The control of the budmoth and green fruit-worms of apple, including experimental work under orchard conditions in the Annapolis Valley. Comparative tests of insecticides. The conducting of an energetic campaign for more spraying.

*Fredericton, N.B.*—Control work and investigations on the brown-tail moth and the introduction and establishment of the parasitic and predaceous enemies of this insect and the gipsy moth. An investigation on the means by which the natural control of the tent caterpillar, fall webworm, and spruce budworm is effected.



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*Hemmingford, Que.*—The control of apple insects and orchard spraying. Experiments on the control of locusts by bacterial disease.

*Vineland Station, Ont.*—A detailed study of aphids affecting apple. The continuation of the apple maggot investigation. The control of insects affecting bush fruits, and greenhouse and mill-infesting insects.

*Strathroy, Ont.*—Investigation of white grubs, and insects affecting shade trees and wood-lots.

*Treesbank, Man.*—The investigation of white grubs and of insects affecting cereal crops, particularly the Osecinidæ or grass stem-maggots.

*Lethbridge, Alta.*—The study of the army cutworm and its control with demonstration work in the field. Investigation of the parasites affecting cutworms. Observations on Nematodes.

*Agassiz, B.C.*—Biological studies of the root maggots and their control. Continuation of the work on the wheat midge and on fruit insects. Discovery of the pear thrips and black currant bud mite.

*Vancouver, B.C.*—The investigation of the insects affecting coniferous trees in Stanley park. A study of *Chermes* and their alternate hosts; bark beetles and other forest insects.

The progress that has been made in our investigations on insects affecting fruit has been very gratifying, and productive of practical results of great value to fruit-growers.

In Eastern Canada locusts were very abundant and injurious. The timely publication of Entomological Circular No. 5, giving the results of our successful experiments on the control of these insects, was the means of preventing serious losses in many cases where the remedies were applied. In a number of instances the farmers co-operated and distributed the poisoned bait over large areas of infested land with complete success. Serious outbreaks of cutworms occurred throughout Canada in 1915, the provinces of Manitoba and Saskatchewan being most severely infested; hundreds of acres of wheat and oats were destroyed, and garden vegetables were freely attacked. In southern Alberta an extensive outbreak of the army cutworm occurred, covering an area of about 3,000 square miles. Our resident officer immediately took the matter in hand, discovered means of controlling the spread of these insects, and by means of field demonstrations and press notices was able to prevent widespread damage. In Ontario and Manitoba satisfactory progress was made in the investigation that we are conducting on white grubs. In Manitoba we have commenced a study of the stem-maggot flies (Osecinidæ) which affect grasses and cereals. An account has been prepared for publication of the investigations that have been carried on in Ontario and British Columbia for a number of years on the control of root maggots. Much work has also been accomplished in the study of miscellaneous insects affecting field crops.

The work on insects affecting forest and shade trees has been advanced, and a large amount of data of practical value have been secured. In British Columbia the

investigations of the preceding years were continued, particularly in Stanley park, Vancouver, and advice based on these studies on the control of the insects responsible for the damage in the latter area was given to the Board of Park Commissioners. A serious type of injury in cedars on the Pacific coast was found and is being studied. On accounts of reports of dying timber in the Lesser Slave Lake region, an investigation into the causes of this injury was made by my officers and the nature and habits of the destructive species of bark-beetles and wood borers were studied with very profitable results. Forest insects were also studied in Jasper park and certain of the other national parks.

During the year further progress was made in an investigation of insects affecting greenhouses and florists' stock.

Insects affecting public health, household, and live-stock have also been studied. The educational campaign against the house-fly has been continued, and further experiments on its control have been carried out. A catalogue of the ticks of Canada has been prepared and published in the *Transactions of the Royal Society of Canada*.

An investigation on insects infesting elevators, flour mills, granaries and stored products has been commenced during the year, and mills in Montreal, Toronto, Winnipeg, and Calgary have been visited. Few people realize the enormous annual cost entailed in taking steps to control this class of insects in Canada where large amounts of grain are dealt with.

The following publications have been issued during the year:—

Cutworms and their Control. By Arthur Gibson. Entomological Bulletin No. 10; 31 pp., 20 figs. 1915.

The Hessian-Fly and the Western Wheat-stem Sawfly in Manitoba, Saskatchewan, and Alberta. By N. Criddle. Entomological Bulletin No. 11; 23 pp., 4 figs. 1915.

The Control of Locusts in Eastern Canada. By Arthur Gibson. Entomological Circular No. 5, 8 pp., 6 figs. 1915.

The Control of Cutworms in the Prairie Provinces. By E. H. Strickland. Entomological Circular No. 6, 8 pp., 5 figs. 1916.

Results from Spraying in Nova Scotia. By G. E. Sanders and W. H. Brittain. Entomological Circular No. 7, 11 pp. 1916.

Report of the Dominion Entomologist for the year ending March 31, 1915, 40 pp., 4 figs., 1 map. 1915.

In addition, the officers of the branch have contributed papers embodying the more technical results of their work to *The Canadian Entomologist* and other scientific journals. Articles have also been contributed each month to *The Agricultural Gazette of Canada*, and in a number of cases reprints of these articles were issued.

Considerable additions have been made during the year to the National Collection of insects, and we are grateful to Dr. J. M. Aldrich, and other specialists in various orders, for their assistance in the classification and determination of our collections.

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## BRANCH OF THE CANADIAN COMMISSIONER OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE.

May, 1915, when Italy joined the Allies, was a critical moment for the institute. The tension in Rome became great, and the difficulties of carrying on the work of the institute increased. The delegates for Austria and Hungary left Rome, and the members of the staff who belonged to these countries and to Germany also found it advisable to leave. Up to August, forty-seven members of the permanent staff, which ordinarily consisted of one hundred, had to leave either because they had been summoned to serve in a military capacity or belonged to countries at war with Italy. In consequence of the closing of the Italian frontiers to the mails coming from Germany and Austria-Hungary, an arrangement was made with the institute's official correspondent for Switzerland, Dr. Laur, by means of which the periodical publications intended for the institute were addressed to him, and abstracts from them made under his direction and forwarded to Rome for publication.

The delegate for Germany on the Permanent Committee, while unwilling to acquiesce in the arrangement proposed by the Italian Government for his uninterrupted collaboration on the Permanent Committee as a resident of Rome, continued after his return to Germany to take an active interest in securing, as far as possible, the regular publication of the German edition of the two large monthly bulletins. The translation and printing of the German edition have been done in Germany under his direction, with the assistance of German employees of the institute returned to that country. Hungary continued its representation on the Permanent Committee through the delegate for Sweden, Baron de Bildt.

Notwithstanding the depletion of the staff at Rome, the regular work of the institute has been continuously carried on with commendable punctuality, very largely due to the ability, tact, and untiring efforts of the president, Marchese Cappelli, and the members of the Permanent Committee, in collaboration with him and with the institute staff. The difficulties of the task were increased because of the inclusion among the absentees of: two chiefs of service, viz., Dr. Hermes, of Germany, Podmanizky, of Hungary; the librarian, Secretary-General Professor Lorenzoni; and twenty-three of the forty-seven editors. Professor Lorenzoni, a native of the Trentino, Austria, who elected to serve in the Italian armies, has again returned to his post. Employees at the various battle fronts were to be allowed during their enforced absence a maximum of six months' pay, and to be permitted, in so far as possible, to resume their duties at the institute on the conclusion of peace.

The financial situation continues sound, notwithstanding some fears at first felt owing to an accumulation of arrears from the non-payment of contributions by certain countries. A considerable proportion of the arrears has recently been paid, the expenses have been notably reduced, and a reserve accumulated which, at the close of 1915, was estimated approximately at \$150,000, on which it will be possible to draw in case of need.

At the end of December, publication of the "Bibliographic Bulletin" was discontinued, owing chiefly to a considerable decrease in the number of books received

and the irregularity of their transmission through the mails. The other three monthly bulletins have been issued with commendable regularity.

New features have been introduced into the "International Year Book of Agricultural Statistics," issued in August, 1915, for the years 1913 and 1914. Area, production and trade in cereals, together with the numbers of live stock, are dealt with in five and ten-year periods. The tables of imports and exports are given by country of origin and country of destination, for all cereals and for cotton, details which previously had been furnished for wheat only. A new chapter gives cash prices, on a certain day of the week, of the principal grades of cereals on the most important world's markets for the years 1913 and 1914. There are added, moreover, tables on the production, international commerce, and prices of fertilizers and chemical products useful to agriculture.

A half-yearly summary entitled "Statistical Notes on the Yield, Consumption, and Prices of Cereals, with Rates of Ocean freight" is now published and sent out along with the "Bulletin of Agricultural and Commercial Statistics" in March and September. This new feature is of great practical value, especially comprising as it does the prices expressed in gold francs per quintal based on the rate of exchange in London. It permits an exact comparison to be made between the leading world's markets.

At a meeting of the Permanent Committee held in December a scheme was approved for the publication of an annual review of the international movement of concentrated feeding stuffs, so far as information on the subject is officially available.

One of the institute's services of primary importance is the preparation of the "Year Book of International Legislation," of which the fourth issue appeared in August. In order to better realize the idea of presenting a faithful record of the world's agricultural legislation, there was an analytical introduction of some sixty pages, which will be of the greatest practical assistance to busy legislators who might desire to make this Year Book a convenient manual. For future editions the institute have decided to publish translations into five different languages of the analytical introduction. In the meantime, the Institute Branch is about to publish in the "Bulletin of Foreign Agricultural Intelligence" a translation into English of the introduction to the current issue, which is for the legislation of 1914.

In accordance with the desire of the representatives of the English-speaking countries, it was resolved to adopt new titles for the English editions of the three monthly bulletins, more intelligible to English readers than those previously used, and which are too close translations of the French. The new titles, with mention of the old in parenthesis, are the following:—

- (1) International Crop Report and Agricultural Statistics. (Bulletin of Agricultural and Commercial Statistics.)
- (2) International Review of the Science and Practice of Agriculture. (Bulletin of Agricultural Intelligence and Plant Diseases.)
- (3) International Review of Agricultural Economics. (Bulletin of Economic and Social Intelligence.)

Reference was made in the last annual report to the initiative taken at the

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institute in 1914 by the delegate for the United States, Mr. David Lubin, supported by an Act of Congress, advocating the establishment of an International Commerce Commission having consultative, deliberative, and advisory powers regarding ocean trade and ocean freights. The following is a brief outline of the report which is being drawn up under the direct supervision of the secretary general on ocean freight rates, with special reference to the carriage of wheat, cotton, and sugar, for presentation at the next session of the General Assembly:—

## I.—CONDITIONS BEFORE THE OUTBREAK OF WAR.

1. The leading transoceanic trade routes for the above three products.
2. The organization of ocean carriage.
3. The formation of freight rates:—
  - (a) The factors which determine the cost price of freights.
  - (b) The factors which determine fluctuations in freight rates above or below cost price. The play of supply and demand. Speculation.
  - (c) Efforts aiming at the reduction of said fluctuations and at conferring greater stability on freight rates:—
    - (1) Measures taken as the result of private action;
    - (2) Proposals for government action.

## II.—CONDITIONS SINCE THE OUTBREAK OF WAR.

1. Increase of freight rates during the war and causes of such increase.
2. Government intervention to moderate or control the rise in freights.

## III.—STATISTICAL TABLES.

1. Transoceanic imports and exports for the three products selected during a period of ten years.
2. Variations in freight rates from the leading export and import ports for the three selected products and according to the different kinds of transport organizations, before the war, for a period of ten years, i.e., from 1904 to 1914.
3. Variations in freight rates from the leading export and import ports for the three selected products, and according to the different kinds of transport organizations, since the war, i.e., from the 1st August, 1914, to 31st July, 1916

The Canadian office is charged with furnishing to the institute the information required concerning Canada, and with republishing in Canada the information contained in the official bulletins, together with other information of a technical character derived from other foreign sources. This work is done through the monthly "Bulletin of Foreign Agricultural Intelligence," the distribution of which has increased during the past year from 12,600 to 13,800.

Prominent among the articles of the year were those entitled: "Some Common Birds Useful to the Farmer," "How to Attract Birds—Bird Sanctuaries," "A Preliminary Census of Birds in the United States," "Flax Growing," "Flax Retting and Process," "Fibro Flax Growing." There were five articles, translated from the French in the office of the branch, setting forth the Russian system of meteorology as applied to agriculture, and defining especially "critical periods" of rainfall in respect to the stages of growth of the various cereals. These meteorological articles were published in intimate collaboration with the Agricultural Division of the

Dominion Meteorological Station, Toronto—as a sequel to the long article published in the May number entitled: “Weather Wisdom in Agriculture”—and are based on Professor Broounoff’s investigations covering a period of over fifteen years. The information, although designed more particularly for the different local meteorological stations and crop correspondents, cannot fail to be of assistance to farmers desirous of adapting their crops and methods of cultivation to weather conditions.

A great number of inquiries were made by readers for greater details than are contained in the summary articles published in the bulletin. Such inquiries, for instance, with reference to new methods, new machines, seeds of new plants, etc., have led to investigations, through correspondence with foreign countries and experiments in Canada, that give promise of beneficial results. Much of the information desired in such cases has been furnished by this branch from the original publications from which the institute summaries had been abstracted, and which are communicated to the library of this branch as well as to the institute library at Rome by practically all the Governments of the world.

A practice has been introduced of reviewing new books on agriculture for the purpose of inviting the attention of farmers to any they might consider of practical use of them. To the statistical division of the bulletin were added the prices of cereals at the leading world’s markets, also the imports and exports of cereals.

During the fiscal year 1915-16 there were added to the library 952 bound books and 6,152 unbound books and pamphlets, making a total, on April 1, of 2,838 bound books and 23,102 unbound books and pamphlets.

Printed catalogue cards to the number of 11,381 have also been received and filed. They are the following:—

1,956 cards representing the publications of the United States Department of Agriculture.

1,000 cards representing the publications of the United States Experiment Stations.

8,425 cards representing the accessions of the Library of the United States Department of Agriculture and the Library of Congress referring to agriculture.

The total number of cards available for consultation is approximately 160,000, including a large proportion of cards prepared and typed in the library. A catalogue of all the publications purchased by the department for the use of the various branches has been maintained. There have been compiled during the year a number of bibliographies, whose value has been acknowledged by commissions and by expert officials of this and other departments desiring special information.

### THE PUBLICATIONS BRANCH.

An important feature of the operations of the Publications Branch during the past year was the rapid growth of the mailing lists. Applications averaging almost one thousand a week throughout the year were received and added to the lists. A corresponding increase took place in the number of copies of publications sent out. These amounted to 3,091,435 copies, exceeding the number for the previous year by 1,284,981 pieces.

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During the year there were mailed to those on the respective lists, and in response to individual requests, upwards of ninety new publications of this department and small editions of three monthly bulletins issued by the International Agricultural Institute at Rome. The publications thus distributed included the annual reports of the Minister, the Experimental Farms, the Branch of the Dairy and Cold Storage Commissioner, the Seed Commissioner, the Veterinary Director General, the Dominion Entomologist, the Canadian Record of Performance, the Canadian Seed Growers' Association, and the Report of the Proceedings of the Fourth Conference of the Fruit Growers of Canada. Besides these there were issued eight bulletins of the Experimental Farms; three of the Health of Animals Branch; four of the Dairy and Cold Storage Branch; one of the Fruit Branch; two of the Live Stock Branch; three of the Seed Branch; three of the Entomological Branch; eleven pamphlets and a large number of circulars and leaflets issued by the various branches of the department. The distribution also included *The Agricultural Gazette* and other periodical publications noted in the table below.

The following table shows the number of copies mailed during the year to persons on the mailing lists and in response to requests:—

	Mailing lists	Requests.
Reports.....	220,321	18,816
Bulletins.....	978,600	55,550
Seasonable Hints.....	823,500	3,790
Pamphlets.....	170,080	35,000
Circulars.....	477,975	19,820
Leaflets.....	.....	14,000
The Agricultural Gazette.....	61,404	2,916
Bulletin of Foreign Agricultural Intelligence.....	144,000	8,200
Bulletin Agricultural Institute (Original).....	9,504	1,170
War Book of 1915.....	.....	13,249
Total.....	2,885,348	172,511

In addition, there were sent out in small bulk lots to branch Experimental Farms and Stations, agricultural, educational, and other institutions, 33,540 copies, chiefly of bulletins, pamphlets, and circulars.

The addressing of envelopes for the mailing list is done by machinery. Hand addressing is required for publications sent in response to individual request. During the year, 2,341,440 envelopes were machine addressed, nearly six thousand addresses were changed, and 7,319 names removed from the lists.

Early in the year a reclassification of the mailing lists was undertaken. The object was to provide combinations of lists so arranged that a publication may be sent to any number of the subject lists without causing duplication. The new system was fully explained in *The Agricultural Gazette* of Canada for November, 1915. The transfer of names from the old to the new system is in progress.

During the year a large number of newspaper articles were written and sent out. These included press notices of publications issued by this department and of articles issued in connection with the "Patriotism and Production" and "Production and Thrift" campaigns.

The editing and publishing of *The Agricultural Gazette* of Canada has occupied much of the time of the chief officer and his assistant editors. The policy of distributing *The Agricultural Gazette*, outlined in this report for last year, has been followed during the year just closed.

The staff employed in the branch included twenty permanent and seven temporary employees, made up of fourteen clerks, four messengers, and nine packers.

### III. PATENTS OF INVENTION.

The following tables show the transactions of the Patent Office, Department of Agriculture, from April, 1915, to March 31, 1916:—

Applications for Patents.	Patents and Certificates Granted.			Caveats.	Assignments of Patents.	Notices under Sec. 8.
	Patents.	Certificates.	Total.			
7,793	6,812	1,419	8,231	419	3,311	1,026

#### DETAILED STATEMENT PATENT OFFICE FEES FOR YEAR 1915-16.

Month.	Notices.	Patents.	Assignments.	Certified copies.	Caveats.	Sundries.	Subscription.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1915.								
April.....	147 95	16,534 75	677 39	249 20	257 00	12 45	118 85	17,997 59
May.....	253 00	16,128 25	689 30	200 30	180 00	39 25	24 10	17,414 20
June.....	208 00	15,004 35	600 75	167 10	235 25	5 26	21 30	16,242 01
July.....	192 00	15,381 60	528 35	152 01	145 10	35 00	13 20	16,447 26
August.....	218 00	14,321 60	517 20	196 30	109 90	7 05	8 45	15,378 50
September.....	142 90	13,453 65	520 00	209 87	172 05	3 00	28 80	14,530 27
October.....	156 15	14,758 70	516 00	280 40	167 95	12 00	13 70	15,904 90
November.....	142 00	13,454 45	727 70	272 65	200 00	18 50	59 60	14,874 90
December.....	148 00	15,117 62	745 25	243 30	185 25	27 15	24 30	16,490 87
1916.								
January.....	183 00	16,455 15	658 05	230 91	175 40	9 00	40 05	17,751 56
February.....	182 40	16,117 75	1,502 10	170 05	191 00	13 20	167 63	18,344 13
March.....	179 90	19,622 00	754 55	253 06	186 00	60 10	198 60	21,254 21
	2,053 30	186,349 87	8,436 64	2,625 15	2,204 90	241 96	718 58	202,630 40



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NATIONALITY OF INVENTORS.

Countries.	1910.	1911.	1912.	1913.	1914.	1915.	1916.
United States of America..	5,021	4,885	4,997	4,964	5,220	4,645	4,972
Great Britain and Ireland.....	392	359	506	495	558	450	360
*Germany.....	241	304	336	307	300	107	14
Australia.....	60	77	99	75	76	76	76
France.....	75	97	108	100	115	83	55
New Zealand.....	37	33	46	47	50	29	31
Sweden.....	39	54	52	64	40	40	44
Belgium.....	20	25	20	23	33	19	21
Austria.....	23	20	24	40	35	11	0
Italy.....	8	12	6	16	14	15	8
Switzerland.....	12	26	23	20	22	14	22
Denmark.....	8	5	14	15	16	11	12
Transvaal.....	12	16	10	7	1	3	3
Hungary.....	7	6	6	6	5	5	0
Russia.....	14	18	6	17	13	9	5
Norway.....	18	20	17	10	32	24	29
Newfoundland.....	2	3	1	2	1	1	1
Netherlands.....	0	0	.....	.....	7	4	2
Mexico.....	11	7	10	8	7	4	4
Cape Province.....	0	3	4	4	1	0	0
Cuba.....	1	5	1	1	9	3	0
Spain.....	1	3	.....	.....	1	1	3
Chile.....	0	1	.....	1	0	0	1
Finland.....	0	1	.....	1	0	0	0
Portugal.....	0	0	.....	.....	0	1	0
Roumania.....	0	1	1	.....	0	1	0
Grand Duchy of Luxemburg.....	0	0	.....	.....	0	3	0
Algeria.....	0	1	.....	.....	0	0	0
Japan.....	2	0	2	2	1	3	2
India.....	0	5	3	1	7	3	0
Natal.....	0	0	1	2	0	0	1
Nicaragua.....	0	1	.....	.....	0	0	0
Brazil.....	0	2	1	.....	1	3	0
Turkey.....	0	0	.....	.....	0	0	0
Poland.....	2	0	.....	.....	0	0	0
Holland.....	2	11	8	7	8	5	2
Argentine Republic.....	5	1	1	.....	2	3	5
Panama (Canal Zone).....	0	0	3	.....	3	0	1
Egypt.....	1	1	.....	.....	1	1	0
Southern Rhodesia.....	1	.....	.....	.....	0	0	2
Peru.....	.....	.....	3	2	0	0	0
Hawaii.....	.....	.....	3	3	0	0	2
Venezuela.....	.....	.....	2	1	1	0	0
Trinidad.....	.....	.....	1	.....	0	0	0
Porto Rico.....	.....	.....	1	2	0	0	0
Tunis.....	.....	.....	.....	1	0	0	0
Ceylon.....	.....	.....	.....	1	0	0	0
Straits Settlements.....	.....	.....	.....	1	0	0	0
Philippine Islands.....	.....	.....	.....	.....	1	1	2
Canary Islands.....	.....	.....	.....	.....	1	0	0
Java.....	.....	.....	.....	.....	1	0	0
Channel Islands.....	.....	.....	.....	.....	1	0	0
China.....	.....	.....	.....	.....	.....	1	0
West Indies.....	.....	.....	.....	.....	.....	1	0
Isle of Man.....	.....	.....	.....	.....	.....	1	0
Norfolk Islands (South Pacific).....	.....	.....	.....	.....	.....	2	1
Alaska.....	.....	.....	.....	.....	.....	2	1
Bermuda.....	.....	.....	.....	.....	.....	1	2
Zululand.....	.....	.....	.....	.....	.....	0	1

\* These fourteen patents were granted during the year to assignees of subjects of the Emperor of Germany; the assignment to citizens of countries not at war with Great Britain having been made previous to the outbreak of hostilities.

The total number of patents granted to Canadian inventors was 1,281, and were distributed among the provinces of the Dominion as follows:—

Ontario.	Quebec.	British Columbia.	Manitoba.	Alberta.	Saskatchewan.	New Brunswick.	Nova Scotia.	Prince Edward Island.	Yukon.
540	237	92	89	65	60	21	17	3	1

Patents issued to residents of Canada, with the ratio of population to each patent granted:—

Provinces.	Patents.	One to Every.
British Columbia . . . . .	92	3,943
Ontario . . . . .	540	4,666
Manitoba . . . . .	89	5,109
Alberta . . . . .	60	6,215
Saskatchewan . . . . .	65	7,577
Yukon . . . . .	1	8,000
Quebec . . . . .	237	8,441
New Brunswick . . . . .	17	20,695
Nova Scotia . . . . .	21	21,992
Prince Edward Island . . . . .	3	31,240

Statement of the number of patents issued under the Act, on which the fees are paid for periods of six, twelve, or eighteen years, at the option of the patentee; and of patents on which the certificates of payments of fees were attached after the issue of patents originally granted for periods of six and twelve years:—

Period for which fees were paid on first issue.			Patents on which Certificates were attached after issue.		Reissues.		
6 years.	12 years.	18 years.	6 years.	12 years.	6 years.	12 years.	18 years.
6,787	3	9	1,381	38	8	1	4

COMPARATIVE STATEMENT of the transactions of the Patent Office from 1907 to 1916, inclusive.

Year.	Applications for Patents.	Patents and Certificates Granted.			Caveats.	Assignments of Patents.	Fees received.
		Patents.	Certificates.	Total.			
1907 . . . . .	7,077	6,121	634	6,755	285	3,003	169,548 78
1908 . . . . .	7,406	6,774	744	7,518	317	2,900	178,482 49
1909 . . . . .	7,239	6,395	827	7,222	319	3,001	176,692 05
1910 . . . . .	7,789	7,223	1,010	8,233	448	3,147	194,571 54
1911 . . . . .	8,037	7,249	1,002	8,251	406	3,256	200,164 41
1912 . . . . .	8,293	7,399	1,113	8,512	348	3,725	207,762 77
1913 . . . . .	8,681	7,502	1,199	8,701	353	3,741	218,125 02
1914 . . . . .	8,359	7,918	1,323	9,241	354	3,432	215,001 71
1915 . . . . .	7,302	6,867	1,211	8,078	391	3,391	150,028 37
1916 . . . . .	7,793	6,812	1,419	8,231	419	3,311	202,630 40

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The total number of reports issued by the examiners during the year was 11,641 and 13 patents were surrendered and reissued.

Out of the total number of patents granted by this office during the year there were 4,972 issued to inventors or assignees resident in the United States, being 73 per cent of the whole issue. •

This branch of my department continues to receive the official reports of patents from Great Britain, Australia, New Zealand, United States, Mexico, Portugal, Italy, Belgium, France, and Japan, in addition to other periodicals of a scientific nature, in exchange for the Canadian Patent Office Record.

There were 2,053 patents brought under the conditions of the compulsory license clause, section 44 of the Patent Act.

The number of notices under section 8 of the Patent Act was 1,026.

On the 28th of November, 1914, two licenses were granted under the Orders and Regulations, respecting Patents of Invention, made under "The War Measures Act, 1914," as follows:—

Number of Patent.	Name of Registered Owner.	Short Title.	Name and Address of Licensees	Date of Grant.
133636	Farbwerke Vorm. Meister Lucius & Bruning assignee of Paul Ehrlich and Alfred Berthelm.	The Manufacture of New Derivatives of the Para-Oxyarylar-sinic acids,	Ernest Neil Macallum and Charles Newton Candee, Jr., trading under the name and style of the Synthetic Drug Company, Toronto, Ont.  Gustave Archambault, M. D., Montreal, Que.	Nov. 28, 1914.
152320	Farbwerke Vorm. Meister Lucius & Bruning assignee of Paul Ehrlich and Alfred Berthelm.	The Manufacture of New Derivatives of the Para Oxyarylar-sinic acids.	Ernest Neil Macallum and Charles Newton Candee, Jr., trading under the name and style of the Synthetic Drug Company, Toronto, Ont.  Gustave Archambault, M. D., Montreal, Que.	
144873	Farbwerke Vorm. Meister Lucius & Bruning assignee of George Korndorfer.	The Manufacture of Derivatives of Dioxidiamino-arseno-benzene.	Ernest Neil Macallum and Charles Newton Candee, Jr., trading under the name and style of the Synthetic Drug Company, Toronto, Ont.  Gustave Archambault, M. D., Montreal, Que.	
144874	Farbwerke Vorm. Meister Lucius & Bruning assignee of George Korndorfer and Baptist Reuter.	The Manufacture of Derivatives of Diamidoxo-arseno-benzene.	Ernest Neil Macallum and Charles Newton Candee, Jr., trading under the name and style of the Synthetic Drug Company, Toronto, Ont.  Gustave Archambault, M. D., Montreal, Que.	

### IV. COPYRIGHTS, TRADE MARKS, INDUSTRIAL DESIGNS AND TIMBER MARKS.

STATEMENT of Fees received by The Copyright and Trade Mark Branch from  
April 1, 1915, to March 31, 1916.

Month.	Trade Marks.		Copy-rights.		Designs.		Timber Marks.		Assign-ments.		Copies.		Totals.		
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	
1915.															
April.....	2,740	60	126	49	104	50	.....	.....	55	00	36	15	3,062	74	
May.....	2,820	40	143	66	95	00	.....	4	00	32	20	39	25	3,134	51
June.....	2,380	70	138	15	65	00	.....	25	00	69	20	8	25	2,686	30
July.....	2,013	90	126	50	46	00	.....	.....	42	00	.....	4	25	2,232	65
August.....	3,039	15	113	50	71	00	.....	6	00	32	00	11	50	3,273	15
September.....	2,831	00	203	65	120	00	.....	.....	69	00	.....	14	75	3,238	40
October.....	2,169	00	135	97	115	00	.....	.....	38	00	.....	47	00	2,504	97
November.....	2,659	42	122	50	90	00	.....	10	00	15	00	11	75	2,908	67
December.....	2,856	55	185	05	160	00	.....	15	50	17	00	23	75	3,257	85
1916.															
January.....	2,619	92	140	00	75	00	.....	4	00	40	00	17	50	2,896	42
February.....	2,524	80	104	00	100	00	.....	12	00	60	00	16	00	2,816	80
March.....	3,330	50	114	50	134	00	.....	2	00	24	00	35	75	3,640	75
Refunds.....															
	31,985	94	1,653	97	1,175	50	.....	78	50	493	40	265	90	35,653	21
	5,850	60	24	50	114	00	.....	2	00	12	00	5	00	6,008	10
	26,135	34	1,629	47	1,061	50	.....	76	50	481	40	260	90	29,645	11

The particulars of the registrations made by The Copyright and Trade Mark Branch of the Department of Agriculture during the year ended March 31, 1916, are as follows:—

<b>I. COPYRIGHTS—</b>		
Full Copyrights without Certificates.. . . . .	1,137	
Full Copyrights with Certificates.. . . . .	143	
Temporary Copyrights without Certificates.. . . . .	89	
Temporary Copyrights with Certificates.. . . . .	..	
Interim Copyrights without Certificates.. . . . .	99	
Interim Copyrights with Certificates.. . . . .	3	
Renewals of Copyrights.. . . . .	6	
Assignments.. . . . .	29	
	1,506	
<b>II. TRADE MARKS.. . . . .</b>		951
Renewals of Specific Trade Marks.. . . . .	68	
Assignments of Trade Marks.. . . . .	231	
<b>III. INDUSTRIAL DESIGNS.. . . . .</b>		200
Renewals.. . . . .	15	
Assignments.. . . . .	19	
<b>IV. TIMBER MARKS.. . . . .</b>		27
Assignments.. . . . .	..	
<b>Total registrations.. . . . .</b>		3,017

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The following tables show a comparative statement of the business of this branch from 1904 to 1915, inclusive:—

Year.	Letters Received.	Letters sent.	Copyrights Registered.	Certificates of Copyright.	Trade Marks Registered.	Industrial Designs Registered.	Timber Marks Registered.	Assignments Registered.	Fees Received.
									\$ cts
1904 .....	2,858	3,293	1,106	228	621	107	25	118	20,617 30
1905 .....	3,367	3,902	1,130	189	661	139	22	154	23,706 75
1906 .....	5,340	5,193	1,228	169	1,119	125	47	282	33,107 10
1907 .....	4,475	4,353	1,140	175	848	182	39	136	30,073 20
1908 .....	6,647	4,980	1,416	170	892	162	44	343	37,514 00
1909 .....	6,320	5,750	1,535	171	1,059	143	108	174	38,071 31
1910 .....	6,411	7,688	1,699	206	1,021	118	39	386	42,153 76
1911 .....	7,027	7,091	1,593	213	1,212	149	39	230	43,327 85
1912 .....	9,435	9,322	1,760	205	2,315	128	15	550	51,043 21
1913 .....	8,441	9,220	1,835	207	1,378	165	57	264	49,409 68
1914 .....	8,190	9,292	1,675	193	1,106	224	24	242	39,599 69
1915 .....	6,815	7,446	1,477	146	1,019	215	27	279	35,653 21

## V. PUBLIC HEALTH AND QUARANTINE.

I have again the satisfaction of being able to state that no epidemic infectious disease from abroad has been allowed to enter Canada this year.

At my coast quarantine stations on the Atlantic and Pacific oceans 138,685 persons have been inspected.

Eighty persons were admitted into hospital at the various stations. In 1914 there were 543. In 1913, 1,966.

In every instance the disease was stamped out at the station, and so prevented from appearing inland.

The small number of persons inspected and of patients admitted to hospital compared with last year and the year before is doubtless owing to the marked diminution of immigration due to the war.

*Asiatic Cholera.*—During the past year this disease has been reported in the following countries: Austria-Hungary, Borneo, Ceylon, China, Dutch East Indies, Germany, India, Indo-China, Italy, Japan, Java, Philippine Islands, Russia, Serbia, Siam, Turkey in Europe and Turkey in Asia.

The experiences during the year in connection with this disease have confirmed previous observations, and placed the existence of healthy "carriers" beyond doubt.

*Bubonic Plague.*—This disease has been reported during the year in the following countries: Argentina, Azores, Bahrein (in Persian gulf), Brazil, Ceylon, China, Cuba, Dutch East Indies, Ecuador, Egypt, Greece, Hawaii, India, Indo-China, Japan, Libya (Tripoli), Mauritius, Persia, Peru, Russia, Senegal, Siam, Straits Settlements, Turkey, Union of South Africa, United States, and Zanibar.

In the United States of America cases of human plague were reported at New Orleans on August 27 and September 8 last. Plague-infected rats were found on May 6, August 8 and 25; September 3, 12, 17 and 25; November 6, 23, 24 and 26;

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December 4 and 17; January, 1916, on the 6th, 7th, 8th, 25th and 29th; February 3 and 10; and on the 13th of March. In California, infected ground squirrels were found on July 1; August 6, 9, 12, 14 and 23; November 13; and on the 4th, 7th and 18th of March.

In Seattle a plague-infected rat was found on July 28, and one on November 30.

In Louisiana a plague-infected rat was trapped on the 4th of March, and one on the 10th.

In Hong Kong the last reported case of plague was on the 4th of March.

In Hawaii the last case of human plague was on December 16, 1915, and the last case of rat plague was on January 18, 1916. In Peru during the year 1915 there were 455 cases of plague, with 240 deaths.

At Zanzibar during the month of December, 1915, 4,421 rats were examined. No plague infection was found.

In Liverpool, England, the examination of rats was continued throughout the year. No plague infection was found.

*Smallpox.*—This disease has again had a practically worldwide appearance during this year.

One case of it has presented itself at the quarantine station at William Head, B.C. It is still under treatment there.

Prior to the date of my last annual report owing to epidemic outbreaks of smallpox in the bordering states of Minnesota and North Dakota, U.S.A., we had been obliged to establish an international medical quarantine frontier inspection at Emo and at Fort Frances, Ont.; at Gretna, Man.; and subsequently at Rainy River, Ont. Owing to the cessation of the epidemic threatening, I was enabled to raise them all on the 15th of June last.

*Typhus Fever.*—The epidemic of typhus fever which spread over Serbia from December, 1914, to July last was, in proportion to the territory involved and the population affected, the most severe that Europe has ever experienced. Conservatively, it is stated that one out of every five of the two and a half million population was attacked by typhus, and 135,000, including 30,000 Austrian prisoners, died of typhus during this epidemic.

*Leprosy.*—There are at present in the leper lazaretto at Tracadie, N.B., fifteen leper patients, seven males and eight females; the smallest number for many years. Eleven of these are of French-Canadian (Acadian) origin, one of English, one of Icelandic, one of Russian, and one of Syrian. Two of these patients are now practically well. The two former inmates discharged, apparently cured, in 1912, remain in good health. There were two deaths during the year, and one new patient was admitted. Amelioration of symptoms and sufferings continues to be observed under the treatment now being carried out.

The leper lazaretto at Darcy Island, British Columbia, has not been in use this year; its former inmates having been sent home to China, to their great satisfaction, and no new case has been reported in British Columbia this year.

*Beri-beri.*—Among investigators into this disease a large majority accept the tenet that beri-beri is the result of subsisting on a diet deficient in certain sub-

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stances termed "vitamins," which are essential for the normal functioning of the nervous system.

There are, however, some authorities who still question the deficiency theory, and who maintain that beri-beri is probably of an infectious nature.

*Enteric Fever.*—As further evidence of the value of anti-typhoid inoculations, the report of the Research Society issued in January last says that among the Expeditionary Force in France and Belgium about 95 per cent have been protected against enteric fever, the annual average being about 90 per cent. The annual admission ratio per 1,000 is more than nine times greater among the non-protected than among the protected. Among the non-protected it is 9.1 per 1,000. Among the protected only 1 per 1,000. The death ratio is thirty-one times greater.

*Trench Fever.*—This disease is a comparatively short fever, which has affected thousands of men in the trench zone and the men of the Royal Army Medical Corps who attend to those suffering from it. Being peculiar in many of its features it has received the name trench fever. The disease is a definite entity, and of infective nature.

*American Public Health Association.*—This association includes the United States of America, the Dominion of Canada, the Republic of Mexico and the Republic of Cuba. The Director-General of Public Health has represented the Dominion at the annual meetings of this association since 1887 and is one of its past presidents. I delegated him to attend the annual meeting at Rochester, N.Y., September 6 to 10. At this meeting he was elected an honorary member of the association. Other sanitarians similarly honoured at the same time were Dr. Stephen Smith, the first president, 1872-3 and 4; Surgeon-General Gorgas, of Panama Canal Zone fame; Surgeon-General Strenburg, the bacteriologist; and Dr. Henry Holton, of Vermont.

*Circulars.*—Circular letters were issued from time to time to the different officers, drawing their attention to the various matters during the year connected with the appearances and movements of epidemic diseases abroad.

*Public Works Health Act.*—The inspectors report that the year has been an exceptional one in its freedom from infectious disease amongst the men employed in the various public works coming under their observation.

*Changes in Medical Staff.*—Drs. V. N. Mackay, and Wm. Warwick, Medical Assistants and Bacteriologists at Halifax, N.S., and St. John, N.B., were given temporary leave to join the Canadian Army Medical Service for overseas service. Their places were filled for the time by the employment of Dr. A. E. Blackett, at Halifax, and by the transfer to St. John of Dr. Heagerty from the St. Lawrence service for the winter.

*Military Occupation.*—To meet the demands for preparation for defence, I allowed the occupation by the military of all the buildings I could possibly spare at the quarantine stations of Lawlor's island, Halifax, N.S., and Partridge island, St. John, N.B., without entirely crippling them for their essential quarantine service. These islands occupy advanced positions in their respective harbours, and their military occupation was at the request of the Department of Militia and Defence.

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*Aftermath.*—Lord Derby has recently voiced the feeling generally held that there will undoubtedly be a large emigration from Europe to the overseas dominions after the war. Tired of war conditions, the people of Britain and other European countries will doubtless seek peace in the newer lands. Of all the dominions, can any present such attractions as Canada, with its boundless prairies, and its 300,000,000 acres of untouched farm land in the west?

To meet this impending immigration, and the disease that is only too probably to be expected with it, the Public Health Service will be ready and alert to make the best possible use of the appliances in its hands for the protection of this Dominion.

The whole respectfully submitted.

MARTIN BURRELL,  
*Minister of Agriculture.*



# PUBLIC HEALTH.

## APPENDIX No. 1.

### REPORT OF THE DIRECTOR-GENERAL OF PUBLIC HEALTH.

(F. MONTIZAMBERT, I.S.O., M.D. Edin., F.R.C.S.E., D.C.L.)

March 31, 1916.

SIR,—I have the honour to submit this my report as Director-General of Public Health for the year ending this day.

In some of your quarantine ports the number of inspections has been considerably greater than in former years. This is, in part at least, due to the withdrawal for war purposes of large vessels and their replacement by more numerous smaller ones.

The number of persons inspected, and of persons admitted to your quarantine hospitals shows a marked decrease owing to the enormous falling-off in immigration and passenger travel generally on account of the war.

Newspaper and public comment endorse Lord Derby's recent statement that there will undoubtedly be a large emigration to the overseas dominions after the war. Tired of war conditions, the people of Britain and other European countries will doubtless seek peace in the newer lands, and of all the dominions can any present such attractions as Canada, with its 300,000,000 acres of untouched farm land in the West?

To meet this impending immigration, and the sickness that is only too probably to be expected with it, your quarantine stations should be more fully prepared than they are at present. The most pressing needs are:—

At Grosse Isle, Que., the completion of the sorely-needed hospital, on the foundations already built; and a "T" across the end of the western wharf so as to allow infected vessels to be brought to it.

At Partridge island, St. John, N.B., a deep-water wharf.

At William Head, Victoria, B.C., a water supply for fire and general purposes.

At Prince Rupert, B.C., a water supply, and a disinfection building.

*Asiatic Cholera.*—Since my last annual report this disease has been reported in the following countries: Austria-Hungary, Borneo, Ceylon, China, Dutch East Indies, Germany, India, Indo-China, Italy, Japan, Java, Philippine Islands, Russia, Serbia, Siam, Turkey in Europe and Turkey in Asia.

"The statistics and experiences derived from the cholera outbreak in Manila somewhat more than a year ago furnish a number of new considerations for the guidance of those entrusted with the problems of public health. Two important features stand out clearly in the light of the successful control of the situation in the Philippines. One of these is the demonstration that in effectively combating a cholera invasion, the use of laboratory facilities in the making of bacteriologic diagnosis on a large scale is absolutely essential. Without such assistance as is

available in the well-equipped Insular Bureau of Science, the results which have been accomplished would have been impossible. From November 1 to November 10 alone approximately 20,000 bacteriologic examinations were made, and before the work of inspection was completed, the number of examinations must have exceeded 100,000. The administration of such a service is, by itself, an affair of no small magnitude; and the task assumes an even more formidable aspect when one recalls that social and political difficulties often need to be overcome in order to make possible an inspection of persons who usually present no outward manifestations of ill health. Carriers must be detected regardless of the consequences. To avoid a danger one must know where it lurks.

Lieut.-Col. Munson, who was the adviser of the Bureau of Health, but who has now returned to this country, has remarked that the work at Manila meant invasion of the accepted rights of the home and of the individual on a scale perhaps unprecedented for any community. The collection of the fecal specimens might fairly be regarded as repulsive to modesty. Add to this, he continues, the facts that the search was made among persons, to themselves and others apparently healthy, who could scarcely fall even within the class of suspects, and that those found to be carriers were subjected to all the inconveniences of isolation, separation from family, loss of earning capacity, etc., and it is apparent with what tact and caution the work had to be carried out and public opinion created in favour of it as an unpleasant but necessary measure.

The second lesson of the Manila outbreak of 1914 was the importance of the cholera carrier. In periods when the mortality is high, the proportion of persons who are carriers without presenting symptoms of the disease will be relatively small; but when the mortality is light, according to Munson the lack of virulence in the germ will probably permit it to be harboured in many cases without the production of symptoms, so that a considerable percentage of carriers may be expected. Outbreaks such as that of 1914 in Manila, accordingly, occur in which the carriers appear to have been not only the most numerous but also the most insidious and dangerous sources of infection. It was undoubtedly spread chiefly by personal contact. Public water supplies and articles of food—all of which were formerly charged with a major offense in the transmission of such diseases—were eliminated as channels of infection, and likewise the flies played an insignificant part at most in its spread. According to the experts in the field, the lack of use of toilet paper, certain habits in the use of the toilet, infected fingers, and the habit of eating food with the hands from a common dish furnish opportunities for passing the infection from the carrier to another person.

A further lesson emphasized by the recent experiences is that the five-day period usually accepted for incubation and quarantine will not suffice in a very considerable number of instances. This, as Munson points out, sheds light on cholera situations not otherwise readily explained. An observed convict who died of true cholera after an eighteen-day period as a carrier "might have travelled half way around the world scattering his infection broadcast" and died of the disease in a place thousands of miles from any other source of infection. There is a warning in such cases, says Munson, that health officers all over the world would do well to heed.

An examination of many cholera patients and carriers by Schobl showed that vitality of cholera vibrios in the human body is not inconsiderable. In forty-three out of eighty patients, the stools were positive for from two to seven days; in twenty-two, from one to two weeks; in six, from two to three weeks; in one case, for forty-eight days. Treatment to free the intestine of the invading micro-organism seems to have been of little value. Trained experts are necessary to manage the serious situations that may be created. Munson's advice deserves to be emphas-

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ized; the prompt eradication of a general cholera infection includes the detection and isolation of carriers as a scientific prerequisite.

The British Medical Journal, May 22, last, says: The existence of healthy "carriers" is beyond doubt. The length of time during which the vibrio can be recovered from the stools of convalescents is variable. V. Stuhlern (1909) gave ninety days, Jakowleff fifty-seven days, Burgers sixty-nine days. Montefusco (1910) obtained positive results in 46 per cent from ten to fifteen days, in 21 per cent from fifteen to twenty, in 10 per cent from twenty to twenty-five, in 10 per cent from one to ten days, while the remainder fell between thirty-five and seventy-eight days. The percentages of healthy contacts excreting vibrios vary. Taking the case of arrivals from districts not known to be infected, of 5,200 healthy persons examined in Prussia on the Russian frontier in 1910, three were "carriers"; in Holland during the same year, of 7,338 arrivals from suspected Baltic ports seven were "carriers." In Naples, of 2,000 intending emigrants twelve were "carriers." The proportions are much higher in epidemic times, so many as six per cent being found at Petrograd during the epidemic of 1910, while much higher percentages have been recorded in Austria and Roumania but based upon small absolute numbers. The duration of the healthy "carriers" condition does not usually exceed three weeks; thus of 577 "carriers" at Petrograd, only twenty-four still persisted after three weeks, but rare instances are known of more than six months' duration (Gaffky, Janssen, Sparmberg).

The epidemiological importance of "carriers" is at present indeterminate, and, as we have remarked, the presence of the micro-organism is only one, although an essential, factor of the disease.

It is not far from the truth to say that until recently the treatment of cholera has been essentially expectant and symptomatic. Specific antiseptic substances administered by mouth to inhibit the growth of the infecting organisms in the alimentary tract have been without value. Attempts have been made sometimes to expel the bacterial invaders by the use of purgative drugs. Yet such procedures fail to bring any relief whatever to some of the consequences and complications that attend the original intoxication. Prominent among the latter are the renal lesions, not infrequently accompanied by uremia.

Dr. A. W. Sellards of the Johns Hopkins Hospital, who has had an extensive experience in the treatment of cholera in the Far East, has lately pointed out that some of the symptoms of uremia which resemble toxemia are due, not to the presence of a foreign toxin, but to the depletion of a normal constituent of the blood. In cholera, according to Sellards, there is a greatly increased tolerance to alkali bicarbonate. This tolerance, however, is not specific for the nephritis of cholera. It occurs not only in nephritis arising from other infections, but also in the nephritides which are free from infection. In this respect, therefore, there is a close relationship between the renal lesions of Asiatic cholera and the ordinary forms of acute and chronic nephritis. In renal disease (chronic interstitial nephritis and primary contracted kidney) a group of clinical symptoms, including dyspnea, changes in the alkali content of the blood, and decrease in its quota of carbon dioxide, reach their height during the stage of uremia. Similarly uremia, which follows the common renal disturbances of cholera, is plainly something more than a mere intoxication. The death rate from the uremia alone has been higher than in the majority of the common specific bacterial infections.

It is at this stage of reaction in cholera, when the evidence of nephritis is becoming prominent, that a distinct increase in the tolerance to sodium bicarbonate develops. Sellards has described it as a clinical picture of acidosis. It seems best, however, to avoid the use of this ill defined term, which means intoxication with

acid in its original sense. As Fischer remarks: The word "acidosis" has had its meaning twisted so greatly to suit the whims of different authors that it might well disappear from our medical and physiologic writings. The mere finding of various acids or "acidosis compounds" in the urine or elsewhere does not yet mean an acid intoxication. The acetone bodies of the diabetic do not betray an acid intoxication, but an altered chemistry from which an acid intoxication may result. A normal or abnormal acid may be produced in great quantities in the organism and appear in the urine, yet if sufficient base is available they are neutralized and so are practically without effect. What Sellards actually implies to be the nature of the "acidosis" associated with the nephritis and uremia of cholera is an impoverishment of the sources of fixed bases in the body.

This deficiency in carbonates, with its train of symptoms ending in coma and air hunger, is conceivably attendant upon a diminished excretion of acid on account of urinary changes due perhaps to impaired functional capacity of the kidney; or it may be attributable to loss of alkali directly by the bowel during the excessive purging that occurs. In any event, Sellards believes that the clinical evidences are sufficiently definite to constitute a rational basis for treatment of the uremia of cholera with alkalies in the form of bicarbonate. He maintains that in practice it has proved far more efficient than the use of solutions of sodium chloride, which have been employed with some success in the stage of collapse to restore the fluid lost from the body.

Alkali therapy in cholera is not entirely new. The attempt of Sellards is in the direction of a more rational application of the principles discussed above. It is regarded as advisable to give a mildly alkaline solution (0.5 per cent of sodium bicarbonate) early in the course of the disease, before an outspoken uremia has developed, and to increase the quantities if symptoms of uremia appear. As much as 100 grams (3½ ounces) of bicarbonate may be required in the course of two or three days. Experience in two epidemics of cholera speaks favourably for this mode of treatment.—*Journal A.M.A.*

*Bubonic Plague.*—This disease has been reported during the year in the following countries: Argentina, Azores, Bahrein (in Persian gulf), Brazil, Ceylon, China, Cuba, Dutch East Indies, Ecuador, Egypt, Greece, Hawaii, India, Indo-China, Japan, Lybia (Tripoli), Mauritius, Persia, Peru, Russia, Senegal, Siam, Straits Settlements, Turkey, Union of South Africa, United States and Zanzibar.

In the United States of America the work of plague eradication has been steadily carried on by the United States Public Health Service. Cases of human plague were reported at New Orleans on August 27, and September 8 last. Plague-infected rats were found in that city in May, August, September, November, and December, 1915, and in January, February, and March of this year. The last one reported was on the 16th of March.

The plague status of New Orleans is given by the United States Public Health Service to March 18, 1916, as follows:—

Last case of human plague, September 8, 1915.

Last case of rodent plague, March 16, 1916.

Total number of rodents captured to March 18, 648,544.

Total number of rodents examined to March 18, 336,776.

Total cases of rodent plague to March 18, by species:—

Mus musculus. . . . .	6
Mus rattus. . . . .	18
Mus alexandrinus. . . . .	12
Mus norvegicus. . . . .	246
Total rodent cases to March 18, 1916. . . . .	<u>282</u>

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The Journal of the American Medical Association thus summed up the plague situation in New Orleans on October 2, last:—

After a lapse of nearly a year a case of human plague occurred in the city of New Orleans, August 27. This case was confirmed as true bubonic plague on September 8. The epidemiologic investigations as to the exact source of the infection have not yet been completed but it is believed that it was probably received in the city of New Orleans. The occurrence of this case demonstrates the difficulties surrounding the eradication of the disease and indicate that had it not been for the active co-operative efforts of the United States Public Health Service and of the departments of health of the state of Louisiana and the city of New Orleans, the outbreak would have reached greater proportions and would have been longer continued. It also points out to other cities the necessity for ridding themselves of the rodent carriers of the disease and of thoroughly rat proofing all of their buildings. No fear is felt that this case will be followed by an outbreak. Officers and men of the Public Health Service, well trained in the control of the disease, are on the ground and with the health authorities of the city of New Orleans are taking every precaution to prevent the spread of the disease from the city and within it. During the three months from July 17 to September 18, the United States Public Health Service, in its work against bubonic plague in New Orleans, fumigated 118 vessels with sulphur, 144 with carbon monoxide and 15 with hydrocyanic acid gas; and issued 345 clean bills of health and 54 foul bills of health. In the department of field operations 56,233 rats were trapped, 101,226 premises were inspected and 7,281 buildings were rat proofed. The department of laboratory operations received 7,281 specimens of *mus rattus*; 13,958 of *mus Norvegicus*; 1,090 of *mus Alexandrinus*; 38,915 of *mus musculus*; 466 wood rats, 308 musk rats and 842 putrid rats. In all, 56,160 rats were received at the laboratory. Of these, 18,605 were examined, 169 were found suspicious and in 7 rats the diagnosis of plague was confirmed. The confirmed rodent cases were as follows: No. 245, captured at 617 St. Marys street, July 7, diagnosis confirmed July 14, premises treated by intensive trapping, premises vacated and demolished and rat proofing initiated; No. 246, captured at Galves and Erato streets, July 13, diagnosis confirmed July 20, and premises treated with intensive trapping in the neighbourhood and on the Galves dump and pushing forward of the rat-proofing operations; No. 247, captured at 536 S. Roman street, August 1, diagnosis confirmed August 8, premises treated by intensive trapping, destruction of rat harbours, spraying of the premises with pulceide and the completion of rat proofing; No. 248, captured at 2503 Howard street, August 17, diagnosis confirmed August 25, and the premises treated by intensive trapping, destruction of rat harbours, premises sprayed with pulceide and rat proofing expedited; No. 249, captured at Harmony Street Wharf, August 19, diagnosis confirmed September 2, and premises treated by intensive trapping; No. 250, captured at 1423 Joseph street, September 6, diagnosis confirmed September 12, premises treated by summary destruction of rat harbours, spraying of pulceide in the vicinity, intensive trapping and rat proofing, and No. 251, captured at 837 S. Fulton street, September 9, diagnosis confirmed September 14, premises treated by intensive trapping, fumigation by cyanid gas and rat proofing. During the week ended July 24, one suspicious human case was inspected and another during the week ended August 28, and one human plague case was discovered as reported above. Since the initiation of the work against plague in New Orleans, 44,938 buildings have been rat proofed, and 442,497 rodents have been captured, of which 286,087 were examined. Rodent plague was found in 4 cases in *mus musculus*, in 17 cases in *mus rattus*, in 8 cases in *mus Alexandrinus*, and in 222 cases in *mus Norvegicus*.

In the Ohio Public Health Journal Assistant Surgeon General W. C. Rucker writes as follows: It is not at all unlikely that a thorough search would demonstrate the presence of plague in other American seaports having a large foreign commerce.

The experience at New Orleans is an ample demonstration of this assertion. Several thousand rats were examined before a single one was found which was plague-infected, and this one would in all probability have been entirely overlooked had it not been for the large experience of the examiners. The examination of rats is a matter requiring considerable skill and much experience, and whenever there is a plague outbreak as many sanitary officers as possible should visit the scene and thoroughly familiarize themselves with the methods to be used in diagnosing, studying, and combating the disease. This was done at New Orleans, and representations from many of the States found there an excellent opportunity to acquire knowledge of the disease at first hand.

Granted the existence of such a condition, what are the steps to be taken to combat it? The first line of defence is maritime quarantine. This may be so applied as to be exceedingly effective, but such efficiency is to be obtained only at the price of disastrous interference with commerce. The routine disinfection of ships, if done very thoroughly, will prevent the introduction of rats, and therefore the introduction of bubonic plague, but such a measure is of temporary value only, and if omitted a single time may be followed by the introduction of plague rats. In the case of vessels hailing from known plague ports, such fumigation should not be omitted, and in the protection of ports which have not been rat proofed it is also necessary. To sum up, quarantine is absolutely effective only at the cost of commerce. It is at best a makeshift. Disinfection is expensive and not always certain.

The second line of defence is at the wharves and consists in the prevention of the embarkation or disembarkation of rodents. This is accomplished by the use of metal rat guards on all mooring lines; by breasting the vessel off from the wharf by rafts or spars; by the guarding of gang planks; and by the inspection of the freight to determine its rat-proof, rat-free condition prior to loading or unloading. The last is a valuable measure, but not one upon which absolute reliance can be placed.

The third line of defence may consist in the immunization of human beings against bubonic plague. This is at best a weak reed upon which to lean. In the absence of an epidemic it is manifestly impossible in American cities to enforce Haffkinization. Under the most favourable conditions only a small portion of the community would consent to voluntary immunization, and of those who took the treatment only a small proportion would be among the stevedore and water-front class, the very people who are most liable to the disease at the beginning of the epidemic.

The fourth line of defence consists in rat proofing the environment in which man works and lives. All of the other lines of defence or any combination of them may be used, but the single one upon which absolute reliance can be placed and from which lasting protection may be obtained is by the insulation of man from the animal which serves as the disseminating host of bubonic plague. Any city which will render itself completely rat proof need have no fear whatsoever of plague. The introduction of plague rats into such a place will be an occurrence of no account, because if rats and therefore the insects which they harbour are excluded from close contact with man it is a matter of entire indifference to him whether the rats have plague or not. It is not infrequently urged that rat proofing is expensive. In the final analysis this is not true, and by reason of the more rapid and increased commercial communication which we have with all the rest of the world, rat proofing has become as absolutely necessary as are good roads, sewers, and public water supplies.

No modern city can afford to regard rat proofing as a luxury. It is the duty of every municipality to incorporate in its public health and building codes ordinances

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requiring the rat proofing of all structures within the limits of its jurisdiction. If the passage of such legislation is put off until an epidemic has appeared the work must be done under pressure. It is then relatively expensive. If the work is done gradually, particularly if it is done at the time the building is erected, the cost is comparatively trifling.

The only kind of rat proofing which is really worth while is by the use of permanent impervious material, such as brick, concrete, or stone. This will fortify the ground areas against the entrance of the Norway rat. In the installation of such rat proofing great care is necessary that all accidental openings, such as are found around plumbing, electric wiring, and the like, be closed effectively. All openings above the ground area should be closed with metal screening so that the climbing rats may not enter in this way. Those who live or work in rat-proof premises need have no fear of plague, and the city which is rat proof will not become the scene of an epidemic of the disease.

The eradication of plague from the city of New Orleans has already cost the nation, the state, and the municipality upward of \$400,000, exclusive of the large sums of money which corporations and private individuals have laid out in rat proofing. The \$400,000 expended for epidemic measures would have gone a long way toward building permanent fortifications against rats. In addition, it should be pointed out that the business losses which the presence of an epidemic produces are so great as to be almost beyond computation.

In California infected ground squirrels were found in July, August, November, and on the 4th, 7th, and 18th of this month.

The following record of plague infection in California is given by the United States Public Health Service:—

Places in California.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number rodents found infected since May, 1907.
<b>Cities:</b>				
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	( <sup>1</sup> )	308 rats
Oakland.....	Aug. 9, 1911	Dec. 1, 1908	( <sup>1</sup> )	126 rats.
Berkeley.....	" 28, 1907	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Los Angeles.....	" 11, 1908	( <sup>1</sup> )	Aug. 21, 1908	1 squirrel.
<b>Counties:</b>				
Alameda (exclusive of Oakland and Berkeley)	Sept. 24, 1909	Oct. 17, 1909 <sup>2</sup>	July 12, 1915	287 squirrels; 1 wood rat.
Contra Costa.....	July 13, 1915	( <sup>1</sup> )	Nov. 12, 1915	1,507 squirrels.
Fresno.....	( <sup>1</sup> )	( <sup>1</sup> )	Oct. 27, 1911	1 squirrel.
Merced.....	( <sup>1</sup> )	( <sup>1</sup> )	July 12, 1911	5 squirrels.
Monterey.....	( <sup>1</sup> )	( <sup>1</sup> )	Feb. 23, 1910	11 squirrels.
San Benito.....	June 4, 1913	( <sup>1</sup> )	Aug. 14, 1915	50 squirrels.
San Joaquin.....	Sept. 18, 1911	( <sup>1</sup> )	" 26, 1911	18 squirrels.
San Luis Obispo.....	( <sup>1</sup> )	( <sup>1</sup> )	Jan. 29, 1910	1 squirrel.
Santa Clara.....	Aug. 31, 1910	( <sup>1</sup> )	July 23, 1913	25 squirrels.
Santa Cruz.....	( <sup>1</sup> )	( <sup>1</sup> )	May 17, 1910	1 squirrel.
Stanislaus.....	( <sup>1</sup> )	( <sup>1</sup> )	June 2, 1911	13 squirrels.

<sup>1</sup> None. <sup>2</sup> Wood rat.

The work is being carried on in the following named counties: Alameda, Contra Costa, San Francisco, Stanislaus, San Benito, Monterey, Lassen and Modoc.

In Seattle, Wash., plague-infected rats were found on July 28, and on November 30.

In Hong Kong the last reported case of human plague was on the 4th of this month.

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In Shanghai during the week ended February 12, 1916, out of 229 rats examined, one was found plague-infected.

In Liverpool, during the two weeks ended February 26, 1916, 492 rats were examined. No plague-infection was found.

In Peru, during the year 1915, 455 cases of plague with 240 deaths were reported.

In Hawaii the last case of human plague was on December 16, 1915, and the last case of rat plague on January 18, 1916.

Union of South Africa, Orange Free State: During the period from January 23 to February 7, 1916, 11 fatal cases of plague, 10 of which occurred in natives and one in a European, were notified in the Orange Free State. The foci of infection were three farms situated in the Hoopstad and Winsburg districts.

At Zanzibar during the month of December, 1915, 4,421 rats were examined. No plague infection was found.

*Smallpox.*—This disease has had its world-wide prevalence again this year. There is now a vessel, the ss. *Titan* from Yokohama in quarantine at your William Head station for smallpox amongst her 74 passengers. On account of its prevalence in North Dakota and Minnesota frontier medical inspection had to be carried out at Gretna, Man., and at Emo, Fort Francis, and Rainy River, Ont., until June 15, last.

The Journal of the American Medical Association writes:—

Although it considers antivaccination legislation a remote possibility at the present session of the Pennsylvania legislature, the Philadelphia *Record* advises caution, since "the antivaccinationists are as industrious as beavers and as persistent as terriers"; as their measures are cropping up continually, "unless public attention is kept on their campaign they will here and there succeed in their efforts to popularize smallpox." This disease in the eighteenth century is spoken of as "the most appalling foe to the human race," but in recent times has been so thoroughly suppressed that in some communities havoc resulted because it was not recognized by physicians, who had never seen a case. The specious argument of the antivaccinationists that, because smallpox is rare there is no occasion for vaccination, is answered by saying, "Let vaccination be abandoned for a few years, and there will be enough smallpox to make the people, lay and medical familiar with it." Indeed the people of a great many communities are becoming familiar with it to their serious cost, for the disease, because of neglect of vaccination, seems to become more widespread each year. The right of the people to protect themselves from the disease is thus put by the *Record*: "Persons who insist on their right to have smallpox if they wish it, or choose to take their chances, assume precisely the attitude of the man who insists on his right to build a frame house in the middle of a city. If he is willing to take the chance of a fire, he says, whose business is it? Well, it is very plainly the business of the neighbours whose houses would be endangered by the presence of a combustible structure. The unvaccinated child is a menace to a school because he may at any time develop the disease, and if so, he has probably communicated it to a dozen other children of parents who insist on their constitutional rights to take and disseminate smallpox. No man has the right needlessly to make himself or his child a possible conveyor of an appalling pestilence."

One of the stock arguments of the antivaccinationists is that cowpox vaccine may become contaminated with the germs of infectious disease and so transmit the latter to the innocent victim of the assault by the vaccinator. It cannot be denied that tetanus has sometimes attacked recently vaccinated persons, and so there is some plausibility in the contention of the anti's that the tetanus spores were implanted with the vaccine virus. The repeated charges that



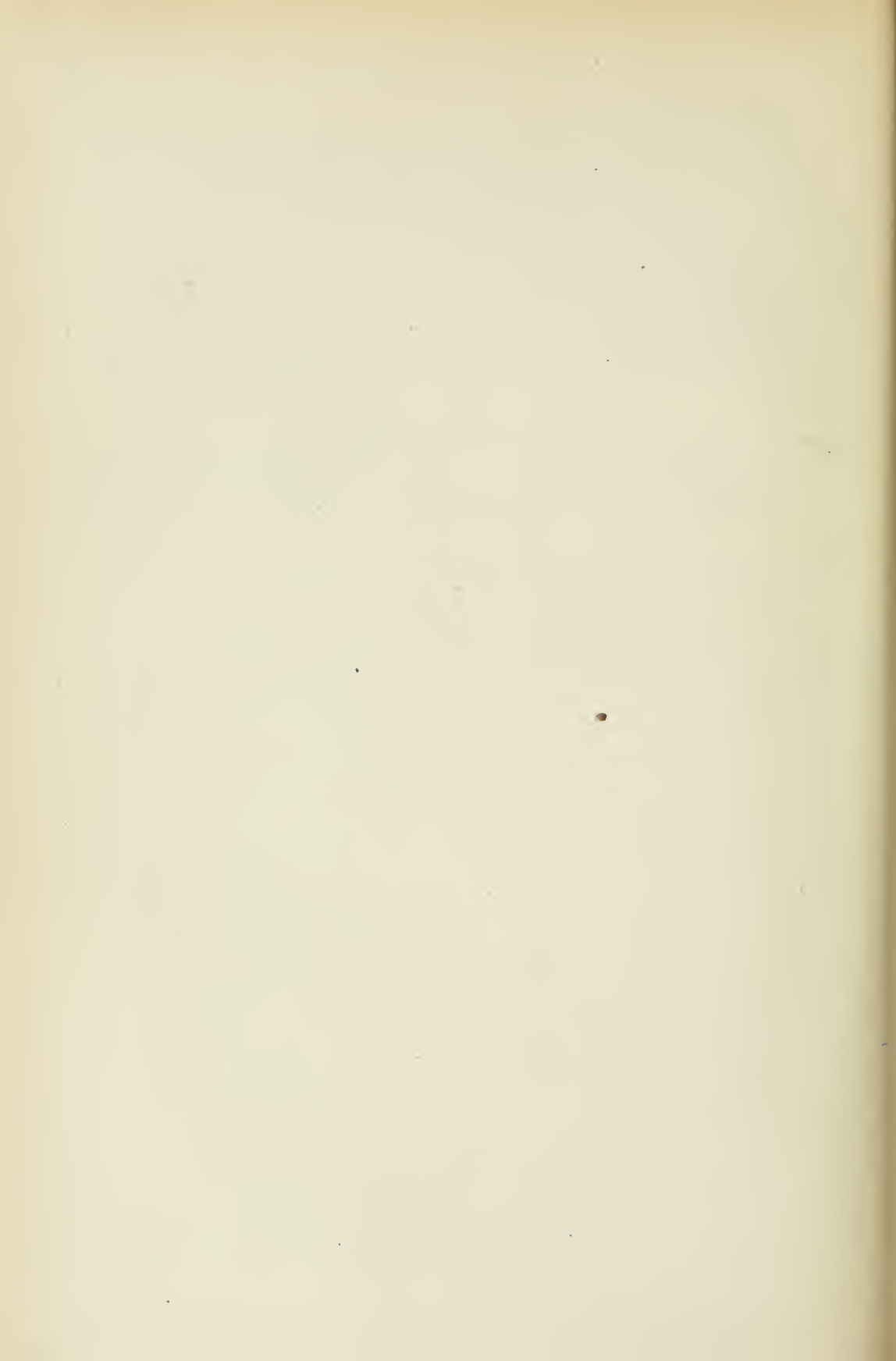
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*Public Works Health Act.*—The inspectors report that the year has been exceptionally free from infectious disease amongst the workmen employed in the various works connected with railway construction, canals, and tunnels. They report the medical service as satisfactory, and the sleeping quarters and boarding of the men employed fully equal to the good conditions of previous years.

*Changes in the Medical Staff.*—At Halifax, N.S., Dr. J. V. Graham has replaced Dr. Blackett as substitute for Dr. V. N. Mackay, overseas. At St. John, N.B., Dr. Heagerty again took winter duty for Dr. Warwick, overseas. At William Head, B.C., the position of assistant medical officer and bacteriologist is at present vacant. At Prince Rupert, B.C., Dr. John Cade is acting as a substitute for Dr. Tremayne, overseas.

The whole respectfully submitted.

MARTIN BURRELL,  
*Minister of Agriculture.*



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such has been the case have led Dr. John R. Anderson, director of the hygienic laboratory, United States Public Health Service, to undertake a careful investigation of all cases of tetanus following vaccination reported in the past ten years and he has endeavoured to collect accurate data concerning such accidents. The results of this investigation and of a series of animal experiments seem to warrant certain conclusions, of which the following is a summary (Public Health Reports, July 16): (1) It is difficult, if not impossible, to produce tetanus in susceptible animals by vaccination with virus containing large numbers of tetanus organisms which have been purposely placed therein. (2) In view of the failure to demonstrate tetanus organisms in the large amount of vaccine virus specifically examined for this purpose, it seems exceedingly improbable that vaccine virus as sold in the United States contains tetanus organisms. (3) From 1904 to 1913, inclusive, over 31,000,000 doses of vaccine virus were used in the United States. Yet information was obtained of only forty-one authenticated cases of tetanus occurring subsequent to the operation. From this it is concluded that had the virus used during that time in the United States been at fault many more cases of tetanus should have followed vaccination. (4) In view of the large number of vaccinations, about 555,000, done in the United States Army and Navy, and the absence from them of a single case of tetanus following the operation, the cases of tetanus following vaccination in the country at large were evidently not due to infection contained in the virus. (5) The average period from vaccination to onset of symptoms of tetanus in 83 cases was 20.7 days, while the average mortality of 93 cases was 75.2 per cent, this being slightly higher than the mortality of cases of tetanus due to other causes with an incubation period of ten days or less. The conclusions based upon these studies were that in case of tetanus occurring 15 or 20 days subsequent to vaccination the infection is not received through the vaccine virus, but in all probability is received from outside sources about the tenth day or later after vaccination. The infection with tetanus is a contamination of the vaccination wound, such as may occur in the case of any other surgical or accidental wound not properly cared for.

*Typhus Fever.*—The *Canadian Medical Journal* of July last, says:—

The vigorous measures taken in Serbia against the epidemics of typhus, relapsing fever, enteric, cholera, and smallpox have met with such success that these diseases are now said to be almost stamped out. The origin of the typhus and relapsing fever infections was traced to Valjevo, where the diseases broke out among the Austrian prisoners. Hospital units were sent at once from England and from America to give assistance. On February 15, the British Army Medical Service sent out a sanitary mission under Colonel Hunter and Lieutenant-Colonel Slammers. They proceeded to Nish and at once began to disinfect the hospitals and destroy lice; wine barrels were fitted up as disinfectors and distributed through the towns and villages; inoculation against cholera was carried out, and, wherever possible, bacteriological laboratories were established and investigation made of the sources of the various epidemics. Among other units sent were the Wounded Allies' Relief Hospital, the Scottish Women's Hospital, and that sent by the Serbian Relief Fund. Apart from the wounded, there were 37,000 sick in the army, including 15,000 cases of fever, 8,000 of which were typhus, nearly 8,000 cases of relapsing fever, and 1,500 cases of enteric. In Kragujevat, a town of 20,000 inhabitants, there were 1,400 cases of typhus, and in three months 3,400 deaths had occurred. At Nish on April 5, there were 8,498 cases of typhus in hospital; on April 18, only 948

Dr. Caldwell, Hospital Administrator American Red Cross Sanitary Commission to Serbia, reports in part as follows in a paper read before the Section on Public Health and Medical Science of the Pan-American Scientific Congress, Washington, D.C., December 28, 1915:—

The epidemic of typhus exanthematicus which spread over Serbia from December, 1914, to the end of July, 1915, was, in proportion to the territory involved and the population affected, the most severe that Europe has ever experienced. The spread of this epidemic from the Danube to the Greek boundary, involving every hospital, prison camp, soldiers' barracks and almost every home, was due entirely to preventable causes, to inexcusable indifference on the part of the Serbian civil and military authorities, and to carelessness which amounted to crime.

It is impossible to tell how many were afflicted with this disease, as there are no reliable statistics available. The military reports do not include the civil population and those who were ill and died of this disease unattended by physicians where no diagnoses were made. Conservatively, one out of every five of the two and a half million population was attacked by typhus, and 135,000, including 30,000 Austrian prisoners, died of typhus during this epidemic. The hospital mortality ranged from 19 to 65 per cent. No part of the country escaped, and every city, town and village in Serbia contributed to the morbidity and to the consequent mortality.

The unreliability of the estimates in this epidemic is further increased by the fact that the Serbian physicians classified typhoid fever as typhus abdominalis, relapsing fever as typhus recurrens, and typhus fever as typhus exanthematicus, and they used the term "typhus" vicariously to indicate any one of these three diseases. Lack of physicians in hospitals and among the civil population caused the diagnosis of typhus to be made in almost any case with increase of temperature, and was given as the cause of death in many cases in which it did not exist.

The word "typhus" covered a multitude of sins in diagnosis, as well as a world of ignorance and carelessness. This does not apply, however, to the better hospitals under Serbian control, or to those managed by the American Red Cross units, or to Red Cross missions sent from other countries.

Typhus is transmitted by the louse. The body louse is completely incriminated, the head louse probably so, and the crab louse not at all. While no human experiments were made in Serbia, still the observations made in those cases of typhus occurring in hospitals and private homes gave no evidence that the disease is transmitted in any other manner than through the bite of the infected louse.

Only where the conditions for hygienic living were provided did the Serbian people escape. All classes and professions were affected. The medical profession in Serbia suffered more from the disease and consequent mortality than any other profession, in proportion to its number. Overworked and exhausted by the endless labour of caring for their sick, these civil heroes lost 160 of their number out of a total of 340 at the beginning of the war. To these self-sacrificing men and women a glory as great as any gained on the battlefield or in fire-shelled trench is due. They spared themselves not, they spared no effort and no labour, but worked until exhausted and the disease attacked them. Among our own American physicians who went to the aid of the stricken people of Serbia, five died, two of them, Drs. Donnelly and MacGruder, were members of the American Red Cross units. The nurses did not escape; they too performed heroic deeds, and in one of our Red Cross units eleven out of fourteen were stricken with typhus; happily none of them died. The physicians and nurses which other countries sent to Serbia suffered as heavily.

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The conditions for the spread of the epidemic in Serbia were ideal. During the Balkan War, typhus had invaded Serbia and had never been completely eradicated. Here and there scattered through the country, especially in the northern districts, were sporadic cases, and from these foci of infection the epidemic had its origin. The people were exhausted from previous wars; they had been invaded by a large army, and the civil population had retreated as the army fell back. Belgrade in normal times has 100,000 people; during the war only 30,000 remained. The smaller cities and villages in central and southern Serbia soon became congested and overcrowded. The lack of bathing facilities in the homes of the better class of Serbians, their entire absence in the homes of the middle and poorer classes, the crowded conditions in which they were forced to live, the cold months of the winter, all favoured the intense spread of the epidemic which had started. Then came their military success. The Austrian army was thrown back through the invaded territory and across the Save river, and 70,000 Austrian prisoners were taken captive. These prisoners, starved, exhausted and vermin infested, were distributed in the little cities and villages of central and southern Serbia, thus further increasing the already overcrowded conditions.

In December, 1914, a sick soldier was sent to his home in Belgrade and was confined to his bed for three days before a physician was called and a diagnosis of his case made. His home was in one of the thickly populated quarters of Belgrade, and many of the members of his family, and his curious but well-meaning neighbours, visited him during the period of his illness. When a physician was called the patient was found to be in the fourth or fifth day of the eruptive period of typhus. No effort was made to isolate or quarantine this patient, and people were permitted to visit the patient as before until he died. Within two weeks in this particular section of the city, dozens of cases of typhus developed, and the epidemic spread through all quarters of the city.

In six months it was estimated that 7,000 cases of typhus occurred in the city of Belgrade alone, the civil hospital caring for 1,850 of them, with a mortality of 19 per cent, which was the lowest hospital mortality of which I know in any hospital in Serbia.

The treatment of typhus fever is unsatisfactory. It is supportive and symptomatic in character. The use of the serum prepared by Nicolle, or the vaccine prepared from the Plotz organism, seems to have a tendency to abort the disease, and seems to have a therapeutic value. Plenty of water should be given to the patient, and a saline infusion should be constantly at hand for use at any period, succeeding the eruptive stage and the climax of the disease. The severe emaciation which attends all these cases should be carefully managed. The diet should be carefully selected and carefully administered, and every precaution to support and stimulate the patients judiciously should be taken. The nervous and mental systems, which are very much disturbed, should be carefully cared for, and this disturbance, often continuing for six months following convalescence, should never be neglected.

The prophylactic measures which were employed in Serbia by the American Red Cross Sanitary Commission, and those which are used in the prison camps in Europe and in the quarantine stations of the countries bordering on Serbia, afford an effective prophylaxis in this disease. The value of the Plotz vaccine in immunizing against typhus infection is problematic. It probably has a value which will be fully demonstrated before typhus is eliminated from the Balkans. It was interesting to note that out of two or three hundred people not immune to typhus, who found it necessary to go to this part of Europe during the epidemic, all of whom were inoculated with the Plotz vaccine, among which number were all of the members of the American Red Cross Sanitary Commission, with but one exception, and the members of the mission which Columbia University sent to Serbia, and many others who were exposed at some time or another to a greater or less degree to the infection, not one case of typhus developed.

Amongst the methods employed to prevent the spread of this disease to neighbouring countries, Dr. Caldwell praises especially those adopted by Greece:—

The most creditable of all, however, was that of the Greek physicians and quarantine officers and sanitarians. Greece bounds Serbia on the south, and since the beginning of the war the only communication which Serbia had with the rest of western Europe and America was through the port of Saloniki, a city of 200,000 people, with an additional 40,000 refugees of all classes, located in buildings and barracks within and about the city. Saloniki is connected with Serbia by two lines of railroads, and the old Via Romana highway affords another means of communication between Monastir and Saloniki. Hundreds of thousands of people travelled in and out of Serbia through this port, and were exposed constantly to the disease while in Serbia during the lifetime of this epidemic; yet such were the carefully executed measures established by the Greek quarantine officers and sanitarians, that less than 200 cases were reported in Saloniki and in the remaining cities of Greece while the epidemic in Serbia existed. At each point of entrance into Greece, the Greek authorities had instituted quarantine stations equipped with disinfecting plants and isolation wards, and every passenger on every train, and every one crossing the boundary line on foot or by conveyance of any kind, was stopped at these stations, examined by competent quarantine physicians, his clothing and baggage disinfected, and all suspicious cases with increase of temperature, due to any cause, held for an incubation period of fourteen days before being permitted to continue the journey into Greece.

Any traveller from Serbia or Saloniki, or any other city in Greece, was again examined by a physician, who issued him a card on which were blanks for the recording of temperature for the five succeeding days, and under heavy penalty for failure to carry out the instructions, the traveller was ordered to report daily to the local physician for the recording of his temperatures. In the city of Saloniki, where a majority of the cases reported made their appearance, the authorities handled the situation in a correct and scientific manner. Every case in the city with rise of temperature from any cause was reported to the health officer, who held the attending physician to a strict account for the faithful reporting of progress and diagnosis in the case.

In any case of doubtful diagnosis, expert professional advice from the health office was tendered without charge to the patient.

The greatest hotbed of typhus and other infections existing in Europe before the outbreak of the epidemic in Serbia was in Galicia and Poland, along the Russian battlefield. With the overrunning of these two immense provinces by the contending armies, the danger from the spread of the disease to the remaining parts of Europe became greater and more apparent each day. When finally the Russians were driven back beyond the borders of Galicia and Poland, and the current of travel between important points of these two provinces again began to flow, it became necessary for the German and Austrian Governments to make great preparations and take the most effective measures to prevent the ingress of infection. On this front is built what the Germans call a "louserin," which was completed at a cost of 5,000,000 marks (\$1,250,000), and was paid for out of the private fortune of the German Emperor. To this great establishment all persons, of whatever age, nationality or rank in life going from Germany into Poland or Galicia, and from those provinces returning into Germany or Austria, are sent and are detained for five days, during which period they are bathed daily and their clothes disinfected in large autoclaves with each bath. At the end of the five-day period each traveller is given a personal examination, and on being found to be free from disease or vermin,

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is given a certificate which permits him to continue his journey across the frontier. No exception is made in the case of any traveller, no matter what his rank or station in life may be, the Imperial family being just as amenable to the rules of this great establishment as the poorest subject of Poland or Germany.

Civic and military authorities in France are co-operating in an endeavour to prevent the spread of typhus fever from wounded soldiers and refugees who return from the trenches to the vicinity of Paris. All such persons are examined to determine whether they are carriers of lice before they are admitted to the hospital and the standard course of procedure is somewhat as follows: The patient is taken to an examining room near the entrance of the hospital. This room is well lighted and furnished in a sanitary manner. The physician in charge makes a thorough examination of all parts of the body to determine whether lice are present. The clothes are removed and placed in a covered receptacle in which they are taken to the disinfecting room. The patient is given a bath in both hot and cold water. If he is known to carry lice the hair and beard are clipped and the skin surfaces soaked in xylol of benzine. The patient then undergoes a thorough rubbing with black soap and sometimes mercurial ointment is used upon special surfaces. The patient is examined upon a portable linen litter upon which he is later removed to the hospital ward. The disinfecting room is a small close chamber and forty to fifty grams of sulphur per cubic meter are burned in the disinfection. The examining physician takes special care to avoid infection and the whole process is most carefully carried out.—*Revue D'Hygiene*, January 20.

The lessons which this epidemic teaches are particularly valuable to the sanitary world, especially to those localities which are from time to time subject to an epidemic of typhus fever. It demonstrates beyond any question of doubt that the disease can be kept out of a country instituting proper quarantine and sanitary measures, and by the proper observance of personal and community cleanliness and hygiene. It has demonstrated with equal certainty that if it should at any time secure a foothold in any locality, it can be easily limited and eradicated in a short time. With our present knowledge of the measures which control this disease, we can take a very optimistic view of the future, and assert with confidence that the epidemic of typhus which Serbia has so recently experienced is probably the last one which will occur in Europe, unless conditions favouring an epidemic are worse than ever before existing in the history of the continent.

At a meeting of the New York Pathological Society held on Wednesday, April 14. Dr. Harry Plotz, of Mount Sinai Hospital announced the isolation of a gram-positive pleomorphic anaerobic bacillus from the blood of 50 per cent of a series of cases of epidemic and endemic typhus fever (Brill's Disease). The bacilli isolated from both types of the disease are identical in their cultural and serum reactions. The bacilli are found only in small numbers in the blood, but have been isolated during the febrile period and as long as thirty-six hours after the crisis. As the disease progresses the agglutination and the complement fixation reactions become positive using the bacilli or extracts in the tests. Because of the shortness of the disease, these reactions are positive more often during convalescence. When cultures are injected into guinea-pigs or monkeys, they cause a febrile reaction similar to that obtained by the injection of blood from a case of typhus fever. The bacilli in cultures quickly lose their virulence. Whether the injection of cultures will protect animals against the inoculation of virulent blood was not stated. The adoption of preventive inoculation with vaccines made from the cultures depends on such immunity tests in susceptible animals.

While a few points need further study the evidence brought forward by Dr. Plotz and his colleagues at Mount Sinai Hospital, indicate that the bacillus discovered is the cause of typhus fever.

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In the opinion of Dr. Caldwell, as quoted above, typhus is transmitted by the louse. This view is generally adopted by recent writers upon this disease. Whilst fully admitting this, I am not as yet prepared entirely to exclude other sources of transmission, such as the breath and other emanations of the patient. And this for two reasons: In the first place in what has been written of the habits of the body louse it is described as clinging closely to the under-clothes. If this be so it seems difficult to account for the rapid spread of an epidemic of this disease by a migration of the louse from body to body. Then in this report of Dr. Caldwell's he tells us of the coming of a sick soldier to Belgrade, and that within two weeks dozens of cases developed, and that in six months 7,000 cases were estimated to be present. Could that well be explained by the migration of infected lice alone? My second reason is that during the thirty-two years I served as a quarantine officer at the St. Lawrence quarantine, 1866-98, I saw a great many cases of typhus fever. It was frequent amongst the European immigrants coming to this country in the small sailing ships in the earlier of those years. Ten members of our staff contracted the disease. Two died of it, a nurse and a hospital orderly. I was one of the ten who took it, and I certainly was not conscious of the presence of any lice. And the cleanly habits of the other members of the staff who fell ill with the disease render it unlikely that they could be attacked by vermin. I have always considered that we contracted the disease from the breath of the patients.

*Leprosy.*—There are at present in the lazaretto at Tracadie, N.B., fifteen leper patients, seven males and eight females. This is the smallest number for some years. There were two deaths during the year, and one new patient was admitted. Eleven are of French-Canadian, one of English, one of Icelandic, one of Russian and one of Syrian origin. The Syrian patient was sent to the lazaretto from Regina by the Immigration Department, pending his deportation, as he has not been three years in Canada. Two of the patients, a woman of 61, and a man of 43, reported as much improved last year, are now practically well. The two former inmates discharged, apparently cured, in 1912, remain in good health. Chaulmoogra oil, in the various forms, is still found to be the most satisfactory treatment.

The leper lazaretto at Darey island, British Columbia, is in good repair. It has not been in use this year.

Dr. Mercier devoted his last course of Fitzpatrick Lectures before the Royal College of Physicians of London to leper houses and mediæval hospitals. He has published the two lectures in a pamphlet which contains a great deal of information and some interesting discussion.

Leprosy existed in England in Saxon times, and the oldest leper house, still existing as a charity, appears to be St. Oswald's Hospital at Worcester, founded by Bishop Oswald in 992. Dr. Mercier thinks, judging from the number of leper houses founded, that the disease reached its height in the second half of the twelfth century. In the first half of that century there were founded at least 46 hospitals, of which 24 were leper houses; in the following fifty years, at least 120, of which 56 were for lepers; in the thirteenth century, 240 hospitals, of which 75 were leper houses; and in the first half of the fourteenth century, 111, of which 42 were leper houses. In that century leprosy began to decline—a fact which Dr. Mercier associates with the Black Death, which swept the country in 1348-9. With the disappearance of leprosy the endowments of the leper houses either disappeared or were devoted to other charitable purposes. One of the oldest leper houses in England, the fabric of which still exists and is used for charitable purposes, is the Hospital of St. Margaret, Monkton, just outside Taunton on the London road. It is a long, low narrow structure, consisting of seven distinct tenements, each with a staircase communicating with the room above; the walls are of stone, faced, for the most part, with plaster, and have a high-pitched thatched roof.



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The New York Weekly Bulletin 30th October, 1915, says:—

The Sanitary Code requires physicians as well as persons in charge of hospitals to report certain infectious diseases and specifically mentions leprosy.

The attitude of the Department of Health towards leprosy is reflected in the recommendations of a committee of the city's leading dermatologists recently consulted by the Department. The recommendations are as follows:—

“Leprosy being an infectious disease, all cases should be reported to and registered at the Department of Health.

“Every case of leprosy should be investigated by a competent diagnostician with the intention of confirming diagnosis (except when reported by a recognized authority on dermatology, who will secure observance of all precautions). The diagnostician should examine all persons exposed and secure the necessary information required in such cases.

“Re-examination should be made for patients and members of household from time to time for a number of years.

“Bacteriological examinations for the bacillus of leprosy should be made in every case when necessary for diagnosis. Research studies on leprosy should be included in the work.

“Patients with suitable home surroundings and where hygienic precautions are observed may be permitted to remain at their homes.

“All cases of leprosy should be supervised from time to time with regard to the observance of regulations and the possibilities of spreading the disease.

“Cases of leprosy unsuited for home care, either because of the character of the case, improper surroundings, or poverty, should be removed to a hospital and detained as long as circumstances warrant.

“After death or removal of a case of leprosy the premises and all infected articles should be disinfected.”

It is estimated that there are 238 known lepers in the United States. It is an accepted fact among physicians that the danger of transmitting leprosy in this climate is small, though there appears to be some danger in the South. When the leper has no open lesions and no discharge from the nose it is safe for him to be at large.

A leper with open lesions, if careful, and if the home conditions are suitable, may be safely segregated in the home. This will avoid the separation of members of a family and its attending unpleasantness.

While the bacilli are not found in the nasal cavities early in the disease, they can occasionally be detected here first. Cases of leprosy with bacilli in the nose will, of course, be observed most carefully.

Vermin, it is thought, plays no unimportant part in the transmission of leprosy. Bed bugs and body lice should therefore be carefully sought for and exterminated.

The Department of Health maintains a list of cases of leprosy. Of the patients at present known to the Department, all but two are under institutional care, and these two cases are under adequate control.

In order to make this list as complete as possible the Department of Health would like to have all cases of leprosy again reported, giving the desired particulars.

The co-operation of managers and superintendents of hospitals and institutions and physicians is earnestly desired to make our records as accurate and up to date as possible. Cards for reporting will be furnished free of charge on request.

Fraser and Fletcher, claiming a discrepancy in the interpretation of their article: "*The Bacillus Lepræ: Has It Been Cultivated?*" (*Lancet*, vol. II, 1913), point out that the diphtheroid bacillus found in certain tubes on which pieces of leprous nodules had been planted is still considered as a contamination and cite occurrences of diphtheroids in one or two tubes out of thirty which were probably contaminations resulting from the use of disinfectants. Now, with improved technique, the authors have been unable to secure any cultures whatsoever and still adhere to the opinion that there is no evidence of the *Bacillus lepræ* being cultivated artificially.

Among the general public there still remains a great fear of the contagiousness of leprosy, evidently issuing from the erroneous interpretation of certain passages of the Old Testament, and the natural repulsion toward the disease. There is an evident desire to get them quickly gone to a remote place with a wish that they may not be overhasty in their return. As a matter of fact, leprosy is very reluctantly contagious, and must require very special favouring circumstances in order for it "to take." A very modest degree of cleanliness hinders its transmission. As soon as a country becomes well to do and adopts the daily tidiness incident to modern civilized life, leprosy dies out. Although, therefore, the Biblical view of the highly contagious nature of leprosy undoubtedly aided in stamping out the epidemic of the middle ages, in modern life it works an unnecessary hardship on the afflicted, and should give place to a more reasonable attitude, agreeing with the real facts in the case.

*Beriberi*.—Major Chamberlain, Medical Corps, United States Army, published last April an interesting article on this disease amongst Philippine Scouts; he says:—

Among investigators in the Orient a large majority, I believe, now accept the tenet that beriberi is the result of subsisting on a diet deficient in certain substances, termed "vitamins," which are essential for the normal functioning of the nervous system. There are, however, some authorities who still question the deficiency theory, and who maintain that beriberi is probably of an infectious nature. In view of this skepticism it seems worth while that the experiences of the United States army with beriberi among its Filipino (native) troops should again be brought to notice at this time. I feel that I may do this, first, because I was in charge of the beriberi work in Manila from 1910 to 1912, when the disease was eradicated from the native troops, and am therefore familiar with the circumstances attending this change; secondly, it may be done now because at the present date (January, 1915) there has elapsed a period of time sufficient to render it extremely improbable that the abatement of beriberi in 1910 was a temporary remission merely coincident with, but not due to, a change in dietary.<sup>1</sup>

The War Department of the United States maintains in the Philippines a body of native troops officially designated as the "Philippine Scouts." The commissioned officers are white Americans. The enlisted men are Filipinos belonging to various tribes and gathered from all parts of the archipelago. There are about 5,200 men in the scouts, and the companies are located in numerous garrisons throughout nearly all portions of the Philippine Islands. Organizations are frequently changed from one section of the archipelago to another, and the contact between the scout soldier and the adjacent population is close and constant. Beriberi is at all times present among the civilian natives, and no effort is made to isolate the sick. Until the calendar year 1910, beriberi was a scourge to the Philippine Scouts. The total annual admissions from this cause ranged from a minimum of 115 to a maximum of 618, and there was a considerable death rate and many discharges from the service for permanent disability. In spite of six years of vigorous effort to suppress the disease, a climax was reached in 1908 and 1909, when the total admissions for

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beriberi reached 618 and 558, respectively. During 1910 certain changes in the dietary of the native soldiers were inaugurated, and in that year the beriberi admissions dropped to fifty. In 1911 there were three admissions, in 1912 two, in 1913 none and in 1914 only one up to July 30, when last reports were received.

During the years prior to 1910, beriberi among the scouts had been combated mainly on the assumption that the disease was infectious.

The opponents of the deficiency theory of beriberi have perhaps had their case strengthened by the fact that the majority of the advocates of the theory have carried out their practical work for the most part in the orient, and have dwelt almost entirely on polished rice as a factor in the etiology of the disease. In the orient rice is, indeed, the factor of importance. In other lands, where rice is little used, the case is quite different. The two following points have received insufficient attention from certain writers;

1. *Many articles of diet, other than rice, are relatively deficient in neuritis preventing vitamins.* Among these may be mentioned fine wheat flour, wheat bread, macaroni, "ship biscuit," sago, hominy, cornstarch, various breakfast foods, and possibly potatoes, exclusive use of these substances leads to polyneuritis gallinarum.

2. *Exposing food to a temperature above a certain point decomposes the neuritis-preventing vitamins present.* It was first shown by Eijkman, and has been abundantly confirmed, that a temperature of 120 C. destroyed some substance in undermilled rice, barley and rye, with the result that multiple neuritis developed when these foodstuffs were used as exclusive articles of diet for fowls. In a neuritis-preventing extract of rice polishings it was found in Manila that boiling, when prolonged for many hours, destroyed some or all of the vitamins present. It is probable that the process of sterilizing necessary for the preservation of canned goods, such as meat, beans and peas, destroys the beriberi-preventing elements originally present. It is well known that the vitamin necessary to prevent infantile scorbatus is destroyed by a temperature at or even below the boiling point, but the substances which avert beriberi appear to be somewhat more resistant to heat.

Therefore when confronted by a syndrome suggesting beriberi it is unsafe to assume that the condition is not due to a vitamin starvation until the dietary has been studied most carefully, and from a point of view entirely different from that occupied a few years ago. Mere dependence on proper amounts of fats, proteins, carbohydrates and salts is not sufficient. One must learn, by animal experiments if necessary, whether the essential components of the ration contain vitamins in quantities adequate to maintain nerve nutrition. It must further be determined whether or not vitamins, originally present in the various articles, are being in part or in whole decomposed by the culinary processes employed. Attention to these points will probably explain the occasional outbreaks of beriberi in lands where the disease is not endemic and where rice is not a food staple.

Furthermore, it is important to remember that beef (and possibly many other articles not yet studied) contains enough vitamins to prevent the development of neuritis, when fed exclusively to fowls, yet the quantity present is relatively small when compared with the amount found in beans, peas, mangoes, barley, peanuts, yeast, or the bran (polishings) of rice or wheat. Therefore if the chief components of the ration are greatly deficient in neuritis-preventing substances the addition to the dietary of a small amount of meat will not supply sufficient vitamin to prevent the onset of disease.

Dr. Joseph A. Andrews, stationed at Indian Harbor, Labrador, for the Grenfell Mission, who returned recently is reported to have found the natives of

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that place suffering from beriberi as a consequence of living chiefly on white bread. When they substituted brown or black bread the epidemic ceased.

*Enteric Fever.*—The *British Medical Journal* in an article dated January 1, 1916, on the results of anti-typhoid vaccination in the French Army states:—

Dr. Jules Courtmont, who is in charge of the isolation hospitals of the XIV District (French military administration), has issued an interesting report on the results of antityphoid vaccination from August 2, 1914, to July 1, 1915. Haemoculture was employed for diagnostic purposes wherever possible, as it was recognized to be the only really trustworthy guide to the nature of the infection. The cases observed, in fact, included a large proportion of infections by paratyphoid organisms.

The total number of admissions of patients diagnosed to be suffering from typhoid fever was 1,347; of this number 891 had not been vaccinated, and 256 had been inoculated from one to four times with Vincent's non-polyvalent vaccine; of the 891 unvaccinated, 506 came from the front and 385 from the XIV district; of the 256 vaccinated, 96 came from the front and 160 from the XIV district.

The number of deaths among the 891 unvaccinated was 155 (17.4 per cent); of these, 80 were from the front and 75 from the district. There were only 8 deaths among the 256 vaccinated (6 from the front and 2 from the district). If the subjects who received the regulation four inoculations were accepted as vaccinated the percentage of deaths would only be 1.9. The following is the complete table:—

Admissions.	Total.	Front.	XIV District.	Slight Fever.	Medium Fever.	Grave Fever.	Deaths.
1 injection .....	51	19	32	35	12	4	3
2 injections .....	50	25	25	36	10	4	2
3 injections .....	39	20	19	24	13	2	1
4 injections .....	116	32	84	85	29	2	2
Total .....	256	96	160	180	64	12	8

This gives:—

	Deaths.
Non-vaccinated .....	17.4 per cent.
Vaccinated—	
1 injection .....	6.0 "
2 injections .....	4.0 "
3 " .....	2.5 "
4 " .....	1.9 "

From the bacteriological point of view the proportion of paratyphoid was high. Haemoculture was used in 100 cases of the vaccinated, and proved negative in 25 and positive in 75. Of the 75 positive cases, 3 yielded Eberth's bacillus (2 of these had only had a single injection, and of these 1 died, the third had 2 injections); 71 yielded paratyphoid B and 1 paratyphoid A. Of the 116 infected patients who had received the four injections 63 showed paratyphoid B.

Antityphoid vaccination is thus shown to be unquestionably active and efficacious, but these figures point to the desirability of making use of a polyvalent vaccine (Eberth, paratyphoid A and B).

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The *Canadian Public Health Journal* has the following:—

It is impossible to give too much publicity to the wonderful work done by the R.A.M.C., not only in fighting disease, but also in the carrying out of preventive measures. In two instances last week Mr. Tennant gave replies to questions upon the health of the forces, and both were eminently satisfactory. With regard to the troops on Salisbury Plain, he said: The annual ratios per 1,000 are, during the period September 1 to December 31: Admissions, 325.4; deaths, 1.88. Both these ratios are lower than those for peace time. With such a record he was perfectly justified in refusing the request for a committee to inquire "into the health of the troops." The other question was the perennial one on enteric fever and inoculation. The reply was as follows: "In the period from the commencement of hostilities to November 10, 1,365 cases of enteric fever were reported as having occurred amongst the British troops in France and Belgium; of these 1,150 cases have been definitely diagnosed after bacteriological examination. In 570 cases where there had been inoculation there were 35 deaths, and in 571 cases where there had not been inoculation there were 115 deaths. In the United Kingdom from August 1, 1914, to October 30, 1915, 540 cases of enteric fever were reported and 87 deaths; 39 per cent of these cases occurred in men who had not been inoculated, but I cannot say how the deaths were distributed amongst the inoculated and uninoculated respectively. For paratyphoid no system of inoculation has yet been adopted." This evidence is absolutely conclusive to all, except a few cranks. But "if an angel from heaven came" they would still be unconvinced.

The Research Defence Society issued a leaflet on protection against typhoid fever about fifteen months ago; it has now added a statement, dated January, 1915, in which it reported as follows:

Among our Expeditionary Force in France and Belgium about 95 per cent have been protected against typhoid fever, the annual average being about 90 per cent.

The annual admission ratio per 1,000 is more than nine times greater among the non-protected than among the protected. Among the non-protected it is 9.1 per 1,000. Among the protected it is 1 per 1,000. The death rate is thirty-one times greater. Among the non-protected it is 1.84 per 1,000. Among the protected it is 0.66 per 1,000.

The figures for Gallipoli have not yet been thoroughly analysed and criticised, but they leave no room to doubt the value of the protective treatment.

The addendum also deals with the suggestion that the statistics are worthless because typhoid fever and para-typhoid fever are often confused. The leaflet points out that this suggestion is false.

If the cases of paratyphoid fever are added to the cases of typhoid fever the annual admission among the non-protected is 11.3 per 1,000. Among the protected it is 3 per 1,000. The death ratio among the non-protected is 1.90 per 1,000. Among the protected it is 0.09 per 1,000.

*Trench Fever.*—A new infectious disease? It would be difficult to make the well-informed clinician believe that he could encounter a number of cases of disease presenting the same syndrome which he would be unable to identify and which, moreover, could not be classified even when the best professional advice was secured. And yet this is happening now among the soldiers in northern France, according to the *British Medical Journal* for July 17. For the past three months there have been observed numerous cases of a disorder somewhat like subacute nephritis in its manifestations. Dropsy is sometimes present and the urine contains albumen and casts. It does not appear to be infectious or contagious and the medical authorities have been unable as yet to determine what are the predisposing causes. Naturally there

has been a great deal of theorizing. One explanation was that it was an Oriental disease, something on the order of beriberi, but this theory was discounted by the fact that it was not prevalent among the Indian troops. Moreover, as has been proven by Heiser and others in the Philippines, beriberi is dietetic in origin and the soldiers suffering from this strange malady have been shown to have had the same fare as the others. A suggestion which obtained some favour for a time was that these were cases of unrecognized scarlatina, but this has since been disproved. Some observers hold that it is an auto-intoxication due to the intestinal stasis which necessarily develops when men are subjected to prolonged periods of duty in the trenches and elsewhere. Some authorities saw features in it analogous to forms of metallic poisoning, and with this idea in view have made searching analyses of the food, water, and the patients' urine. Whatever may be the causes of this new disease, it does not seem to be very serious except in its temporarily incapacitating effects, and it is probable that a further period of observation will clear up its etiology.

Captain McNee and Lieutenant Renshaw, with the clinical assistance of Captain Brunt, all of the R.A.M.C., have published an article on "Trench Fever" in the *British Medical Journal* of February 12, 1916:—

During the whole time that the army has been in Flanders cases of short fever have continually occurred.

In a comparatively small number there has been a little bronchitis, or some diarrhoea, or tenderness of the muscles or nerves in limited situations, these have been called bronchitis, or influenza, enteritis, colitis, myalgia, and neuritis. But, as a rule, the symptoms have not included more than the general aches and pains which are the common denominator of all fevers. The patients have been very slightly ill, and except in a small number of cases have quickly returned to duty.

It has been very difficult to know what to call these cases. They have been sent in as influenza, myalgia, neuritis, pyrexia of unknown origin, and even as rheumatic fever. Of genuine rheumatic fever I have seen only five instances. Its absence has been one of the most striking things in the campaign, and effectually disposes of any connection between this fever and wet or cold.

These undetermined fevers have from the first been the hunting ground of the bacteriologists, who with their laboratories are disposed in a line along the front, together with a few in special places further back. The bases have, of course, their own bacteriologists, and are not now under consideration.

The diagnosis of the enteric group of fevers is of such consequence to an army that the first task of the bacteriologist is always to exclude them. In consequence these cases of pyrexia have throughout been examined from that point of view. As they were usually seen quite early in the disease cultivation of the excreta and agglutination tests have also been carried out in many hundreds of cases. In any case where either abdominal symptoms, or a dry tongue, or an enlarged spleen, or suspicious spots, gave clinical grounds for suspecting an enteric fever, the patient was sent down as "suspected typhoid" even if this had been done we were left with a large mass of cases in which neither the clinical nor the bacteriological evidence afforded any ground for this diagnosis.

In the early part of the summer Major J. H. P. Graham called my attention to a type of fever characterized by two bouts of pyrexia separated by a normal interval. He afterwards published two cases of the kind. About the same time Captain Wells reported several similar cases. Colonel Sir William Leishman came round with me to see these cases. Their resemblance to sand-fly fever and also to dengue struck those who had had experience in these fevers,

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but there were several points which effectually disproved identity. Other officers were good enough to look out for similar cases. I should like especially to thank Captain Stirling and Captain Bolus for their help. In the *Lancet* of November 20, 1915, appeared a paper by Captain G. H. Hunt and Major A. C. Rankin, describing 30 cases and mentioning for the first time the name "trench fever," which by this time has come into common use. From these papers and from the paper now published I think we can say that from the mass of cases of obscure fevers one type has been isolated in which the clinical symptoms, the course, and to a certain extent the pathology, have been established. We are, however, still ignorant both of the nature of the infection and of the way in which it is introduced into the human system. It is still occurring, and this renders the agency of a flying insect improbable, though I was shown *A. maculipennis* only two days ago (January 29).

The present paper needs no praise of mine, but I may say that I have followed the work throughout with the deepest interest.

The cases of the type to be described first began to be recognized in this laboratory area about the beginning of July, 1915, although, on considering the matter later, it was certain that a small number of men seen during the previous month had suffered from the same disease.

It will be of interest to give an account of how our attention was drawn to the condition in the first place. In the first few days of July a number of men, about twenty in all, were sent in to an isolation hospital labelled "suspected enteric." These men all belonged to a division which had recently arrived in the area, and all had headache and varying degrees of pyrexia, in addition to other symptoms to which less attention was paid at the time. Since it was known that during the previous two months cases of paratyphoid B had occurred both in the civilian population and in the division then in occupation of the area, it was at first thought that these new cases might be of the same nature. Blood cultures were made in bile salt broth in the usual way, and thereafter the cases were immediately transferred to a stationary hospital further from the front. These blood cultures proved one and all sterile. The men reached the statutory hospital within a week of the onset of the febrile symptoms, but, on admission there, their temperatures were either found normal or fell to normal within a day or two, leaving the patients apparently quite well. As the cases did not resemble clinically any of the enteric group, an inquiry was at once addressed to this laboratory to find out the results of the blood examinations. The bacteriological and clinical findings seemed to exclude the enteric group, although the possibility of previous inoculation modifying the course of genuine enteric had still to be considered at the time.

Cases of the same kind occurred immediately afterwards, and on these being watched it was found that the fever ceased after five to eight days. These men were examined carefully, and other symptoms recognized, which will be described in full later on. None of these early cases, however, remained under observation for long after the temperature fell to normal, so that their subsequent history is unknown. The point of this remark will be seen when the course of cases watched over a long period is considered.

As has been already indicated, all the early cases remained under suspicion of belonging in some sort of way to the enteric group. As more and more cases were observed, however, each with a similar and constant group of symptoms, the disease soon became recognizable as a definite clinical entity, and early became known to officers and men under the name "trench fever."

Since attention was attracted to the condition, great numbers of cases have come under observation. During the months of July, August, and September

ber, in fact, it was impossible to visit three or four field ambulances on any day without seeing at least half a dozen fresh cases.

During August and September arrangements were made, especially at one casualty clearing station, to keep a series of cases under constant observation for some weeks, and it is as a result of this that we have been able to carry out most of the clinical, pathological, and experimental work detailed below.

1. The disease is a definite entity, and of infective nature, as is proved by its ready transmission from one person to another by the blood.

2. There are two clinical types of the disease: (a) A short fever of about a week's duration, followed frequently after a few days by a short single relapse; (b) a longer illness characterized above all by the number, sharpness, and periodicity of the relapses.

3. The symptoms of both types are clinically identical, the most constant and characteristic being headache, and pain in the legs and small of the back.

4. The two types described are, in our opinion, merely varieties of one and the same disease. In addition to the identity of symptoms, the experimental evidence for this is strong, a typical "short" variety having been shown capable of giving rise to a typical "long" one.

5. The incubation period varies, possibly with the dose of the infective virus introduced. The shortest incubation period in our experimental transmissions was six days, and the longest twenty-two days.

6. The disease is transmissible in every case by the whole blood, whether injected intravenously or intramuscularly.

7. The disease is not transmissible by the serum. In the one instance in which the serum proved infective, haemolysis of corpuscles had occurred before injection.

8. It follows as a corollary to the preceding statement that the virus is not a "filter passer" in the serum, as we thought from analogy that it might be. All our experiments with filtered serum were negative.

9. The plasma was infective in one experiment, but haemolysis of red cells had occurred, so that the plasma was haemoglobin tinted. The filtered plasma in another test was not infective.

10. The above results seemed to point to the virus being contained *within the blood corpuscles themselves*, whether leucocytes or red cells.

11. Blood corpuscles, after washing five times in saline to remove the plasma, were still found to be infective. This further supports our view that the virus is intracorpuseular.

12. Very many blood films at all stages of the disease have been examined without a parasite being detected. The blood has been examined fresh, under dark-ground illumination, and dried films have been stained in varying ways, without result.

13. Blood corpuscles were broken down, and the haemoglobin-tinted fluid passed through a filter in an attempt to prove the virus an ultra-microscopic one confined to the corpuscles. The fluid when injected, however, was not found to be infective.

14. The only constant morphological change in the blood is the presence of punctate basophilia. This was so marked in some cases as to require very careful investigation to differentiate it from an intracellular parasite. The blood counts, differential and ordinary, did not yield any important results.

15. As regards the means by which the disease is transmitted in nature we have as yet no evidence to offer. The fact that only two classes of men are affected—those from the trench zone and men of the Royal Army Medical Corps—is, however, suggestive. The disease is either contagious from man to man or, what seems much more likely, is carried by one of the common



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flies or parasites found in the trenches. During the past summer lice, mosquitoes, midges, and flies of other kinds have all been common in the Flanders war zone.

*International Frontier Quarantine.*—At the date of the last annual report this inspection was in force, on account of smallpox in North Dakota and Minnesota, U.S.A., at Grenna, Man., and Emo, Fort Francis and Rainy River, Ont. It was raised by you at all four places on June 15.

*Electrolytic Hypochloride for Hospital Ships.*—Last month a report to the Medical Research Committee on the use of sodium hypochlorite prepared by the electrolysis of sea water for disinfecting and antiseptic purposes on shipboard, especially in hospital ships, has been made by Drs. H. D. Dakin and H.G. Carlisle, and will be read with much interest, because it is important both in its scientific and practical aspects. The report mentions the well-known Hermite process for the sterilization of sewage by electrolytic hypochlorite, introduced about 1893, and the use of electrolytic hypochloride for general disinfection by several sanitary authorities, notably at Poplar, and the valuable results obtained through its use in the plague epidemic in Glasgow in 1901.

This Hermite process was reported on by me in my annual report October 31, 1894, to the then Minister of Agriculture, with a recommendation for its use on seagoing passenger vessels.

*Circulars.*—Circular letters were issued from time to time to your different officers, calling their attention to the various matters during the year connected with the appearances of epidemic diseases abroad.

*Bulletins, etc., received.*—The weekly Public Health Reports of the United States Public Health Service have been regularly received and are of great value, as are also the monthly bulletin from provincial, state, and municipal boards of health in Canada, the United States, and other countries. The bulletins of the International Office of Public Health, Paris, and of the Sleeping Sickness Bureau, London, have been regularly received throughout the year, and in both cases spare copies have been distributed to the provincial boards of health.

*Official Visits, Inspection, etc.*—On the 19th June last I left, by your instruction, to inspect on the Atlantic coast. I visited the quarantine station at Grosse Isle, Que.; the leper lazaretto at Tracadie, N.B.; the quarantine stations at Chatham and St. John, N.B., Digby, Halifax, Sydney, and Louisburg, N.S., Charlottetown and Summerside, P.E.I.; Rimouski, Que.; and made a second inspection at Grosse Isle, Que., in connection with the improvements being carried on there.

On August 17, I left for the Pacific coast. I inspected at Vancouver, Victoria, William Head, and Prince Rupert, and the leper lazaretto at Darcy Island.

No meeting of the Canadian Medical Association was held this year, owing to the absence of so many medical men on military duty.

The Canadian Public Health Association held its annual meeting in Toronto on the 3rd and 4th of September.

I had the honour to represent you at the annual meeting of the American Public Health Association held in Rochester, N.Y., September 6 to 10. This association includes the United States of America, the Dominion of Canada, the Republic of Mexico, and the Republic of Cuba. The attendance including the New York State Sanitary Officers' Association, was close to 2,000.

An address of welcome was given by Governor Whitman of New York state. Of this address a recent writer says—

As a significant sign of the times we might well refer to the address of Governor Whitman of New York state. It represented the attitude of a broad-minded state executive toward the public health movement of to-day.

Governor Whitman pointed out that "public health is only one of many fields of public work which are growing and expanding year by year, and demanding constantly larger appropriations which they are able to justify by valid evidence of excellent results attained. Meanwhile, city and state debts and tax rates are mounting to an unprecedented degree." Yet he concluded that "public health is one of the social activities of the state whose development should be curtailed only in the very last necessity." After a keen and incisive review of the more important phases of the public health campaign—in relation to infant mortality, communicable diseases, tuberculosis and the diseases of later life—Governor Whitman points out as a justification of public health work, even on economic grounds, that the reduction in the New York state death-rate of 0.4 per 1,000 in 1914, as compared to 1913, corresponds to a saving of 4,000 lives which, taking the ordinary estimate of \$5,000 for the average value of a human life, "means an economic saving of \$20,000,000 due to progressive health work in a single year."

Most inspiring of all is the Governor's attitude toward the integrity of the public health service and its freedom from political control.

Finally, those who have watched the admirable results of the system of state health organization through a corps of district sanitary supervisors in force for two years in New York state will welcome the Governor's cordial approval of the plan as "most important and beneficial to the local communities." He adds, "I sincerely hope that some means may be found by which the services of these physicians may be retained, and feel confident that next year, when the members of the legislature are made fully acquainted with the facts as to the value of these services, funds will be provided for their continuance. I shall use my influence to attain this end, for, while rigid economy in the administration of the finances of the state is essential, savings in expenditure attained through decreased efficiency in health work are not only unwise but resolve themselves, in the end, into irreparable waste of the most valuable resources of the Commonwealth."

At this meeting of the Association, of which I have been a member since 1887, and of which I am a past-president, I had the honour to be elected an honorary member. Others who received a like honour at the same time were Dr. Stephen Smith, the first president of the Association in 1872, 1873 and 1874; General Gorgas of Panama Canal fame, General Sternberg, the Bacteriologist, and Dr. Henry Holton of Vermont.

On the 6th of this month I was delegated by you to attend a meeting at Washington, D.C., of the International Joint Commission of the Pollution of Boundary Waters. The meetings were held on the 8th and 9th.

The *Journal of the American Medical Association* speaks of this meeting as follows:—

The International Joint Commission held a meeting at Washington, D.C., March 8 and 9, to consider the final report on the engineering investigations which have been made during the past year relative to the pollution of boundary waters. The commission is composed of three members from the Dominion of Canada and three from the United States. It is formed as a permanent tribunal for the adjustment of boundary matters between the two countries under the terms of the treaty of January 11, 1909, between the United States and Great Britain. The commission has from time to time considered various matters relative to water power, water diversion and obstruction to navigation, including the adjustment and control of lake levels, and has also during the past three years been considering the matter of pollution of boundary waters.

The treaty referred to states that "the waters therein defined as boundary waters and the waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other." In 1913 a reference comprising two

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branches was submitted to this commission whereby it was asked to determine in brief, first, whether the treaty obligations were being violated and if so, at what points and to what extent and by what causes, and, secondly, what remedies would be feasible and advisable under the circumstances. The first branch of the reference was answered by the commission in a progress report dated January 16, 1914, embodying the report of the sanitary experts. Of the latter, Dr. Allan J. McLaughlin, United States Public Health Service, had been appointed chief sanitary expert, and with him was associated Drs. J. W. McCullough and John A. Amyot, and Fred A. Dallyn, all of the Provincial Board of Health of Ontario. In brief, it was found that the provisions of the treaty were seriously violated, and that public health was endangered at many points, particularly on the boundary rivers. The waters of the Great Lakes themselves, from an international standpoint, were found to be satisfactorily pure, existing pollution being confined to the shore fronts.

The second branch of the reference was essentially engineering, and its solution was placed in the hands of Prof. Earl B. Phelps as consulting sanitary engineer. Engineering offices were opened at Detroit and Buffalo in charge of Mr. Henry C. McRae and Mr. Frank C. Tolles, respectively, and during the past year comprehensive drainage and disposal schemes have been developed for these two cities and for all the smaller communities on both sides of the St. Clair, Detroit and Niagara rivers. The final report on this work has just been completed, and is now in course of publication. The meeting of the commission referred to was for the purpose of hearing and discussing this report. The general conclusions and recommendations of the report have not been accepted by the commission, and will not be until all the interested communities, as well as the state and federal representatives of the two governments have had opportunity to review the findings and to be heard relative thereto.

Not only does this international commission represent a unique and, by contrast with other existing methods, an eminently satisfactory method of dealing with international affairs, but also the findings of the commission in the particular case in question promise to point the way toward a more systematic and consistent policy of the control of stream pollution than has heretofore been possible under existing methods of state control.

*Changes in Medical Staff (temporary).*—With your approval Dr. V. N. Mackay, Assistant Medical Officer and Bacteriologist of the Halifax Quarantine Service, and Dr. Warwick, assistant Medical Officer of the St. John, N.B., Quarantine Service were given leave of absence to join the Military Medical Service for active duty. The place of Dr. Mackay has been filled by the temporary appointment of Dr. A. E. Blackett of Halifax. Dr. Warwick's place was filled for the winter by the transfer to St. John of Dr. Heagerty from the Grosse Isle Station, where navigation was temporarily suspended.

*Stations, etc.—Grosse Isle, Que.*—Vessels inspected 315, being a decrease of 40 as compared with last year, and at the substitution of Rimouski 40, being a decrease of 29 from last year's figures. Persons inspected at Grosse Isle 27,667, at Rimouski 25,669, a total of 53,336, as against 119,598 last year, a decrease of 96,262, due to the lessened immigration owing to the war.

Infectious disease was reported or discovered on 23 occasions. The cases and contacts were landed at Grosse Isle.

Seventy-six persons were admitted to hospital. The diseases were measles, variçella, mumps, enteric fever, and diphtheria. No one of these cases proved fatal. The admission to hospital in 1914 were 502. In 1913 they were 1,720. With the large immigration to be expected after the war, the admissions may again well reach, or exceed the figure of 1913. It is therefore of urgent importance that the building of the new hospital which has been begun be pushed rapidly to its completion.

*Halifax, N.S.*—Vessels inspected 274. Persons inspected 19,357. This was 49,471 less than in the preceding year. No quarantinable disease presented itself, and there was no admission to hospital for such disease.

*St. John, N.B.*—Vessels inspected 272. Persons inspected 23,877. Admissions to hospital 3; one case each of diphtheria, scarlet fever and enteric fever.

The pressing need of a deep water wharf makes itself more and more felt as each year's dredging of the harbour increases the rapidity and strength of the current. It is extremely dangerous to lighter to and from the quarantine boat in rough weather. Several times this winter a boat accident has been narrowly escaped. Apart from the risk to the staff an accident in landing passengers would be an extremely serious matter.

*Chatham, N.B.*—Vessels inspected 109. Persons inspected 1,143. No quarantinable disease.

*Digby, N.S.*—No quarantinable vessels entered the Annapolis Basin this year.

*Sydney, N.S.*—Vessels inspected 248. Persons inspected 11,033. No quarantinable disease.

*Louisburg, N.S.*—Vessels inspected 112. Persons inspected 2,985. No quarantinable disease.

*Charlottetown, P.E.I.*—Vessels inspected, 8. Persons inspected, 91. No quarantinable disease.

*Summerside, P.E.I.*—No quarantinable vessels entered this port during the year.

*William Head, B.C.*—Vessels inspected 174. Persons inspected 26,754. The ss. "Titan" is in quarantine with a case of smallpox. Her passengers 74 in number have been landed. The ship is from Yokohama.

An improved water supply is most pressingly required. It is quite inadequate for domestic purposes, and still more so in case of a fire such as so closely threatened the station last summer.

*Victoria, B.C.*—No quarantinable vessels entered this port during the year.

*Vancouver, B.C.*—No quarantinable vessels entered this port during the year.

*Prince Rupert, B.C.*—No quarantinable disease. A fresh-water supply is pressingly needed. Also a disinfection building. There is, as yet no provision made for handling an infected vessel at this port.

*Military occupation.*—In order to help to give prominent positions in the harbours of Halifax and St. John to the militia defending the country, you allowed the military authorities to occupy with troops all the buildings at the quarantine stations of Lawlors Island and Partridge Island that could possibly be spared without entirely paralysing those stations for quarantine service.

*Tracadie Leper Lazaretto, N.B.*—Patients at present 15. Seven males and eight females. There were two deaths during the year, and one new patient was admitted See under Leprosy.

The devotion and care given to the patients by the nursing religious sisters continue to be above all praise.

*Darcy Island Leper Lazaretto, B.C.*—The buildings at this leper lazaretto are in good repair. They have not been occupied during this year.

*Public Works Health Act.*—Your inspector for Eastern Canada states that the year has been an exceptional one in the almost non-appearance of contagious and infectious diseases among the men employed on the various public works coming under his inspection. He has found the medical service given to be complete. The sleeping

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quarters and boarding of the men fully equal to the very good conditions reported by him last year.

Your inspector for Western Canada reports the year as remarkable for the sudden falling off in the volume of work and number of men engaged, and in the freedom from epidemic disease.

On the Hudson Bay Railway work much of the grading work was re-sublet to stationmen who lived in small segregated parties with improvised habitations. Though antiscorbutic food was obtainable some parties fed themselves so poorly on unvaried diet and indifferent cooking that numerous cases of scurvy developed. The trouble was eliminated by using pressure on the employees to have them eat more vegetables and fruit.

I have the honour to be, Sir,

Your obedient servant,

F. MONTIZAMBERT, M.D.

*Director-General of Public Health.*

The Honourable,  
The Minister of Agriculture.  
Ottawa.



# MISCELLANEOUS

## EXHIBITIONS.

### APPENDIX No. 2.

SAN DIEGO, CAL., April 1, 1916.

SIR,—I have the honour to submit the following report of the operations of the Exhibition Branch of your Department for the fiscal year ended March 31, 1916:—

#### PANAMA PACIFIC INTERNATIONAL EXPOSITION, SAN FRANCISCO.

The greatest part of the fiscal year 1915-16 was spent at the Panama Pacific International Exposition, held at San Francisco, California, from February 20 to December 4, 1915, where, according to your instructions, we endeavoured to make our participation one of great magnitude that would surpass all our previous efforts. My report on the operations of this branch for the year 1914-15 affords detailed information as to the extent and importance of our participation in San Francisco and the results obtained up to the 31st of March, 1915. The great success of our exhibit during the first weeks continued unabated during the whole length of the Exposition. The Canadian Pavilion was recognized by all to be the most attractive building on the Exposition grounds, and the press and visitors were unanimous in giving Canada credit for being the foremost country in the world in the art of exhibiting and advertising her resources.

The attendance at the Panama Pacific International Exposition, San Francisco, totalled nearly 19,000,000, and practically all the visitors passed through our building. All the staff was kept busy answering inquiries from visitors from all parts of the United States regarding Canada, especially the farm lands of the Northwest, where a great many expressed their desire to go and settle. Another gratifying feature was the fact that our exhibit was visited by a large number of Canadians who were loud in their praise for what the Canadian Government was doing to advertise the country, expressing at the same time their satisfaction at our fine exposition.

A large quantity of Atlases and other publications issued by the Federal and Provincial Governments have been distributed during the year. This literature affords a thorough knowledge of Canada's resources, and deals especially with the adaptability of our soil and climate for agricultural purposes, and the opportunities offered for the safe investment of capital in our forest and mineral wealth. I have no doubt that Canada will derive great benefit through making such an extensive and comprehensive exhibit in California.

#### PANAMA CALIFORNIA INTERNATIONAL EXPOSITION, SAN DIEGO, 1916

The Canadian Government having decided to take part in the Panama California International Exposition held in San Diego, California, during 1916, the exhibits shown in the Canadian Pavilion at San Francisco in 1915 have been transported to San Diego and are now installed in one of the finest buildings on the Exposition grounds, which has been placed at our disposal, free of charge, by the executive of the exposition. It is situated on the main thoroughfare of the grounds, near the main entrance. Its dimensions and construction were such as to allow the rigid and

7 GEORGE V, A. 1917

successful installation of the whole of our exhibit, at a comparatively low cost. As in San Francisco our display includes products of agriculture, horticulture, forestry, minerals, fish and game, and relief maps of our water-powers. Panoramas and pictures of all kinds illustrate the progress of colonization in Canada, as well as transportation facilities, especially in connection with the requirements of the Northwest grain crops. Our display of fresh and bottled fruit and our mineral exhibit can without hesitation be called unique. Special attention is also given to the distribution of Government literature and to the operating of our Information Bureau.

Although the transference of our exhibits from San Francisco to San Diego was considerably hampered and delayed by the unusual stormy weather experienced in Southern California at the beginning of this year, we succeeded in having our Building opened to the public on the 15th of February, three days before the official opening of the Exposition. The papers are again publishing most complimentary reports about our participation, and our Building has already been visited by thousands and thousands of people from all parts of the United States. The Panama California International Exposition is extensively advertised all over the United States, our exhibit being mentioned as one of the main features. Special rates from all eastern parts have been arranged with the railroads, and the management fully expects that the number of visitors to the exposition will by far exceed the two millions that passed through the gates last year. In this respect I may say that their expectations will be fully realized if the attendance in the future continues to be as large as it has been since the opening day, and as our exhibit is given as being quite as complete and effective as in San Francisco, I have no doubt that the best results will be achieved for Canada here.

I may add that the management of the Exposition, realizing the great importance of the Canadian exhibit as a drawing card, not only placed at our disposal, free of charge, the magnificent building in which our exhibit is now installed, but also assumed to meet all expenses in connection with the transfer of our goods from our building in San Francisco to the Exposition grounds here, and the supplying of water, gas, electric current and guards, thus bringing down to a considerable extent the cost of our participation.

The whole respectfully submitted.

WM. HUTCHISON,

*Canadian Exhibition Commissioner.*

To the Honourable,  
The Minister of Agriculture,  
Ottawa.







DEPARTMENT OF AGRICULTURE  
CANADA

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REPORT

OF THE

VETERINARY DIRECTOR GENERAL

(F. TORRANCE, B.A., D.V.S.)

FOR THE

YEAR ENDING MARCH 31, 1916

*PRINTED BY ORDER OF PARLIAMENT.*



OTTAWA

J. DE LABROQUERIE TACHÉ

PRINTER TO THE KING'S MOST EXCELLENT MAJESTY

1917



# REPORT

OF

## THE VETERINARY DIRECTOR GENERAL

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OTTAWA, March 31, 1916.

SIR,—I have the honour to present my report as Veterinary Director General for the year ending March 31, 1916.

The absence of a considerable number of our veterinary inspectors, and other members of our staff, who have joined the colours, has rendered us somewhat short-handed. Notwithstanding this difficulty, the work of the branch has not been neglected in any way. Our officers have shown their willingness to do more than their duty, and have enabled us, by their diligence, to overcome the handicap of scarcity of workers.

To all the members of our staff I desire to express my appreciation of the loyal service they have given to our branch during the emergencies that have arisen.

Progress has been made in the control of contagious diseases, foot-and-mouth disease has been kept out of our borders, and new methods have been inaugurated with success.

The Meat Inspection Division has had a particularly busy year, owing to the great increase in the export of dressed meats caused by the war, full particulars of which are given herewith.

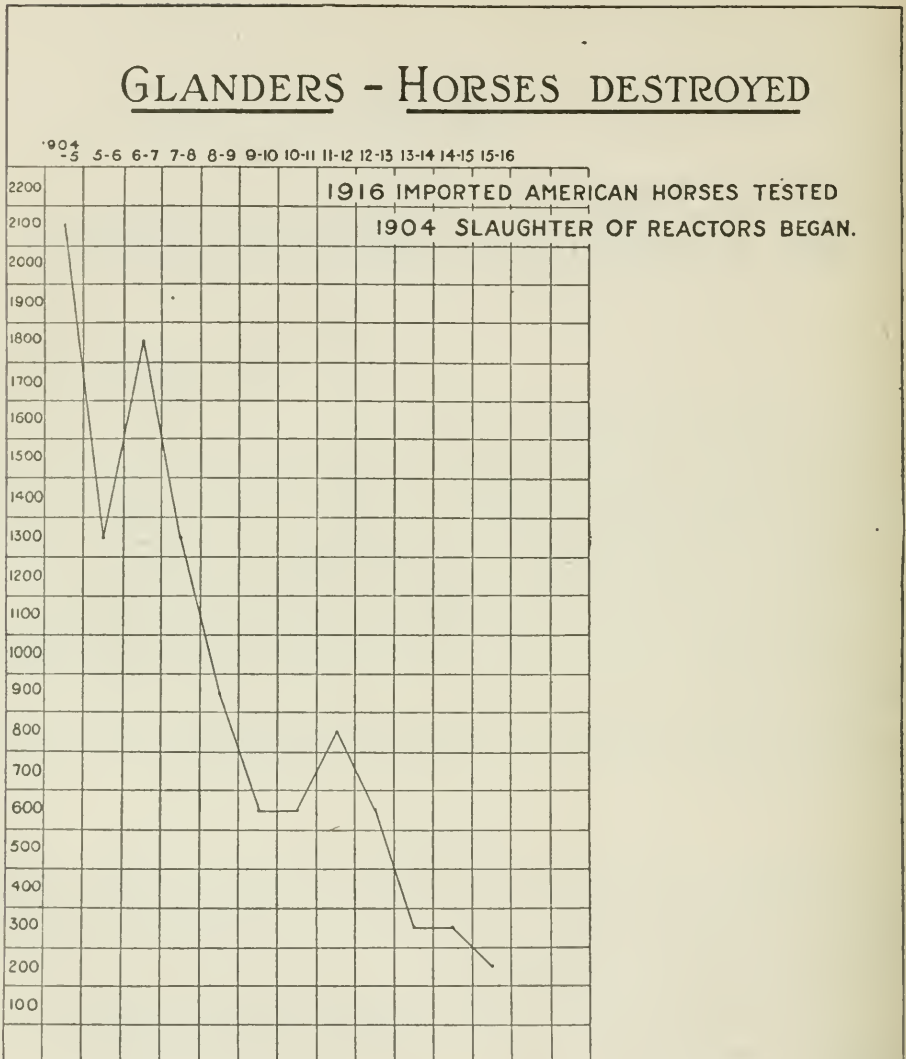
### GLANDERS.

A gratifying reduction in the number of horses destroyed for glanders is to be noted; and these, as in former years, have been found almost entirely in the Prairie Provinces. Of the total number killed, 241, the province of Saskatchewan contributed 191, the remainder being scattered between the other provinces, with the exception of the Maritime, in which no cases were found.

The more recent settlement of Saskatchewan, the importation of horses to supply the wants of new settlers, and the delay which often occurs in reporting suspicious cases to our inspectors, are the probable causes of the number of outbreaks in this province.

Eleven reactors were detected among American horses tested by our officers at the border. These were refused admittance to Canada and returned to the United States to be dealt with according to their laws.

	No. Horses Destroyed.	Compensation Paid.
1906 . . . . .	1,787	\$168,845
1907 . . . . .	1,881	141,067
1908 . . . . .	1,324	122,898
1909 . . . . .	881	75,288
1910 . . . . .	627	48,988
1911 . . . . .	666	52,123
1912 . . . . .	563	57,419
1913 . . . . .	608	60,271
1914 . . . . .	338	36,666
1915 . . . . .	380	34,186
1916 . . . . .	226	21,648



## DOMINION.

- 4 killed on inspection.  
 209 " at first test.  
 27 " " second test.  
 1 " " fourth test.

241 (valued at \$34,655, at a cost of \$23,102.76).

67 showed clinical symptoms.

7,523 horses were tested with mallein, of which 237 reacted and were destroyed. Of the 237 reactors, 67 showed clinical symptoms of glanders at or during the test.

95 horses are under control for retest.

Of the above 237 horses slaughtered 8 were killed without compensation.

## SESSIONAL PAPER No. 15b

## NOVA SCOTIA.

41 horses were tested and proved to be healthy.

## NEW BRUNSWICK.

79 horses were tested and proved to be healthy.

## QUEBEC.

3 killed on inspection.  
12 " " at first test.

—  
15 (valued at \$1,920, at a cost of \$1,279.99).

13 showed clinical symptoms.

119 horses were tested with mallein, of which 12 reacted and were destroyed. Of the 12 reactors, 10 showed clinical symptoms of glanders at or during the test.

Of the 15 horses slaughtered—

2	were	in	the	electoral	district	of	Montmagny.
3	"	"	"	"	"	"	Bellechasse.
1	was	"	"	"	"	"	Terrebonne.
4	were	"	"	"	"	"	Jacques Cartier.
2	"	"	"	"	"	"	Montreal.
3	"	"	"	"	"	"	Beauce.

—  
15

## ONTARIO.

5 killed at first test.  
2 " " second test.

—  
7 (valued at \$1,250, at a cost of \$833.31).

3 showed clinical symptoms.

69 horses were tested with mallein, of which 7 reacted and were destroyed. Of the 7 reactors, 3 showed clinical symptoms of glanders at or during the test.

2 horses are under control for retest.

Of the 7 horses slaughtered—

6 were in the electoral district of Renfrew, S.R.  
1 was in the electoral district of Glengarry.

## MANITOBA.

4 horses were killed on first test, valued at \$665.00, at a cost of \$443.33.  
1 showed clinical symptoms.

162 horses were tested with mallein, of which 4 reacted and were destroyed. Of the 4 reactors 1 showed clinical symptoms of glanders at or during the test.

The 4 horses slaughtered were in the electoral district of Dauphin.

## SASKATCHEWAN.

167 killed at first test.  
24 " " second test.

—  
191 (valued at \$27,805, at a cost of \$18,536.17).

43 showed clinical symptoms.

5,240 horses were tested with mallein, of which 191 reacted and were destroyed. Of the 191 reactors, 43 showed clinical symptoms of glanders at or during the test.

93 horses are under control for retest.

Of the 191 horses slaughtered—

13	were	in	the	electoral	district	of	Regina.
21	"	"	"	"	"	"	Humboldt.
108	"	"	"	"	"	"	Moosejaw.
1	was	"	"	"	"	"	Qu'Appelle.
37	were	"	"	"	"	"	Assiniboia.
5	"	"	"	"	"	"	Battleford.
1	was	"	"	"	"	"	Saskatoon.
5	were	"	"	"	"	"	Salcoats.

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191

ALBERTA.

1 killed on inspection.

20 " at first test.

1 " at fourth test.

---

22 (valued at \$2,875, at a cost of \$1,916.63).

6 horses showed clinical symptoms.

1,799 horses were tested with mallein, of which 21 reacted and were destroyed. Of the 21 reactors, 5 showed clinical symptoms at or during the test.

Of the 22 horses slaughtered—

6	were	in	the	electoral	district	of	Medicine Hat.
4	"	"	"	"	"	"	Macleod.
7	"	"	"	"	"	"	Calgary.
4	"	"	"	"	"	"	Red Deer.
1	was	"	"	"	"	"	Strathcona.

---

22

BRITISH COLUMBIA.

1 killed at first test.

1 " " second test.

---

2 (valued at \$140, at a cost of \$93.33).

1 showed clinical symptoms.

14 horses were tested with mallein, of which two reacted and were destroyed. Of the reactors, 1 showed clinical symptoms at or during the test.

RABIES.

In Ontario, 69 premises were quarantined on account of the prevalence of rabies in the adjacent districts, distributed as follows:—

District.	Premises quarantined.
Brant.. . . . .	3
York.. . . . .	18
Dufferin.. . . . .	15
Simcoe.. . . . .	4
Welland.. . . . .	3
Peel.. . . . .	4
Wellington.. . . . .	1
Halton.. . . . .	2
Oxford.. . . . .	1
Norfolk.. . . . .	3
Perth.. . . . .	15



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## DOURINE.

A further reduction in the number of cases of this disease shows that gratifying progress has been made. The disease is of such an insidious nature that no effort is spared in the hope of its final eradication. Horse owners have co-operated with the Health of Animals-Branch to a marked degree and have, very generally, submitted with a good grace to the restrictions of breeding and the movement of horses it was deemed necessary to impose. The laboratory at Lethbridge has again shown its great usefulness in affording facilities for the immense number of blood tests made by our pathologist there, Dr. W. L. Hawke, and his assistants

	Horses destroyed.	Compensation.	
		\$	cts.
1907.....	167	10,336	00
1908.....	49	3,449	00
1909.....	28	2,506	00
1910.....	37	3,419	00
1911.....	41	5,110	00
1912.....	18	1,739	00
*1913.....	18	2,096	00
1914.....	394	32,080	00
1915.....	382	31,363	00
1916.....	220	16,646	00

\* Complement fixation test used for diagnosis.

## DOURINE.

228 animals, valued at \$26,085, were slaughtered as being affected with this disease, at a cost of \$17,389.65, distributed as follows:—

## SASKATCHEWAN.

Electoral District.	Animals quarantined.	Slaughtered.
Moosejaw.....	185	31
Saskatoon.....	1	
Assiniboia.....	2	
Battleford.....	21	1
	209	32

## ALBERTA.

Calgary.....	85	12
Macleod.....	697	90
Medicine Hat.....	1,097	86
Red Deer.....	47	8
Strathcona.....	126	
Edmonton.....	1	
	2,653	196

ONTARIO.

	Animals quarantined.	Slaughtered.
Parry Sound . . . . .	1	—

CATTLE MANGE.

A further reduction of the mange area was effected during the year, nearly seventy townships being released. There has also been a diminution in the number of herds quarantined. The dipping of cattle under the supervision of our officers now meets with little or no opposition from owners, as they are realizing the advantages derived from ridding their cattle of other parasites as well as mange. Dipping is found to improve the general health and vigour.

Province.	Outbreaks	Animals affected.	Animals quarantined.
Saskatchewan . . . . .	23	75	15,651
Alberta . . . . .	57	759	23,937
British Columbia . . . . .	* 3	.....	25
Quebec . . . . .	1	2	2

\* Canadian Pacific Railway Company Stock Yards, and Canadian Northern Pacific Railway Company Stock Yards at Kamloops are also quarantined, a license being required before any animals may be removed.

56,625 cattle were inspected on being presented for shipment from the quarantined area in Saskatchewan and Alberta.

136,787 cattle were inspected in Winnipeg on arrival from points west thereof.

HORSE MANGE.

Outbreaks have occurred in these provinces, and all were successfully treated under our officers' supervision.

Province.	Outbreaks.	Animals affected.	Animals quarantined.
Quebec . . . . .	26	39	55
Saskatchewan . . . . .	140	321	968
Alberta . . . . .	1	3	400
	167	363	1,423

24,552 horses and 41 mules were inspected on being presented for shipment from the quarantined area in Alberta and Saskatchewan.

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## SHEEP SCAB.

Two outbreaks, both in Manitoba, occurred during the year, and were successfully handled. The remainder of Canada was free from the disease.

In Manitoba 746 animals on 9 premises were found to be affected with sheep scab.

District.	No. affected.
Dauphin. ....	9
Brandon .....	737
	<hr/> 746

In accordance with the Quarantine Regulations, 501 sheep imported into Canada were quarantined for the prescribed period of thirty days

## ANTHRAX.

A few outbreaks occurred in Ontario and Quebec. Vaccine prepared in our laboratory at Ottawa was successfully used in its control.

The following outbreaks were reported and dealt with during the year:—

Province.	Outbreaks.	Animals quarantined.	Animals affected.
Quebec .....	3	136	6
Ontario .....	10	229	19
	<hr/> 13	<hr/> 365	<hr/> 25

Eight hundred and ninety-nine doses of anthrax vaccine and 100,022 doses of blackleg vaccine were sent out during the year.

## TUBERCULOSIS.

The application of the federal regulations to the city of Saskatoon began with the close of our last fiscal year, and I now report the result of the first year of operation. This has been highly satisfactory. The number of reactors found at the first test was less than might have been expected, and in the work of getting rid of them there was a gratifying absence of friction or dissatisfaction. In fact, no complaints have reached the branch from the dairymen concerned, that they considered their treatment unfair.

The citizens of Saskatoon have been well satisfied with the results attained, and the city council have expressed this feeling in the following resolution, passed July 13, after the completion of the first test:—

“That this city very much appreciates the prompt and effective response to their application to have all the cattle in the vicinity of Saskatoon tested for tuberculosis, and the excellent work carried out by the assistants of the Veterinary Director General's Department.”

As this report deals only with the work done previous to March 31, 1910, the following figures can only be taken to show what has already been accomplished towards a task, which is far from complete, and which it would be unreasonable to expect to finish in one year.

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## RECORD OF TESTING AT SASKATOON.

2,232	cows tested at first test . . . .	136	reactors = 6	per cent.
561	“ second test . . . .	27	“ = 4.8	“
144	“ third test . . . .	0	“ = 0	“

The much smaller number shown at the second and third tests is due to the fact that the first test disclosed a large number of herds that contained no reactors. These herds were not retested during the period covered by the report. The herds in which reactors were found were retested as soon after the first test as it was deemed advisable, any reactors dealt with under the regulations, and a third test made after a reasonable interval.

## DISPOSAL OF REACTORS.

The regulations provide for three methods of dealing with reactors: (1) immediate slaughter, (2) slaughter after fattening, and (3) withdrawal from the raw milk trade. Of the 163 reactors mentioned above, 144 were slaughtered either immediately or after fattening, 9 were still fattening for slaughter, and 10 were withdrawn from the dairy business by their owners, who preferred to have their licenses cancelled. These ten cows were earmarked by punching out a large "T" in the right ear to indicate to future purchasers that they are tuberculous cattle.

The small percentage of cattle thus withheld from slaughter is, I think, fair evidence that the majority of dairymen do not want to keep tuberculous cows, and will get rid of them if reasonable assistance is granted.

142 reactors slaughtered, valued \$9,440, compensation \$3,144.59.

2 reactors slaughtered, salvage in excess of value.

1 reactor traded for horse.

9 reactors, where owners preferred to have licenses cancelled than slaughter animals. These could not be classed under section (a), paragraph 5, of the Tuberculosis Order and were therefore earmarked and released.

9 reactors not yet slaughtered.

---

163 reactors.

## NEW METHODS OF TUBERCULIN TESTING.

The advocates of intradermal and subpalpebral testing have been claiming for these methods equal reliability with the old subcutaneous test, and the great advantage of taking less time. The accuracy of a test is usually affirmed when it is found on postmortem examination that the animal which reacted to the test was actually diseased. As the non-reactors are not usually killed at the time of the test, there is no evidence to show that they were free from disease. In order to determine accurately both aspects of the question the following experiment was carried out:—

One thousand and six cows, which were about to be slaughtered at an abattoir, were first submitted to the test. This was applied by two of our most experienced inspectors, Drs. Moore and Stork. The tuberculin used was of two kinds; the first was prepared in our own laboratory at Ottawa and used in the testing of 908 cattle; the second kind of tuberculin was obtained from a well-known firm of biological chemists in the United States, and was specially made for intradermal testing. Ninety-eight of the cattle were tested with this tuberculin. No difference in the results was observed in the use of these different tuberculins.

In order to test the relative advantages or disadvantages of the intradermal and subpalpebral methods, 656 were tested by the former, and 350 by the latter. The intradermal method usually adopted involves the injection of the tuberculin ( $\frac{1}{4}$  c.c.) into the skin at the root of the tail, where the skin forms a fold known as the caudal

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fold. The injection is made into the inner layer of the skin and not into the tissue beneath the skin, the operation requiring more skill and care than the subcutaneous injection.

The subpalpebral method is a modification of the intradermal, and differs from it in the place selected for the injection. This is a fold of skin of the lower eyelid, and is supposed to offer a cleaner site and to furnish a more marked reaction. In both methods the reaction consists of a swelling which makes its appearance at the site of injection several hours afterwards, and usually reaches its maximum in forty-eight or seventy-two hours. The extent of the reaction is judged by the size of the swelling, comparing one eye with the other, or one caudal fold with the other. In non-reactors the trifling swelling caused by the tuberculin soon disappears, and in both reactors and non-reactors no permanent effect remains.

Comparing the results obtained by the two methods, no difference as to accuracy could be detected, and the inspectors making the test were indifferent as to which method they used.

Taking the test as a whole, the following results were obtained:—

Total number of cattle tested . . . . .	1,006
“ “ slaughtered . . . . .	1,006
“ “ reacting . . . . .	45
Number of reactors found diseased on postmortem . . . . .	15
“ “ suspects “ “ “ . . . . .	22
“ “ suspects “ “ “ . . . . .	8

In addition to the suspects found diseased on postmortem, there were thirteen suspects in which no disease was found, and there were three reactors in which no disease was found.

It will be noted from the above that the result was far from satisfactory. Not only did the test fail to pick out the diseased animals, but it indicated disease in animals where it could not be found. The large number of suspects shows that there is much difficulty in reading aright the evidence of swelling. There is sometimes a slight swelling which the inspector is at a loss to explain. It may be a slight reaction, or perhaps a slight local infection or irritation from something carried in by the needle from the surface of the skin. The inspector is unable to decide, and classes the animal as suspicious.

A similar difficulty is not infrequent in making the subcutaneous test. The temperature recorded shows a rise following the injection, but not sufficient to be called a reaction, and the animal is classed as suspicious. However, in subcutaneous testing the proportion of suspects is very limited, and never as high as in this experiment.

On the whole, the result is not satisfactory to the new tests, and I do not think we would be justified in adopting either, in preference to the present method. This has its drawbacks, but, in good hands and used on cattle that have not been tampered with, it is quite reliable.

I would call attention to the small percentage (4.5 per cent) of diseased animals found in this lot of cattle. These were all old dairy cows, known to the trade as ‘canners,’ and such cattle are generally supposed to be more frequently affected with tuberculosis than almost any other class. They were tested in the Toronto Stock Yards, and may fairly be supposed to have come from farms in Ontario. This may indicate that bovine tuberculosis is not as widespread as is commonly supposed.

#### *Tuberculin Tests Made.*

Two hundred and seventy-one were tested on being imported into Canada, 6 of which reacted, 2 were classed as suspicious, and 263 proved healthy.

Eight hundred and six cattle were tested for export, 8 of which reacted, 3 were classed as suspicious, and 795 proved healthy.

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Five thousand three hundred and seventy-one cattle were tested by private practitioners, 366 of which reacted, 98 were classed as suspicious, and 4,907 proved healthy.

All reactors were permanently earmarked by a veterinary inspector, in cases where the owner did not voluntarily destroy them.

Two hundred and fifty-eight cattle were tested for shipment to different parts of the Dominion, 10 of which reacted, and 248 proved healthy.

One thousand nine hundred and seventy-five cattle were tested in herds under the supervision of this department, 119 of which reacted, 18 were classed as suspicious, and 1,838 proved healthy.

Eight hundred and fifty-five other cattle were tested by officials of this department, 58 of which reacted, 37 were classed as suspicious, and 760 proved healthy.

### HOG CHOLERA.

The experience of past years having proved conclusively that the feeding of uncooked garbage is a frequent cause of hog cholera, and has been responsible for many serious outbreaks of the disease, it was decided to limit this practice to those who are willing to cook the garbage and to maintain their hog pens in a sanitary condition.

The following regulation was passed and is now law:—

“The feeding of swine upon garbage, either raw or cooked, obtained elsewhere than on the premises where fed, is prohibited, unless special permission in writing is first obtained from the Veterinary Director General.”

Following the passing of this regulation, our inspectors have endeavoured to have all persons engaged in the business of garbage feeding apply for a license to continue the same. No charge is made for a license, but licenses are issued only to persons having the necessary appliances for cooking the garbage, and who maintain their premises in a sanitary manner.

A large number of licenses have been issued, and the supervision which this system enables us to exercise over this business is already showing good results. No prosecutions have yet been undertaken of parties who continue to feed garbage without a license, but it will probably be necessary to do so unless the law is generally obeyed.

Another important change in our method of handling hog cholera has resulted in reducing the losses from the disease to a considerable extent. This is the use of serum to save as many as possible of the hogs in an outbreak. We are using the “serum alone” method to immunize hogs which have been exposed to infection but have not yet developed the symptoms of the disease. Under former methods, these hogs were slaughtered and their carcasses destroyed, so as to stamp out the infection as soon as possible. Now we are able to save a large number of hogs which are fattened under quarantine, and subsequently slaughtered under inspection for pork. We are not permitting these immunized hogs to remain alive for breeding purposes, as it is likely that some of them may be immune carriers of the disease, and thus originate fresh outbreaks.

The serum is injected by our own inspectors without cost to the farmer, and the serum is obtained from highly recommended manufacturers in the United States. For many reasons this appears to be more desirable at present than to engage in its manufacture at our laboratory here.

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ESTIMATED saving to the department through the use of hog cholera serum from April 26, 1915, to December 31, 1916.

Hogs treated with serum, 1915-16.....	2,349
"    "    "    April 1, 1916, to December 31, 1916..	6,036
<hr/>	
Total hogs treated.....	8,385
Estimated compensation value.....	\$57,145 66
Cost of 346,699 c.c. serum at \$15 per 1,000.....	1,451 28
Estimated cost of express.....	75 00
"    "    broken syringes and needles.....	49 00
"    "    ear tags.....	75 00
<hr/>	
Total expense.....	\$ 1,691 28
<hr/>	
Estimated saving.....	\$55,454 38

I am glad to report that a very great improvement is shown in the figures for the year now ending. Last year was very expensive to us in the heavy losses occasioned by this disease, and the drop from 34,470 hogs destroyed in 1915 to only 5,700 in 1916 is extremely gratifying.

	No. of hogs destroyed.	Compensation.
1909.....	1,881	\$ 9,912
1910.....	1,127	7,087
1911.....	1,346	8,818
1912.....	4,249	23,446
1913.....	8,466	52,785
1914.....	34,779	198,981
1915.....	34,470	188,582
1916.....	5,700	33,695

*Dominion.*—In the Dominion, 5,700 hogs were destroyed as diseased, at a cost of \$33,699.95 in compensation.

*Nova Scotia.*—Three outbreaks of hog cholera occurred in Nova Scotia, in which 399 hogs, valued at \$3,063 were destroyed, at a cost of \$2,011.98 in compensation. Three premises were quarantined on suspicion of hog cholera.

*Quebec.*—Thirty-one outbreaks of hog cholera occurred, in which 706 hogs, valued at \$6,125, were destroyed in the undermentioned districts, at a cost of \$4,083.28.

One hundred and thirty premises were also quarantined on suspicion, involving the control of 1,655 hogs.

Six hogs, valued at \$70, were destroyed for purposes of examination, but no evidence of hog cholera was found.

District.	No outbreaks	Hogs destroyed
Chambly-Verchères.....	2	3
Laval.....	6	60
Montmorency.....	1	187
Missisquoi.....	1	7
Bagot.....	3	83
Compton.....	3	7
Champlain.....	3	14
L'Assomption.....	1	27
Rimouski.....	3	6
Bellechasse.....	2	6
Labelle.....	6	81
Quebec.....	1	3
	<hr/>	<hr/>
	31	706

*Ontario.*—One hundred and sixty three outbreaks of hog cholera occurred, in which 2,537 hogs, valued at \$21,668.50, were destroyed in the undermentioned districts, at a cost of \$14,445.07 in compensation.

Two hundred and two premises were also quarantined on suspicion, involving the control of 4,758 hogs

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Twenty-two hogs, valued at \$141.82, were destroyed for purposes of examination, but no evidence of hog cholera was found.

District.	No. outbreaks.	Hogs destroyed.
Essex, S.R.	23	684
Essex, W.R.	2	21
Kent, E.R.	3	50
Kent, W.R.	10	227
York, S.R.	13	235
York, C.R.	9	80
Elgin, E.R.	11	218
Elgin, W.R.	9	123
Nipissing.	23	286
Oxford, S.R.	1	5
Wentworth.	3	38
Frontenac.	3	36
Middlesex, E.R.	6	118
Carleton.	9	53
Welland.	16	121
Waterloo, N.R.	2	69
Peel.	2	27
Brantford.	7	95
Brant.	4	35
Lincoln.	1	1
Haldimand.	3	4
London.	3	11
	<hr/>	<hr/>
	163	2,537

*Manitoba.*—Thirty-nine outbreaks of hog cholera occurred in Manitoba, in which 922 hogs, valued at \$8,981, were destroyed in the undermentioned districts, at a cost of \$5,987.28.

Thirteen premises were also quarantined on suspicion, involving the control of 177 hogs.

Ten hogs, valued at \$41, were destroyed for purposes of examination, but no evidence of hog cholera was found.

District.	No. outbreaks.	Hogs destroyed.
Winnipeg.	6	343
Brandon.	23	395
Dauphin.	2	14
Provencher.	2	170
	<hr/>	<hr/>
	39	922

*Saskatchewan.*—Twenty-two outbreaks of hog cholera occurred in Saskatchewan, in which 479 hogs, valued at \$4,415.40, were destroyed in the undermentioned districts, at a cost of \$2,943.58 in compensation.

Nineteen premises were also quarantined on suspicion, involving the control of 661 hogs.

Twenty-one hogs, valued at \$87.33, were destroyed for purposes of examination, but no evidence of hog cholera was found.

District.	No. outbreaks.	Hogs destroyed.
Assiniboia.	3	219
Saskatoon.	12	174
Battleford.	5	33
Moosejaw.	2	53
	<hr/>	<hr/>
	22	479

*Alberta.*—Seven outbreaks of hog cholera occurred in Alberta, in which 288 hogs, valued at \$3,526, were destroyed in the undermentioned districts, at a cost of \$2,350.64 in compensation.

Seventeen premises were also quarantined on suspicion, involving the control of 1,247 hogs.



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Nine hogs, valued at \$74, were destroyed for purposes of examination, but no evidence of hog cholera was found.

District.	No. outbreaks.	Hogs destroyed
Macleod.. . . . .	1	4
Edmonton.. . . . .	3	125
Strathcona.. . . . .	2	139
Medicine Hat.. . . . .	1	20
	7	288

*British Columbia.*—Twenty-five outbreaks of hog cholera occurred in British Columbia, in which 369 hogs, valued at \$2,772.30, were destroyed in the undermentioned districts, at a cost of \$1,848.12 in compensation.

Fifteen premises were also quarantined on suspicion, involving the control of 335 hogs.

Seven hogs, valued at \$30.66, were destroyed for purposes of examination, but no evidence of hog cholera was found.

District.	No. outbreaks.	Hogs destroyed.
Vancouver.. . . . .	1	35
New Westminster.. . . . .	3	71
Victoria.. . . . .	2	19
Yale-Cariboo.. . . . .	1	7
Nanaimo.. . . . .	16	226
Comox-Atlin.. . . . .	2	11
	25	369

LABORATORIES.

Our laboratories have continued to do good work in the manufacture of biological products for use in the diagnosis and control of disease, and have also been able to attack some of the problems in veterinary science, which call for research. In this latter respect, however, our efforts have been limited on account of the absence "with the colours" of Dr. Watson, of our Lethbridge laboratory, and Dr. Evans, of headquarters' staff.

At the Ottawa Biological Laboratory, under the charge of Dr. C. H. Higgins, a large quantity of biological products were manufactured for use in our service and for sale to the public.

	No. of doses.
Mallein.. . . . .	15,000
Tuberculin.. . . . .	22,980
"    precipitated.. . . . .	1,600
Strangles vaccine.. . . . .	3,056
Stock bacterial vaccine.. . . . .	14,346
Blackleg vaccine, single.. . . . .	128,510
"    "    double.. . . . .	342
Anthrax vaccine.. . . . .	342
Total.. . . . .	181,981

Our blackleg vaccine is now prepared in the form of pellets to be introduced beneath the skin by a special instrument. This change was made because of the frequent breakages of instruments in using the thread form of vaccine, and also on account of the increasing price of the silk cord used in its manufacture. Our sales of blackleg vaccine are increasing, and in its new form the vaccine appears quite satisfactory.

DISINFECTANTS.

The importance of reliable disinfectants for the work of this branch cannot be overestimated. In the suppression of disease, the cleansing and disinfecting of premises, on which cases of contagious disease have occurred, is a vital matter, and the agent used must be of sufficient strength to destroy germ life, or the work is of no avail.

The enormous increase in the price of carbolic acid, owing to its use in explosives, has resulted in the use of a great many substitutes, some of very doubtful value, and

I therefore decided that it would be well to test as many of these substitutes as we conveniently could. This work has occupied much of the time of Dr. Higgins, and has already given us good results. When the investigation is completed, it may be advisable to publish the results in bulletin form.

In examining and testing disinfectants, the method of the Hygienic Laboratory of the Public Health Service of the United States is employed, pure carbolic acid (phenol) being used as the standard of comparison.

Detailed information concerning the examinations made of a number of disinfectants is presented herewith. These are placed in alphabetical order for ready reference. We are not presenting full information concerning results secured with organic matter present, for in some instances these are still incomplete. Our experience indicates, however, that the drop in coefficient value when organic matter is added varies from one-twentieth to one-third, according to the chemical constituents included in the bulk disinfecting material. The pressure of work has been so great that we have been unable to complete this feature in every instance. However, we have sufficiently checked this aspect of the disinfectant problem to fully safeguard routine disinfecting operations.

CHLORIDE OF LIME.

		Phenol coefficient.
7739	Sample taken from Laboratory stock (Crown Diamond) . . . .	11·8
7740	Sample taken from Laboratory stock (Crescent) . . . . .	13·3

COOPER'S FLUID.

7230	Sample submitted by the Veterinary Director General . . . . .	1·53
7290	Sample submitted by the Veterinary Director General . . . . .	1·90
7726	Sample submitted by E. S. Archibald, Ottawa . . . . .	2·1
7763	Sample submitted by the County of Carleton General Protestant Hospital, Ottawa (barrel bulk) . . . . .	2·7

CRESOL COMPOUND.

7316	Sample submitted by Inspector W. W. Stork, Toronto, Ont. . . .	1·8
7408	Sample submitted by the Can. Northern Ry., Winnipeg, Man. . .	0·2
7449	Sample submitted from Turcot Yards . . . . . (Labelled Cresol compound but was really a Carbolic oil.)	1·6
7461	Sample submitted by Inspector W. W. Stork, Toronto, Ont. . . .	0·12
7560	Sample submitted by the Can. Northern Ry., Winnipeg, Man. . .	1·4
7689	Sample submitted by W. E. Troup, Niagara Falls, Ont. . . . .	1·0
7693	Sample submitted by the Can. Northern Ry., Winnipeg, Man. . .	2·65
7708	Sample submitted by the Grand Trunk Ry. stores, Ottawa. . . .	2·5
7721	Sample (Cre-septic) submitted by the Theo. B. Robertson Soap Co., Chicago, Ill., U.S.A. . . . .	1·9
7722	Sample submitted by the Grand Trunk Ry., Montreal, Que. . . .	2·8
7729	Sample submitted by W. E. Troup, Niagara Falls, Ont. . . . . (After settling an examination of the top layer gave a coefficient of 0·37, while the bottom gave a coefficient of 0·79.)	0·58
7760	Sample submitted by Inspector Shaver, Edmonton, Alta. . . . .	0·8
7780	Sample submitted by the Ottawa and New York Ry., Ottawa. . .	2·1
7785	Sample submitted by the Grand Trunk Ry., Niagara Falls, Ont. . . . .	2·98

CRUDE CARBOLIC ACID.

Chem. Lab. No.	Sample from Laboratory stock secured in 1912. . . . .	3·02
19970	.....	0·94
19971	.....	0·74
19972	.....	1·56
19973	.....	0·51
19974	.....	1·5
20001	.....	1·8
20005	.....	0·64
20013	.....	0·53
20015	.....	1·51
20016	.....	0·6
20017	.....	0·8
20018	.....	0·86
20046	.....	0·64
20060	.....	0·64
20061	.....	0·49
20062	.....	2·0

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Chem. Lab. No.	CRUDE CARBOLIC ACID.—Continued.	Phenol coefficient.
20069	.....	0.41
20326	.....	0.34
20715	.....	5.56
	(An emulsified product.)	
7271	.....	0.8
7272	.....	0.59
7317	Sample submitted by Inspector W. W. Stork, Toronto, Ont. . .	1.0
7360	Sample submitted by the Grand Trunk Ry., Montreal, Que. . .	2.5
7371	Sample submitted by the Central Vermont Ry., St. Albans, Vt. . .	1.0
7372	Sample submitted by the Canadian Pacific Ry., Montreal, Que. . .	2.63
7461	Sample submitted by Inspector W. W. Stork, Toronto, Ont. . . [Preparation called Cresol but is a crude black oily preparation (carbolic oil).]	0.12
7683	Sample submitted by Inspector W. W. Stork, Toronto, Ont. . .	0.38
7684	Sample submitted by Inspector W. W. Stork, Toronto, Ont. . .	0.4
	COOKS COFECTANT.	
	Sample received in 1910. Tested in 1915. . . . .	10.0
	OREOLIN.	
	Laboratory stock secured in 1913. Tested March 5, 1915	4.39
7417	Sample submitted by Inspector Philips, Bridgeburg, Ont. . . .	4.6
7436	Sample submitted by Inspector C. D. McGillvray, Winnipeg, Man. . . . .	2.2
	FORMALDEHYDE	
7441	Sample submitted by F. K. Dutcher, Druggist, St. Albans, Vt., U.S.A. . . . .	0.2
	HYCOL.	
	Laboratory stock. . . . .	4.31
	IZAL.	
	I Laboratory stock (Sample tin) . . . . .	6.10
	II " " " . . . . .	8.48
	III " " " . . . . .	6.24
7551	Sample submitted by the Veterinary Director General. (Sample tin) . . . . .	8.6
7715	Sample submitted by Inspector C. D. McGillvray, Winnipeg, Man. . . . .	7.5
7764	Sample submitted by the County of Carleton General Protestant Hospital, Ottawa, (from bulk supply) . . . . .	4.18
	IZAL, VETERINARY.	
	Laboratory stock (Sample tin) . . . . .	2.62
	K.A.G.	
	(Kills all germs). A powder disinfectant selling locally at 10 cents per pound package and recommended for deodorizing, disinfecting and keeping flies away from garbage pails.	
	C.H.H. Bought at A. E. Hess & Co. . . . .	1.4
	(Watery extract made for testing but expression of coefficient refers to original powder and not to solution).	
	K.K. DISINFECTING FLUID.	
	(Manufactured by the Rochester Germicide Co., Rochester, N.Y.)	
7623	Sample I submitted by E. S. Archibald, Ottawa . . . . .	0.8
7682	Sample II submitted by E. S. Archibald, Ottawa . . . . .	2.4
7420	Sample III submitted by E. S. Archibald, Ottawa . . . . .	2.5
	LIME.	
*7614	(Stone) Local supply . . . . .	17.6
*7737	(Hydrated) Sample submitted by Inspector W. H. Rowe, Chatham, Ont. . . . .	15.6
7749	(Stone) Sample submitted by Inspector W. W. Stork, Toronto, Ont. . . . .	3.2
7757	(Stone) Sample submitted by Inspector C. D. McGillvray, Winnipeg, Man. . . . .	7.3
7762	(Stone) Sample submitted by Inspector C. D. McGillvray, Winnipeg, Man. . . . .	8.1

\* In these two instances the test was run immediately after getting this lime solution prepared. In the other cases the test was run some days after the preparation of the lime solution. This same feature has been observed with all samples of lime tested.

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## NEKO.

Phenol coefficient.

	(Manufactured by Parke, Davis & Co., Detroit, Mich.)	
7784	Sample submitted in original container by the Veterinary Director General (Sample No. C. 456879) . . . . .	15.2
7791	Sample submitted in original container by the Veterinary Director General (Sample No. 434610) . . . . .	16.9

## PHENECO.

	(Manufactured by the West Disinfecting Co., Montreal.)	
7612	Sample submitted by the Veterinary Director General . . . . .	15.8

## PYXOL.

	(Manufactured by the Paterson Manufacturing Co., Montreal.)	
7401	Sample submitted by the Canadian Pacific Railway, Montreal.	13.0
7697	Sample submitted by Inspector Frink, St. John, N.B. . . . .	11.8
7700	Sample submitted by the Canadian Pacific Railway, Montreal.	10.6
7750	Sample submitted by Inspector Stork, Toronto, Ont. . . . .	12.1

## SAND DISINFECTANT.

7183	Sample submitted by the Veterinary Director General . . . . . (25 grammes taken and after leaching with water, 24.5 grammes of insoluble material remains.)	0.033
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## SODIUM HYPOCHLORITE.

7787	Sample secured from City Water Works (courtesy of Mr. J. Race, city bacteriologist) . . . . .	5.0
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## WESCOL.

7719	Sample submitted by E. S. Archibald, Ottawa . . . . . (This sample was found later to have been supplied in error by the Warehouse and replaced with the product ordered.)	4.3
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## ZENOLEUM.

7624	Sample submitted by E. S. Archibald, Ottawa . . . . .	2.3
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It will be seen from the above that the disinfectants which we have tested vary greatly in their coefficient values. While we express the disinfectant value by a given number, this should be interpreted to mean that the number or coefficient is the relative lethal effect of that particular disinfectant compared with pure carbolic acid or phenol on the typhoid organism. Therefore, if we express the phenol coefficient as 2.0 this would mean, that if you are accustomed to using your phenol or carbolic acid in a 5 per cent solution, you would secure under ordinary conditions equivalent results with a 2½ per cent solution of this stronger product. For the purpose of arriving at the dilution in which the disinfectant should be used we are arbitrarily specifying the following: "A disinfectant should be made using therefor 40 pounds of freshly-burned stone lime to the barrel of water as a base, and to this add sufficient disinfectant having a phenol coefficient of not less than 2.0 to make a 3 per cent solution of the disinfectant in the limewash preparation. Where the phenol coefficient is shown to be in excess of 2.0, the amount of disinfectant to be added may be reduced proportionately. Thus if a disinfectant having a phenol coefficient of 10.0 is used, a limewash solution containing 0.6 per cent of the disinfectant will be the equivalent.

## ABORTION.

Another very important subject with which we have dealt during the past year has been that of contagious abortion. The details of this work have been entirely in the hands of Dr. J. C. Reid of the Laboratory staff. He has undertaken a great many examinations to determine the presence or absence of this affection in herds where a suspicious case has appeared. He has also had a number of animals placed at his disposal through the courtesy of the Dominion Experimental Farms, with the result that these are now under experiment to determine whether or not the method of immunization will prove effective. To assist this work and overcome the very serious reaction at times following the injection, he has devised a serum which promises good results. This

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serum has been secured from the goat by increasing the protective power in the blood against the organisms causing contagious abortion. After a sufficient resistance has been built up in the animal under experiment, the blood is withdrawn, the serum permitted to rise, and this is afterwards tested for the purpose of standardizing. The results already secured show that the simultaneous injection of a living or killed culture and the serum is followed by a very slight or no reaction. When the living or killed culture without the serum is used there is quite an elevation in temperature, and other symptoms may also be noted. Work is continuing on this line as fast as our limited staff permits.

*Agassiz, B.C.*—Our small research laboratory, under the care of Dr. Seymour Hadwen, continues to give good results. His investigation of the life-history of the parasites of cattle, commonly known as "warbles," has brought out new and interesting facts. These were deemed of sufficient importance to be published as bulletins of the Scientific Series, Nos. 21 and 22, entitled, respectively, "A further contribution on the Biology of *Hypoderma Lineatum*," and "Observations on the Migration of Warble larvæ through the tissues."

A serious malady of horses, prevalent on the low coast lands, and resulting in many deaths, was investigated and found to be caused, in all probability, by feeding on bracken or fern. This weed is very frequently found in the hay put up in this region, and when in sufficient quantity gives rise to symptoms commonly known as "staggers." The horse becomes weak, loses control of his legs, wobbles in his gait, becomes emaciated, and dies. Experiments are being made to verify the facts by feeding hay containing bracken to horses under observation, the results of which will be reported later.

During the summer of 1915, an experiment was carried out with a view to ascertaining facts regarding a disease of cattle in the Dry Belt of British Columbia. This disease has been causing numerous deaths among the cattle in the vicinity of Kamloops. Stock owners were inclined to believe that the disease is contagious, and as it does not correspond with any of the known contagious diseases, it was of importance to ascertain the facts regarding it. With this object, ten head of healthy young cattle were shipped from Alberta to Kamloops and placed in a corral with five head of diseased cattle. They were allowed to mingle freely together for three months, receiving the same feed, water, and care. During all this time, the herd was under the constant supervision of a veterinary inspector, who made daily observations of their temperature, etc. The ten head of healthy cattle remained healthy, showing that the disease is not transferable under the conditions ordinarily found.

Experiments in inoculation of healthy animals with blood and discharges from the diseased ones also proved negative. The pathology of the disease remains to be cleared up, and further research is to be made; but it is satisfactory to know that whatever its nature and cause, the disease is not contagious.

The investigation of bovine haematuria "red water" is continuing, and satisfactory progress made. We hope to have material for publication on this subject before long. Excellent work has also been done at this laboratory in the identification of the internal parasites found in animals in British Columbia.

*Lethbridge.*—The laboratory near this city has been under the supervision of Dr. W. L. Hawke since June 20, 1915, when Dr. A. Watson left on military leave. During this period the work of the laboratory has consisted almost exclusively in making complement fixation tests for the diagnosis of dourine. The total number of tests, including controls, reaches the large total of 10,148; entailing an immense amount of careful, highly technical work. This has been performed in a highly satisfactory way by Dr. Hawke and his assistants.

## IMPORT INSPECTIONS FROM UNITED STATES AND NEWFOUNDLAND.

	Horses.	Mules.	Cattle.	Sheep.	Swine.	Goats.	Shet- land Pontes.	Asses.	Burros.	Deer.
Charlottetown, P. E. I. ....	4									
Sydney, N.S. ....	53					1				
St. John, N.B. ....	35			15						
St. Stephen. ....	26		1							
McAdam Junction. ....	13		5							
Debec Junction. ....	15									
Woodstock. ....	10									
Florenceville. ....	4									
Aroostook Junction. ....	24									
Grand Falls. ....	8									
St. Leonards. ....	25									
Edmundston. ....	31									
N. B. General. ....	4									
Comins Mills, Que. ....	3									
Beauceville. ....	300									
Couticooke. ....	16		1							
Beebe Junction. ....	104		1							
Sherbrooke. ....	28		1							
Highwater. ....	20									
Lacolle Junction. ....	539									
Athelstan. ....	1,556		3							
Dundee. ....	37		5							
St. Agnes de Dundee. ....	5									
Cornwall, Ont. ....	5									
Prescott. ....	34		1							
Morrisburg. ....	9	1	21							
Brockville. ....	24									
Kingston. ....	23									
Toronto. ....	8									1
Niagara Falls. ....	59	2	17							
Bridgeburg. ....	1,298	9	2	1						
Windsor. ....	79,077	5	29	1	6					6
Sarnia. ....	1,061		9		4					
Sault Ste. Marie. ....	9									3
Port Arthur. ....	3									
Rainy River. ....	12	2	1							
Fort Frances. ....	55	4	7				2			
Emerson, Man. ....	1,064	155	160			3				
Gretna. ....	163	13	59	4,625						
Snowlake. ....	58		24							
Bannerman. ....	33		27							
North Portal, Sask. ....	1,542	129	254	2		6		5		
Northgate. ....	40		9			1				
Wood Mountain. ....	285		9	9,712						
Big Muddy. ....	440		14							
Willow Creek. ....	247	2		3,811						
Sask. General. ....	4									
Pinhorn, Alberta. ....	8									
Coutts. ....	532	36	132	20,449						
Twin Lakes. ....	83		181							
Gateway, B.C. ....	21		6							
Kingsgate. ....	555	29	57	9,595						
Rossland. ....	10		13							
Grand Forks. ....	15		99							
Midway. ....	5		4							
Myncester. ....	3		1							
Bridonville. ....	2		3							
Keremeos. ....	13									
Osoyoos. ....	22	4		494						
Huntingdon. ....	86	1	109	11,377	14					
New Westminster. ....	2		16							
White Rock. ....	18		70	4,989		4				
Vancouver. ....	30	25		11,847					10	
Victoria. ....	2		29	1,198						
Total. ....	89,820	417	1,384	78,109	24	15	9	7	10	9

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## IMPORT INSPECTIONS FROM EUROPE AND ELSEWHERE.

Port.	Horses.	Cattle.	Swine.	Sheep.
Halifax, N.S.....	2			
St. John, N.B.....	17			
Montreal, Que.....	58			
Quebec.....		144	2	70
Niagara Falls, Ont.....	10			
Total .....	67	144	2	70

## PURE-BRED IMPORTS.

## HORSES.

Breed.	Great Britain.	United States.	Elsewhere.	Total.
Shire.....	6	1		7
Clyde.....	39	4		43
Thoroughbred.....	8	14		22
Hackney.....	2	4		6
Pony.....	1	2		3
Standardbred.....	2	107		109
Percheron.....		53		53
Shetland.....		4		4
Total.....	58	189		247

## CATTLE.

Breed.	Great Britain.	United States.	Elsewhere.	Total.
Shorthorn.....	39	10		49
Guernsey.....	51			51
Ayrshire.....	29	4		33
Jersey.....	20	13		33
Red Polled.....	5			5
Holstein.....		12		12
Hereford.....		21		21
Galloway.....		2		2
Total.....	144	62		206

## SWINE.

Breed.	Great Britain.	United States.	Elsewhere.	Total.
Yorkshire.....	2			2
Duroc Jersey.....		6		6
Ohio Improved Chester.....		4		4
Total.....	2	10		12

## SHEEP.

Breed.	Great Britain.	United States.	Elsewhere.	Total.
Cheviot.....	70	.....	.....	70
Karakule.....	.....	15	.....	15
Romney.....	.....	7	.....	7
	70	22	.....	92

## DISEASED IMPORTS.

Port.	No. horses in infected shipments.	No. of shipments.	No. horses diseased.	Country of origin.	Action taken.
Fort Frances, Ont. ....	2	1	1	United States.	Returned.
North Portal, Sask.....	46	7	7	"	"
Big Muddy, ".....	2	1	1	"	"
Countts, Alberta.....	3	1	1	"	1 slaughtered, 2 held for retest.
Midway, B. C.....	1	1	1	"	Returned.
	54	11	11		

Thirteen cattle tested at Huntingdon were returned to the United States and one reactor earmarked.

## ANIMALS INSPECTED FOR EXPORT.

Port.	Horses.	Cattle.	Sheep.	Swine.	Goats.	Calves.
Charlottetown to Newfoundland.....	27	692	548	156	.....	.....
" " United States.....	1	.....	.....	2	.....	.....
Summerside to Newfoundland.....	.....	135	343	.....	.....	.....
" " United States.....	.....	.....	.....	3	.....	.....
Halifax to St. Pierre and Miquelon.....	.....	21	11	20	.....	.....
" " Demarara.....	.....	.....	20	.....	.....	.....
" " Trinidad.....	.....	.....	3	11	.....	.....
" " Great Britain.....	1,362	.....	.....	.....	.....	.....
" " Newfoundland.....	5	2	.....	3	.....	.....
" " Bermuda.....	18	13	2	10	.....	.....
" " Charlottetown.....	.....	.....	67	.....	2	.....
" " United States.....	1	.....	.....	.....	.....	.....
Sydney to Newfoundland.....	145	542	251	141	.....	.....
" " St. Pierre and Miquelon.....	.....	31	59	3	.....	3
St. John to (destination unknown).....	6,045	.....	.....	.....	.....	.....
Montreal to France.....	.....	12,438	.....	.....	.....	.....
" " South Africa.....	.....	1	145	.....	.....	.....
" " Great Britain.....	7,949	.....	.....	.....	.....	.....
Toronto to United States.....	9	25,376	3,896	.....	.....	4,036
" " Bermuda.....	.....	292	1184 lambs	.....	.....	.....
	15,562	39,543	5,345 1184 lambs	349	2	4,039



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## IMPORT TESTING.

Three thousand four hundred and thirty-four horses were tested on arrival from the United States and allowed to proceed to their destinations.

Entered at—	Number.	Entered at—	Number.
Halifax, N.S.	3	Sault Ste. Marie	3
St. John, N.B.	2	Port Arthur	2
St. Stephen	5	Rainy River	9
McAdam Junction	6	Fort Frances	46
Woodstock	3	Ontario General	2
Florenceville	3	Emerson, Man.	214
Aroostook Junction	24	Gretna	56
Grand Falls	8	Snowflake	56
St. Leonards	25	Bannerman	23
Edmundston	24	North Portal, Sask.	275
Quebec, Que.	2	Northgate	16
Comins Mills, Que.	3	Wood Mountain	219
Lake Megantic	4	Big Muddy	50
Beauceville	295	Willow Creek	109
Coaticook	15	Saskatchewan General	8
Beebe Junction	60	Pinhorn, Alta.	2
Sherbrooke	13	Coutts	323
Highwater	3	Twin Lakes	81
Abercorn	14	Alberta General	3
St. Armand	9	Gateway, B.C.	21
Lacolle Junction	238	Kingsgate	58
Noyan Junction	7	Rossland	4
St. Johns	496	Grand Forks	9
Athelstan	5	Midway	6
Dundee	4	Myncaster	3
St. Agnes de Dundee, Que.	2	Bridesville	2
Quebec General	6	Keremeos	13
Prescott, Ont.	7	Osoyoos	23
Morrisburg	8	Huntingdon	23
Cornwall	18	White Rock	7
Brockville	13	Vancouver	10
Kingston	8	Victoria	2
Toronto	7	Prince Rupert	6
Niagara Falls	13	White Horse, Y.T.	2
Bridgeburg	48		
Windsor, Ont.	333		
Sarnia	10		
			3,434

## STAFF CHANGES.

Appointments, resignations, etc., March 31, 1915, to March 31, 1916:—

## APPOINTMENTS.

*Veterinary Inspectors.*—W. T. Patton, V.S.; T. H. Jagger, V.S.; A. M. Lloyd, V.S.; W. Jakeman, V.S.; J. H. Brown, V.S.

*Inspectors.*—W. J. Wheelhouse; R. Anderson, V.S.; G. L. Terry; G. E. M. Scott, J. J. Kelly.

## RESIGNATIONS.

*Veterinary Inspectors.*—P. A. Gough, V.S.; J. Simpson, V.S.; W. T. Patton, V.S.; H. L. Bissonnette, V.S.; J. H. Brown, V.S.

## TRANSFERS.

*Veterinary Inspectors (from Meat Inspection).*—D. E. Tulloch, M.R.C.V.S.; W. Moynihan, V.S.; H. R. Estes, V.S.; C. A. Mitchell, V.S.

## DEATHS.

Veterinary Inspector F. C. Brown.  
 Veterinary Inspector B. A. Sugden.

Owing to the improvement in the situation in the United States with regard to Foot and Mouth Disease it was possible to dispense with the services of the following temporary inspectors during the year March 31, 1915, to March 31, 1916: J. Gillespie, H. Acton, J. Robinson, A. A. Joslin, G. Moore, E. Branigan, John Morris, W. A. Horne, W. J. Wheelhouse.

## ON ACTIVE SERVICE.

4th August, 1914-31st March, 1916.

*Inside Service.*—Major C. H. L. Sharman, Captain T. C. Evans, B. V. Sc., Lieutenant R. H. L. Uglow, Lieutenant E. D. Perney, Lance-Corporal F. Dexter.

*Outside Service.*—Major E. C. Thurston, D.V.S., Captain A. Watson, V.S., Captain D. S. Tamblin, D.V.S., Captain B. R. Poole, V.S., Captain C. Maconachie, V.S., Lieutenant W. F. Macdougall, V.S., Lieutenant F. J. Braund, V.S., Private G. H. Unwin, Private H. C. Evans, Private S. Metze, Private G. A. Cousins, Lieutenant A. E. Cameron, V.S. (resigned to go), G. S. Thornewill, V.S. (resigned to go), J. T. M. Hughes, M.R.C.V.S. (resigned to go), R. W. MacDonald, V.S. (resigned to go), J. J. Farrell, V.S. (resigned to go), J. Simpson, V.S. (resigned to go), J. H. Brown, V.S. (resigned to go).

## MEAT AND CANNED FOODS DIVISION.

The work of this division has continued to increase. The demands of the war have greatly stimulated the packing industry, and in consequence the duties of our staff have been correspondingly increased. Under the constant and capable supervision of Dr. R. Barnes, Chief Meat Inspector, the service has been satisfactory, the inspection careful and efficient, and performed with the minimum of friction between the packers and the staff. We may justly claim our meat inspection to be as good as any we know of, and our stamp "Canada Approved" the guarantee of good, sound, wholesome meat.

Owing to the enormous demand of the British market, packers were unable during the past year to procure sufficient hogs in Canada to keep up the supply for this trade; in consequence of which they were forced to import into inspected establishments, 380,726 carcasses, of which 223,706 were in the form of singed hogs and 157,020 scalded hogs, together with 20,000,000 pounds of hams, etc.

This immense import of meats from the United States, nearly all of which entered inspected establishments, was, in accordance with the United States laws governing exports and our Meat and Canned Foods Act regarding the entry of meats into inspected plants, inspected and passed in the country of origin, and its shipment from the United States was supervised by their officers. Such meats were subjected to a close supervision by our inspectors upon their entry into Canadian plants, where all that was intended for export to Great Britain was separately handled, cured, and boxed. It was then shipped under special brands in order that, while it had been handled by Canadian firms and given a Canadian cure, it should not be shipped or sold as Canadian bacon, which at the present time has a splendid reputation in Great Britain, and brings a price second only to the best Danish or Irish cures.

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Owing to the number of officers who were granted military leave and who resigned for overseas service, we were extremely short handed during the whole year, although we held two examinations, one in April at points throughout Canada, at which sixty veterinarians wrote, of whom thirty-three were successful, and a special examination at Laval University on May 18, at the close of the college year, in order that their graduating class might qualify for appointment. At the latter ten candidates wrote and five were successful.

The increasing importance of the duties of lay inspectors made it highly desirable that a standard of qualification for the position should be established. It was therefore decided that applicants for such positions must pass an open competitive examination in writing, spelling, arithmetic, composition, and practical questions on subjects met with in the daily operation of a packing-house, and that the appointees must be men of sobriety and steady habits, in good health, and not over forty years of age. Judging from the appearance and qualifications of the new appointees, this method is a distinct improvement and will tend to much better work. It is brought about under an amendment to the regulations passed by Order in Council under date of January 8, 1916.

The practice of the periodic transfer of inspectors is working to the advantage of the service. While the department does not authorize such transfers more often than it deems absolutely necessary, owing to the expense and at times the personal discomfort and inconvenience of our officers, yet circumstances arise which make such moves not only advantageous but necessary in order that the work may be better supervised.

In the three large centres, namely, Toronto, Montreal, and Winnipeg, the inspectors in charge of the different establishments meet once a week for the purpose of discussing the work in general. Judging from the results obtained, these meetings should continue, as they tend to uniformity and co-operation—the balance-wheel of success in a service such as this.

From our records in connection with slaughter, the following information is submitted:—

Cattle slaughtered	512,154.	Increase over 1914-15,	11,729 or 2.21 per cent.
Sheep	403,147.	Decrease under 1914-15,	44,026 or 9.84 per cent.
Swine	2,363,693.	Decrease under 1914-15,	234,645 or 9.93 per cent.

The provinces show increases or decreases as follows:—

Province.	Cattle.		Sheep.		Swine.	
	Head.	Per cent.	Head.	Per cent.	Head.	Per cent.
Ontario .....	+ 38,374	18 14	+ 21 013	14 49	+ 80,447	6 08
Quebec .....	- 38,417	17 73	- 16 835	11 56	- 2,700	0 1
Manitoba .....	+ 6,177	15 95	- 16 058	38 51	- 100,333	30 02
Saskatchewan .....	+ 3,307	233 87	+ 2 603	51 50	- 33,147	42 70
Alberta .....	+ 6,685	17 04	- 9,318	21 00	- 136,880	43 01
British Columbia .....	- 4,858	21 53	- 18,846	48 07	- 28,296	41 36
New Brunswick .....	- 53	100 00	- 4,576	40 56		
Nova Scotia .....			- 1,521	100 00		
Prince Edward Island .....	+ 514	23 38	- 418	3 20	+ 800	3 87

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The percentage of slaughter for each province to the total for all Canada:—

Province.	Cattle.	Sheep.	Swine.
	Per cent.	Per cent.	Per cent.
Ontario.....	46.09	41.23	60.44
Quebec.....	32.88	31.94	16.38
Manitoba.....	8.28	6.36	8.67
Saskatchewan.....	.87	1.89	1.89
Alberta.....	8.47	8.69	9.94
British Columbia.....	2.91	5.05	1.70
Maritime Provinces.....	.50	4.84	.98

While the records show an increase in swine killings in Ontario, this is undoubtedly due to the large shipments of live hogs from the western provinces.

### CARCASS CONDEMNATIONS.

*Cattle.*—The number of carcasses condemned this year being 1.95 per cent of total kill against 1.45 per cent last year, it is satisfactory to note that carcasses condemned for tuberculosis only represent 31.20 per cent of total condemned against 40.14 per cent last year.

Those condemned for bruises and imperfect bleeding also show a small decrease.

Calves condemned for immaturity are much higher than last year, being 48 per cent of total condemned against 42 per cent.

Emaciated cattle were sent to slaughter in much larger numbers this year, high prices being no doubt an inducement.

*Swine.*—It is regrettable that a much larger proportion of hogs were condemned for tuberculosis than last year, the percentage of total carcasses condemned being 61.76 per cent against 53.16 per cent.

It is gratifying to note the decrease in condemnations for hog cholera, 81 carcasses against 1,084 last year.

Carcasses were condemned for *cysticercus cellulose* to the extent of 545 against 478 last year.

*Sheep.*—The increase in sheep condemned is nearly all made up of emaciated and bruised carcasses, possibly caused by overloaded cars during the extremely hot weather.

*Portions condemned.*—In almost all cases these show increases over last year, and call for no particular comment.

### IMPORTS AND EXPORTS.

In studying these figures the first thing we notice is the large amount of beef and pork imported and exported.

To enable our Canadian packers to meet their requirements of bacon hogs for shipment to England, it was necessary from September, 1915, to March 31, 1916, to import singed and scalded dressed hogs from the United States to be cured in Canada and shipped as Canadian-cured United States product, 380,700 dressed hogs weighing around 40,000,000 pounds; also, about 20,000,000 pounds of backs, bellies, hams, etc.,

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all of which might have been produced in Canada. Instead, we find a decrease in all but two provinces, while hogs touched the highest price on record, viz., \$13 per cwt.

During 1915-16, hogs were from one to two dollars per cwt. higher in Canada than in the United States, and the shipments of live animals across the line did not amount to anything like former years.

While in cattle the export of 241,000 head was largely made up of stockers and feeders, it is unfortunate that these were not retained by Canadian farms.

Our export of bacon for the year amounted to 167,000,000 pounds. The export of beef also shows a large increase over last year, from 29,000,000 to 53,000,000 pounds.

In comparison with Denmark and Ireland, area and possibilities considered, Canada does not show up nearly as well as she should.

## KILLINGS.

Year.	Canada.	Denmark.	Ireland.
1912 .....	1,650,966	2,084,786	1,416,490
1913 .....	1,564,246	2,215,850	1,181,285
1914 .....	2,255,479	2,651,041	1,266,620
1915 .....	2,616,461	1,960,965	1,376,063

## FRUIT AND VEGETABLES.

The sanitary conditions in the fruit and vegetable canneries have been well maintained, and the quality of the raw material used was quite up to the average.

Considerable work was done during the past year in connection with evaporated apples. Owing to the vigilance of our officers, this product was offered for sale in a much better condition than ever before. The observance of the standard for moisture-content was insisted upon, in consequence of which no complaints have reached this office regarding losses, which were common in other years owing to excessive moisture. The possibilities of a foreign trade in this product are enormous if shippers will only pack a proper article, the chief requirement being to keep down the water-content and to discontinue the practice of sprinkling the apples at the time of packing. Experiments conducted at this office have demonstrated beyond doubt that such a practice will cause a rapid decomposition of the product, irrespective of the condition at time of packing, or method, manner or condition of storing and handling afterwards.

## CONDENSED MILK.

There is very little to be said regarding this product. Its very nature compels the manufacturers to maintain their plants in a sanitary condition, otherwise the keeping qualities of the finished article would be seriously affected. There is perhaps no manufactured food which requires such care as this. The supervision begins at the farm on which the milk is produced, and continues until the article is ready for use.

## MEAT AND CANNED FOODS DIVISION.

## STAFF.

Chief, Meat and Canned Foods Division—R. Barnes, V.S.

Travelling Inspectors, M. and C. F. Division—H. H. Ross, V.S.; M. J. Kellam, V.S.

In charge of Montreal—L. A. Willson, V.S.

In charge of Toronto—F. H. S. Lowrey, V.S.

In charge of Winnipeg—C. D. McGilvray, M.D.V.

In charge of Prince Edward Island—W. J. Pethick, V.S.

Chief Travelling Inspector, Fruit and Vegetable Canneries—C. S. McGillivray.

Canning Inspectors—A. Bowlby, H. S. Switzer, F. W. Gray.

## ADDITIONS TO STAFF.

*Veterinary Inspectors.*—J. O. Allan, V.S.; Wm. Bright, V.S.; M. Chagnon, M.V.; O. Christian, V.S.; R. Clegg, V.S.; I. E. Croken, V.S.; O. S. Dickinson, V.S.; C. M. Flanders, V.S.; S. H. Kesten, V.S.; S. E. Lawrence, V.S.; J. E. LeBlond, V.S.; D. McDonald, V.S.; J. E. Mumford, V.S.; R. Paquette, V.S.; A. Robertson, V.S.; P. E. Simard, M.V.; H. W. Steeves, V.S.; W. F. R. Stubbs, V.S.; W. R. Wood, V.S.; H. M. Younghusband, V.S.

*Lay Inspectors.*—J. N. Ellah, V.S.; E. C. Oliver, V.S.; J. C. O'Connor, J. Rowntree, Smith Shaw, W. T. Wenborn.

*Canning Inspector.*—F. W. Gray.

## TRANSFERS.

To C. D. Division: Estes, H. R., V.S.; Moynihan, Wm., B.V.Sc.; Symes, J. W., D.V.S.; Tulloch, D. E., M.R.C.V.S.

## RESIGNATIONS.

Bright, S. G., V.S.; Fagin, H. W., V.S.; Kesten, S. H., V.S.; MacFadzean, W. B., V.S.; Pook, G. G., V.S.; Swail, L. H., V.S.; Seymour, Wm., V.S.; Whitehead, Geo., B.V.Sc.; Flanders, C. M., V.S.

## DISMISSALS.

Graham, W. A. D.; Mallett, H. W.; Paquette, R. S., V.S.; Wall, S. L., V.S.

## PROLONGED LEAVE OF ABSENCE.

Ardill, A.; McEwen, N. E., V.S.; Lundie, A. C., V.S.; Nelson, H. D., B.V.S. (On Active Service); Brunet, O., M.V.; Colebourn, H., V.S.; Collet, H. B., V.S.; Daigneault, F. A., M.V.; Douglas, K. L., V.S.; Elliott, H. J., M.D.V.; Finmore, C. W., V.S.; Walsh, F. A., V.S.

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## ESTABLISHMENTS UNDER INSPECTION MARCH 31, 1916

No.	Name.	Place.	Inspectors.
1	Armour & Co.....	Hamilton.....	A. C. Ramsay, V.S. J. G. Davidson, V.S. J. E. A. Duhamel, M.V. John Wright.
2A	Matthews-Blackwell, Ltd.....	Hull, P.Q. ....	J. Langevin, M.V. J. Steen, V.S. A. W. Younghusband, V.S. John Terrance.
2B	" "	Brantford .....	W. R. Bell, V.S. G. C. Cockerton, V.S. C. M. Flanders, V.S.
2C	" "	Peterborough.....	W. A. Henderson, V.S. J. E. Bennett, V.S.
2D	" "	Montreal .....	W. H. James, V.S. M. Chagnon, M.V. G. W. Starnaman, V.S. A. J. Champion. A. E. Hawkins. Geo. Jones.
2E	" "	Toronto .....	C. S. Anderson, V.S. J. W. Fisher, V.S. J. E. Morse, V.S. W. J. Blainey. J. H. Mumford.
4A	Wm. Davies Co., Ltd. ....	" .....	A. R. Torrie, V.S. T. W. R. McFarlane, V.S. D. R. Bone, V.S. F. Fisher, V.S. J. H. George, V.S. Wm. Howard P. Kingston. J. W. Lee. J. R. Songhurst.
4B	" "	Montreal.....	C. W. McIntosh, V.S. F. R. Armstrong, V.S. J. E. M. Lefebvre, M.V. W. R. Wood, V.S. J. F. Campese, M.V. E. Lathouand. T. O. Paquette. G. W. Walsh.
6	Municipal Abattoir.....	Toronto .....	D. C. Tennant, V.S. A. W. Beach, D.V.S. A. C. Tanner, R.V.S. A. C. Walker, R.V.S. E. E. White.
7	Harris Abattoir Co., Ltd., St. Clair Ave..	" .....	R. H. Cook, V.S. R. Clapp, V.S. T. E. Crocker, V.S. W. J. Padden, V.S. T. H. Richards, V.S. A. Robertson, V.S. Wm. Tennant, V.S. A. J. Hodgson. " J. Kelly. T. K. Kerr. H. N. Smith. J. W. Nishida. J. Rowntree.
7A	Harris Abattoir Co., Ltd., Strachan Ave.	" .....	A. L. Wallace, V.S.

ESTABLISHMENTS UNDER INSPECTION MARCH 31, 1916.—Continued

No.	Name.	Place.	Inspectors.
9	Gunn's, Limited.....	Toronto.....	E. R. Farewell, V.S. Wm. Bright, V.S. D. McDonald, V.S. Chas. Brittain. Edwin Cox. J. N. Ellah, V.S. Ernest Hunter. E. C. Oliver, V.S.
10	F. W. Fearman Co., Ltd.....	Hamilton.....	C. J. Johannes, V.S. C. S. Cain, V.S. H. Garrett, B.V.S. Wm. Lawson, V.S.
11	Ingersoll Packing Co .....	Ingersoll.....	R. D. Orr, V.S. J. E. Mumford, V.S. A. G. Murray, V.S.
13	Whyte Packing Co., Ltd.....	Stratford.....	F. A. McNally, V.S. G. C. Brownridge, V.S.
17	Jones Packing & Prov. Co.....	Smiths Falls.....	J. B. White, V.S.
18	Swift Canadian Co., Ltd.....	Winnipeg .....	J. D. Ross, V.S. F. C. Bishop, V.S. J. E. Lawrence, V.S. J. H. Shonyo, V.S. J. L. Trudeau, M. V. C. H. Johnston. W. G. Williams.
18B	" " " .....	Edmonton.....	H. C. Leslie, V.S. R. D. Boast, V.S. G. A. Ledgerwood, V.S. J. H. Part, V.S. P. E. Simard, M.V. H. Christman. E. J. Laidlaw.
18C	" " " .....	Toronto.....	T. M. Pine, V.S. A. A. Bélanger, M.V. C. S. Dickinson, V.S. T. E. H. Fisher, V.S. W. Kime, V.S. G. P. McKenzie V.S. F. L. Wingate, V.S. H. M. Younghusband, V.S. A. E. Harvey. Wm. McCabe. J. T. Newton. J. C. O'Connor. Smith Shaw.
19	Gordon, Ironside & Fares Ltd. ....	Winnipeg.....	F. C. Jones, V.S. H. Pomfret, V.S. J. W. Nichols, V.S. J. G. McDonald, V.S. R. H. Lyon.
19A	" " " .....	Montreal.....	J. R. Young.
19B	" " " .....	Moosejaw.....	J. W. Purdy, V.S. J. R. English, V.S. J. E. LeBlond, M.V. R. F. Jackson. A. J. Tapley.
20	Gallagher, Holman & Lafranco.....	Winnipeg.....	A. R. Walsh, V.S. C. Brind, V.S. T. F. Coleman.
21	Western Packing Co., Ltd.....	" .....	J. R. N. Harrison, V.S. R. B. Dellert, V.S.





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ESTABLISHMENTS UNDER TEMPORARY INSPECTION, APRIL 1, 1915,  
TO MARCH 31, 1916.

Number	Name.	Place.
12	Prince Edward Island Railway.....	Kensington, P. E. I.
15	John Reop. ....	Charlottetown, P. E. I.
34	Sussex Packing Co. ....	Sussex, N. B.
35	New Brunswick Cold Storage Company.....	St. John, N. B.
36	W. A. Leard.....	Charlottetown, P. E. I.
36B	W. A. Leard.....	Summerside, P. E. I.
40	Aylmer Canning Co. ....	Aylmer, Ontario.
41	Prince Edward Island Railway.....	Bradalbane, P. E. I.
43	R. O'Leary.....	Richibucto, N. B.
51	J. H. Myrick & Co. ....	Tignish, P. E. I.
52	Sims Packing Co. ....	Charlottetown, P. E. I.
53	Prince Edward Island Railway.....	Summerside P. E. I.
57	P. MacNutt & Son.....	Malpeque, P. E. I.
60	Fred Magee.....	Port Elgin, N. B.
64	P. C. Gallant.....	Summerside, P. E. I.

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## DISEASES FOUND AT ESTABLISHMENTS UNDER INSPECTION.

Diseases.	Cattle.			Sheep.			Swine.			Poultry.
	Car-casses	Por-tions.	Lbs.	Car-casses	Por-tions.	Lbs.	Car-casse-	Por-tions.	Lbs.	Lbs.
Abcess.....	17	22,879		15	340		25	2,610		
Actinomycosis.....	40	22,804			1		2	1,608		
Adhesions.....		8,692			374			10,691		
Ascitis.....				1			1			
Arthritis.....	1						6	4		
Angiomatosis.....		1,825								
Bruises.....	130	56,227	7,806	20	2,565	55	14	17,349	64,397	
Carcinoma.....	4									
Cripples.....	4	150		1	31		6	6,884		
Cysts.....		243						2,833		
Cysticercus Bovis.....	205	1,842								
" Cellulose.....							545	156		
" Ovis.....				3	59					
" Tenuicollis.....					134					
Congestion.....		56			8		2	2,359		
Cirrhosis.....		15						6,026		
Decomposed.....			106,476			4,641			143,289	
Dirty.....		549	353,448			2,771		174	120,983	
Emaciation.....	695			225			76			
Enteritis.....	17			1			93			
Emphysema.....	3	4		1			7	1,096		
Hernia.....							2	116		
Hydraemia.....	46			19						
Hog cholera.....							81			
Immaturity.....	5,075									
Improper bleeding.....	277			83			239			
Inflammation.....	33			8			42			
Icterus.....	5			13			39			
Induration.....								116		
Metritis.....	11			2			13			
Mucoid degeneration.....	94						2			
Mammitis.....	5	4						27		
Melanosis.....		6		2			1	59		
Necrosis.....		273			5,975			15,864		
Nephritis.....	34			5			16			
Pyrexia.....	1						3			
Parasites.....		46,896			102,511			100,349		
Pericarditis.....	53			1			16			
Peritonitis.....	59			8			148			
Pleuritis.....	10			3			8			
Pneumonia.....	89			107			253			
Pyæmia or septicaemia.....	135			38			598			
Sexual smell.....							79	334		
Skin diseases.....							3	1,221		
Sarcoma.....	5			1			9			
Sour.....			95,142			2,239			136,787	
Stale.....	38						15			
Septic infection.....	150						1			
Tuberculosis.....	3,297	22,249		4	42		4,066	784,891		
" pseudo.....				6						
Tumours.....	2	20		2			7	19		
Uræmia.....							12			
Various.....	31	11,313	3,460	18	107		77	466	1,662	
Damaged by fire.....			50							
Total.....	10,566	196,047	566,890	591	112,147	9,708	6,582	951,231	467,064	2,882 and 376 car- casses
Found dead.....	203			417			1,486			

The following summary shows the results of post-mortem inspections of cattle, sheep, and swine from April 1, 1915, to March 31, 1916:—

Cattle marked "Canada Approved".....	531,588
Carcasses of cattle "Condemned".....	10,566
Percentage of cattle "Condemned".....	1.95
Portions of cattle "Condemned".....	196,047
Sheep marked "Canada Approved".....	402,556
Carcasses of sheep "Condemned".....	591
Percentage of sheep "Condemned".....	.14
Portions of sheep "Condemned".....	112,147
Swine marked "Canada Approved".....	2,357,111
Carcasses of swine "Condemned".....	6,582
Percentage of swine "Condemned".....	.28
Portions of swine "Condemned".....	951,231
Total number of carcasses "Passed".....	3,291,255
Total number of carcasses "Condemned".....	17,739
Percentage of carcasses "Condemned".....	.53
Total number of portions "Condemned".....	1,259,425

In addition to the animals slaughtered at inspected establishments, the following amounts of dressed and cured meats and lard, etc., were received during the fiscal year from foreign countries:—

	Lb.
Beef.....	9,046,195
Mutton.....	449,770
Pork.....	52,603,260
Lard.....	4,033,988

During the course of reinspection the following meats were condemned:—

	Cattle.	Sheep.	Swine.	Poultry.
	lb.	lb.	lb.	lb.
Bruised.....	7,806	55	64,392	
Decomposed.....	106,476	4,641	143,289	
Dirty.....	353,448	2,771	120,983	
Sour.....	95,142	2,239	136,737	
Damaged by fire.....	50			
Various.....	3,468		1,663	2,382
<b>Total</b> .....	<b>566,390</b>	<b>9,706</b>	<b>467,064</b>	<b>2,382</b>

Total amount condemned on reinspection, 1,045,542 pounds.

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Customs statistics show that we imported and exported the following:—

	Imports.	Exports.
Cattle (live).....	365	241,578
Sheep ".....	68,564	94,588
Swine ".....		9,925
Beef (pounds).....	15,096,703	53,342,594
Mutton ".....	2,841,838	99,593
Pork ".....	60,502,494	167,671,813
Lard ".....	5,101,356	28,521
Canned meats (pounds).....	306,205	11,047,931

In conclusion, I wish to express my appreciation of the loyal service rendered by all members of the staff, and especially by Dr. Hilton, Chief Veterinary Inspector, and Dr. Barnes, Chief Meat Inspector.

I have the honour to be, sir,

Your obedient servant,

F. TORRANCE,

*Veterinary Director General.*

## BULLETINS PUBLISHED.

- "A further contribution on the biology of *Hypoderma Lineatum*," by Seymour Hadwen, D.V.Sc. (Scientific Series, No. 21.)
- "Observations on the migration of Warble larvæ through the tissues," by Seymour Hadwen, D.V.Sc. (Scientific Series, No. 22.)

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The late Charles Caniff James, C.M.G., M.A., LL.D., F.R.S.C.  
Commissioner, Agricultural Instruction Act, 1912-16.



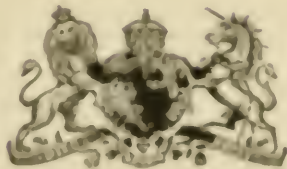
# REPORT

ON THE

# AGRICULTURAL INSTRUCTION ACT

1915-1916

*PRINTED BY ORDER OF PARLIAMENT*



OTTAWA  
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PRINTER TO THE KING'S MOST EXCELLENT MAJESTY  
1917



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OTTAWA, December 31, 1916.

To the Honourable MARTIN BURRELL,  
Minister of Agriculture,  
Ottawa.

SIR,—I have the honour to present the report for the fiscal year 1915-16 on the work performed by the several provinces of Canada with the funds provided under the Agricultural Instruction Act.

While the preparation of this report devolved upon me owing to the decease of my predecessor, Charles Caniff James, in June last, the work described herein was performed entirely within the period of his administration.

I have the honour to be, sir,

Your obedient servant,

W. J. BLACK,

*Commissioner.*



# REPORT

## ON THE

# AGRICULTURAL INSTRUCTION ACT

### FOR THE FISCAL YEAR 1915-16.

*Tabled in pursuance of Section 8 of the above-named Act.*

Province.	Grant.	Date.	Amount.
	\$    cts.		\$    cts.
Ontario.....	266,013 64	May 29, 1915 Jan. 17, 1916	133,006 82 133,006 82
Quebec.....	215,310 70	June 18, 1915 Oct. 4, 1915	107,655 35 107,655 35
Manitoba.....	64,421 31	July 20, 1915 April 3, 1916 May 16, 1916	32,210 65 10,000 00 22,210 66
Saskatchewan.....	68,011 04	July 16, 1915 July 20, 1916	34,005 52 34,005 52
Alberta.....	56,528 82	June 18, 1915 Nov. 24, 1915	28,264 41 28,264 41
British Columbia.....	58,265 94	April 29, 1915 June 2, 1915 April 5, 1916	10,000 00 19,132 97 29,132 97
Nova Scotia.....	68,001 87	June 11, 1915 Aug. 30, 1915	34,000 93 34,000 94
New Brunswick.....	51,308 10	June 8, 1915 Oct. 25, 1915	27,154 20 27,154 20
Prince Edward Island.....	29,138 28	June 11, 1915 Feb. 17, 1916 Mar. 24, 1916	14,569 14 8,000 00 6,569 14
Ontario Veterinary College.....	14,800 56	No payment made in 1915-16	
School of Veterinary Science, Montreal.....	5,130 44	Mar. 31, 1916	5,130 44
	300,000 00		300,000 00

ALLOTMENT OF GRANTS OF 1915-16.

	Ontario.	Quebec.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Nova Scotia.	New Brunswick.	Prince Edward Island.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Agricultural Colleges and Schools— Capital Expenditure, i.e., Build- ings, Equipment, Furnishings. Salaries, Expenses and Mainte- nance, Instruction, College Ex- tension, research.	81,413 64 12,040 00	11,000 00 49,000 00		22,800 00	2,000 00 36,000 00 Schools of Agri- culture give Instruction in Household Science.		7,500 00 20,000 00	10,000 00 6,500 00	4,000 00
Instruction and Demonstration— Including salaries of Instructors, and Inspectors and Superinten- dents and all or part expenses connected with one or more of the following, i.e., District Rep- resentatives, Short Courses, De- monstration Farms, Demons- tration Trains, Demonstrations in Soil and Drainage, Horticulture, including Fruit and Vegetable growing; Instruction in Co- operation and Marketing, Live- Stock, Dairying, Poultry and Bee-keeping, Field Crops; Seed Improvement, Boys and Girls Work, Institute Lectures, Meat Curing and Abattoir Work, Maple Products, Fruit Canning Investigations, Competitions.	150,200 00	131,810 70	47,000 00	35,700 00	15,200 00	38,500 00	26,500 00	23,000 00	8,875 00
Elementary Agricultural Education— Training of Teachers, Household Science, School Gardens, Grants.	20,000 00	23,500 00	200 00	1,000 00 Instruction and Demonstration and Publicity Votes drawn upon.		15,000 00	10,000 00	10,000 00	11,791 14
Women's Work— Institute Organization, Domestic Science Courses, Supervision; Incidental Expenses.	2,000 00	Provided in Eng- lish speaking districts out of Maine and College grant.	7,000 00	4,500 00	1,500 00	Women's work charged to Miscellane- ous.	3,000 00	3,000 00	2,890 00



Publicity— Printing and Publication of Bul- letins and Reports; other forms of Publicity work	7,000 00	3,000 00	1,800 00	2,000 00	500 00	500 00
Manuallists	3,221 31	1,011 04	28 82	2,765 94	501 87	1,308 40
Total	296,013 05	68,011 01	56,528 82	58,265 94	68,001 87	29,138 28

STAFFING BY PROVINCES OF THE NUMBER OF PERSONS WHOSE SALARIES ARE CHARGED TO THE DOMINION GRANT, EXCLUSIVE OF VETERINARY COLLEGES, AND THE AMOUNT SO CHARGED.

	Ontario.	Quebec.	Manitoba.	Saskat- chewan.	Alberta.	British Columbia.	Nova Scotia.	New Brunswick.	Prince Edward Island.
1. Number of officers exclusively employed and paid wholly from the Dominion grant.	23	77	20	18	3	13	10	18	16
2. Number of officers exclusively employed and paid in part from the grant	45	7	3	2	20	4	19		
3. Number of officers employed regularly for part of Dominion and paid wholly from the grant				4			1		
Total number	68	84	23	24	32	17	33	18	16
Amount attributable for salaries by Dominion grant	\$ 62,000 00	\$ 51,000 00	\$ 29,120 00	\$ 40,100 00	\$ 15,220 00	\$ 19,380 00	\$ 16,735 00	\$ 21,700 00	\$ 16,880 00

Total number of regular officers paid wholly or in part by Dominion grant..... 315  
Total amount contributed to salaries by grant ..... \$306,135 00

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District Representatives: In the case of Ontario where there are forty-five representatives, the practice is to charge approximately one-half of their salaries to provincial appropriations and one-half to the Dominion grant, and the above computation is made on that basis. Formerly a graduate or undergraduate of the Ontario Agricultural College was attached to each office as assistant, but in view of the large number who enlisted and the difficulty in filling their places, it was decided to discontinue permanent assistants except in about half a dozen of the larger counties. At the present time, office assistance is provided, together with such special help as may from time to time be called for on account of inspection of school plots, short courses, and other forms of work that require periodical help. Regular assistants, where these are employed, office help and temporary assistants are not included in the enumeration.

Quebec has eleven district agronomists and four assistants, attached to the Provincial Department, whose salaries are paid from the grant, and Macdonald College has one.

Manitoba has twelve district representatives paid by the grant, Saskatchewan one, Nova Scotia five, Prince Edward Island two, while in British Columbia two men who act in this capacity are paid partly by the grant and partly by the province.

## RECAPITULATION OF APPROPRIATIONS.

	1913-14.	1914-15.	1915-16.	1916-17.
Prince Edward Island.. . . .	\$ 26,529 85	\$ 27,832 81	\$ 29,138 28	\$ 30,443 75
Nova Scotia.. . . .	54,288 45	61,144 45	68,001 87	74,859 28
New Brunswick .. . . .	44,509 93	49,407 20	54,308 40	59,209 60
Quebec.. . . .	159,482 40	187,409 16	215,310 70	243,212 23
Ontario.. . . .	195,733 32	230,868 83	266,013 64	301,158 45
Manitoba.. . . .	51,730 05	58,075 45	64,421 31	70,767 21
Saskatchewan.. . . .	54,296 29	61,152 31	68,011 04	74,869 76
Alberta.. . . .	46,094 95	51,310 41	56,528 82	61,747 22
British Columbia.. . . .	47,334 76	52,799 38	58,265 94	63,732 50
Veterinary Colleges. . . . .	20,000 00	20,000 00	20,000 00	20,000 00
Total.. . . .	<u>\$700,000 00</u>	<u>\$800,000 00</u>	<u>\$900,000 00</u>	<u>\$1,000,000 00</u>

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VETERINARY COLLEGES.

The Ontario Veterinary College, Toronto, and the School of Comparative Medicine and Veterinary Science, Montreal, participate under the Act in an annual grant of twenty thousand dollars on the basis of the number of British subjects enrolled as students in the previous year.

For the year 1915-16 the apportionment was as follows:—

	Students, 1914-15.	Grant, 1915-16.
Ontario Veterinary College. . . . .	171	\$14,869 65
School of Veterinary Science. . . . .	59	5,130 44
		<hr/> \$20,000 00

Ontario Veterinary College.

One grant only had been paid to the Ontario Veterinary College at the close of the fiscal year, namely that of 1913-14, amounting to \$15,371.91.

The expenditure, under date of November 25, 1916, was as follows:—

Contingencies: postage, stationery, temporary assistance, etc. . . . .	\$ 1,642 51	
Equipment, library supplies, laboratory supplies, anatomical subjects. . . . .	7,688 28	
Printing and advertising. . . . .	597 59	
Rent, taxes, water rates. . . . .	2,192 28	
Services of lecturers, demonstrators, etc. . . . .	3,316 74	
	<hr/> \$15,417 40	
Refund of duplicate payment. . . . .	65 94	
		<hr/> \$15,351 46
Balance on hand. . . . .		<hr/> 20 45

The grant contributes to the salaries of the following lecturers:—

- Instructor in Clinics and Restraint of Animals, J. N. Pringle, M.R.C.V.S.
- Demonstrator in Histology and Bacteriology, M. D. McKlehan, B.A., M.D.
- Demonstrator in Histology, H. G. Wilson, B.A., M.B.
- Examiner, S. A. Cudmore, B.A. (Oxon).

STATEMENT OF ATTENDANCE, 1915-16.

	First Year.	Second Year.	Third Year.
Ontario. . . . .	28	24	27
Quebec. . . . .	4	2	1
Nova Scotia. . . . .	3	1	3
New Brunswick. . . . .	1	—	2
Prince Edward Island. . . . .	1	—	1
Manitoba. . . . .	5	4	7
Saskatchewan. . . . .	6	5	6
Alberta. . . . .	2	2	2
British Columbia. . . . .	—	—	2
Great Britain. . . . .	—	—	7
United States. . . . .	7	12	25
British West Indies. . . . .	—	—	7
New Zealand. . . . .	—	—	1
Newfoundland. . . . .	1	—	—
Total. . . . .	<hr/> 58	<hr/> 48	<hr/> 81
British subjects. . . . .			<hr/> 148
Foreign countries. . . . .			<hr/> 44
Total. . . . .			<hr/> 189

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## STATEMENT OF ENROLMENT, 1912-16.

	British Subjects.	Foreign.	Total.
1912-13 . . . . .	186	88	274
1913-14 . . . . .	199	74	273
1914-15 . . . . .	171	61	232
1915-16 . . . . .	145	44	189

## School of Comparative Medicine and Veterinary Science.

The grant to the School of Veterinary Science, Montreal, for 1915-16 was paid on March 30, 1916, and amounted to \$5,130.44, based on an enrolment of fifty-six students. The following expenses were charged to the grant:—

1. Practical laboratory work, purchase and hire of animals for investigation, purchase of 3 microscopes and distillation apparatus. . . . .	\$ 820 73
2. Applied on salaries account. . . . .	4,309 71
	<hr/>
	\$ 5,130 44

The following is the complete Financial Statement of the Institution for the year ended June 30, 1916:—

## RECEIPTS.

Cash in bank, July 1, 1916. . . . .	\$ 252 49
Students' fees. . . . .	2,325 59
Provincial Grant. . . . .	3,500 00
Dominion Grant "Agricultural Instruction Act". . . . .	5,130 44
Rental of Hospital. . . . .	666 60
From Laval University. . . . .	10,000 00
Miscellaneous Receipts. . . . .	150 03
Loans. . . . .	3,000 00
	<hr/>
	\$ 25,025 06

## DISBURSEMENTS.

Salaries of professors. . . . .	\$ 5,700 00
Salaries of officers. . . . .	800 00
Salary of the appariteur. . . . .	742 00
Administration expenses. . . . .	472 43
Laboratory expenses. . . . .	820 73
Rent of hospital. . . . .	1,201 85
Miscellaneous. . . . .	205 47
Printing and advertising. . . . .	197 59
Bank loans repaid and interest. . . . .	4,096 00
Land and new building. . . . .	6,000 00
Architect's fee. . . . .	300 00
Insurance, heat, light, etc. . . . .	4,000 00
	<hr/>
	\$ 24,536 07
Balance on hand. . . . .	488 99
	<hr/>
	\$ 25,025 06

Number of Students, British Subjects, in attendance in 1915-16:—

First year. . . . .	16
Second year. . . . .	21
Third year. . . . .	21
	<hr/>
	58

## STATEMENT OF ENROLMENT, 1912-16.

1912-13. . . . .	59
1913-14. . . . .	56
1914-15. . . . .	56
1915-16. . . . .	58

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STATEMENT OF APPORTIONMENT OF GRANT, 1912-17.

	Ontario Veterinary College.	School of Veterinary Science.
1912-13 (Agricultural Aid Act) . . . . .	\$15,500 00	\$3,000 00
1913-14 (Agricultural Instruction Act) . . . . .	15,371 91	4,628 09
1914-15 . . . . .	15,607 85	4,392 15
1915-16 . . . . .	14,869 56	5,130 44
1916-17 . . . . .	14,285 72	5,714 28

## ONTARIO.

## AGREEMENT, 1915-16.

1. District representatives.. . . . .	\$114,000 00
2. Agricultural college—	
(a) Capital expenditure.. . . . .	81,413 64
(b) Salaries and expenses of additions to staff and maintenance.. . . . .	12,400 00
3. O.A.C. short courses, travelling and living expenses of winners of acre profit and live stock competitions.. . .	1,500 00
4. To encourage Agriculture and Domestic Science in High, Public, Separate and Continuation schools, to be available for grants and for travelling and living expenses of teachers and others in attendance at short courses or other educational gatherings, in addition to services, expenses and equipment, and to be paid out on the recommendation of the Department of Education.. . . . .	20,000 00
5. Educational work in connection with marketing farm products, including organization of co-operative societies, collection, printing and distribution of information on current prices and systems of marketing.. . . . .	6,000 00
6. Stock and seed judging, short courses and institute lecture work.. . . . .	6,500 00
7. Women's institute work, including courses in cooking, sewing, etc.. . . . .	2,000 00
8. Short courses for fall fair and field crop judges, including travelling and living expenses.. . . . .	3,000 00
9. Drainage work.. . . . .	6,200 00
10. Demonstrations and instruction in vegetable growing.. . .	3,000 00
11. Demonstration work on soils.. . . . .	2,000 00
12. Demonstration work in spraying, pruning and packing fruits.. . . . .	4,000 00
13. Work in bee-keeping.. . . . .	1,500 00
14. Equipment of laboratory and services of Assistant, Horticultural Experiment Station, Vineland Station.. . . . .	2,500 00
(Each appropriation to include services, expenses and equipment.)	
Total.. . . . .	<u>\$ 266,013 64</u>

*District Representatives, \$110,555.*

By far the larger portion of the grant to the province of Ontario was, as in former years, allotted to the work of the district representatives, the amount being \$114,000, as against \$100,000 in the previous year.

In 1911 (the year before the Dominion grant became available), the number of counties served by special representatives was twenty, and some \$44,000 was expended by the province in this connection. In 1915 the number had increased to forty-five, and in most cases assistants had been provided together with such office help as was called for by the great increase in the work performed. The total appropriation in 1915, apart from county grants, amounted to \$190,000, of which sum the province provided \$80,000, and the Dominion grant the balance.

In the opinion of the president of the Ontario Agricultural College, "No better work is being done anywhere than these men are doing among the farmers of the province." It is not necessary in this report to present more than a summary of the activities engaging their attention, for the reason that this subject has been dealt with somewhat fully in previous reports, and will be found set out in detail in recent reports of the Ontario Minister of Agriculture. Of these activities the following list is typical, and represents the average county in the province.

1. Farmers' Clubs; 2. Stock and Seed Judging Courses; 3. Fruit Institutes; 4. Farmers' Institutes; 5. Apiary Demonstrations; 6. Drainage Surveys; 7. Ploughing Matches; 8. Egg Circles; 9. Six Weeks' Courses in Agriculture; 10. Junior Farmers'

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Improvement Associations; 11. Acre Profit Competitions; 12. Feeding Hogs for Profit Competitions; 13. Baby Beef Competitions; 14. Inter-County Live Stock Judging Competitions; 15. Potato Variety Tests; 16. Corn Variety Tests; 17. Alfalfa Variety Tests; 18. Sweet Clover Variety Tests; 19. Potato Spraying Experiments; 20. Fruit Growers' Associations; 21. Fall Fairs; 22. Cow Testing; 23. Prize Grain Distribution; 24. Publicity Associations; 25. Patriotism and Production Campaign; 26. Pure Seed Centres; 27. Live Stock Census; 28. Rural School Fairs.

One of the most striking illustrations of growth is to be found in the School Fair movement, as indicated by the following figures:—

	1913.	1914.	1915.
Number of fairs held.. . . . .	69	148	234
Number of schools included.. . . . .	531	1,391	2,291
Number of children represented.. . . . .	.....	.....	48,386
Number of settings of eggs given out.. . . . .	.....	4,074	6,868
Number of plots.. . . . .	.....	23,872	51,234
Number of entries at fairs.. . . . .	18,652	75,602	116,236
Number of persons attending fairs.. . . . .	33,375	95,310	157,000

ONTARIO AGRICULTURAL COLLEGE.

*New Buildings, \$74,340.*

This year witnessed the completion of the new Physics Building at the Ontario Agricultural College, Guelph, making the third building provided for in this way since Dominion assistance was first given in 1912. The buildings previously erected were the Field Husbandry and the Poultry Building, and to these should be added the completion of the Dairy Barn and the reconstruction of the Bacteriological Building, the total expenditure to date from the grants in this connection amounting to the sum of \$222,236.

The new building is an imposing structure. Its purpose is to provide facilities for teaching and investigation work in soil physics, and it will form a very valuable addition to the equipment of the college. The building is a four-story, steel-framed structure, having a frontage of 101 feet 9 inches and a depth of 70 feet. The lower story is of stone, and the upper portion of red pressed brick with stone trim and slate roof. The partition walls are of tile. The floors of halls and stairways are of concrete or other fireproof material. The provision for heating, lighting and equipment of classrooms and laboratories is modern and up-to-date in all respects.

*Salaries and Expenses, \$10,021.*

The assistance given by the grant has enabled the Ontario Agricultural College to further extend and strengthen its staff of lecturers and demonstrators. During the period covered by the report, the above sum was expended in salaries and expenses of eleven members of the staff, comprising two assistants in soil and drainage, two lecturers in horticulture, two lecturers in poultry work, a lecturer in chemistry, a lecturer in geology and soils, a lecturer in animal husbandry, a lecturer in farm management, and an assistant in bee-keeping. In addition to giving instruction to the students, assistance is given in the special work being carried on in the respective departments such as soil and drainage survey work, short courses, fruit growing, bee-keeping and poultry demonstrations, as described in succeeding paragraphs of this report.

MARKETING AND CO-OPERATION, \$6,046

Since the organization of the co-operation and markets branch in O.A.C., much painstaking work has been performed in gathering information as to the various co-operative organizations in the province with a view to obtaining a clearer know-

ledge of their functions and the degree of efficiency with which their work is being carried on. It was felt that a complete survey of the field was essential before very much could be done in the way of giving assistance to existing organizations, or guidance in connection with new undertakings.

While associations of farmers having for their object the improvement of producing methods are numerous it is found that substantial and effective business organizations to undertake the marketing of farm products were very few in number, and that even the best of them left much to be desired.

The results of the inquiry lead to the belief that the time is ripe for concerted action looking to the formation of farmers' marketing associations, and it is the purpose and intention of the branch to assist, both in the reorganization of old societies and the formation of new ones, by giving instruction in (1) Methods of organization, (2) Basis of organization, (3) Business methods and practices. To this end a bulletin on organizing a co-operative marketing business has been issued.

During the past year, a number of fruit-growers' and other associations have been assisted to reorganize their business in older Ontario, while much effective work has been done in the newer districts. The Manitoulin Marketing Association, whose organization was assisted by the department, has been very successful in marketing wool, and will extend its business to include live stock and farm produce. The Rainy River Potato Growers' Association includes nearly all the farmers of the district in its membership, and a similar organization has been formed for Thunder Bay. Assistance has been given to the organization of seed centres for the production and sale of registered seed, while attention has also been devoted to the methods of marketing tender fruits and to the question of their wider distribution. In addition to the above, a monthly list of products offered for sale by co-operative associations is sent out to farmers' clubs and others, and has proved of great value. The cost of the work is met entirely from the Dominion grant, and amounts to date to the sum of \$10,266.

#### SHORT COURSES AND LECTURES.

##### *Farmers' Institute Courses, \$5,588.*

The Institutes Branch of the Ontario Department of Agriculture, co-operated with the thirty-three District Representatives in holding demonstrations in the judging of live stock during the winter months of 1915-16.

During the season, 1915-16, seventy-nine courses were held, occupying one hundred and fifty days. Besides, there were nineteen evening meetings held in conjunction with the courses. The total attendance at these courses was approximately 12,250. The classes of stock discussed by eighteen carefully selected, experienced live stock experts, were heavy and light horses, beef and dairy cattle, sheep, swine, and poultry. In addition to the live stock discussions, seed-judging was taken up by a qualified agronomy expert at several of the courses. All evening meetings, attended by mixed audiences, were devoted to discussions of live stock and other agricultural topics, while in many cases these meetings were also addressed by one of the many first-class Women's Institute speakers. The stock used for demonstrating at these courses was secured from local breeders and importers.

*Demonstration Train.*—In the autumn of 1915 a "Better Farming Special Train" was organized, and taken over the lines of the Canadian Pacific Railway in Ontario; over 15,000 attended the lectures and demonstrations given at each station at which the train stopped.

One car was devoted to each of the following branches of agriculture:—

1. Live stock.

2. A display of the most productive varieties of grains grown in Ontario, as well as illustrations of the advisability of early seeding, sowing plump grain, free from smut, etc.



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3. A drainage and lightning rod exhibit.
4. Appliances used by the up-to-date dairyman.
5. Miniature modern poultry houses, feeding troughs, etc., as well as samples of the most approved poultry foods. This department also carried specimens of the most desirable and undesirable types of poultry.
6. Specimens of the noxious weeds and weed seeds most commonly found on Ontario farms.

Each department was in charge of an expert, capable of giving valuable instruction to visitors. Up-to-date literature containing information on all branches of agriculture was distributed. Not only were the farmers invited to visit the train, but special invitations were sent to the school children through the school boards and teachers, and the instructors took pains to make their exhibits as instructive as possible to the great number of children who visited the coaches.

Arrangements were made through the local Women's Institute to hold afternoon meetings for women, these meetings being addressed by one of the Department's Women's Institute speakers. They also were largely attended. Joint meetings were held in the evening, when addresses were given by women speakers and some of the specialists accompanying the train. A leading feature of these evening meetings was moving pictures illustrating modern agricultural operations. These proved to be not only entertaining but highly instructive.

The expenditure in connection with Short Courses in Stock and Seed judging, and the running of a Better Farming Special were met, with the exception of about \$500, solely from the grant.

*Judges' Short Courses, \$3,082.*

Short courses of instruction for judges at fall fairs and at field crop competitions were conducted as in former years both at the Ontario Agricultural College, Guelph, and at the Central Experimental Farm, Ottawa. The attendance at each of these points during the past season was about 200. The cost of the work is defrayed by the grant, and includes the expenses of those in attendance, as well as the services and expenses of the instructors.

*Short Courses at Ontario Agricultural College, \$2,148.*

Provision is made under this head for meeting the travelling and living expenses of the winners of the Acre Profit and Live Stock Competitions for young men, held under the supervision of the District Representatives. Eighty-six winners were given free courses at the college in stock and seed judging during January, 1916.

*Women's Institutes, \$4,762.*

Practically the whole of the outlay in connection with the demonstration lecture courses held throughout the province under the auspices of the women's institutes, is met by the grant. The following is a summary of the courses held during the season of 1915-16:—

A—Food values and cooking—	
Number taking course.....	1,699
Aggregate attendance.....	14,817
B—Home nursing—	
Number taking course.....	489
Aggregate attendance.....	4,865
C—Sewing—	
Number taking course.....	221
Aggregate attendance.....	2,191
Total number receiving instruction.....	2,889

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Every effort is made to make the courses as practical as possible, and emphasis is placed on efficiency and economy in the choice and preparation of foods, and in the choice and making of clothes. The interest shown by farm women in patriotic efforts received great stimulation through these courses. Many institutes have decided to devote their whole attention to such efforts while the war continues, and to discontinue the courses for the time being. At the present time the women's institutes, not only in Ontario, but of other provinces as well, are deeply engrossed in the making of supplies and the raising of money for the Red Cross, having responded most generously to the calls for their support.

## INSTRUCTION AND DEMONSTRATION.

*Drainage Work, \$6,190.*

This work is under the direction of the Department of Physics at the Ontario Agricultural College, and, when necessary, assistance is lent by the district representatives. It includes the making of drainage surveys for farmers, demonstrations in tile draining, and the conducting of drainage demonstration plots. In the latter, half of the field is left undrained for comparison. Six more plots were started in 1915 and a demonstration was held in each, with an average attendance of seventy-six. This brings the total number of plots up to twenty-four. The season was unfavourable for the test, but partial returns, comprising fourteen plots, showed an average increase of \$4.40 in crop values over the undrained land. The experiment will continue for a period of years.

The following is a statement of the drainage work performed during the past three years. The cost of the work is borne jointly by the Dominion grant and the province.

## SUMMARY OF SURVEY.

Year.	Applications.	Surveys.	Acres surveyed.	Miles of drain.	No.	Demonstrations average attendance
1913.....	290	217	13,705	1,713	56	20.3
1914.....	296	250	13,386	1,673	23	20.9
1915.....	291	263	15,336	1,917	8	12.8

*Vegetable Growing, \$3,800.*

The grant provides for the salary of the Vegetable Specialist and his assistant, travelling expenses and the expenses of the office, located at Toronto.

The work includes conferences with those engaged in the business of market gardening, addresses to agricultural classes, institutes and similar gatherings, correspondence and personal interviews, the carrying on of demonstration on a commercial basis and of experimental work with vegetable diseases and pests, such as Cabbage Root Maggot, Celery Blight. In connection with Celery Blight, fourteen demonstration plots were conducted, meetings held, and the results brought to the attention of growers all over the province. Most of the outside work is done in co-operation with the District Representatives.

*Soils and Soil Survey Work, \$3,646.*

Two lines of work are being carried on at the Ontario Agricultural College by this division of the Department of Chemistry. The first embraces a preliminary soil survey. The work of actual charting was begun in June and continued through the

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season. Eleven counties have been completed and the mapping done; five others are completed in part.

The second undertaking is the conduct of two demonstration plots on definite types of soil, one at Walsh, Norfolk county, on light sand, and another near the College on clay loam. At Walsh, where the sandy land was limed, manured and fertilized, the yield of potatoes was raised more than six-fold over the check plots, being more than 400 bushels per acre.

Other plots have been laid out and the material applied for an extensive experiment with different forms of lime materials on the acid, peaty soils of the Leamington marsh and on the heavy clay soils of Welland county.

Two new sources of potash are being studied in the fertilizer experiments, but conclusive results have not yet been arrived at.

The grant provides for the services of four demonstrators in this branch, together with expenses, supplies, equipment, etc.; also for a motor car to facilitate operations.

*Fruit Demonstrations, \$3,052.*

The work in this connection is conducted partly through the Department of Agriculture and partly by the Ontario Agricultural College.

During the season of 1915 the Department carried on extensive demonstrations of practical orchard methods in different parts of the province. This was very largely in five orchards, leased by the Department of Agriculture, and in a number of smaller orchards that were taken over simply for the season. In the leased orchards, which contain some 1,900 trees in full bearing, the entire work was undertaken, from the pruning in the spring to the marketing in the fall. These orchards were in most cases about the average of the province, that is, in a fair condition when taken over. To demonstrate just what results could be obtained, the trees were carefully pruned and thoroughly sprayed. Manure was shipped in from outside points and everything possible done to secure good crops of choice fruit. The results secured were far in advance of the expectations of the ordinary grower, and were verified by the best growers in each locality, who inspected them carefully. Very great interest is being taken in these orchards, particularly in Prince Edward and Lambton counties, meetings having been held in the orchard to show the growers of the neighbourhood the methods followed in looking after the trees.

In addition to the work in the demonstration orchards a very great deal of personal work has been done by the men working under this vote. The Department stands prepared to send one of its demonstrators to any orchard in the province, where the owner has asked for advice. In many cases the owners of the orchards to whom representatives have been sent have gathered together a number of their neighbours so that all may take advantage of the information supplied.

At the College the work performed comes under the supervision of the Horticultural Department, and is carried on by G. J. Culham, B.S.A., Lecturer in Horticulture, and H. S. Fry, B.S.A., Lecturer in Pomology, two of the lecturers provided by the grant. The work comprises co-operative orchard experiments conducted over a series of years in summer pruning of the Spy apple to hasten bearing, and the top-grafting of the Ben Davis to better varieties, and root pruning. Thirteen experiments are under way.

The causes and prevention of winter injury to apple trees were also investigated, in view of the numerous cases of injury reported. Assistance was also given to beginners in fruit growing in Northern Ontario, and much information gathered, which is of great value to settlers seeking advice.

The lecturer in Pomology takes entire charge of the First and Second Year Classes in Fruit Growing, and also of the fruit work of the graduating classes in Horticulture.

*Bee-Keeping, \$1,756.*

The expenditure under this head is supplementary to the outlay by the Department of Agriculture, the amount provided from the grant during the year being \$1,755.71. This branch of work is carried on from the Ontario Agricultural College, where the officer in charge also acts as lecturer. The grant provides for the services and expenses of a number of students who act as demonstrators and instructors. An educational campaign is being pursued, and sixty demonstrations were held during the season with a total attendance of nearly two thousand. Bee-keepers all over the province look to the College for information and assistance in their work.

*Canning Investigations, \$1,631.77*

Acting on the recommendation of the Advisory Board of the Horticultural Experiment Station at Vineland, Ontario, a specialist has been appointed to carry on investigations in canning operations, and as to the disposal of the surplus products of the orchard and garden. Perhaps the most valuable part of the work hitherto performed relates to the canning of fruits and vegetables. To this end the small canning plant that had been provided out of provincial funds was supplemented by the equipment of a testing laboratory, the cost, together with the salary of the specialist in charge, being met out of the grant. All kinds of fruits and vegetables are being canned at this plant. Records are kept by varieties as to the qualities produced and their keeping qualities under different methods of treatment. Varieties are also tested to prove their value under canning factory conditions, with a view of recommending both to canners and growers just what varieties should be grown for this particular industry. Mr. Culverhouse, who has charge of the plant, was instructed by the Department, since the war, to can as much fruit as the plant would handle in order to supply the hospital demand. During the past season 30,000 pounds of jam and over 30,000 gallon cans of peaches and other fruit were put up. While work of this kind was never contemplated on anything approaching this scale, it has nevertheless resulted in giving the superintendent a very wide experience in the processing of the different fruits.

Other investigations have included the making of cider and vinegar, and bulletins have been issued describing the methods employed.

## ELEMENTARY AGRICULTURE INSTRUCTION IN SCHOOLS, \$20,347.

In the province of Ontario, grants in aid of Agricultural Education are awarded both to schools and to teachers qualifying for same under the regulations of the Education Department.

In the case of High Schools, Continuation Schools and Collegiate Institutes, where the prescribed courses are carried out, a grant not exceeding \$100 is made to the board, but further grants of bonuses are made to the teachers conducting such courses, the amount being determined by their professional qualifications. In cases where such schools conduct experimental and demonstration plots in the school grounds in connection with class-room and laboratory instruction, the teacher receives a further supplementary bonus. The bonuses to teachers in schools of this class range from \$30 to \$120, the latter being paid to the holder of a high school professional certificate and the degree of B.Sc. (Agr.) who carries on courses extending throughout the year.

In the case of Public and Separate Schools the grants are on a similar basis, namely, to the Board and to the teacher. The requirements are the carrying out of the specified course of instruction, the conducting of Home and School Gardens, and planting and caring for the school grounds. The teachers' bonuses are determined by their professional qualifications, and by the length of the period during

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which instruction is given. Boards receive grants ranging from \$10 to \$30; teachers holding Elementary Agricultural certificates receive bonuses ranging from \$12 to \$30. Those not certificated in Agriculture receive a bonus of from \$5 to \$15.

The grants and bonuses referred to are provided out of the Dominion grant, and the total amount so disbursed amounted for the year to \$14,382.

The following statement gives the number of schools of all classes qualifying for grants during the period 1913-16:—

	1913.	1914.	1915.	1916.
High schools, Collegiate Institute and Continuation schools.. . . . .	2	11	15	21
Public and Separate schools.. . . . .	159	268	407	—

Of the 407 Public and Separate Schools qualifying in 1915, 222 conducted school gardens and 185 home gardens.

To prepare teachers to teach agriculture, and to qualify inspectors for the work of supervision, the following special courses are provided:—

(1) A summer school for public and separate school teachers, held during July at the Ontario Agricultural College, and leading to an elementary certificate in agriculture. The work prescribed covers sessions at the college in two consecutive years with a winter reading course between.

(2) A summer school for high school teachers, held at the Ontario Agricultural College during July. The course extends over two consecutive sessions, and leads to an intermediate certificate in agriculture qualifying the holder to teach the subject in continuation schools, high schools, and collegiate institutes.

The numbers in attendance at the summer schools in the years stated were as follows:—

	Public School Teachers.	High School Teachers.
1914—		
First year.. . . . .	64	16
Second year.. . . . .	32	13
1915—		
First year.. . . . .	54	18
Second year.. . . . .	23	10
1916—		
First year.. . . . .	116	18
Second year.. . . . .	46	15

In 1915, a course of two weeks' duration was provided for school inspectors at the college. Practically all the inspectors in the province attended.

The certificates above referred to are awarded by the Department of Education, but the instruction is given by members of the college faculty. The expenses of the students and of the courses are met by the grant.

In addition to the above, a degree B.Sc. (Agr.) is now given to students who complete two years in certain prescribed work in one of the universities of Ontario, followed by two years at the Agricultural College, the object being to provide highly qualified teachers of agriculture. Owing to war conditions, the necessity of the establishment of this degree, and the yet undeveloped state of public opinion, there have not, hitherto, been many candidates.

It should be observed that, in addition to the special teachers' courses at the Ontario Agricultural College, the Education Department makes provision for a course of study in agriculture, with examinations, at the provincial normal schools. At these schools teachers-in-training may fit themselves for teaching subjects related to farming, nature and rural life, and it is from this source that those who hereafter qualify for teaching work will receive their agricultural training.

## APPOINTMENTS PROVIDED BY THE DOMINION GRANT.

(A.) *Officers regularly employed, whose salaries are paid wholly from the Agricultural Instruction Grant:*

## ONTARIO AGRICULTURAL COLLEGE, GUELPH.

Lecturer in Poultry, F. N. Marcellus, B.S.A.  
 Lecturer in Farm Management, A. Leitch, B.S.A.  
 Lecturer in Rural Sociology, A. McLaren, B.S.A.  
 Lecturer in Geology and Soils, John Woodward.  
 Lecturer in Physics, J. R. Spry, B.S.A.  
 Soil Analyst, S. R. Curzon, B.S.A.  
 Demonstrator in Horticulture, H. S. Fry, B.S.A.  
 Demonstrator on Chemistry, W. L. Iveson, M.A.  
 Lecturer in Animal Husbandry, J. P. Saekville, B.S.A.  
 Poultry Specialist, J. P. Hales, B.S.A.  
 \*Horticulturist, G. J. Culham, B.S.A.  
 Assistant in Soil Work, F. Bryant.  
 Assistant in Drainage Work, A. E. McLaurin.

## DEPARTMENT OF AGRICULTURE, TORONTO.

Vegetable Specialist, S. C. Johnston, B.S.A.  
 Stenographers, two.  
 Director, Co-operation and Markets Branch, F. C. Hart, B.S.A.  
 Stenographer, Markets Branch, Miss Reid.

## HORTICULTURAL EXPERIMENT STATION, VINELAND, ONT.

Assistant Experimentalist, P. E. Culverhouse, B.S.A.  
 In Charge Fruit Extension Work, O. J. Robb.  
 Official Butter Grader, J. H. Scott.

## DEPARTMENT OF EDUCATION, TORONTO.

Director of Elementary Agricultural Education, Dr. J. B. Dandeno, Teacher of Domestic Art, Miss A. E. Robertson.

(B.)—*Officers, regularly employed, whose salaries are paid in part from the Grant.*

## DEPARTMENT OF AGRICULTURE, TORONTO.

45 District Representatives.

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COMPARATIVE STATEMENT of Expenditure of Provincial Funds for Agricultural purposes for the years 1913, 1914, and 1915, and estimated Expenditure for 1916.

Service.	1913. To Oct. 31.	1914. To Oct. 31.	1915. To Oct. 31.	1916. To Oct. 31. [Estimated].
Department of Agriculture	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Salaries; Contingencies; Incidentals and Miscellaneous	98,346 79	100,973 95	98,021 72	120,500 18
County Representatives	40,596 68	30,668 93	35,917 01	80,000 00
Live Stock Interests—				
Grants and Winter Fairs; Grants to Poultry Association and Horse Shows; Stallion Registration; Sheep Experiments, etc.; Spring Shows	58,793 66	38,563 78	43,079 87	40,152 73
Dairy Interests—				
Grants; Instruction and Inspection; Dairy School; Miscellaneous	58,574 35	58,701 09	54,091 40	62,712 70
Agricultural and Horticultural Societies—				
Insurance; Field Crop Competitions and Judges; Expert Judges; Exhibitions; Special Grants	129,473 98	125,548 10	123,807 11	172,504 66
Institute—Farmers' and Women's	32,052 25	27,323 52	23,187 68	31,000 54
Fruit Interests—				
Grants; Spraying Assistance; Special Crop Experiments; Cold Storage Experiments and Exhibits; San Jose Scale; Horticultural Experiment stations; Apiary Inspection; Demonstration Work	45,474 87	54,934 72	49,515 68	55,508 12
Ontario Veterinary College—				
Salaries and Expenses	32,929 74	33,589 22	28,089 00	32,057 77
Ontario Agricultural College, Macdonald Institute, and Ontario Experimental Farm—				
Salaries and Expenses	264,458 55	284,507 67	280,315 91	300,641 00
Total	741,529 87	771,811 00	775,491 34	908,725 80
Revenue	177,131 50	157,111 80	138,906 62	
Net total	564,398 37	614,699 20	636,584 72	

Note.—The above statement does not include expenditure under colonization, factory inspection and stationary engineers' branches.

In 1915 the Department of Education expended \$47,377 in connection with agricultural education. Of this sum \$39,245 went towards the cost of the work of the district representatives. In 1916 this was assumed by the Department of Agriculture, while the balance of the expenditure for this purpose was met from the federal grant.

## ONTARIO.

GRANT 1915-16, \$266,013.64.

SUMMARY STATEMENT, April 1, 1915, to March 31, 1916.

No.	Classification.	Grant 1915-16.	Balance April 1, 1915.	Total.	Expended to Mar. 31, 1916.	Balance on hand Mar. 31, 1916.
1.	District representatives.....	\$114,000 00	\$ 402 86	\$114,402 86	\$110,555 76	\$ 3,847 10
2.	Ontario agricultural college.					
	(a) Capital.....	81,413 64	20,604 48	102,018 12	74,340 39	27,677 73
	(b) Salaries and expenses.....	12,400 00	.....	12,400 00	10,021 32	2,378 68
3.	Short courses, O. A. C.....	1,500 00	763 51	2,263 51	2,148 28	115 23
4.	Agriculture and domestic science in schools.....	20,000 00	11,954 67	31,954 67	20,346 66	11,608 67
5.	Marketing of farm products.....	6,000 00	1,279 25	7,279 25	5,015 58	2,233 67
6.	Stock and seed judging: Institute short courses; lectures	6,500 00	3,618 66	10,118 66	5,588 07	4,530 59
7.	Women's institutes.....	2,000 00	7,806 87	9,806 87	4,761 60	5,045 27
8.	Judges' short courses.....	3,000 00	709 15	3,709 15	3,281 56	427 59
9.	Drainage work.....	6,200 00	.....	6,200 00	6,189 66	10 34
10.	Demonstrations in vegetable grow- ing.....	3,000 00	838 28	3,838 28	3,799 91	38 37
11.	Demonstrations on soils.....	2,000 00	1,645 67	3,645 67	3,645 67	.....
12.	" " fruit.....	4,000 00	3,319 52	7,319 52	3,052 10	4,297 42
13.	" " bee-keeping.....	1,500 00	308 02	1,808 02	1,755 71	52 31
14.	Horticultural experiment station ..	2,500 00	.....	2,500 00	1,631 77	868 23
	Totals .....	\$266,013 64	\$53,280 94	\$319,294 58	\$256,164 04	\$ 63,130 54
	Additional from 1914-15.					
	Lectures on Horticulture .....		433 45	433 45	209 25	224 20
	Demonstrations in live stock and poultry.....		3,097 80	3,097 80	1,027 21	2,070 60
	Miscellaneous.....		4,795 97	4,795 97	1,132 97	3,663 00
	Totals .....	\$266,013 64	\$61,688 16	\$327,621 80	\$258,533 46	\$ 69,088 34



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DETAILS OF EXPENDITURE, APRIL 1, 1915, TO MARCH 31, 1916.

1. DISTRICT REPRESENTATIVES.

Grant 1915-16.....	\$114,000 00	
Balance April 1, 1915.....	402 86	
Expended to March 31, 1916.....		\$110,555 76
Balance on hand March 31, 1916.....		3,847 10
	<u>\$114,402 86</u>	<u>\$114,402 86</u>

Brant.....	\$2,223 82	Brought forward.....	\$62,520 27
Bruce.....	2,387 49	Muskoka.....	1,561 95
Carleton.....	2,284 16	Miscellaneous.....	4,241 82
Dufferin.....	2,013 86	New Liskeard.....	1,540 11
Dundas.....	2,219 23	Northumberland.....	2,491 88
Durham.....	2,601 35	Norfolk.....	1,669 89
Elgin.....	2,319 05	Ontario.....	2,580 31
Essex.....	2,787 18	Oxford.....	3,041 17
Frontenac.....	2,187 06	Prince Edward.....	2,253 59
Ft. William.....	1,019 71	Port Arthur.....	1,654 73
Grenville.....	858 71	Peterboro.....	2,129 65
Glengarry.....	3,289 35	Peel.....	2,932 51
Gore Bay.....	2,735 63	Rainy River.....	2,965 23
Grey.....	3,066 02	Renfrew.....	2,487 75
Halton.....	2,604 27	Sault Ste. Marie.....	1,841 14
Hastings.....	1,963 90	Simcoe.....	2,893 83
Haldimand.....	2,680 97	Sudbury.....	1,519 08
Kenora.....	3,308 17	Victoria.....	2,724 07
Kent.....	2,839 71	Waterloo.....	1,782 58
Lambton.....	2,912 85	Welland.....	1,092 71
Lanark.....	3,259 93	Wentworth.....	2,701 02
Leeds.....	3,759 03	York.....	2,292 47
Lennox and Addington.....	3,637 65		
Middlesex.....	3,133 17		
Carried forward.....	\$62,520 27	Less refunds.....	\$11,128 76
			573 00
			<u>\$110,555 76</u>

2. ONTARIO AGRICULTURAL COLLEGE.

(a) Capital Expenditure.

Grant, 1915-16.....	\$ 81,413 64	
Balance April 1, 1915.....	20,604 48	
Expended to March 31, 1916.....		\$ 74,349 39
Balance on hand March 31, 1916.....		27,677 73
Total.....	<u>\$102,018 12</u>	<u>\$ 102,018 12</u>
Poultry building—		
Material.....	\$ 1,312 32	
Labour.....	444 90	\$ 1,766 52
Boards building—		
Material.....	1,400 82	
Labour.....	951 63	2,356 46
Physical building—		
Material.....	\$3 486 18	
Contracts.....	5,277 01	
Furnishings.....	4,787 82	
Labour.....	52,769 48	
Contingencies.....	1,277 48	
W. A. Armstrong, accountable.....	1,600 00	\$7,991 88
To complete buildings at O. A. C.—		
Material.....	1,002 97	
Labour.....	657 19	
Furnishings.....	884 79	
Contingencies.....	2 94	
		\$ 2,548 41
		\$ 10,980 88
Less refund.....		788 88
Total.....		<u>\$ 74,349 39</u>

*(b) Salaries and Expenses of Additions to Staff.*

Grant, 1915-16.. . . . .	\$ 12,400 00	
Expended to March 31, 1916.. . . . .		\$ 10,021 32
Balance on hand March 31, 1916.. . . . .		2,378 68
Total.. . . . .	<u>\$ 12,400 00</u>	<u>\$ 12,400 00</u>

## Services and expenses—

R. Bryant, Assistant in Soil and Drainage Work.. . . . .	\$ 651 70	
G. J. Culham, Lecturer in Horticulture.. . . . .	1,228 15	
H. S. Fry, Lecturer in Pomology . . . . .	1,067 70	
A. L. Gibson, Lecturer in Chemistry.. . . . .	574 15	
J. P. Hales, Lecturer in Poultry.. . . . .	1,000 00	
C. M. Laidlaw, Assistant in Drainage Work.. . . . .	1,060 94	
A. Leitch, Lecturer in Farm Management.. . . . .	1,500 00	
F. N. Marcellus, Lecturer in Poultry.. . . . .	1,336 60	
J. P. Sackville, Lecturer in Animal Husbandry.. . . . .	1,000 00	
J. Woodward, Lecturer on Geology and Soils.. . . . .	375 00	
A. J. Galbraith, Assistant in Bee-keeping . . . . .	26 92	
Equipment.. . . . .	200 16	
Total.. . . . .		<u>\$ 10,021 32</u>

## 3. SHORT COURSES ONTARIO AGRICULTURAL COLLEGE.

Grant, 1915-16.. . . . .	\$ 1,500 00	
Balance April 1, 1915.. . . . .	763 51	
Expended to March 31, 1916.. . . . .		\$ 2,148 28
Balance on hand March 31, 1916.. . . . .		115 23
Total.. . . . .	<u>\$ 2,263 51</u>	<u>\$ 2,263 51</u>

Travelling and living expenses of winners of competitions..	\$ 2,124 10
Printing and stationery.. . . . .	24 18
Total.. . . . .	<u>\$ 2,148 28</u>

## 4. TO ENCOURAGE AGRICULTURE AND DOMESTIC SCIENCE IN HIGH, PUBLIC, SEPARATE AND CONTINUATION SCHOOLS.

Grant, 1915-16.. . . . .	\$ 20,000 00	
Balance April 1, 1915.. . . . .	11,954 67	
Expended to March 31, 1916.. . . . .		\$ 20,346 66
Balance on hand March 31, 1916.. . . . .		11,608 01
Total.. . . . .	<u>\$ 31,954 67</u>	<u>\$ 31,954 67</u>

W. R. Austin, Field Agent, services and expenses.. . . . .	\$ 334 44
J. C. Fuller, " " " . . . . .	302 18
A. M. McDermott, " " " . . . . .	610 49
J. E. McLarty, " " " . . . . .	201 25
E. L. Small, " " " . . . . .	419 66
W. I. Scott, " " " . . . . .	733 00
J. B. Dandeno, services as inspector of Elementary Agricultural Instruction.. . . . .	1,249 98
A. E. Robertson, services as instructor in household science..	250 00
Grant to High, Continuation, Public and Separate schools for teaching agriculture.. . . . .	14,382 47
Instructors and students, services and expenses.. . . . .	1,521 20
Printing and advertising, periodicals.. . . . .	459 10
Seed, etc.. . . . .	130 64
	<u>\$ 20,597 41</u>
Less refund.. . . . .	250 75
Total.. . . . .	<u>\$ 20,346 66</u>



6. STOCK AND SEED JUDGING, ETC.—*Concluded.*Services and expenses of instructors—*Concluded.*

F. Forsyth.. . . . .	\$	243	54	
A. W. Peart.. . . . .		13	50	
I. B. Martin.. . . . .		23	80	
M. V. Powell.. . . . .		42	50	
C. Gantby.. . . . .		34	10	
E. G. Rowley.. . . . .		22	55	
J. W. Clark.. . . . .		102	45	
H. M. Robinson.. . . . .		40	15	
F. N. Marcellus.. . . . .		5	25	
H. M. King.. . . . .		13	05	
				\$ 3,521 84
Rent of stock.. . . . .			133	50
Freight and express.. . . . .			50	17
Rent of halls, tents, etc.. . . . .			216	41
Livery.. . . . .			76	20
Printing and advertising.. . . . .			942	33
Labour, cartage and supplies.. . . . .			826	66
Postage.. . . . .			235	13
				\$ 6,002 24
Less refunds.. . . . .			414	17
Total.. . . . .	\$	5,588	07	

## 7. WOMEN'S INSTITUTES.

Grant, 1915-16.. . . . .	\$	2,000	00	
Balance April 1, 1915.. . . . .		7,806	87	
Expended to March 31, 1916.. . . . .	\$	4,761	60	
Balance on hand March 31 1916.. . . . .		5,045	27	
Total.. . . . .	\$	9,806	87	\$ 9,806 87

## Lecturers, services and expenses—

N. H. Altenburg.. . . . .	\$	605	78	
E. Chapman.. . . . .		167	50	
E. M. Collins.. . . . .		435	24	
G. Gray.. . . . .		479	22	
H. I. Jobb.. . . . .		143	80	
E. McKay.. . . . .		623	01	
B. McDermand.. . . . .		255	43	
O. Hayes.. . . . .		75	00	
G. Conover.. . . . .		131	65	
E. Campbell.. . . . .		75	00	
M. L. Woelard.. . . . .		343	85	
M. I. Foote.. . . . .		262	80	
M. M. Smith.. . . . .		30	00	
D. Miller.. . . . .		30	00	
H. Willett.. . . . .		100	00	
E. W. McClure.. . . . .		53	74	
R. Black.. . . . .		404	15	
E. McCausland.. . . . .		25	75	
N. M. Steele.. . . . .		177	00	
C. T. Black.. . . . .		354	75	
Printing, advertising and contingencies.. . . . .		80	93	
				\$ 4,854 60
Less refund.. . . . .			93	00
Total.. . . . .	\$	4,761	60	

## 8. SHORT COURSES FOR JUDGES.

Grant, 1915-16.. . . . .	\$	3,000	00	
Balance April 1, 1915.. . . . .		709	15	
Expended to March 31, 1916.. . . . .	\$	3,281	56	
Balance on hand March 31, 1916.. . . . .		427	59	
Total.. . . . .	\$	3,709	15	\$ 3,709 15
Sundry persons, services.. . . . .	\$	167	50	
" " expenses.. . . . .		3,114	06	
Total.. . . . .	\$	3,281	56	



12. FRUIT DEMONSTRATION.

Grant, 1915-16.. . . . .	\$ 4,000 00	
Balance April 1, 1915.. . . . .	3,349 52	
Expended to March 31, 1916.. . . . .		\$ 3,052 10
Balance on hand March 31, 1916.. . . . .		4,297 42
	<hr/>	<hr/>
Total.. . . . .	\$ 7,349 52	\$ 7,349 52
G. J. Culham, Instructor, expenses.. . . . .	\$ 266 85	
H. S. Fry, " " . . . . .	200 00	
W. F. Kydd, " " . . . . .	626 54	
W. L. Hamilton, " " . . . . .	206 30	
O. J. Robb, Fruit Specialist, expenses.. . . . .	1,108 75	
L. Smith, Instructor, services and expenses.. . . . .	81 95	
Supplies, labour, board.. . . . .	626 58	
Cartage, express, freight.. . . . .	35 13	
	<hr/>	<hr/>
	\$ 3,152 10	
Less refund.. . . . .		100 00
	<hr/>	<hr/>
Total.. . . . .	\$ 3,052 10	

Messrs. Culham and Fry are members of the Agricultural College staff; their services are paid under section 2b. Messrs. Kydd, Hamilton and Robb are employed by the Department of Agriculture and do no college work.

13. DEMONSTRATION IN BEE-KEEPING.

Grant, 1915-16.. . . . .	\$ 1,500 00	
Balance April 1, 1915.. . . . .	308 02	
Expended to March 31, 1916.. . . . .		\$ 1,755 71
Balance on hand March 31, 1916.. . . . .		52 31
	<hr/>	<hr/>
Total.. . . . .	\$ 1,808 02	\$ 1,808 02

Students and Instructors, services and expenses—

Jas. Armstrong.. . . . .	\$ 69 70
J. Barlow.. . . . .	68 02
J. Coburn.. . . . .	5 50
A. Dennison.. . . . .	137 40
J. C. Duff.. . . . .	53 05
J. F. Dunn.. . . . .	36 65
R. A. Fowler.. . . . .	12 20
R. C. Fretz.. . . . .	63 20
W. F. Geddes.. . . . .	114 00
M. B. Holmes.. . . . .	19 00
R. M. Hunter.. . . . .	32 40
G. T. Kingsmill.. . . . .	494 50
J. H. McCauley.. . . . .	457 45
M. Pettit.. . . . .	59 20
N. Robertson.. . . . .	63 85
J. S. Schrank.. . . . .	38 50
W. Scott.. . . . .	117 44
W. H. Selwyn.. . . . .	22 95
S. A. Stewart.. . . . .	228 05
W. A. Weir.. . . . .	43 60
J. T. Wilson.. . . . .	14 05
	<hr/>
Total.. . . . .	\$ 1,755 71



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## DEMONSTRATIONS IN LIVE STOCK AND POULTRY (1914-15).

Balance April 1, 1915.. . . . .	\$3,097 80	
Expended to March 31, 1916.. . . . .		\$1,027 20
Balance on hand, March 31, 1916.. . . . .		2,070 60
	<hr/>	<hr/>
Total.. . . . .	\$3,097 80	\$3,097 80
F. N. Marcellus, instructor, expenses.. . . . . \$ 233 20		
Lecturers, services and expenses—		
J. Porter.. . . . .	\$ 15 00	
C. A. Zavitz.. . . . .	10 00	
G. E. Day.. . . . .	10 00	
A. Leitch.. . . . .	300 00	
J. Murray.. . . . .	40 00	
J. Gardhouse.. . . . .	10 00	
D. Anderson.. . . . .	15 00	
T. McMillan.. . . . .	20 00	
E. A. Hales.. . . . .	10 00	
J. P. Sackville.. . . . .	100 00	
J. J. Ferguson.. . . . .	40 00	
R. H. Harding.. . . . .	10 00	
A. J. Craig.. . . . .	15 00	
H. Goltz.. . . . .	15 00	
	<hr/>	610 00
H. M. King, instructor, services and expenses.. . . . .		109 00
Reporting conventions.. . . . .		75 00
		<hr/>
Total.. . . . .		\$1,027 20

The above expenditure was on account of the 1914-15 grant, and is dealt with in the report on the Instruction Act for that year.

## ONTARIO.

## AGRICULTURAL AID ACT GRANT, 1912.

## STATEMENT APRIL 1, 1915, TO MARCH 31, 1916.

	Balance April 1, 1915.	Balance on hand, Mar. 31, 1916.
Poultry work.. . . . .	\$ 4 39	\$ 4 39
Milking shorthorns.. . . . .	1,856 11	1,856 11
Dairy survey.. . . . .	215 51	215 51
Ontario Veterinary College—Additional land.. . . . .	13,494 93	13,494 93
Western Ontario creamery work.. . . . .	1,131 90	1,131 90
	<hr/>	<hr/>
Total.. . . . .	\$16,702 84	\$16,702 84
Live stock, Northern Ontario—Refund .. . . . .		3,427 84
		<hr/>
Total.. . . . .		\$20,130 68



QUEBEC.

AGREEMENT, 1915-16.

1. Poultry . . . . .	\$15,000 00
2. Arboriculture, fruit growing . . . . .	33,000 00
3. Bacon . . . . .	12,000 00
4. Schools of agriculture . . . . .	60,000 00
5. Agricultural teaching in academies, rural and normal schools . . . . .	8,000 00
6. District representatives, agricultural teachers, Agronomist . . . . .	12,000 00
7. Experimental union . . . . .	2,000 00
8. Alfalfa and clover . . . . .	4,000 00
9. Seed selection . . . . .	4,500 00
10. Bee-keeping . . . . .	9,000 00
11. Tobacco . . . . .	3,500 00
12. Dairying . . . . .	25,000 00
13. Drainage . . . . .	3,000 00
14. Domestic science . . . . .	10,000 00
15. Maple sugar industry . . . . .	4,000 00
16. Conferences, publications, etc. . . . .	10,310 70
Total . . . . .	<u>\$215,310 70</u>

The grant to the province of Quebec, provided by the Agricultural Instruction Act, is expended mainly under three divisions. First, to promote undertakings carried out through the Provincial Department of Agriculture; second, to contribute to the funds of colleges and schools of agriculture, and, third, to advance agricultural teaching in rural schools and instruction in household science in the convent and normal schools.

In making a general survey under these three headings of the work carried on, it will be found that the projects coming under the direct auspices of the Provincial Department may, speaking generally, be regarded either as field demonstration, oral instruction, or, as is most often the case, a combination of instruction and demonstration. An example of the first will be found in the demonstration orchards, in the alfalfa and clover plots and in the operation of ditching machines in connection with under-drainage; of the second, in the short courses provided for farmers and farmers' sons, and of the third, in the school of instruction in bacon-curing and general abattoir work, as well as in the maple sugar-making schools.

In an effort to stimulate the raising of hogs and the production of bacon, a Danish expert has been employed and a building provided and equipped to give detailed instruction in bacon-curing and general abattoir methods. In connection with the effort being made to raise the standard and increase the supply of maple products, for which the province is noted, four schools have been provided at which instruction is given in up-to-date methods. In the interest of horticulture the province has received very considerable aid. Not only has a provincial entomologist been provided, but a fruit branch of the department at Quebec has been organized, mainly with the funds derived from the grant, while the cost of operating demonstration and experimental orchards and the establishment of a nursery for introducing suitable varieties of fruit is being met in this way.

The same is true of the poultry demonstrations scattered over the province, the tobacco-growing and curing demonstrations and the work of apitary inspection, coupled with instruction in the keeping of bees free from disease.

In various other forms of demonstration the grant has been of great assistance. It has been drawn upon to assist the pure-seed propaganda, including the operation of clover-hullers, leading to a numerous introduction of these machines and a great increase in the supply of home-grown seed.

Dairying is the leading branch of agriculture in Quebec, and the province has been relieved to a considerable extent of the cost of the work of inspection in cheese and butter factories. The advance in the quality and quantity of the output is noteworthy, due largely to the improvement that has taken place in methods of production and manufacture.

The introduction of the district representative system has been brought about by means of the grant. The number of district agronomists employed among the French population has been increased from six to twelve, with five assistants. The scope of their work includes the supervision of farmers' organizations, advising with farmers, the promotion of demonstrations and of school garden and school fair work, and the carrying on of short courses for farmers.

The grant also contributes to the issue of bulletins on many of the topics referred to, and also to the cost of making educational displays at exhibitions.

Turning to the schools and colleges of agriculture it will be found that, both at the Agricultural Institute at Oka and the School of Agriculture at Ste. Anne de la Pocatière, the student capacity has been extended and other financial assistance has also been given in the way of increased salaries for the teaching staffs and towards equipment and maintenance. Each school is to receive \$50,000 to cover the cost of building extensions, to be paid from the grant in yearly instalments.

By means of the grant Macdonald College has been enabled not only to increase its teaching staff, and to extend its investigation and research work, but also to carry on various demonstrations among the English-speaking community, embracing among other activities, sheep husbandry, poultry-keeping and orchard management. Assistance has also been given to college extension work, including homemakers' clubs, short courses and the training of teachers in agriculture.

A considerable share of the grant has been employed to promote instruction in household science, and in providing normal school students with the training necessary to enable them to give agricultural instruction through garden and class-room work. The teaching of household science in 47 convent schools and 2 normal schools is supervised, and special grants are made to these institutions, to assist this department of instruction, which includes such outdoor phases as gardening, bee-keeping, and orchard, dairy and poultry work. A special course is offered at the normal schools to convent teachers in household science.

The Assistant Commissioner of Agricultural Instruction for the Province of Quebec, Dr. J. C. Chapais, makes the following report on the work carried on during the year through the Quebec Department of Agriculture:

#### *Poultry Industry, \$19,425.*

Instruction in poultry raising was given by means of lectures or practical demonstrations at twenty-eight breeding and fattening stations, in forty-nine normal and domestic science schools, and also in connection with co-operative incubator stations. In the majority of cases, the department rents the land, buildings and implements used, on a basis of about 10 per cent of the total value, said rent not to exceed \$100. A manager takes charge of two or three stations, and is assisted by the proprietor, who receives a small bonus for his work together with whatever profits accrue from operations. At all stations practical instruction is given in candling eggs, and in caponizing, killing, dressing and packing poultry for market. District representatives conducted poultry exhibits at school fairs in eleven counties.

SESSIONAL PAPER No. 15c

*Fruit Culture, \$23,240.60.*

This work is conducted under four divisions, (1) Demonstration Orchards, (2) Experimental Fruit Stations, (3) Experimental Fields and (4) Horticultural Societies.

1. Demonstration Orchards: Five orchards in the western district, chiefly Fameuse apples, were taken over by a committee of the Quebec Pomological Society, with Prof. W. Saxby Blair, of Macdonald College, at its head, in order to demonstrate proper methods of spraying and cultivation. Twenty-six acres of orchard are included in this undertaking. The work has been very beneficial in its results. At Abbotsford where farmers were ready to abandon their orchards, a strong co-operative fruit organization has been formed, and planting is being extended. At Abbotsford and Havelock a number of power spraying outfits have been purchased. Results in other districts are also encouraging, although for various reasons, not so marked as in the two already mentioned.

(2) Experimental Stations and Fields: The number of stations was reduced to twenty-eight this year, being eight less than the year previous, whereas the experimental fields were increased from eighteen to thirty, as better results are anticipated from them than from the Stations discontinued. Both stations and fields are provided with trees for planting and with whatever is necessary in the way of supplies.

(3) Horticultural Societies: These form a medium for the distribution of fruit trees as premiums with the object of encouraging the planting of domestic orchards. During the year 6,000 trees were distributed and planted, having been sold to the societies at cost price by the department. These the Berthier nursery, now being established, will shortly be able to supply. Ten instructors were sent out to give instruction in planting, pruning and spraying to members securing trees by this means.

Fruit displays were prepared by the department for the various agricultural exhibitions throughout the province, and numerous lectures and demonstrations were held during the year.

*Bacon Industry, \$19,040.*

The major portion of the year's expenditure has been for the extension and fuller equipment of the abattoir at St. Valier, the total charge against the Instruction Act since 1913 having been \$18,262 for this purpose. The capacity of the plant has now been increased from 15 to 60 hogs a day.

The work is in charge of A. Hansen, a Danish bacon expert. Practical courses are given to students and, in addition, many farmers have been given instruction in the raising, feeding, killing and dressing of hogs, beef-cattle, calves, sheep and poultry, and valuable work in the promotion of the live stock industry is carried on. A new departure has been the organization of a hog-fattening competition among farmers' sons.

In the spring of 1916, the Provincial Department transferred the direction of the establishment to the Quebec Cheesemakers' Co-operative Society, an institution which is rapidly taking the lead in the commercial handling of the dairy, meat and poultry products of the province.

*Agricultural Instruction in Academies and Schools, \$16,844.*

Of this sum, \$5,219 was expended in connection with special courses for public school teachers at Ste. Anne de la Pocatière, the Oka Institute and Macdonald College, and \$3,623 for special lecturers appointed by the department to lecture on agriculture, horticulture and domestic science in the academies and colleges of the province. One lecturer, M. l'abbé A. Michaud, President of the Quebec Agricultural Missionaries, delivered seventy lectures of this character during the year.

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The balance of the appropriation was devoted chiefly to the school garden and school fair promotion, together with the cost of printing instructional pamphlets. During the year, 759 school gardens were carried on, with over 19,000 children engaged either at home or at school. The children's clubs established numbered 305, and 228 teachers signified their intention of making school exhibits in 1916. In this work the district representatives rendered great assistance.

*District Representatives, \$14,774.*

No important changes were made in this work during the period covered, although plans are being devised to increase the number of representatives from six to twelve, and the assistant representatives from two to five. The importance of giving instruction to settlers in new districts has been recognized by the appointment of a representative in the Abitibi country, recently opened for colonization. There the work performed included lectures on clearing, breaking and ploughing and the operating of demonstration plots.

*Quebec Experimental Union, \$2,500.*

This organization receives an annual grant of \$2,500 from the allotment to the province. The work carried on included experiments with alfalfa (250 pounds of seed distributed), experiments in methods of couch-grass eradication, and experiments with bees and poultry. In the latter, the colony-house system was made the feature.

With a view to qualifying the students of the Quebec Normal School to teach agriculture a tract of land located near the school is operated as a basis for demonstration lectures. The publicity work carried on included representation at exhibitions, lectures, correspondence and pamphlet distribution.

*Alfalfa and Clover Demonstration, \$3,995.*

Thirty-four clover demonstration plots were conducted, and two clover-hulling machines were demonstrated at ten points, hulling 18,500 pounds of seed and cleaning 7,340 pounds. It was estimated that sixty privately-owned hullers would operate in the province during the season, and that, as a result, 400,000 pounds of seed would be secured. For the information of growers, a booklet on clover was compiled and 10,000 copies issued.

*Seed Selection, \$5,956.*

The expenditure covers services and expenses of travelling instructors and lecturers to promote seed selection work among the farmers, and to oversee the work conducted by members of the Seed Growers' Association.

A two-day exhibition of seeds and grains is held at Quebec in January of each year under the auspices of the Provincial Department. Seven hundred competitive exhibits were made, and a competition in seed-grain judging among farmers' sons was conducted.

*Apiculture, \$8,996.*

This division of the grant provides the salaries and expenses of apiary inspectors and their assistants, together with the supplies and equipment used in the performance of their work. These men inspect for foul brood and instruct bee-keepers in the treatment of this disease.

SESSIONAL PAPER No. 15c

*Dairying, \$29,541.*

Apart from a grant of \$2,000 made in 1915 to the Dairy School at St. Hyacinthe, the whole of this appropriation is devoted by the Provincial Department to the inspection services for cheese and butter factories.

Under the Dairy Act of 1915, the province was divided into fifty districts, with an average of about 42 factories to each district. The inspection service includes two general inspectors, five assistant general inspectors and fifty local inspectors, by whom weekly reports are submitted. Inspectors are required to hold diplomas as cheese and buttermakers, and to test milk and cream to the satisfaction of the Board of Examiners of the Dairymen's Association. Each year or so they spend a few days at the St. Hyacinthe Dairy School to keep in touch with modern methods. It is anticipated that this work will speedily lead to further improvement of methods of milk production and manufacture, thus promoting the progress of the industry.

*Drainage, \$7,675.*

The two ditching machines purchased in 1912 were continued in operation. During the year, 21,075 feet of ditch were excavated on the farms of the St. Paschal Normal School of Domestic Science and of the Ste. Anne de la Pocatière Agricultural School. The second machine excavated 29,900 feet in Huntingdon county. Other work performed was that of surveying land, preparing plans and addressing gatherings of farmers interested in drainage.

*Domestic Science, \$13,490.*

The number of schools in the province giving domestic science courses increased from forty-five to forty-nine during the year, all being convent schools except two. Instruction includes outdoor work in gardening, poultry-raising, bee-keeping and orchard and dairy work. The Rev. Pabbé O. Martin devotes the whole of his time to the superintendence of this work, paying frequent visits to the institutions, delivering lectures, etc. The grants made the institutions to assist this branch of instruction amounted to \$11,490, the balance going to pay the salary of the Provincial Inspector, expenses of a school exhibit at the Quebec Exhibition, and in printing pamphlets for distribution.

*Maple Industry, \$2,739.*

The maple industry of the province continues to make satisfactory development and the quality of the product to show an improvement, but it is believed that the output can still be greatly increased if proper methods are followed. The work of instruction in methods of manufacture, carried on during the last few years, has been financed by the funds provided by the Agricultural Instruction Act as described in the previous report, but legislation, looking to the protection of the industry has no doubt had an important bearing on results, as have also the steps taken by various co-operative organizations for the marketing of the product.

During the year, a fourth sugar-making school was added to the three already in operation, the new one being located at St. Casimir, Portneuf county. The attendance showed an increase for the year at two out of the three older schools, and was as follows:—

	Students	Visitors
Hautecsville . . . . .	12	328
Ste. Louise . . . . .	14	321
La Minerve . . . . .	8	23
St. Casimir . . . . .	18	682

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Services and expenses of superintendents and cost of students' board are charged to the vote.

The work of giving practical demonstrations at school houses, having proved successful, was continued, and 796 farmers were reached in this way. Twenty thousand copies of a bulletin on sugar-making were distributed.

*Lectures and Publications, \$11,234.*

This division of the grant goes to assist the Provincial Department to carry out the annual short course programme, and to print and publish bulletins and pamphlets for the information of the farming community.

The courses are additional to those carried on by the Schools and Colleges of Agriculture, and, this year, were divided into two series, one conducted at points on the Grand Trunk and Quebec Central railways, and the second along the lines of the Intercolonial railway. The courses are of one week's duration with three sessions per day, the work being performed largely by the district representatives, officers of the Dominion and Provincial Departments, the professors of the Schools of Agriculture, sugar-making school instructors and others.

The first series of courses extended from November, 1915, to March, 1916. Courses were held at thirteen points in as many counties, the total attendance being very large.

This year domestic science courses were added to the general courses in agriculture and Mlle. Jeanne Anctil, Director of Domestic Science School of Montreal, being in charge of the work. At three points, St. Agapit, Plessisville and Beauceville, women's clubs were organized.

The second series extended over a period of fifteen weeks. The courses were of five days' duration and were held at fifteen points, in as many counties, stretching from Lévis to Gaspé. The lectures were given mainly by the staff of the School of Agriculture of Ste. Anne de la Pocatière, assisted by representatives of the Provincial and Dominion Departments. As an outcome cow-testing associations were established quite generally, and the maintenance of various agricultural organizations was greatly encouraged.

*Schools of Agriculture.*

The work begun in 1912 of increasing the capacity of the Agricultural Institute at Oka, and of the School of Agriculture at Ste. Anne de la Pocatière has now been completed. These schools now accommodate 125 and 130 students respectively, and during the year, each had its full complement. The usual winter and summer short courses were held for farmers, farmers' sons and school inspectors, and all are reported to have been well attended.

OKA AGRICULTURAL INSTITUTE, 1915-16.

*Expenditure of Grant.*

Enlargement of college building, annual payment.. . . .	\$ 5,000 00
Insurance, heating and lighting.. . . .	1,600 00
Allowance for board of students.. . . .	1,936 00
Administration, salaries and wages.. . . .	3,700 00
Apparatus and supplies.. . . .	631 00
Salaries and allowances of teaching staff.. . . .	7,060 00
Expenses of various branches.. . . .	500 00
Experimental plots.. . . .	483 00
Total.. . . .	<u>\$ 20,910 00</u>

SESSIONAL PAPER No. 15c

SCHOOL OF AGRICULTURE, STE. ANNE DE LA POCATIÈRE, 1915-16.

*Expenditure of Grant.*

Building extension, annual payment.. . . . .	\$ 6,000 00
Insurance, heating and lighting.. . . . .	1,715 00
Appliances.. . . . .	181 05
Library books and magazines.. . . . .	154 90
Experimental plots and drainage.. . . . .	850 00
Machinery and appliances for preserving fruit.. . . . .	300 00
Travelling expenses.. . . . .	96 09
Allowance for board of students.. . . . .	1,579 45
"    wages of employees.. . . . .	1,035 00
Salaries and allowances of teaching staff, etc.. . . . .	8,005 00
 Total.. . . . .	<hr/> \$ 19,916 49

MACDONALD COLLEGE.

REPORT ON WORK PERFORMED IN 1915-16.

Animal Husbandry: The work in this department was devoted entirely to sheep husbandry. Much effort was directed towards enlarging, organizing and assisting the nine wool growers' and sheep breeders' associations now operating in the province. These associations increased their membership from 975 to 1,617 this year. One hundred and sixty-nine thousand eight hundred and thirty-nine pounds of wool were marketed co-operatively through these associations at an average price of 41.8 cents per pound, which was 7 cents to 12 cents a pound more than that paid locally throughout the province. In addition to marketing their wool these associations have successfully conducted four local sheep sales at which 98 head of breeding stock were sold, and they are now organized to undertake the co-operative marketing of their lambs.

Eight demonstration flocks of pure-bred sheep have been established in various parts of the province for the purpose of demonstrating improved methods of breeding, housing, feeding and management. The increase will be used in establishing new flocks. A few pure-bred rams have been placed with grade flocks in order that farmers might ascertain the value of using pure-bred sires on grade ewes. Through these channels the blood lines of sheep on certain districts may be definitely influenced, and at the same time sheep raising may be given an impetus.

Experiments with fifty lambs were conducted comparing the value of various roughages, silage and swedes in different combinations with a standard grain ration for fattening lambs.

Educational features of the work consisted, for the most part, in delivering lectures and giving demonstrations. Talks were given on the preparation of wool for market, management and feeding of breeding ewes, fattening lambs for market, etc. Demonstrations were given in the proper methods of shearing, rolling and tying of fleeces, docking and castrating lambs. A sheep exhibit was sent to Sherbrooke Fair. Other features of the exhibit were models and particulars of a sheep barn, feeding rack, lamb trough and dipping tank.

Cereal Husbandry: The work conducted in the cereal husbandry department is that of root crop investigation. During the past season the cultural experiments of former years have been continued. Of these the experiments on dates of seeding and on dates of singling have given very conclusive results. There is now no doubt that an increased yield results from early seeding and singling. These facts have not, up to the present, been appreciated by the majority of root growers.

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In addition to cultural experiments considerable work has been done on seed production and on selection with the object of isolating superior strains. The result has been that home-grown seed has shown itself vastly superior to anything placed in the market up to the present. By careful selection strains of mangels and of swedes have been isolated which, in triplicate tests, have proved superior not only to ordinary commercial varieties but also superior, under Quebec conditions, to outstanding strains obtained directly from European breeders.

Aside from the experimental work conducted at the college, all possible assistance has been given to the farmers of the province of Quebec in order to encourage the production of home-grown seed. With this object in view seed roots and good foundation seed have been distributed in several counties. The results have been excellent. These local tests give good promise of a future satisfactory development of this important line of work.

Horticulture: Seed distribution to school children in rural districts has been continued as in the past two years. One thousand 10-pound lots of potatoes, 100 packets of early sweet corn, 500 packets tomatoes and 800 collections of flower seed were distributed in the rural schools.

The irrigation system has been found very useful, especially during June, July, and August of 1915, and records have been kept of amounts of water used on various crops and comparisons made with unirrigated plots of similar vegetables and strawberries. Information is being sought in regard to the financial returns of these crops through a series of years.

An experiment was undertaken in order to determine the degree of self-fertility or self-sterility in the McIntosh and Fameuse apples, and some information has been gathered in regard to it. The experiment will be continued for at least two more years. A number of vacancies in the three demonstration orchards were filled in, and in general these orchards are making good growth.

Biology: The work done in the Biology Department is divided under two heads—(1) Investigation, (2) Teaching.

During the summer the work consists almost exclusively of investigation of injurious insects. The most important work undertaken during the past year was a continuation and completion of studies on the life history and control of the bud moth *Eucosma (Tmetocera ocellana Schiff)*. This insect, which is injurious in practically all the fruit growing districts of Canada from British Columbia to Nova Scotia, has during recent years been one of the most serious fruit pests in Quebec. In the spring it causes injury to the leaf buds, flower buds and setting fruit; in summer it skeletonises the leaves and injures the larger fruit, making culls of otherwise excellent fruit. Experiments conducted in the spring of 1915 showed that the best two sprays for controlling this insect were those applied shortly before the blossoms open and shortly after the petals fall. These experiments were repeated in the spring of 1916 and gave the same results. In the summer of 1915 spraying experiments to control the newly hatched larvæ were conducted. It was found that a thorough spraying with lime and sulphur and lead arsenate when the eggs are on the leaves will destroy a large proportion of the larvæ as soon as they hatch and commence feeding. A full account of the life history and control of this insect is now in course of preparation and will be published shortly.

During 1915, observation and notes were made on certain clover insects. A curculionid weevil *Tychius picirostris* was discovered which threatens to be a new pest of clover. This insect is being carefully studied.

A start has also been made on the study of the caterpillars and other larvæ which attack apples in Quebec. The intention is to gradually acquire information on these insects, their occurrence, the extent of their injury, their habits and control, and to construct a key which, supplemented by drawings and photographs, will enable the grower to determine any of these insects.



## SESSIONAL PAPER No. 15c

During the college session a considerable amount of the time of the investigator was devoted to teaching.

**Poultry:** Six breeding flocks have been established in the six demonstration houses. A number of breeding flocks have also been established with reliable farmers in various parts of the province to assist in the work of supplying hatching eggs for school fair distribution. 541 sittings of hatching eggs have been distributed to school children from seven centres. School fairs will be held at which the children will exhibit the chicks hatched from the eggs supplied to them. A marked improvement is noticeable in the number of pure-bred poultry throughout the province. Educational exhibits have been put on at a number of poultry shows. To ascertain existing conditions on the farms in the province a poultry survey has been started, and up to the present time about 300 farms have been visited.

**Chemistry:** The department of chemistry has continued throughout the year investigations of maple syrup, maple sugar and other products of the maple tree. Five papers were published in connection with the work done on methods of detecting the adulteration of maple products. A method for detecting the adulteration of both maple sugar and maple syrup has been worked out during the past year, which promises to be the best single test yet devised.

**Rural School Department:** During the past year over 800 pupils in sixteen superior schools received a two-day short course in nature study and agriculture, while several hundred more in the smaller schools were given lectures along the same lines. Public meetings were also held, which were well attended. Eleven conferences were addressed at which 175 elementary teachers were present. Some of the fund was also expended on the improvement of school grounds, ten being improved during the year with shrubs and flowers. The school boards, however, refunded a fair proportion of this outlay.

**Veterinary Science:** Classes have been given in veterinary work at Macdonald College. Demonstrations and lectures have been given at various places throughout the province. The various treatments of contagious abortion have been experimented with to determine the most adaptable method for controlling the disease. The intra-dermal test for tuberculosis was also given a fair trial to determine its reliability in diagnosing the disease.

**Household Science:** During the year 1915-16 there has been in the work of the Quebec Homemakers' Clubs, as a whole, a sound and well sustained development. Not only have the clubs carried out their regular study programmes and in many instances done much valuable work in their own communities but, in addition, have in almost every case materially assisted the national movement in Red Cross and other patriotic service. Four new clubs were organized during the year.

The clubs gave considerable attention during the year to stimulating the interest of the school children in matters pertaining to the home and the community by offering prizes for cooking, sewing and garden products at school fairs. The demonstrator gave practical demonstrations to the children to aid them in preparing their exhibits. This movement will, it is believed, have far-reaching results for good throughout the province, leading to improvement in home and community life.

**Demonstration:** The expenditure was devoted to demonstrator road rides for Pontine county at Shawville, Que.

**Short Course:** Winter short courses were held in hve stock, field crops, poultry, horticulture, farm engineering and farm home at nineteen centres in the province. Fifty-two meetings were held in 19 places in 11 counties; the total attendance was 2,371; with an average per meeting of 46. Eighty-six addresses were given by 15 different members of the college staff.

## DEPARTMENT OF AGRICULTURE

7 GEORGE V, A. 1917

## MACDONALD COLLEGE.

## RECEIPTS.

Credit balance, April 1, 1915.. . . . .	\$	1,317	25
Dominion grant, 1915-16.. . . . .		20,000	00
Total.. . . . .	\$	21,317	25

## DISBURSEMENTS.

*(Including salaries of members of staff paid wholly or in part from Grant.)*

Animal husbandry.. . . . .	\$	4,879	56
Biology.. . . . .		1,049	94
Cereal husbandry.. . . . .		2,516	19
Chemistry.. . . . .		1,043	37
Demonstration.. . . . .		2,207	59
Horticulture.. . . . .		661	56
Household science.. . . . .		1,427	70
Physics.. . . . .		525	01
Poultry.. . . . .		2,481	38
Veterinary science.. . . . .		1,220	96
Rural schools.. . . . .		1,920	08
General.. . . . .		712	55
Short courses.. . . . .		392	07
	\$	21,037	96
Credit balance March 31, 1916.. . . . .		279	29
Total.. . . . .	\$	21,317	25

APPOINTMENTS PROVIDED BY THE DOMINION GRANT.

(A) *List of persons regularly employed whose salaries are paid wholly from the Agricultural Instruction Grant.*

- Instructor, Rev. J. B. A. Allaire, St. Thomas d'Aquin, St. Hyacinthe, Quebec.
- “ L. P. Belisle, Department of Agriculture, Quebec.
- “ Raoul Dumaine, St. Guillaume d'Upton, Quebec.
- “ J. G. Morgan, Department of Agriculture, Quebec.
- “ J. M. T. Talbot, Department of Agriculture, Quebec.
- “ Antonio Mathieu, Department of Agriculture, Quebec.
- “ Lucien Dupuis, Department of Agriculture, Quebec.
- Entomologist, G. Maheux, Department of Agriculture, Quebec.
- Instructor, J. E. Grisé.
- Expert, Bacon Industry, A. Hansen, Department of Agriculture, Quebec.
- Seed Expert, Louis Lavallée, St. Guillaume d'Upton.
- Poultry Superintendent, Rev. Brother Liguori, Department of Agriculture, Quebec.
- Poultry Assistant Superintendent, Léon Picard, Department of Agriculture, Quebec.
- District Agronomist, Alphonse Roy, Plessisville, Quebec.
- “ H. Clouthier, Rougemont, Rouville, Quebec.
- “ J. M. Leclair, Amos, Abitibi, Quebec.
- “ R. A. Rousseau, Acton-Vale, Bagot county.
- “ Alphonse Désilets, St. Jean, I. O., Montmorency county.
- “ J. C. Magnan, St. Casimir, Portneuf.
- “ Abel Raymond, St. Valier, Bellechasse county.
- “ W. G. MacDougall, Lennoxville, Sherbrooke county.
- “ R. Husk, Huntingdon.
- “ J. A. Fortin, St. Stanislas, Champlain county.
- “ J. N. Albert, Bonaventure.
- “ L. V. Parent, Richmond.
- Assistant District Agronomist, Arthur Landry, Actonvale, Bagot county.
- “ “ Wilfred Delaney, St. Jean, I. O., Montmorency
- “ “ J. R. St. Arnaud, St. Casimir, Portneuf.
- “ “ L. A. Gosselin, St. Valier, Bellechasse.
- Lecturer, Miss Eva Paré, Causapscau, Rimouski county.
- “ “ Eveline LeBlanc, Bonaventure.
- “ Rev. Ol. Martin, St. Denis, Kamouraska county.
- Clerk, J. D. Barbeau, 142 Sauvagenau street, Quebec.
- “ O. Roberge, Rosalie, Bagot.

(B) *List of persons regularly employed, whose salaries are paid in part from the Agricultural Instruction Grant.*

- Accountant, J. Arthur Paquet, Department of Agriculture, Quebec.

COLLEGE OF AGRICULTURE.

(Sts. Anne de la Pocatière, Kamouraska.)

The salaries of the following are paid wholly from the Federal subsidy:

- Professor of Horticulture, Rev. P. Levasseur
- “ “ “ “ A. Letourneau

Professor of Mathematics, E. Beaudoin.  
 " " Chemistry, L'Abbé Geo. Coté.  
 " " English, T. Ennis.  
 " " Mathematics, S. Lord.  
 " " Droit Rural, Notaire Dupuis.  
 " " Génie Rural, Albert Sirois.  
 Asst. Chef de Pratique Générale, M. Philéas Boulet.  
 Horticulturist, Albert Jalbert.  
 Instructor in Dairying, Ernest Lizotte.  
 " " " Francois Dionne.  
 " " " Alfred Robichaud.

Domestic help (4 persons).

The salaries of the following are paid in part from the Federal subsidy:—

Professor of Chemistry, Georges Bouchard.  
 Instructor, Jos. Sénéchal.

#### THE OKA AGRICULTURAL INSTITUTE.

(*La Trappe, Quebec*).

The salaries of the following are paid wholly from the Federal grant:—

Director, Rev. Father Jean-de-la-Croix.  
 Chief of general practice, Brother Celestin.  
 " " " Gérard.

Aumonier, Rev. Father Yves.

Institute Secretary, D. Fortin.

Professor of Physics, J. W. Ponton.

" " Agriculture, Philippe Roy.  
 " " Entomology, Firmin Létourneau.  
 " " Veterinary Medicine, Dr. A. Dauth, Montreal.  
 " " Apiculture, Rev. P. Maur.  
 " " Horticulture, Rev. P. Athanase.  
 " " Poultry Husbandry, Rev. Brother Wilfred.

Instructor Agricultural Engineering, H. Nagant.

" Horticulture, L. Arscott.

Vergers & Pépinière, P. Honore.

Chaplains, R.R.F.F. Humbert and Alfred.

The salaries of the following are paid in part from the Federal subsidy:—

Professor of English, Rev. Brother Benjamin.  
 " " Arboriculture, Rev. Father Leopold.  
 " " Biology, Rev. Father Isadore.

#### MACDONALD COLLEGE.

(*Quebec*).

Officers regularly employed, whose salaries are paid wholly from the Agricultural Instruction grant:—

Crop Investigator, P. A. Boving.

Veterinarian, N. E. McEwan, V.S.

Sheep Husbandry, A. A. McMillan, B.S.A.

Assistant in Biology, E. M. Duporte, B.S.A.

" " Physics, R. MacDougall, B.S.A.

" " Animal Husbandry, A. E. McLaurin, B.S.A.

" " Assistant in Chemistry, J. G. Van Zoeren.

Demonstrator Homemakers' Clubs, Miss F. Campbell.

Rural School Demonstrator, J. E. McQuat, B.S.A.

District Demonstrator, C. H. Hodge, B.S.A., Shawville, Quebec.

QUEBEC.

GRANT OF 1914-15.

SUMMARY STATEMENT FROM APRIL 1, 1915, TO DECEMBER 31, 1915.

No.	Classification.	Balance on Hand April 1, 1915.		Expended to Dec. 31, 1915.	
		\$	cts.	\$	cts.
1	Poultry.....	9,881	34	9,881	34
2	Fruit Growing.....	1,000	00	1,000	00
3	Bacon Industry.....	3,116	54	3,116	54
4	Schools of Agriculture.....	18,690	47	18,690	47
5	Agriculture in Academies, Rural and Normal Schools..	3,207	29	3,207	29
6	District Representatives.....	8,593	11	8,593	11
7	Experimental Union.....	1,500	00	1,500	00
8	Alfalfa and Clover.....	0	03	0	03
9	Seed Selection.....	1,998	99	1,998	99
10	Bee-keeping.....				
11	Tobacco.....	576	78	576	78
12	Dairying.....	4,541	29	4,541	29
13	Drainage.....	6,956	38	6,956	38
14	Domestic Science.....	3,949	67	3,949	67
15	Maple Sugar.....	663	56	663	56
16	Conferences, etc.....	923	66	923	66
	Total.....	65,589	11	65,589	11

DETAILS OF EXPENDITURE, APRIL 1, 1915, TO DECEMBER 31, 1915.

1.—POULTRY.

April 1, 1915, balance unexpended... \$ 9,881 34  
 Expended to December 31, 1915... \$ 9,881 34

Rev. Bro. Liguori, Provincial Superintendent, salary and expenses... 681 00  
 Leon Picard, Assistant... 400 00  
 J. D. Barbeau, Assistant... 223 25  
 Rev. J. B. A. Allaire, Lecturer... 858 31

Instructors, services and expenses—  
 Raoul Dumaine... 387 88  
 Jean Charbonneau... 592 84  
 Tel. Itoy... 387 20  
 J. Art. Fortin... 242 50  
 J. G. Morgan... 222 11  
 Art. Chabot... 286 66  
 Art. Larabes... 201 80  
 C. Vallancourt... 17 65  
 J. M. Talbot... 40 00  
 P. Racine... 82 28  
 J. W. Mercier... 3 46

\$ 4,012 28

Poultry Stations—  
 Services of superintendents, rental, etc... 3,949 67  
 Eggs for distribution, incubators, utensils, and supplies... 2,094 14  
 Printing, etc... 118 66  
 St. Hyacinthe Co-operative Society grant... 100 00

Total... \$ 9,881 34

## 2.—FRUIT GROWING.

April 1, 1915, balance unexpended.. . . .	\$ 1,000 00	
Expended to December 31, 1915.. . . .		\$ 1,000 00
Fruits Division, salary and expenses—		
Rev. V. A. Huard, Provincial Entomologist.. . . .	\$	75 00
D. J. Wood, Conserves expert.. . . .		150 00
J. H. Lavoie, Assistant Arboriculturist.. . . .		100 00
Instructors, services and expenses—		
F. X. Gosselin.. . . .	\$ 42 90	
P. Lapointe.. . . .	55 60	
Henri Roy, Forestry Engineer.. . . .	350 00	
Alf. LaBel.. . . .	126 35	
G. Reynaud.. . . .	51 85	
		\$ 626 70
Incidentals.. . . .		48 30
Total.. . . .		\$ 1,000 00

## 3.—BACON INDUSTRY.

April 1, 1915, balance unexpended . . . . .	\$3,116 54	
Expended to December 31, 1915.. . . .		\$3,116 54
A. Hansen, bacon expert, salary . . . . .		
		\$ 750 00
A. C. St. Pierre, manager St. Valier Abattoir.. . . .		75 00
Art. Perrault, co-operative society organization.. . . .		116 54
Wilfrid Brochu, building annex to St. Valier Abattoir . . . . .		1,000 00
Refrigeration at St. Valier . . . . .		704 00
Supplies and incidentals . . . . .		471 00
Total.. . . .		\$3,116 54

## 4.—SCHOOLS OF AGRICULTURE.

April 1, 1915, balance unexpended.. . . .	\$18,690 47	
Expended to December 31, 1915 . . . . .		\$18,690 47
Oka Institute, balance of grant.. . . .		
		\$ 2,910 00
Macdonald College, balance of grant . . . . .		10,000 00
Ste. Anne de la Pocatière, balance of grant.. . . .		4,000 00
"    "    "    students' board allowance.. . . .		1,380 47
Orphelinat Agricole de Vauvert.. . . .		400 00
Total.. . . .		\$18,690 47

## 5.—AGRICULTURAL TEACHING IN ACADEMIES, RURAL AND NORMAL SCHOOLS.

April 1, 1915, balance unexpended.. . . .	\$3,207 29	
Expended to December 31, 1915.. . . .		\$3,207 29
Rev. A. Michaud, lecturer, salary, \$133.32; expenses, \$82.05 ..		
		\$ 215 37
J. C. Magnan, organization of school gardens.. . . .		200 00
Macdonald College, <i>re</i> agriculture in Protestant Normal Schools, 1913-14.. . . .		412 80
17,500 copies "Le Potager Canadien".. . . .		2,000 00
10,000 " " "Conferences sur l'Agriculture".. . . .		300 00
Incidentals.. . . .		79 12
Total . . . . .		\$3,207 29

SESSIONAL PAPER No. 15c

6.—DISTRICT REPRESENTATIVES.

April 1, 1915, balance unexpended . . . . .	\$5,593 11	
Expended to December 31, 1915 . . . . .		\$8,593 11
<hr/>		
Salaries and disbursements—		
R. A. Rousseau . . . . .	\$1,222 83	
J. C. Magnan . . . . .	962 36	
H. Cloutier . . . . .	1,140 62	
A. Raymond . . . . .	1,127 92	
J. M. LeClair . . . . .	895 91	
A. Desilets . . . . .	795 61	
L. P. Gauvin, assistant . . . . .	64 39	
J. S. Simard, " . . . . .	158 70	
R. Barbin, " . . . . .	268 46	
Alf. Paquet, " . . . . .	583 65	
J. A. Fortin, " . . . . .	606 21	
		\$7,826 76
Cameras and photo supplies . . . . .	82 40	
Clover seed for distribution . . . . .	173 97	
Motor cycle . . . . .	298 00	
Office furniture . . . . .	93 00	
Postage and incidentals . . . . .	114 88	
		\$8,593 11
<hr/>		
Total . . . . .		\$8,593 11

7.—EXPERIMENTAL UNION.

April 1, 1915, balance unexpended . . . . .	\$1,500 00	
Expended to December 31, 1915 . . . . .		\$1,500 00
<hr/>		
Balance of grant . . . . .		\$1,500 00

8.—ALFALFA AND CLOVER.

April 1, 1915, balance unexpended . . . . .	\$0 00	
Expended to December 31, 1915 . . . . .		\$0 00
<hr/>		
Postage . . . . .		\$0 00

9.—SEED SELECTION.

April 1, 1915, balance unexpended . . . . .	\$ 1,938 89	
Expended to December 31, 1915 . . . . .		\$ 1,938 89
<hr/>		
Salaries and Expenses—		
L. Francoeur . . . . .	\$ 350 00	
P. X. St. Pierre . . . . .	179 84	
Jos. Barbeau . . . . .	77 89	
L. P. Belzile . . . . .	298 40	
L. Lavallee . . . . .	319 67	
O. Roberge . . . . .	86 77	
L. E. Kronstrom . . . . .	420 17	
L. Brown, leaflet on clover and travelling expenses . . . . .	300 76	
Incidentals . . . . .	26 81	
		\$ 1,938 89
<hr/>		
Total . . . . .		\$ 1,938 89

## 11.—TOBACCO.

April 1, 1915, balance unexpended.. . . .	\$	566 78	
Expended to December 31, 1915.. . . .			\$ 566 78
<hr/>			
L. E. Kronstrom, salary and expenses.. . . .	\$	315 11	
Expenses re demonstration fields.. . . .		560 86	
Incidentals.. . . .		40 81	
<hr/>			
Re land purchase at St. Cesaire, amount not utilized.. . . .			\$ 916 78
			350 00
<hr/>			
Total.. . . .	\$	566 78	

## 12.—DAIRYING.

April 1, 1915, balance unexpended.. . . .	\$	4,541 29	
Expended to December 31, 1915.. . . .			\$ 4,541 29
<hr/>			
Services and expenses—			
Ph. Rheault.. . . .	\$	146 50	
P. Gaudreault.. . . .		428 25	
G. St. Pierre.. . . .		89 55	
A. N. La Brie.. . . .		21 95	
Art. Morisette.. . . .		130 50	
Jos. Pasquet.. . . .		10 90	
J. Art. Paquet.. . . .		300 00	
J. A. Talbot.. . . .		192 55	
J. D. Leclair, indemnity.. . . .		300 00	
Geo. Cayer.. . . .		200 00	
L. P. Lacoursiere.. . . .		150 00	
T. H. Fortier.. . . .		63 00	
Grant St. Hyacinthe Dairy Society.. . . .		2,000 00	
Typewriter, St. Hyacinthe Dairy Society.. . . .		168 25	
Translation, postage, incidentals.. . . .		339 84	
<hr/>			
Total.. . . .	\$	4,541 29	

## 13.—DRAINAGE.

April 1, 1915, balance unexpended.. . . .	\$	6,956 38	
Expended to December 31, 1915.. . . .			\$ 6,956 38
<hr/>			
Services and Expenses—			
John Drolet.. . . .	\$	764 20	
W. Giroux.. . . .		1,034 63	
F. N. Savole.. . . .		699 15	
Orens Garneau.. . . .		377 07	
J. Delaney.. . . .		440 60	
R. Barbin.. . . .		342 00	
L. P. Gauvin.. . . .		307 75	
R. Belzlle.. . . .		290 15	
J. Barbeau.. . . .		165 00	
A. L. Gareau.. . . .		100 00	
Earl Fraser, Macdonald College.. . . .		289 56	
W. E. N. Hodgins, " . . . .		343 51	
C. Lyster, " . . . .		263 55	
G. E. Emberley, " . . . .		379 80	
E. M. Ewart, " . . . .		344 60	
<hr/>			
	\$	6,141 57	
Supplies, renewals, printing and incidentals.. . . .		814 81	
<hr/>			
Total.. . . .	\$	6,956 38	



SESSIONAL PAPER No. 15c

14.—DOMESTIC SCIENCE.

April 1, 1915, balance unexpended.. . . . .	\$3,949 67	
Expended to December 31, 1915.. . . . .	.....	\$3,949 67
<hr/>		
Rev. O. L. Martin, Provincial Inspector, salary and expenses..		\$ 363 10
Grants to schools and academies.. . . . .		3,586 57
<hr/>		
Total.. . . . .		\$3,949 67

15.—MAPLE SUGAR.

April 1, 1915, balance unexpended.. . . . .	\$ 663 56	
Expended to December 31, 1915.. . . . .	.....	\$ 663 56
<hr/>		
Alfred Lebrun, Inspector, salary and expenses.. . . . .		\$ 103 15
P. E. Monty, Instructor.. . . . .		109 73
L. J. A. Dupuis, Supt. Ste. Louise school, allowance, board of students, etc.. . . . .		226 03
Expenses <i>re</i> demonstrations.. . . . .		221 30
Incidentals.. . . . .		3 35
<hr/>		
Totals.. . . . .		\$ 663 56

16.—CONFERENCES, PUBLICATIONS, ETC.

April 1, 1915, balance unexpended.. . . . .	\$ 923 66	
Expended to December 31, 1915.. . . . .	.....	\$ 923 66
<hr/>		
Art. Perrault, <i>re</i> co-operative society organization.. . . . .		\$ 163 46
V. Vincent, salary and expenses.. . . . .		174 16
J. G. Bouchard, lecturer, salary and expenses.. . . . .		88 55
F. N. Savole, salary and expenses.. . . . .		131 00
Jos. Pasquet, hon. and expenses.. . . . .		107 10
Rev. H. Bois, " . . . . .		32 30
Chs. Peloquin, " . . . . .		19 20
L. Lavallee, " . . . . .		24 60
Orens Garneau, expenses.. . . . .		12 50
A. L. Garneau, expenses.. . . . .		160 00
Incidentals.. . . . .		10 78
<hr/>		
Total.. . . . .		\$ 923 66

## QUEBEC.

GRANT OF 1915-16, \$215,310.70.

SUMMARY STATEMENT TO MARCH 31, 1916.

No.	Classification.	Grant 1915-16.		Expended to March 31, 1916.		Unexpended Balances March 31, 1916.	
		\$	cts.	\$	cts.	\$	cts.
1	Poultry .....	15,000	00	9,543	98	5,456	02
2	Fruit .....	33,000	00	27,240	60	5,759	40
3	Bacon .....	16,500	00	15,924	08	575	92
4	Schools of Agriculture .....	60,000	00	41,405	06	18,594	94
5	Instruction in academies and schools .....	13,500	00	13,117	00	383	00
6	District representatives .....	7,500	00	6,180	70	1,319	30
7	Experimental union .....	2,000	00	1,000	00	1,000	00
8	Clover and alfalfa .....	4,000	00	3,995	64	4	96
9	Seed .....	4,500	00	3,957	01	542	99
10	Bee-keeping .....	9,000	00	8,996	55	3	45
11	Tobacco .....						
12	Dairying .....	25,000	00	25,000	00		
13	Drainage .....	1,000	00	718	20	281	80
14	Domestic science .....	10,000	00	9,540	41	459	59
15	Maple sugar .....	4,000	00	2,075	71	1,924	29
16	Lectures and publications .....	10,310	70	10,310	10	0	60
	Totals .....	215,310	70	179,004	44	36,306	26

## DETAILS OF EXPENDITURE OF GRANT OF 1915-16, TO MARCH 31, 1916.

## 1. POULTRY.

Grant .....	\$ 15,000 00		
Expended to March 31, 1916 .....		\$ 9,543 98	
Balance March 31, 1916 .....			\$ 5,456 02
Total .....	\$ 15,000 00	\$ 15,000 00	

## Salaries and Expenses—

Rev. Bro. Liguori, Poultry Superintendent .....	\$ 1,180 63
Leon Picard, Assistant .....	783 96
J. D. Barbeau, Assistant .....	355 75
Rev. J. B. A. Allaire, Lecturer .....	660 03
Art. Chabot, Instructor .....	536 85
R. Dumaine, " .....	835 85
J. G. Morgan, " .....	787 95
Tel. Roy, " .....	85 70
Art. Larabee, " .....	148 50
J. Charbonneau, " .....	70 00
Sundry persons .....	56 88

Total .....

	\$ 5,502 10
--	-------------

Eggs for distribution .....	314 50
Poultry stations, supplies and equipment .....	447 23
Poultry services of Superintendents and rental allowance .....	2,725 00
Printing, exhibits and incidentals .....	555 15

Total .....

	\$ 9,543 98
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SESSIONAL PAPER No. 15c

2. FRUIT CULTURE.

Grant.. . . . .	\$ 23,000 00	
Expended to March 31, 1916.. . . . .		\$ 27,240 60
Balance March 31, 1916.. . . . .		5,759 40
	<hr/>	<hr/>
Total.. . . . .	\$ 23,000 00	\$ 33,000 00

Salaries and Expenses—

Solyne Roy, Chief Horticulturist, expenses.. . . . .	\$ 767 39
Henri Roy, expenses.. . . . .	779 01
J. H. Lavole, Assistant Horticulturist.. . . . .	1,222 50
Peter Reid, Superintendent, Demonstration orchards.. . . . .	1,342 11
Rev. V. A. Huard, Entomologist.. . . . .	827 09
D. J. Wood, Conserves expert.. . . . .	163 00
L. E. Kronstrom, expenses.. . . . .	200 00
Rev. P. Leopold, " . . . . .	191 10
Jos. Cloutier, " . . . . .	142 24
Alfred Label, Instructor.. . . . .	1,392 35
J. M. Talbot, " . . . . .	1,106 06
F. X. Gosselin.. . . . .	480 45
Alp. Roy.. . . . .	153 86
R. Cossette.. . . . .	105 12
Phll. Hamel.. . . . .	921 95
Tel. Roy, expenses.. . . . .	50 00
Sundry persons, services and expenses.. . . . .	150 10

\$ 9,994 33

Demonstration orchards, allowances, expenses and rental.. . . . .	\$ 2,745 57
Equipment and supplies.. . . . .	1,773 19
Nursery at Berthierville, salaries, labour, supplies, trees and incidentals.. . . . .	3,354 56
Fruit trees for stations and Horticultural societies	959 88

\$ 8,833 20

Allowances to Oka Institute.. . . . .	1,139 16
Preparation and printing of bulletins and leaflets on fruit culture.. . . . .	6,085 44
Exhibits, printing and incidentals.. . . . .	788 47
Gas engine, Rougemont Demonstration orchard.. . . . .	400 00

Total.. . . . . \$ 27,240 60

3. BACON INDUSTRY.

Grant.. . . . .	\$ 16,500 00	
Expended to March 31, 1916.. . . . .		\$ 16,924 08
Balance March 31, 1916.. . . . .		875 92
	<hr/>	<hr/>
Total.. . . . .	\$ 16,500 00	\$ 16,500 00

St. Valler Abattoir and Annex, construction.. . . . .	\$ 4,371 40
Furnishings and equipment, including refrigeration.. . . . .	2,949 89
Insurance and incidentals.. . . . .	421 16
Advances.. . . . .	3,466 88

\$ 11,209 13

Salaries and expenses—

A. Hansen, Bacon Expert.. . . . .	\$ 2,821 81
A. C. St. Pierre, Instructor.. . . . .	1,479 17
E. Ituel, " . . . . .	181 43

Total.. . . . . \$ 13,924 98

## 4. SCHOOLS OF AGRICULTURE.

Grant.. . . . .	\$ 60,000 00	
Expended to March 31, 1916.. . . . .		\$ 41,405 06
Balance March 31, 1916.. . . . .		18,594 94
Total.. . . . .	<u>\$ 60,000 00</u>	<u>\$ 60,000 00</u>

Oka Agricultural Institute, grant.. . . . .	\$ 15,000 00	
Ste. Anne de la Pocatière, School of Agriculture, grant.. . . . .	10,000 00	
Board of students.. . . . .		705 06
Macdonald Agricultural College, grant.. . . . .	15,000 00	
Orphelinat Agricole à Vauvert, grant.. . . . .		700 00
Total.. . . . .		<u>\$ 41,405 06</u>

## 5. AGRICULTURE IN ACADEMIES, RURAL AND NORMAL SCHOOLS.

Grant.. . . . .	\$ 13,500 00	
Expended to March 31, 1916.. . . . .		\$ 13,117 00
Balance March 31, 1916.. . . . .		383 00
Total.. . . . .	<u>\$ 13,500 00</u>	<u>\$ 13,500 00</u>

Services as Special Lecturers, sundry persons.. . . . .	\$ 3,490 00	
Expenses, school gardens.. . . . .		241 20
Supplies for scholars.. . . . .		1,893 32
Prizes, School Fairs.. . . . .		85 66
5,000 Bulletin, No. 12.. . . . .	\$ 514 60	
10,000 garden leaflet.. . . . .	100 00	
17,500 "Le Potager Canadien".. . . . .	1,500 00	
Miscellaneous.. . . . .	83 16	
		<u>\$ 2,197 76</u>

## Ste. Anne de la Pocatière—

Short Course students' indemnity.. . . . .	\$ 654 85	
Teachers' Special Course.. . . . .	397 00	
Oka Institute—		
Short Course students' indemnity.. . . . .	947 85	
Teachers' special course.. . . . .	626 05	
Macdonald College—		
Grant for special courses.. . . . .	2,583 31	
		<u>\$ 5,209 06</u>
		<u>\$ 13,117 00</u>

## 6. DISTRICT REPRESENTATIVES.

Grant.. . . . .	\$ 7,500 00	
Expended March 31, 1916.. . . . .		\$ 6,180 70
Balance March 31, 1916.. . . . .		1,319 30
Total.. . . . .	<u>\$ 7,500 00</u>	<u>\$ 7,500 00</u>

## Salaries and Expenses—

R. A. Rossseau, District Representative.. . . . .	\$ 751 03	
J. C. Magnan, " . . . . .	1,412 76	
H. Cloutier, " . . . . .	659 99	
A. Raymond, " . . . . .	850 43	
J. M. Leclair, " . . . . .	795 20	
J. A. Desilets, " . . . . .	671 16	
J. A. Fortin, Assistant District Representative.. . . . .	438 59	
Alp, Paquet, " . . . . .	268 35	
Sundry persons.. . . . .	206 72	
		<u>\$ 6,057 23</u>
Furnishings, printing and repairs.. . . . .		123 47
Total.. . . . .		<u>\$ 6,180 70</u>

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7. EXPERIMENTAL UNION.

Grant.....	\$ 2,000 00	
Expended to March 31, 1916.....		\$ 1,000 00
Balance March 31, 1916.....		1,000 00
	<hr/>	<hr/>
Total.....	\$ 2,000 00	\$ 2,000 00
Grant to Experimental Union.....		\$ 1,000 00

8. CLOVER AND ALFALFA.

Grant.....	\$ 4,000 00	
Expended to March 31, 1916.....		\$ 3,995 04
Balance March 31, 1916.....		4 96
	<hr/>	<hr/>
Total.....	\$ 4,000 00	\$ 4,000 00

Salaries and Expenses—

Mag. Francoeur.....	\$ 696 49
Leo. Brown, Instructor.....	675 10
L. P. Belzile.....	650 53
	<hr/>
	\$ 2,022 12
Demonstration fields, expenses of operation.....	1,100 71
Leo. Brown, compiling booklet on clover.....	184 98
10,000 copies ".....	316 80
10,000 copies Bulletin No. 14.....	102 77
Photos, engraving, etc.....	253 44
	<hr/>
Total.....	\$ 3,195 84

9. SEED SELECTION.

Grant.....	\$ 4,500 00	
Expended to March 31, 1916.....		\$ 4,007 01
Balance March 31, 1916.....		492 99
	<hr/>	<hr/>
Total.....	\$ 4,500 00	\$ 4,500 00

Instructors, salaries and expenses—

Ad. Desmarais.....	\$ 554 10
Leo. Brown.....	34 15
L. P. Belzile.....	161 40
O. Roberge.....	400 00
La. Lavallee.....	345 98
L. E. Kronstrom.....	800 32
M. Francoeur.....	278 85
J. A. Piquet, expenses.....	100 00
A. Paré.....	70 91
	<hr/>
	\$ 3,045 61
Incidentals.....	55 44
	<hr/>
	\$ 3,101 05

10. APICULTURE.

Grant.....	\$ 3,000 00	
Expended to March 31, 1916.....		\$ 2,995 30
Balance March 31, 1916.....		4 70
	<hr/>	<hr/>
Total.....	\$ 3,000 00	\$ 3,000 00





## QUEBEC.

COMPARATIVE STATEMENT of Expenditure of Provincial Funds for Agricultural purposes for the Years 1913, 1914, 1915, 1916, and Estimated Expenditure for 1917.

Service.	1913 to June 30.	1914 to June 30.	1915 to June 30.	1916 to June 30.	1916-17 to June 30. (Estimated)
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Civil Government Salaries and Contingencies.....	41,533 34	45,220 96	45,500 00	45,424 05	45,800 00
Agricultural Schools.....	20,208 39	18,534 99	29,863 09	30,000 00	30,000 00
Housekeeping Schools.....	10,000 00	18,500 00	10,290 29	8,518 00	12,000 00
Agricultural Societies.....	120,614 08	164,551 98	146,296 56	105,061 96	100,000 00
Farmers' Clubs or Agricultural Circles, including grant to S. Shore Railway..	90,851 83	99,650 00	97,000 00	148,020 10	85,000 00
Council of Agriculture.....	4,529 03	3,665 83	2,787 99	2,272 68	3,000 00
Horticultural and Agricultural Societies, Montreal and Provincial.....	1,000 00	1,000 00	1,000 00	1,000 00	1,500 00
Veterinary Instruction.....	5,994 96	5,500 00	4,772 68	6,500 00	5,500 00
Dairying.....	74,441 50	76,000 00	67,676 14	94,451 61	97,000 00
Provincial Laboratory.....	2,000 00	1,540 24	2,000 00	4,000 00	2,000 00
Lectures on Agriculture.....	6,537 56	7,029 44	5,406 09	3,927 21	9,000 00
Fruit Growing.....	11,856 29	10,865 48	6,580 36	4,605 33	5,000 00
Poultry Raising.....	3,000 00	3,000 00	2,099 14	2,126 47	3,000 00
Journal of Agriculture.....	29,000 00	29,000 00	27,000 00	26,624 30	27,000 00
Agricultural Merit.....	4,000 00	2,607 65	3,270 38	3,298 40	3,500 00
Exhibitions.....	32,000 00	32,000 00	31,000 00	30,500 00	32,000 00
Miscellaneous.....	100 00	100 00	100 00	35 00	100 00
School of Agriculture, Ste. Anne de la Pocatière—					
Towards construction.....	10,000 00				
Towards maintenance.....	10,000 00	10,000 00			
Totals.....	477,666 98	528,766 57	482,642 72	516,365 14	461,400 00



MANITOBA.

AGREEMENT, 1915-16.

	Original.		Variations.	
	§	cts	§	cts
1 Instructors, Directors and District Representatives (salaries and expenses) . . . . .	27,000	00	27,000	00
2 Instruction and Demonstrations (including Short Courses) . . . . .	20,000	00	15,000	00
3 Women's Work (Domestic Science) . . . . .	7,000	00	7,000	00
4 Boys' and Girls' Clubs . . . . .	4,000	00	5,000	00
5 Bulletins and miscellaneous printing . . . . .	2,000	00	7,000	00
6 Instruction in Public and High Schools . . . . .	1,200	00	200	00
7 Contingencies and miscellaneous . . . . .	3,221	31	3,221	31
Total . . . . .	64,421	31	64,421	31

The major portion of the grant to the province of Manitoba was used to promote the extension work carried on by the Agricultural College, in the following departments, namely, district representatives, boys' and girls' clubs, short courses, automobile lectures, and home economies societies. The college staff has been strengthened by the appointment of an instructor in soil chemistry, an apiarist, who besides giving instruction in bee-keeping, acts as provincial inspector of apiaries, an instructor in household arts, and three lecturers in home economies. Besides this the grant contributes part of the salaries of a professor of animal husbandry and a lecturer in horticulture and forestry. On the college farm, a considerable scheme of drainage is being carried out to serve as a basis for instruction and investigation, accompanied by soil analysis and soil survey work.

The balance of the grant was expended directly by the Department of Agriculture on demonstration farm plots, the Killarney farm, in giving instruction in methods of dairying among settlers in the central and northern districts who do not speak English, in the grading of dairy products for export, in assisting in the publication of certain reports and bulletins, and in general publicity in connection with the work of the department.

AGRICULTURAL COLLEGE EXTENSION.

*District Representatives.* This movement was inaugurated at the close of the college course in April, 1915, when six graduates were appointed, as follows: N. S. Smith, Killarney; W. T. G. Weiner, Morris; L. V. Lohr, Neepawa; W. J. Stone, Swan River; H. F. Danielson, Arborg; K. W. Gordon, Dauphin; and J. E. Sirett, Roblin. Messrs. Gordon and Sirett were at the time teaching agriculture at the high schools at Dauphin and Roblin respectively, and undertook to do district representative work in addition.

Much attention was given during the season to the organization and oversight of boys' and girls' clubs, judging at fairs, addressing meetings and visiting farmers on request, with a view to advising on such questions as drainage and cultivation, weed and insect control and the rotation of crops.

Six short courses were organized and carried out by the representatives in January and February of 1916. Weather conditions somewhat lessened the attendance expected, and a doubt is expressed as to whether work of this kind in the Prairie Provinces will be found as acceptable on this account as in the East.

Important results from instructional work among the farmers themselves from the first season's operations, are, perhaps, scarcely to be expected, particularly in view of the fact that in the fall succeeding their appointment three of the staff, Messrs. Stone, Gordon, and Danielson enlisted, and the department was thus deprived of their services.

*Boys' and Girls' Clubs:* The membership of these clubs in 1915 reached a total of 5,500 from sixty-five clubs, embracing about 400 schools, mostly rural. In 1914, the membership was 1,800. The contests engaged in included potato-growing, poultry-raising, hog-raising, fodder-corn growing, woodworking, sewing, and baking. Seed-potatoes, seed-corn and eggs from pure-bred strains of poultry were supplied free. To encourage the exhibit of products at club fairs the department contributed fifty per cent of the prize money. All the clubs held fairs, the attendance ranging from 250 to 500, and averaging about 350. The amount charged to the grant in this connection was \$5,900.

*Short Courses:* The short courses in agriculture and home economics are now under the direction of the extension service. Some of these courses are for men, some for women and a few for both sexes.

During the year six agricultural and home economics combined courses were held, as follows:—

Place.	Subject.	Number Registered.	Number of Sessions.
Winkler .....	3	90	30
Boissevain .....	4	140	25
Neepawa .....	4	110	32
Dauphin .....	4	160	31
Roblin .....	2	65	10
Viriden .....	No returns.		

While the usual agricultural topics were taken up in the Men's Courses, the plan was adopted of placing special emphasis on one subject, or to concentrate for a week at a time on a given topic. During one week, animal husbandry was taught; the next being devoted, it may be, to field and garden crops, and the next to dairying, poultry and bee-keeping. At Winkler, Roblin and Dauphin, gas-engine work constituted over one-third of the instruction given, while a supplementary course in this subject was given at Viriden for a week after the conclusion of the regular course. The Women's Courses, held independently, comprised instruction by a special staff in dress-making, millinery, home-nursing and cooking.

*Home Economics Short Courses:* Chiefly under the auspices of the Home Economics Societies, the following courses, usually of one week's duration, were held during the year:—

	Courses.	Session.s.	Registered.
<i>Dressmaking—</i>			
Miss Smith .....	17	9	425
Miss Senior .....	19	9	415
Miss Gowsell .....	12	9	240
Miss Tew .....	15	9	300
<i>Millinery—</i>			
Miss Smith .....	10	9	230
Mrs. Graham .....	15	9	310
Miss Gowsell .....	3	8	45
<i>Cookery—</i>			
Miss Crawford .....	6	9	314
One day lectures .....	..	280	
Miss Gowsell—One day lectures .....	..	125	
<i>Home Nursing—</i>			
Miss Clarke .....	18	9	360

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While the above courses are carried on very generally in connection with the Home Economics Societies, it is the policy of the Extension Service to organize a course wherever twenty women in a community ask for it. Occasionally, classes are organized for the older school girls and others who desire instruction in dress-making and millinery.

*Home Economics Societies:* These societies continue to show gratifying increases in number and membership, there being, at the close of the year, 68 societies with a membership of over 3,000 as against 2,050 for the year previous. The energies of these societies have been largely bent towards rendering assistance in patriotic work. No attempt was made, therefore, to organize new societies where there were good Red Cross or other patriotic organizations operating. The usual courses in Dressmaking, Millinery, Cookery and Home-nursing were held during the year. Of these a statement is presented in the section relating to Short Course Work.

*Automobile Lectures:* In 1915, the plan of running demonstration trains over the railways of the province, accompanied by a staff of lecturers, was discontinued, and a series of six motor-car tours substituted. By this means the instructors were able to reach places situated at some distance from the railways, leaving railway points for winter meetings. Five speakers were assigned to each car—three on agriculture and two on home economics, and 171 summer meetings were held. The total attendance number 30,000.

The speakers were agreed that these lectures enabled them to get into closer touch with farm problems and conditions than had previously been practicable. The subjects dealt with included feeds and feeding, silage and silo construction, poultry raising, moisture conservation, weed control, lightening control, alfalfa inoculation and subjects relating to women's work. Charts and illustrative material were used, and all members of the staff of the Agricultural College took part. Agricultural Societies, Grain Grower's Associations, Municipal Councils and Home Economic Societies rendered valuable assistance in making the meetings a success.

## DEPARTMENT OF AGRICULTURE.

*Dairying in Outlying Districts:* A special dairy instructor and an interpreter are employed in central and northern Manitoba among the Ruthenians and other non-English speaking communities. This work has been going on since 1913, when Mr. W. J. Crowe was first placed in charge. He reports that the instruction given has been particularly helpful among the Ruthenians. Herds have increased from two or three to ten or twelve head, and whereas the output was formerly so inferior that it could hardly be disposed of, good cream is now being regularly shipped to the creameries. Not only is the amount of cream supplied by the outlying districts steadily increasing in quantity, but it is continually improving in quality as well. In addition to the instructor and an interpreter engaged in the work referred to, the salary and expenses of the Grader of Dairy Products, L. A. Gibson, were also paid from the grant.

*Publicity:* In January of the present year, Mr. George Batho was appointed Publicity Agent for the Department and shortly afterwards was placed in charge of the Publications Branch. In addition to supervising the printing and distribution of reports, bulletins, etc., a news letter is sent out containing agricultural intelligence, which is made wide use of by agricultural and local papers, while advertisements and posters announcing short courses are prepared and arranged for. The salary and expenses of the officer are met from the grant.

During the year assistance was given by the grant towards the printing of a number of leaflets, bulletins and reports issued by the Department, including among others one on "Woodworking Problems" for use in connection with Boy's and Girl's Club Contests.

## THE MANITOBA DEMONSTRATION FARM SYSTEM.

In the year 1912, the Minister of Agriculture for Manitoba, realizing the need for the adoption of better methods of soil cultivation and crop growing, and knowing that the best authorities on these subjects in Canada believed that the failure of farmers to follow a well-defined system of crop rotation was largely responsible for unsatisfactory results on many farms, submitted to the Honourable Minister of Agriculture for Canada a plan by which it was proposed to use part of the federal grant in establishing a series of demonstration farms or plots, for the purpose of bringing about an improvement in conditions. These Demonstration Farms were to consist of forty acres each, to be located on a main highway close to a town or village, the trading point for a recognized agricultural district.

Twelve of these farms, each consisting of 40 acres of leased land, were located during the summer of 1913, and two the following year. An agreement was entered into with the owner to perform such work as might be required by the Department at a rate which was agreed upon as satisfactory. The provincial Department of Agriculture had a substantial fence erected to enclose each farm and divided same into five acre fields, and heavy platform scales, as well as other implements, were purchased in order that the work might be satisfactorily carried on.

In 1914, the entire forty acres in each case were summer-fallowed, and the first crops were sown in the spring of 1915. The results from the grain fields in 1915, given in the statement below, may be considered as reasonably satisfactory. However, the better results that are to be looked for from a scientific rotation of crops cannot be expected until the system has been in operation for a term of years. About one-quarter of the total area was devoted to clover and alfalfa for which no return was made during the first year.

## The Killarney Demonstration Farm.

The land on which the Killarney demonstration farm is being established was purchased in 1914, and has an approximate area of seventy-five acres. Sixty-two acres are either in crop, planted with fruit or ornamental trees and bushes, or included in the farmstead plan. The balance is waste, caused by the river and the lake outlet. This is fenced and used for pasture, so far as available.

This farm may be classed as a general purpose demonstration farm, with the growing of hardy varieties of fruits as its leading feature.

Buildings: House, 28 by 30, with kitchen and sleeping balcony on back, 12 by 14. Veranda across front and half way down each side, 10 feet wide.

Barn, 36 by 40, with 16-foot stud, arranged for stabling five horses, box stall and harness room, and six cattle stalls and a box stall.

Machinery shed, 22 by 50, with 8-foot stud. This shed is the size recommended for a half section and was erected to demonstrate this, as well as to shelter machinery used on the farm.

Poultry house, 14 by 28, accommodating one hundred hens.

Ice-house, 10 by 12.

Live Stock: There are at present two teams of horses on the farm, one heavy draught and one agricultural, and one grade cow. It is the intention to purchase good grade Shorthorn cows and breed up and select for milk production.

Field Husbandry: In 1915 there were about nineteen acres of corn planted, nine acres of oats seeded, and the balance of the farm summer-fallowed.

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In 1916 the farm was surveyed for a crop rotation, seed selection work and a small amount of cultural work. On the portion of the farm left unsurveyed for the present year feed is being produced. The rotation to be adopted on one acre plots is the following: (1) wheat, (2) oats, (3) barley, (4) corn, (5) wheat, (6) oats, (7) corn, (8) alfalfa.

**Cultural Work:** Rates of seeding of grasses and legumes are being tested on forty-two one-quarter acre plots; methods of summer-fallowing on twenty-one plots; varieties of wheat, oats, and barley on sixty-three plots. Six varieties of each are being tested. Two and a half acres were seeded with alfalfa for seed production, but due to the land being very weedy, it was necessary to plough this up for the season. One and a half acres were seeded with white sweet clover to cut and put in silo.

**Seed Selection Work:** A number of quarter-acre plots were laid out for seed selection work, with a view to starting a centre for seed improvement. This work is arranged in a rotation so as to test out varieties of corn, peas and roots.

**Horticultural Work:**

Planting 1915—

84 standard apples.. . . . .	7 varieties.
48 crab apples.. . . . .	4 "
12 Compass cherry.. . . . .	1 "
24 plums.. . . . .	2 "
36 gooseberry.. . . . .	3 "
72 currants.. . . . .	6 "
6 Beta grape.. . . . .	1 "
349 raspberries.. . . . .	7 "

No fruit trees or bushes planted in 1916, but a number of ornamental shrubs were set out and preparations are being made for a great deal of planting in the season of 1917.

DEMONSTRATION FARMS CROP REPORT, 1915.

**Warren Demonstration Farm.**

(Six-year rotation with alfalfa for six years continuously.)

- Field No. 1. Summer-fallow seeded to clover June 28.
- " No. 2. Corn.
- " No. 3. Wheat, 62 bushels per acre.
- " No. 4. Oats, 92 bushels per acre.
- " No. 5. Corn.
- " No. 6. Wheat, 60 bushels per acre.
- " No. 7. Alfalfa, seeded June 26.

**Carberry Demonstration Farm.**

(Rotation six years and alfalfa for six years continuously.)

- Field No. 1. Clover, sown June 11.
- " No. 2. Corn, frozen.
- " No. 3. Wheat, 26½ bushels per acre; No. 1 hard.
- " No. 4. Oats, 74 bushels per acre.
- " No. 5. Podder corn, killed by frost.
- " No. 6. Wheat, 25 bushels per acre; No. 1 hard.
- " No. 7. Alfalfa, sown June 11.

**Baldur Demonstration Farm.**

(Rotation, six course and alfalfa.)

- Field No. 1. Oats, 15 bushels and 13 pounds per acre.
- " No. 2. Podder corn; killed by summer frosts.
- " No. 3. Wheat, 29 bushels and 47 pounds per acre.
- " No. 4. Summer-fallowed.
- " No. 5. Wheat, 24 bushels per acre.
- " No. 6. Wheat, 33 bushels and 32 pounds per acre.
- " No. 7. Alfalfa.

**Harding Demonstration Farm.**

(Six-year rotation with alfalfa for six years continuously.)

- Field No. 1. Summer clover.
- " No. 2. Fodder corn, 1,924 pounds per acre.
- " No. 3. Wheat, 39 bushels and 8 pounds per acre.
- " No. 4. Oats, 104 bushels and 12 pounds per acre.
- " No. 5. Fodder corn, 9,720 pounds per acre.
- " No. 6. Wheat, 37 bushels per acre.
- " No. 7. Alfalfa.

**Virden Demonstration Farm.**

The Superintendent reported the yield of barley in 1914 as 960 bushels on 40 acres, or 24 bushels per acre.

**Boissevain Demonstration Farm.**

(Six-year rotation with alfalfa for six years continuously.)

- Field No. 1. Summer-fallow, seeded to Common Red Clover.
- " No. 2. Corn.
- " No. 3. Wheat, 18 and  $\frac{3}{4}$  bushels per acre, badly blown out by wind.
- " No. 4. Oats, 65 bushels and 27 pounds per acre.
- " No. 5. Fodder corn.
- " No. 6. Wheat, 28 bushels and 56 pounds per acre.
- " No. 7. Alfalfa, first year.

**Portage La Prairie Demonstration Farm.**

(Six-year rotation with alfalfa for six years continuously.)

- Field No. 1. Summer-fallow, sown to clover in late summer.
- " No. 2. Ear corn, frozen.
- " No. 3. Wheat, 30 bushels per acre.
- " No. 4. Oats, 78 bushels per acre.
- " No. 5. Corn, spoiled by frost.
- " No. 6. Marquis wheat, 25 bushels per acre, blown by wind.
- " No. 7. Alfalfa, first year.

**Souris Demonstration Farm.**

(Six-course rotation, with alfalfa for six years continuously.)

- Filed No. 1. Summer-fallowed, seeded to clover.
- " No. 2. Corn, badly frosted.
- " No. 3. Wheat, 20 bushels per acre.
- " No. 4. Oats, 65 bushels per acre.
- " No. 5. Corn, badly frosted.
- " No. 6. Wheat, Marquis, 25 bushels per acre.
- " No. 7. Alfalfa, sown June 12.

**Deloraine Demonstration Farm.**

(Rotation six years and alfalfa for six years continuously.)

- Field No. 1. Summer-fallow.
- " No. 2. Seeded to clover.
- " No. 3. Wheat, 42 bushels per acre.
- " No. 4. Oats, 92 and  $\frac{3}{4}$  bushels per acre.
- " No. 5. Fodder corn, frozen.
- " No. 6. Wheat, 40 bushels per acre.
- " No. 7. Alfalfa.

**Somerset Demonstration Farm.**

(Seven-year rotation, with alfalfa for seven years continuously.)

- Field No. 1. Wheat, 47 $\frac{1}{2}$  bushels per acre.
- " No. 2. Oats, 82 $\cdot$ 4 bushels per acre.
- " No. 3. Wheat, 48 $\cdot$ 70 bushels per acre.
- " No. 4. Fodder corn, frozen.
- " No. 5. Wheat, 49 $\cdot$ 23 bushels per acre.
- " No. 6. Barley, 45 $\cdot$ 86 bushels per acre.
- " No. 7. Corn, frozen.
- " No. 8. Alfalfa, sown 1915.

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### St. Pierre Jolys Demonstration Farm.

This farm was summer-fallowed in 1914, but the sow thistles were not kept down, and it was decided to defer subdividing until 1916, and in the meantime to sow the land to some bulk crop. In 1915, Marquis wheat was sown on 30 acres and a part in fodder corn.

### Elkhorn Demonstration Farm.

(Rotation seven course and alfalfa for seven years continuously.)

Field No. 1.	Wheat, 30 bushels per acre.
" No. 2.	Oats, 37 bushels per acre.
" No. 3.	Wheat, 36 bushels per acre.
" No. 4.	Corn, frozen.
" No. 5.	Wheat, 36 and $\frac{1}{2}$ bushels per acre.
" No. 6.	Barley, yield not stated.
" No. 7.	Fodder corn, frozen.
" No. 8.	Alfalfa.

### Arborg Demonstration Farm.

About  $1\frac{1}{2}$  acres of timber and scrub cleared and broken up in 1915. Surveyed during 1914-15. The whole farm fenced in 1915. A great deal of cleaning up and summer-fallowing in 1915 but none of the land was cropped.

7 GEORGE V, A. 1917

## APPOINTMENTS PROVIDED BY THE DOMINION GRANT.

*(A) List of Persons, Regularly Employed, whose Salaries are Paid wholly from the Agricultural Instruction Grant.*

Editor, Agricultural Publications, George Batho.  
 Instructor in Chemistry, A. J. Galbraith.  
 Instructor in Household Arts, Miss C. L. Groff.  
 Dairy Inspector, W. J. Crowe.  
 Inspector Dairy Produce, L. A. Gibson.  
 District Representative, L. V. Lohr.  
     "                    W. T. G. Wiener.  
     "                    N. S. Smith.  
     "                    R. M. Muckle.  
     "                    W. R. Roberts.  
     "                    J. H. Hudson.  
     "                    J. R. Bell.  
     "                    J. H. Kiteley.  
     "                    A. Skorobohacz.  
     "                    F. T. Boresky.  
     "                    F. F. Parkinson.  
     "                    S. J. Sigfusson.  
 Home Economics Lecturer, Miss E. Crawford.  
     "                    Miss Margaret Smith.  
     "                    Miss A. Hay.

*(B) List of Persons Receiving Part Salary from Federal Grant.*

Professor of Animal Husbandry, F. S. Jacobs.  
 Secretary, Horticulture and Forestry, J. A. Neilson.  
 Accountant, J. P. Grant.



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MANITOBA.  
Grant 1915-16.

SUMMARY STATEMENT APRIL 1, 1915, TO MARCH 31, 1916.

Number.	Classification.	Grant.	Grant as Amended.	Balance on hand April 1, 1915.	Total.	Expended to Mar. 31, 1916.	Balance on hand Mar. 31, 1916.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Instructors, Directors and District Representatives (salaries and expenses).....	27,000 00	27,000 00	1,951 98	28,951 98	22,120 17	6,831 81
2	Instruction and Demonstration, (including short courses).....	20,000 00	15,000 00	28,814 06	43,814 06	29,910 65	13,904 41
3	Women's Work.....	7,000 00	7,000 00	2,137 82	9,137 82	8,372 50	765 22
4	Boys' and Girls' Clubs.....	4,000 00	5,050 00	1,434 75	6,434 75	5,901 15	533 60
5	Bulletins and Miscellaneous Printing.....	2,000 00	7,000 00	23 75	7,023 75	6,173 37	850 18
6	Instruction to Public and High Schools.....	1,200 00	200 00	2,500 00	2,700 00	200 00	2,500 00
7	Contingencies and Miscellaneous..	3,221 31	3,221 31	1,539 37	4,760 68	3,157 12	1,603 56
		61,121 31	64,421 31	38,401 73	102,823 04	75,834 65	26,988 38

DETAILS OF EXPENDITURE, APRIL 1, 1915, TO MARCH 31, 1916.

I. INSTRUCTORS, DIRECTORS AND DISTRICT REPRESENTATIVES.

Grant, 1915-16.....	\$ 27,000 00
Balance April 1, 1915 -	
Agricultural Instructors.....	1,725 00
Dairying.....	226 98
Expended to March 31, 1916.....	\$ 22,120 17
Balance on hand March 31, 1916.....	6,831 81
Total.....	\$ 28,951 98

W. T. G. Welner, District Representative, salary.....	\$ 1,260 23
N. S. Smith, " " " ".....	1,260 23
L. V. Lohr, " " " ".....	1,260 23
H. P. Danielson, " " " ".....	1,206 64
W. K. Gordon, Representative and Lecturer.....	324 98
L. Sirett, " " " ".....	541 60
R. M. Muckle, Dairy Inspector and Instructor.....	7,284 92
W. J. Crowe, Dairy Instructor, salary.....	1,100 00
L. A. Gibson, Inspector Dairy Products.....	1,888 00
E. Czapak, Interpreter.....	235 00
Geo. H. Jones, Inspector Demonstration Farms.....	1,200 00
A. J. Mulbrath, Instructor in Soil Chemistry, M.A.C.....	500 00
J. A. Nelson, Lecturer in Horticulture, M.A.C., part salary.....	375 00
W. J. Stone, District Representative, etc.....	731 33
R. A. Henry, Killarney Farm.....	482 98
J. Evans, services and expenses.....	48 80
F. S. Jacobs, Professor of Animal Husbandry, M.A.C., part salary and expenses.....	50 37
Mr. C. I. Groff, Demonstrator in Household Art, M.A.C.....	500 00
Travelling and incidental expenses.....	8,152 48
Total.....	\$ 22,120 17



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4. BOYS' AND GIRLS' CLUBS.

Grant, 1915-16.. . . . .	\$ 5,000 00	
Balance April 1, 1915.. . . . .	1,434 75	
Expended to March 31, 1916.. . . . .		\$ 5,901 15
Balance on hand March 31, 1916.. . . . .		533 60
<b>Total.. . . . .</b>	<b>\$ 6,434 75</b>	<b>\$ 6,434 75</b>
Eggs, potatoes, seed, supplies and incidentals, distributed to clubs	\$ 4,164 16	
Fair grants.. . . . .	1,414 20	
Judging at fairs.. . . . .	226 60	
Services and expenses.. . . . .	96 25	
<b>Total.. . . . .</b>	<b>\$ 5,901 15</b>	

5. BULLETINS AND MISCELLANEOUS PRINTING.

Grant, 1915-16.. . . . .	\$ 7,000 00	
Balance April 1, 1915.. . . . .	23 75	
Expended to March 31, 1916.. . . . .		\$ 6,173 57
Balance on hand March 31, 1916.. . . . .		850 18
<b>Total.. . . . .</b>	<b>\$ 7,023 75</b>	<b>\$ 7,023 75</b>
Printing, engraving, mailing and incidentals re leaflets on alfalfa, birds, spraying, hay and pasture, fodder corn, bees, rye, "Horticulturist" .. . . . .	\$ 2,499 13	
"Wood Working Problems" .. . . . .	1,575 00	
Printing College report.. . . . .	1,065 00	
		\$ 5,139 13
Advertising.. . . . .	80 00	
Geo. Batho, Publicity Agent, salary, 3 months.. . . . .	624 99	
" " travelling.. . . . .	29 45	
W. J. Abel, salary.. . . . .	300 00	
<b>Total.. . . . .</b>	<b>\$ 6,173 57</b>	

6. INSTRUCTION IN PUBLIC AND HIGH SCHOOLS

Grant, 1915-16.. . . . .	\$ 200 00	
Balance "Farm Mechanics" April 1, 1915.. . . . .	2,500 00	
Expended to March 31, 1916.. . . . .		\$ 200 00
Balance on hand March 31, 1916.. . . . .		2,500 00
<b>Total.. . . . .</b>	<b>\$ 2,700 00</b>	<b>\$ 2,700 00</b>
Grant to Holland Consolidated school .. . . . .		\$ 200 00

7. CONTINGENCIES AND MISCELLANEOUS.

Grant, 1915-16.. . . . .	\$ 3,321 31	
Balance April 1, 1915—		
(15) Excursions .. . . . .	1,000 00	
(19) Miscellaneous.. . . . .	839 37	
Expended to March 31, 1916.. . . . .		\$ 3,167 13
Balance on hand March 31, 1916.. . . . .		1,093 66
<b>Total.. . . . .</b>	<b>\$ 4,760 65</b>	<b>\$ 4,760 65</b>
Jan 1' Grant, accountant, salary .. . . . .		\$ 753 22
W. Johnson, accounting .. . . . .		858 00
W. Barber, publicity .. . . . .		40 00

CONTINGENCIES AND MISCELLANEOUS—*Concluded.*

Special services—			
J. B. Skaptason, accounting 3 years.. . . .	\$	300 00	
Mrs. Dickson.. . . .		200 00	
			\$ 500 00
Colin Smith, indemnity, accident at farm.. . . .	\$	600 00	
D. Harris.. . . .		400 00	
	\$	1,000 00	
Smith cheque refused and cancelled.. . . .		600 00	
			400 00
Printing, postage, stationery and incidentals.. . . .			684 05
Typewriter and furniture, office of Editor of Agricultural publications.. . . .			224 75
Total.. . . .	\$	3,157 12	

## MANITOBA.

## COMPARATIVE STATEMENT OF EXPENDITURE OF PROVINCIAL FUNDS FOR AGRICULTURAL PURPOSES FOR THE YEARS 1913, 1914 AND 1915, AND ESTIMATED FOR 1916.

Service.	1913	1914	1915	1916
	To Nov. 30.	To Nov. 30.	To Nov. 30.	To Nov. 30, Appropriations.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Department—Salaries.. . . .	14,729 97	14,700 00	14,555 00	13,700 00
"    Office Expenses.. . . .	1,675 28	1,496 07	1,727 81	3,000 00
Agricultural Societies and Farmers' Institutes, Judging, Seed Fairs, etc.. . . .	41,937 40	39,426 53	45,815 78	} 97,450 00
Supt. Agricultural Societies.. . . .			2,300 00	
Agricultural Statistics.. . . .	3,412 77	2,702 70	3,825 18	} 273,498 35
Noxious Weeds Inspection.. . . .	4,896 29	5,612 99	5,974 51	
Grants to Live Stock Associations, Winter Fairs, Exhibitions and Societies (Dom. Fair, \$20,000, special in 1913).. . . .	36,473 00	19,229 00	5,707 72	
Manitoba Agricultural College—				
Salaries.. . . .	68,393 02	76,190 00	103,709 95	} 273,498 35
Maintenance.. . . .	36,461 85	52,172 71	65,791 83	
Fuel.. . . .	12,537 55	40,342 06	35,337 25	
Totals.. . . .	220,517 13	251,872 08	281,775 03	387,648 35
Revenue				
Agricultural College fees, etc.. . . .	16,509 91	18,175 77	42,876 10	78,500 00
Net Total.. . . .	204,007 22	233,696 31	241,898 93	309,148 35

SASKATCHEWAN.

AGREEMENT, 1915-16.

1. College of Agriculture.....	\$21,800 00
2. Instructors, Directors, Superintendents and District Representatives—Salaries and expenses.....	27,600 00
3. Instruction and Demonstration in live stock, dairying, soils, crops, etc., including short courses.....	7,000 00
4. Women's work.....	4,500 00
5. Boys' and girls' work.....	1,100 00
6. Bulletins and miscellaneous printing.....	3,000 00
7. Instruction in Public, High and Normal Schools in Agriculture, Nature Study and Domestic Science, school gardens, training of teachers.....	1,000 00
8. Contingencies and miscellaneous.....	1,011 04
Total.....	<u>\$68,011 04</u>

In this province the grant is divided into three parts, one part being disbursed by the College of Agriculture of the University of Saskatchewan, one by the Department of Agriculture, and one by the Department of Education.

DEPARTMENT OF AGRICULTURE.

The expenditure made by the Department of Agriculture is chiefly on account of demonstration and instruction. It includes the organization of co-operative marketing of farm products, the employment of travelling instructors in live stock, dairying and field husbandry and the operation of demonstration trains. In the case of the Co-operation and Markets Branch and the Demonstration Trains, the cost of the work is borne entirely by the grant. In other phases of the work, the grant supplements provincial funds.

*Co-operative Organizations, \$3,199.*

The educational and development work to promote co-operative production and marketing of farm products is in the hands of a director and an assistant, whose salaries and expenses are charged to the grant. Their principal work is to gather and disseminate information, and to encourage and assist organizations by aiding in drawing up articles of incorporation, by-laws, etc., and by supplying speakers to give advice upon the particular line of work which the association has in view.

Of the 173 associations (5,537 shareholders) reporting for 1916, 148 were engaged in co-operative purchasing and in live stock marketing, and 9 in other lines of business, the balance being recently organized.

A special effort had been made by the branch to encourage co-operative stock marketing and, in addition to distributing over 8,000 copies of a bulletin dealing with the subject, and supplying live stock marketing receipt and amount forms free, a representative of the branch has, since January 1, 1916, assisted five associations in handling their first shipments of stock. This representative assisted the local manager in receiving, marketing, grading and shipping the stock. He then proceeded to the terminal market, aided in selling the stock and showed the manager how to properly apportion the expenses and forward the returns to the farmers. By this means associations are encouraged to make a start, and when once they have experienced the benefits to be derived, further assistance will be unnecessary.

The wool gathering project undertaken in 1914 was again conducted in 1915 with very satisfactory results. In 1914, 180 sheep owners, whose combined clip aggregated 69,404 pounds, marketed their wool through the branch, and realized an average net price of 16½ cents per pound. In 1915, 318 sheepmen sold 150,328 pounds of wool through the branch. The expense of handling, warehousing and insurance amounted to half a cent per pound. After deducting this and the cost of sacks, freight to Regina and cartage the net amount received by the farmers was 23.66 per pound.

This work will again be undertaken this season, and arrangements have already been made to have the wool graded by expert graders provided by the Dominion Live Stock Branch. This will enable the Branch to make payment on a quality basis and should induce a much larger proportion of the sheepmen of the province to market their wool clip through that office.

To encourage a greater production of poultry and poultry produce, a co-operative poultry marketing project was undertaken jointly by the Branch and the Poultry Husbandry Department of the College of Agriculture in the fall of 1915. The co-operation of the Canadian Northern Railway was secured, and a baggage car, fitted up as a poultry receiving and killing station, was provided and operated for six weeks, from October 25 to December 3, over C.N.R. lines in the northern portion of the province, 34 points being visited. The itinerary of the car was widely advertised and poultry raisers were invited to fit up their birds and bring them in alive to the car. Competent demonstrators from the College of Agriculture gave demonstrations in the proper methods of killing, plucking and packing. After the birds had been killed, plucked and graded, a representative of the Co-operative Organization Branch took delivery of them and made advance payments to the producers at graduated prices consistent with the quality of the birds. The poultry was then packed in boxes, placed in storage and subsequently sold, when a final payment was forwarded to the producers, who were thus paid every cent realized from the sale, less cost of boxes, transportation and storage charges.

During the period covered by this report the following quantities of literature relative to agricultural co-operative work have been distributed in the province:—

8,500 copies, Bulletin No. 41, Co-operative Live Stock Marketing.

10,500 copies, Bulletin No. 42, Suggested Lines of Co-operative Production.

6,500 copies of the Agricultural Co-operative Associations Act and Standard By-laws.

12,000 copies of Explanation of the Agricultural Co-operative Associations Act.

*Animal Husbandry, \$4,682.*

During the summer of 1915 three travelling instructors in animal husbandry were employed under the direction of the Saskatchewan Live Stock Commission, their salaries and expenses being paid out of the grant. These men assisted in the distribution of live stock and visited and advised purchasers regarding care and management. Their services in the advancement of the horse breeding industry were performed in connection with the administration of part 2 of the Horse Breeders Act, relating to inspection and licensing.

*Dairying, \$3,290.85.*

The salaries and expenses of two dairy instructors and the expenses of a third were paid out of the grant during 1915-16. One inspector was charged with the inspection of cream buying stations. Another of his duties is the inspection of districts from which requests have been received for the organization of new creameries, so as to determine their suitability. He also aids in organizing co-operative creamery cou-

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panies where organization is deemed advisable. A third instructor relieves the managers of local creameries to enable them to visit creamery patrons and confer with them regarding methods by which their dairying operations can be improved. An important part of the work of the dairy instructors was the holding of special meetings—either in connection with special dairy car or otherwise. Ninety-one meetings were held with an attendance of 3,536.

*Field Husbandry, \$1,714.*

During 1915 two travelling instructors, graduates of the Manitoba Agricultural College, were employed under the direction of the Weeds and Seed Commissioner and paid out of the grant.

Much of the time of the field representatives was directed to the development of work among the boys and girls although matters connected with the administration of the Noxious Weeds Act also received their attention.

*Demonstration Trains, \$6,424.*

Two separate trains were equipped and operated for several weeks over the Canadian Northern and Canadian Pacific railways. One train was manned mainly by the regular staff of the department and was organized to give instruction in field husbandry, poultry raising, building construction and domestic science. One car was provided for giving illustrated lectures for boys and girls, and an empty coach was fitted with toys and equipment to entertain children too small to be interested in the educational features.

The second train, which operated from Saskatoon, carried two cars of live stock and a car of mechanical exhibits, as well as the usual lecture and demonstration cars for field husbandry, poultry husbandry and household science. Children's cars were provided. The lecture staff consisted mainly of members of the college staff.

About 38,000 people visited the train, comprising 18,000 men, 12,000 women, and 8,000 children, and its educational value becomes more apparent each season. The trains were provided free by the railway companies, and all expenses were met by the grant.

*Short Courses for Veterinary Surgeons, \$500.*

The second Summer School of the Saskatchewan Veterinary Association was held at the College of Agriculture, Saskatoon, August 4, 5, 6, 1915. A grant of \$500 for expenses was made out of the Dominion subsidy. Dr. L. A. Merrillat, Professor of Surgery, McKillop Veterinary College, Chicago, Dr. C. D. McGilvray, Chief Inspector, Dominion Health of Animals Branch for Manitoba, as well as a number of Saskatchewan veterinarians, gave valuable lectures and demonstrations. The association published a report of its Short Course which contains much valuable information.

## UNIVERSITY OF SASKATCHEWAN.

## COLLEGE OF AGRICULTURE.

Student and general work  
Women's work

1915-16  
4,518

114,788

The grant received by this institution contributes very materially to the instruction, research and extension work of the College of Agriculture. By far the greater portion of it is devoted to strengthening the college staff, as it is believed that in this way the objects aimed at can best be secured.

The grant provides for the salaries of three professors—cereal husbandry, animal husbandry and poultry; of five assistant professors—animal husbandry, dairying, engineering, physics, and chemistry, and also of a director and a lecturer for women's work.

Each of the men in agriculture has been required to divide his attention between teaching, research and extension work. The following is a summary of the work performed by the extension service during the year: Short courses of from two to four days each, 35, with a total recorded attendance of 11,656; dairy meetings, 122; poultry shows, 25; two better-farming special trains; one poultry demonstration car and one dairy demonstration car; seed fairs, 84; standing crop competitions, 23; ploughing matches, 61; exhibitions, 113; stallion shows, 13.

A summary of the activities carried on by departments of the college, with which are associated the members of the staff who are provided for by the grant, will indicate the nature of the work performed by them, apart from that of teaching and college extension.

**Cereal Husbandry:** In this department important investigations, already extending over two years, are being undertaken, covering the following projects:

1. Variety testing for wheat, winter rye, and winter wheat, oats barley and flax. The test is designed to determine the relative value of the varieties experimented with, both for immediate results and as a basis for improvement.

2. Management: Under this head are included (a) a study of smut and its control; (b) a study of size and quality of seed in relation to its value for seeding purposes; (c) fanning-mill test in relation to seeding value of different grades of wheat and oats; (d) depth, dates and rates of seeding, dates of cutting, time of stooking, time of threshing.

3. Improvement of Cereals: (a) Wheat: yield, milling qualities, baking qualities, and earliness are the general considerations. The varieties being improved are Marquis, Red Fife, Bobs, Prelude, Hard Red Calcutta, Kubanka (Durum wheat) and certain Dr. Saunders varieties; (b) oats: resistance to loose smut, greater purity and freedom from inclination to produce false wild oats are the chief considerations. The varieties being improved are Banner, Victory, Gold Rain, Abundance, Ligowo, Daubeney; (c) barley: objects, purity and uniformity. The following varieties are being dealt with O.A.C. No. 21, Manchurian, Hamchen, Canadian Thorpe; (d) peas: objects, ease in germination, purity, productiveness. Varieties, Solo, Arthur, and others; (e) flax: rine varieties being studied for seed and oil purposes as well as fibre; (f) hybridization and cross-pollination tests for wheat and barley, and a test of the Gartons' regeneration theory.

**Animal Husbandry:** This branch is giving special attention to the building up of a dairy herd for teaching purposes. Similar work is being done in the sheep, swine and horse departments. Animals are supplied for the demonstration train. A poultry plant is operated with similar objects and purposes.

**Homemakers' Clubs:** The work of Homemakers' Clubs is carried on as a branch of the College Extension Service under the supervision of a director and an assistant. Over 160 of these clubs have been formed, including organizations among the Ruthenian population. The activities of the clubs have a wide range, including an active interest in every form of community work, in schools, hospitals, rest-rooms, and in the Red Cross and other patriotic movements. An annual convention is held at the university, the attendance this year being 300.



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## DEPARTMENT OF EDUCATION.

## AGRICULTURAL INSTRUCTION COMMITTEE.

To direct the policy of the department, which is to extend instruction in agriculture and household science to the public schools, high schools and normal schools, a committee known as the Agricultural Instruction Committee was appointed by the Minister of Education. This committee consists of the Superintendent of Education, the Deputy Ministers of Education and Agriculture, the Director of Extension Work of the College of Agriculture, the Dean of the College of Agriculture, the Professor of Agricultural Engineering, the Principals of the two Provincial Normal Schools and the two Directors of School Agriculture.

*Directors, Salaries, \$6,000; Expenses, \$1,666.*

In January, 1915, Miss Fannie A. Twiss was appointed Director of Household Science, and in May, Mr. F. W. Bates, M.Sc., and Mr. A. W. Cocks, B.Sc., were appointed, on the recommendation of the Agricultural Instruction Committee, Directors of School Agriculture. The duties of the two latter include the supervision of the teaching of agriculture and nature study in the schools of the northern half and the southern half of the province, respectively. The directors are also responsible for the instruction in the Normal Schools at Saskatoon and Regina, in agriculture, nature study, and school gardening. They also give lectures in agriculture, nature study and school gardening to the third class normal sessions which are held at various points throughout the province during the winter months. It has been found necessary for the directors to address a large number of meetings of teachers and the general public in order that the work of agricultural instruction may be carefully explained. These lectures have often been illustrated by means of lantern slides. A considerable portion of the directors' time is taken up with the organization of Rural Education Associations and school fair work.

*Household Science.*

The duties of the Director of Household Science, Miss Twiss, consist of the supervision of the teaching of household science in the schools of the province and therefore most of her time is occupied in inspection and in addressing trustees and ratepayers in order to encourage them to establish household science departments in the schools of the towns, villages and rural districts. Miss Twiss has been successful in persuading the school boards in several of the smaller towns to provide equipment for the teaching of household science, and in many rural districts the teachers are commencing this work by means of a noonday lunch. Miss Twiss lectures to the students at the Normal Schools and also to teachers at institutes and conventions.

*Summer School, \$1,135.*

The summer school which is held each year in July at the University of Saskatchewan, Saskatoon, provides special courses in agriculture, elementary science and household science for the teachers of the province. Teachers who satisfactorily complete a two-years' course are granted diplomas. The work of the school is under the supervision of the Directors who receive great assistance from the staff of the university. The charge against the grant includes the return railway fares of teachers satisfactorily completing the course, and the accommodation provided in the university residence at the rate of \$1 per day.

*School Gardens.*

An attempt was made by means of circulars and addresses given by the directors to explain the aim of school gardens to teachers and ratepayers throughout the province. This was very successful, as evidenced by the increased number of school gardens during 1915. As no grant is made to a district on account of the school garden work the improvement is particularly gratifying. In many districts it is still almost impossible for the teacher and pupils to conduct a garden owing to destruction by gophers or to the unsatisfactory nature of the school grounds. The home gardens are always encouraged whether or not a garden on the school grounds is possible.

*Improvement of School Grounds.*

Arrangements were made with the Chief of the Tree-planting Division of the Division of the Dominion Forestry Farm, Indian Head, and with the Superintendent of the Provincial Nurseries, Regina, for the free distribution of trees and shrubs to school districts. The Directors supply school officials with instructions regarding the cultivation of the ground and in many cases with plans for the same. The grounds are inspected and when the Directors are satisfied that the land has been properly prepared, trees are supplied. As a result of this arrangement over one hundred districts have commenced work which will result in considerable improvement of the school grounds.

*School Fairs, \$220.*

Prior to 1915, a few school fairs were conducted by teachers' associations and other organizations. Although no very systematic organization of this work was attempted, the Directors assisted at many school fairs by judging the exhibits and by speaking to the public on the subject of such exhibitions. Probably fifty school fairs were held in Saskatchewan during 1915.

*Rural Education Associations.*

As a result of the study of the school fair movement the Directors were able to formulate a policy, which has received the approval of the Agricultural Instruction Committee, whereby Rural Education Associations are being organized in the municipalities of the province. It has been decided that the rural municipality shall be taken as the unit for organization and that all teachers, trustees and individuals interested in education shall be encouraged to become members of the association.

The objects of these organizations are to promote and develop the use of the school garden as an educational factor, to organize school fairs, contests for boys and girls, boys' and girls' clubs, etc., to organize literary societies and to encourage the use of the school building as a community centre, in fact an attempt is being made to make these associations feel responsible for the general educational advancement of the whole community.

*Publications \$1,441.*

The following is a list of school agriculture circulars prepared by the Directors for the information and assistance of teachers and trustees:—

"No. 1, Distribution of Trees and Shrubs"; "No. 2, Suggestions for Teachers" (supplies information respecting birds and their importance to the farmer, native plants, garden tools, experiments and demonstrations for garden work, text books, etc.); "No. 3, Rural Education Associations"; "No. 4, Seed Catalogue for School Gardens"; "No. 5, School Fairs"; "No. 6, The School Garden", a bulletin of nearly 70 pages, dealing with all phases of the school garden movement in Saskatchewan.

Two other circulars, "Gardening for the Schools of Saskatchewan" and "Tree Planting for the Schools of Saskatchewan" have already been distributed and are proving to be of considerable assistance to both teachers and trustees.

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APPOINTMENTS PROVIDED BY THE DOMINION GRANT.

(A) *Officers, regularly employed, whose salaries are paid wholly from the Agricultural Instruction Grant.*

Field Representative, J. W. Hunter, Live Stock Branch, Department of Agriculture, Regina.

Dairy Inspector, J. A. McDonald, Department of Agriculture, Regina.

“ P. E. Reed, Department of Agriculture, Regina.

Field Representative, L. C. Wirtz, Dairy Branch, Department of Agriculture, Wadena.

District Representative, J. G. Rayner, North Battleford.

Professor of Cereal Husbandry, G. H. Cutler, Saskatoon.

Professor of Animal Husbandry, A. M. Shaw, Saskatoon.

Assistant Professor of Animal Husbandry, W. H. J. Tisdale, Saskatoon.

Assistant Professor of Agricultural Engineering, J. MacGregor Smith, Saskatoon.

Professor of Poultry Husbandry, R. K. Baker, Saskatoon.

Assistant Professor of Dairying, K. G. MacKay, Saskatoon.

Assistant Professor of Physics, A. E. Hennings, Saskatoon.

Assistant Professor of Chemistry, T. Thorvaldson, Saskatoon.

Director of Women's Work, Miss A. DeLury.

Lecturer for Homemakers' Clubs, Miss Daisy Harrison.

Director, School of Agriculture, F. W. Bates, Department of Education, Saskatoon.

“ “ A. W. Cocks, Department of Education, Regina.

“ “ Miss F. A. Twiss, Dept. of Education, Regina.

(B) *Officers, regularly employed, whose salaries are paid in part from the Agricultural Instruction Grant.*

Director, Co-operative Work, W. W. Thomson, Department of Agriculture, Regina.

Assistant Director, Co-operative Work, \*W. G. Mawhinney, Department of Agriculture, Regina.

(C) *Officers employed a part of each year whose salaries are paid from the Agricultural Instruction Grant.*

Field Representative, J. S. Fulton, Live Stock Branch, Department of Agriculture, Regina.

Field Representative, M. P. Tullis, Weeds Branch, Department of Agriculture, Saskatoon.

Field Representative, Wm. Thomson, Weeds Branch, Department of Agriculture, Vegreville, Sask.

Field Representative, R. J. Lewis, Weeds Branch, Department of Agriculture, Vaudreuil, Sask.

\* Enlisted

## SASKATCHEWAN.

GRANT OF 1914-15—SUMMARY STATEMENT, APRIL 1, 1915, TO SEPTEMBER 30, 1915.

Classification.	Balance brought for- ward April 1, 1915.	Expended to Sept. 30, 1915.	Un- expended.	Overexpended.
	§ cts.	§ cts.	§ cts.	§ cts.
1. School Courses in Agriculture and Domestic Science .....	5,817 76	5,534 01	283 75	—
2. College of Agriculture .....	15,300 98	15,261 11	39 87	—
3. Demonstrations in Animal Husbandry .....	3,478 46	3,465 50	12 96	—
4. Demonstrations in Dairying .....	1,842 05	1,842 05	—	—
5. Demonstrations in Field Husbandry and Weed Control .....	1,518 68	1,518 68	—	—
6. Co-operation in Production and Marketing .....	2,228 74	2,209 26	19 48	—
7. Demonstration Trains .....	4,983 68	5,222 54	—	238 86
8. Veterinary Short Course .....	500 00	500 00	—	—
Total .....	35,670 35	35,553 15	356 06	238 86
Net balance .....				117 20

DETAILS OF EXPENDITURE APRIL 1, 1915, TO SEPTEMBER 30, 1915.

## 1. SCHOOL COURSES IN AGRICULTURE AND DOMESTIC SCIENCE.

Balance brought forward April 1, 1915 .....	\$ 5,817 76	
Expended to September 30, 1915 .....		\$ 5,534 01
Balance on hand Sept. 30, 1915 .....		283 75
Total .....	\$ 5,817 76	\$ 5,817 76
Instructors, Directors and Superintendents, salaries .....		\$ 3,199 97
“ “ “ expenses .....		889 23
Boys' and girls' work, (Clubs, Competitions, Fairs, School Gardens, etc.) .....		220 00
Summer Schools, Regina and Saskatoon .....		765 48
Bulletins, reports, printing, etc. ....		981 52
Contingencies and miscellaneous .....		163 25
		\$ 6,219 45
Less refunds .....		3 20
		\$ 6,216 25
Less accounted for in Report of 1914-15, p. 84 .....		682 24
Total .....		\$ 5,534 01

Summer Schools: This item includes railway fares for teachers attending, subsistence of teachers, special lecturers and sundry supplies in connection with the summer schools held at Regina and Saskatoon.

## 2. COLLEGE OF AGRICULTURE.

Balance brought forward April 1, 1915 .....	\$ 15,300 98	
Expended to Sept. 30, 1915 .....		\$ 15,261 11
Balance on hand Sept. 30, 1915 .....		39 87
Total .....	\$ 15,300 98	\$ 15,300 98

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2. COLLEGE OF AGRICULTURE—*Concluded.*

Instruction and Research: Salaries—		
Six professors and assistant professors, part time.		\$ 1,657 68
Two assistants, full time.		2,500 00
Nine instructors and assistants.		3,391 05
Extension Work: Salaries—		
Six professors and assistant professors, part time		2,937 60
Director and Lecturer, women's work.		1,349 96
Women's work expenses.		1,672 09
Short courses in rural districts.		422 70
Total.		<u>\$ 17,261 11</u>

3. DEMONSTRATIONS IN ANIMAL HUSBANDRY.

Balance brought forward April 1, 1915.	\$ 3,478 46	
Expended to Sept. 30, 1915.		\$ 2,465 56
Balance on hand Sept. 30, 1915.		12 96
	<u>\$ 3,478 46</u>	<u>\$ 3,478 46</u>
Salaries and Expenses—		
	Salary.	Expenses.
J. W. Hunter.	\$ 500 00	\$ 292 35
R. W. Brett.	509 68	689 95
J. S. Fulton.	422 19	849 35
	<u>\$ 1,532 87</u>	<u>\$ 1,932 65</u>
		<u>\$ 3,465 19</u>

4. DEMONSTRATIONS IN DAIRYING.

Balance brought forward April 1, 1915.	\$ 1,842 05	
Expended to September 30, 1915.		\$ 1,842 05
Total.	<u>\$ 1,842 05</u>	<u>\$ 1,842 05</u>
Salaries and Expenses—		
	Salary	Expenses
J. A. McDonald.	\$ 750 00	\$ 356 55
C. L. Wirtz.	270 97	185 95
	<u>\$ 1,020 97</u>	<u>\$ 542 50</u>
Expenses inspecting farm dairies.		\$ 1,563 47
" operating dairy cars.		282 80
		175 72
		<u>\$ 1,942 05</u>
Less Jas. Graham refund.		100 00
Total.		<u>\$ 1,842 05</u>

5. FIELD HUSBANDRY AND WEED CONTROL.

Balance brought forward April 1, 1915.	\$ 1,318 88	
Expended to September 30, 1915.		\$ 1,318 88
Total.	<u>\$ 1,318 88</u>	<u>\$ 1,318 88</u>
Salaries and Expenses—		
	Salary	Expenses
A. J. McPhail.	\$ 500 00	\$ 348 91
J. G. Haynor.	200 00	158 76
E. H. Hawthorne.	661 84	882 93
T. L. Guld.	100 00	
W. Betts.	66 66	78 29
J. L. Brown.	66 66	
	<u>\$ 1,594 86</u>	<u>\$ 1,468 72</u>
Incidentals.		\$ 1,796 88
		5 00
		<u>\$ 1,796 88</u>
Refund re Agricultural Societies Convention.		1,318 88
Total.		<u>\$ 1,318 88</u>

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## 6. CO-OPERATION IN PRODUCTION AND MARKETING.

Balance brought forward April 1, 1915.. . . .	\$ 2,228 74		
Expended to September 30, 1915.. . . .		\$	2,209 26
Balance on hand September 30, 1915.. . . .			19 48
Total.. . . .	\$ 2,228 74	\$	2,228 74
Salaries and Expenses—			
	Salary.	Expenses.	
W. W. Thomson.. . . .	\$ 900 00	\$ 60 50	
L. E. Kirk.. . . .	200 00	96 30	
W. G. Mawhinny.. . . .	167 74	—	
	\$ 1,267 74	\$ 156 80	
Printing.. . . .			\$ 1,424 54
Incidentals.. . . .			778 69
			6 03
Total.. . . .			\$ 2,209 26

## 7. DEMONSTRATION TRAINS.

Balance brought forward April 1, 1915.. . . .	\$ 4,983 68		
Expended to September 30, 1915.. . . .		\$	5,222 54
Balance over expended September 30, 1915.. . . .	238 86		
Total.. . . .	\$ 5,222 54	\$	5,222 54
Salaries.. . . .		\$	1,350 62
Expenses.. . . .			2,474 75
Printing.. . . .			1,290 40
Equipment.. . . .			386 50
Incidentals.. . . .			12 59
		\$	5,514 86
Refund interest.. . . .			292 32
Total.. . . .		\$	5,222 54

## 8. VETERINARY SHORT COURSE.

Balance brought forward April 1, 1915.. . . .	\$ 500 00		
Expended to September 30, 1915.. . . .		\$	500 00
Total.. . . .	\$ 500 00	\$	500 00
Grant to Saskatchewan Veterinary Association 1915.. . . .		\$	500 00

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SASKATCHEWAN.

GRANT OF 1915-16.

SUMMARY STATEMENT October 1, 1915, to March 31, 1916.

No.	Classification.	Grant 1915-16	Balances- (Cr.)brought forward Oct. 1, 1915.	Total	Expended to Mar. 31, 1916.	Balance on hand Mar. 31, 1916.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1.	College of Agriculture.....	22,800 00	39 87	27,339 87	13,725 44	13,614 43
4	Women's work.....	4,500 00				
2.	Instructors, directors, superintendents and district representatives—salaries and expenses..	27,600 00		27,600 00	7,913 63	19,686 37
3.	Instruction and demonstration in live stock, dairying, soils, crops, etc., including short courses....	7,000 00	32 44	7,032 44	1,440 42	5,592 02
5.	Boys' and Girls' work.....	1,100 00		1,100 00		1,100 00
6.	Bulletins and miscellaneous printing	3,000 00		3,000 00	1,253 03	1,746 97
7.	Instruction in public, high and normal schools in agriculture, nature study and domestic science, school gardens, training of teachers. . .	1,000 00	283 75	1,283 75	405 45	878 30
8.	Contingencies and miscellaneous. .	1,011 04		1,011 04	162 03	849 01
	Interest accrued.....		114 24	114 24		114 24
		68,011 04	470 30	68,481 34	24,900 00	43,581 34

DETAILS OF EXPENDITURE, OCTOBER 1, 1915, TO MARCH 31, 1916.

1.—COLLEGE OF AGRICULTURE.

Grant 1915-16—College of Agriculture.....	\$ 22,800 00
"    —Women's work.....	4,500 00
Balance brought forward, Oct. 1, 1915.....	39 87
Expended to March 31, 1916.....	\$ 13,725 44
Balance on hand March 31, 1916.....	13,614 43
	<u>\$ 27,339 87</u>
Instruction and Research. Salaries—	
Six Professors and Assistants, part time.....	\$ 3,781 22
Two Professors, full time.....	1,399 88
Extension Work—	
Six Professors and Assistants, part time.....	2,118 71
Director and lecturer in women's work.....	1,199 92
Short courses in rural districts.....	2,917 92
Expenses, women's work.....	487 68
Total.....	<u>\$ 13,725 44</u>

Names of six professors charged (part time) on item "Instruction and Research," and (part time) on "Extension Work":—

- J. McG. Smith, Assistant Professor Agricultural Engineering.
- R. K. Baker, Professor of Poultry.
- A. M. Shaw, Assistant Professor Animal Husbandry.
- G. H. Cutler, Second Professor Field Husbandry.
- W. H. J. Tidale, Assistant Professor Animal Husbandry.
- K. G. McKay, Assistant Professor Dairying.

Names of two professors charged (full time) on item "Instruction and Research":—

- A. E. Hennings, Assistant Professor Physics.
- T. Thorvaldsen, Assistant Professor Chemistry.

Names of director and lecturer on "Women's Work":—

- Miss A. Delury, Director.
- Miss D. Harrison, Lecturer.

2.—INSTRUCTORS, DIRECTORS, SUPERINTENDENTS AND DISTRICT REPRESENTATIVES—  
SALARIES AND EXPENSES.

Grant 1915-16.. . . . .	\$ 27,600 00	
Expended to March 31, 1916.. . . . .		\$ 7,913 63
Balance on hand March 31, 1916.. . . . .		19,686 37
	<u>\$ 27,600 00</u>	<u>\$ 27,600 00</u>

Department of Agriculture—

Live stock—	Salary.	Expenses.	
J. W. Hunter, Field Representative.	\$ 600 00	\$ 208 60	
J. S. Fulton, " "	92 90	314 60	
			\$ 1,216 10

Weeds—			
E. Hawthorne.. . . . .	\$ 159 42	\$ 36 05	195 48

Dairying—			
J. A. McDonald, Inspector.. . . . .	\$ 750 00	\$ 92 50	
P. E. Reed, " "	375 00	107 40	
P. M. Logan, Field Representative.. . . . .		47 80	
L. C. Wirtz, " "		76 10	
			1,448 80

Co-operative Work—			
W. W. Thomson, Dir. Co-op. work..	\$ 750 00	\$ 152 51	
John Ames.. . . . .	30 00	55 31	
Expense.. . . . .		1 70	
			\$89 52

Department of Education—

Miss Twiss.. . . . .	\$ 799 98	\$ 519 64	
A. W. Cocks, Dir. of Sch. of Agric..	1,200 00	142 74	
F. W. Bates, " "	1,200 00	178 92	
Sundry Persons expenses.. . . . .		22 45	
			4,063 73
			<u>\$ 7,913 63</u>

3.—INSTRUCTION AND DEMONSTRATION.

Grant 1915-16.. . . . .	\$ 7,000 00	
Balances brought forward Oct. 1, 1915—		
" Demonstrations Animal Husbandry " ..	\$12 96	
" Co-operation " .. . . . .	19 48	
		32 44
" Demonstration Trains " .. . . . .		\$ 238 86
Expended to March 31, 1916.. . . . .		1,201 56
Balance on hand March 31, 1916.. . . . .		5,592 02
	<u>\$ 7,032 44</u>	<u>\$ 7,032 44</u>

Better Farming Train—

Maintenance and travelling.. . . . .	\$ 1,076 73	
Wages.. . . . .	90 00	
Equipment.. . . . .	34 83	
		<u>\$ 1,201 56</u>



AGRICULTURAL INSTRUCTION ACT

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6.—BULLETINS AND PRINTING.

Grant 1915-16.....	\$ 3,000 00	
Expended to March 31, 1916.....		\$ 1,253 03
Balance on hand March 31, 1916.....		1,746 97
	<u>\$ 3,000 00</u>	<u>\$ 3,000 00</u>
Department of Agriculture—		
Lithographing for Weed Bulletin.....	\$ 595 00	
Printing for Dairy Instruction.....	34 68	
Printing for Co-operative work.....	157 39	
		<u>\$ 787 07</u>
Department of Education—		
Seed Catalogue for School Gardens.....	\$ 143 70	
Pamphlet, "Suggestions for Teachers".....	38 40	
Pamphlet, "Rural Education Associations".....	95 66	
Office supplies.....	67 95	
Postage for distribution of publications.....	50 00	
Multigraphing circular letters.....	20 25	
		<u>465 96</u>
		<u>\$ 1,253 03</u>

7.—SCHOOL INSTRUCTION IN AGRICULTURE.

Grant 1915-16.....	\$ 1,000 00	
Balance brought forward Oct. 1, 1915—		
"School Courses in Agriculture and Domestic Science".....	283 75	
Expended to March 31, 1916.....		\$ 367 07
Balance on hand March 31, 1916.....		916 68
	<u>\$ 1,283 75</u>	<u>\$ 1,283 75</u>
Education Department—		
Summer Schools—		
Railway fares.....	\$ 5 45	
Subsistence of teachers at Summer School, Saskatoon.....	400 00	
		<u>\$ 405 45</u>
Loss refund of interest to Oct. 30, 1915.....		38 38
		<u>\$ 367 07</u>

8.—CONTINGENCIES AND MISCELLANEOUS.

Grant 1915-16.....	\$ 1,011 04	
Expended to March 31, 1916.....		\$ 182 00
Balance on hand March 31, 1916.....		828 04
	<u>\$ 1,011 04</u>	<u>\$ 1,011 04</u>
Education Department—		
Chemical Apparatus.....		68 30
Bibliocount and accessories.....		89 25
Agricultural Instruction Committee.....		4 45
		<u>\$ 162 00</u>

## SASKATCHEWAN.

COMPARATIVE STATEMENT of Expenditure of Provincial Funds for Agricultural purposes for the Years 1913, 1914, 1915, and estimated Expenditure for 1916.

Service.	1913-14.	1914-15.	1915-16.	1916-17.
	To April 30.	To April 30.	To April 30.	To April 30. (Estimated.)
	₹ cts.	₹ cts.	₹ cts.	₹ cts.
Department Salaries and General Expenses.	41,186 38	39,536 09	66,347 93	40,795 00
General Agricultural Interests—Agricultural Societies; Provincial Organization; Grants; Contingencies.....	56,148 90	67,739 52	68,549 34	67,600 00
Live Stock Industry.....	68,575 84	23,593 85	35,636 95	30,300 00
Dairy and Poultry Industries.....	471,272 25	84,600 63	87,986 43	71,100 00
Agricultural Statistics and Publicity.....	33,413 43	36,404 16	26,635 82	26,900 00
Bacteriological Laboratory.....	8,111 11	8,443 74	8,040 88	8,400 00
Weed Control and Game Protection.....	18,398 52	19,588 94	18,272 69	8,900 00 Weeds 10,100 00 Game.
Bureau of Labour—				
Farm and domestic labour and factory inspection.....	55,542 00	8,968 35	7,594 60	9,600 00
Miscellaneous Services—				
Vital statistics; Natural History, Scholarships, Brands, etc., expenses under Agricultural Instruction Act.....	27,892 19	24,352 72	21,235 31	9,100 00
Totals.....	780,540 62	337,228 00	340,299 95	282,795 00
Less Revenue.....	552,340 78	179,291 51	104,283 41	95,500 00
	228,199 84	175,936 49	236,016 54	187,295 00
Education Department—				
College for Agricultural Extension.....	24,000 00	24,000 00	24,000 00	24,000 00
Manual training and domestic science organization.....			1,800 00	1,800 00
Grand Total.....	252,199 84	181,936 49	261,816 54	213,095 00

Note. Vital Statistics transferred to Bureau of Public Health at beginning of fiscal year 1914-15.

**ALBERTA.**

AGREEMENT, 1915-16.

1. Schools of Agriculture—		
(a) Maintenance.. . . . .	\$ 36,000 00	
(b) Equipment and buildings.. . . . .	2,000 00	
	<hr/>	\$ 38,000 00
2. Provincial Instructors—Salaries and Expenses—		
Dairying.. . . . .		4,000 00
3. Instruction and Demonstration—		
(a) Demonstration farms.. . . . .	\$ 3,200 00	
(b) Demonstration trains.. . . . .	5,000 00	
(c) Dairying.. . . . .	3,000 00	
	<hr/>	11,200 00
4. Women's work.. . . . .		1,500 00
5. Bulletins and publications.. . . . .		1,800 00
6. Miscellaneous.. . . . .		28 82
Total.. . . . .		<hr/>
		\$ 56,528 82

SCHOOLS OF AGRICULTURE.

In the report for 1914-15 the Alberta Schools of Agriculture were fully described, and an outline given of the courses in agriculture and household science; but in view of the fact that considerably more than half the grant is expended on these schools, it will perhaps not be amiss to again draw attention to the leading facts connected with them.

The plan adopted by Alberta for instructing farm boys in the business of farming and girls in home economics, differs from that in vogue in provinces where agricultural education is centralized at a provincial college. It is not necessary, in order to qualify for admission to the Alberta schools that pupils shall have completed a high school or even a grade course. Another feature is that students are not compelled to attend a college situated a long way from their homes, but find close at hand a school of low cost where they can acquire instruction of a kind to fit them for life on the farm. The schools are designed to meet the needs of the people on the land for instruction in sound farming methods, irrespective of race, religion, scholastic attainment or money resources.

Some will, doubtless, look beyond this to higher spheres. For such, provision is made at the University of Alberta, where, after a two-years' course at one of the schools of agriculture the student may take up advanced work during the three-year course provided at the college.

In connection with each school a demonstration farm is being operated, where practical application is made of the instruction given in the school; but these farms are not more pretentious than any young farmer might reasonably look forward to possessing.

The schools have now completed the third year of operation. This year the total enrolment was 330, as compared with 285 for the previous year. A noteworthy feature was the increase in the number of girls taking the domestic science course, the figures being 70 for 1914-15, and 109 for 1915-16. These figures give evidence of the success of the schools, and also of the increasing interest which the farmers of the province are taking in them.

During the past year, many improvements were effected, making for the more efficient handling of the increasing number of students. The teaching staffs were augmented, and a new building erected at each of the schools, consisting of a large stock-judging pavilion with an agronomy laboratory overhead.

The members of the second graduating class, who have just completed their two-years' course and received their diplomas, number seventy. Thirteen men of the '15 class have been this winter continuing their study of scientific agriculture at the University of Alberta, where the recently created faculty of agriculture provides a three-year course leading to the B.S.A. degree. The work at Edmonton is a continuation of that at the schools of agriculture.

Up to the present over forty men from the three schools have enlisted.

*Maintenance, \$28,088: Buildings and Equipment, \$3,557.*

The cost of maintaining the schools of agriculture is charged to the grant. By expenditure for maintenance is understood the disbursement of all moneys incidental to the operating of the schools, such as payments of regular and special instructors, clerical and janitor help, fuel, printing, express, telephone, etc., the largest item being the salaries of the staff. The regular staff of each school consisted during the year of the following:—

Four male instructors for the four standard departments of field husbandry, animal husbandry, farm mechanics and science, the subjects of English farm mathematics and farm book-keeping being allotted or distributed according to the fitness of special lecturers for this general type of work. This year, 1916, an additional lecturer has been added in one school to relieve the principal, whose duties of general administration, correspondence and instruction were increased by the large attendance. Three special lecturers in veterinary science, dairying and poultry, do most of the work for the three schools. Three lady instructors are required for the work in household science, which included cooking, plain and fancy sewing, laundering and home nursing.

In addition to instruction by the recognized staff, occasional lectures or courses of lectures are given by officials of the department and others, on subjects in which they have specialized.

#### *Seed Growing Competitions.*

Early in 1915, the first competition in the production of alfalfa seed was arranged among the students of the three schools of agriculture, Olds, Vermilion and Claresholm. The contestants, fifty in number, were supplied with Alberta-grown seed, donated by Mr. W. A. McGregor of Medicine Hat. This was sown in the spring of 1915 and will be harvested this year, the students being advised in both operations by the instructors of field husbandry attached to the school staffs.

The prize money, comprising fifty dollars to each school, was voluntarily donated by three lumber companies doing business in the province. These companies have taken a great interest in the competitions from the start, their representatives visiting many of the students' home plots, accompanied by the field instructor. So well convinced were they that great benefits were likely to result that, in 1916, they again offered prizes for a new competition, to be concluded in 1917, thus giving the freshmen classes a chance to take part.

Already, in each of the fifty neighbourhoods where the plots have been started, interest is being aroused in this crop, and it is expected that the results will be felt over a large portion of the province. But this is not the only, nor indeed, the chief result that may be looked for: the principle underlying the movement goes far deeper.

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What is being done in alfalfa is also being worked out in many other lines, but the alfalfa competitions serve as an illustration. The undertaking not only promotes alfalfa growing, and thus benefits the agriculture of the province, but it affords the students an opportunity of applying in a practical way, on their home farms, the principles taught them at the schools of agriculture. This is the really important result from an educational point of view, and serves to illustrate the very practical manner in which the schools are being conducted.

## INSTRUCTION AND DEMONSTRATION.

*Demonstration Farms, \$5,916.*

The Provincial Demonstration Farms are seven in number and are situated at Medicine Hat, Claresholm, Olds, Sedgewick, Vermilion, Stony Plain and Athabaska. It will be seen that they are widely distributed, thus serving different parts of the province. The leading reasons for their establishment are:

1. To illustrate the best practice in soil treatment, cropping, and the care of live-stock, for the instruction of the people of the district in which the farms are situated, and also those of districts where soil and climatic conditions are similar. The practice of the farms is intended for illustration and inspection, but later the results will be embodied in reports.
2. To furnish suitable accommodation and occasion for farm meetings and conventions.
3. To furnish object teaching and chances for observation to the pupils of the Schools of Agriculture, who are practically all from farms.
4. To provide types and breeds of live stock for the animal husbandry teaching of the schools.
5. To furnish pure-bred stock, pure seed, and farm building plans to those in need of them.
6. To conduct dairy and feeding tests for the improvement of stock interests of the neighbourhood.

*Dairying, \$7,258.*

Dairying forms a prominent feature in the work carried on in connection with the demonstration farms and schools, conducted by the Department of Agriculture of the province. As part of this work, demonstrations have been given as to the capacity of the double-purpose Shorthorn as a milk producer.

Under the allotment to Demonstration Farms are included the purchase of pure-bred stock for demonstration purposes such as the Dairy Shorthorn bull, "Director," the Holstein "King Segis Pontine Alcatraz II" and the Jersey, "Brampton's Safety First." Coupled with the cost of the animal is the cost of transportation, insurance, etc.

The expenditure under educational dairying includes the expense of carrying on testing and instruction in testing work, the purchase of equipment, printing and the purchase of prizes. All prizes consist of pure bred live stock. Mr. S. G. Carlyle, Superintendent and Dairy Expert for the Demonstration Farms, had charge of this work, and his salary and expenses are provided for under Section 2.

*Demonstration Trains, \$3,967.*

A very complete itinerary was carried out during the year. This included sections of the Canadian Pacific, Grand Trunk Pacific, Canadian Northern and Edmonton and Dunvegan railways. Seventy points were visited, the chief work being done on the newer lines. The services and exhibits included the interests of live stock, woods and seeds, agricultural schools, demonstration farms, woman's work of all kinds, dairying, poultry, and game conservation and protection.

*Women's Work, \$1,486.*

The work of the Department on behalf of women takes account of the organization of institutes, lectures at institutes, short course schools, and the distribution of special bulletins and other literature. The grant was used on account of salaries, printing, travelling and advertising.

*Bulletins and Publications, \$776.*

The department has recently added to its services a publications branch, through which the reports and bulletins of the department may be critically and carefully prepared. The office is intended to act as an intelligence service for the activities of the department in its relations with other departments, other governments and the press. It is regarded as an important branch of extension service in that its issues are of responsible and accurate character. It is likewise intended to serve as an office for the gathering of classified information on agricultural, extension and administrative matters. The allotment for bulletins and publications is devoted to supporting this service.

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APPOINTMENTS PROVIDED BY DOMINION GRANT.

(A) *Officials whose salaries are paid wholly from the Agricultural Instruction Grant:—*

Instructor in Dairying and Dairy Farming, S. G. Carlyle, Department of Agriculture, Edmonton.  
 Editor of Publications, Jas. McCaig.  
 Stenographer.

(B) *Officials whose salaries are paid in part from the Agricultural Instruction Grant:—*

VERMILION SCHOOL.

Principal, F. S. Gridale, Vermilion.  
 Stenographer.  
 Instructor in Science, E. S. Hopkins, Vermilion.  
 Instructor in Farm Mechanics, L. Shanks, Vermilion.  
 Instructor of Animal Husbandry, H. H. McIntyre, Vermilion.  
 Plotman, Robt. Pilkie, Vermilion.  
 Instructor in Domestic Science, Fern Hotton, Vermilion.  
 Assistant Instructure in Domestic Science, A. M. Lavalee, Vermilion.  
 Nurse, Annie McKenzie, Vermilion.

OLDS SCHOOL.

Principal, W. J. Elliott, Olds.  
 Field Husbandry, A. E. Meyer, Olds.  
 Agricultural Mechanics, G. R. Holeton, Olds.  
 Instructor in Science, Jas. G. Taggart, Olds.  
 Agronomist, O. S. Longman, Olds.  
 English Instructor, J. H. McNally, Olds.  
 Instructor, Household Science, Miss Elizabeth Cumming, Olds.  
 Stenographer, Miss Isabella Ore, Olds.  
 Labourer, L. Neary, Olds.

CLARESHOLM SCHOOL.

Principal, W. J. Stephen, Claresholm.  
 Instructor in English and Elementary Science, J. C. Hooper, Claresholm.  
 Instructor, Animal Husbandry, H. W. Scott, Claresholm.  
 Instructor, Domestic Science, Myrtle A. Hayward, Claresholm.  
 Assistant Instructor, Domestic Science, Grace Robertson, Claresholm.  
 Teacher, A. E. Qually, Claresholm.  
 Teacher, A. Faulkner, Claresholm.  
 Stenographer, Mabel Moir, Claresholm.  
 Teamster, B. Andrews, Claresholm.

WOMEN'S INSTITUTES.

Superintendent, Miss Mary McIsaac, Department of Agriculture, Edmonton.  
 Stenographer, Miss Helen Hutching.

## ALBERTA.

GRANT, 1915-16, \$56,528.82.

## STATEMENT FOR THE YEAR ENDING MARCH 31, 1916.

No.	Classification.	Grant 1915-16.	Balances, April 1, 1915.	Total.	Expended to Mar. 31, 1916.	Balances Carried Forward.	
						Un- expended.	Over- expended.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Schools of Agriculture—						
	(a) Maintenance..... 36,000			36,000 00	29,570 37	6,429 63	
	(b) Equipment..... 2,000	3,000 00	{ 2,239 91 763 60	5,003 51	4,677 24	326 27	
2	Provincial Instructors—						
	Dairying..... 4,000 00		72 55	4,072 55	3,919 99	152 56	
3	Instruction and Demonstration—						
	(a) Demonstration Farms. 3,200		309 90	3,509 90	5,916 42		2,406 52
	(b) " " Trains. 5,000			5,000 00	4,957 12	42 88	
	(c) Dairying..... 3,000	11,200 00	2,457 71	5,457 71	3,338 52	2,119 19	
4	Women's Work..... 1,500 00		13 95	1,513 95	1,486 34	27 61	
5	Bulletins and Publications..... 1,800 00			1,800 00	775 99	1,024 01	
6	Miscellaneous..... 28 82		777 81	806 63		806 63	
						10,928 78	
						2,406 52	
		56,528 82	6,635 43	63,164 25	54,641 99	8,522 26	

## INTEREST ACCOUNT.

March 31, 1915, Accrued Interest.....	\$299 15
March 31, 1916 ".....	343 70
	<u>\$642 85</u>

## 1.—SCHOOLS OF AGRICULTURE.

## (a) Maintenance.

Grant, 1915-16.....	\$ 36,000 00
Balance April 1, 1915 "Operation".....	\$ 1,482 67
Expended to March 31, 1916.....	28,087 70
Balance carried forward.....	6,429 63
Total.....	<u>\$ 36,000 00</u>
Salaries, Olds, Vermilion, Claresholm.....	\$ 19,172 94
Services—	
W. H. Scott, teacher.....	\$ 300 00
D. Chalmers.....	120 00
W. R. Barker.....	50 00
Office assistance.....	60 00
	<u>\$ 530 00</u>
Supplies, repairs, travelling, stationery, incidentals.....	8,384 76
Total.....	<u>\$ 28,087 70</u>

Supplies include laboratory, dairy, laundry, chemical and physical supplies.



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1.—SCHOOLS OF AGRICULTURE.

(b) *Equipment and Buildings.*

Grant, 1915-16.....	\$ 2,000 00	
Balances April 1, 1915—		
" Equipment".....	2,239 91	
" Buildings".....		\$ 1,120 61
" Library".....	763 60	
Expended to March 31, 1916.....		3,556 63
Balance carried forward.....		326 27
<b>Total.....</b>	<b>\$ 5,003 51</b>	<b>\$ 5,003 51</b>
Farm implements, teaching appliances.....		\$ 2,968 97
Books for Library.....		390 50
<b>Buildings Account—</b>		
Balance of contract and extras Vermilion, box stalls, Brimacombe and Glassford.....	\$ 122 41	
Claresholm, box stalls, labour and material.....	74 75	
		197 16
<b>Total.....</b>		<b>\$ 3,556 63</b>

Building account: Supplementary expenditure in box stall barns built in previous years.

2.—PROVINCIAL INSTRUCTORS.

*Dairying (Salaries and Expenses).*

Grant, 1915-16.....	\$ 4,000 00	
Balance April 1, 1915.....	72 55	
Expended to March 31, 1916.....		\$ 3,919 99
Balance carried forward.....		152 56
<b>Total.....</b>	<b>\$ 4,072 55</b>	<b>\$ 4,072 55</b>
S. G. Carlyle, salary.....		\$ 3,250 00
General expenses.....		669 99
<b>Total.....</b>		<b>\$ 3,919 99</b>

3.—INSTRUCTION AND DEMONSTRATION.

(a) *Demonstration Farms.*

Grant, 1915-16.....	\$ 3,200 00	
Balance April 1, 1915.....	309 91	
Expended to March 31, 1916.....		\$ 3,916 42
Balance carried forward.....	2,486 51	
<b>Total.....</b>	<b>\$ 5,916 42</b>	<b>\$ 3,916 42</b>
Purchase of Breeding Stock.....		\$ 3,707 41
Insurance.....		213 00
Incidentals.....		98 97
R. C. Davidson, Buildings, Athabaska.....		1,398 04
<b>Total.....</b>		<b>\$ 3,916 42</b>

The expenditure for buildings at the Athabaska Farm covered contract price of horse barn and implement shed.

3.—INSTRUCTION AND DEMONSTRATION.

(b) *Demonstration Trains.*

Grant, 1915-16.. . . . .	\$ 5,000 00	
Expended to March 31, 1916.. . . . .		\$ 4,957 12
Balance carried forward.. . . . .		42 88
<b>Total.. . . . .</b>	<b>\$ 5,000 00</b>	<b>\$ 5,000 00</b>
Materials, supplies, labour, advertising and incidentals.. . . . .		\$ 4,175 22
Meals and berths.. . . . .		781 90
<b>Total.. . . . .</b>		<b>\$ 4,957 12</b>

3.—INSTRUCTION AND DEMONSTRATION.

(c) *Dairy Competitions.*

Grant, 1915-16.. . . . .	\$ 3,000 00	
Balance April 1, 1915.. . . . .	2,457 71	
Expended to March 31, 1916.. . . . .		\$ 3,338 52
Balance carried forward.. . . . .		2,119 19
<b>Total.. . . . .</b>	<b>\$ 5,457 71</b>	<b>\$ 5,457 71</b>
A. Lamont, Milk Tester, salary.. . . . .		\$ 735 48
MacNeill, services.. . . . .		55 00
Office assistance.. . . . .		165 00
Live stock prizes.. . . . .		1,370 50
Supplies, equipment and incidentals.. . . . .		662 54
Carlyle, expenses.. . . . .		350 00
<b>Total.. . . . .</b>		<b>\$ 3,338 52</b>

4.—WOMEN'S WORK.

Grant, 1915-16.. . . . .	\$ 1,500 00	
Balance April 1, 1915— "Domestic Science".. . . . .	13 95	
Expended to March 31, 1916.. . . . .		\$ 1,486 34
Balance carried forward.. . . . .		27 61
<b>Total.. . . . .</b>	<b>\$ 1,513 95</b>	<b>\$ 1,513 95</b>
Salaries: Miss Mary MacIsaac and Miss Carlyle.. . . . .		\$ 600 00
Printing and stationery.. . . . .		536 83
Supplies, travelling and incidentals.. . . . .		349 51
<b>Total.. . . . .</b>		<b>\$ 1,486 34</b>

5.—BULLETINS AND PUBLICATIONS.

Grant, 1915-16.. . . . .	\$ 1,800 00	
Expended to March 31, 1916.. . . . .		\$ 775 99
Balance carried forward.. . . . .		1,024 01
<b>Total.. . . . .</b>	<b>\$ 1,800 00</b>	<b>\$ 1,800 00</b>
Jas. G. McCaig, salary.. . . . .		\$ 435 48
Minute and hand-books.. . . . .		327 74
Incidentals.. . . . .		12 77
<b>Total.. . . . .</b>		<b>\$ 775 99</b>

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6.—MISCELLANEOUS.

Grant, 1915-16.....	\$	28 82	
Balance April 1, 1915.....		777 81	
Balance carried forward.....			\$ 806 63
Total.....	\$	806 63	\$ 806 63

ALBERTA.

COMPARATIVE STATEMENT OF EXPENDITURE OF PROVINCIAL FUNDS FOR AGRICULTURAL PURPOSES FOR THE YEARS 1913, 1914, 1915, AND APPROPRIATIONS FOR 1916.

Service.	1913.	1914.	1915.	1916 Appropriations.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Civil Government.....	30,329 30	36,911 29	48,329 94	49,520 00
Live Stock—				
Live Stock and Agricultural Institutes and Associations; Fat Stock Shows; Destruction of Wolves; Stock Inspection; Brands and Brand Book; Grants to Live Stock Associations; Spring Stock Show.....	44,789 38	60,981 07	47,736 83	46,100 00
Fairs and Exhibitions—				
Official Judges, Production of Pure Seed Grain, and Seed Fair, Fairs Association, etc.....	95,826 51	107,365 49	117,226 18	121,500 00
Poultry—				
To encourage Poultry Industry; Grant to Poultry Association.....	8,972 65	8,547 83	8,300 37	8,200 00
Dairying—				
Advances to Creameries; to encourage dairy work.....	111,710 36	175,024 81	249,851 53	19,500 00
Demonstration Farms—				
Administration and operation.....	73,620 58	66,840 44	70,231 95	65,000 00
Schools of Agriculture—				
Operation; Agricultural instruction; Scholarships.....	3,005 95	1,375 40	20,503 11	20,500 00
Statistics; Protection of Game Prairie Fires.....	34,279 19	48,373 26	45,371 79	32,500 00
Grants—				
United Farmers Irrigation Association, Women's Institutes, Destruction of Noxious Weeds, Natural History Society.....	30,591 45	31,708 08	27,640 66	30,000 00
Bacteriological and Pathological Work.....	7,705 80	9,000 00	9,000 00	
Sundries and Contingencies.....	1,003 51	500 00	1,694 19	1,000 00
	442,425 68	546,627 70	645,786 55	303,820 00
Less Revenue.....	202,268 00	272,318 00	342,086 60	
	240,157 68	274,309 70	303,700 95	

## BRITISH COLUMBIA.

## AGREEMENT 1915-16.

1. Appointment of Inspectors, Instructors, Directors, Superintendents, and District Representatives—Salaries and expenses.. . . . .	\$ 10,000 00
2. Farm demonstration and experimental work, field crop competitions, cow testing associations, poultry demonstration stations, co-operative variety tests.. . . . .	18,000 00
3. Horticultural demonstration stations, experimental work in vegetable growing and greenhouse work, pathological and entomological investigation work, demonstration and experimental work in various cultural practices in fruits and vegetables.. . . . .	8,500 00
4. Boys' and Girls' field crop competitions, fairs, etc.. . . . .	2,000 00
5. Bulletins, reports, circulars and miscellaneous printing.. . . . .	2,000 00
6. Department of Education, towards agricultural instruction in Public, Normal and High Schools.. . . . .	15,000 00
7. Contingencies and miscellaneous, not included in above items.	2,765 94
Total.. . . . .	\$ 58,265 94

The Department of Agriculture for British Columbia has adopted the policy of instruction through demonstrations as the best means of expending the grant placed at its disposal by the Dominion: and the major portion of the grant is devoted to such purposes.

For carrying out the work performed by the Department of Agriculture, the salaries and expenses of sixteen officials are paid wholly or in part from the grant. These comprise the following: A market commissioner, three veterinary inspectors, four assistant horticulturists, two assistant agriculturists, a plant pathologist, a silo demonstrator, soil and crop instructor, fowl brood instructor, caretaker, egg-laying contest, and a caretaker of demonstration plots.

## FARM DEMONSTRATION AND EXPERIMENTAL WORK.

Instructors and Inspectors salaries.. . . . .	\$ 9,687 00
General disbursements and travelling.. . . . .	16,701 00

*Demonstration Stations.*

Twelve demonstration stations, varying in size from four to thirteen acres, are operated under an agreement with the owner of the land, who carries out the work under the direction and supervision of the Soils and Crops Division of the Live Stock Branch of the Department:—

District.	Crop.
Chilliwack.. . . . .	Fodder Crop Rotation.
Armstrong.. . . . .	"
Edgewood.. . . . .	"
Grand Forks.. . . . .	"
Rock Creek.. . . . .	"
Parksville.. . . . .	Demonstration station of 13 acres.
Hazelton.. . . . .	Mixed Crops.
Tel'wa.. . . . .	"
Aldermere.. . . . .	"
Francois Lake.. . . . .	"
Ootsa Lake.. . . . .	"
Nechaco Valley.. . . . .	"

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*Alfalfa Plots.*

The following alfalfa plots, consisting of one acre each, are operated in order to find out the suitability of different districts for growing this fodder crop, and the best varieties to be grown:—

District.	Location.
Courtenay.. . . . .	Courtenay.
Saltspring Island.. . . . .	Ganges Harbour.
Howe Sound.. . . . .	Gibson's Landing.
Rosehill.. . . . .	Rosehill.
Nakusp.. . . . .	Nakusp.
Burton.. . . . .	Burton.
Edgewood.. . . . .	Edgewood.
Sidley.. . . . .	Bridesville.
Rock Creek.. . . . .	Rock Creek.

Very valuable results have been secured from the operation of these demonstrations and alfalfa plots. The work of the Department in this connection is much appreciated by all farmers in the districts in which these plots have been placed. It is actual demonstration work. The farmer does the work under the Department's supervision, thus leading him to adopt correct principles of farming. Valuable information has also been secured as to the varieties of grain, fodder crops, fruits, etc., for the different districts. The principle of correct crop rotation has been encouraged amongst farmers, and generally the results accomplished by the operation of these plots are very encouraging to the Department.

*Poultry Breeding Stations.*

During the past fiscal year, twenty breeding pens of pure-bred fowls were sent out to the newer districts of the province, in order to get a good strain of poultry introduced. The pens consisted of twenty hens and two cockerels. They were supplied to reliable men who undertook to take charge of them according to directions from the Department, and to sell all the eggs from them to neighbouring farmers at a price not to exceed \$1 a setting. The quality of the poultry in the different districts has been very much improved by this means.

*Selected Seed Distribution.*

Under this section, a comprehensive scheme of selected seed distribution has been undertaken through farmers' institutes. The seed ordered by each secretary is forwarded to him for distribution to members. Freight charges are paid by the Department. Oats, wheat, alfalfa, corn, and mangel seeds were distributed by this method.

The Department states that "one has only to travel through the different parts of the province to see the splendid results that have been accomplished by this work. Not only has the acreage in crop been increased materially, but the yield per acre has shown a very marked increase since we started this work."

*Egg-Laying Contest*

An international egg-laying contest has been held in Victoria for the last four years, and is operated under this section. Splendid records of egg production have been made each year, and valuable information afforded to poultrymen as to proper balanced feeding rations and care of poultry. There is a constant stream of visitors to this contest, who are eager to obtain all information from the men in charge. The cost of carrying on this egg-laying contest is trifling, as the sale of eggs not only pays for all the feed used, but also practically pays the salary of the men in charge of the contest. The money received from sale of eggs is refunded to this section of the grant.

*Cow-Testing Associations.*

This is regarded as one of the most valuable lines of work recently introduced by the Department. The following cow-testing associations have been formed, and are doing very valuable work amongst dairymen:—

Location.	No. of Cows Tested.
Chilliwack.....	515
Sardis and Rosedale.....	489
Comox.....	450
Langley-Surrey.....	436
Delta.....	400
<b>Total.....</b>	<b>2,290</b>

By means of these cow-testing associations, farmers are rapidly being educated as to the advisability of keeping a careful record of performance of their cows, by weighing the milk and using the Babcock test. Since these associations were started, the milk production has very materially increased, owing to the fact that dairymen have discarded unprofitable cows. The principle of breeding from selection, feeding a balanced ration, and the proper housing, care and treatment of cows are all encouraged.

*Field Crop Competitions.*

These were first organized to induce farmers to adopt more correct methods of crop production. Prize money was offered as the inducement, and was paid to those who had studied such methods and applied them most successfully.

The object of field crop competitions is to induce farmers to attempt better and greater production. They have served and are serving the purpose for which they were intended, and there is an annual increase in the number of competitions held and in the number of institute members taking part, as is shown by the following table:—

Year.	No. of Institutes Competing.	No. of Competitions.	No. of Competitors.
1912.....	14	20	...
1913.....	21	31	305
1914.....	49	80	587
1915.....	59	101	812

*Silo Demonstrations.*

By means of the Federal grant, the department has during the past two years been enabled to undertake a strong campaign of instruction in the growing of ensilage crops, and the use of the silo. Blue-prints and specifications of a cheap but effective stave silo are supplied free of cost to all farmers who contemplate building. The department undertakes to erect the first silo in any Farmers' Institute district, and later in the year to fill it, and has been kept busy during the last three years erecting silos for farmers in different districts in which they had not been started. As a result of this work, there are now approximately three hundred silos in the province, when four years ago there were probably not a dozen. In this time the acreage devoted to the growing of corn has increased tenfold. In the opinion of the department the value of this work cannot be overestimated, as the province is particularly well adapted for growing soiling and fodder crops and for the use of the silo. The increase in milk sold and butter made during the last few years is to a large extent due to the use of silos by farmers.

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*Clover and Alfalfa.*

Very large sums of money are yearly sent out of the province for clover and alfalfa seed when farmers can produce the highest quality of seed at home. In order to encourage farmers to grow their own seeds, the department purchased a clover and alfalfa huller, and this year will be threshing approximately two hundred acres of these crops for different farmers, charging them a fair price for the work. The quality of the seed grown, owing to favourable climatic and soil conditions in British Columbia, is far superior to that imported from other countries.

*Seed Fairs.*

Annual seed fairs are now being held. Arrangements for the present year provide for these fairs being held at New Westminster, which will take in all the country of the Lower Mainland and Vancouver Island; Armstrong, which will serve the country of the Okanagan, Similkameen, and Boundary; and Kamloops which will take in the Thompson Valley, Shuswap and Arrow Lakes districts. Suitable prizes are awarded at these seed fairs, and the other expenses in connection therewith paid out of this section of the federal grant.

*Markets Commissioner.*

A Coast Markets Commissioner, with office at Vancouver, has been appointed with the object of assisting British Columbia producers to secure the best markets by furnishing them with information with regard to marketing conditions, prices, correct methods of grading and packing produce. Full weekly reports are sent to all producers, giving information as to prices, demand for produce, etc. Most excellent results have been obtained from this work, and many thousands of dollars, it is stated, have been saved to farmers and fruit growers through the activities of this branch. The salary and expenses of the Commissioner, R. C. Abbott, and the expenses of his office are defrayed by the grant.

## HORTICULTURAL WORK.

*Salaries and General Disbursements, \$8,501.*

Three demonstration and experimental plots in agriculture and horticulture are being conducted, namely, at Terrace (Skeem River), Bella Coola, and Lawn Hill (Graham Island). These plots are five acres in extent, and are devoted to tree fruits, small fruits, vegetables, grain and forage crops. Different varieties are tested out, and experimental work in cultural methods, fertilization, spraying, and pruning, is carried on. These plots have proved of great service to the farmers and fruit growers in the localities in which they are established, and are much appreciated by them.

The Northern Okanagan Small Fruit and Vegetable Experimental Station is under the direction of Mr. J. L. Hilborn, whose property at Summerland was placed at the disposal of the department for the purpose, as described in last year's report. Mr. Hilborn's experience in Ontario proved of great value. Mr. Hilborn devotes all his time to advising growers, with the result that many have taken up this phase of work with success.

By means of the grant, two laboratories have been equipped with the necessary appliances and materials for conducting exhaustive investigation and research work in plant diseases and pests, and as to their control and eradication. An assistant plant pathologist has been appointed, and the interests of fruit growers have been well served by the experimental and research work carried out by means of these laboratories.

Provincial horticulturists in their respective districts have also carried out a considerable amount of experimental and investigation work, in pruning, spraying, fertilizing, irrigating, and cultural methods. The expenditure incidental to work of this nature has been met by the grant.

#### BOYS' AND GIRLS' COMPETITIONS.

Sixteen clubs for boys and girls were organized in the spring of 1916, with the object of creating an interest in the farm through the medium of competitions. Any boy or girl, from 10 to 17 years inclusive, is eligible for membership. Twenty competitions were held, ten in potato-growing, eight in poultry-raising, and two in pig-raising. Although only recently inaugurated, a great deal of interest is being taken in the movement. In most instances the children obtain very good results—better than those secured by their elders—owing to the fact that they are eager to follow directions given. When good results follow, the parents themselves are interested. The cost of the undertaking is met from the grant, but the charges do not appear in the accounts for the past financial year.

#### DOMINION GRANT APPRECIATED.

In commenting upon the work performed, the Deputy Minister of Agriculture, Mr. Wm. E. Scott, states: "By means of the grant we have been enabled to carry on to a much fuller extent than would be possible if we only had our provincial appropriations on which to rely, the most valuable lines of educative and demonstration work. This work is giving a great stimulus to agriculture, and is teaching the farmer how, by the adoption and application of correct principles of farming, he can increase his production from the land, and improve the quality of the stock, and generally, make a greater success of his farming operations."

#### AGRICULTURAL INSTRUCTION IN SCHOOLS (\$15,000).

During the past year substantial progress has been made in all lines of work included in the programme of agricultural education. The response of the teachers to the call of the Education Department to attend the summer school of 1915 was even more marked than in the previous year. Of the one hundred and seventy-one teachers who took the preliminary course in rural science in 1914, some seventy-seven returned for the advanced course in 1915, and in addition to these there were one hundred and eighty-three entered for the preliminary course. Altogether three hundred and fifty-nine teachers have taken this summer course in rural science. On account of the unusual conditions now existing in Canada, it was decided not to hold a summer school in 1916, but in all probability these courses for teachers will be continued even on a more extended scale in 1917.

The interest that is being aroused amongst school trustees and people generally throughout the province in agricultural education is very gratifying. The rapid increase in school gardens as an aid in the teaching of agriculture goes to show this. In 1914 there were but few school gardens in the province that could be officially recognized—probably less than half a dozen. In 1915 departmental grants were paid to eighty schools as having gardens up to the standard recognized by the department, and for the present year, 1916, the number will be more than doubled. In addition to this, some twenty-five or thirty teachers have undertaken home garden projects with their pupils. Special grants are made to school boards as well as to teachers undertaking to carry on home and school gardens.



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School trustees are also taking a greater interest in the general improvement of school grounds. In most parts of the province good grounds for modern school requirements necessitate a large outlay for clearing and levelling, not to mention fencing, planting and beautifying. The assistance offered by the department to school boards towards the carrying out of an approved plan of grounds improvement has been greatly appreciated. During the past year thirty school grounds have been planned and are being rapidly improved. School boards are giving more attention to the choosing of good school sites with sufficient room for all school purposes, including school gardens and outdoor sports, than heretofore. School grounds have been supplied with shade and ornamental trees, flowering shrubs and herbaceous perennial flowers from the provincial schools' nursery.

The teaching of agriculture has been introduced in one of the high schools of the province—Chilliwack. It has been made an optional subject and for students taking it the study of foreign languages has been made optional on certain conditions and may be carried as a bonus subject. Arrangements have already been made to extend the work, and four other high schools will be offering two-year courses in agriculture when the schools open in September. It is hoped that within a few years all of the high schools of the province that are established in agricultural districts will be offering courses in agriculture.

Instruction in agriculture is to be given in these high schools by specialists only. These men, who must be graduates in agriculture, are being carefully selected. In addition to their work as teachers in the high school, they have supervision of the rural science work of the public schools of the district. They make regular visits to these adjacent rural schools, giving instruction to the pupils in school gardening, as well as in other branches of agriculture, and assisting the teachers generally in carrying out a suitable line of work. During the winter of 1915-16, the District Supervisor at Chilliwack organized an extension class for young men not in attendance at school. Ten young men attended the classes regularly two half-days per week during the months of November, December, January and February. One evening per week was also arranged which partook of the nature of an agricultural club meeting or conference. Lectures by outside men were given, debates and discussions organized, etc. It has been arranged to continue this branch of the district work, although the great majority of the young men have joined the colours, and we do not look for a very large attendance this year. An attempt has been made to suit the work carried on in the extension classes to the particular needs and interests of these young men, and in all classes the work is conducted in the most practical manner possible.

In the regular high school classes, girls as well as boys are included. It is desired that those young people who are looking towards the teaching profession should avail themselves of this instruction in agriculture, as they will be thereby the better able to give instruction in the subject in their own schools later on.

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## APPOINTMENTS PROVIDED BY THE DOMINION GRANT.

*(A)—Officers, regularly employed, whose salaries are paid wholly from the Agricultural Instruction grant:*

Director Elementary Agricultural Education, J. W. Gibson, M.A., Victoria.  
 District Supervisor Agricultural Education, J. C. Readey, B.S.A., Chilliwack.  
 District Supervisor Agricultural Instruction, E. L. Small, B.S.A., Cloverdale.  
 District Supervisor Agricultural Instruction, J. E. Britton, B.S.A., Armstrong.  
 Assistant Plant Pathologist, M. H. Rulmann, Vernon.  
 Silo Operator, J. Ferris, Victoria.  
 Assistant Horticulturist, E. C. Hunt, Grand Forks.  
 Caretaker, Egg-laying Contest, W. H. Stroyan, Victoria.  
 District Agriculturist, Geo. C. Hay, B.S.A., Telkwa.  
 District Agriculturist, J. H. McCulloch, B.S.A., Quesnel.  
 Soil and Crop Instructor, E. W. Hogan, B.S.A., Victoria.  
 Acting Asst. Horticulturist, A. R. Neale, B.S.A., Prince Rupert.  
 Coast Markets Commissioner, R. C. Abbott, Vancouver.  
 Editor, Publications Branch, Roy McLennan, Victoria.

*(B)—Officers, regularly employed, whose salaries are paid partly from the Agricultural Instruction grant:*

Cow Tester, G. H. Thornbery, Courtenay.  
 Cow Tester, E. Rive, Ladner.  
 Cow Tester, J. B. Watson, Sardis.  
 Cow Tester, D. James, Cloverdale.

BRITISH COLUMBIA.

BALANCE OF GRANT OF 1914-15.

EXPENDITURE for the year ended March 31, 1916.

Number.	Classification.	Balance on	Expenditure	Balance-	Balance-
		hand April 1, 1915.	to March 31, 1916.	Unexpended Mar. 31, 1916	Overexpended.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Demonstration and Experimental Plots.	118 89	119 73	8 16	
2	Poultry Demonstration Stations . . . . .	8 97	8 00	97	
3	Children's Crop Competitions . . . . .				
4	Cow-testing Associations . . . . .	2,500 02	2,079 84	420 18	
5	Horticultural Demonstrations . . . . .	1,348 10	1,347 91	19	
6	Vegetable Experiments . . . . .	21 45	12 40	9 05	
7	Insect and Plant Diseases Investiga- tions . . . . .	500 00	160 22	339 78	
8	Fruit Packing . . . . .	1,000 00	215 00	785 00	
9	Agricultural Instructors . . . . .				
10	Printing and Preparing Bulletins . . . . .	5 34	510 19		504 76
11	Weed Suppression . . . . .	1 68		1 68	
12	*Agricultural Instruction in Schools . . . . .				
13	Miscellaneous . . . . .	753 56	745 56	8 00	
		6,258 01	5,189 76	1,573 01	504 76

Net balance of \$1,068.25 transferred to Section 5, "Printing and Preparing Bulletins" 1915-16 grant, as authorized by Minister, thus closing the account.

\*In the previous statement a balance of \$3,386.40 was incorrectly given, under "Agricultural Instruction in Schools," the expenditure of the total grant of \$15,000, being fully accounted for in the details appearing on Page 105 of the Report of 1914-15.

1. DEMONSTRATION AND EXPERIMENTAL PLOTS.

Balance April 1, 1915 . . . . .	\$ 118 89	
Expended to March 31, 1916 . . . . .		\$ 119 73
Balance March 31, 1916 . . . . .		8 16
	<u>\$ 118 89</u>	<u>\$ 118 89</u>

Salaries—

R. J. Ferris, silo demonstrator . . . . .	\$ 75 00	
F. Goldie, cure demonstration plot . . . . .	40 00	
W. Newton, instructor soil and crops . . . . .	120 00	
" " expenses . . . . .	77 30	
S. F. Dunlop, Agriculturist, expense . . . . .	103 00	
		<u>\$ 315 30</u>

Labour and materials, demonstration plots . . . . .	\$ 219 46	
Implements . . . . .	209 00	
		<u>428 46</u>

Seed distribution . . . . .	5,991 70	
Silo work . . . . .	75 00	
Crop competitions . . . . .	88 75	
Alfalfa cultures . . . . .	865 00	
		<u>7,020 45</u>

Less seed grain refunds . . . . .	5,924 00	
		<u>\$ 116 73</u>

## 2. POULTRY DEMONSTRATIONS.

Balance April 1, 1915.. . . . .	\$ 8 97	
Expended to March 31, 1916.. . . . .		\$ 8 00
Balance March 31, 1916.. . . . .		97
	<u>\$ 8 97</u>	<u>\$ 8 97</u>
Advertising Egg Contest.. . . . .		\$ 8 00

## 4. COW-TESTING WORK.

Balance April 1, 1915.. . . . .	\$ 2,500 02	
Expended to March 31, 1916.. . . . .		\$ 2,079 84
Balance March 31, 1916.. . . . .		420 18
	<u>\$ 2,500 02</u>	<u>\$ 2,500 02</u>
Salaries, sundry persons, cow-testers.. . . . .		\$ 1,836 00
Travelling expenses, supplies, etc. . . . .		243 84
		<u>\$ 2,079 84</u>

## 5. HORTICULTURAL DEMONSTRATIONS.

Balance April 1, 1915.. . . . .	\$ 1,348 10	
Expended to March 31, 1916.. . . . .		\$ 1,347 91
Balance March 31, 1916.. . . . .		19
	<u>\$ 1,348 10</u>	<u>\$ 1,348 10</u>
Salaries, Caretakers Demonstration Plots—		
S. LeC. Grant.. . . . .	\$ 300 00	
T. H. Hughes.. . . . .	200 00	
E. C. Hunt.. . . . .	200 00	
A. Richardson.. . . . .	200 00	
		\$ 900 00
Labour, materials and supplies.. . . . .		170 71
Travelling expenses.. . . . .		277 20
		<u>\$ 1,347 91</u>

## 6. VEGETABLE GROWING.

Balance April 1, 1915.. . . . .	\$ 21 45	
Expended to March 31, 1916.. . . . .		\$ 12 40
Balance March 31, 1916.. . . . .		9 05
	<u>\$ 21 45</u>	<u>\$ 21 45</u>
Seed, fertilizer and labour demonstration plot.. . . . .		\$ 12 40

## 7. INSECT AND PLANT DISEASES—INVESTIGATION WORK.

Balance April 1, 1915.. . . . .	\$ 500 00	
Expended to March 31, 1916.. . . . .		\$ 160 22
Balance March 31, 1916.. . . . .		339 78
	<u>\$ 500 00</u>	<u>\$ 500 00</u>
Chemicals, supplies, duty.. . . . .		\$ 160 22

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S. FRUIT PACKING.

Balance April 1, 1915.....	\$ 1,000 00	
Expended to March 31, 1916.....		\$ 215 00
Balance March 31, 1916.....		785 00
<b>Total.....</b>	<b>\$ 1,000 00</b>	<b>\$ 1,000 00</b>
Prizes, apple-packing contests, and packed fruit dispays.. .		\$ 215 10

10. PRINTING AND PREPARING BULLETINS.

Balance April 1, 1915.....	\$ 5 34	
Expended to March 31, 1916.....		\$ 510 10
Balance overexpended March 31, 1916.....	504 76	
<b>Total.....</b>	<b>\$ 510 00</b>	<b>\$ 510 10</b>
Addressing machine.....		\$ 25 00
Wool circular.....		7 50
Services mailing.....		11 00
Printing Agricultural Journal.....		466 60
<b>Total.....</b>		<b>\$ 510 10</b>

13. MISCELLANEOUS.

Balance April 1, 1915.....	\$ 753 56	
Expended to March 31, 1916.....		\$ 745 56
Balance March 31, 1916.....		8 00
<b>Total.....</b>	<b>\$ 753 56</b>	<b>\$ 753 56</b>
B. Livingston, travelling expenses, Women's Institute lectures.....		\$ 593 81
Seed distribution.....		168 50
Weed suppression.....		21 00
Incidentals.....		12 25
<b>Total.....</b>		<b>\$ 745 56</b>

BRITISH COLUMBIA.

Grant, 1915-16, \$58,265.94

STATEMENT FOR THE YEAR ENDED MARCH 31, 1916

Number	Classification	Grant	Grant	Balance	Expenses	Balance
		1915-16.	as amended	on hand Apr. 1, 1915.	to Mar. 31, 1916.	Unexpended Mar. 31, 1916.
		\$ cts	\$ cts	\$ cts	\$ cts	\$ cts
1	Instructors and Inspectors	10,000 00	12,000 00		9,975 72	2,024 28
2	Demonstration and Experimental Work	18,000 00	18,000 00		14,212 77	3,787 23
3	Horticultural demonstrations	8,000 00	8,000 00		8,000 00	0 00
4	Boys' and Girls' Field Crop Competitions	2,000 00				
5	Printing and Preparing Bulletins	2,000 00	2,000 00	1,000 00	1,187 44	812 56
6	Agricultural Instruction in Schools	15,000 00	15,000 00		15,000 00	0 00
7	Miscellaneous	2,765 94	2,765 94		2,765 94	0 00
	<b>Total</b>	<b>58,265 94</b>	<b>58,265 94</b>	<b>1,000 00</b>	<b>49,700 00</b>	<b>8,565 94</b>

7 GEORGE V. A. 1917

## 1. INSTRUCTORS AND INSPECTORS.

Grant 1915-16.. . . . .	\$ 12,000 00	
Expended to March 31, 1916.. . . . .		\$ 9,975 72
Balance March 31, 1916.. . . . .		2,024 28
		<hr/>
Total.. . . . .	\$ 12,000 00	\$ 12,000 00
<hr/>		
Salaries—		
R. C. Abbott, Markets Commissioner.. . . . .		\$ 1,175 00
W. T. Brookes, Veterinary Inspector.. . . . .		615 00
L. F. Burrows, Assistant Horticulturist.. . . . .		70 95
D. F. Dunlop, " . . . . .		575 00
R. J. Ferris, silo demonstrator.. . . . .		375 00
F. L. Goldman, Assistant Horticulturist.. . . . .		83 85
F. Goldie, caretaker demonstration plot.. . . . .		80 00
E. M. Howitt, Assistant Horticulturist.. . . . .		600 00
E. C. Hunt, " . . . . .		500 00
D. H. McKay, Veterinary Inspector.. . . . .		600 00
W. Newton, Instructor, soil and crop.. . . . .		450 00
M. H. Ruhmann, Asst. Plant Pathologist.. . . . .		700 00
R. L. Ramsay, Assistant Agriculturist.. . . . .		125 00
W. J. Sheppard, Foul Brood Inspector.. . . . .		125 00
M. Sparrow, Veterinary Inspector.. . . . .		600 00
W. H. Stroyan, caretaker, egg-laying contest.. . . . .		375 00
		<hr/>
		\$ 7,079 80
Travelling and office expenses of above.. . . . .		2,895 92
		<hr/>
Total.. . . . .		\$ 9,975 72

A. H. Howitt, B.S.A., acts as Assistant to the Horticulturist at Prince Rupert, and gives instruction to pupils of public and high schools in agriculture and horticulture.

E. C. Hunt, B.Sc., has charge of the Boundary district, besides taking charge of the campaign for fire blight control; he conducted primary schools, gave orchard demonstrations, lectured and judged at fairs. The most important feature of this work is the orchard-to-orchard inspection.

Three veterinary inspectors were employed for about four months in improving conditions on dairy farms.

M. H. Ruhmann is in charge of the Pathological and Entomological Laboratory at Vernon. The laboratory does a great deal of identification work. A considerable portion of his time is devoted to field study for the benefit of the orchard industry, lecturing, etc.

R. L. Ramsay acted at District Agriculturist at Telkwa, being succeeded by D. F. Dunlop.

## 2. DEMONSTRATION AND EXPERIMENTAL WORK.

Grant, 1915-16.. . . . .	\$ 18,000 00	
Expended to March 31, 1916.. . . . .		\$ 14,213 77
Balance March 31, 1916.. . . . .		3,786 23
		<hr/>
Total.. . . . .	\$ 18,000 00	\$ 18,000 00
<hr/>		
Poultry Work—		
Breeders' premium for services.. . . . .	\$ 305 00	
Prizes, Egg contests.. . . . .	376 75	
Supplies and expenses contests.. . . . .	596 97	
Poultry for breeding stations.. . . . .	1,124 22	
		<hr/>
		\$ 2,402 94
Silo demonstrations—		
Equipment, supplies and expenses.. . . . .		\$ 1,624 27
Demonstration Plots—		
Labour and supplies.. . . . .	\$ 2,962 27	
Rent.. . . . .	483 00	
Implements.. . . . .	105 50	
		<hr/>
		\$ 3,550 77

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2. DEMONSTRATION AND EXPERIMENTAL WORK—*Concluded.*

Farmers' Institute Crop Competitions—			
Prizes.. . . . .	\$ 1,790 00		
Judges' expenses.. . . . .	1,123 50		
Boys' and Girls' competitions.. . . . .	105 20		
		\$	3,018 00
Seed Grain and distribution.. . . . .			3,028 44
Alfalfa cultures.. . . . .			122 50
Dairy division.. . . . .			314 05
Apparatus and supplies, soil analysis.. . . . .			343 47
Travelling expenses—			
S. F. Dunlop, District Agriculturist.. . . . .	\$ 420 57		
C. H. Gravely.. . . . .	196 00		
D. H. McKay.. . . . .	90 50		
W. Newton, Instructor, soil and crop.. . . . .	602 25		
M. Sparrow.. . . . .	51 00		
		\$	1,370 74
Incidentals.. . . . .			291 51
Total.. . . . .		\$	16,064 47
Less seed grain refunds.. . . . .			4,457 66
		\$	11,606 77
Salaries—			
R. J. Ferris, Silo Demonstrator.. . . . .	\$ 450 00		
P. Goldie, Caretaker Demonstration Plot.. . . . .	240 00		
W. H. Stroyan, Caretaker, Egg-laying contest.. . . . .	525 00		
W. Newton, soils and crops .. . . . .	600 00		
Cow-testers.. . . . .	240 00		
S. F. Dunlop, Assistant Agriculturist.. . . . .	552 00		
		\$	2,607 00
Total.. . . . .		\$	14,213 77

*Cow-testers.*—Assistance is given to cow-testing associations by paying a portion of the salaries of cow-testers.

3. HORTICULTURAL DEMONSTRATION PLOTS.

Grant, 1915-16.. . . . .	\$ 8,500 00		
Expended to March 31, 1916.. . . . .		\$	6,600 64
Balance March 31, 1916.. . . . .			1,974 36
Total.. . . . .	\$ 8,500 00	\$	8,500 00
Labour, supplies, incidentals, services of superintendents and travelling expenses of Assistant Horticulturists, Experimental Plots.. . . . .			
		\$	2,500 29
J. L. Hilborn, in charge of Summerland station for small fruits and vegetables.. . . . .			300 00
		\$	2,800 29
Salaries—			
L. P. Burrows, Assistant Horticulturist .. . . . .	\$ 500 00		
F. L. Goodman, " .. . . . .	410 25		
S. LeC. Grant, Caretaker, Demonstration Plot .. . . . .	300 00		
T. H. Hughes, " .. . . . .	400 00		
C. E. Hunt, Asst. Horticulturist, (See Section 1).. . . . .	500 00		
A. Richardson, Plot Caretaker.. . . . .	400 00		
M. H. Ruhmann, Plant Pathologist (See Section 1) .. . . . .	500 00		
		\$	2,910 25
Total.. . . . .		\$	5,710 54

The entire cost of operating three experimental plots was borne from the food. On account of these plots, salaries of \$1,800 were paid to the three superintendents, and a total of \$1,025.11 was expended in the purchase of seeds, fertilizers, necessary implements, the erection of fences and such sheds as were necessary, and the payment





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7. MISCELLANEOUS—*Concluded.*

Dr. S. Ransom, salary and expenses, cattle investigation.....	165 25
Seed Grain distribution.....	81 25
Poultry for stations.....	60 80
Weed suppression.....	70 50
Prizes Boys' and Girls' competitions.....	42 50
Supplies, printing, etc.....	86 55
<b>Total.....</b>	<b>\$ 2,755 52</b>

Payments in connection with women's institute work, grain distribution, poultry breeding stations, noxious weeds, pathological work, etc., have been made from this section. The principal expenditures incurred were with respect to women's institutes, the provincial appropriation for this purpose having been fully expended towards the end of last year, and in order that the work might be carried on till yearly appropriation was again available, permission was secured from the Dominion Minister of Agriculture to utilize part of the grant for this purpose.

AGRICULTURAL AID GRANT, 1912.

STATEMENT FROM JUNE 17, 1915, TO MARCH 31, 1916.

Number.	Classification.	Balance on hand June 17, 1915.		Expended to Mar. 31, 1916.		Balance carried forward.	
		\$	cts.	\$	cts.	\$	cts.
1	Women's Institutes .....	5	95	417	88	411	93 (over)
2	Fruit Packing.....	10	00			10	00
3	Purchase Dairy Cattle .....						
4	Demonstrations in Crops, live stock and pure bred stock purchase .....	2,044	13	2,043	20		0 93
5	Importation of Pure-bred stock .....	2,292	46	1,286	68	1,005	78
6	Miscellaneous .....		1 91				1 19
	<b>Total .....</b>	<b>4,354</b>	<b>45</b>	<b>3,747</b>	<b>76</b>	<b>606</b>	<b>00</b>

## BRITISH COLUMBIA.

## COMPARATIVE STATEMENT OF EXPENDITURE OF PROVINCIAL FUNDS FOR AGRICULTURAL PURPOSES FOR THE YEARS 1913, 1914 AND 1915.

Service.	1913 to	1914 to	1915 to	1916 to	1916-17 to
	March 31.	March 31.	March 31.	March 31.	March 31. (Estimated).
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Salaries—Agricultural Branch, Dept. of Finance and Agriculture. ....	37,851 78	53,755 12	67,288 62	62,919 70	73,496 00
Agricultural Associations. ....	88,823 65	67,311 11	41,041 45	16,709 33	30,000 00
Board of Horticulture. ....	2,556 65	1,078 25	217 70	318 85	500 00
Stock Breeders' Associations. ....	4,633 42	2,717 68	1,278 04	.....	2,500 00
Flockmasters' Association. ....	250 00	250 00	250 00	1,757 85	250 00
Dairymen's Association. ....	3,062 51	2,999 55	2,096 46	2,564 78	2,500 00
Department of Agriculture—	30,160 87	19,340 31			
Grants to Students; Compensation for Cattle; Services and Expenses, outside; Miscellaneous, Weed Suppression. ....		24,985 50	104,021 88	77,336 31	67,000 00
Panama Exposition. ....				7,822 92	
Fruit Work—					
Fruit Cooling and Storage. ....	871 01	2,992 51			
Fruit Exhibitions. ....	43,110 28	36,059 28			
Fruit Packing Schools. ....	4,567 49	4,043 15			
Inspection Nursery Stock. ....	11,681 58	41,216 74	68,335 25	36,649 76	43,750 00
Fruit Growers' Associations. ....	4,211 42	6,251 46			
Demonstration Orchards. ....	18,071 23	2,242 13			
Farmers' Institutes and Importation of Pure Bred Stock in 1913. ....	58,577 05	17,575 75	5,704 60	18,108 45	20,000 00
Women's Institutes. ....	4,640 01	.....	4,993 85	.....	7,500 00
Poultry Association Grant. ....	2,934 64	3,870 86	1,879 91	5,213 60	2,500 00
Poultry Shows. ....	3,100 00	4,000 00	4,000 00	.....	
Totals. ....	318,103 59	290,789 60	303,107 26	228,901 55	249,996 00

NOVA SCOTIA.

AGREEMENT, 1915-16.

1. Agricultural Colleges and Agricultural Schools—		
(a) Capital expenditure to pay interest and sinking fund on cost of construction of and furnishing for science building . . . . .	\$ 7,500 00	
(b) Salaries and maintenance . . . . .	20,000 00	
		\$ 27,500 00
2. Instructors, Directors, Superintendents and District Representatives—		
Salaries and expenses . . . . .		7,500 00
3. Instruction and Demonstration—		
Dairying . . . . .	\$ 3,500 00	
Poultry . . . . .	1,600 00	
Bee-keeping . . . . .	400 00	
Soils (including drainage and field crops) . . . . .	2,300 00	
Horticultural and Entomological investigation . . . . .	7,500 00	
Fruit growing . . . . .	1,200 00	
Short courses . . . . .	3,000 00	
		19,500 00
4. Women's work (Women's Institutes, Home Makers' Clubs, Domestic Science, etc.) . . . . .		3,000 00
5. Bulletins, reports, circulars and miscellaneous printing . . . . .		500 00
6. Instruction in Public and High Schools and in Normal Schools in Agriculture, Nature Study, trapping of teachers and school gardens . . . . .		10,000 00
7. Contingencies and miscellaneous . . . . .		501 87
Total . . . . .		\$ 68,001 87

*New Science Building.*

The Science building, at the Nova Scotia Agricultural College, completed in the autumn of 1915, was formally opened on January 11, 1916, by the late Dr. C. C. James, Dominion Commissioner of Agricultural Instruction.

The building is intended to provide accommodation for instruction and investigation in the various departments of science and in home economics, proper facilities for which have hitherto been lacking.

The building is a handsome rustic brick structure of 125 x 50 feet, three stories high, and set high on the central knoll of the college campus. The basement, or what is really the ground floor, contains a general chemical laboratory and a soil-biochemistry laboratory, each capable of accommodating fifty students.

On the first floor are three research laboratories in entomological and plant disease work, and a class room capable of seating 100 students. The second floor is devoted wholly to home economics. Here is provided a fine assembly hall, equipped with movable furniture, to serve as a meeting place for women's institute convocations, and as a room for instruction in sewing, millinery and other subjects related to women's work. Attached to it is a library and reading room. There is also a spacious modern laboratory, equipped with desks, ranges and other apparatus, for study and demonstration. Adjoining this is a laundry with modern fixtures.

The heating and ventilating systems are of the most modern type. The boiler-room is placed below the basement, thus making it in reality a full three-story building. The entire interior finish is of quartered oak. The building is in every sense satisfactory, is an ornament to the college premises, and a splendid addition to the college equipment.

7 GEORGE V, A. 1917

Under the agreement of 1914-15, arrangements were made to finance the undertaking, whereby it was provided that the province should borrow the necessary money and devote a portion of the Dominion grant each year to the payment of interest and the establishment of a sinking fund, at a rate that would clear the account in twenty years. The cost of the building to date has been approximately \$115,000.

The account to March 31, 1916, stands as follows:—

Interest charges, 1914-15 . . . . .	\$ 625 44
“ “ 1915-16 . . . . .	4,471 69
Sinking fund, 1915-16 . . . . .	2,364 62
Total . . . . .	<u>\$ 7,461 75</u>

The previous additions to the buildings at the college, made possible by the Dominion grants, were: 1912, main building extension; 1913, horticultural building and greenhouses. The following are the charges to date against building account:—

1912 . . . . .	\$ 31,288 45
1913-14 and 1914-15 . . . . .	13,686 09
1915-16 . . . . .	6,836 31
Total . . . . .	<u>\$ 51,810 85</u>

*Agricultural College Salaries and Maintenance, \$19,411.*

The contribution from the grant in 1915-16 to salaries and maintenance at the Agricultural College amounted to \$19,411.46. The expenditure under this head is not presented in detail except in the Provincial Public Accounts.

It should be pointed out that since aid was first given in 1915, the provincial appropriations to the institution have not been increased, and that, therefore, whatever progress has been made at the institution since that date has been due to the aid received from the grant. Apart from new buildings, the main increases have been for increased laboratory facilities, additions to staff, and a decided addition to the amount of original investigation work carried on. The members of the college staff devote much time to extension work, in addition to their regular duties. The funds provided by the grant have made it possible, not only to add to the staff, but to secure and hold the services of the best men obtainable.

The expenditure at the institution during the year charged against the grant was \$26,217.77, out of an expenditure for all purposes of \$66,793.65 so charged.

*Beneficial Effects of the Grant.*

In this connection, Mr. M. Cumming, principal of the college and secretary for agriculture, states:—

“Perhaps to no other institution in Canada has the grant under the Agricultural Instruction Act meant more than to the college at Truro. Since the first grant was given in 1912, the staff has been materially increased and strengthened. The horticultural and science buildings and a substantial addition to the main building have all been erected. In fact, from a college with barely enough accommodation for its own province students, and with little laboratory facility for research, the college at Truro has grown into a full-fledged, well-equipped institution capable of accommodating for many years to come all the regular course students from the Maritime Provinces. Moreover, investigation work is now being carried on in fields and laboratories which promises its full fruition to the agriculture of the East. No doubt some of this development would have taken place had the Federal grant not been available, but the fact remains that the major part of the development has been financed from this fund.”

SESSIONAL PAPER No. 15c

## INSTRUCTION AND DEMONSTRATION.

*District Representatives, \$6,980.*

In one county, Antigonish, one permanent representative, Mr. Hugh MacPherson, has been appointed. In the four Cape Breton counties, Mr. H. S. Cunningham and three assistants are employed for the growing season, and give special attention to crop-growing demonstrations. A motor-car was provided to enable Mr. Cunningham to properly supervise the work. In Richmond county, Rev. Father Robitaille carried out demonstration work among the French-speaking residents.

A clover-huller was purchased and operated at several centres. This is said to be the first ever used in the province, and it has already been the means of stimulating clover-seed production. It will be operated in other counties in future seasons. The total cost of this service is charged to the grant.

*Dairying, \$3,519.*

The expenditure on this service is supplementary to the provincial grant. It provides half the salary of the Provincial Dairy Superintendent, the salary of his assistant, their expenses and the expenses of those employed from time to time in helping to organize the business. The awards given at the Provincial Butter-making Competition and the expenses of the Provincial Dairy Convention are also charged.

The creamery output of the province shows a continuous increase, amounting since 1910 to nearly 500 per cent.

*Poultry, \$1,542.*

The demonstration work carried on by the Provincial Superintendent with headquarters at the Agricultural College, was continued as in the year preceding. The appropriation has been used to meet the cost of establishing demonstration poultry houses in different districts, to supply settings of eggs to school children, and to provide for the expenses of the superintendent and others conducting meetings.

*Bee-keeping, \$373.*

During the year a partial survey of the province was made with a view to ascertaining the prevalence of foul-brood with a view to obtaining legislation looking to the suppression of the disease. The work was of a preliminary character.

*Soils, Drainage and Field Crops, \$2,298.*

Drainage and soil survey work was begun two years ago, part of the cost of the undertaking being charged to the grant. These charges included the salary of an assistant chemist, the services and expenses of those engaged in making drainage survey for farmers, the cost of concrete tile-making demonstrations and the cost of seeds, fertilizer and supplies used in co-operative experimental work.

The department agrees to demonstrate concrete tile-making to any group of farmers who propose manufacturing 20,000 or more tile. During 1915, 31,000 lbs. of all sizes were manufactured in Pictou county.

*Entomological Investigation, \$7,302.*

This appropriation assists the province to meet the cost of the campaign against the Brown-tail moth and the San José scale, carried on under the Provincial Entomologist, Mr. W. H. Brittain. The scale has been almost eradicated and the moth kept well within bounds. Evidence goes to show that the province has saved great loss because of the prompt and efficient work carried on in this regard.

The grant provides for the expenses of the Provincial Entomologist, the salary and expenses of his assistant, and of the chief inspector and fourteen assistants.



SESSIONAL PAPER No. 15c

## APPOINTMENTS PROVIDED BY THE DOMINION GRANT.

(A)—*List of persons, regularly employed, whose salaries are paid wholly from the Agricultural Instruction grant:*

- County representative, H. McPherson, Antigonish County.  
 County Representative, H. S. Cunningham, Cape Breton Counties.  
 County Representative, H. B. Langille, Cape Breton and Richmond Counties.  
 County Representative, T. C. Munn, Inverness County.  
 County Representative, A. B. MacDonald, Guysborough County.  
 Entomological Field Work Superintendent, H. G. Payne, Department of Agriculture, Truro.  
 Assistant Provincial Entomologist, C. A. Good, Department of Agriculture, Truro.  
 Soil Analyst, J. G. Archibald, Department of Agriculture, Truro.  
 Women's Institute Superintendent, Miss Jennie A. Fraser, New Glasgow.  
 Director Rural Science, L. A. DeWolfe, Truro.  
 Dean Rural Science Schools, C. L. Moore, Halifax.  
 C. B. Gooderham, Apiary and Entomological Inspector.  
 Fruit and Vegetable Growing Instructor, W. N. Byers.  
 Fruit and Vegetable Growing Instructor, F. B. Kinsman.

(B)—*List of persons receiving part salary from Federal grant:*

- Dairy Superintendent, W. A. MacKay, Department of Agriculture, Truro.  
 Stenographer to Dairy Superintendent, Miss M. M. Caldwell, Truro.  
 Accountant, C. R. B. Bryan, Truro.  
 Professor of Agriculture, J. M. Trucman, Agricultural College, Truro.  
 Professor of Horticulture, P. J. Shaw, Agricultural College, Truro.  
 Professor of Zoology, W. H. Brittain, Agricultural College, Truro.  
 Professor of Botany, H. W. Smith, Agricultural College, Truro.  
 Professor of Chemistry, J. M. Scott, Normal College, Truro.  
 Professor of Physics, J. A. Benoit, Normal College, Truro.  
 Professor of Manual Training, F. G. Mathews, Normal College, Truro.  
 Principal E. C. Allen, Truro Academy.  
 Professor of Chemistry, L. C. Hurlow, Agricultural College.  
 Entomological Inspector, J. P. Spittall, Department of Agriculture, Truro.  
 Entomological Inspector, W. W. Vitchhead.  
 Entomological Inspector, L. G. Saunders, Department of Agriculture, Truro.  
 Entomological Inspector, C. F. U. Whitman, Department of Agriculture, Truro.  
 Entomological Inspector, D. Robichou, Department of Agriculture, Truro.  
 Entomological Inspector, V. A. Chute, Department of Agriculture, Truro.  
 Entomological Inspector, R. M. Sanford.

NOVA SCOTIA.

GRANT, 1915-16, \$68,001.87—STATEMENT FROM APRIL 1, 1915, TO MARCH 31, 1916.

No.	Classification.	Grant, 1915-16.		Balance on hand, April 1, '15.		Total.		Expended to Mar. 31, '16.		Balance Unexpended Mar. 31, '16.	
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
1	Agricultural Colleges and Schools (S27,500)—										
	(a) Interest and Sinking Fund— Science Building.....	7,500	00	3,009	32	10,509	32	6,836	31	3,673	01
	(L) Salaries and Maintenance....	20,000	00	4,059	28	24,059	28	24,059	28		
2	Instructors, Directors, etc— Salaries and Expenses.....	7,000	00			7,000	00	6,979	88	20	12
3	Instruction and Demonstration (S19,500)—										
	(a) Dairying.....	3,500	00	19	85	3,519	85	3,519	26		59
	(b) Poultry.....	1,600	00	8	47	1,608	47	1,541	97	66	50
	(c) Beekeeping.....	400	00			400	00	373	13	26	87
	(d) Soils.....	2,300	00	4	39	2,304	39	2,297	69	6	70
	(e) Horticultural and Entomological Investigation.....	7,500	00	62	30	7,562	30	7,562	30		
	(f) Fruit Growing.....	1,200	00			1,200	00	974	25	225	75
	(g) Short Courses.....	3,000	00	509	78	3,509	78	3,453	74	56	04
4	Women's Work.....	3,000	00	1,212	04	4,212	04	2,861	63	1,350	41
5	Bulletins, Printing, etc.....	500	00			500	00	499	72		28
6	Agriculture in Schools.....	10,000	00	826	87	10,826	87	9,854	46	972	41
7	Contingencies.....	501	87	134	70	636	57	627	85		8 72
	Total.....	68,001	87	9,847	00	77,848	87	71,441	47	6,407	40

DETAILS OF EXPENDITURE FROM APRIL 1, 1915, TO MARCH 31 1916.

1a. INTEREST AND SINKING FUND, SCIENCE BUILDING.

Grant 1915-16.....	\$ 7,500 00
Balance forward April 1, 1915.....	3,009 32
Expended to March 31, 1916.....	\$ 6,836 31
Balance March 31, 1916.....	3,673 01
Total.....	\$ 10,509 32
Eastern Trust Co., interest.....	\$ 644 70
“ paid on loan.....	2,364 62
“ interest January 30, 1916.....	3,826 99
Total.....	\$ 6,836 31

1b. SALARIES AND MAINTENANCE.

Grant 1915-16.....	\$ 20,000 00
Balance brought forward April 1, 1915.....	4,059 28
Expended to March 31, 1916.....	\$ 24,059 28
Total.....	\$ 24,059 28

The Agricultural College expenditure is not presented in detail. The grant was expended for additional staff and services.



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2. INSTRUCTORS AND DIRECTORS.

Grant, 1915-16.. . . . .	\$ 7,000 00	
Expended to March 31, 1916.. . . . .		\$ 6,979 88
Balance unexpended March 31, 1916.. . . . .		20 12
<b>Total.. . . . .</b>	<b>\$ 7,000 00</b>	<b>\$ 7,000 00</b>
District Representatives—	Salaries.	Expenses.
H. S. Cunningham, Cape Breton..	\$ 1,113 37	\$ 762 31
H. McPherson, Antigonish.. . . . .	1,166 62	62 00
Rev. J. E. Robitaille, Richmond.. . . . .	100 00	—
Assistant Representatives—		
H. B. Langille.. . . . .	640 00	933 32
J. M. McKenzie.. . . . .	166 65	260 05
T. C. Munn.. . . . .	36 00	77 20
C. M. Dickle.. . . . .	198 00	193 55
	<b>\$ 3,420 64</b>	<b>\$ 2,294 73</b>
Motor car and supplies.. . . . .		\$ 5,715 37
Clover huller.. . . . .		728 11
Freight and operating.. . . . .		454 00
Incidentals.. . . . .		75 15
		11 25
<b>Total.. . . . .</b>		<b>\$ 6,979 88</b>

3a. DAIRYING.

Grant, 1915-16.. . . . .	\$ 3,500 00	
Balance April 1, 1915.. . . . .	19 85	
Expended to March 31, 1916.. . . . .		\$ 3,519 26
Balance March 31, 1916.. . . . .		0 59
<b>Total.. . . . .</b>	<b>\$ 3,519 85</b>	<b>\$ 3,519 85</b>
	Salaries.	Expenses.
W. A. McKay, Supt.. . . . .	\$ 699 97	\$ 996 39
J. W. Baird, Assistant.. . . . .	476 92	368 52
J. R. Sutherland, Assistant.. . . . .	193 08	64 98
<b>Total.. . . . .</b>	<b>\$ 1,369 97</b>	<b>\$ 1,429 89</b>
Sundry persons, services and expenses.. . . . .		\$ 2,788 86
Awards, dairy competitions.. . . . .		283 73
Convention expenses.. . . . .		265 00
Incidentals.. . . . .		194 98
		7 89
<b>Total.. . . . .</b>		<b>\$ 3,519 86</b>

3b. POULTRY.

Grant, 1915-16.. . . . .	\$ 1,800 00	
Balance April 1, 1915.. . . . .	5 47	
Expended to March 31, 1916.. . . . .		\$ 1,544 97
Balance unexpended March 31, 1916.. . . . .		250 50
<b>Total.. . . . .</b>	<b>\$ 1,805 47</b>	<b>\$ 1,805 47</b>
J. P. Landry, Supt., expenses.. . . . .		\$ 336 84
Material, demonstration houses.. . . . .		892 15
Poultry Convention.. . . . .		85 58
Eggs sent to schools.. . . . .		822 11
Express, crates, etc.. . . . .		50 86
<b>Total.. . . . .</b>		<b>\$ 1,544 97</b>

3c. BEE-KEEPING.

Grant, 1915-16.. . . . .	\$	400 00	
Expended to March 31, 1916.. . . . .			\$ 373 13
Balance unexpended March 31, 1916.. . . . .			26 87
Total.. . . . .		\$ 400 00	\$ 400 00
C. F. W. Whitman, salary, \$100. Expenses, \$78.82.. . . . .	\$		178 82
C. B. Gooderham, expenses.. . . . .			13 76
M. Pettit, services, \$25. Expenses, \$49.80.. . . . .			74 80
W. H. Brittain, services.. . . . .			100 00
Supplies.. . . . .			5 75
Total.. . . . .			\$ 373 13

4. SOILS (Drainage and Field Crops).

Grant, 1915-16.. . . . .	\$ 2,300 00	
Balance April 1, 1915.. . . . .	4 39	
Expended to March 31, 1916.. . . . .		\$ 2,297 69
Balance March 31, 1916.. . . . .		6 70
Total.. . . . .		\$ 2,304 39
V. B. Robinson, Analyst, salary.. . . . .	\$	330 00
A. E. Murphy, drainage, salary \$493.08; expenses, \$167.34.. . . . .		660 42
A. C. Tattrie, salary, \$75; expenses \$86.40.. . . . .		161 40
T. C. Munn, services and expenses.. . . . .		26 90
Clarence Foster, services and expenses.. . . . .		52 50
L. C. Harlow, services and expenses.. . . . .		151 72
T. Hodgson, services and expenses.. . . . .		70 75
W. M. Blair, services.. . . . .		60 00
R. Robertson, services.. . . . .		18 00
B. H. Landell, expenses.. . . . .		26 20
J. R. Dickson, expenses.. . . . .		22 25
		\$ 1,580 14
Seed, fertilizer, supplies and incidentals.. . . . .		717 55
Total.. . . . .		\$ 2,297 69

3c. HORTICULTURAL AND ENTOMOLOGICAL INVESTIGATION.

Grant, 1915-16.. . . . .	\$ 7,500 00		
Balance April 1, 1915.. . . . .	62 30		
Expended to March 31, 1916.. . . . .		\$ 7,562 30	
Total.. . . . .		\$ 7,562 30	
	Salary.	Expenses.	
W. H. Brittain, Provincial Entomologist.. . . . .		\$ 216 40	
C. A. Good, Assistant.. . . . .	\$ 900 00	305 91	
C. B. Gooderham, Assistant.. . . . .	195 00		
H. G. Payne, Chief Inspector.. . . . .	991 64	612 19	
14 Inspectors, salary (half) and exp.. . . . .	2,156 27	1,760 34	
	\$ 4,242 91	\$ 2,894 84	\$ 7,137 75
Supplies and incidentals.. . . . .			424 55
Total.. . . . .			\$ 7,562 30

3f. FRUIT GROWING.

Grant, 1915-16.. . . . .	\$ 1,200 00	
Expended to March 31, 1916.. . . . .		\$ 974 25
Balance March 31, 1916.. . . . .		225 75
Total.. . . . .		\$ 1,200 00

AGRICULTURAL INSTRUCTION ACT

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3f. FRUIT GROWING—*Concluded.*

P. J. Shaw, expenses.....		\$ 80 14
C. M. Dickie, salary, \$195; expenses \$155.25 .....		350 25
Supplies and incidentals, including fertilizer and spraying materials.....		543 56
Total.....		<u>\$ 974 25</u>

3g. SHORT COURSES.

Grant, 1915-16.....	\$ 3,000 00	
Balance April 1, 1915.....	509 78	
Expended to March 31, 1916.....		\$ 3,453 74
Balance March 31, 1916.....		56 04
Total.....	<u>\$ 3,509 78</u>	<u>\$ 3,709 78</u>

Demonstration building, Antigonish.....		\$ 508 38
"    "    Lawrencetown.....		1,400 00
"    "    Yarmouth.....		25 00
L. R. Fairn, Architect, fees.....		78 00
Furnishings, fittings, etc.....		155 15

Delegate expenses.....		\$ 2,158 53
Paul A. Hoving, services \$25; expenses \$38.05.....		594 00
J. M. Trueman, expenses.....		63 05
H. B. Langille, services \$60; expenses \$71.12.....		38 41
H. L. Trueman, services \$50; expenses, \$58.91.....		131 12
J. S. Sinclair, services.....		188 91
Laurencetown electric light.....		1 00
Supplies and incidentals.....		56 32
Total.....		<u>\$ 3,453 74</u>

10. WOMEN'S INSTITUTES.

Grant, 1915-16.....	\$ 3,000 00	
Balance April 1, 1915.....	1,112 04	
Expended to March 31, 1916.....		\$ 2,841 47
Balance March 31, 1916.....		1,270 41
Total.....	<u>\$ 4,212 04</u>	<u>\$ 4,212 04</u>

Miss Jennie A. Fraser, Supt., salary \$670; expenses \$615.25.....		\$ 1,285 25
Miss A. Redmond, salary \$111; expenses, \$128.61.....		240 61
Lecturers, services and expenses.....		488 28
Delegates' expenses, Truro Convention.....		456 20
Supplies and incidentals.....		148 75
Total.....		<u>\$ 2,560 49</u>

5. BULLETINS.

Grant, 1915-16.....	\$ 100 00	
Expended to March 31, 1916.....		\$ 488 73
Balance March 31, 1916.....		52
Total.....	<u>\$ 100 00</u>	<u>\$ 540 98</u>

Printing, Distribution, Dairy and Fruit Growers' Bulletin.....		\$ 488 73
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By special arrangement the Nova Scotia Fruit Growers' Association received an appropriation of \$304.74 to enable them to publish a more complete report than heretofore. The balance was used to meet the cost of publishing popular bulletins on drainage and dairying.

## 6. AGRICULTURE IN SCHOOLS.

Grant, 1915-16 . . . . .	\$ 10,000 00	
Balance April 1, 1915 . . . . .	826 87	
Expended to March 31, 1916 . . . . .		\$ 9,854 46
Balance March 31, 1916 . . . . .		972 41
Total . . . . .	\$ 10,826 87	\$ 10,826 87

L. A. DeWolfe, Director of Rural Science, salary \$1,999.98; expenses, \$582.27 . . . . .		\$ 2,582 25
C. L. Moore, Dean Rural Science Training School, salary \$1,000; expenses, \$6.83 . . . . .		1,006 83
Eight instructors at Summer School . . . . .		800 00

		\$ 4,389 08
Books . . . . .		213 58
Eggs for setting . . . . .		145 50
Teachers' grants, (95 teachers) . . . . .		1,942 50
Exhibition prizes . . . . .		169 65
Students, travelling expenses . . . . .		499 93
Bonuses to summer students . . . . .		1,553 15
Supplies and miscellaneous . . . . .		941 07
Total . . . . .		\$ 9,854 46

## 7. CONTINGENCIES.

Grant, 1915-16 . . . . .	\$ 501 87	
Balance April 1, 1915 . . . . .	134 70	
Expended to March 31, 1916 . . . . .		\$ 627 85
Balance March 31, 1916 . . . . .		8 72
Total . . . . .	\$ 636 57	\$ 636 57

W. M. Blair, services . . . . .		\$ 160 00
C. R. B. Bryan, Accountant, services . . . . .		300 00
Dr. P. C. Gauthier, expenses . . . . .		30 00
Hugh McPherson, expenses . . . . .		57 85
Postage . . . . .		80 00
Total . . . . .		\$ 627 85

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NOVA SCOTIA.

COMPARATIVE STATEMENT OF EXPENDITURE OF PROVINCIAL FUNDS FOR AGRICULTURAL PURPOSES FOR THE YEARS 1913, 1914, 1915 AND 1916.

Service.	1913.		1914.		1915.		1916.		
	To	Sept. 30.	To	Sept. 30.	To	Sept. 30.	To	Sept. 30.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	
General Agriculture—									
Department Salaries and Expenses.....	7,672	08	5,449	77	14,415	04	14,747	58	
Assistance in Dairying.....	926	16	1,257	34	1,849	69	1,783	87	
Entomological Inspection.....	3,582	27	2,744	15	2,938	06	3,916	51	
Drainage.....	1,534	01	993	19	460	93	12	39	
Exhibitions.....	12,457	84	18,222	13	10,484	08	9,540	17	
Field Crop Competitions.....	870	18	939	18	935	07	1,022	71	
Live Stock Improvement.....	898	57							
Meetings.....	621	84	69	77	405	50	89	10	
Model Orchards.....	983	31	832	15	595	45	500	01	
Printing and Advertising.....	134	35	306	81	212	60	490	92	
Miscellaneous.....	397	05	228	20	448	45	616	78	
Agricultural College.....	19,697	25	22,000	00	18,300	00	19,000	00	
College Farm.....	14,317	41	14,000	00	14,700	00	15,000	00	
Agricultural Societies.....	13,282	32	15,787	05	14,710	76	14,400	45	
Fruit Growers and County Associations.....	1,032	75	1,150	00	1,200	00	1,450	00	
Stallion Enrolment.....	84	75	518	91	142	25	210	95	
Assistance to Poultry.....	100	85	565	13	423	20	432	65	
Advertising Fruit in Great Britain.....								781	95
Total.....	78,502	50	84,973	78	82,164	06	84,809	95	
Revenue.....	9,498	41	6,677	26	10,018	82	9,539	75	
	69,004	09	78,296	52	72,145	84	74,770	20	

NEW BRUNSWICK.

AGREEMENT 1915-16.

1. Agricultural Schools—		
(a) Capital expenditure. . . . .	\$ 10,000 00	
(b) Salaries and maintenance. . . . .	6,500 00	
		\$ 16,500 00
2. Instructors, Directors, Superintendents and District Representatives—		
Salaries and expenses. . . . .		18,000 00
3. Instruction and Demonstration—		
Bee-keeping. . . . .	\$ 500 00	
Silos and drainage. . . . .	3,000 00	
Horticulture. . . . .	500 00	
Short courses. . . . .	1,000 00	
		5,000 00
4. Women's work. . . . .		3,000 00
5. Bulletins, reports, circulars and miscellaneous printing. . . . .		500 00
6. Instruction in Public, High and Normal Schools in Agriculture, Nature Study and Domestic Science, training of teachers and school gardens. . . . .		10,000 00
7. Contingencies and miscellaneous. . . . .		1,308 40
		<u>54,308 40</u>
Total. . . . .		\$ 54,308 40

AGRICULTURAL SCHOOLS.

July, 1915, witnessed the opening of the Agricultural School at Sussex, described in the previous report. The cost of the building is being met entirely from the grant, as is also the expenditure necessary for salaries and maintenance, furniture and equipment, both for the Fisher School at Woodstock and also for the Sussex School. Both these schools have already been described in detail but a summary of their cost to date is presented.

Sussex School—(Construction, equipment and furnishings)—		
Amount charged in 1913 and 1914. . . . .	\$ 18,607 11	
Amount charged in 1915 and 1916. . . . .	17,748 46	
		\$ 36,355 57
Woodstock School—(Equipment and furnishings)—		
Amount charged in 1913 and 1914. . . . .	\$ 3,913 12	
Amount charged in 1915 and 1916. . . . .	551 91	
		4,465 03
Microscopes and Laboratory equipment, Woodstock and Sussex. . . . .		1,068 65
		<u>41,889 25</u>

The charges for salaries and maintenance have been as follows:—

Woodstock, 1913 and 1914. . . . .	\$ 2,358 42	
Woodstock and Sussex, 1915-16. . . . .	5,647 01	
		8,005 43
Total charges Agricultural Schools. . . . .		<u>\$ 49,894 68</u>

The two Agricultural Schools referred to are not, however, the only buildings that have been either constructed or equipped with the funds provided by the grant. The expenditure of previous years included part cost of construction of the dairy school at Sussex, and the cost of equipment, furnishings and maintenance of both

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the Sussex and St. Hilaire Dairy Schools, the outlay amounting to the sum of \$5,086. From this it will be seen that the total charge against the grant on account of buildings, furnishings, equipment, salaries and maintenance up to the present time, in connection with the Agricultural Schools and Dairy Schools, amounts to the sum of \$55,850.65.

It is the intention to present a regular course of instruction at both Agricultural Schools. To this end, plans were well under way, but on account of the enlistment of the Director, Mr. R. Newton, and two of his assistants, B. T. Reed and W. D. Ford, together with the fact that many young men from the farms are joining the colours, it was concluded to leave the organization of the schools until after the war. The buildings are utilized at present for the holding of farmers' short courses, household science courses and summer and winter science courses for teachers. Apart from these courses, the buildings are occupied during the entire year as offices and headquarters for certain members of the staff whose work is conveniently conducted from these centres. At the Sussex School, Mr. R. P. Steeves, the Director of Elementary Agricultural Education and his assistants have their headquarters.

## AGRICULTURAL TEACHING IN SCHOOLS.

(\$10,250.)

The third year of rural science work in New Brunswick, under supervision of a director, has now been concluded. Previous to 1913, a nature study course was authorized and special grants were paid for school gardening. The passing of the Agricultural Instruction Act opened the way for an advance movement. A director was appointed and the necessary finances were provided by the grant thus relieving the province of any financial obligation in connection with the work associated with his office.

In the working out of the undertaking, rural science schools for giving special training and instruction to teachers have been established, and a nature study and agriculture course has been prescribed for use in all elementary schools. In addition, equipment for experimental teaching has been installed in many schools, school-garden libraries have been procured and instructive pamphlets and circulars distributed. School gardens or home plots have become general, the school fair idea has been inaugurated with apparent success, and an attempt is being made to make the school an influence towards community improvement.

During the year eighty school gardens were in operation, and 378 supervised home plots were conducted as against 59 the year previous. The number of pupils receiving instruction in nature study and agriculture was 2,711 as compared with 1,355 in 1914. In order to stimulate a competitive spirit, three garden prizes were offered in each county, of \$3, \$6 and \$9 respectively, one-third going to the teacher and two-thirds to the district to be expended on special equipment. Ten counties took part in the competition.

To qualify teachers for giving instruction in nature study and agriculture, two summer courses of four weeks' duration were provided, one at the Fisher Vocational School at Woodstock and the other at the new Agricultural School at Sussex. It was found impossible to accommodate the entire number of applicants, but 65 were admitted at Woodstock and 115 at Sussex.

In January of 1916, an additional course for teachers was presented at the Sussex Agricultural School to deal with certain difficulties met with by teachers in presenting these subjects. This course lasted one week, with 107 teachers in attendance; but many had to be refused for lack of accommodation. Lectures were delivered by specialists from other provinces and from the Dominion Department in

addition to the provincial officers and instructors. In the opinion of those responsible for the course it not only served to draw public attention to the value of nature study and to the relation of education to the practical affairs of life, but, in addition, it clearly demonstrated that the teachers are anxious to qualify for giving this form of instruction.

#### *School Fairs.*

School fairs have been undertaken only on a limited scale as yet, but the success met with promises a considerable extension of the work. Prizes were provided, contingent in a measure on the amount raised locally. These included not only prizes for the products of school gardens and home plots, but for related school room work. What may be called the first school fair in New Brunswick was held in the Cloverdale district in September, 1915. The afternoon was given up to an examination of the grounds and garden and the school building and equipment, followed by a luncheon for those present. In the evening at the public hall near by a programme in which the pupils largely participated was presented, and the prizes were awarded to the successful fair competitors; the whole forming what was in reality a community progress day. It is believed that the inauguration of the school fair will be a logical outcome of the increase in school and home gardens, school clubs and local improvement circles, all helping to create a sentiment among the people that rural school should train pupils for country life and rural development.

#### *Household Science, \$685.*

Under the section relating to Agricultural Instruction in Schools the necessary funds are provided to meet the expenses of the courses in Household Science held annually, at Sussex and Woodstock. The dates were, Sussex, February 1st to 11th and February 15th to 25th; Woodstock, February 29th to March 10th, and March 14th to 21th. The average attendance at each of the four courses was twenty-three regular students, this, on account of the war, being smaller than was anticipated.

Besides the subjects taken up last year a new class in Arts and Crafts was introduced and proved very popular. Written examinations in the theory of cooking and home nursing, a test in hand sewing, and judging quality and originality of the work in handicraft were new features. Prizes of from \$5 to \$20 were awarded.

#### *Women's Institutes, \$2,838.*

There are at present eighty Women's Institutes in the province, an increase of eighteen since the previous year. The membership now stands at 2,353 as against 2,000 a year ago. Because of the existence of numerous patriotic societies, the organization of new institutes was allowed to remain somewhat in abeyance; nevertheless, Madawaska is the only county in which no organization has been effected.

During the Institute year, closing July 31st, 1916, 861 regular meetings and 171 Red Cross meetings were held, with a total attendance of 12,373. At these meetings 626 papers were read and addresses delivered. The cost of the work is financed entirely by the Dominion grant, including an annual grant of five dollars to each institute.

#### INSTRUCTION AND DEMONSTRATION.

##### *Short Courses, \$913.*

The courses here referred to are the courses in general agriculture, designed for farmers and farmer's sons. The special courses for teachers and the courses in household science, having already been described in connection with the work coming under the supervision of the educational authorities, are not included with the above.



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The following is a statement of the agricultural courses held during the year:

Sussex Agricultural Institute, January 11th to 21st; subjects, poultry and bee-keeping, weed control, dairying, entomology, field husbandry, animal husbandry. Four illustrated evening lectures were given. An exceptionally good course in field crops and live stock was given during the last five days. The course opened with an attendance of 24, but this number was not maintained, and the course was not taken advantage of to the extent expected.

*Woodstock Agricultural School.*—Two weeks' general course, with special attention to field-crops and live stock, and including a two days' potato growers' convention, was held from March 20 to 31. The attendance at the course ran between twenty and forty.

Bathurst course: A three day course in general agriculture was held at Bathurst from December 14 to 16. The total registered attendance was one hundred and eighteen.

*St. Hilaire Dairy School.*—Four days' general course, April 11 to 14. This course was particularly successful, the attendance at no time falling below forty, and as many as 250 were present at some of the evening sessions.

In addition to short courses, officers of the Department of Agriculture held some sixty meetings during November and December, giving illustrated addresses on various phases of farming.

*Soil and Drainage, \$2,989.*

This comprised, as in previous years, the demonstration of a ditching machine in connection with under-drainage and of a limestone pulverizer. Both these undertakings were described in last year's report (page 131). Under-drainage was demonstrated on fifteen farms and 1,850 rods of tile were laid during the year, while the pulverizer was operated in various parts of the province, on the basis of cost to the farmers.

*Dairying, \$6,660.*

Three dairy superintendents who are members of the Departmental staff are provided by the grant, and also a milk-tester. The superintendents undertake the supervision of all creameries and cheese factories, visit individual farmers, attend meetings of agricultural societies and instruct at short courses.

*Animal Husbandry, \$789.*

The salary and expenses of a field instructor in live stock are charged to the grant. This officer visits individual farmers giving instruction as to the selection, feeding and breeding of live stock, and supervises the work carried on by the Department. Owing to the enlistment of the instructor, Mr. W. D. Ford, this work was subsequently taken over by the Dairy Division.

*Poultry Division, \$1,660.*

The salary and expenses of the poultry superintendent are charged. This officer instructs at short courses, organizes poultry competitions among young people, conducts poultry fattening demonstrations and attends agricultural society gatherings.

*Horticulture, \$5,308.*

The grant provides for a horticulturist and two assistants. Their work embraces (1) the supervision of demonstration orchards set out by the Department during the last few years, (2) the operation of four old orchards as illustrations of orchard renovation, and (3) short course work.

In response to demands for instruction in pruning and grafting, men are sent to individual orchard owners to illustrate the work. This phase of the work has increased one hundred per cent in three years.

*Bee-keeping and Fertilizers, \$1,965.*

An instructor in soil fertility and bee-keeping is provided, and is doing much to stimulate honey production and to improve apiary methods. This officer gives instruction through the agricultural societies in the mixing and proper use of chemical fertilizers.

*Entomology, \$1,168.*

The provincial entomologist assists in school agriculture and instructs at short courses. Through his efforts the children of the rural schools have been widely taught to identify the Brown-tail and Gypsy moths. A stenographer and other office expenses are charged.

*Agricultural Societies, \$1,808.*

This sum provides the salary and expenses of the superintendent of agricultural societies who has the supervision of 126 such organizations in the province.

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## APPOINTMENTS PROVIDED BY THE DOMINION GRANT.

*Officers, regularly employed, whose salaries are paid wholly from the Agricultural Instruction grant:—*

Superintendent of Dairying and Live Stock, J. W. Mitchell, Fredericton.

Provincial Horticulturist, A. G. Turney, B.S.A., Fredericton.

Dairy Superintendent, C. W. McDougall, Sussex.

Assistant Dairy Superintendent, N. W. Eveleigh, Sussex.

Poultry Superintendent, Seth Jones, Sussex.

Instructor in Fertilizers and Bee-keeping, H. B. Durost, B.S.A., Woodstock.

Entomologist, Wm. McIntosh, St. John.

Superintendent Agricultural Societies, J. E. DeGrace, Petit Rocher.

Director Elem. Agricultural Education, R. P. Steeves, M.A., Sussex.

Assistant Director Elem. Agricultural Education, Victor B. Robinson, B.S.A.,  
Sussex.

Supervisor Women's Institutes, Hazel E. Winter, Fredericton.

Instructor in Household Science, Ada B. Saunders, Fredericton.

The following, having enlisted for overseas service, are not now under pay, but their positions are being held open for them for one year:—

R. Newton, B.S.A., Director Agricultural Schools and Field Husbandman.

W. D. Ford, B.S.A., Animal Husbandman, killed in action.

D. B. Flewelling, B.S.A., 2nd Assistant Horticulturist.

L. C. D'Aigle, Dairy Superintendent.

B. T. Reed, B.S.A., Assistant Field Husbandman.

NEW BRUNSWICK.

GRANT, 1915-16, \$54,308.40—SUMMARY STATEMENT, APRIL 1, 1915, TO MARCH 31, 1916.

No.	Classification.	Grant 1915-16.	Balance April 1, 1915.	Net Total.	Expended to March 31, 1916.	Balance March 31, 1916.	
						Un- expended.	Over- expended.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1.	Agricultural Schools—						
	Capital .....	10,000 00			19,373 02		
	Salaries and Maintenance .....	6,500 00	6,714 76	9,785 24	5,647 01		15,234 79
2.	Instructors, Directors and Superintendents .....	18,000 00	1,571 70	19,571 70	18,224 04	1,347 66	
3.	Instruction and Demonstration .....	5,000 00	640 92	4,359 08	4,988 77		629 69
4.	Women's Work .....	3,000 00	431 88	3,431 88	2,838 02	593 68	
5.	Bulletins and Reports .....	500 00	109 58	390 42	231 10	159 32	
6.	Agriculture in Schools .....	10,000 00	2,091 67	12,091 67	10,937 41	1,154 26	
7.	Contingencies and Miscellaneous .....	1,308 40	1,223 92	2,537 32	1,318 61	1,218 68	
	Totals .....	54,308 40		52,167 31	63,558 01	15,864 48	15,864 48

\* Dr. balance.

1. DETAILS OF EXPENDITURE, APRIL 1, 1915, TO MARCH 31, 1916.

AGRICULTURAL SCHOOLS.

Grant, 1915-16—

Capital .....	\$ 10,000 00
Salaries and maintenance .....	6,500 00

Balance, April 1, 1915—

(a) Agricultural schools .....	\$ 6,378 65
(b) Dairy schools .....	417 51
(c) Teachers, Agricultural schools .....	81 40

Expended to March 31, 1916—

Capital .....	19,373 02
Salaries and maintenance .....	5,647 01
Balance overexpended March 31, 1916 .....	15,234 79
<b>Total .....</b>	<b>\$ 31,816 19</b>

Capital Account.

Sussex School—

W. F. Lutz, balance of contract .....	\$ 11,032 00
"    extras .....	3,105 32
Globe Furniture Co., furniture .....	550 00
Electrical equipment .....	1,576 67
Knox Electrical Co., heating contract .....	125 00
Furnishings .....	256 27
G. E. Fairweather, Architect .....	1,103 20
	<b>\$ 17,748 46</b>

Woodstock School—

Furniture .....	\$ 131 02
Grounds improvement .....	121 40
Miscellaneous equipment .....	303 49
	555 91

Microscopes and Laboratory equipment, Woodstock and Sussex ..	1,068 65
<b>Total .....</b>	<b>\$ 19,373 02</b>

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*Salaries and Maintenance.*

R. Newton, Director Agricultural schools, etc., salary, \$1,266.67, expenses, \$192.47	\$ 1,459 14
B. T. Reed, Assistant Field Husbandry, salary, \$1,150, expenses, \$472.45	1,622 45
F. D. Plummer, Janitor	500 00
Thos. Ellison, "	406 98
Maintenance and supplies	1,676 39
	\$ 5,654 96
Less refund	7 95
Total	\$ 5,647 01

2. INSTRUCTORS, DIRECTORS AND SUPERINTENDENTS.

Grant, 1915-16	\$ 18,000 00	
Balance "Travelling Instructors" April 1, 1915	1,571 70	
Expended to March 31, 1916		\$ 18,224 04
Balance unexpended March 31, 1916		1,347 66
Total	\$ 19,571 70	\$ 19,571 70

	Salary.	Expenses.	
W. D. Ford, Animal Husbandman	\$ 583 34	\$ 196 35	\$ 779 69
N. W. Eveleigh, Asst. Dairy Supt.	1,400 02	616 77	2,016 79
C. W. McDougall, Dairy Supt.	1,500 00	562 72	2,062 72
L. C. D'Aigle, "	1,375 00	900 96	2,275 96
Seth Jones, Poultry Supt.	1,200 00	454 94	1,654 94
A. G. Turney, Horticulturist	1,650 00	270 62	1,920 62
R. P. Gorham, Asst. Horticulturist	1,200 00	374 60	1,574 60
D. B. Flewelling, Asst. Horticulturist	825 00	239 63	1,064 63
H. B. Durost, Bee and Fertilizer Instructor	1,141 68	822 85	1,964 53
Wm. McIntosh, Prov. Entomologist	600 00	85 64	685 64
J. E. DeGrace, Supt. Agricultural Societies	1,070 82	737 32	1,808 14
Wm. Kerr, Services Milk Tester	180 00	124 30	304 30
Chas. E. Sheridan, Inspector, potato diseases	200 00	181 70	381 70
Ethel McKee, Stenographer	247 00		247 00
Supplies and incidentals, chiefly Entomological			135 67
			\$ 18,976 83
Less transfers and refunds			752 79
Total			\$ 18,224 04

All the above, in addition to carrying on the special work in which they are engaged, act as instructors at short courses and as travelling lecturers.

3. INSTRUCTION AND DEMONSTRATION.

Grant, 1915-16	\$ 2,000 00	
Balance, April 1, 1915		
Short courses	518 96	
Instructors		\$ 1,088 61
Demonstration trainings	1 14	
Prudage		481 78
Bee-keeping	218 44	
Expended to March 31, 1916		4,868 77
Balance, overexpended, March 31, 1916	278 88	
Total	\$ 4,898 37	\$ 4,898 37
(a) Bee-keeping		
Morley Pettit, services and expenses	\$ 94 20	
Supplies and incidentals	214 91	
		\$ 309 11

## DEPARTMENT OF AGRICULTURE

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3. INSTRUCTION AND DEMONSTRATION—*Concluded.*

(b) Soil and drainage—		
Services and expenses, engineers, foremen, surveyor (pulverizer and ditcher) . . . . .	\$ 2,734 93	
Supplies, repairs, incidentals . . . . .	1,808 51	
	<u>\$ 4,543 44</u>	
Less refunds . . . . .	1,554 24	\$ 2,989 20
(c) Horticulture—		
Sundry persons, services and expenses pruning and grafting . . . . .		748 35
(d) Short Course Work—		
Advertising, printing, supplies and miscellaneous expenses.		913 11
Total . . . . .		<u>\$ 4,988 77</u>

## 4. WOMEN'S WORK.

Grant, 1915-16 . . . . .	\$ 3,000 00	
Balances, April 1, 1915—		
Women's Institutes . . . . .	276 28	
Domestic Science . . . . .	155 60	
Expended to March 31, 1916 . . . . .		\$ 2,838 02
Balance, unexpended, March 31, 1916 . . . . .		593 86
Total . . . . .	<u>\$ 3,431 88</u>	<u>\$ 3,431 88</u>

Miss Hazel E. Winter, Supervisor, salary \$670.84; expenses, \$99.58 . . . . .	\$ 770 42	
Miss Imogene Jonah, salary \$300; expenses \$181.69 . . . . .	481 69	
Lecturers and organizers, services and expenses . . . . .	651 66	
Expenses Convention delegates . . . . .	176 28	
Prizes . . . . .	40 00	
Grants of \$5 to 76 institutes . . . . .	380 00	
Equipment, supplies and incidentals . . . . .	512 32	
	<u>\$ 3,012 37</u>	
Refunds . . . . .	174 35	
Total . . . . .		<u>\$ 2,838 02</u>

## 5. BULLETINS AND REPORTS.

Grant, 1915-16 . . . . .	\$ 500 00	
Balance, April 1, 1915 . . . . .		\$ 109 58
Expended to March 31, 1916 . . . . .		231 10
Balance, unexpended, March 31, 1916 . . . . .		159 32
Total . . . . .	<u>\$ 500 00</u>	<u>\$ 500 00</u>
Spraying and fertilizer leaflets . . . . .	\$ 42 00	
Poultry Bulletin . . . . .	96 00	
Insect Bulletin . . . . .	28 50	
Nature study leaflets . . . . .	24 60	
Envelopes . . . . .	40 00	
Total . . . . .		<u>\$ 231 10</u>

## 6. AGRICULTURE IN SCHOOLS.

Grant, 1915-16 . . . . .	\$ 10,000 00	
Balances, April 1, 1915—		
"Elementary Agricultural Education" . . . . .	712 49	
"Training Teachers" . . . . .		\$ 216 40
"Domestic Science Teachers" . . . . .	177 80	
"School Gardens" . . . . .	1,417 78	
Expended to March 31, 1916 . . . . .		10,937 41
Balance, unexpended, March 31, 1916 . . . . .		1,154 26
Total . . . . .	<u>\$ 12,308 07</u>	<u>\$ 12,308 07</u>

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AGRICULTURE IN SCHOOLS—*Concluded.*

R. P. Steeves, Director Elementary Agricultural Education, salary \$1,800, expenses \$580.11 . . . . .	\$ 2,380 11
Services of Instructors in Special Courses—	
Domestic Science, Animal Life, Soil Physics, School Gardening—Woodstock and Sussex . . . . .	1,500 65
Refunded railway fares . . . . .	599 81
Bonuses for attending Science Schools, 57 at \$20 . . . . .	1,140 00
Grants to secretaries, teachers, trustees re Nature Study . . . . .	3,497 83
Prizes for school gardens . . . . .	147 00
Grants to inspectors, Rural Science School . . . . .	140 00
Seeds, eggs, supplies, stationery, advertising, furnishing and miscellaneous . . . . .	847 32
	\$ 10,279 71
Services and expenses, Domestic Science courses—sundry persons . . . . .	551 35
Prizes, Domestic Science course . . . . .	60 00
Supplies, Domestic Science course . . . . .	73 41
	\$ 10,964 47
Refund . . . . .	27 06
	\$ 10,937 41

7. CONTINGENCIES AND MISCELLANEOUS.

Grant, 1915-16 . . . . .	\$ 1,308 40
Balances, April 1, 1915—	
"Transportation" . . . . .	272 18
"Contingencies" . . . . .	776 40
"Agricultural Aid Act" . . . . .	180 34
Expended to March 31, 1916 . . . . .	\$ 1,318 64
Balance, unexpended, March 31, 1916 . . . . .	1,218 68
	\$ 2,537 32
Office assistance, Woodstock and Sussex . . . . .	\$ 611 76
Railway fare, agricultural students . . . . .	444 31
Postage, stationery and incidentals . . . . .	262 38
	\$ 1,318 64

Office assistance, postage, stationery, etc.: Stenographic assistance and other disbursements of Director of Elementary Agricultural Education, Dairy and Poultry Superintendent, who have offices either at the Woodstock or Sussex school.

Railway fares of students attending Provincial short courses and also the regular course at any agricultural college in the Dominion.

## NEW BRUNSWICK.

## COMPARATIVE STATEMENT OF EXPENDITURE OF PROVINCIAL FUNDS FOR AGRICULTURAL PURPOSES FOR THE YEARS 1913, 1914 AND 1915, AND APPROPRIATIONS FOR 1916.

Service.	1913	1914	1915	1916
	to October 31.	to October 31	to October 31	to October 31 Appropriations.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Salaries and Expenses Department.....	6,499 68	7,019 06	7,945 44	10,358 00
Agricultural Societies.....	16,867 66	17,444 83	17,000 00	17,000 00
Dairying.....	4,092 28	3,039 53	6,477 85	6,300 00
Live Stock Industries.....	950 45	3,611 78		
Dairy School.....	537 03	4,067 99	738 05	1,000 00
Farmers' Institute.....	1,048 96			
Horticulture.....	4,155 67	1,999 37	1,997 26	1,500 00
Cold Storage.....	750 00			
Assistance to Scholars.....				
Poultry Raising.....	1,984 94	980 08	1,245 57	1,500 00
Crop Competitions, Seed Fairs.....	1,869 44	2,082 77	3,398 16	3,000 00
Exhibitions.....			9,824 87	10,000 00
Miscellaneous.....	309 59	355 00	1,944 11	2,500 00
Brown Tail Moth, etc.....	999 51	4,481 93	3,754 45	3,650 00
Bonus Mud Dredges.....		1,000 00	519 90	500 00
Bonus Clover Hullers.....			600 00	
Advertising Natural Products.....				
Limestone crusher and power.....			1,895 00	500 00
Farm Settlement Board.....			862 48	1,500 00
Bonus to Wheat Mills.....				2,500 00
Total.....	40,005 21	46,082 34	58,203 14	61,808 00



PRINCE EDWARD ISLAND.

AGREEMENT, 1915-16.

1. Capital Account—Equipment of offices of instructors, domestic science kitchens and laboratories. . . . .	\$ 4,000 00
2. Director of Agricultural Instruction and Instructors. . . . .	6,475 00
3. Instruction and demonstration (including Short Courses in Live Stock, Poultry, Bee-keeping, Horticulture and Fruit Growing. . . . .	2,400 00
4. Women's work. . . . .	2,890 00
5. Instruction in Public and High Schools. . . . .	11,791 14
6. Office assistance. . . . .	1,500 00
7. Miscellaneous and contingencies. . . . .	\$ 2 14
Total. . . . .	<u>\$ 29,135 28</u>

Previous to the passing of the Agricultural Instruction Act, very little work of an educational character in relation to agriculture had been attempted in Prince Edward Island, apart from that undertaken by the Dominion Department of Agriculture. The work of this nature now being carried on is financed entirely from the funds provided by the Act.

In the spring of 1915, W. R. Reek, B.S.A., formerly Associate Professor of Animal Husbandry at the Ontario Agricultural College, was appointed Director of Agricultural Instruction for the province, and given general supervision of the work. The conclusion was then reached to discontinue the four months' course in agriculture at Charlottetown. Hitherto, Professor W. J. Reid, B.S.A., and Professor J. Leslie Tennant had devoted one-third of their time to instruction work in connection with this course, and the balance to the duties of district representatives, which included the holding of short courses, demonstrations, etc. Messrs. Reid and Tennant will now be enabled to devote their whole time to district representative work. They represent Prince county and King's county respectively, and their office and headquarters will be at Summerside and at the Agricultural Hall, Charlottetown.

*Capital Expenditure, \$4,000.*

The agricultural halls at Charlottetown and Summerside had been purchased and partly reconstructed in previous years with Dominion funds. They provide the accommodation necessary for courses in agriculture and domestic science and for farmers' meetings and conventions. In 1915 it was found necessary to provide office accommodation in the Charlottetown building for the district representatives, and also for the Women's Institute Branch, including an adequate kitchen for short course work. In the Summerside building enlarged office accommodation was arranged for, and facilities were provided for seed judging work. This and repair work made necessary the expenditure of upwards of three thousand dollars in labour and materials, while for office equipment, including furniture, typewriters, etc. the sum of \$742 was spent. Altogether the total cost of these buildings to date has been \$15,534. Before these improvements were fully completed, however, both halls were handed over to the military authorities and are occupied by them at the present time.

*Instruction and Demonstration (Salaries and General Disbursements \$12,221).*

SHORT COURSES: Short courses were held in January, February and March at such points as were considered suitable. All those engaged in agricultural work upon the Island took part, including Dominion and Provincial officers, school inspectors and others. The number of sessions held was 91, the average attendance 85, and the total attendance 7,735. Live stock, field husbandry, dairying, drainage and plant diseases

were the principal subjects dealt with. Part of the expense of the courses was met locally. One of these courses was held at Macdonald Consolidated School at Hillsboro, which had been closed for a number of years. It is interesting to note that this course proved to be the means of re-opening it for community work. The total attendance at this point was 1,064. During the course, a country club was formed, fifty-two new members were added to the Farmers' Institute, and the nucleus of a Women's Institute was organized, while closer co-operation between cheese and butter factories was promoted.

**DRAINAGE:** In certain districts of the Island the need of drainage is very insistent. Approximately 200,000 acres require drainage in order to be worked successfully in an ordinary season. These lands are naturally very fertile and will repay the installation of systems of tile drainage. At the present time very few surface ditches are in existence, and practically no tile drainage is being done, principally because of the fact that tile had to be imported, and the price was consequently too high. During the year much attention was given by the Director and his assistants to this question. Investigation showed that the manufacture of cement tile was not feasible owing to difficulty in securing sand of the proper quality. Finally clay and sand suitable for the manufacture of tile were located near Richmond. This resulted in the formation of a company for the manufacture of tile, brick and other products.

To prove the value of underdrainage a demonstration was undertaken near Wellington, and four acres surveyed, ditched and tiled. As a result of the movement, a Drainage Act was passed by the Legislature, the first of its kind on the Island, in which provision is made for loans to assist in underdrainage.

**DAIRY WORK:** In January 1916, a conference was held to discuss dairy conditions. The maker and a representative from every factory were invited to attend, and their expenses were paid.

Resolutions were passed and forwarded to the Dairymen's Association of the province recommending (1) the appointment of a provincial inspector and instructor to work among factories, whose salary and expenses should be provided by the grant; (2) the enactment of legislation relating to inspection work and factory operation, and (3) that the Maritime Provinces co-operate in establishing a course for cheese and butter-makers at Truro, N.S. These resolutions received the endorsement of the Association.

**CO-OPERATIVE MARKETING:** With the assistance of the Dominion Department of Agriculture, the first co-operative wool sale was organized in 1915 and successfully carried out, with Summerside as the centre of operations. About 5,500 pounds of wool were gathered, graded by an expert and sold. Owing to the season being late before the work commenced it was found impossible to cover all the districts where sheep were kept. This work was carried on by the District Representatives who called upon or corresponded with farmers engaged in sheep raising, assisted in keeping records, grading, packing, shipping, etc. The co-operative selling of lambs was also encouraged.

Subsequently organizations were formed, chiefly in the western part of the Island, to take charge of gathering and shipping of wool to the grading station, to promote the purchase and joint ownership of pure-bred rams and better methods of management. This work has already proved of considerable benefit to the sheep industry.

*School Agriculture, \$13,668.*

During the summer of 1915, the services of Professor S. B. McCready of Guelph, were secured to organize a Rural Science Department at Prince of Wales College for training of teachers in Elementary Agriculture. Professor McCready states in his report that, owing to the liberal allowance made from the funds available through the Agricultural Instruction Act, it has been possible to provide first-class equipment, including special laboratory furniture and fittings. Science books valued at

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about \$200 were purchased, and the leading agricultural publications subscribed for. The expenditure, which amounts to \$1,600, also includes apparatus and material for teaching, such as lantern and screen, slides, charts, balances and scales, soil and weather apparatus, incubator and poultry and bee-keeping accessories. Besides the indoor arrangements plans were made for model school gardens, embodying such features as might be used at rural and town schools.

The issue of a school circular or bulletin was begun in February and will be continued from time to time. This will set forth the general plans for introducing Rural Science, and will assist in enlightening, not only the active teaching body, but also the general body of school supporters as to the methods and possibilities of the work. Besides the circulars a commencement has been made in holding meetings in the country and giving illustrated talks on the subject of school improvement.

The practice of holding a summer school for teachers at Charlottetown was continued in July, and lasted two weeks. Three hundred and sixty attended. A normal course for inspectors was also presented. The railway fares and other expenses are met from the grant.

The teaching staff for this course consists of members of the faculty of Prince of Wales College, of the staff of the Department of Agriculture, and several specialists from other provinces and the United States, and the subjects taught comprise Nature Study, Botany and School Gardening.

As in previous years bonuses were offered to teachers who took up school and home gardening. One hundred and sixty-seven school gardens and 2,506 home projects were conducted, and bonuses amounting to \$2,737 were distributed among 289 teachers. It is anticipated that the work of the Rural Science Department at the college will gradually place school agriculture on a substantial basis.

Favourable results have been received from every quarter where rural science teaching has been introduced. Home project work was carried on to a much greater degree than was anticipated, and interest is reported to be increasing, not only among the children but also among the parents. It is anticipated that the work of the Rural Science Department will result in teachers securing the equipment necessary to teach intelligently and systematically and the hope is expressed that the movement will strengthen the bond between home and school, result in better schools, and tend to make country life more pleasant and farming more profitable.

*Women's Work (\$3,993).*

This work is presided over by Miss Hazel L. Stearns, as supervisor, and two assistants, and has been of rapid growth. At the present time there are from 35 to 40 active institutes with a total membership of about 700. The activities of this organization reach the school, church, and the various patriotic movements, as well as the home. The institutes have continued to be very active in the Patriotic and Red Cross movements and have contributed liberally both in money and goods.

The movement for improvement in the school house and its surroundings has resulted in the schools being renovated in many districts. On the installation of water tanks, sanitary drinking cups, new seats and desks, school libraries and general repairs the sum of about \$700 was expended, this having been raised specially for the purpose. The institutes have also been instrumental in securing the lighting of public halls, the starting of a public library, while encouragement has been given by the supervisors to the making of exhibits at fall fairs and seed fairs.

As in the two previous years, courses in household science were held during January, February and March, at Prince of Wales College. Each of these was of two weeks' duration, and they were open to women and girls of the rural sections. The attendance was 155. The courses were in charge of the supervisor, and the lectures were given by the institute staff and members of the Departmental staff. Those attending received railway fare and a grant of \$4 each.

## APPOINTMENTS PROVIDED BY THE DOMINION GRANT.

Director of Agricultural Instruction, W. R. Reek, B.S.A.  
 District Representative, Prince County, W. J. Reid, B.S.A.  
     "                    Queens County, W. R. Shaw, B.S.A.  
     "                    Kings County, M. H. Coughlan, B.S.A.  
 Soil and Seed Specialist, Leslie Tennant, B.S.A.  
 Director of Rural Science Department, Prince of Wales College, J. E. McLarty,  
     B.S.A.  
 Supervision of Women's Institutes, Miss Hazel Stearns.  
 Assistant Supervisor of Women's Institutes, Miss Alberta McFarlane.  
     "                    "                    "                    "                    Miss A. Gordon.  
 Director of Agricultural Instruction in Public Schools, Wm. Cain.  
     "                    "                    "                    "                    "                    Walter Curtis.  
     "                    "                    "                    "                    "                    D. S. Fraser.  
     "                    "                    "                    "                    "                    L. A. Adams.  
 Accountant, Miss A. W. Newbery.  
 Stenographer, Miss F. Murdock.  
     "                    Miss Bessie Aylward.

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PRINCE EDWARD ISLAND.

GRANT OF 1915-1916—SUMMARY STATEMENT APRIL 1, 1915, TO MARCH 31, 1916.

No.	Classification.	Grant 1915-16.	Grant as amended.	Balance Forward Apr. 1, '15.	Total.	Expended Apr. 1, '15 to Mar. 31, '16	Balance on hand Mar. 31, '16
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Capital Account— Instructors' Offices Domestic Science equipment.....	4,000 00	4,000 00		4,000 00	4,000 00	
2	Instructors, Directors, Superintendents and District Representatives.....	6,475 00	6,475 00	2,334 32	8,809 32	8,809 32	
3	Instruction and Demonstration— (1) Live Stock..... 2,500 (2) Poultry..... 300 (3) Beekeeping..... 100 (4) Horticulture..... 500	3,400 00	2,400 00	1,270 06	3,670 06	3,411 99	258 07
4	Women's Work.....	3,190 00	2,890 00	1,122 26	4,012 26	3,922 79	89 47
5	Agricultural Instruction in High and Public Schools.....	10,950 00	11,791 14	1,877 22	13,668 36	13,665 35	3 01
6	Office Assistance.....	1,500 00	1,500 00	69 30	1,569 30	1,551 67	17 63
7	Miscellaneous and Contingencies..	523 28	82 14		82 14	82 14	
	Total.....	29,138 28	29,138 28	6,673 16	35,811 44	35,443 26	368 18

1. CAPITAL ACCOUNT.

Grant, 1915-16.....	\$ 4,000 00
Expended to March 31, 1916.....	\$ 4,000 00
Instructors' Office Equipment—	
2 typewriters.....	\$ 250 00
Books.....	111 15
Furniture.....	308 33
Office supplies.....	17 79
Labour and materials.....	8,297 66
Total.....	\$ 4,000 00

2. INSTRUCTORS, DIRECTORS, SUPERINTENDENTS AND DISTRICT REPRESENTATIVES.

Grant, 1915-16.....	\$ 6,475 00
Balance April 1, 1915, District Representatives.....	2,334 32
Expended to March 31, 1916.....	\$ 8,809 32
Total.....	\$ 8,809 32
Salaries and Expenses—	
W. R. Beck, Director Agricultural Instruction.....	\$ 2,984 86
W. J. Bell, District Representative, Prince George.....	2,043 28
J. L. Tennant, District Representative, Kings Co.....	1,856 29
W. H. Coughlin, Assistant Representative.....	475 50
Walter Shaw.....	898 97
Richard Creel.....	417 52
P. Ross, expenses.....	326 60
General expense.....	827 68
Total.....	\$ 8,809 32

## 3. INSTRUCTION AND DEMONSTRATION.

Grant, 1915-16.. . . . .	\$ 2,400 00	
Balances April 1, 1915—		
" Short Courses " .. . . . .	527 23	
" Judging Classes " .. . . . .	503 17	
" Demonstration " .. . . . .	239 66	
Expended to March 31, 1916.. . . . .		\$ 3,411 99
Balance on hand March 31, 1916.. . . . .		258 07
		<hr/>
Total.. . . . .	\$ 3,670 06	\$ 3,670 06
		<hr/>
Supplies, labour, materials, incidentals, including Long and Short Course charges.. . . . .		\$ 2,123 68
Typewriter.. . . . .		130 00
Services and Expenses—		
David Shurman, Horticultural work.. . . . .	\$ 275 00	
W. Davison, Instructor in Field Husbandry.. . . . .	457 77	
Jas. Landrigan, Instructor in English.. . . . .	150 00	
J. H. Blanchard, School Inspector.. . . . .	100 00	
Sundry persons.. . . . .	159 96	
		<hr/>
		1,142 73
Fares Dairy Convention.. . . . .		68 85
		<hr/>
		\$ 3,465 26
Less refunds.. . . . .		53 27
		<hr/>
Total.. . . . .		\$ 3,411 99

## 4. WOMEN'S WORK.

Grant, 1915-16.. . . . .	\$ 2,890 00	
Balance April 1, 1915—		
" Women's Institutes " .. . . . .	1,122 26	
Expended to March 31, 1916.. . . . .		\$ 3,922 79
Balance on hand March 31, 1916.. . . . .		89 47
		<hr/>
Total.. . . . .	\$ 4,012 26	\$ 4,012 26
		<hr/>
Salaries and Expenses—		
Mrs. Dunbrack, Supervisor.. . . . .	\$ 430 05	
Miss Hazel L. Stearns, Supervisor .. . . . .	759 41	
" A. McFarlane, Assistant.. . . . .	701 39	
" Helena McDonald, Assistant.. . . . .	138 70	
" Adele Gordon, Assistant.. . . . .	150 00	
Sundry persons travelling.. . . . .	246 80	
		<hr/>
		\$ 2,426 35
Supplies, printing, incidentals.. . . . .		602 09
Scholarships and railway tickets, Short Course.. . . . .		719 35
Women's Institute grants.. . . . .		175 00
		<hr/>
Total.. . . . .		\$ 3,922 79

Mrs. Dunbrack resigned in September, 1915, and Miss Helena MacDonald at the end of June, and the vacancies were filled by Miss Stearns and Miss McFarlane.

## 5. AGRICULTURAL INSTRUCTION IN PUBLIC AND HIGH SCHOOLS.

Grant, 1915-16.. . . . .	\$ 11,791 14	
Balances April 1, 1915—		
(1) Prince of Wales College.. . . . .	1,012 31	
(2) Nature Study.. . . . .	863 91	
Expended to March 31, 1916.. . . . .		\$ 13,665 35
Balance on hand March 31, 1916.. . . . .		3 01
		<hr/>
Total.. . . . .	\$ 13,668 36	\$ 13,668 36

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5. AGRICULTURAL INSTRUCTION IN PUBLIC AND HIGH SCHOOLS—*Concluded.*

Salaries and Expenses—	
Leslie Adams, School Inspector . . . . .	\$ 1,005 00
D. S. Fraser, " . . . . .	1,018 20
W. E. Curtis, " . . . . .	1,005 35
Wm. Cain, " . . . . .	999 90
S. B. McCreedy, Head Rural Science Department, Prince of Wales College . . . . .	1,512 82
J. H. Blanchard, services . . . . .	100 00
H. Dobie, " . . . . .	216 69
G. McCarthy, " . . . . .	174 66
Chas. Buxton, (enlisted) travelling expenses . . . . .	105 90
Services and expenses of Inspectors taking over C. Buxton's work . . . . .	453 15
Railway tickets . . . . .	170 84
	<hr/>
	\$ 6,762 51
Supplies, labour, books, incidentals . . . . .	637 53
Weather instruments . . . . .	28 00
Furniture . . . . .	554 05
Summer School for Teachers—	
Services of instructors, bonuses for attendance, railway fares,* and incidentals . . . . .	3,323 38
Bonuses, Teachers, October to December . . . . .	2,361 00
	<hr/>
	\$ 13,666 47
Less refund . . . . .	1 12
	<hr/>
Total . . . . .	\$ 13,665 35

\* Six dollars off railway fare allowed each teacher taking the course.

6. OFFICE ASSISTANCE.

Grant, 1915-16 . . . . .	\$ 1,500 00
Balance April 1, 1915 . . . . .	69 30
Expended to March 31, 1916 . . . . .	\$ 1,651 67
Balance on hand March 31, 1916 . . . . .	17 63
	<hr/>
Total . . . . .	\$ 1,569 30

Salaries—	
A. W. Newbery . . . . .	\$ 486 67
N. J. McLeod . . . . .	500 00
E. Pléneau . . . . .	280 00
Miss B. Alward . . . . .	150 00
Miss Edith Prouse . . . . .	60 00
J. Ross . . . . .	75 00
	<hr/>
Total . . . . .	\$ 1,551 67

7. MISCELLANEOUS AND CONTINGENCIES.

Grant, 1915-16 . . . . .	\$ 82 14
Expended to March 31, 1916 . . . . .	\$ 82 14

PRINCE EDWARD ISLAND.

COMPARATIVE Statement of Expenditure of Provincial Funds for Agriculture.

	1913 to Dec. 31	1914 to Dec. 31	1915 to Dec. 31	1916 Appropri- ations.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Farmers' Institutes . . . . .	1,834 50	1,968 75	1,623 00	1,700 00
Field Competitions and Seed Fairs (net) . . . . .	987 80	1,148 15	989 27	
Field Crops, Horticulture, Dairying and Poultry . . . . .				3,000 00
Exhibitions, grants . . . . .	9,587 00	8,513 31	10,568 80	
Associations, grants . . . . .	1,361 80	1,247 00		
Exhibitions and Live Stock Judging . . . . .				9,200 00
Miscellaneous, Dept. expenses . . . . .	3,450 38	4,806 73	16,756 78	5,800 00
Totals . . . . .	14,221 68	17,735 47	28,386 82	19,900 00











