

SIXTEENTH REPORT
OF THE
DAIRYMEN'S ASSOCIATION
OF THE
PROVINCE OF QUEBEC

SUPPLEMENT TO THE REPORT OF THE HON. COMMISSIONER
OF AGRICULTURE AND COLONISATION

1897

PRINTED BY ORDER OF THE LEGISLATURE



QUEBEC
PRINTED BY CHARLES PAGEAU,
PRINTER TO HER MOST EXCELLENT MAJESTY THE QUEEN.

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OFFICERS OF THE ASSOCIATION, 1897-98.

M. MACDONALD. M.P.P.
4th President, 1897-98.

M. H. BOURASSA, M.P.,
9th Vice-President, 1838.

M. J. C. CHAPAIS,
8th Vice-President, 1897.

M. E. CASTEL,
2nd Secretary, 1892-98.

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To the H

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SIXTEENTH ANNUAL REPORT
OF THE
DAIRYMEN'S ASSOCIATION
OF THE
PROVINCE OF QUEBEC.

*To the Hon. Commissioner of Agriculture and Colonisation,
Quebec.*

SIR,
The Board of Directors of the Dairymen's Association of the Province of Quebec has the honour to offer you the following report of its operations during the year 1897, and of the Annual Meeting held at Nicolet, 1st and 2nd December last.

THE SECRETARY-TREASURER OF THE DAIRYMEN'S
ASSOCIATION OF THE PROVINCE OF QUEBEC,
EMILE CASTEL.

St. Hyacinthe, April 15th, 1898.

OFFICERS AND DIRECTORS OF THE DAIRYMEN'S ASSOCIATION

FOR 1898.

Honorary President: L'ABBÉ T. MONTMINY, St. Georges de Beauce.
 President: M. MILTON MACDONALD, M. P. P., Actonvale, Que.
 Vice-President: M. HENRI BOURASSA, M. P., Papineauville, Que
 Secretary-Treasurer: M. EMILE CASTEL, St. Hyacinthe.

DIRECTORS.

DISTRICT	NAMES	RESIDENCE
Arthabaska.....	MESSRS. D. O. BOURBEAU.....	Victoriaville.
Beauce.....	J. DE L. TACHÉ.....	St. Hyacinthe.
Beauharnois.....	ROBERT NESS.....	Howick.
Bedford.....	C. H. PARMELEE, M. P..	Waterloo.
Charlevoix et Saguenay..	J. D. GUAY.....	Chicoutimi
Chicoutimi.....	JOS. GIRARD, M.P.P. . . .	St-Gédéon, Lac St-Jean
Gaspé.....	ALEXIS CHICOINE.....	St-Marc, Verchères.
Iberville.....	ED. MCGOWAN.....	Ste. Martine, Chat.
Joliette.....	SAM. CHAGNON.....	St-Paul l'Ermite.
Kamouraska.....	J. C. CHAPAIS.....	St-Denis de la Bouteillerie.
Montmagny.....	ED. A. BARNARD.....	L'Ange Gardien, Mtey.
Montreal.....	J. A. VAILLANCOURT..	Montreal.
Ottawa.....	J. H. SCOTT.....	Montreal.
Quebec.....	N. GARNEAU, M.P.P....	Ste-Foye, Que.
Richelieu.....	J. L. LEMIRE.....	La Baie du Febvre.
Rimouski.....	CHS. PRÉFONTAINE . . .	Isle Verte.
St-François.....	L'ABBÉ V. CHAREST . . .	Sherbrooke.
St-Hyacinthe.....	L. T. BRODEUR.....	St-Hugues, Bagot.
Terrebonne.....	L'ABBÉ COUSINEAU....	Ste-Thérèse, Terrebonne.
Three Rivers.....	CHARLES MILOT.....	Sté-Minique, Nicolet.

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LEGISLATION.

AUTHORISING THE FORMATION OF AN ASSOCIATION UNDER THE NAME OF
"DAIRY ASSOCIATION OF THE PROVINCE OF QUEBEC."

(1749 to 1755 Q.R.S. and Schedule.)

1749. The Lieutenant-Governor-in-Council may authorise the formation for the Province of an association, having for its object to promote improvement in the manufacture of butter and cheese, and of all things connected therewith, under the name of the "Dairy Association of the Province of Quebec," 45 V., c. 61, s. 1.

1750. The association shall be composed of at least fifty persons, who shall sign a declaration in the form of the schedule annexed to this section; and every member of the association shall subscribe and pay, annually, a sum of at least one dollar to the funds of the association.

The Commissioner of Agriculture and Colonisation shall be *ex-officio* a member of the association. 45 V., c. 66, ss. and 6; 50 V., c. 7, s. 12.

1751. Such declaration shall be made in duplicate, one to be written and signed on the first page of a book to be kept by the association for the purpose of entering therein the minutes of their proceedings, during the first year of the establishment of such association, and the other shall be immediately transmitted to the Commissioner of Agriculture and Colonisation, who shall, as soon as possible after its reception, cause to be published a notice of the formation of such society in the Quebec Official Gazette. 45 V., c. 66, s. 3; 60 V., c. 7, s. 12.

1752. From and after the publication, in the Quebec Official Gazette of the notice of the formation of the association, it will become and shall be a body politic and corporate, for the purposes of this section, and may possess real estate to a value not exceeding twenty thousand dollars. 45 V., c. 66, s. 4.

1753. The Association shall have power to make by-laws, to prescribe the mode or manner of admission of new members, to regulate the election of its officers, and generally, the management of its affairs and property. 45 V., c. 66, s. 5.

"1753a. The association, with a view of obtaining a more prompt and complete diffusion of the best method to be followed for the production of milk,

the fabrication of dairy produce, and, in general, the advancement of the dairy industry, may subdivide the Province into regional divisions, in which syndicates, composed of butter and cheese factories and like industries, may be established.

The formation and working of such syndicates are governed by the regulations made by the said Association and approved by the Lieutenant-Governor-in-Council; and such syndicates shall be under the direction and supervision of the Association.

To such syndicates the Lieutenant-Governor-in-Council may grant, out of the Consolidated Revenue Fund, a subsidy equal to one-half of the expenses incurred for the service of inspection and instruction organized therein, including the salary of inspectors, their travelling and other expenses directly connected therewith, but not to exceed the sum of two hundred and fifty dollars for each syndicate.

"**1753b.** The inspectors, including the Inspector-General, are appointed by the Lieutenant-Governor-in-Council, and shall be experts who hold certificates of competence from the Board of Examiners mentioned in article 1753d.

The inspectors are to superintend the production and supply of milk, as well as the manufacture of butter and cheese in the establishments so organized into such syndicates, the whole in conformity with the regulations made by the said Association and approved by the Lieutenant-Governor-in-Council.

"**1753c.** The salary of the Inspector-General shall be paid by the Association.

His duties shall be defined by regulations to be passed by the Association and approved by the Lieutenant-Governor-in-Council.

"**1753d.** A board of examiners may be appointed by the Association for the purpose of examining candidates for the office of inspector.

The working of such board shall be governed by the regulations to be passed for that purpose by the Association and approved by the Lieutenant-Governor-in-Council.

"**1753e.** It shall be lawful for the Lieutenant-Governor-in-Council to grant to the said Society an additional sum of one thousand dollars, annually, for the direction and supervision of the syndicates, for the maintenance and working of the boards of examiners above mentioned.

1754. The Association shall hold an annual meeting, at such time and place as shall have been selected by the Board of Directors, besides those which may have been prescribed and determined by the by-laws.

At such annual meeting, the Association shall elect a president, and vice-president, a secretary-treasurer and also one director for each judicial district of the Province, chosen from among the members of the Association, domiciled in such districts. 45 V., c. 66, s. 7.

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52 VICT. 1889 CAP. XXII.

AN ACT TO PROVIDE FOR THE FORMATION OF FARMERS' AND DAIRYMEN'S ASSOCIATIONS.

Assented to 31st March, 1889.

HER MAJESTY, by and with the advice and consent of the Legislature of the Province of Quebec, enacts as follows:

1. The following section is added after section thirteenth of chapter seventh of title fourth of the Revised Statutes of the Province of Quebec:

SECTION XIV.

FARMERS' AND DAIRYMEN'S ASSOCIATIONS.

"1755a. The Lieutenant-Governor-in-Council may authorize the formation in each judicial district of the Province of an association, having for its object the promotion of agriculture, the improvement of the manufacture of butter and cheese, the inspection of butter and cheese factories, and all other things in connection therewith, to be called the "Farmers' and Dairymen's Association of the district of ————."

"1755b. The Association shall be composed of at least twenty-five persons, who shall sign a declaration in the form of the schedule annexed to this section.

Every member of the Association shall subscribe and pay, annually, a sum of at least one dollar to the funds of the Association.

"1755c. The Commissioner of Agriculture and Colonization shall be, *ex-officio* a member of the Association.

"1755d. Such declaration shall be made in duplicate, one to be written and signed on the first page of a book, to be kept by the Association for the purpose of entering therein the minutes of their proceedings, and the other shall be immediately transmitted to the Commissioner of Agricultural and Colonization, who shall, as soon as possible after its reception cause to be published a notice of the formation of such Association in the Quebec Official Gazette.

"1755e. From and after the publication, in the Quebec Official Gazette of the notice of the formation of the Association, such Association will become and shall be a body politic and corporate for the purpose of this section, and may possess real estate to the value not exceeding five thousand dollars.

"1755f. The Association shall have power to make by-laws, to prescribe the mode or manner of admission of new members, to regulate the election and appointment of its officers and employés, and generally the management of its

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affairs and property for the purpose of carrying out the objects of the Association.

"1755g. The first meeting of the Association shall be held at the *chef-lieu* of the district, on the second Wednesday of the month following the one in which the notice of formation of the Association is published in the Quebec Official Gazette.

"1755h. The Association shall hold an annual meeting, at such time and place as shall have been selected by the Board of Directors.

"1755i. At such annual meeting, the members of the Association present shall elect three directors from each county forming the judicial district for which the Association is formed, chosen from the members of the Association domiciled in the said counties, who shall constitute the Board of Directors of the Association.

"1755j. The Board of Directors shall elect, from their members, a president and a vice-president, and shall appoint a secretary-treasurer and such other officers and employés as they may deem necessary for carrying out the objects of the Association.

"1755k. The Directors shall prepare and present at the annual meeting of the Association a detailed report of their operations during the past year.

Such report shall indicate the names of all the members of the Association, the amount subscribed and paid into the hands of the Secretary-treasurer, the names and number of the factories in their district, and give such other information deemed useful and in the interest of agriculture and the dairy industry

A triplicate of such report shall be transmitted to the Commissioner of Agriculture of the Province, and another to the Dairy Association of the Province of Quebec.

2. This Act shall come into force on the day of its sanction.

SCHEDULE.

MENTIONED IN ARTICLE 1755b.

We, the undersigned, agree to form ourselves into an Association under the provisions of section fourteenth of chapter seventh of title fourth of the Revised Statutes of the Province of Quebec, respecting Farmers' and Dairymen's Associations, and we hereby severally agree to pay to the Secretary-Treasurer, annually, while we continue members of the Association, the sums opposite our respective names, and we further agree to conform to the rules and by-laws of the said Association.

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R. S. Q., TITLE XI, CAP. IV., SECT. III.

SOCIETIES FOR THE MANUFACTURE OF BUTTER OR CHEESE OR OF BOTH.

§ 1—*Formation of such Societies.*

5477. When in any part of the province five or more persons shall have signed a declaration, that they have formed an association for the manufacture of butter or cheese (or of both, as the case may be) in a certain place which shall be designated as their principal place of business, and have deposited such declaration in the hands of the prothonotary of the Superior Court in the district where the Society intend to do business, such persons and all such other persons as may thereafter become members of such society, their heirs, executors, curators, administrators, successors and assigns, respectively, shall constitute a body politic and corporate, under the name of "butter and cheese manufacturing society (or both, as the case may be) of (name of the place and number of the manufactory as mentioned in the declaration)"

The prothonotary shall deliver to such company a certificate stating that such declaration has been made, which certificate shall be registered in the Registry office of the place in which such society has its principal place of business, and be also, without delay, forwarded to the Commissioner of Agriculture and Colonization. 45 V., c. 65, s. 1; 50 V., c. 7, s. 12.

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5478. The declaration, to be made under the provision of this section, shall, in order to constitute into a corporation any butter and cheese manufacturing society, be in the form annexed to this section.

§ 2—*General Powers and Duties.*

5479. Every such society so formed, for the purpose for which it has been established, shall enjoy all the powers vested in ordinary corporations, especially that of choosing officers from among its members, of passing by-laws not contrary to the laws of this Province, to determine the number of its members, for its internal management, and for conducting its proceedings and the administration of its affairs in general. 45 V., c. 65, s. 2.

5480. The first meeting of the shareholders of the society shall take place within the eight days following the deposit of the declaration mentioned in article 5477, after a special notice to that effect has been given to the shareholders, by at least two shareholders of the said society, which notice shall be given at least two days before the meeting, for the purpose of electing officers and approving the by-laws of the society.

The annual general meetings afterwards, and all special meetings of the society, shall be regulated by by-laws. 45 V., c. 65, s. 3.

5481. A book shall be kept by each society for entering the subscriptions of shares, and another for entering in detail all the transactions of the society. 45 V., c. 65, s. 4.

5482. Each of such books and the by-laws shall be constantly open to the inspection of the members of the society. 45 V., c. 64, s. 5.

5483. During the course of the month of December, in each year, a statement of its operations for the year shall be forwarded to the Commissioner of Agriculture and Colonisation by each society formed under the section. 45 V., c. 65, s. 12.

SCHEDULE

IN ACCORDANCE WITH ARTICLE 5478.

We, the undersigned, agree to form ourselves into an association in virtue of paragraph one of the third section of the fourth chapter of the eleventh title of the Revised Statutes of the Province of Quebec, to be entitled "The Association for the Manufacture of butter (*or*) cheese, (*or*) of butter and cheese, of the parish of _____, county of _____, and we pledge ourselves to conform to all the rules and by-laws of the said association."

(Signatures) 45 Vic., c. 65, Schedule.

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49 VICT., CAP. XLII, 1886, OTTAWA.

AN ACT TO PROHIBIT THE MANUFACTURE AND SALE OF CERTAIN SUBSTITUTES FOR BUTTER.

(Assented to 2nd June, 1886.)

Whereas the use of certain substitutes for butter, heretofore manufactured and exposed for sale in Canada, is injurious to health; and it is expedient to prohibit the manufacture and sale thereof: Therefore, Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:

1. No oleomargarine, butterine or other substitute for butter, manufactured from animal substance other than milk, shall be manufactured in Canada, or sold therein, and every person who contravenes the provision of this Act in any manner whatsoever, shall incur a penalty not exceeding four hundred dollars, and not less than two hundred dollars, and, in default of payment, shall be liable to imprisonment for a term not exceeding twelve months and not less than three months.

52 VICT., CAP. XLIII, 1889, OTTAWA.

AN ACT TO PROVIDE AGAINST FRAUDS IN THE SUPPLYING OF MILK TO CHEESE, BUTTER AND CONDENSED MILK MANUFACTORIES. (1)

Assented to 2nd May, 1889.

Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:

1. No person shall sell, supply, or send to any cheese, or butter, or condensed milk manufactory, or to the owner or manager thereof, or to any maker of butter, cheese or condensed milk, to be manufactured, milk diluted with water, or in any way adulterated, or milk from which any cream has been taken, or milk commonly known as skimmed milk.

2. No person who supplies, sends, sells or brings to any cheese, or butter, or condensed milk manufactory, or to the owner or manager thereof, or to the maker of cheese, or butter, or condensed milk, any milk, to be manufactured into butter, or cheese, or condensed milk, shall keep back any portion of that part of the milk known as strippings.

(1) The Ontario courts have declared to be "ultra vires," an Act of the Legislature on the same subject like that which exists in our Provincial Statutes. The Federal Act was passed subsequently to this judicial decision, and all prosecutions regarding frauds in the furnishing of milk should, as a measure of prudence, be instituted in virtue of this Act.

3. No butter, or condensed milk that is t

4. No milk factory, butter, or cheese he knows to l

5. Every edge, violates for each offence peace, forfeit dollars, together penalty and cost for a term not enforcing the :

6. The person to a cheese, or aforesaid, shall of this Act.

7. For the violation of the violation of be sufficient person such milk so manufactured in quality to pass cream gauge, or person. Provision sufficient legal

8. In any sections of this be described as tion, and, there mentioned in evidence. And in matter complain the meaning of complained of with thereof was effect

9. No appeal Superior, County Court of the Sessions had; and such a nization entered in and shall be heard

3. No person shall knowingly sell, supply, bring or send to a cheese, or butter, or condensed milk manufactory, or to the owner or manager thereof, any milk that is tainted or partly sour.

4. No person shall sell, send or bring to a cheese, or butter, or condensed milk factory, or to the owner or manager thereof, or to the maker of such butter, or cheese, or condensed milk, any milk taken or drawn from a cow that he knows to be diseased at the time the milk is so taken or drawn from her.

5. Every person who, by himself, or by any other person to his knowledge, violates any of the provisions of the preceding sections of this Act, shall, for each offence, upon conviction thereof before any justice or justices of the peace, forfeit and pay a fine not exceeding fifty dollars and not less than five dollars, together with costs of prosecution, and in default of payment of such penalty and costs, shall be liable to imprisonment, with or without hard labor, for a term not exceeding six months, unless the said penalty and costs of enforcing the same, be sooner paid.

6. The person on whose behalf any milk is sold, sent, supplied or brought to a cheese, or butter, or condensed milk manufactory for any of the purposes aforesaid, shall *primâ facie* be liable for the violation of any of the provisions of this Act.

7. For the purpose of establishing the guilt of any person charged with the violation of any of the provisions of section one, or two, of this Act, it shall be sufficient *primâ facie* evidence on which to found a conviction, to show that such milk so sent, sold, supplied or brought to a manufactory as aforesaid to be manufactured into butter, or cheese, or condensed milk, is substantially inferior in quality to pure milk, provided the test is made by means of a lactometer or cream gauge, or some other proper and adequate test, and is made by a competent person. Provided always that a conviction may be made or had on any other sufficient legal evidence.

8. In any complaint or information made or laid under the first or second sections of this Act, and in any conviction thereon, the milk complained of may be described as deteriorated milk, without specification of the cause of deterioration, and, thereupon, proof of any of the causes or modes of deterioration mentioned in either of the said two sections, shall be sufficient to sustain conviction. And in any complaint, information, or conviction under this Act, the matter complained of may be declared, and shall be held to have arisen, within the meaning of "The Summary Convictions Act," at the place where the milk complained of was to be manufactured, notwithstanding that the deterioration thereof was effected elsewhere.

9. No appeal shall lie from any conviction under this Act to a Judge of a Superior, County, Circuit or District Court, or to the Chairman or Judge of the Court of the Sessions of the Peace, having jurisdiction where the conviction was had; and such appeal shall be brought, notice of appeal in writing given, recognition entered into or deposit made, within ten days after the date of conviction, and shall be heard, tried, adjudicated upon and decided without the intervention

of a jury, at such time and place as the Court or Judge hearing the same appoints, within thirty days from the date of conviction, unless the said Court or Judge extends the time for hearing and decision beyond thirty days; and in all other respects not provided for in this Act, the procedure under "The Summary Conviction Act," so far as applicable, shall apply.

10. Any person accused of an offence under this Act, and the husband or wife of such person, shall be competent and compellable to testify.

11. Any pecuniary penalty imposed under this Act shall, when recovered, be payable one-half to the informant or complainant, and the other half to the owner, treasurer or president of the manufactory to which the milk was sent, sold or supplied for any of the purposes aforesaid, in violation of any of the provisions of this Act, to be distributed among the patrons thereof in proportion to their respective interest in the product thereof.

CONSTITUTION OF THE DAIRYMEN'S ASSOCIATION.

INCORPORATED BY THE STATUTE 45 VICT., CHAP. 66, P.Q.

1. The Association takes as its designation: "The Dairymen's Association of the Province of Quebec."

2. The object of the Association is to encourage the improvement of the manufacture of butter and cheese and of all things connected with the above manufacture.

3. To become a member of the Association, a subscription of at least one dollar (\$1.00) a year is all that is requisite.

4. The affairs of the Association shall be under the direction of a president, a vice-president, a secretary-treasurer, and certain directors named in accordance with the Act of incorporation, all of whom shall form the Board of Directors of the Association, and shall make a report of the operations of the Association at the annual general meeting of the Association.

5. The election of the officers and directors shall take place at the annual general meeting, the date of which shall be fixed by the Board; to insure the right of voting at the above election, the previous payment of subscriptions will be requisite.

6. When more than one candidate is proposed for the office, the voting shall be by *sitting* and *standing* (*assis* and *levés*), the secretary shall count the votes, and the president shall declare elected the candidate who shall have the majority of votes.

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7. The officers elected shall remain in office until the following election, and shall be re-eligible.

8. The president shall take the chair at the general meetings, and at the meetings of the Board of Directors.

9. The president shall be, *ex-officio*, a member of all the committees of the Board of Directors.

10. To the secretary-treasurer shall be entrusted all the moneys and other valuables belonging to the association; he shall keep, in a special register, minutes of all meetings of the Association as well as of the Board of Directors, and these minutes shall be signed by the president, or, in his absence, by the vice-president, and by the secretary-treasurer: he shall, besides, keep books in which shall be entered, regularly and without delay, all the monetary operations of the Associations. At the end of the fiscal year of the Association, the secretary-treasurer shall present before the Board a statement of accounts for the directors' approbation.

11. The vacancies which occur among the officers or directors shall be temporarily filled by the Board, and the Board shall also nominate the directors for those judicial districts which may not as yet be represented.

12. The Board, to ensure greater efficiency, shall be at liberty to claim the services of specialists as advisers.

RULES AND REGULATIONS OF THE DAIRYMEN'S ASSOCIATION.

1. The annual or general meetings of the Association, as well as of those of the Board of Directors, shall be called by notice in writing from the secretary to each of the members of the Association and of the Board. Notice of the meetings of the Association shall be given at least a month beforehand.

2. At the request of three directors or officers of the Association, the president may call a meeting of the Board of Directors; the call shall be in the form mentioned above.

3. At the meeting of the Board of Directors, three shall form a quorum, exclusive of the president and vice-president.

4. The Board of Directors may name, from among its members, a committee to audit the accounts, and other committees for any purpose it may think necessary.

5. The order of business at general and official meetings shall be determined by the Board of Directors.

6. No question shall be submitted for discussion except it be in writing and placed before the secretary-treasurer.

7. The secretary-treasurer shall be obliged to furnish security to the amount of \$400.00, which security will be subject to the approval of the Board.

SYNDICATES OF CHEESE AND BUTTER FACTORIES.

BY-LAWS ADOPTED BY THE DAIRYMEN'S ASSOCIATION AND ASSENTED TO BY THE LIEUTENANT-GOVERNOR IN COUNCIL.

COPY of the report of a committee of the Honorable Executive Council, dated January 23rd, 1891, approved by the Lieutenant-Governor, January 24th, 1891. (Translation.)

No. 75.—On the approval of certain regulations of the Dairymen's Association.

The Hon. the Commissioner of Agriculture and Colonisation, in a memorandum, dated the 23rd of January of the current year, 1891, recommends that the regulations of the Dairymen's Association of the Province of Quebec, a copy of which is annexed to the above memorandum, be approved.

Certified true copy.

(Signed),

GUSTAVE GRENIER,

Clerk of the Executive Council.

REGULATIONS OF THE DAIRYMEN'S ASSOCIATION.

Whereas, by a law passed at the last session of the Legislature of the Province of Quebec, the Dairymen's Association of the Province of Quebec was authorized to create regional divisions in which the proprietors of creameries, cheese factories, and other dairy establishments may form themselves into syndicates, for the purpose of securing a more prompt and complete diffusion of the best methods of conducting the production of milk, the manufacture of dairy products, and the advancement in general of the dairy industry;

And whereas the said Association was, by the same law, entrusted with the duty of:

1. Establishing regulations for the formation and working of the said syndicates;
2. Of directing and superintending the syndicates;
3. Of establishing rules to define the duties of the Inspector-General and of the inspectors who are to superintend the production of milk and the manufacture of butter and cheese in the establishments so organized into syndicates;

4. Of a for the office the said Board

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4. Of appointing a Board of Examiners for the examination of candidates for the office of inspectors, and of laying down regulations for the working of the said Board ;

And, whereas, there is granted to each syndicate a sum equal to half the outlay incurred for the service of inspection and instruction organized in the syndicates, including the salary of the inspector, his travelling expenses, and other expenses relating directly to the said service, but which sum granted must not in any case exceed \$250 (two hundred and fifty dollars) for each syndicate ;

Whereas, there has been granted to the said Association, besides its subsidy and other ordinary concessions, an additional sum of \$1,000 (one thousand dollars) for the expenses necessary for the direction and superintendence of the syndicates, as well as for the maintenance and due working of the Board of Examiners above-mentioned ;

The said Association constitutes, as follows, the programme of the formation and working of the syndicates, of their direction and superintendence, of the manner of conducting the proceedings of the Board of Examiners and of the inspectors.

I.

DIVISION OF THE PROVINCE.

The Province shall be divided as follows, for the purpose of the new organization :

<i>a.</i> Syndicates of cheese factories and creameries :	
No. of Division.	Counties comprised in the Division.
1.....	Gaspé, Bonaventure, Matane, Rimouski, Témiscouata.
2.....	Kamouraska, L'Islet, Montmagny, Bellechasse.
3.....	Dorchester, Lévis, Beauce.
4.....	Lotbinière, Megantic, Arthabaska.
5.....	Nicolet, Yamaska.
6.....	Drummond, Richmond, Wolfe.
7.....	Sherbrooke, Stanstead, Compton.
8.....	St. Hyacinthe, Bagot, Richelieu.
9.....	Rouville, Iberville, St. Johns.
10.....	Shefford, Brome, Missisquoi.
11.....	Verchères, Chambly, Laprairie, Napierville.
12.....	Beauharnois. Châteauguay.
13.....	Huntingdon.
14.....	Saguenay, Lac St. Jean, Chicoutimi, Charlevoix.
15.....	Portneuf, Quebec, Montmorency.
16.....	Three Rivers, Champlain, St. Maurice, Maskinongé.

17. Montcalm, Joliette, Berthier, L'Assomtion.
 18. Hochelaga, Jacques-Cartier, Laval, Terrebonne, Deux-Montagnes.
 19. Argenteuil, Ottawa, Pontiac.
 20. Vaudreil, Soulanges.

b. Syndicates of butter factories.

As any limitation of territory would be a hindrance to the formation of syndicates of butter-factories, on account of the small number of such existing in the Province, liberty may be granted them by the Association to organize themselves in accordance with the following regulations; and the united counties in which such a syndicate shall have been formed shall constitute a territorial division for all the purposes of the present regulations.

II.

DIRECTION AND SUPERINTENDENCE OF THE SYNDICATES.

1. The Association shall direct the working of the syndicates :
 - a. By means of a fortnightly or monthly bulletin published during the season of manufacture, the prospectus-number of which shall be published at once, and distributed among the old and new members of the Association and those of the public who are interested in the dairy industry; this bulletin shall contain, especially, instruction and advice to farmers, producers of milk, patrons of factories, to inspectors and makers of cheese and butter, relating more especially to the time of the year following the issue of each number; it shall also contain general information in connection with the dairy industry.
 - b. By means of the school-factory of the Association, whose work shall be conducted with a view to the new organization.
2. The superintendence of the syndicates shall be exercised by the Association :
 - a. Through the Inspector-general and the inspectors of the syndicates, whose duties and office will be defined hereafter;
 - b. Through its ordinary officers, as regards all private or public communications it may have to make to the representatives of the syndicates of the factories syndicated.
3. The Association does not pretend to exercise any control over the interior management of the financial arrangements of the syndicates; it will suffice, if the latter conform to the present regulations to entitle them to be considered as having accepted the direction and superintendence of the Association.
4. The direction and superintendence of the Association shall be exercised with a view to securing, especially in the syndicated establishments :

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a. A regular attention to the testing of the patrons' milk, in order to obtain from them milk of the best quality, neither skimmed, nor watered, nor adulterated in any way;

b. A scrupulous attention to the general keeping in order of the factories, and to the maintenance of cleanliness therein;

c. Good quality and uniformity in the products manufactured;

d. A uniform system of book-keeping, sufficient to insure the exactness and integrity of the operations of the year, which each factory will have to furnish to the Association.

III

ORGANISATION AND WORKING OF THE SYNDICATES.

1. A syndicate shall be constituted by the associating together of the creameries, cheese-factories, or other dairy establishments, to the number of not fewer than (15) fifteen, or more than (30) thirty; it shall have for its aim the diffusion over the division in which it is formed of the best methods of producing milk and of manufacturing dairy products; it may also aim at adopting and exercising all measures calculated to protect such interests of the patrons and proprietors as are to the general advancement of the dairy industry; the proprietors or representatives of the syndicated factories shall for that purpose engage to support between them, in a proportion left to their discretion, the expense of the hiring of one or more experienced inspectors, who shall superintend the production and supplying of the milk, as well as of its manufacture into cheese and butter in the syndicated factories. The inspector shall be under the direction of the Dairymen's Association, under the conditions hereinafter enumerated, and shall conform to the present regulations.

2. The syndicate shall organise, as much as possible, by the beginning of the manufacturing season.

3. The syndicate shall organise by the signature in duplicate of the proprietors or the representatives of the factories who wish to form themselves into a syndicate to a declaration, on a printed form, which shall be furnished by the Association, and a duplicate of which shall be sent without delay to the Secretary of the Association, who shall acknowledge its receipt.

4. In each territorial division, syndicates composed exclusively of cheese-factories or of creameries, or of creameries and cheese-factories, may be established.

5. If in any division there be not found a sufficient number of factories whose representatives desire to form a syndicate, these factories may agree with those of a neighboring division to form a syndicate, or to become part of an already existing one.

6. Every factory shall have the right to ask for admission into the syndicate of its division.

7. Every syndicate shall have the right to prevent any factory of its division from uniting with a syndicate of a neighboring division, except in the case provided for by the following article.

8. For special reasons, the Association shall be empowered to allow certain factories of a division to unite with the syndicate of a neighboring division, provided that this permission hinder not the formation of a syndicate in the former division.

9. The representative of the factories associated into a syndicate shall name a president, a vice-president, and a secretary-treasurer, who shall be the officers of the syndicate, and whose address shall be given to the Association; all official correspondence shall be carried out by the medium of the Secretary-Treasurer.

10. At the end of each season, the syndicate shall render an exact account, certified by its Secretary-Treasurer, of the salary paid to its inspector, his travelling and other expenses in direct relation to his duties of inspection, such as hire of carriages, railway and steamboat fares, board, stationery, postage, purchase of instruments for the inspector's use, etc., etc.

11. As the government grant is given specially for the service of inspection, this grant in no case shall exceed the half of the genuine amount of the expenses alone just mentioned, provided that half do not exceed two hundred and fifty dollars (\$250.00); and the payment thereof shall only be made at the end of the dairy season, after the report mentioned in the preceding article shall have been made to the Association by the syndicate.

12. A subscription shall be paid by the proprietors, or by the representatives of each factory, to the Dairymen's Association, or to the Dairy Association of the district in which the syndicate is formed, in order that the makers or the directors may be kept *au courant* of the work of the Association; moreover, they shall forward to the Association a complete certified report of the operations of their factory, according to the official form adopted by the Association; which shall not be made public except by consent of those therein interested.

IV

OF THE INSPECTOR-GENERAL AND THE INSPECTORS OF SYNDICATES.

1. The Inspector-General and the inspectors of syndicates are appointed by the Lieutenant-Governor-in-Council; but in neither case will any one be appointed until he shall have previously undergone an examination sufficient to establish his qualifications before the Board of Examiners of the Association. The Inspector-General shall be paid by the Association, and other inspectors by the syndicates.

2. The duties of the inspectors belonging exclusively to the teaching of the best methods of the production of milk and its proper supply to the factories, the manufacture of dairy-products, correct accounts, and the orderly management of the factories, these officers shall carefully avoid meddling with any troubles with which their duties have no concern, whether they arise between neighboring

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§ 1. OF THE INSPECTOR-GENERAL.

1. The Inspector-General is the representative of the Association accredited to the proprietors, the makers, and the representatives of the establishments under syndicates; all the instructions, therefore, he shall give, with the approbation of the Association, are to be observed.

2. Before the opening of the season, or even during the season, if he see fit, or if he receive orders to that effect from the Association, the Inspector-General shall call together the inspectors of syndicates, by groups, at the school-factory of the Association, or at some other factory, and keeping them there a few days, instruct them in their duties and in the best methods of manufacture.

3. After the opening of the season the Inspector-General shall keep himself in communication with the inspectors of syndicates by going at different times to pass two or three days alternately with each of them, to ascertain the efficiency of the factories they have in charge. In these visits, the Inspector-General will not be so much bound to visit the factories in particular, as to follow the steps of the inspectors in their ordinary duties.

4. The Inspector-General shall lend his aid to the working of the school-factory, which he shall visit, taking it in turn with the syndicates.

5. The Inspector-General shall keep, in duplicate, a special note-book, in which he shall insert, day by day, all the observations he makes on the work of each of the inspectors, and on the general management of their factories; these notes shall be regularly communicated to the Association, in time to be printed in each number of the bulletin, in which everything of public interest shall be inserted; the Inspector-General shall also keep a daily account of his travelling and other expenses.

6. With the consent of the Association, the Inspector may visit the model establishment of this province or of Ontario, for the purpose of studying and of publishing any new process of working which may have passed into current practice.

7. At the end of the season the Inspector-General shall prepare a complete report of his work, giving a condensed statement of the observations he has made; the report shall be in two parts; one containing matters interesting to the public, the other, private notes on the work of each of the inspectors.

§ 2. OF THE INSPECTORS OF SYNDICATES.

1. The inspectors of the syndicates are the servants of the syndicates, and as regards questions of interior management, such as wages, payment of expenses, etc., are under the control of the officers of the syndicates.

2. As regards the performance of his duties, the inspector of a syndicate is under the direction of the Association, and he must strictly conform to the instructions received from its officers or from the Inspector-General.

3. The wages, travelling and other expenses of the inspector are to be paid by the syndicate.

4. It is obligatory on each inspector to attend all the meetings called together by the Inspector-General.

5. After the meeting convoked by the Inspector-General before the opening of the season, the syndicate inspector shall convoke his makers in one of the earliest opened factories, and shall repeat to them all the information he has received from the Inspector-General.

6. In order to learn as soon as possible how far his makers understand their business, the inspector shall visit as quickly as possible all the factories he has in charge; this done, he shall devote himself to the assistance of the least skilled makers, passing a day with each of them; later, he shall visit those whom he thinks the most skilful.

7. After having thus made himself acquainted with the situation of affairs, and having helped each maker, in proportion to his needs, with his assistance and advice, the inspector shall arrange his visits so as to make a regular routine from factory to factory.

8. After or about the 1st June, the inspector shall so divide his work that between two visits made to the same factory no greater number of days shall elapse than there are factories in the syndicate.

9. Unless prevented by distance, bad roads, or other hindrances, the inspector shall be present every morning at some one factory, to receive the milk in company with the maker, and shall test samples of each patron's milk; he shall note the result of each test in a special memorandum book, which shall be preserved and handed to the association at the end of the season; the inspector shall always have with him on his journeys good instruments for testing milk, with which the syndicate shall provide him.

10. The test of the milk, its delivery in good condition, its manufacture, the general state of the factories, the accounts, shall receive the constant attention of the inspector, that nothing in any factory be neglected or allowed to remain in arrear.

11. The inspector shall receive from the association a special note book, in which shall appear all the observations made in course of his inspection; from it he shall extract and forward an abstract to the Inspector-General, or to any other officer who shall be indicated to him by the association at the end of each season.

12. The inspector shall daily note down all his travelling expenses, and give in the details once a week to the secretary-treasurer of the syndicate;

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adding the list of factories visited, and indicating the probable route of his next week's journeys, in order that the secretary-treasurer, if he desire it, communicate with him.

13. On pain of instant dismissal, the inspector shall communicate to nobody, unless it be to the Inspector-General or the secretary of the association, his observations on the factories and the work of the persons employed in them; still, he may, at the request of the proprietor, of the maker, or of the president of the directors of any factory, communicate to such persons the tenor of such notes of his as concern that factory.

14. In all cases wherein he shall see need of making observations, either to the patrons in regard to the supplying of the milk, to the maker about his work, or to the proprietor about the fittings of his factory, the inspector shall first of all address the person in fault privately, by letter or otherwise; it is only after having ascertained the existence of serious neglect, or of evident evil intention, that the inspector shall warn the parties to whom the ascertained bad state of things will cause injury. In very serious cases the inspector shall avail himself of the advice of the Inspector-General or of the officers of the association.

15. The inspector should be deeply impressed with the importance of the most guarded discretion, not only in regard to the following cases, but in all the details of his duty; a serious infraction of this rule may be punished by the withdrawal of the certificate of competence granted by the board of examiners.

V

OF THE BOARD OF EXAMINERS.

1. The board of examiners shall be composed of three members and a secretary appointed by the board of directors at the annual convention or about that time.

2. This board shall settle, and publish immediately, a programme of the examinations to be passed by the candidates for the office of inspector to give them a right to a certificate of competence; it shall, at the same time, give the date and the place of examination, and mention the references to be furnished by the candidates, and the other formalities to be gone through before admission.

3. To those who pass a satisfactory examination the board shall give a certificate of competence; this may state the degree of success—pretty well, or very well,—and it shall be either provisional or definitive; the provisional certificate will be good for only one year, and the bearer may be called upon to pass another examination, either in all the subjects of the programme, or in certain specially reserved subjects.

4. The board of examiners shall, without delay, make to the Honorable Commissioner of Agriculture and Colonisation a detailed report of the result of the examination, containing specially the names of the candidates and of those who shall have received the certificate, with the degree of success obtained.

5. Even the definitive certificate of competence may be withdrawn by the board of directors of the association from any inspector who shall be guilty of a serious breach of the rules, or who, for any other grave cause, shall be considered unfitted to discharge his duties properly.

6. If the number of candidates be not sufficient to warrant the holding of the examination in more than one place, the association may, out of the funds allotted for the purposes of the syndicate, pay one-half of the travelling expenses of the more distant candidates from their homes to the place of examination.

56 VICTORIA, CHAP. 37, OTTAWA.

AN ACT TO PREVENT THE MANUFACTURE AND SALE OF FILLED OR IMITATION CHEESE, AND TO PROVIDE FOR THE BRANDING OF DAIRY PRODUCTS.

[Assented to 1st April, 1893.]

HER Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:

1. This Act may be cited as *The Dairy Products Act, 1893.*
2. No person shall manufacture, or shall knowingly buy, sell, offer, expose or have in his possession for sale, any cheese manufactured from skimmed milk, to which there has been added any fat which is foreign to such milk.
 2. Every person who, by himself or by any other person to his knowledge, violates the provisions of this section, shall, for each offense, upon conviction thereof before any justice or justices of the peace, be liable to a fine not exceeding five hundred dollars and not less than twenty-five dollars, together with the costs of prosecution, and, in default of payment of such fine and costs, shall be liable to imprisonment, with or without hard labour, for a term not exceeding six months, unless such fine and the costs of enforcing it are sooner paid.
3. No person shall sell, offer, expose or have in his possession for sale, any cheese manufactured from or by the use of milk commonly known as "skimmed milk," or milk from which cream has been removed, or milk to which skimmed milk has been added, unless the words "skim-milk cheese" are branded, marked or stamped in a legible manner upon the side of every cheese, and also upon the outside of every box or package which contains the same, in letters not less than three-quarters of an inch high and three-quarters of an inch wide.
 2. No person, with intent to misrepresent or to defraud, shall remove or in any way efface, obliterate or alter the words "skim-milk cheese" on such cheese, or on any box or package which contains the same.
 3. Every person who, by himself, or by any other person to his knowledge, violates any of the provisions of this section, shall, for each offense, upon conviction thereof before any justice or justices of the peace, be liable to a fine

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4. No person shall apply any brand, stamp or mark of the word "Canadian," "Canadien" or "Canada" as a descriptive term, mark or brand upon any cheese, or upon any box or package which contains cheese or butter, unless such cheese and butter have been produced in Canada.

2. No person shall knowingly sell, offer, expose or have in his possession for sale, any cheese or butter upon which or upon any box or package which contains the same, the words "Canadian," "Canadien" or "Canada" is applied as a descriptive term, mark or brand, unless such cheese or butter has been produced in Canada.

3. Every person who, by himself or by any other person to his knowledge, violates any of the provisions of this section, shall, for each offence, upon conviction thereof before any justice or justices of the peace, be liable to a fine not exceeding twenty dollars and not less than five dollars for every such cheese or box or package, which is sold, offered, or had in his possession for sale, together with the costs of prosecution, and in default of payment of such fine and costs shall be liable to imprisonment, with or without hard labor, for a term not exceeding three months, unless such fine and the costs of enforcing it are sooner paid.

5. No person shall sell, offer, expose or have in his possession for sale, any cheese or butter which is produced in any foreign country, unless the name of the country where such cheese or butter was produced, is branded, stamped or marked in a legible manner upon the outside of every box or package which contains the same, in letters not less than three-eighths of an inch high and one-quarter of an inch wide.

2. Every person who, by himself or by any other person to his knowledge, violates the provisions of this section shall, for each offence, upon conviction thereof before any justice or justices of the peace, be liable to a fine not exceeding five dollars and not less than two dollars for every such cheese, or box or package of butter, which is sold, offered, exposed or had in his possession for sale, together with the costs of prosecution, and in default of payment of such fine and costs shall be liable to imprisonment, with or without hard labor, for a term not exceeding three months, unless such fine and the costs of enforcing it are sooner paid.

6. The person on whose behalf any cheese or butter is manufactured, sold, offered, exposed or had in possession for sale, contrary to the provisions of the foregoing sections of this Act, shall be *prima facie* liable for the violation of any of the provisions of this Act.

7. In any complaint, information or conviction under this Act, the matter complained of may be declared, and shall be held to have arisen, within the meaning of *The Summary Convictions Act*, at the place where the cheese or butter complained of was manufactured, sold, offered, exposed or had in possession for sale.

8. No appeal shall lie from any conviction under this Act except to a superior, county, circuit or district court, or the court of the sessions of the peace, having jurisdiction where the conviction was had; and such appeal shall be brought, notice of appeal in writing given, recognisance entered into or deposit made, within ten days after the date of conviction; and such appeal shall be heard, tried, adjudicated upon and decided, without the intervention of a jury, at such time and place as the court or judge hearing the same appoints, within thirty days from the conviction, unless the said court or judge extends the time for hearing and decision beyond such thirty days; and in all other respects, not provided for in this Act, the procedure under *The Summary Convictions Act*, so far as applicable, shall apply.

9. It shall be lawful for any person who may be charged with the enforcement of this Act to enter upon the premises of any person suspected of violating the provisions of this Act, and make an examination of cheese or butter; and any such suspected person, who obstructs or refuses to permit the making of any such examination, shall, upon conviction thereof, be liable to a penalty not exceeding five hundred dollars and not less than twenty-five dollars, together with the costs of prosecution, and in default of payment of such penalty and costs, shall be liable to imprisonment, with or without hard labor, for a term not exceeding six months, unless the said penalty and the costs of enforcing the same are sooner paid.

10. Any pecuniary penalty imposed under this Act, shall, when recovered, be payable, one-half to the informant or complainant, and the other half to Her Majesty.

11. The Governor-in-Council may make such regulations as he considers necessary in order to secure the efficient operation of this Act; and the regulations so made shall be in force from the date of their publication in the *Canada Gazette*, or from such other date as is specified in the proclamation made in that behalf.

60-61 VICTORIA.—CHAP. 21.

An Act to provide for the Registration of Cheese Factories and Creameries, and the Branding of Dairy Products, and to prohibit misrepresentation as to the dates of Manufacture of such Products.

[Assented to 29th June, 1897.]

HER Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Dairy Act*, 1897.

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2. The Minister of Agriculture shall keep in the Department of Agriculture a book to be called "The Cheese Factories and Creameries Register," and any person engaged in the business of cheese or of butter making may apply to the Department of Agriculture, at Ottawa, for the registration of the cheese factory or creamery owned or duly represented by him; and, on receipt of the particulars as set forth in schedule to this Act, the Minister of Agriculture, or such officer of the Department of Agriculture as is designated by the Governor in Council, shall forthwith send to the owner or representative of such cheese factory or creamery a certificate showing the registration number allotted to such cheese factory or creamery.

3. The person to whom such registration number is assigned shall thereafter have the exclusive right to use it for the purpose of designating the dairy products manufactured by him at such cheese factory or creamery, in the manner shown in schedule B to this Act.

4. No person shall sell, offer, expose, or have in his possession for sale, any butter or cheese made in Canada, and destined for export therefrom, unless the word "Canadian," "Canadien," or "Canada" is printed, stamped or marked in a legible and indelible manner, in letters not less than three-eighths of an inch high, and one-quarter of an inch wide, upon—

(a) the box or package containing the butter or cheese, and—

(b) moreover, in the case of cheese, upon the cheese itself, before it is taken from the factory where it was made.

5. No person, with intent to misrepresent, shall remove or in any way efface, obliterate or alter the word "Canadian," "Canadien," or "Canada," or the registration number on any cheese, or on any box or package which contains cheese or butter.

6. No person shall knowingly sell, or offer, expose, or have in his possession for sale, any cheese or butter upon which, or upon any box or package containing which, is printed, stamped or marked any month other than the month in which such butter or cheese was made; and no person shall, knowingly and with intent to misrepresent, sell, or offer, expose, or have in his possession for sale, any cheese or butter represented in any manner as having been made in any month other than the month in which it was actually made.

7. Every person, who, by himself, or by any other person to his knowledge, violates any of the provisions of sections four, five and six of this Act shall, for each offence, upon summary conviction, be liable to a fine not exceeding twenty dollars and not less than five dollars, for every cheese or box, or package of butter or cheese which is sold, or offered, exposed, or had in his possession for sale, contrary to the provisions of those sections, together with the costs of prosecution, and, in default of such fine and costs, shall be liable to imprisonment, with or without hard labour, for a term not exceeding three months, unless such fine and the costs of enforcing it are sooner paid.

8. Any pecuniary penalty imposed under this Act shall, when recovered be payable, one-half to the informant or complainant, and the other half to Her Majesty.

9. The Governor in Council may make such regulations as he considers necessary in order to secure the efficient operation of this Act; and the regulations so made shall be in force from the date of their publication in the *Canada Gazette*, or from such other date as is specified in the proclamation in that behalf.

SCHEDULE A.

Particulars for the registration of cheese factories and creameries:

- 1. Name of cheese factory or creamery
- 2. Where situated:—
 - (a.) Province
 - (b.) County
 - (c.) Township or parish
 - (d.) Post office
 - (e.) Telegraph or telephone office
 - (f.) Railway station or shipping port
- 3. Name of owner
- Post office address
- If a co-operative dairy association or joint stock company:—*
- Name of secretary
- Post office address
- 4. Registered brand or trade mark, if any
- 5. Registered number allotted

The above is certified correct.

..... Owner.
 P. O. Address.
 Secretary.

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SCHEDULE B.

Form of brand for registered number to be allotted to cheese factories and creameries:—

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REGISTERED
No.
DAIRY ACT 1897

DAIRYMEN

PARISH OR P. B.

- A
- Brownsburg
- Dalesville
- Cushing
- Cambria
- Hill Head
- Geneva
- Grenville
- Harrington
- Lachute
- Mabel
- Mille Isles
- St. Philippe
- St. Andrews
- AR
- St. Albert
- St. Christophe
- Ste. Elisabeth d' Au
- Ste. Hélène de Chest
- St. Rémi de Tingwi
- St. Rosaire
- St. Valère de Bulstro
- Stanford

LIST OF THE MEMBERS

OF THE

DAIRYMEN'S ASSOCIATION OF THE PROVINCE OF QUEBEC, (1897.)

PARISH OR P. B.	NAMES.	PARISH OR P. B.	NAMES.
ARGENTEUIL.		ARTHABASKA—Con.	
Brownsburg	Thos. Ross & Sons, Monaléa No. 5	Tingwick.....	P. Laroche Onésiphore Lemay Rvd. M. Jutras
Dalesville	Thos. Ross & Sons, Monaléa No. 12	Victoriaville.....	D. O. Bourbeau Tourigny & Naud A. Dusseault
Cushing.....	Thos. Ross & Sons, Monaléa No. 2	Warwick.....	Alfred Bergeron Au. Bergeron Rvd. M. Méthot Emile Morin
Cambria.....	Thos. Ross & Sons, Monaléa No. 16		
Hill Head.....	Thos. Ross & Sons, Monaléa No. 10		
Geneva.....	William A. Bradley.		
Grenville.....	Thos. Ross & Sons, Monaléa No. 11	St. Dominique.....	Harris Brabant Pierre Chicoine Norbert Frédette Arsène Guilbert Emile Chagnon Wilfrid Lapointe L. G. Fredette Hormidas Laplante
Harrington.....	Thos. Ross & Sons, Monaléa No. 14	St. Christine.....	A. Armstrong
Lachute.....	Jno. W. Ross. Thos. Ross & Sons, Monaléa No. 19	Acton Vale.....	Rvd. M. L. N. Boivin
	Thos. Ross & Sons, Monaléa No. 8	St. Ephrem d'Upton..	Delphis Chicoine
Mabel.....	Thos. Ross & Sons, Monaléa No. 13	St. Hélène.....	Rvd. Mr. J. U. Charbon neau Michel Houle, Fromager J. G. Houle A. Sicard F. X. Brunet
Mille Isles.....	Thos. Ross & Sons, Monaléa No. 17	St. Hugues..	L. T. Brodeur Emery Lafontaine J. A. Lussier H. Chevette
St. Philippe.....	Thos. Ross & Sons, Monaléa No. 6	St. Liboire...	F. X. Brunette H. G. Chabot Salluste Auclair Joseph Lemonde H. Charland
St. Andrews	John Knox. Thos. Ross & Sons Monaléa No. 9	St. Nazaire.....	Aurèle Leclerc
		St. Pie.....	Louis Lozeau P. E. Roy Alphonse Morin
ARTHABASKA.		St. Rosalie..	Augustin Lemonde J. Laliberté
St. Albert.....	N. Hébert	St. Simon.....	Azarie Deslauriers Tétéault & L'heureux
St. Christophe.....	Alfred Desprès D. Dumont	St. Théodore d'Acton ...	Isidore Jodoin
Ste. Elisabeth d'Auteuil	Edmond Desfossés Auguste Dion	Upton.....	Jean Maurice Jos. Normandin
Ste. Hélène de Chester.	L. Camiré		
St. Rémi de Tingwick..	Eugène Levasseur Joseph Proulx		
St. Rosaire.....	P. Leclerc		
St. Valère de Bulstrode..	D. Bergeron A. St.-Laurent J. L. Blanchette		
Stanford.....	Edmond Lord C. Dion Ed Baril G. Blanchette		

PARISH OR P. B.	NAME.	PARISH OR P. B.	NAME.	PARISH OR P. B.	NAME.
BEAUUCE.		BERTHIER—Con.		CHAMPI	
Adstock..	J. N. Duguay	St. Cuthbert....	Vve. Antoine Robert	Champlain..	
Lambton..	D. O. Lacombe		Arthur Fournier	Batiscan..	
S.C. de Jésus.....	Joseph Grégoire	St. Norbert..	J. R. Mayer	St. Tite..	
St. Ephrem de Tring....	Oct. Roy, Propriétaire		Arclesse Dubeau		
St. Ephrem Station....	J. N. Massé		Joseph Ayotte		
St. Evariste de Forsyth..	Louis Bernier		David Fréchette		
St. Francois..	Charles Busque	BONAVENTURE.			
	Philius Veilleux	Little Cascapédia.....	André Cyr	Baie St. Paul.. . . .	
St. Georges..	Rvd. M. Th. Montminy	St. Alexis de Matapédia	Rvd. M. J. E. Pelletier		
	Absalon P. Poulin	Ste. Brigitte de Maria..	F. X. Allard		
St. Hilaire Dorset.. . . .	Edouard Journeaux				
St. Honoré de Shelley..	Pitre Buteau	BROME.			
St. Samuel..	Gilbert Dallaire	Eastman..	Euclide Phaneuf	Les Eboulements..	
St. Vital Lambton.. . . .	Edouard Godbout	Knowlton..	H. S. Foster	Murray Bay..	
Scott Junction..	William R'Haven		Hon. S. A. Fisher	Ste Agnès.....	
	Pierre Gosselin	Laroche..	Alfred Lapierre	St. Hilarion.....	
BEAUHARNOIS.		North Sutton..	Wm. MacFarlane	St. Irénée.....	
Beauharnois..	Ovila Harelle	St. Etienne de Bolton..	Donat Decelles	St. Placide.....	
Landreville..	Alexis Lemieux	Sutton Junction..	Howard O. Wales	St. Urbain.....	
	Joseph Martin, care of	Vale Perkins..	Dhu. Birten		
	Alexis Lemieux		Jos. Nelson Labelle		
	Uldérie Archambault,	West Brome..	James M. Pettes		
	(care of Alex. Lemieux)				
St. Etienne..	William Durnin (3)	CHAMBLY.			
	Jos. Crête (care of J	St. Hubert..	Georges Dellière		
	Brosseau)				
St. Ls de Gonzague.. . . .	H. Lepage (2)	CHAMPLAIN:			
St. Timothée.....	Jos. Ringuette	Ste. Thècle.....	Charles Audy	Holton....	
Valleyfield..	Lloyd & McBean	St. Stanislas..	Joseph L. Jacob	Howick.....	
Vendome	Gendron & Allard	St. Severin Proulxville..	Majorique Bordeleau	North Georgetown..	
	Joseph Allard		Narcisse Bordeleau	Norton Creek.....	
BELLECHASSE.			Trefflé Veillet	Orms town.....	
Armagh....	Philibert Langlois	St. Prosper..	Alfred Trudel	Riverfield.....	
	Isabelle Protais		F. X. O. Trudel	Ste. Barbe.....	
St. Charles..	Onésime Mercier		Benoit Trudel	St. Chrysostome....	
St. Gervais..	Dr. G. Ph. Tanguay	St. Narcisse..	Jos. T. Trudel		
	Etienne Coté		Isidore Derouin		
	J. B. Paquet	St. Maurice..	Trefflé Trudel		
St. Michel..	H. A. Furoy		Dr. P. Grenier		
St. Raphael.....	Joseph Bolduc		Frs. Ducharme		
			Oscar Nobert		
			Antoine Laprise		
BERTHIER.		Ste. Geneviève.....	Ernest Jacob	Ste. Martine.....	
Berthier..	Victor Allard		Léopold Marchand		
	François Sylvestre	Ste. Anne de la Péra-de.	J. Th. Gendron	Ste. Philomène.....	
Berthierville..	Jos. D. Parent		Alphonse Latour	St. Urbain.....	
	Octavien Teller		Jos. Godin, fils de Jean		
Isle du Pas..	Thomas Sylvestre		Michel Loranger		
Lanoraie..	Arthur Ferland		Edouard Douville		
St. Barthélemy.....	Hormidas Laurondeau		Elzéar Ricard		
	Jos A. Dalcourt	N.D. du Mont Carmel.. .	Oscar Lord, Fromager		
	Wenceslas Plante		P. O. Valmont		
	Pierre Comtois & Rou	Mont Carmel..	Luc Ducharme		
	seau		Philippe Rhéault		
	Louis Drainville				

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Rhéault

PARISH OR P.B.	NAMES.
CHAMPLAIN—<i>Con inued.</i>	
Champlain..	Jacques Doutigny L. P. Carignan
Batiscan..	L. P. Lacourcière Pierre Lapointe F. E. Tourigny
St. Tite..	J. A. Lambert
CHARLEVOIX.	
Baie St. Paul.. . . .	Joseph Fortin Alfred Gagnon Jos. Simard, fils de Wlfr. Jos. Simard, fromager Adélaré Ménard Charles Martel Alpr. Coté Jos. Tremblay, fils de William
Les Eboulements.. . . .	Jos. Bouchard
Murray Bay..	Jules Bradet (2)
St. Agnès.....	Frs. Harvey Edgar Desgagné
St. Hilarion.....	Evariste Desmeules
St. Irénée.....	Ferdinand Gauthier
St. Placide.....	Gédéon Perron
St. Urbain.....	Charles Fortin
CHATEAUGUAY.	
Holton....	Antoine Vinette
Howick.....	Robert Ness A.E. Marleau
North Georgetown.....	Etienne Marleau
Norton Creek.....	Joseph Lefebvre
Ormstown.....	G. R. Johnson A. S. Lloyd T. Tait
Riverfield.....	John MacGregor
Ste. Barbe.....	O. Haineault
St. Chrysostome.....	Napoléon Hébert Narcisse Beaudin Jos. Beaudin, (care of Narcisse) J. Tourangeau E. Gamelin John Boyd
Ste. Martine.....	Joseph Poirier Trefflé Lécuyer Edmond Laberge Edouard McGowan
Ste. Philomène.....	F. P. Laberge (2) Delphis Lacoste
St. Urbain.....	Israel Sabourin J. A. Defayette Arthur Barrette Wilfrid Lavigreur Alexandre Bourgerie

PARISH OR P.B.	NAMES.
CHATEAUGUAY—<i>Continued.</i>	
Stockwell.....	Jas. McGill M. Patnaude
Chateauguay.....	N. R. Laberge Peter MacFarlane
CHICOUTIMI.	
Bagotville	Elie Tremblay
Chicoutimi.....	J. E. A. Dubuc Pitre Gaudreault J. D. Guay Georges Maltais William Tremblay Joseph Maltais Adélaré Lavoie Dr. L. E. Beauchamp Frs. Brassard Richard Gagnon Louis Guay Jean Perron (2)
L'Anse St. Jean.....	Edouard Harvey Zéphirin Desgagné
St. Alphonse	Pierre Tremblay Jos. Buteau
Ste. Anne.....	Joseph Bouchard Ernest Gravel Henry Coté Charles Villeneuve Joseph Savard Louis Roucher
St. Dominique de Jon- quières.....	Paschal Bergeron Jean Brassard et Pascal Angers Nérée Bergeron Chs. J. B. Fortin Jean Girard Joseph Gagnon
COMPTON.	
East Clifton.....	J. O. E. Lussier (2)
La Patrie.....	Samuel Gobeil
Lingwick P.O. Gould.....	J. L. Painchaud
Paquetteville.....	Hormidas Chicoine Isidore Lazure
Ste. Edwidge.....	Louis Ladouceur
St. Malo.....	Alvaresse Aubé P. L. Breault Ovila Lamarre
Waterville..	Frank Nap. Therrien D. S. Davignon
DEUX-MONTAGNES.	
Oka.....	Georges Mirallès Alexandre Aird, éc., d'ag R.R. P.P. Trappistes C. E. Derome

LIST OF THE MEMBERS OF THE ASSOCIATION.

PARISH OR P. B.	NAMES.
DEUX-MONTAGNES—Continued.	
Petite Rivière.....	Emile Laurin
St. Augustin.....	Hormidas Lafrance
St. Canut.....	Ferdinand Rochon
St. Eustache.....	L. W. J. Payment
St. Hermas.....	B. Beauchamp
	Honoré Pagé
St. Placide.....	Alphonse Dubreuil
	Nap. Dubreuil
	Frédéric Dubreuil
DORCHESTER.	
Frampton West.....	Joseph Lacasse
St. Anselme.....	Paul Girard
St. Anselme Bureau	GingAmédée Grégoire
St. Claire.....	William Laflamme
	Georges Richard
	J. A. Cayouette
St. Isidore.....	Chs. Turgeon
St. Hénédine.....	Gabriel Dumont
St. Justine.....	Fortunat Chabot
	Philius Tanguay, Fro-
	mager
St. Léon de Standon.....	Emile Blanchet
DRUMMOND.	
Drummondville.....	J. A. Gosselin
	Samuel Jones
	Arthur Marcotte
	Elias Mosseau
Kingsey Falls.....	Rvd. P. S. Belliveau
Kingsey French Village..	J. P. Lefebvre
	Georges Benoit
	P. St.-Louis
L'Avenir....	Léon Bahl
	Emmanuel Boisvert
	Jos. Beaulac
	Owen McGiveney
	J. C. St.-Amand
St. Bonaventure.....	Napoléon Danneau
St. Cyrille de Wendover.	Damien Janelle
	Olivier Joyal
	Paul Valois
	Ans. Valois
St. Eugène de Grantham	Daniel Jutras
St. Germain de Grantham	Olivier Lemaire
	Louis Sarrazin, fils
	Olivier Rajotte, fils
	Frédéric Moreau
St. Guillaume.....	J. B. Vigneau
St. Norbert de Drummond	Joseph Paul Farley
ville.....	Eudore Coté
South Durham.....	J. A. Dowd
	J. O. Griffith
	Henry Coté
	J. B. I. Préfontaine

PARISH OR P. B.	NAMES.
DRUMMOND—Continued.	
South Durham.....	C. C. Church
	A. J. Hyde
	J. A. Janelle
Ulverton.....	Chas. Wilkins
HOCHELAGA.	
Mile End.....	Rvd. Frère Charest
Sault au Récollet.....	Harry L. Candlish
HUNTINGDON.	
Anderson's Corner.....	J. A. MacDonald
Athelstan.....	Lake View Cheese fact-
	ory (D. M. Macpher-
	son)
Cazaville.....	Jas. Irwin
Dewville.....	M. Connell
Dundee.....	D. M. Macpherson's
	Dundee Cheese Fact.
	D. M. Macpherson, Ban-
	non Cheese Factory
Frontier (Hemmingford)	W. H. Stewart
Helena.....	D.M. Macpherson, Walk-
	ers Cheese Factory
(1)	Henry Hugues
Herdman.....	Geo. Lornis
	A. W. Millar
	Richard Boyd
Huntingdon.....	Chas. S. Bennett
	Geo. W. Ferguson
	D. M. Macpherson
	Clyde Corner Cheese
	Factory
	D. M. Macpherson,
	Huntingdon Cheese &
	Butter Factory
	W. H. Walker
	R. S. Fenny
	Geo. MacKinnon
Kelso.....	John Small
Kensington.....	D. M. Macpherson,
	Helena Cheese Factory
Kibain.....	D. M. Macpherson,
	Lees Corner Cheese
	Factory
La Guerre.....	D. M. Macpherson,
	La Guerre Cheese &
	Butter Factory
	D. M. Macpherson,
	New Found Out Cheese
	Factory
Port Lewis.....	D. M. Macpherson,
	Port Lewis Cheese
	Factory
Powrscourt.....	J. A. Plamondon
Rockburn.....	William Farquar

PARISH OR P. B.
HUN
Ste. Agnès de D
St. Anicet..
Trout River.....
(1) Hemmingford
Sabrevois.....
St. Alexandre....
St. Brigide.....
St. Grégoire.....
St. Jean.....
St. Sabine.....
St. Sébastien.....
JAC
St. Geneviève....
St. Raphael, Isle I
Joliette.....
St. Ambroise de K
St. Elizabeth....
St. Emilie de l'E
St. Félix de Val
St. Jean de Math
St. Mélanie.....
St. Mélanie d'Al
St. Thomas.....

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Plamondon
n Farquar

PARISH OR P. B.	NAMES.
HUNTINGDON—Continued.	
Ste. Agnès de Dundee.....	D. M. Macpherson, Brystreet Butter Fac- tory
	D. M. Macpherson, Ste. Agnès Cheese Fac- tory
St. Anicet.....	D. M. Macpherson, McGowan's Cheese Fac- tory
Trout River.....	D. M. Macpherson, Trout River Cheese Factory
(1) Hemmingford.....	Jos. Fournier

IBERVILLE.

Sabrevois.....	Féodor F. Meunier
St. Alexandre.....	A. Labreque
Ste. Brigide.....	O. Archambault, Fro mager
St. Grégoire.....	Damina Bernard
St. Jean.....	Victor Guertin, The Hermitage Creamery.
Ste. Sabine.....	Aldéi Lanoue Rvd. A. V. Roy
St. Sébastien.....	Pierre Brault, fils

JACQUES-CARTIER.

Ste. Geneviève.....	J. B. Meloche, fils
St. Raphael, Isle Bizard..	Joseph Bélanger

JOLIETTE.

Joliette.....	D. A. Dostaler A. Fontaine Pierre Laforest J. B. A. Richard Almé Riopel J. M. Tellier, Avocat
St. Ambroise de Kildare..	Marcel Ethier
Ste. Elizabeth.....	Isaie Drainville P. L. Gadoury & Cie. Hormidas Dudemaine
Ste. Emille de l'Energie.	Onésime Beaudry
St. Félix de Valois.....	Georges Asselin
St. Jean de Matha.....	Joseph Clermont Georges Clermont Adolphe Beaudry Chs. Bazinet, M. P. Chénier Roberge Moïse Robitaille Tancrede St.-Georges Anselme Asselin
Ste. Mélanie.....	Désiré Nadeau
Ste. Mélanie d'Aillebout	Zacharie Lepage
St. Thomas.....	Ephrem Dion Maxime Coutu

PARISH OR P. B.	NAMES.
KAMOURASKA.	
St. Pacome.....	Victor Hudon dit Beau- lieu
St. Germain.....	Alfred Levesque
St. Denis.....	J. C. Chapais Charles Bouchard François Gagnon Joseph Dionne
Ste. Anne la Pocatière..	Collège de Ste.-Anne François Gendron
Kamcuraska.....	Cyrias Ouellet
St. Philippe de Néri.....	Thomas Leclair

LAC ST. JEAN.

Alma.....	E. Harvey
Chambord.....	O. Lefrançois
Delisle.....	Alfred Gagné
Hébertville.....	Gonzague Girard Josaphat Deschènes Charles Tremblay P. E. Hudon Servule Tremblay T. R. Lemay
Normandin.....	Alphonse Poirier Joseph Poirier Luc Lizotte
Roberval.....	Stanislas Pilote
St. Bruno.....	Avila O. Bellemare
St. Cyrille de Normandin	Joseph Potvin
St. Félicien.....	Jos. Girard, M.P.P. André Bouchard
St. Gédéon.....	Joseph Gagnon François Gagnon J. B. Rageau Napoléon Baillargeon Napoléon Gagné Charles Simard Octave Hudon
St. Jérôme.....	Edmond Bergeron
St. Joseph d'Alma.....	

LAPRAIRIE.

St. Isidore.....	Baldérique Hébert J. R. Pagé
St. Constant.....	Victor Fyfe

L'ASSOMPTION.

Lachenaie.....	Wilfrid Frappier
L'Assomption.....	Stanislas Coyteux A. Longpré I. J. A. Marsan Jos. Parthenais
Repentigny.....	Thouin & Lord Aimé Lord
St. Henri Mascouche....	S. Chagnon Alphonse Soucisse
St. Lin.....	E. Desmarais

PARISH OR P.B.	NAMES.
L'ASSOMPTION—Continued.	
St. Paul l'Hermite.....	Samuel Chagnon (2) Jos. Marion Philias Léveillé F. O. Lachapelle
St. Sulpice.....	J. A. Chicoiné
LAVAL.	
St. Francois de Sales.....	Delvica Adam
St. Martin.....	J. L. Allard
Ste. Rose.....	J. F. Cossette & Ar chambault J. Ferdinand Cossette J. G. Héroux, (Bas de la Grande Côte)
St. Vincent de Paul.....	Honorable Jos. H. Bel lerose C. E. Pagé
LEVIS.	
Levis.....	Carrier, Lainé & Cie.
St. Etienne de Lauzon.....	Alfred Dubois
St. Lambert.....	Philémon Bernard Georges Couture, beur rier
St. Nicholas.....	Gabriel Desrochers
L'ISLET.	
St. Roch des Aulnaies.....	J. B. Honorius Anttil Joseph Emile Pelletier
St. Jean Port Joli.....	Démétrius Lord J. Ed. Vaillancourt
St. Aubert.....	Xavier Potvin
L'Islet.....	Lucien Bélanger ... Gustave Guilmette Amédée Gaudreault Ferdinand Thibault
Trois Saumons.....	J. A. Talbot
Village des Aulnaies.....	J. Anguste Pelletier
LOTBINIERE.	
Lotbinerie.....	Honorius Auger Evariste Lauzé Arthur Beaudet Léger Pépin
St. Agapit.....	Benjamin Bergeron J. N. Allard Francis Roger
Ste. Agathe.....	John Blais Philibert Pomerleau
Ste. Croix.....	Dr. C. I. Rinfret, M. P.
Ste. Emilie.....	Jos. Jés. Beaudet Ernest Lauzé
St. Flavien.....	Fulbert Garneau Lazare Bédard Edouard Boucher, fils Louis Bibeau

PARISH OR P.B.	NAMES.
LOTBINIERE—Continued.	
St. Jean des Chaillons...	Maximilien Audet Francis Hamel
St. Patrick.....	Samuel Smith
Ste. Philomène Deschailions	Louis P Bourret
St. Sylvestre Ouest.....	Yvan B. C. Nell
MASKINONGE.	
Maskinongé.....	G. Arthur Dompousse Théophile Sicard
Nancy.....	L. A. Caron
St. Alexis des Monts.....	Philias Allard
St. Justin.....	Dr. J. C. Coulombe Pierre Baril Rvd. M. D. Gérin
St. Léon.....	Georges Caron
MATANE.	
Matane.....	J. E. Gagnon, notaire
Méchins.....	Georges Eug. Verreault
Ste. Félicité.....	Odina Dugas Herménégilde Gagnon
St. Luc.....	Rvd. E. Pelletier Edouard Gauthier
MEGANTIC.	
St. Ferdinand d'Halifax.....	Oscar Gilbert
S.C. de Marie.....	J. O. Hébert
Lyster.....	Lucien Lemay
Somerset.....	Alphonse Lord
MISSISQUOI.	
West Farnham.....	Edouard Arpin Amédée Charland
N.D. de Stanbridge.....	Ovila Courtemanche (2)
East Dunham.....	Charles M. Harvey J. G. Wales
MONTCALM.	
Rawdon.....	Walter Boyes
St. Alexis.....	Ernest Liard Octave Magnan
St. Calixte Kilkenny.....	Xavier Sauriol
St. Esprit.....	Pierre Lesage Eloi Rochon Raymond Lesage
St. Jaques L'Achigan....	Clément Laviolette J. N. Marion
Ste. Marie Salomé.....	Joseph Mirault L. B. Fontaine
MONTMAGNY.	
St. Paul du Buton.....	Wenceslas Talbot
St. Francois, Riv. du Sud	O. A. Théberge
Isle aux Grues.....	Charles Paul Roy Joseph A. Roy Jos. Alfred Vézina

PARISH OR P.B.	NAMES.
MON	
Casault.....	
Cap St. Ignace.....	
Isle aux Reaux...	
St. François P.O.	
Ste. Anne de Bel	
St. Ferréol.....	
St. Jean, Isle d'C	
St. Joachim.....	
St. Pierre, Isle d'	
190 Rue Sanguine	
241 Rue St. Paul.	
La Minerve.....	
Marché Ste. Anne	
65 William Street.	
McGill Street.....	
55, William Street	
2 and 4 Foundling	
1594 Ste. Catherine	
534 Rue St. Denis	
Montréal.....	
138 St. James Stre	
rue Sherbrooke....	
Napierville.....	
St. Cyprien P.O. 1	
ville.....	
St. Remi.....	
Nicolet.....	
Ste. Brigitte.....	
St. Célestin.....	
Ste. Eulalie.....	

LIST OF THE MEMBERS OF THE ASSOCIATION.

PARISH OR P.B.	NAMES.
MONTMAGNY—Continued.	
Casault.....	James Brown
Cap St. Ignace.....	G. S. Dugal
MONTMORENCY.	
Isle aux Reaux.....	
St. François P.O. (I.O.)	Narcisse Roberge
Ste. Anne de Beaupré.....	Elzéar Fortier
St. Ferréol.....	Rvd. G. A. Lemieux
St. Jean, Isle d'Orléans..	Onésime Blouin
St. Joachim.....	J. N. Pépin
	Isidore L'heureux
	Célestin Fortin
	David Fortin
	Antoine Thomassin
	Hugh Brown
St. Pierre, Isle d'Orléans	F. X. Coté
	Jos. Blais, Beurrerie St Pierre

MONTREAL.	
190 Rue Sanguiet.....	Isaie Renault
241 Rue St. Paul.....	Charles Langlois
La Minerve.....	J. M. A. Denault
Marché Ste. Anne.....	J. A. Vaillancourt
65 William Street.....	F. A. Dorion
McGill Street.....	A. A. Ayer & Cie.
55, William Street.....	Duckett, Hodge & Cie.
2 and 4 Foundling Street	N. E. Clément
1594 Ste. Catherine.....	Alphonse Lachance
534 Rue St. Denis.....	Raoul Duclos
Montréal.....	Honorable P. E. Leblanc
138 St. James Street....	W. A. Weir, M. L. A.
rue Sherbrooke.....	Paul Brisset

NAPIERVILLE.	
Napierville.....	Théophile Fortin
	Adélar Fortin
	Lazare Fortin
	Alfred Girard
St. Cyprien P.O. Napier-	
ville.....	Rvd. M. A. P. Tassé
St. Remi.....	Harvey Colpron
	Chs. Hugué-Latour

NICOLET.	
Nicolet.....	Napoléon Desfossés
	J. Lucien Doré
	Rvd. M. G. Proulx
	Abraham Beaulac
Ste. Brigitte.....	Jos. Lemire
	Léon Paquette
St. Célestin.....	Phlémon Dugas
	Albert Boisclair
	Ludger Piché
Ste. Eulalie.....	H. Cloutier
	D. Babineau

PARISH OR P.B.	NAMES.
NICOLET—Continued.	
Ste. Gertrude.....	Gaspard Coté
	Arsène Houle
	Noé Morrissette
	Henri Piché
St. Grégoire.....	Hubert Dufresne
	Arthur E. Desautels
St. Jean Baptiste.....	Phillippe Brassard, se
	crétaire du Cercle Agr
	cole
St. Léonard d'Ashton...	Joseph Hébert
	Frs. Lauzier
Ste. Marie de Blandford..	Alfred Baron
Ste. Monique.....	Charles Milot
	B. A. Pothier
	Ev. St.-Germain
	J. B. Nourri
	Alfred Thérien
	William Thérien
	J. B. Beauchemin
	J. B. Duval
Ste. Sophie Lévrard.....	D. Dubuc
Ste. Perpétue.....	Luc Girard
St. Pierre les Becquets...	Ferdinand Cinq-Mars

OTTAWA.	
Aylmer.....	Joseph Alex. Noël
Little Rideau.....	Thos. Ross & Sons
	Monaléa No. 1
Hollands Mills.....	Thos. Ross & Sons
	Monaléa No. 18
Buckingham.....	Thos. Ross & Sons
	Monaléa No. 15
Maniwaki.....	Frère Jos. Laporte
Montpellier.....	Louis Montpellier
Nominingue.....	Rvd. Père Cottet, prieu
	du Nominingue
Ponsonby P.O. Boileau..	Joseph Danis
Ripon.....	Olivier Louisaize
Silver Creek.....	Thos. Ross & Sons
	Monaléa No. 20
Thurso.....	Eugène Roy

PONTIAC.	
Baie des Pères.....	R.R. P.P. Oblats

PORTNEUF.	
Allan's Mills.....	Adélar Perron
Cap Santé.....	Gabriel Hamel (2)
Deschambault.....	Arthur Morrissette
	Uldérie Benoit
Ecureuils.....	Hubert Auger
Grondines.....	Ls. Archambault (2)
Lachevrotière.....	Aubert Bédard

PARISH OR P.B.	NAMES.
ROUVILLE—Continued.	
Magenta.....	Cléophas Archambault
Marieville.....	Jos. Archambault Noël H. Alix Hubert Gingras
Pauline.....	J. P. Rocheleau
Ste. Angèle Monnoir.....	Philius Beaulieu Trefflé Girard
St. Césaire.....	Samuel Aubin Frédéric Maynard Simon Sénécal Henry Normandin Wilfrid Bourbeau
St. Jean Baptiste.....	Georges Dusseault Louis Remi
Ste. Marie Monnoir.....	Félix Bessette, fils de Pierre
St. Michel de Rougemont.....	J. H. Vadnais
ST. JEAN.	
L'Acadie.....	Jules Ménard Henri Oulmet
Ste. Marguerite de Blair finchie.....	Frs. Liénard, Sec. du Cercle Agricole
St. Valentin.....	J. G. Bouchard
Stottsville.....	Philippe Morin
ST-HYACINTHE.	
La Présentation.....	M. A. Piché
N.D. de St. Hyacinthe.....	J. A. Archambault
St. Damase.....	Z. T. Marchessault, se crétaire de la Froma gerie de Corbin Z. T. Marchessault, se crétaire de la Froma gerie du Pont Francis Racicot Jacques Jodoin Théophile Brodeur
St. Denis, Riv. Richelieu.....	Edmond Richard
St. Hyacinthe.....	Rvd. M. C. A. Beaudry M. Blanchet, avocat Brousseau & Bergeron Rvd. M. J. B. Chartier Rvd. M. Tétreault Emile Caste! Henry Gélinas J. Lafrance J. de L. Taché
St. Judes.....	Stanislas Mathieu Aldéric Dupré Amédée Lacroix Xavier Larivière Pierre St-Germain Pierre Comsau
Ste. Madeleine.....	Louis Chabot Dr. A. P. Cartier Ludger St.-Pierre

PARISH OR P.B.	NAMES.
ST-MAURICE.	
Pointe du Lac.....	Olivier Duplessis
Radnor Forges.....	Maxime Cossette
St. Barnabé.....	Philippe Gélinas Arthur Milot Thomas Lacerte
Yamachiche.....	J. Fortunat Coté
SHEFFORD.	
Frost Village.....	Carlton A. Martin
Granboro.....	A. Fossey
Granby.....	Dandelin & Coté Edmond Salois Philippe Vadnais Hyp. Bombardier Joseph Racicot J. Wright Irwin T. Roberts
Lawrenceville.....	Emile M. Dion
Milton East.....	Azarie Coté
(Ste. Cécile).....	Simon Touchette
Nth. Stukely Bonsecours.....	Hormidas Simonneau Antoine Loisselle J. B. Roberge
Nth. Stukely.....	Nazaire St-François William St-François
Racine.....	Modeste Choinière Napoléon Salois
Rochelle.....	Maxime Archambault David Daigneault
Maucook.....	J. H. Rocheleau
Roxton Falls.....	Edéas Larocque Ferdinand Brals Joseph Brun
Roxton Pond.....	Herménégilde Robert
St. Alphonse de Granby..	Denis Allard Pierre Allard Rvd. M. St.-Pierre
Ste. Anne de Stukely....	Jos. Morin
St. Joachim.....	Napoléon Coté
St. Valérien.....	André Brasseur J. B. Dépot Joseph Demers Louis de Grandpré Lucien Roy Maxime Robert Rvd. F. P. Coté Calixte Desmarais
Savage's Mills.....	Savage & Purdy P. H. MacIntosh
Shefford Mountain.....	E. Doonan E. A. Booth
South Granby.....	Jas. Duncan
South Stukely.....	W. S. Purdy
Valcourt Ely.....	Eusèbe Salois P. J. S. Peltier, notaire Joseph Vêroneau Dolphis Choinière

PARISH OR P.B.	NAMES.	PARISH OR P.B.	NAMES.	PARISH OR P.B.
SHEFFORD.—Continued.		TERREBONNE.		
Warden	L. E. Richardson	La Plaine.....	Théodule Corbeil (2)	Contrecoeur.....
Waterloo	C. H. Parmelee	New Glasgow.....	Georges Bennett (2)	St. Antoine.....
	Gédéon Boulé		Amédée Désormeaux	
	James Hamilton	St. Adèle.....	Dr. W. Grignon	St. Julie.....
West Ely.....	Chs. Thibaut, avocat	St. Anne des Plaines...	Siméon Giguère	St. Marc.....
West Shefford.....	Napoléon Tétreault (2)	St. Janvier.....	Jos. Desroches	
	Nelson Moffat	St. Jérôme.....	Wilbrod Gareau	
	Médard Duquette		Louis Labelle	
	W. Murray		Ernest Latour	
	Z. S. Lawrence		Dr. F. P. Vannier	Baie Du Febvre...
SHERBROOKE.		St. Marguerite du Lac		
Sherbrooke.....	Rvd. F. Venant Charest	Masson.....	Rvd. M. A. G. Moreau	
	J. A. Chicoine, M.P.P.	St. Sauveur des Monts...	E. Brasseau	
	J. A. Camirand	St. Sophie.....	Edouard Paquette	Chatillon.....
	J. A. Bourque	St. Thérèse.....	Antoine Desjardins	St. David.....
			J. D. Leclair (2)	
SOULANGES.			Rvd. M. J. A. Vaillancourt	
Coteau Station.....	Jos. Flavien Montpetit	(Collège)	Rvd. M. H. Cousineau	
	Eméric Sauvé	Terrebonne	Henry Moody	
Les Cèdres	Rvd. M. T. Chagnon			
	Samuel Leroux	TROIS-RIVIÈRES.		
Point Chateau.....	J. A. Bourbonnais (2)	Banlieu des Trois-Rivières.....	Hormidas Duval	St. Elphège.....
Rivière Beaudette.....	Louis Méthot (2)		Evariste Jutras	St. François.....
St. Clément.....	J. B. Marleau	Trois-Rivières.....	C. Bellemare	
	Pierre Pilon		L. N. Duplessis, M.P.P.	
St. Téléphore.....	J. H. Gareau		T. E. Normand, M.P.P.	
	Louis Charlebois		J. A. Milot	St. Michel.....
St. Polycarpe.....	J. Hector Leclair			St. Pie Deguire....
				St. Thomas de Pie
STANSTEAD.				St. Zéphirin.....
Barford.....	Philippe Pilette			
Coaticook.....	Auguste Gérin			Yamaska.....
Dixville.....	Philibert Jougas			
East Hatley.....	C. E. Standish			
Kate Vale.....	Pierre Ménard			
Ladds Mills.....	E. C. Wells			
Magog.....	Louis Brodeur	Beauvoir.....	A. O. Ranger	
Magog, boîte 244.....	Joseph Benoit	Isle Perrot.....	Herménégilde Daoust	
St. Herménégilde.....	J. P. Dupuis		Azilda Daoust	
	Jos. Robillard	Mont Oscar.....	Napoléon Quesnel	
		Pointe Fortune.....	J. E. Therrier	
			Thos. Ross & Sons	
			Monaléa No. 4	
TEMISCOUATA.		Rigaud.....	J. B. Besner	
L'Isle Verte.....	Alfred Paradis		Trefflé Pilon	
	Préfontaine & Frère	St. Justine de Newton	Henry Charlebois	
Old Lake Road.....	F. Flo Soucy		Théophile Doctet	
St. Arsène.....	Georges Lapointe	St. Lazare.....	Oscar Denis	
St. Clément.....	Thomas Roy	St. Marthe.....	Peter Monaghan (2)	
	Rvd. J. B. Ruest		Rosario Séguin	
St. Eloi.....	C. Godbout		J. B. Deschamps	
St. Epiphane.....	Auguste Breton	St. Rédempteur.....	Georges Valois	
	François Patoine	Vaudreuil.....	Amédée Castonguay	
St. Jean de Dieu.....	J. O. Massé		Bazile Charlebois	
St. Modeste.....	Firmin Couillard		Elzéar Brasseur	
Trois-Pistoles.....	Phyllis Pelletier			

LIST OF THE MEMBERS OF THE ASSOCIATION.

NAMES.	PARISH OR P. B.	NAMES.	PARISH OR P. B.	NAMES.
	VERCHÈRES.		WOLFÉ.	
Contrecoeur.....		Joseph Bélanger	East Dudswell.....	M. Guay
e Corbell (2)		Joseph Cormier	Garthby Station.....	A. A. Jacques
Bennett (2)		Honoré Handfield	Marbleton.....	Ephrem Lizée
Désormeaux	St. Antoine.....	J. B. Phaneuf	St. Adolphe de Dudswell.	Joseph Nadeau
Grignon		Ovila Bonin	St. Camille.....	Pierre Caron
Giguère		Antoine Girouard	South Dudswell.....	Norbert Rondeau
roches		Jos. Cartier	Weedon Centre.....	L. A. Lussier
l Gareau	St. Julie.....	Rvd. J. C. Daigneault	Weedon Station.....	Magloire Demers
abelle	St. Marc.....	Alexis Chicoine		Jérémie Fisette
Latour				Victor Coté
P. Vannier				Pierre J. Després
	YAMASKA.		Wotton.....	J. E. Plamondon
. A. G. Moreau	Baie Du Febvre.....	J. T. Bélisle		Zacharie Bilodeau
sseau		Uldéric Lévesque		Joseph Gilbert
d Paquette		Elie Proulx	NOUVEAU-BRUNSWICK.	
e Desjardins		Nazaire Lemire	Boutouche.....	Rvd. M. F. X. Michaud,
clair (2)		J. Louis Lemire		Prêtre
f. J. A. Vaillan-		Zéphyrin Duguay	ONTARIO.	
		J. N. Duguay	Fournier (Prescott).....	Damase Malboeuf
f. H. Cousineau		Ludger Bélisle	Ottawa.....	Léon Gérin
Moody	Chatillon.....	Ovide Lépine	Plantagenet.....	Aldège Thérien
	St. David.....	Adjénard Brouillard	St. Albert (Russell).....	Alphonse Laforêt dit
		David Larivière, fils de		Lebrun
		Charles	St. Anne de Prescott...	Joseph Blais
ES.	St. Elphège.....	Rosario Vadeboncoeur		Adolphe Vachon
		Dolph. Coll	SASKATCHEWAN.	
		Hamel & Coll	St. Louis de Langevin, via	
das Duval		Théogène Lépine	Duck Lake.....	Paul Blondeau
te Jutras	St. Francois.....	William Parent	ÉTATS-UNIS.	
lemare		Edouard Giguère	Turners Falls Mass. box 154 L.	E. Girard
Duplessis, M.P.P.		Charles Bédard	FRANCE.	
Normand, M.P.P.		Onésime Marcotte	St. Brieuc (Cotes du Nord)M.	l'Abbé Aigne!
dilot	St. Michel.....	Harry Lauzière	Paris, 88 rue d'Assas.....	A. Billard
		J. O. Duhaime	Paris, 18 rue Clauzel.....	R. Lézé
	St. Pie Deguire.....	Thomas Delaney	Ouilly le Vicomte (Cal-	vados).....
L.		Narcisse Parenteau		C. Morice
Ranger	St. Thomas de Pierreville	Edmond Coll	Lisieux (Calvados).....	Edmond Groult
énégilde Daoust		Adélard Boisvert	Mende (Lozère).....	E. Rigaux, Professeur
Daoust	St. Zéphirin.....	Napoléon Benoit		d'Agriculture
éon Quesnel		Evariste Boisvert	Menton (Alpes Maritimes)	Charles Rayneri
Therrier		J. B. Raiche		
Ross & Son		G. P. Rousseau		
Monaléa No. 4	Yamaska.....	Emile Labaie		
Besner		Herman Lefebvre		
lé Pilon		Roch P. Parenteau		
y Charlebois		Calixte Robidoux		
phile Dotcet				
r Denis				
Monaghan (2)				
rio Séguin				
. Deschamps				
ges Valois				
lée Castonguay				
le Charlebois				
ar Brasseur				

RECAPITULATION AND TOTALS BY COUNTY.

Argenteuil	16	Kamouraska	10	Richmond.....	25
Arthabaska	26	Lac St. Jean	25	Rimouski	4
Bagot.....	36	Laprairie	3	Rouville.....	25
Beauce.....	16	L'Assomption	16	St. Hyacinthe	26
Beauharnois	15	Laval	7	St. Jean.....	5
Bellechasse	8	Lévis	5	St. Maurice	6
Berthier	17	L'Islet	11	Shefford.....	60
Bonaventure.....	3	Lotbinière	21	Sherbrooke	4
Brome	10	Maskinongé	8	Soulanges	13
Chambly.....	1	Matane	6	Stanstead	10
Champlain.....	32	Mégantic.....	4	Témiscouata	12
Charlevoix	17	Missisquoi	6	Terrebonne	21
Châteauguay	32	Montcalm	11	Trois-Rivières.....	6
Chicoutimi	30	Montmagny	7	Vaudreuil.....	19
Compton.....	12	Montmorency	12	Verchères.....	9
Deux-Montagnes	13	Montréal	13	Wolfe.....	14
Dorchester	11	Napierville	7	Yamaska	38
Drummond	34	Nicolet.....	32	Ontario	6
Hochelega	2	Ottawa.....	11	Nouveau Brunswick.....	1
Huntingdon	32	Pontiac	1	Saskatchewan.....	1
Iberville	8	Portneuf	36	Etats-Unis	1
Jacques-Cartier	2	Québec:	13	France	7
Joliette	24	Richelieu.	26		
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REPORT "IN EXTENSO"

OF THE

SIXTEENTH ANNUAL CONVENTION

OF THE

DAIRYMEN'S ASSOCIATION

OF THE PROVINCE OF QUEBEC,

HELD AT NICOLET, DECEMBER 1st and 2nd, 1897.

Session of Wednesday Morning, December 1st,

MR. M. McDONALD, M.P.P., IN THE CHAIR.

Opening of the Convention.

The President, Mr. Milton McDonald :

Gentlemen,

We are about to open the Sixteenth Annual Convention of the Dairymen's Association of the Province of Quebec. The attendance is not numerous, but certain circumstances, over which we have no control, have prevented many from being present at this meeting, which is one of the greatest interest to all those connected with dairying.

This year we have inaugurated a novel system, wherein we have rather copied the methods adopted by similar associations in Ontario, at a meeting at which we were present last year: The subjects to be discussed are announced in a programme beforehand, and those who are to discuss them are therein named. In this programme, we allow a certain portion of time to each speaker, and we specially invite all strangers present to put questions to the lecturers, because such questions tend to draw out discussion, and from discussion breaks forth light.

REPORT OF MR. ELIE BOURBEAU,

Inspector-General of Syndicates.

To the Board of Directors of the

Dairymen's Association of the Province of Quebec :

Gentlemen,

I have the honour to submit to you my second annual report as Inspector-General of the Cheesery and Creamery Syndicates of this Province.

I began my tour through the Syndicates on the 24th of May, and ended on the 20th of October.

I arranged with my assistant, Mr. Plamondon, to divide our territory in such a manner that each factory should be visited, if possible, twice, in order to ascertain if the makers had profited by the advice we had given them at our first visit. I attended chiefly to the northern part of the province, and as factories there are of comparatively less importance, I, individually, inspected less cheese than last year.

This season I visited 169 factories, which I classify as follows :

	1st Class.	2nd Class.	3rd Class.	
Number.....	75	75	19	169
Order.....	123	40	6	169

In these factories I examined 12,024 cheese, which I classified thus :

1st Quality.	2nd Quality.	3rd Quality.
5,368	5,600	1,066

This year's proportion of second quality cheese is larger than last year's; the chief reason for which is this : Having begun my tour in the north, I found more early-made cheese, and, as you know, many factories at the beginning of the season, not having sufficient supplies of milk to make cheese every day, only work thrice, or even only twice, a week. I everywhere advised makers, and particularly farmers, on no account to start their operations until there was a sufficient supply of milk to enable them to make good cheese every day. There would be less of this sort of trouble if farmers would agree only to patronize factories of some importance. In regard to what I have said, we must not forget that this season was very backward.

Nevertheless, in the method of cheese making, properly so called, I remarked that some progress has been made ; it is our factories that chiefly need improvement, particularly in the ripening chambers. We have very few of these in which the temperature is under complete control ; and yet this is a point of the greatest importance, and the loss incurred under this head by the province is

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enormous, as may be easily seen on comparing our sale-prices with those of Ontario; I need not say that the difference is not in our favor. For my part, I think that our makers understand their business as well as the Ontario makers. Most of our men are well skilled in their trade; so the cause of the lower price of our cheese must be sought for in other directions, and I think it is due to the existence of those small factories I mentioned just now.

Is it likely that a factory that only receives two or three thousand pounds of milk a day can expend considerable sums in the purchase of good implements and in building good ripening chambers? Some do so, but they are exceptions, and belong to persons who, regardless of profits, aim solely at setting a good example.

One word as to the most usual defects—defects that made it difficult for me to put certain cheese in the first class: I mean defects in the appearance of the cheese; too small, and irregular as to weight; and it is in the smaller class of factories that these are most frequently met with.

The trade nowadays wants a cheese less firm than formerly, and of softer texture. Many makers have not succeeded in making the changes in their method needed to secure this; the secret lies in searching for the requisite degree of firmness less in the working than in the heating up, or cooking.

But I will not enter more fully into the details of manufacture; we have our school at St. Hyacinthe, where every one who meets with difficulties in the course of the season can have them elucidated.

The whole respectfully submitted,

ELIE BOURBEAU.

REPORT OF MR. J. A. PLAMONDON,

Assistant Inspector-General.

To the Board of Management of the
Dairymen's Association of the Province of Quebec,
Gentlemen,

I have the honour to submit to you my second annual report as Assistant Inspector-General of the Dairymen's Association of the Province of Quebec:

I began my tour of inspection this year on May 11th, and finished on October 15th. We changed the plan of our summer work this year, as Mr. Bourbeau thought it would be better for each of us to take a certain number of syndicates, and to visit them a second time, in order to judge of the improvement made in each syndicate, and to ascertain whether or not our teachings and

advice had been followed out. We also thought it better to visit fewer factories in each syndicate, and to devote more time to the making of cheese in the presence of the inspector.

During the above mentioned period, I visited 11 syndicates twice, and 4 syndicates once, making in all 26 visits, in which I went through 277 cheeseries, and about 20 creameries; but of all these factories I only found 63 in which the whole of the cheese could be in every respect called first-class, the total number of such cheese being, at the time of my visits, 3,477. In all the other factories, though there were some first-class cheese, there were others that, in some way or another, failed to come up to the mark. I classified them thus:

	Number of factories visited.	Factories and outhouses; drainage.	Implements and utensils in the factory, etc.	General state of the factories.	System of making.	Number of factories in which cheese was first-class.	Number of cheese first-class in every respect.	Total cheese examined.	Aroma.	Body.	Texture.	Colour.	Appearance.
1st class.....	227	123	221	150	171	63	3477	17365	11019	9997	6085	9081	10493
2nd ".....		121	55	115	98				2748	3761	7707	4696	3444
3rd ".....		33	1	12	8				121	130	96	111	251

In looking over this table I observe much less cheese this year than last having a bad aroma—off-flavour; and I also note that those that were not perfect had for the most part a smell as of whey, which shows the need of more care being taken by the makers as to the cleanliness of the whey-vats, and by the patrons to empty at once, to thoroughly wash, and scald with *boiling-water*, and to aerate throughout the whole day their milk-cans, instead of allowing the whey to remain in them all day in the sun, as many still do, in spite of all the remonstrances made to induce them to pursue a better line of conduct.

One morning last summer I was greatly surprised at seeing the master of the house in which we had passed the night going to the whey-vat and giving a pailful of whey to each of his cows, and doing this just as the patrons were beginning to arrive with their milk. Now, I ask you, how can this man find fault with his patrons for bringing in sour or badly flavoured milk, when he himself is teaching them the worst possible lesson, namely, that of giving whey to the cows. Moreover, he was a cheese-maker, though just then he was not practising. I am happy to say that he had never studied at our school at St. Hyacinthe.

I beg also to say that the districts which last year made the worst flavoured cheese, compare very favourably this year with any part of the province that I

visited this year still a great deal were formerly most of the made and well cooked

It is under class cheese; in of strictly first in texture is clear they do not take putting it to press of curd to get day after having pressing. Many cheese to press cannot be made details that pe out.

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Texture.	Colour.	Appearance.
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7707	4696	3444
96	111	251

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visited this year. Also, that I found much less soft cheese, though there are still a great deal too many who persist in making soft cheese, either because they were formerly taught to make it so, or to get greater yields; while, in reality, most of the makers of soft cheese get smaller yields than if they made it firm and well cooked (*bien cuit*).

It is under the head "texture" that I found the greatest number of second-class cheese; if there had not been so many defective on this point, the number of strictly first-class cheese would have indisputably been doubled. This defect in texture is chiefly due to the desire of the makers to end their work early; they do not take time enough to let the curd ripen and become pliant before putting it to press; it is also partly due to their allowing the butts of the blocks of curd to get cool in the heaps; or again, because they add curd of a previous day after having ground or salted the day's curd; or, lastly, for want of enough pressing. Many makers leave their work about an hour after having put the cheese to press, and never return thither till the next morning. Good cheese cannot be made in this way. It is only by paying attention to these little details that perfect cheese, such as the market nowadays wants, can be turned out.

As to colour, I am glad to say that here, too, I found great improvement especially in spring, at which season we generally find sour, dead-white cheese, with a great deal too much acidity in it. This, apparently, was caused by the makers at the commencement of the season making their cheese in the same way in which they were working at the end of the autumn previous; and we spoke and lectured them so persistently on this point that our teachings are at last beginning to bear fruit, for I found very much less soft, sour cheese this spring than last year. May I be permitted to state here, *en passant*, the causes that lead to the making of this dead-white cheese:

It is due, not so much to the too great degree of acidity imparted, as to this acidity being allowed to be absorbed while the curd is by far too soft; the milk, too, is allowed to ripen too much before adding the rennet, so that it works too fast, which renders it necessary to run off the whey as soon as the curd is cooked, and to firm the curd by stirring it while dry, whereby the whey runs off as white as milk, carrying with it that extra yield the maker aims at in making soft cheese; it is thus that at the same time cheese of the dead-white colour is produced.

In appearance, too, I found some slight improvement; but there is still room for plenty more. It seems almost impossible to get our makers to pay special attention to the finishing off of their cheese. If they could only feel the difference it makes in the eyes of the buyer, the inspector, or any stranger who visits their factory, I am certain they would strive to keep their cheese clean and finish it off in a neat and tasteful manner. In many factories I found the cheese so green that it was impossible to say how it would turn out. All the cheese had been sent away too soon after making, and against this fault it is impossible to strive too earnestly. In many cases, I have seen cheese taken out of press on Monday and boxed on Wednesday, and this is a terrible mistake;

under no pretext should cheese be boxed till at least ten or twelve days old. I was speaking one day this summer, at St. Hyacinthe, to a buyer about this error of sending away cheese too new, he himself having complained about it. "But," said I, "why do you not put a stop to it? If you would not buy any new cheese they would not send any out." To this he replied: "If I did not buy it my competitors would; but, after all, it is not we who suffer the loss." Observe, gentlemen, it is not the buyer who loses! Who does lose, then? If not the buyer, it must be the makers or the patrons! But in that case, if the makers would agree among themselves, and the patrons would insist that no cheese should be sold before it was ripe, or if the buyers would be good enough not to buy any cheese before it was two weeks old, this trouble would vanish utterly. We must strive manfully against this evil, which increases from year to year, for I saw more cheese sent away green this year than ever before.

In October and November, too, I also saw many cheese which were old enough, but which had not ripened properly, because the ripening chamber had not been kept warm enough to allow fermentation to act with sufficient activity. It is a well known fact that more cheese are spoiled at the commencement of autumn for want of a proper ripening temperature than later, when it is really cold, because then the makers are compelled to heat up the factory for fear of being frozen themselves. The ripening chambers should always be kept at 65° F., as nearly as possible, especially during the first ten days of ripening; but there are not probably 20 per cent. of the factories in this province which are properly adapted to the maintenance of an equal temperature; hence, an enormous loss to the Province of Quebec. You may judge how great the loss by the following fact

Several times this summer we have noted that the cheese sold at the Cowansville Board of Trade fetched as high, if not a higher, price than the cheese sold at the London, Ont., Board, on the same day; but, in the *Montreal Gazette* of November 8th, the report of the Cowansville and London markets of the Saturday previous shows that 3,229 boxes sold at Cowansville for 7½ and 2,222 for 7½ cents a pound, while at London, the same day, the price was 8 cents! I calculate, gentlemen, that this difference of price, on the same day, cost the district of Cowansville \$1,625.32, and I see nothing to account for it but that there are not proper means in that district of controlling the temperature of the ripening chambers. With the sixteen hundred dollars loss on November 6th at Cowansville, many a stove or other heating apparatus could be mounted, and many a ripening chamber put into proper order.

In my opinion all the trouble is caused by the building in which cheese is to ripen not being properly constructed. In many factories it is utterly impossible to keep up a proper temperature in cold weather. I have been in factories in which when any water was spilt on the floor it froze at once, even before it could be wiped up, and the cheese froze in the press. You may think I exaggerate, but you will find upon enquiry that there is not one of our inspectors that has not observed the same thing; but if your factory is not weather-proof, the temperature must be raised higher during the day-time. (1)

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In the ripening chambers we often find, stuck away in some corner or other, a stove; this is kept blazing away red-hot all day; the cheese near the stove begin to melt, while those at the other end of the chamber are freezing, or are at all events in too low a temperature to allow of their ripening. Everyone knows that a cheese once chilled will taste bitter and be pasty in texture.

On the other hand, in buildings in which the cold cannot be kept out, the heat in summer will have the right of entry, and it is not rare to see in the ripening chambers of this sort the butter running on to the floor. The Federal Government offers at present a grant to the creameries to enable them to fit up cold-chambers. Could it not do the same thing for the cheeseries? If a similar grant were made to each factory that is built and fitted up in a judicious manner, so that the temperature is under control throughout the whole season, I think this would greatly promote the chance of our cheese being properly ripened. Even had we, as a beginning, a few factories of this sort scattered about over the province, they would suffice to show the superiority of the cheese made therein. Mr. Bourbeau has just returned from Wisconsin, whither he went to look at the way in which their cheeseries are fitted up. Let us hope that the report he is to give us of his experience in that State will do good here, and stimulate us to make fresh efforts to ensure our cheese being equal in quality to any on the world's markets.

Another thing: Syndicates should be formed in the fall, or at least in the early part of the winter. I know of several cases in which the inspector could not get the makers to enter his syndicate in the fall, but, when summer came, when he had quite as many factories as he could properly manage and visit, they who had refused to join in the fall sought to enter the syndicate; of course he had to let them in, in spite of his having enough already on his hands. The thing is to be regretted, for though the rules of the Association allow each inspector to have from fifteen to thirty factories under his control, no one ought to have more than twenty or twenty-two in his syndicate; this is quite clear to all those who have visited a syndicate in which there are too many factories.

Factory proprietors ought to give their makers everything that is needed to enable them to turn out good work—a well built factory and all the apparatus required in good condition. In many places, the whey-vat is put under the floor of the factory, and cannot be got at by any means to clean it out. I once asked a man whose whey-vat was in such a situation, when it had been cleaned out last. "I know nothing about it," was his reply; "I have been here six years, and I have always found it just as it is now."

Again: The floor of the cheesery is frequently rotten and full of large holes through which whey and water run under the factory and putrify there. I assure you, gentlemen, that the smell that escapes from such a spot in hot weather is far from pleasant. I have also found old, leaky vats that, as soon as the steam was let on, emitted a stink that nearly drove one out of the factory.

Under such conditions, ought a maker to be held responsible for cheese that is off-flavour? In such a case, the patrons should bestir themselves, and, if

necessary, have the factory set in order at the cost of its proprietors, for it is a matter of hundreds of dollars to them.

And the proprietors should not cut down the wages of the makers to such a point that a good man cannot be found to work for such pay. I know a man who has several factories; he intends next season to hire none but youths at low wages, counting on the inspector's instructions showing them what they have to do. A greater mistake cannot be made. The inspector cannot be everywhere at once. And more, there are many men who never do what he tells them. If you have a good maker keep him, if possible, by all means; look after his comfort as if he were your best friend, for he is not easily replaced. Doubtless, there are exceptions. Last June I visited a factory in this very county of Nicolet, in which there was a young maker who had cheese of all kinds, of all sizes and forms. It was impossible to say how this state of things could be remedied so that the affairs should be carried on in a better manner. When we left, the inspector asked me what he had better do with the lad. I told him to get rid of him, as he would never be able to make anything of him. "Oh, but I cannot do that," replied the inspector. "Well then," said I, "do the best you can." Well, gentlemen, in October I revisited that factory, and in all my life I never was so surprised as I was to see the improvement made there. One could pick up blindfold any cheese on the shelves and send it to the competition to be held here to-day or to any exhibition in the country. I hope that lad is present and hears what I am saying. I can honestly say to-day that in none of the syndicates that I have visited have I found greater progress made than I have found here in Nicolet since my first visit.

In addition to the inspection tour I have recounted to you, I also devoted a few days at the end of April to the organization of a syndicate, as well as, in the first week in November, being present at a meeting at Drummondville, to get up a syndicate for the new year, at which place I delivered a lecture on dairying in general. Besides, I acted as judge of cheese at the exhibitions at Ste-Martine and Richmond, where I addressed the patrons on the care of milk, the factory-owners on their installations, and the cheese-makers on the faults in their cheese, the cause of these faults, and the remedies to be applied to correct them. I must say that I found this year at Richmond a very great improvement, chiefly as regards the flavour of their cheese, compared with what it was last year; and this year I had a great deal of trouble in assigning the prizes, so great was the uniformity in the lots. I also visited the Lachute exhibition, and there again, thanks to the courtesy of one of the directors, the president of the Agricultural Society, I was allowed to examine the cheese. We held there an extemporary meeting of cheese-makers, factory-owners, sellers, and judges of the exhibits. We had to try each cheese, and to tell them the reasons for such or such defect, for such or such a good point in the cheese shown, so as to give a real object-lesson. I may also observe that I found cheese in different factories in the county of Argenteuil as good as any that were on exhibit that day.

In May, while travelling about, I observed that in many places the meadows were as completely destroyed by the frost as if they had been burnt. There

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seemed to be no hay at all. I advised all the farmers I met to plough up these meadows and sow some grain or other to replace the hay that had failed. Later in the season, I saw this being done generally, some farmers ploughing and sowing even as late as July. I also observed that it was not in the middle of the lands (or ridges), or in the higher spots that the frost had destroyed the grass, but in the furrows, or in low places where the water had stagnated; and this shows the necessity of providing efficient drainage for our farms.

The whole respectfully submitted by your very humble servant,

J. A. PLAMONDON.

M. J. A. PLAMONDON'S REPORT.

DISCUSSION OF THE REPORT OF THE INSPECTOR-GENERAL.

Mr. Ed. McGowan—Mr. Bourbeau spoke just now of certain small factories; would he be good enough to define them more clearly, in regard to the quantity of milk received?

M. Bourbeau—In my opinion, the least that ought to be received at any factory is from five to six thousand pounds a day, or one might say, ten to twelve thousand. For my part, I would rather make cheese for a cent and a quarter, with a daily receipt of six thousand pounds of milk, than for two cents with four thousand. The cheese would infallibly be better. I tell you, therefore, that no factory ought to receive less than five to six thousand pounds. You will doubtless think this average high, for the greater number of our factories indisputably do not take in more than two thousand pounds daily, if we reckon from the opening to the close of the season.

Mr. McGowan—Do you not think that twenty-five to thirty thousand pounds of milk a week would constitute a good make in July to September?

M. Bourbeau—It would be an increase of fifty per cent. over what we now have.

Mr. McGowan—You cannot expect to have more. Could you not suggest some means of getting rid of these small factories altogether?

M. Bourbeau—Mr. Taché mentioned a way, and I think he can teach us how to do it. He has studied the question more deeply than I have. I have proved that they are an evil, but I should find it difficult to propound a cure. It would be easy enough if farmers made up their minds to it, but they do not seem to feel its importance.

Mr. McGowan—Then you think the farmers themselves are the cause of this evil?

M. Bourbeau—Yes I do; they are often the sole starters of these small factories, where young apprentices are hired, because the proprietors cannot afford to pay good wages; but it is the farmers that are the chief sufferers.

M. J. de L. Taché—Did you find any first-class factories ?

M. Bourbeau—I did not find so many as last year.

M. J. de L. Taché—You know what the scale of classification as to cheeseries includes : extra, first-class, second and third classes.

M. Bourbeau—I found no extra ones.

M. Taché—Why not put the first-class factories under the head of "extras" ?

M. Bourbeau—I consider that a factory that merits to be called an extra one should be perfect in every respect, and I have not found a single one in that condition.

M. Taché—*M. Vaillancourt* says that the scale one finds in the books of inspection comprehends the word "extra;" if it corresponds with nothing, should not the classification be changed ?

M. Bourbeau—I think it should. Dairying was less advanced when this scale was put forth by the association. The factories that were then called first-class would now no longer be worthy of that position, and the first-class of to-day would then have been "extra." The scale should be changed.

M. Clément—Have you this season met with any cheese having a sweet flavour ? I think this quality of cheese is a cause of loss to our farmers. Is there a fault in the making, or must we attribute it to the milk sent in ? If the farmers are in fault, it were well to instruct the makers on this point, to enable them to show the farmers how to get rid of the evil as soon as possible.

M. Bourbeau—This fermentative flavour used to be very common here in Nicolet, but now it has disappeared. In some places the maker is to blame for it, but the milk is the usual cause. If, for instance, you neglect washing the cans, you will get this taste. My own maker made an experiment at his own expense by keeping a ferment too long. He fancied it smelt strong, without, however, being sure of it. I advised him to discontinue using that ferment in making his cheese ; but, unfortunately, cheese had been made with it for three or four days, and it all had the sweet flavour. A maker, too, who firms his cheese too soon runs the risk of its acquiring the sweet taste.

M. Clément—Can the plan pursued of heating during the night rather more than usual, from 104° to 106°, get rid of this flavour ?

M. Bourbeau—It might help, certainly ; but to be perfectly sure of obviating it, use a ferment made of good milk. To prepare it, warm a can of milk up to 90° ; leave it in a warm place, and adding 50 per cent. of cold water, stir it thoroughly the next day and mix it with the milk. This has proved a perfect cure.

M. Clément—I observe that you point out a crowd of defects that we, as buyers, often meet with ; would it not be a good thing if these defects were

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mentioned in your spring circulars? There are but a few makers who are able to attend such meetings as the present, and I think they would be greatly benefited by the plan I suggest.

M. Bourbeau—Your idea is decidedly a good one, for we have put it in practice for a long time. In the *Journal d'Agriculture* of every month there appears an article on the system of making to be pursued the next month, the defects that have been noted in it, and the means generally to be adopted to obviate them. I trust that this custom will be kept up, and, as all factories are supposed to receive the *Journal d'Agriculture*, your idea is adopted in practice.

M. Clément—I feel the usefulness of this, and I have read the *Journal*; still, I think a circular would be read by every maker.

M. Bourbeau—Perhaps these remarks might be entered in the *Journal* a little earlier.

M. Poulin—Do you often find the bad quality of the cheese to be due to bad rennet?

M. Bourbeau—Last year, yes; but not a single case have I met with this season.

M. Poulin—Have any means been adopted for the abolition in future of this evil?

M. Bourbeau—The only means is to buy rennet only from reputable, well-known firms.

M. Poulin—Do you think that would be a means of securing the employment of none but good rennet? At the Waterloo meeting, two years ago, I suggested that the Government should take on itself the control of the rennet, but that body has not apparently taken any notice of the question. Last year the papers took up this matter very warmly. Farmers have lost a great deal of money through the use of bad rennet, and are crying out lustily for a preventive of its employment. I now reiterate my Waterloo suggestion, and I ask this meeting to assist in urging the Government to assume control over the supply of rennet. Inspectors ought to be employed charged to analyze the rennet that is sent to market, or better, it should be made under Government control. None should be allowed to be sold except under Government control.

The President—I beg to say that Mr. Poulin ought to lay his resolution before the meeting. It was only last year that we had any bad rennet, and it happened in this wise: It was made at Montreal by inexperienced hands; that imported from Europe was good. If people only take rennet bearing a good trade-mark there will be no fear of loss. Still, if Mr. Poulin would lay his resolution before the meeting —

M. Poulin—That I am going to do, and I think it will be useful, provided it is in order.

The President—Yes; you are in order.

M. Poulin—I think the best means of gaining my end would be to act through the intermediary of the Association. I am quite ready to submit it in writing, if it is thought advisable.

M. Vaillancourt—This question has been discussed by the Montreal Cheese Board. It was proposed to place the rennet under a certain control, but nothing was done about it. We found ourselves, last year, confronted by an accidental occurrence that will not recur, and which was due to the maker being misled by his chemist. I think that in future the trade will never buy any rennet that has not been submitted to the most minute analysis. It would be a waste of valuable time to pass a resolution on this point, seeing that the evil complained of will never happen again.

Mr. McGowan—In support of Mr. Poulin's resolution, would it not be well to state that rennet should never be made in Canada, as success in its manufacture here is impossible?

M. Chapais—That is not an "adjudged case."

Mr. McGowan—It would be better to forbid makers using it; for if they do they will be taken in again, as they were last year. Rennet must be put under the control of the Government, or of some other authority, to ensure that the rennet offered for sale be invariably of the best quality.

Mr. Barnard—Are we in order, Mr. President? I think it would have been better to have this question before the meeting by a regular resolution. Moreover, it is not our present business to discuss how we are to buy rennet; we have something else to do; there are the important points in Mr. Bourbeau's report to be discussed, and as far as I can see, they have not yet been touched.

M. Poulin—How do we know that the same thing will not occur next year? I want the danger to be utterly expelled, for I think we had a pretty disastrous instance of its effects last year. Now the question of order is raised; my proposal is said to be out of order. I beg to say that the discussion of the report was to be entrusted to certain gentlemen, and they not being present, the public was invited to put questions and make suggestions. The first question put was this: "Is the bad quality of cheese due to the rennet?" I think I am perfectly in order in talking about rennet. It is a question of the greatest importance, for it is all very well our getting good milk, but if the rennet is bad we shall not make good cheese. Milk and rennet are the two chief things to be regarded in the cheesery. I persist, then, in submitting my idea to the assembly if the President says my proposition is in order.

The President—You are out of order. Mr. McGowan was selected to lead the discussion, and he is here; but as you did not know him, you thought till now you had the right to ask questions.

M. Duguay—I am grateful to Mr. Poulin for the initiative he took. I think this Association ought to work at once at this question in preference to any other. As a selling agent, I have had many examples of bad cheese this year—said to be due to the rennet. I remember a demand from England to

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recover \$350 on an invoice of 400 cheese on account of the bad rennet used in their making, and these were of this year's make. This question is far too important to be slighted. I think the Association ought at once to seek means to get rid of bad rennet, and I think Mr. Poulin's way of putting the question is highly practical. The best plan would be, as he says, to put the supply under the control of the Government. Whether the rennet be Canadian or foreign, it should be examined by skilful, truly competent men, under the supervision of the Government. I feel that this article merits our greatest possible attention; we do not often meet with bad rennet, but it has happened once or twice, and that is too often.

The President—The representatives of two of the leading firms in the cheese trade in this country are present, Mr. Scott, of Ayer & Co., Montreal, and Mr. Dorion, of Hodgson & Co. Will they be good enough to tell us if they have met with any bad rennet this year?

Mr. Scott—I have seen none.

M. Dorion—Neither have I.

M. Vaillancourt—As to bad rennet, I have two instances to relate to you, both of which happened this year. The former is perhaps the one mentioned just now. One of my makers had had some rennet that I had ordered him to cease using in August, 1896; but he began to use it again this spring up to May 27, when I stopped him again; it caused a loss of about \$300. In the other case, the seller tried to throw the blame on the rennet, but I think the fault lay with him, for the rennet came from a cheesery that always turned out first-class cheese both in aroma, body and color.

M. J. de L. Taché—I beg to observe that rennet is excessively capricious. I know many makers who will not accept rennet until they have themselves tested it. An official may find it good, and the cheese-maker not approve of it. Certificates thus given by competent persons have contributed greatly to deceive the public. The article, after it is made, is subject to so many variations of temperature, etc. Thus, it may have been good when the inspector gave his certificate, and yet be hardly worth anything when the cheese-maker wants to use it. The makers, in this matter, have only their experience to protect them. I firmly believe that any report leading to the appointment of a Government official will by no means afford the public all the desired guarantees.

M. Poulin—Here is my resolution: "Proposed by Mr. H. E. Poulin, seconded by Mr. J. N. Duguay, that the Dairymen's Association exert its influence with the Government to persuade it to undertake either the manufacture or the inspection of rennet."

Mr. Barnard—The purchaser can get the best rennet in the world; he has only to desire it. But, in my opinion, a Government certificate is rather likely to lead him into error. The certified rennet, if it has not had all necessary pains expended on it, may in a certain time turn out to be worthless in spite of the Government certificate still being there to protect it. The Association would, in my opinion, be wrong in accepting Mr. Poulin's resolution.

M. J. de Taché—It is within my personal knowledge that a certain sample of rennet was sent to a chemist for analysis, and the result was favourable. I am thoroughly persuaded, though, that the whole lot will draw down reproaches on the head of him that sells any of it.

M. Clément—I think Mr. Taché's remarks are well founded. I have witnessed an almost identical fact. A man to whom I had sold rennet in the spring came to me in the course of the summer saying that it was not good. Later in the season I bought some cheese of him, and I observed that it had a bad flavour—due to the rennet. I asked him in what state he kept the barrel, and he told me that he kept it in the factory not far from the boiler and exposed to the sun. I found that the rennet, that had been good in spring, had been ruined in his factory owing to the carelessness with which it had been treated. Thus, as Mr. Taché said, a rennet may easily be ruined after the chemist who analyzed it has given his certificate of its goodness.

M. Bourbeau—Even if the rennet had received a Government certificate that would not have prevented it going wrong in the condition under which it was kept. The best guarantee is to buy rennet of a responsible party.

The President—I request the members present to vote on the motion.

M. Poulin—It would give me great pleasure to withdraw my resolution, but I have a very powerful reason for not doing so, and I am anxious that it should remain public. Two years ago the same arguments were opposed to my proposal, and I yielded to the wish of the Convention. Two years after, the public got excited over the same question, and events proved that I was perfectly right.

M. Duguay—I second Mr. Poulin's motion.

Mr. Barnard—There is one question of deeper importance of which not a word has been yet said—the ripening of cheese. All our inspectors agree in saying that our ripening chambers are badly arranged, and I think the point is well worthy of being discussed. I trust Mr. Bourbeau will give us his opinion on the subject, and tell us if it would be possible for us to have central ripening chambers for the use of all the cheeseries in a district.

M. Bourbeau—With good roads, I think it would be a good thing. The Wisconsin people are going to try it. It is intended that all the cheese of a district should be carried to a central ripening chamber, to mature there under proper conditions. When the cheese is ripe the dealer is to visit the central depot and examine the cheese. The man who is to be the guardian of the cheese will himself be a judge, and it is to that dépôt that the dealer will go to select the cheese he requires. I do not know if the thing will take here; the difficulty is the roads.

Mr. Barnard—Could not a central dépôt be got up at Montreal? If we could manage it so that Montreal dealers had a Chamber like that —

M. Bourbeau—It would cost too much at Montreal; besides, green cheese would be damaged if carted too far.

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M. Bourgeois—Will you describe to us a good ripening chamber?

M. Bourbeau—Before a ripening chamber can be called really good, it must be so arranged that the temperature can be kept in all seasons about 65°F. In this province hardly any of our factories have the means of controlling the temperature. In the hottest part of last summer, in a number of factories which we consider good ones, the temperature ran up to 90°F. A great difference between 65° and 90°! If 65° suits cheese, 90° cannot be a favourable temperature. I think it would be better to put the cheese on tables than on slatted shelves (*claires*), as our cheese does perfectly well on tables, and as the cheese are heavy, they are apt to get marked by the slats. On tables the cheese must be turned daily. Then, there are at least 80 per cent. of our factories that are utterly without ventilation, and of the remaining 20, others that have only a ventilation of 20 inches square in a chamber of 20 feet square. Among these 20 there are several I would not classify as "extra" solely on account of incomplete ventilation.

Mr. J. de L. Taché—I am in some degree responsible for the scale of classification. I never meant to ask inspectors to place factories in the first-class that did not merit the distinction; but I would ask the inspectors to define what they mean in classifying a factory as "extra."

Mr. Bourbeau—They are factories that are plastered; they have a cement floor; a good ripening chamber; a good system of drainage, and plenty of ventilation.

Mr. J. de L. Taché—I should like to hear in what part of the province you met with the greatest number of the worst constructed ripening chambers.

Mr. Bourbeau—In the parts I visited, Lake St. John and Chicoutimi, I think the ripening chambers are quite as good as those in this district.

Mr. J. de L. Taché—Supposing you were going through Ontario, and visited, say, 175 factories corresponding with the 175 first-class factories here, would you put them in the first-class?

Mr. Bourbeau—No; I would classify them as "extra." I only wait for an order to change the scale.

Mr. Barnard—There is another question: about the counsel to be given to the public, a most important point which was raised just now. To give this counsel or advice we have at our disposal the *Journal d'Agriculture*; it is published twice a month, or rather four times, since it appears in both languages and at different dates for both editions. Thus, all who receive both versions of the *Journal* would have a weekly article on the making of butter and cheese. Now, there is, without doubt, a great many makers who are not members of our Association, and who do not receive the *Journal*. This is an inconceivable state of things; it ought to be no longer tolerated, and every sensible man should try to put an end to it. Here is an Association that takes the trouble to devote an article, to instruct the makers, in every number of the *Journal*, and the makers

do not belong to the Association, and therefore do not receive the Journal. It is a state of things that is abhorrent to common sense.

M. Clément—I remarked that Mr. Plamondon told us that he had met with a great deal of cheese with a sweetish taste. I should like to know if he attributes this fault generally to the makers not knowing their business, or to the quality of the milk they are obliged to receive from the patrons? I consider that if the makers are in fault, it would be urgently necessary to compel each maker to furnish himself with a certificate of competence before he is entitled to put himself at the head of a factory. I want to know if, after his investigation, Mr. Plamondon thinks the thing depends on maker or on patron?

M. Plamondon—I met with cheese of second quality with the sweetish taste, and that was the fault of the maker; his vat was not clean. He only cleaned and scalded his vat twice a week, while it ought to be done daily. Again, there is cheese with a taste of whey in it; there would be much less of this sort were the patrons more careful. Most of them are careless; they leave the return-whey in the cans for part of the day, and it always has a bad effect on the cheese.

The maker is in fault as regards the greater number of cheese of the second quality, but rather from carelessness than from ignorance. In our books on the classification of cheese we specify: flavour, body, texture, colour, and general appearance. A cheese may be good in texture, and yet bad in flavour; good in body, and yet full of holes; this is called bad in texture, and is always the fault of the maker, more from carelessness than from want of knowledge of his business.

Dr. Grignon—Even if a maker has a diploma, that will not enable him to make good cheese out of bad milk. Do you find nothing but good milk brought to the factories?

M. Plamondon—No.

Dr. Grignon—What is your opinion of a maker who would accept a can of milk at the bottom of which he had found a rat?

M. Plamondon—I have found plenty of maggots in cans. I have seen maggots crawling out of a lot of coagulated milk on the edge of a can.

Dr. Grignon—In your visits, now, do you find that the inspectors do their duty? Are they present for the purpose of inspecting the milk of all the patrons?

M. Plamondon—Their orders are to be present, and in our tours we are with them.

Dr. Grignon—Are they brave enough to say to the patrons: "Your milk is too dirty." Have any of them the pluck to say that?

M. Plamondon—Certainly there are many who are bold enough for that.

M. Bourbeau—The inspectors have instructions to do so, and I believe they obey their orders; but behind their backs the makers refuse hardly any

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M. Plamondon refuses any milk obliged to accept

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milk; the cause is the small factories. The maker knows bad milk when he sees it, and the reason that he does not refuse it is that his neighbour is ready to accept it.

M. Plamondon—Just so; the factories are too near together. If one maker refuses any milk, it is taken to the next factory and accepted, so the maker is obliged to accept all the milk offered under fear of being obliged to shut up his factory. In Ontario, there are factories that take the milk within a circuit of six miles, and when not good it is refused at once. The patrons, having no other place to carry their milk to, are obliged to be more careful.

M. Poulin—If these small factories ought not to be patronized why do the inspectors patronize them?

M. Castel—To try to prevent them from doing ill is not patronizing them?

M. Chagnon—I beg to ask Mr. Corbeil, our inspector, if I do not compel him to do his duty in this matter.

M. Corbeil—You have made me refuse bad milk; I was cited into court as a witness on that affair.

Dr. Grignon—Did those patrons improve?

M. Corbeil—Yes.

Dr. Grignon—Is it within your knowledge that aerating strainers are used?

M. Plamondon—Not generally enough.

Mr. McGowan—Formerly, we country shopkeepers did not always buy good or bad; it had to be taken. We had our customers, and in spite of ourselves, we had to tell them that their butter was good. Nowadays the makers are nearly in our old position; they must take the milk offered, for if they will not, the neighbouring maker will.

M. Chagnon—I am in just the same position. I have never taken bad milk. I used to tell Mr. Corbeil: "I want you not to accept a single drop of bad milk." He has refused sweet milk, only of the previous afternoon's milking, for a bad flavour in it. It was sent back and it did not hurt my business.

Mr. McGowan—There are some factories in the province where in many instances no cheese at all would be made if, as in that case, inferior milk was rejected.

M. Plamondon—But if every factory refused bad milk, such cases as Mr. McGowan cites could not occur.

Mr. Ness—Could not all the makers combine and bind themselves to accept no milk that had been refused at another factory?

M. Plamondon—I know of people who, refused at one factory, go to another next day, where they are accepted with pride.

M. Chagnon—In our case, that is utterly impossible. There is another factory within seven hundred yards of us and we have not found our business fail. We have had less milk, that is all.

Question—Why not enrol all the factories in syndicates? We could then lay down rules in virtue of which all milk refused at one factory could not be accepted by another.

M. Castel—All improvements cannot be made in one day; a rule of this kind was adopted last year by Syndicate No. 2, Bedford district. It is going on this year, and acts well; but all factories are not yet syndicated.

M. Plamondon—It is not the syndicated ones that do us the most harm, but those that remain outside.

Mr. Wilkins—I tried this year to get my syndicate to adopt this rule, but I could not find ten factories in favor of it.

Mr. Barnard—I propose that this discussion be adjourned till to-morrow

The President—It is dinner time. This session is adjourned till half-past one o'clock this afternoon.

AFTERNOON SESSION OF WEDNESDAY, DECEMBER 1ST.

At 2 o'clock the President declared the session opened.

REPORT OF M. J. D. LECLAIR,

Superintendent of the Dairy School and Inspector of Creameries.

To the members of the Dairymen's Association of the Province of Quebec:

My annual report last year of the operations of your Dairy School at St. Hyacinthe showed a falling off in the number of pupils inscribed in the courses of instruction, and the reason for the decrease was given you. The attendance for 1896-97 has been more numerous; 302 pupils have followed the courses; 155 in cheese, and 147 in butter.

From all parts of the province comes testimony, all the more flattering since unsolicited, on the benefits derived from your Dairy School. The making of butter and cheese, the management and administration of factories, are better understood and better carried out by the great majority of those who have attended the school. These improvements I have witnessed myself, and great pleasure I feel in telling you of them.

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The St. Hyacinthe Dairy School is in nearly the same condition that it was last year, and it is enough to refer you to memoranda I had the honour to submit last year to the School Committee, as well as to my report. The only thing I have to add is, that events crowd on rapidly, and a vast amount of work is being carried on everywhere; work for improvement in the dairy business, work striving to attract customers for its products. Very pressing, then, is it that your school be put into a condition to enable it to keep step with other similar schools in America, and not lag behind. The school is recognized as affording thorough practical instruction; grant it a little scope in the investigation of certain questions, in the carrying out of some experiments, and I feel convinced that it will fulfil all the expectations that can be formed of it.

Last spring, the Hon. Minister of Agriculture at Ottawa secured my services for a tour of inspection through the Province of Quebec, with instructions to pay particular attention to the making of butter and all thereunto belonging. I was also entrusted with the duty of accepting the work done on the construction of ice-houses and cold chambers for the keeping of butter, and to decide if the buildings were entitled to share in the premiums offered in aid of them by the Federal Government.

The route approved by the Dominion Commissioner of Agriculture and Dairying was only a continuation of the visits I paid the previous year; I visited almost all the factories on the south shore, from Lévis to Ste-Anne des Monts, in Gaspé, a certain number near Montreal, and along the north shore as far as St. Bazile, Portneuf.

I will now, gentlemen, serve you up a réchauffé of my report of last year, telling you how I found the same faults in making, with the same variations of intensity; but to these I will add a fresh one: the bad management of and in the factories; mouldiness in churns; ending with a few general observations:

1. *Mould in churns*—My experience, gained this year as well as last, enables me to say that perfect butter cannot be made in a mouldy churn. Mould has a very strong smell that the cream absorbs during its churning and retains after washing. The constant dampness of the wood of the churn causes it, and then the churn becomes the home of these vile smells. The want of care in washing the churn is sometimes the cause; but generally the washing is well done, and the mould is caused by the churn never being dried. After washing, the churn must be filled with dry steam until it becomes very hot, then, in opening it, the water of condensation runs off, and the difference of temperature producing very rapid evaporation causes the churn to become dry in a few minutes.

2. *Management of factories*—You will not be surprised at my telling you that many men concerned in the business of butter and cheese-making have been very far from finding the fortune they had a glimpse of and which had sometimes been promised them. Farmers in easy circumstances have only found a simple way of covering their land with mortgages, and have confessed to me that, at starting, they never troubled themselves about expenditure; it seemed impossible to expend all the money in making at four cents a pound. I remind you of these things because I am convinced that your inspectors might be

rendering a very great service by teaching the true and wise principles of management, which can alone make this business pay. This kind of teaching between two men (inspector and proprietor) (1) is not the least fruitful of results. The slight, inner details are exposed to the light; objections are discussed; the essential points explained; and the risk of mistakes are thereby rendered much less hazardous. The instances of deception advanced enables the candidate to weigh exactly the advantages or the reverse of an undertaking, moderate the enthusiasm of a too lofty ambition, and eventually lead to the trade being embarked in solely by men endowed with special aptitude for the business.

2. *Observations*—The enumeration of the faults committed in making and the teaching of the proper means of remedying them do not seem to me to be sufficient to guide us in the proper road to the improvement of the dairy industry. As the farmer ought to understand the land as well as he understands the seed he sows on it, so ought you to understand the idiosyncrasies of those to whose minds you confide the seed of words and instruction.

I found much gratification in travelling through the parishes along the South Shore, from Lévis to Ste Anne des Monts, Gaspé. The average cultivation is good, and those of the Association who know the proportion of pupils sent by that region to our school have much cause to take pride in hearing this statement. I am all the more at ease in making this statement, because I am far from those whom it concerns, and this is the first time I have ever been in Nicolet. The proprietors and directors of the factories pull well together, and if anything good is achieved there do not look for the cause of it elsewhere than in them. They are pleased to meet the inspector, and take in good part the remarks and advice that is given them. Postponed improvements, good resolutions, taken in a moment of enthusiasm, but weakened by the lapse of time, return all of a sudden with greater force than ever, and receive at least the first impulse of practical execution.

It is painful to me to have to make a few reservations as to some of the counties on the North Shore, between Montreal and Three Rivers; but it would not be fair to omit stating a difference—the existence of which is real.

Payment for milk in proportion to its richness is the practice now in a large number of creameries and cheseries, to the great satisfaction of the patrons. A good sign is that the patrons themselves are so eager for it that they threaten to leave any factory that will not follow it.

There are now a great many manufacturers of boxes; but I wish the manufacturers would find out how large, exactly, a box that is to hold 56 lbs. of butter ought to be. Some boxes hold 60 lbs., and it has happened that a maker having filled some boxes that held more than the 56 lbs., was only paid for that quantity. This want of uniformity, besides, ought to be enough to abolish badly made boxes.

Various prices are paid for boxes now on sale, varying from fifteen to twenty-two cents, and I believe we might tell the dealers that unless they adopt

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the plan of value in proportion to cost (d'achat suivant la valeur) within two years from to-day, all the good boxes will be despised and the poor ones taken. No amount of good advice will be of any use where money is concerned; and I tell you frankly that it is utterly useless to counsel and recommend the purchase of a box costing an additional seven cents, if the good boxes are not treated on the market with more respect than the inferior ones. And buyers ought to provide bags to pack the tubs and boxes in; their cost is always taken into consideration of the expense of packing; it would even be a saving to supply the packages to the sellers, for they would escape the necessity of having to clean the boxes before packing them.

The construction of cold chambers with refrigerators was regarded with a proper degree of consideration, and I met everywhere with such an anxiety to construct them, that I entered warmly into this part of my mission, and made it the subject of a genuine crusade. And nothing is more pleasant to me to-day than to tell you, in the presence of the Dominion Minister of Agriculture, that of the 148 factories I visited, 107 promised to build them, without reckoning the 15 that had already been built. I will go so far as to say that, had our factory owners thoroughly understood the idea of the Minister and the manner in which these edifices should be put up, at least \$5,000 of the liberal grant voted for this purpose would have come into this province.

I trust, gentlemen, that these few remarks will be made the subject of a resolution requesting the Hon. Sydney Fisher to continue for another year the time granted for the entire sharing of the subvention.

The Butter Trade.—This important question is also in our department; it has already been treated in our meetings, but we should return to it as often as circumstances require. Our export of butter we have seen increase since measures have been adopted to present it in better form on the English market. Encouraged, and with reason, by this success, we have made, or are making, every possible exertion to present it in good condition to the trade of that country. Cold chambers, refrigerator-cars, cold storage at the export towns; the chain has no broken links, and the butter will lose little or nothing of its freshness so far. It is then the property of the purchasers—the dealers—and we must recognize their right to get rid of it at any time and in any manner that suits them; it is no business of ours. Still, we are at liberty to give a glance at these large warehouses, in order to know how long the butter lies there; and we find that there is in them some butters two, and even three, months old! At such an age can butter retain its early fine fresh flavour? No, gentlemen; however low the temperature in which it has been kept, its freshness has disappeared as the perfume of the flower disappears, and we had nothing but a withered nosegay left to offer to the English for the festivities of the Jubilee of Her Majesty.

When butter appeared to be on the point of being erased from the list of our exports, we said, after ripe reflection: The English market is supplied uninterruptedly with butter; it is for fresh butter that, in 1896, 75,000,000 dollars were paid, and if we care to have our share of the sum it is fresh butter that we too

must send thither. Whatever may be the laws that govern trade, now that we see our competitors becoming more and more numerous, the question presents itself, whether the manner in which the butter trade is conducted corresponds with the need of developing that trade here, and with the public efforts made to that end.

The editor of this report is happy to annex to M. Leclair's declaration the following circular, dated :—

MONTREAL, MARCH 1ST, 1898.

THE MONTREAL BUTTER-AND-CHEESE DEALERS' ASSOCIATION.

SIR,—In view of the coming season, the executive committee of the Dealers in Butter and Cheese of Montreal think it their duty to call your attention to the fact that, according to letters received from the principal towns of England, to which the greater part of Canadian butter is sent, it appears that in order to keep up our present trade and to increase it, it is positively necessary that our butter be exported in a perfectly fresh state. We desire to convince you of the importance of selling the products of your creamery every week at the then market price, instead of waiting till the end of the month, as has been the usual practice; and we are firmly convinced that if this plan be generally adopted, as it is already for cheese, the result at the end of the season will be much more satisfactory to the producer than the present plan, and that the volume of trade will be greatly expanded.

For the truth is, that if Canada does not adopt the policy of selling her butter when strictly fresh, she had better at once abandon her efforts at establishing an export trade; for that is the method of sale pursued by all her competitors in the English market.

It is acknowledged to be the plan followed by Canada with her cheese, which has placed us at the head of all countries that supply England with that comestible, and owing to it we have reached the highest reputation, while as to butter we are still far behindhand.

(Signed).—A. J. BRICE, President; JAMES OLIVER, P. W. McLAGAN, ARTHUR HODGSON, JOHN MCKERGOW, WM. NIVIN, J. A. VAILLANCOURT."

I say no; and never shall we reach the same level that the Danes and the French occupy if we continue to observe our present dilatory and unselfish pace. We must be active and energetic; we must display our fresh butter before the eyes of the English; make them taste it rather more than less frequently, and make them learn that they really cannot do without it. This is the only way to increase our export trade, to open a market for this product of our milk, at the same time increasing the means of getting a larger yield from our cows.

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I have a plan or project to submit to your examination; it has already met with assent from a certain number of persons concerned to whom I spoke when on my tour, and who doubtless will take part in its discussion.

The whole respectfully submitted,

J. D. LECLAIR.

SESSION OF DECEMBER 1ST.

M. Leclair—My project is this:

1. Appointment of a commissioner to reside one or more seasons in England to put our butters before the English people, and make them well known.
2. Appointment of one or two experts at the shipping ports to judge of the fitness of butter for export.
3. Selection by the Association of a number of factories in this province that would agree to (export?) a day's make or more every week or month.
4. The quantity to be left at the discretion of the government.
5. Payment, cash, at the Montreal market price, by the government on production of invoice by its expert.
6. Product of sale handed to the government by its commissioner.
7. Profit paid over to the exporters; losses borne by the Treasury.
8. The whole revocable at discretion.

Such is my plan; it has been objected to by some, others approved of it more or less thoroughly. On the whole, it has been sanctioned by a great number of persons interested. I leave it, gentlemen, to you for discussion.

Here, Mr. Macdonald left the chair, which Mr. J. C. Chapais, the Vice-President, then took.

M. Vaillancourt—I have nothing prepared to set before you, for I was waiting to hear Mr. Leclair's report that I might make a few remarks upon it. I will take an assertion of Mr. Leclair's. He said in his report that some boxes of cheese hold as much as 60 lbs., and that when once put upon the Montreal market, the sender was only credited with 56 lbs. I think he is mistaken. It often happens that boxes come weighing more than 56 lbs.; but in that case they are weighed by the public weigher and the difference paid for.

M. Leclair—I thought I had explained in my report that this was only practised by a very few dealers—very few indeed. But even if it had only happened once it would be worth calling attention to. I am aware that, in general, business is carried on as you describe, and the forwarders are paid for

the goods they send; but I also know that 60 lb. boxes have been sent to Montreal and the senders only paid for 56 lbs.

M. Vaillancourt—I think you are wrong to quote this as a practice, if there have only been exceptional cases. Again, you spoke of bags to wrap up the boxes in, saying that the butter buyer ought to furnish them. In my opinion it is rather the duty of the purchaser of the butter to supply the bags and to exact payment for them; for treated in such a way, the boxes would always be in proper order when they reach us.

M. Leclair—As exporters are obliged to put their boxes in bags, would it not be better for them to send bags at once to the creamery owners?

M. Vaillancourt—And if the exporter does not buy the butter afterwards? Why should not the forwarder put the boxes into bags himself, and be satisfied with getting paid for them by the exporter?

M. Leclair—One never gets the money for them back again.

M. Vaillancourt—It would not cost him more.

M. Leclair—If it can be done in that way I have no objection.

M. Vaillancourt—If the seller put the boxes in bags, I would willingly allow him two or three cents a bag.

M. Leclair—If you could establish this custom it would be perfect.

M. Vaillancourt—You mentioned that England requires fresh butter all the year round. This is proof of the importance of not keeping our butter long. We have in warehouses butter three months old, and, which is still worse, butter very mild (very slightly salted) for exportation, and therefore not suited to home consumption; so the export trade cannot do anything with it, because it is no longer fresh; neither can the local trade, because it is not salt enough! The local consumption ought to be considered, as there is no longer any quantity of dairy butter on the market; so a trifle more salt should be used, so as to meet the demands of both the English and the home market.

M. Leclair—I do not think it is possible to make a butter that would suit both countries.

M. Vaillancourt—Strike an average; use $\frac{3}{8}$ of an ounce of salt to the pound of butter, and that will please both palates, English and Canadian. The butter made for England will not keep, even in an icehouse.

Mr. Macdonald—Is it not the dealers rather than the makers that keep butter for several months?

M. Vaillancourt—Yes, undoubtedly; but I know makers who have as much as 700 tubs on hand; they will lose by it, as it has not kept well.

M. Leclair—No one wants to encourage makers to keep their butter.

M. Vaillancourt—True; but I want to have this appear in the report.

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M. Leclair—We always advise makers to sell their butter every week, but some of them like to speculate. We always make it our duty to prove to these people that they would get a much better average price at the end of the season by selling weekly, than by selling at irregular intervals. We always recommend weekly sales whenever possible.

M. Vaillancourt—It has been advised to pack butter in boxes; some have tried it, and when they reached the buyer with their butter he told them: "If your butter was in tubs I would take it, but as it is in boxes I cannot buy it." I would therefore advise people to pack some of their butter in boxes, but not all; the local market prefers tubs to boxes.

M. Leclair—I think it would be much better if, on the opening of the season, the dealers in butter and cheese were to hold a meeting, to which the inspectors should be invited, to make known the views and needs of the local market. The local trade has never put forward any particular statement of its tastes. If you would say what you want, the inspectors would make it their business to spread abroad the knowledge of the requirements of the local as well as of the foreign market.

M. Vaillancourt—It would not be too easy to state the needs of the local market at the beginning of the season. A demand might arise from a country, on the spur of the moment, on account of a drought, or some other cause. It is for that reason that I advise that all the butter should not be put into tubs, so as to always have some ready to meet the demands at any given moment.

M. Leclair—It would be better to have an understanding. A purchaser should have his clients who would engage to deliver him so much butter for the local trade and so much for the foreign market.

M. J. de L. Taché—*M. Leclair's* idea is excellent; there is always a time when the English demand falls off. At the end of March one can form some idea of what the demands of the market will be. At that period, *M. Vaillancourt* and the other dealers ought to make it their business to communicate with our Association, or to get the Secretary to come to Montreal and give him their ideas as to the coming demand for butter. We could then easily guard against the dangers that *M. Vaillancourt* has just pointed out, that is, the risk of having butter in boxes when the trade wants tubs. After the 15th September, there is always a risk in packing butter in boxes, because the fall in price begins about the 3rd or 4th. It takes place earlier now than formerly, on account of the arrival of Australasian butter, and because we then no longer make much grass-fed butter; so, of course, there is a risk in packing butter in boxes. We had better work for the Montreal market.

M. Vaillancourt—There would not be much use in consulting the dealers only at the beginning of the season. Last spring, we expected that boxes would be more in demand, but we were mistaken. The trade had better be consulted every month. And, moreover, we must not cling entirely to either box or tub. It is not easy to sell butter in boxes to the local trade.

M. Leclair—Why is that.

M. Vaillancourt—It is a fancy; still, I must say that there are boxes that are nothing but four butt-ends of boards stuck together.

M. Leclair—That is a well known fact. There are plenty of bad boxes; still, the butter in them sells at the same price as that in better boxes.

M. Vaillancourt—I have nothing to add to M. Leclair's report. I think he has pointed out all the defects we have to complain of. But I think there is still a great deal of progress that needs to be made, and I trust that the *Journal d'Agriculture* will do all in its power to ensure the greatest possible firmness in the butter made for exportation. The articles that are read in that periodical aid greatly in promoting the success of dairying. The greatest fault which remains to be noticed this fall is the white spots (mottled butter). If we could get rid of them, we should, I think, have made a good onward stride in the path of improvement.

Mr. Barnard—Since we are speaking of boxes, I saw yesterday, on my road from Quebec, a really remarkable box. It is a Canadian invention. I should like to know if M. Leclair has seen the "Piché box," and what he thinks of it?

M. Leclair—I know it. Its only fault at present is its high price. It is fairly staunch, well shaped; it has the slope (*inclination*) the market seeks for, and closes well. It is certainly as good as any box on the market at present.

Mr. Barnard—Then, as with all good things, it has chosen its time for appearing judiciously.

M. Leclair—I hope so. I observed in my report, that we could take our choice in boxes from 15 to 22 cents in price. And when we sell our butter, we get no more for that in good boxes than for the butter in the cheaper ones, though it makes a vast difference to the seller. If a remedy cannot be found for this, in a few years the good boxes will be renounced altogether.

Mr. Barnard—Ought not the Association to investigate the cause of this? Now, I earnestly desire that the products of Lower Canada should be recognized as being of the first quality wherever they go. At present our products are excellent, and are considered on the Montreal market as first-class, and yet we cannot sell them without discarding their designation mark. There is an established prejudice which makes out that everything that is good in Quebec was really made in Ontario, and that every inferior product from Ontario hails from Quebec. But Mr. Fisher here will, no doubt, make it his business to put an end to this prejudice. Quebec's products must be seen on the market in their own name, and reinstated in their proper position; and I believe that had we an agent, selected out of this province, and sent by the Government to represent us, the superiority of our goods would be recognized before long.

M. Vaillancourt—I can certainly recommend Mr. Piché's box, as I think it is the best. As to M. Leclair's project, I think I spoke of it long before he did, for I mentioned it to M. Beaubien three or four years ago, saying to him: "As long as we are without a commissioner to look after our products

'on the other market."

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'on the other side,' we shall not be able to take a firm hold of the English market."

M. Leclair—I am glad to see that my idea is favored by the trade.

Mr. Wilkins—Mr. Leclair, in his report, said that milk ought to be paid for according to its richness. I have found patrons who put their milk into cold water at night, skimmed in the morning, and added the cream to some unskimmed milk to enrich it. What does Mr. Leclair think of this action?

M. Leclair—It is fraudulent; for a milk that is paid for according to the production of fat in a hundred pounds, you would have more fat than ought to be.

Mr. Wilkins—I wished to lay this before the meeting to show what things are done in the country. It is one of the objections entertained by the makers to the paying for milk according to its richness. They will not make their calculations upon the richness of the milk on that account. It makes a great difference as regards cheese. (1)

M. Leclair—In such a case the makers ought to examine the quantity of solids in the milk, so as to detect the fraud.

Mr. R. Haven—Do you not think that boxes should be uniform? Could we not fix upon a uniform measure, so that all boxes might be made exactly of the same size and shape?

M. Leclair—In that case we should need the assent of both the dealers in butter and the makers of boxes.

Mr. R. Haven—If butter is packed in the boxes too soon after churning when it gets dry the weight will no longer be 56 lbs.

M. Lavourcière—From the report of M. Leclair it is evident that the St. Hyacinthe school has done so much good that I wish to see it open throughout the year. It ought not to be closed for six months out of the twelve. I desire to submit this point to your discussion, and I think it would be approved of by every one.

M. J. de L. Taché—I beg to call the attention of the meeting to the fact that the reason why the school is closed for six months is that pupils fail us. It is intended specially for the makers, and they cannot attend in summer. Then the cost of retaining the teachers all the summer must be considered. You are aware that the inspectors in summer become teachers in winter. The school would, doubtless, be more beneficial if we could keep it open all the year, but the Association has not funds enough at its disposal to enable it to keep open longer than it does.

Mr. Barnard—This question, I think, brings another in its train—that of the aid brought to the Association if the number of its subscribers were increased as much as possible. I do not believe more than one-half of the makers are members; it is a misfortune, for either it is doing a great deal of

good or it is useless. For my part, I think it is doing much good ; and yet half the makers do not think it worth their while to pay a dollar to receive its report. If every maker subscribed that sum we should be in a position to engage another inspector, and when any difficulty arose in a maker's work, instead of leaving his factory and going to the school to learn how to conquer the trouble, the Association could easily send a competent man who would at once put things straight. That is what we could do if every one would do his best to help us. In this province there is a great number of patrons not represented in our Association. I think means ought to be found, by increasing our income, to do good on a more extended scale.

Mr. John Scott (of the firm of A. A. Ayer & Co., Montreal)—I must notice a few points in M. Leclair's report : First, no Montreal firm pays for only 56 lbs. of butter, when there are 60 lbs. in the box, for every respectable firm pays by the certificate of the public weigher. Secondly, I cannot admit that buyers pay as much for butter in inferior boxes as they do for butter in good ones. Mr. Barnard said that buyers take our good butter and cheese and label it "Ontario," and label the inferior lots of Ontario cheese "Quebec." Though this is not a general practice, it has been done two or three times to my knowledge. Thirdly, I do not agree with the proposal to send a Government agent to England to look after the sales of our butter there ; the exporters are there ; they know their own business, and have capital at stake.

While I am up, I wish to add a few words on a matter I consider to be of the greatest importance to the makers. I know that it is much more ingratiating to flatter them on the improvements made in butter and cheese during the last two years, but I cannot refrain from calling your attention to some faults that are still perceptible, and that many makers have not corrected : I mean the want of attention to the look of the goods. (In fact, what the French mean by "*cachet*," an untranslatable word, meaning the stamp of elegance, fashion, etc., etc.—A. R. J., F)

The purchasers judge butter or cheese first, by its quality, aroma, texture, etc., and then by its looks. If a box of cheese, otherwise well made, is badly got up, with badly placed bandages, surfaces not level or smooth, or spotted by dirt on the shelves, weights varying from 45 to 70 pounds, and in badly fitting boxes, too wide or not high enough for the cheese, the cheese exceeding the box in height by half an inch to two inches ; these points, I say, either separately or combined, must reduce the value of the cheese. As long as makers send in their cheese in this form they will never get the top price of the market for it.

The same remarks will apply to the packing of butter. It is absolutely necessary that the exterior of the tub or box be clean and free from stains. Butter must be packed firmly, without air-space, and the packages lined with good parchment paper. Both boxes and tubs must be filled full ; the surface level and flat, neither rounded up, nor marked with the pestle. No need to put salt on the top of the butter, but the parchment paper should be steeped in brine, which would prevent mould.

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If makers would decide to consider seriously this question of "cachet" or *looks*, and the finishing touch to be given to butter and cheese, I am convinced that with the progress already made in the Province of Quebec, there would be no more talk about the difference in make and price between Ontario and Quebec cheese.

M. Leclair—I do not know if you seized my idea, when I stated that certain shippers had sent 60 pounds of butter; they had filled the boxes, and, not having marked the weight on their outside, the Montreal dealer only credited them with 56 pounds. I did not say that this was the usual practice, but I did say that in my tour I received such complaints, and I seized the opportunity of the fact to ask that the manufacturers should take care that the boxes should only hold 56 lbs. exactly. In this way the dealer would not have to pay for what he has not received, neither would the maker fail to be paid in full for what he had delivered. These remarks were only made to introduce the question of the uniformity of the size of the boxes. That is what I said, Mr. Scott.

Mr. Scott—This explanation changes the question, but you accused the dealers of only paying for 56 lbs. when they had received 60 lbs.

M. Leclair—Excuse me; I did not say that. Now, what is the second censure you have against me?

Mr. Scott—I do not censure you; I spoke of the quality of the boxes.

M. Leclair—I did not recommend the use of inferior boxes; but I stated before the Association, and I am glad to repeat it before the dealers, that unless there is a difference made in the price paid for butter in a 22 cent box and for butter in a 15 cent one, the factory men will invariably choose the 15 cent box, and the result will be that butter will be sent abroad in inferior boxes.

Mr. Scott—That is just the thing I want to contradict. Dealers do not pay the same price for butter in an inferior box that they pay for butter in a good one. The very first thing a dealer looks at is the box.

M. Leclair—I know proprietors of creameries who have told me that they would pack butter in any box required, provided they were repaid for their outlay.

Mr. Scott—And who was to repay them?

M. Leclair—The dealer; but you pay as much for butter in a 15 cent box.

Mr. Scott—Oh, no.

M. Leclair—Then I am very much surprised at what these men told me. They were trustworthy men, and I accepted their statements implicitly.

M. Clément—The discussion between Mr. Scott and you is not without its usefulness. In my butter and cheese business I have several times had to buy butter in inferior as well as in good boxes; and I have often made the same remarks that you have made; but, on the other hand, I have been obliged to

pay as much for butter in bad boxes as for butter in good ones. There are circumstances in trade that are out of our control. Each of us have clients who come to our store with butter in bad boxes, and we have to pay them the market price in spite of the boxes being inferior. In several circumstances we have lots of butter in cold-storage. Suppose there are ten lots; the buyer will begin; if he wants 200 boxes, you may be sure he will begin by looking at the outside of the boxes before he asks to see their inside. I therefore advise the payment of the seven additional cents for a good box, since butter thus packed sells more readily, and I think makers should be encouraged to use good boxes. I know that we shall have an additional amount to pay, but if we lose on one sale of butter, under other circumstances we shall gain much more than the value of the entire outlay that we have made during several months.

M. Leclair—You admit that you have paid the same price for the good as for the bad boxes; and you also say that the purchaser made a difference between the prices of the good and the bad ones; why then do you not make a distinction between the two in the purchasing price?

M. Vaillancourt—With the permission of the Chairman—Mr. Scott has just contradicted me as to the value of having a Commissioner in England. I said, and I stick to it, that we never shall succeed in getting a firm hold of the English market for our butter until we have a commissioner there. I think that it is the duty of this Association to take steps to persuade the Minister of Agriculture to allow us to have one. When the Government has appointed a commissioner there to introduce our butter, with a large "poster," inscribed CANADIAN BUTTER, then our butter will be protected properly. I think that the trade is wrong in keeping twenty thousand dollars' worth, and more, of butter, in store; they let the butter go bad, and it cannot help earning a bad name on the foreign market. The Government will have no profits to make. It will ship off our butter regularly, and before long we shall get the same price for our butter that the Danes get for theirs.

Mr. Barnard—Commerce is deeply interested in seeing that butter sells at the highest possible rate. The higher the price, the more commerce thrives. All that we can do to increase the value of products tends to benefit trade in general. To buy in the cheapest and sell in the dearest market is the one and the sole business of trade. We must act in such a manner that our goods may be sought for by the trade, and by displaying them properly in England we shall be aiding the trade in the Province of Quebec.

M. Castel—The Government of the United States has just taken up a position perfectly similar to the one we are discussing. The Minister has made purchases at the creameries of different States and sent samples of these butters to England, where they are sold on account of these creameries. The United States papers speak very highly of the experiment. At a very recent convention, the Minister caused to be exhibited samples of butter, the make of all the countries with which the States butter is likely to come into competition, and his action was approved of by all the butter-dealers in the States.

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M. Taché—I beg to say that Denmark never got a good hold on the English market until after having kept an agent in England for ten years.

Mr. Barnard—All the Australian colonies have agents in England.

Mr. Scott—If an English dealer buys butter from a Montreal butter-man, and orders it to be kept in cold storage for two months, the Canadian dealer is not to bear the blame (if it is spoilt); that is the English dealer's business.

M. Castel—Would it be possible to get from the trade an account of all the butter stored in Montreal on English dealers' account?

Mr. Scott—Such a thing has never been asked for.

M. Castel—It might be published, and would be, I doubt not beneficial to our people.

Mr. Scott—You would be horrified at it!

M. Vaillancourt—Generally speaking, our September butter is not shipped so fresh as our June butter, for at that season the English market does not want it so much; it has butter from other countries. Frequently butter is bought on commission, and is consigned to *cold storage* by order of the foreign dealer, and the broker who bought it can only ship it off later, since he is paid to do so. Still, that injures our trade, and is only another proof of the need of making our butter known in its fresh state on the English market.

Now, there is a serious defect that I have mentioned. The parchment paper is subject to turn mouldy. Will M. Leclair be good enough to enlighten us on this matter?

M. Leclair—This question is now under investigation. I have conferred with M. Choquette, and he has given us a remedy: Steam the box or tub first of all; steep it in brine; wash it; steam it again, and then wash it in cold water. Treat the paper by soaking it in a very hot brine before using it.

M. Vaillancourt—I suppose your investigation will be concluded in time for its being published in the next report.

M. Leclair—I do not know if M. Choquette can get it done in time. In the next number of the *Journal d'Agriculture* there will be an article on *moulds*.

M. Corbeil—I fancy a good deal is due to the ice houses that sweat too much. I have seen mouldy butter in ice houses where there was too much moisture.

M. Chagnon—With a dry ice house (refrigerator) and the box steeped in brine, there is no danger.

ADDRESS OF MR. PETER MACFARLANE,

Inspector of Cold Storages.

My Friends,

I am about to address you in French; but to speak fluently in that language, demands constant practice, and, unfortunately, I had but little chance of practising it during the past summer, for I passed it in Ontario, where I did not hear a word of French spoken. I met there several Canadians, but they all spoke English; the same thing occurs in this province, where one meets men whose name is English, but who cannot speak a word of that language. So, during the whole ten weeks I passed in Ontario, I had no chance to keep up my French; wherefore, if I speak it unintelligibly now, you will accept the will for the deed, and excuse any blunders I may make.

The Government—I am not about to talk politics, ah! no; no politics here; the Government has been trying to place our cheese on a sound position in England; and I will relate to you a fact that will prove to you that it has succeeded. Two friends, on a trip to England, were passing a shop in which cheese was sold; entering, they asked the owner if he had none of their country's cheese to sell. What is the name of your country, asked the tradesman? America, replied one of them. We have no American cheese, said the man; it is not good. Asking the other of the two friends whence he came, and hearing that he came from Canada: Ah! said the shopkeeper, Canadian cheese is good! The English, as you see, do not know much about the geography of our country, but they are fully aware that very excellent cheese is made in Canada. We are Canadians, and that is the reason why makers should always brand their boxes and the cheese itself with the word, "Canadian."

But, though our cheese occupies a good position on the English market, it is not so with our butter. We now have to give a hoist up to our butter. Every maker ought to have a nice little cold storage; not too large a one, lest he be tempted to keep his butter too long. This cold storage should be so made as to be susceptible of preserving a temperature of 38° F. Then he despatches his butter in refrigerator cars to Montreal, whence it is shipped in cold storage steamers to London. Butter thus kept cool will reach England in good condition, and gain a good reputation there.

Mr. Fisher, who made a grant to such creamery proprietors as have built a cold storage for butter, told us some time ago that he had only received some 70 applications for this grant, out of which only 50 had fulfilled the conditions and been paid; the others had failed to construct their storage properly, and so lost their right to the grant, but of the 50, two-thirds are Quebec men, and this shows that the Province is not lagging behind.

Mr. Fisher tells us that a grant of \$100 is to be continued for one more year. He thinks that there are not enough creamery men who have profited by the advantage offered last year, so he gives them another chance.

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The Province of Quebec is not lagging behind in the race. I took a trip through Ontario last summer and the people there thought me crazy when I told them that, in butter-making, Quebec beat Ontario; still, it is the case. We here, do not believe this; no, we fancy Ontario leads in everything. We are wrong; in the West there is not a single separator!

Capital cheese is made in Ontario; there, they are leading, but we make better butter. In many places in Ontario the cream is fetched from the farms, and the woman who delivers it is not always too careful in her toilette, consequently the cream collected in this way is not always so fragrant as it might be. Such a state of things does not exist in Quebec.

Now, allowing that the Ontario people know how to make cheese, it often happens that they do not know how to sell it. Here is a circular sent out by an Ontario maker, offering for sale 1,900 boxes of cheese of September and October make. I could have sold this at $9\frac{1}{2}$ cents a pound, but the maker would not let it go under 10 cents.

In Quebec we do not speculate like this, except in the Eastern townships, where something of the kind was tried to the great loss of the speculators. The best plan is to sell the cheese as soon as it is fit to leave the factory and to leave speculation in cheese to others. Why not sell at once, instead of keeping our cheese such a time? Why this maker who refused $9\frac{1}{2}$ cents has not sold his cheese yet, and is only offered $8\frac{1}{2}$ and $8\frac{1}{2}$ cents for it! Here, at home, we never keep our cheese like this; our fault, if we have one, is that we do not keep it long enough. Excuse me, once more; I could go on talking, but I think I had better hold my tongue.

M. Clément—I should like to hear Mr. Macfarlane on "cold storage."

Mr. Macfarlane—Many people fancy that \$400 must be the least expenditure to give them a right to the grant, but they are mistaken. It can be done for very little. Suppose you have a staunch weather-proof chamber in your building; even if it be not quite staunch, at an outlay of \$25 to \$30 you can so repair it as to keep the heat from entering. It is not so much spending a lot of money that is wanted as prudent expenditure of the necessary sum; for I have seen a factory that cost \$6,400, and when I was in the cold storage, I could see the sun through the gaps in the boards. The owners were trying to find out why they could not keep their cheese cool in it! The reason was the sun could get into the chamber with ease. You can make your chamber close with paper; use only lumber enough to hold the paper firmly; there is nothing beats paper for keeping the air out. I do not advise the boards to be tongue-and-grooved; it is needless to spend four or five hundred dollars to get a grant of one hundred. You can in this way make your storage-chamber large enough, but not too large. There are many people in Ontario that have fine, roomy storage-chambers in which they can keep butter for a month or six weeks; they say: It is a good thing, this cold-storage plan, to keep butter. But, when we asked them why they wanted to keep it, they replied: Oh! perhaps the price will go up. That is not

the line of conduct we must imitate. And for this reason, I say, do not make your cold-storage too large; with only a small one you will have to sell your butter quickly to get it out of the way.

A large chamber is much more troublesome to care for than a small one. You have, for instance, a little one, in a corner, 12×18 feet; that will not be difficult to keep cool. You need not have an ice-house in your building; keep your ice in the usual way.

You can lower the temperature of your chamber to 26°; it is easy to keep it at 38°; so with such a margin there is no danger. It is still better if it can be kept at 34°. At 26° it is very good, but so low a temperature is not needed. Everyone who wants help for this purpose can get it by applying to the Government. You have only to write to the Department of Agriculture, and you will receive all the plans and explanations needed to show you how to construct your cold-storage. Do not hesitate about it; it will cost you nothing.

Now, I think I have said enough; once more, be good enough to excuse me.

M. Castel then read a paper, by M. J. N. Paquet, on:

PAROCHIAL CO-OPERATION, AS THE MEANS OF DIMINISHING THE NUMBER OF SMALL FACTORIES.

Mr. President and Gentlemen,

"Parochial co-operation, as the means of diminishing the number of small factories"; such is the subject of the paper you requested me to prepare for the present meeting of the Dairymen's Association. Had I to treat this subject myself before the convention, I should be able to condense my paper within the limits of the half-hour you allow me at first, and then, during the discussion to follow, supply the omissions and gaps that occur in it.

That my paper may not be useless, and that the questions that the audience may want to put may be answered by anticipation, I shall avail myself, without abusing it, of the latitude you so obligingly offer me. To say too much, and to say too little, these are the two rocks past which I have to manœuvre. Be not afraid; if I am wrecked, I, I alone, shall be the victim.

It is because I assisted in the formation of an association for the making of butter and cheese in the parish of St. Hénédine, Dorchester, that you asked me to treat this subject, that the parishes that desire to form similar associations might benefit by our experience; I must therefore:

- 1, Relate with historical nicety the formation of our association;
- 2, Detail to you its organisation, its rules, and its board of directors;

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3, Describe its operation, and its financial condition up to the present time ;

4, And, in conclusion, offer certain practical observations and advice.

This is a rather long journey to travel, and fatiguing too, perhaps, but the interest you feel in the formation of these associations permits me to reckon on your kind attention.

Time presses, I will pluck the finer ears, and afterwards, if needed, pick up the gleanings.

CONDENSED ACCOUNT OF THE FORMATION OF OUR SOCIETY.

There has been a creamery at St. Hénédine since 1882. In 1883 it passed into the hands of a syndicate composed of six landowners of the parish. At the same time, up ran two cheeseries. There, then, were three factories, all stained with the original sin of competition. The evil was incurable, it had to be borne with, and the scourge of disunion ravaged the district for three years. In August, 1897, the two cheeseries, finding that their milk supply was failing, gave up working, but the owner of one of them and his friends, seeing that they needed a creamery to contend with equal forces, determined to erect one, and even to start it over against the already existing one.

The parish priest, the Rev. Alfred Paquet, saw with grief the discord that reigned among his parishioners, otherwise good fellows and good Christians. So, being filled with serious ideas as to his priestly duties, he conceived the happy idea of fusing together these widely differing elements and forming a butter and cheese association, by way of striking a death blow at the spirit of disunion. This appeared to everyone an attempt at the impossible. Still, if some were obstinate, there were others who sought for peace and mutual good will.

And now, the priest goes to work. The difficulty was to get the most ardent partisans of each side to meet together and make proposals tending to restore peace. The invariable answer to the curé was: "I will attend the meeting if the others will;" but no one stirred, and the weeks were passing rapidly. In spite of this the priest kept on; at last, driven to his last refuge, he had to act. All at once a droll idea occurred to one of the parishioners. "We will have a meeting, Monsieur le curé. I can answer for the attendance of all the rest, but on one condition, you are not to be present at it" "Very good," was the reply, make peace among yourselves, that is all I wish for; if I am an obstacle to it, I will keep away. This was discarding the Association's cornerstone; the meeting took place; plenty of talk, of discussion, and the meeting broke up leaving the minds and feelings of the people more disunited than ever.

Months elapsed, discord was more embittered than before, but the curé resumed his labors: will not successive drops of water wear away a stone? In short, the people came to an understanding; the formation of an Association was decided upon; the creamery was purchased for \$1,500, the cheesery, that is the more contentious one, \$650, and it was carried from its place and set

down close to the creamery. No one troubled himself about the other cheesery, because as soon as the Association got to work it was foreseen that that cheesery would have to shut up.

There was, then, no standing still; five of our folk, animated by a zeal more ardent than enlightened, registered, in the Record Office of the District of Beauce, a declaration attesting the formation of the Association. But, fatal omission! The bye laws and organization of the Association had not been drawn up. And there they were (so many men, so many opinions), lost in an inextricable labyrinth. To aid the curé in his work of restoring peace I then came forward with an offer of my services.

After long *pour parlers*, both parties agreed upon a system of partnership (*à fonds social*). I prepared bye-laws founded on that system; they were discussed in committee, before being submitted to the general meeting, which according to the date of the registration of the declaration, had to be held on January 2nd. The committee met, but to my surprise, I found that unknown to me, its members were trying to institute a totally opposite system of working. Discounting the future, it was proposed to borrow all the needed funds, not to lay out a farthing of cash, and the debts of the Association were to be paid out of profits. A popular system, it is true, but not too creditable to people in good circumstances, and utterly opposed to the interests of a good partnership. An association is dear to us on account of the advantages we gain from it, and the sacrifices it has cost us.

From this arose fresh troubles. The meeting that was to have been held on January 2nd, is not announced, and will not take place. The minds of all become excited. New Year's Day over, no more congratulations. All hope of a good understanding vanishes; to those who were helping me I said: "We have scattered abroad good seed; it is cold, the land is frozen; when the season improves it will bear crop. Patience and length of time, says Lafontaine, do more than impetuosity and violence." There was sufficient to drive people crazy.

On the Epiphany (Old Christmas, or Twelfth Day, A.R.J.F.) when the Mass was over, I called a public meeting; things were more quiet; explanations were made, concord reigned. Anyone who caused trouble was carried away by the general current. I drew up the plan agreed upon, and they were satisfied; 68 of the most notable farmers joined the association; there are only 115 in the parish, so no opposition factory can be built; that is sufficient. January 10th, a fresh meeting to sign the declaration required by the law passed in 1891 to render legal the association for the manufacture of butter and cheese.

After a thousand explanations, I told the members of this embryonic association that they had all to sign the declaration. At the word *sign* many looked towards the door, preparing to steal off without sound of trumpet. "Ah çà, my friends," said I, "the association is not got up for my benefit, but for yours. I don't want it. You are free and can do as you please. If you wish for it you must all sign, or else it will fall to the ground." That was enough; all signed the declaration as well as a formula drawn up in the shape of a promissory note by which they engaged to pay ten dollars to the association, in two payments.

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The formalities required by the law having been complied with, a meeting of all the shareholders was held on January 15th to approve the bye-laws and to elect the directors.

The birth of this association has kept us a long time, I allow; but you know how difficult the formation of such a thing must be, obstructed as it is by a crowd of obstacles. Still, perseverance conquers everything.

The cheesery purchased is a mile from the creamery; it must be transported close to it. The 20th January, 35 pair of oxen, driven by as many men, execute this gigantic task in a few hours; and behold our two factories, seeming to regard each other with a stupefied air, exchange the kiss of peace, as a sisterlike pledge that henceforth harmony shall rule between them.

Oh, marvellous power of dairying! Thou makest all to move, men, beasts, factories; glory to you all, devoted promoters of this beneficent trade, here is your work accomplished. •

In the second place, let us look at

THE ORGANISATION OF THE ASSOCIATION.

As Boileau says, we had to consult the taste of every one; to replace the work twenty times on the loom in order to conciliate all the voices.

I stated that the association paid for the creamery, including a complete apparatus for cheese-making, \$1,500; for the cheesery, \$650; in all, \$2,150. Dear, do you say? I do not deny it. But to acquire the inestimable treasure of peace, it was not too much. In addition, the association had to buy a second separator, a butter-worker, a churn, at a cost of more than \$600. These considerations were the starting point of the system adopted.

There are 68 members, therefore 68 shares: each member is a shareholder, and holds only one share. The amount subscribed for each share is \$40. In consequence, \$2,720 is the amount of the capital stock. Ten dollars is the sum paid on each share; thus the capital paid in is \$680; enough to provide for pressing demands. So that the association only owes \$2,040. The payment of the ten dollars is made at twice, \$5 on each payment; one on May 1st, the other on July 1st.

The revenues of the combined factories shall be employed: first, in the payment of the workmen, the working expenses, insurance, interest due to creditors, payment of capital due, and lastly, for the repayment to members of moneys paid at the starting of the association.

The association will then repay to each member the sum of \$10, without any interest. This repayment shall be made by dividing the profits equally among the members.

The profits derived from the members of the Association, after the above repayment has been made, shall be distributed among them, according to the number of pounds of milk furnished by each member.

The profits derived from those who are only patrons shall be also divided among all the members of the association.

There are in the parish 115 farmers; there are 68 members and 112 patrons, including the members. Of these, 7 of the patrons are from a neighboring parish.

Such is the constitution of the association. Now, let us see what are the by-laws which are to ensure its successful working:

They are not, you will easily believe, the work of the "Seven wise men of Greece"; more than one of you could add to them the seasoning of a deeper wisdom; but, such as they are, they suit us. I omit in the recital those clauses that especially concern St. Hénédine, and only give those that are of interest to the public at large.

1. The association is formed for an unlimited period. With the consent of a full majority of its members it may be dissolved, provided it shall have settled all its business and paid all its debts.

2. Any farmer or other person of St. Hénédine, keeping milch-cows, may become a member of the association.

3. The members agree to conform to the bye-laws adopted by the association, as well as to those that the board of directors shall think fit to pass hereafter.

4. Every member is to send his milk to the factory.

5. Should a member sell his property, he may sell his share to the purchaser, the latter thereby becoming a member of the association.

6. As long as the association shall have debts, or sums due to the members, each member who shall be a year or more without sending any milk to the factory shall be repaid his \$10 after the other members, after the expiration of a delay equal to the time he shall not have sent any milk to the factory.

7. Anyone in the parish, or even from the neighboring parishes, may, as a patron, send milk to the factory.

8. The charge for making is 3 cents a pound for butter, and 1½ cents for cheese, for both members and patrons.

9. The association makes butter and cheese. On the demand of its members it may make both at the same time, if the directors think the supply of milk is sufficient.

This lengthy recital must be inducive of slumber; it affects even me in that way. But judge for yourselves; could I abridge it, cut it short, without injury to its utility? Could I pass in silence the board of directors, the very soul of the association; for, as the soul animates the body and puts its organs into action, even so the board of directors preserves, develops the vital principles of the association and directs all its operations.

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BOARD OF DIRECTORS.

1. The association elects seven directors to form the board. This number is chosen on account of the seven sections into which the parish is divided. As far as possible, each of these should furnish a director.

2. He is elected yearly at the general meeting in December; four form a *quorum*.

3. When a meeting of the board is to be held, the directors are to be notified specially by the president or the secretary, or by one of the directors, at least 24 hours before the meeting.

4. Every question that is disputed is to be decided by a majority of the directors present.

5. The president may vote as a director on every division; in case of an equal division of votes, he, as president, has a casting vote.

6. The directors elect two of their number as president and vice-president, who must be able to sign their names; they are the officers of the Association.

7. The directors engage the secretary-treasurer, who is not to be a director.

8. The directors are to manage the property, the interior discipline, the sale of the products, the payments to members and patrons, and the general administration of the business of the Association.

9. At any time the directors may call a meeting of the Association, upon giving public notice at the door of the parish church on Sunday or a *fête d'obligation* preceding the day of meeting.

10. The services of the directors are gratuitous; but a director authorized to travel on behalf of the Association is repaid his ordinary travelling expenses.

11. A general annual assembly is to be held during the month of December, at which the directors give an account of their administration, and a detailed statement of the receipts, expenditure and general business of the Association. At this meeting, new members may be admitted, the capital shares increased or reduced, and, if necessary the members ordered to make a first payment on the amount subscribed for their shares.

12. The Association is to subscribe to "Le Prix Courant."

Festina lente, says the Latin proverb; don't hurry; and I don't. Let us say a few words on the humble servant of the Association, the secretary-treasurer. It is a too important movement in the mechanism of the Association to be left in the shade. The

SECRETARY-TREASURER

has to give security for an amount to be determined by the directors. His duty consists in giving special and public notices; being present at the meetings of

the directors and of the Association; drawing up reports and writing letters; keeping all the books and accounts of the Association; receiving in proper time and place the payments of the shareholders; making out the dividend lists; preparing the reports, etc.

It is a matter of importance to select a thoroughly competent man for this post; one revelling in the midst of figures, like that one at St. Hénédiene; and to give him a salary in proportion to the work he has to do. People often offer to do the work cheaper, but be on your guard; under pretence of a false economy, do not risk the existence of an association on which your hopes of prosperity are founded.

The man to whom you intrust your milk, the fruit of your labor and sweat, deserves our serious attention. Heavy responsibility rests on his shoulders. It is not a waste of time to say a few words about

THE MAKER.

That he must thoroughly understand his trade is clear, and he must possess a hundred other qualifications. If you find your man knows how to make first-rate cheese and butter, and discharges conscientiously his duty, you possess a treasure; keep him by all means. Begin by securing good milk, and the success of your association is certain. The maker we employ, a former pupil of the St. Hyacinthe Dairy School, gives us perfect satisfaction. He can refuse, politely, a bad lot of milk. "But ——" does any patron retort? "There is no but, here ——" At the St. Hyacinthe School we were taught to do thus." The lesson bears its fruit.

That to found an Association, to furnish it with all the elements of vitality, is a praiseworthy work, nobody denies. But must not the tree be judged by its fruits? The fruits of a dairy association are of two kinds: first, the products, butter and cheese; then the realized profits. After seven months' work, let us see if the

OPERATIONS AND FINANCIAL STATE OF THE ASSOCIATION

answers our expectations and merits our care. I have my information from the secretary of the association. From April 19th to November 1st, the creamery made 58,500 lbs. of butter, and we expect an additional make of about 6,000 lbs.; besides 7,780 lbs. of cheese. Everyone knows that the pastures failed during part of the grazing season, and also that cows return in milk just what they get in food. The sales of butter in the second half of August and during the whole of September realized, respectively, 75½ and 74 cents per 100 lbs. of milk; the sales of cheese for the corresponding period, 72½ cts. The goods were of the best quality, and sold at the highest market price, even if that was not very high. Although the result be in favour of the creamery, in these isolated facts, I dare draw no rigorous conclusion from them, on account of the fluctuations of the market. But I am confirmed in my opinion one is as good as the other; both are bound, like twin sisters of the same business, to travel together hand

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in hand; to offer aid to the needs of the market; and to assist the interests of the farmer.

You must have remarked that the yield per 100 lbs. of milk is not very high. On this point, the maker, enlightened by the Babcock, said to me: "At Hébertville, Lac St-Jean, where I worked for several years, the difference in the per centage of fat is greatly in favour of that place compared with St-Hénédine." The cause? Is it due to the cows, or to the pasture? The parish of St-Hénédine lies in a valley; the soil is rather moist, the grasses and fodder naturally watery. This may be the cause. (1)

Then follows an abridged financial statement of our affairs: The association paid, for both factories, \$2,150.00; the members subscribed \$680.00 in order to pay ready money for a separator, a butter-worker, a churn, etc., and the other expenses of installation were great. On November 1st, after all expenses paid, the association remitted on capital account, the sum of \$450.00, including interest. The calculation of receipts and expenditure being made, approximately, for the entire season, it is estimated that from the present time to the end of the season the association will realize \$150.00. No possible error can exceed a few dollars. To-day, November 8th, we are still in receipt of 4,000 lbs. of milk every day. A net income of nearly \$600.00 is reckoned upon. It is for you to appreciate the value of the work of our association, and to make it the subject of one of your interesting discussions.

A few *Remarks and Counsels*, and I have done.

1. We are strongly advised not to make "fodder-cheese." We must therefore set up combined factories, in order to carry on dairying throughout almost the whole year. That which an individual cannot undertake, a parochial association can always do. Dairying works with both hands. The creamery is the right hand, the cheesery the left; they help each other, and together make complete work. I call the creamery the right hand, because it necessarily begins and ends the work of the season, and may even keep on without interruption all through the year.

2. In parishes where several small factories are living harmoniously, it would be highly advantageous from many points of view, to set up an association to deal with all the milk in the parish as one factory. If the size of the parish or the situation of the place is against a single factory, nothing hinders the formation of two associations, provided they be not rivals. The emulation between them will be likely to stimulate the zeal of the members.

3. In parishes where division reigns the formation of an association is a cure for all evils. Difficult of application, it is sovereignly efficacious when applied. The physician who must be employed is the priest, the curé of the parish. His authoritative advice will cause the most obstinate of hearts to bow. I suppose, of course, that he is a absolutely disinterested, immovable in patience, and zealous for the spiritual as well as temporal interests of his parishioners. Sometimes an equally unselfish layman can be of valuable assistance to him.

(1) Food, then, does influence the per centage of fat!—A. R. J. F.

4. There were false prophets 1,800 years ago and there are still some; pessimists, men who delight in the midst of embarrassment. If you are working for the public good, you will surely meet some such men. Keep on, all the same, follow up your endeavours towards conciliation and progress.

5. If you aim at forming an association that will last, begin by securing a good organization; that is the foundation to build it upon; provide it with wise bye-laws, the superstructure that will shelter it from all storms. See that the directors observe strictly the bye-laws, that is to say, the code of the association. He who passes as a lamb on entering the association may turn out to be a wolf in the sheepfold. Some will want to shake off the yoke of the bye-laws in order to get a chance to satisfy an old grudge, to make things go in the way he prefers. Without this safeguard and the protection of the law that entitles it to legal existence, an association will incur great risks. It is the rein that curbs the most restive of spirits.

[1897] You do not think, I hope, that the association I speak of heralds the return of the Golden Age on earth! You are too profoundly acquainted with the human heart to entertain such an illusion. Discontent, chattering (Anglice *jawing*), clamour, we have enough of; the machinery is worn, rusty, needs a drop of oil, and a slight application of brotherly kindness, the sort of oil needed, has often the effect of restoring order to the whole machine. Still, nothing arrests the progress of the association, nothing changes the general satisfaction. The dairy industry develops itself in full freedom, and peace reigns over every soul.

Help yourself, and Heaven will aid you. Work we then to consolidate the union that constitutes our strength. God, who sees in secret, who holds in His hands the hearts and wills of men, sometimes makes that possible which seems beyond the powers of man. It is the grand secret of the success of our humble endeavour.

(Signed) JULES N. PAQUET.

Ste. Hénédine, November 10th, 1897.

REMARKS BY M. J. DE L. TACHÉ.

M. J. de L. Taché.—M. Paquet's lecture is entitled: "*Parochial co-operation as a means of decreasing the number of small factories.*" It is then the evergreen subject of small factories that returns periodically before our meeting, but it is a subject that we must not neglect. As fungi grow on old stumps, so all sorts of troubles result from these small factories.

As regards the proprietor, no profits, forced retrenchments in the installation, the keeping up of the factory, the supplies, the pay of the workmen. As regards the goods produced, second rate in quality, inferior look and consequent poor demand, difficulties in delivery, and cuts in prices.

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As regards the patron, as a compensation for his distant carriage, less money, less confidence, shorter seasons, and less encouragement.

It is a good thing that our meetings repeat and our reports record once more, that it is not the number of factories that will secure the future of our dairy industry, but the excellence of our butter and our cheese, and that to attain excellence in these goods, the best plan, in the opinion of those who know anything about it, is to make the factories large enough, important enough to enable the proprietors to hire first-rate workmen, to supply all things of the best quality, to keep up and improve the buildings and apparatus, to gain information of every sort, and to keep themselves thoroughly acquainted with the constant improvements that are being made in the dairy industry.

And how is the erection of small factories to be prevented? How are those at present working to be abolished? The difficulty is to find an effective, lasting cure, more efficacious than those we already possess.

M. Paquet and Dr. Grignon seem to think that the remedy is already found in co-operation, such as described in M. Paquet's address. Of course, I see how, as long as folks agree and get on, things will go well. But on what does the existence of the co-operation association of Ste. Hénéline depend? On the interest of the shareholders of the Association, that is, \$10 each? In the income from the \$10, as at present? And consider that among them there are parties who cart their milk from considerable distances, and you get no more for it than do those close to the factory. The patrons are not even all bound to deliver their milk. (1) Besides any one of them, at the first disagreement can try and set up a rival factory. If a district containing, say, 25 patrons, be detached from the rest, there is another small factory possible.

A precarious, limited means is co-operation, under such conditions, as a remedy for the trouble; it is but another sort of exploitation, with its advantages and disadvantages; but before going any further a word must be said here.

Our own association, it must not be forgotten, is in great part composed of proprietors who have the merit of being the pioneers of the dairy industry in this country. Out of the 1,500 or 1,600 factories in this province, there are probably 1,000 that are the private property of good people who have invested their savings and their prospects therein. Neither must it be forgotten that patrons are greatly inclined to regard as unfairly levied from their own pocket all that the owner of a creamery or cheesery makes by the labor and diligence he exerts in their service.

As a member of this association, in which each individual interest should be represented, I think it is an opportune time to recommend prudence and moderation to all those who are tempted to wrap themselves up in co-operative societies as well as in studying how to reduce the number of small factories, not to forget the interests that must disappear, but to remember that they are not likely to allow themselves to be abolished without a struggle. In this point,

(1) All the shareholders are, by the bye-law.

there is a double question of justice and success involved as regards the application of the remedies proposed.

To return to my subject: I have listened to almost every one of the discussions concerning the small factories; I have talked over this serious matter with sensible people, and I think that if the subject is looked upon as being so difficult to deal with, it is for want of the causes of the situation not being clearly defined.

Why are there so many small cheeseries and creameries? Let us hunt up the real reason: Because any one, never mind who he is, has the right to start one, never mind where.

When will there be means to prevent their establishment, or of getting rid of them when too numerous? When those interested shall have a definite right to decree that no new factories shall be erected, or that certain factories shall be abolished.

The evil we complain of has its roots in the unlimited liberty that exists of setting up public creameries and cheeseries. The remedy, in my opinion, lies in the instituting of a legal rule, to regulate their establishment, their number, and to define the limits of their territory.

I can see no reasonable objection to a law, that, under certain conditions, shall grant to a majority of the landed-proprietor-farmers (in England, *yeomen*, A. R. J. F.) the right to decide that, within the limits of a specified territory, no more than one factory shall be operated.

Under what conditions would such a right be accorded?

1. We must realise that which is of the essence of a large factory. The majority of landed proprietors ought to represent the number of cows sufficient to ensure a supply of milk for a large business, or territory enough to realise that condition before long, in the places where dairying is only beginning to be practised.

2. Next, the chief reason for the existence of these small factories must be got rid of—the inequality of the distance to be traversed in carting milk to the factory—by rendering obligatory the cartage of milk, or imposing an equally obligatory payment, proportioned to the average distance to be covered by the loads.

3. Next, that the acquired rights of the owners of the doomed factories may be respected, they must be indemnified in full for the value of their establishments, including the installation, and the value of the returns.

4. To impart a character of stability to the central factory, it must be so fitted up as to be suited to the making of butter or cheese according to the season, or the market demands, the preference or agricultural operations of the patrons.

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Such are the chief conditions. It would not be necessary, not even opportune, to impose this law or regulation on the whole of the province; it would suffice that its application should be optional, that is, at the desire of the majority of those interested.

I know, of course, what is the invariable objection made in circumstances offering some analogy to this: Such a law seems to fetter the liberty of the citizens. To this I reply that it is easy to find dozens of cases in which commercial liberty is fettered; for instance, by some countries in which railroads and telegraphic communications are engrossed by the government, the manufacture of certain goods, such as tobacco and matches, are made monopolies; again, by our laws permitting municipal councils to confer exclusive privileges for the supplying of water, light, gas, for the working of city railroads; by our legislatures that give privileged rights to erect bridges over rivers.

As to the liberty of the subject, in our case it cannot be fettered, since every farmer in a closed district can keep his milk at home, and deal with it as he likes best. He is only forbidden to encourage another factory, that the profitable working of the central or public creamery, which we consider to be a desirable thing as regards the public, be in no wise hindered.

If the dairy industry be a powerful factor of our agricultural future, of which we are all convinced, there can be no serious objections to such a law, which, after a deep investigation of its details, it seems to me advisable that we should try to get enacted by the Legislature. All that there is in it, neither more nor less, is to confer the public right, to the majority of a sufficient number of those interested to decide: that the milk produced on their farms shall be manipulated in a public and common place, under the conditions best suited to produce the greatest possible profit, and, also, that no rival establishment shall compromise the success of such an establishment. That is all.

And when we have secured this, then Dr. Grignon and M. Pâquet will see their favorite, co-operation, enjoying its finest, most prosperous days. I trust they will bear me no enmity for having assisted them in the above manner.

DISCUSSION.

Dr. Grignon—M. Taché blames Dr. Grignon and M. Pâquet for proposing to cause those who have built small factories to lose a good deal of money; but he does not show us how these losses are to be avoided.

M. Taché—We propose to indemnify the proprietors up to the full amount of their property, and that this value be settled by experts.

Dr. Grignon—By whom; by the Association?

M. Taché—The proprietors will decide that there shall be only one factory, and they will have some one to work this factory for them.

Dr. Grignon—The other factories will suffer.

M. Taché—They will be indemnified by the parish.

Dr. Grignon—Do you imagine that you will find a parish that will thus pay for a new factory?

M. Vaillancourt—I think the proprietors will be glad enough to pay off their neighbour, and thus get rid of competition.

Dr. Grignon—Do you expect to find within a space (radius?) of four miles *habitans* disposed to pay off the three small factories in competition? These people have not asked leave to set up a new factory and to cause losses; I do not think that they must be indemnified. Let us look at the reason why these small factories were started; it was the distance. If we can show the contributors that with a large company milk can be carted by the factory, the question of distance vanishes.

M. Taché—It vanishes, too, under my plan. I stated that I laid down the condition that the inequality of distance must be abolished. The law cannot be applied unless the milk is carted at the common cost, or a sum proportionate to the distance be paid as an indemnification.

Dr. Grignon—If you lay down the principle that the proprietor is to be indemnified, you will never succeed.

M. Taché—I said that the choice of these remedies should be left to the proprietor himself.

Dr. Grignon—I visited the establishment of M. Gabriel Dumont, at St. Hénédine. I delivered there a lecture, two years ago, on co-operative associations, and M. Dumont himself took it into his head to form the one in question. He met with many impediments, but to-day he has in operation an association comprising 68 members, and this is no marvel, for there 115 farmers in the parish. Well, in spite of that, they have realized a profit; they paid out \$2,500, and have made a net profit of \$500, which money returns to the shareholders. I quote this to show the farmers that they are deeply interested in the forming of bodies such as I spoke of last year. Take my calculations (15th Report, pp. 210 and seq.). A farmer with 100 arpents of land can keep ten cows. If 100 farmers each put in \$50, then you have a sum of \$5,000. Could not a good factory be set up with such an amount?

Mr. R. Haven—Some there must be who would not join your association; since you have a monopoly you must indemnify the other.

Mr. Barnard—I see that the discussion rests between Dr. Grignon and M. Taché. I think it would be as well to let them discuss it between themselves, first of all.

Dr. Grignon—If my figures admit of refutation tell me so. You admit that 100 farmers, with a hundred arpents each, may keep ten cows apiece, and subscribe their \$50 each. I ask if \$5,000 is not enough to provide a good creamery and a good cheesery. I assert that it is more than enough. A hundred

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farmers, with ten cows each, make a thousand cows. Could not the thousand cows give an average of 15 lbs. of milk a day each?

Mr. R. Haven—No, the average is 12 lbs.

Dr. Grignon—Will you not allow an average of more than 12 lbs?

Mr. R. Haven—In 1894 the average, as given in your report, was 12 lbs.

Dr. Grignon—But, now; if we fed as we ought to feed?

Mr. R. Haven—When calculations like yours are formulated, they should be based on the actually existent, and not on the possible. You deceive yourself.

Dr. Grignon—By no means. At any rate, if our cows are well fed they will certainly give an average of 15 lbs. a day each. Then you cannot impugn the accuracy of the following calculations: (15th report, p. 210, table).

Then, if a factory receives the milk of a thousand cows, fed so as to induce a yield of 15 lbs. of milk each daily, this factory would realize a net profit of \$3,100, and I assert that by employing this profit in having the milk carted, you have your Association made co-operative, and no one can compete with you. This is the reason why I have always said the co-operative Associations are one of the greatest means of getting rid of the small factories.

Now, if Mr. Taché were to pray the Government to take the initiative, I think that all the members ought to unite with him to beg the people in power to do their best to abolish the plague of these small factories. I find complaints of them wherever I go. In Beauce I saw four factories, where one would have sufficed. One I saw receiving only 800 lbs. of milk a day, and charging one cent for making! I applaud M. Taché's project for decreasing the number of the small factories by the action of the law; but, I contend, co-operative associations are also an excellent means of arriving at the same end.

M. Taché.—There is no difference in our opinions; only Dr. Grignon thinks he can gain the point without the aid of the law, while I say that unless we make use of the law it will take us many a long day to get rid of the small factories. When once a district shall be closed by the law I propose, then the citizens will be at liberty to form a co-operative association like Dr. Grignon's, and that factory will flourish as it never has done.

Dr. Grignon—Your plan is a good one, and mine was not a bad one.

M. A. Gérin—What is the opinion of this Association in respect of a creamery aided by the Government, which acts in opposition to the neighboring factories. There is one of them at Compton; it pays high prices for milk, makes up the butter in pound pats, and sells it very dear under the Government stamp. We who pack in tubs and boxes cannot compete with this factory.

M. l'Abbé Charest—It is to support the farm-school at Compton. The idea is to get enough milk to create a revenue for the school.

M. Gérin.—Not only do they pay high prices for milk, but they pay for its cartage.

M. Barnard.—If you will allow me, I will repeat for the sixteenth time what I said at the first meeting of our Association. There is a remedy applicable to the evil of these small factories, and a very simple one. I think, Mr. Chairman (M. J. C. Chapais), that you ought to know what it is, as you paid for learning it. It is the cartage of the milk.

The Chairman can tell you that, sixteen years ago, a creamery was established in a small parish below Quebec, in a place where the most influential men of the district said: "Don't come talk'ing about this here. You won't succeed. Every farmer here lifts his cow up by the tail when spring comes; and under such conditions there is no use dreaming of dairying, etc., etc., etc.

There is now in that parish a thriving combined factory, which has existed for sixteen years, and which must have paid for itself over and over again, and not only that, but it has given good dividends to its owners. And how has it been done? By encouraging the poor and the rich alike to send their milk to the factory by carting it thither for them.

This is no new thing; we have learned it from Ontario and the States. I should like to draw your attention to this point once more. I am growing old, and I cannot go on repeating the same thing to you for another sixteen years: I want to make you understand that experience gained in this province proves that success lies in the carting of the milk by the factory.

We have here, for instance, a farmer who lives two or three miles from the factory; his cows are falling off in yield, his neighbours are in the same quandary as he, and they begin to say among themselves: "It is not worth while to go on drawing milk to the factory, it is too far off, etc." Plenty of the neighbours say the same; consequently, for want of milk the factory is obliged to end the season; while if the factory carts the milk, the farmer has nothing to trouble himself about, except to receive his money once a month. This he finds to be very handy; he can devote himself more to the care of his herd, and each man finds himself all the better for it.

I think this ought to be the first remedy to be tried, and the more the patrons strive to obviate opposition, the less difficult will its application be. We are agreed in this: that the cause of so much bad butter and cheese being made lies in the small factories, that want the capital and resources needed to produce first-rate goods. Competition is the cause of dairying falling off at the very moment when its products ought to be super-excellent.

It is, then, important to study the project of establishing co-operative associations now submitted to us. It is to the interest of each of us; if we want to make money out of dairying, it is clear that it is to the interest of each individual. The object is to improve our factories so as to get the highest possible price for our goods, a question of the highest importance.

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You have just been shown how, out of a capital, not paid in, but simply subscribed, a net profit of \$600 may be realized; a profit equal to 33 per cent. on the subscribed capital. You see at a glance how profitable such a transaction must be.

There is no objection to the intervention of the law, but I know how difficult it is to get the law into operation when it effects the liberties of trade; and why not make use of the more simple means that we have at our command? The whole winter is before us in which to do that which has been done at St. Hénédine. You have been shown profits in hard cash made where no hard cash was expended. People are not much inclined to create troubles for themselves to prevent money from running after them. If I have any advice to give you it is to do what has been done at St. Denis and Ste. Hénédine, that is, let the factory undertake the cartage of the milk.

M. Chagnon—But if the farmer will not agree to this, how then?

Mr. Barnard—It has been proved that farmers only cart their milk themselves when they cannot avoid it. Let the factory do the cartage, and you will soon find that the extra quantity of milk delivered will repay you for the outlay.

M. Chagnon—I have offered to pay for half the cost of carriage.

Mr. Barnard—If you had offered to pay for the whole no one would have objected, and you would have made money.

After a very warm discussion between MM. Taché, Grignon, Haven, Dumont and others on co-operative associations, their working, and the profits to be made by them; a discussion which the short-hand reporter could not take down,

M. Taché rose and said:—I should like to propose that a committee be appointed to study a bill on the basis that I have described, but I shall not do so now. I withdraw my proposal, and shall not submit it till to-morrow.

Mr. Barnard—Do you think, Mr. Chairman, that there could be any successful opposition to your St. Denis factory?

M. Chapais—It would be difficult.

M. Dumont—How much does the cartage of milk cost you?

M. Chapais—\$600 a year.

M. Dumont—Do you hire your neighbours to do the cartage?

M. Chapais—We have six vehicles on the road.

Mr. Barnard—Does it pay?

M. Chapais—Yes; but it is said not to pay.

The session was then closed at 5 p.m.

THIRD SESSION—DECEMBER 1ST, 8 P.M.

OPENING OF THE CONVENTION.

The session was opened by the President, Mr. Milton Macdonald.

ADDRESS OF WELCOME FROM THE CITIZENS OF NICOLET.

To the President, Mr. Macdonald, M.P.P., and the other distinguished members that compose this meeting of the Dairymen's Association.

MR. PRESIDENT,

On the occasion of the first meeting of the Dairymen's Association at Nicolet, permit me, in the name of my fellow citizens, to bid you most cordially welcome, and to present to you our most sincere and respectful compliments.

I have a very pleasant duty to perform; to express our heart-felt and lively gratitude to the hon. representatives of the Government of this Province and to His Lordship, M. Gravel who have been good enough by their presence to confer on this convention the impress of éclat and importance.

For they are, in fact, the official and attentive protectors of the cause of agriculture and colonization, in which the most promising future of our beloved Canada must be sought.

As to the members of the clergy that have associated themselves with the hopes and benedictions of this day, they too are welcome. In concert with their venerated Bishops, they represent here below, by the character of their mission, not less than by the sentiment of their hearts, the Divine Shepherd, who, of himself, said: My Father is a husbandman. So they will continue to preach that it is the Christian, agricultural spirit that from age to age has enriched the earth; that this spirit is the one most fitted to unite all interests and soothe all hearts, in the happiness and ease of rural life.

My thanks are also due to the devoted and enlightened friends of this noble cause, to the members of the Farmers' Club of this diocese, who have come hither in such crowds. We welcome them from the heart, and trust that we shall know how to profit, Mr. President and other members of this convention, by every measure for the benefit of agriculture and the prosperity of our province that your patriotism shall suggest to you. This is the most emphatic desire of our hearts, and we trust to see it realized.

We entreat you to believe, Mr. President, and all you who form this Association of Dairymen, that for many a long day we shall preserve the remembrance of your presence in our midst; and that our most profound gratitude and sympathetic sentiments are at your service.

SÉVÈRE GOUDREAU, MAYOR.

NICOLET, December 1st, 1897.

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REPLY OF THE PRESIDENT.

My Lord, Mr. Mayor, and Gentlemen,

I thank, very sincerely, the citizens of Nicolet who, by the voice of their worthy Mayor, have presented to us so pleasant an address of welcome. We see in it that spirit of faith, of Christian faith, that, whatever may be said to the contrary, still exists among the Canadian people.

One of the reasons that induced us to hold our fifteenth meeting here, is that the county of Nicolet, with the county of Yamaska, occupies almost the first rank in the dairy industry. You have two syndicates, comprising forty factories; you occupy the second rank in the province as regards the syndicates. In the number of creameries, of which you have six, you are second in rank in the province. Again, with your fifty-two cheeseries, you are in the second rank; and you possess nine combined factories, making in all sixty-seven factories. You have an agricultural society; seventeen farmers' clubs, with one hundred and sixty-seven members; again, the second in the province. It may be said that, after the district of Three Rivers, you occupy the first rank in the province, and I will, before many minutes, give you another reason that induced us to hold our convention here this year.

Once more, gentlemen I thank you for the kind reception you have given to the members of the Dairymen's Association.

OPENING ADDRESS OF THE PRESIDENT.

My Lord, Mr. Mayor, and Gentlemen,

It is the custom of our Association that the President, at the third session of each convention, shall deliver an address setting forth to its members, who meet once a year, the operations of our Association. I thought that at this meeting it would be as well to adopt another form of procedure, for I thought that the customary speech from the president took up too much valuable time, and for that reason I have prepared no address.

I may tell you, however, that in January last we were invited by the Western Ontario Dairymen's Association to be present at one of its conventions. I feel a genuine pleasure in telling you that we have here this evening the worthy President of that society, in the person of Mr. Maclaren. The friendly and sympathetic reception we met with from our brethren in Ontario really was most affecting. They seemed delighted to see, for the first time, the Province of Quebec represented at one of their conventions. We were utterly surprised, M. Castel and I, at the progress made in Ontario in agriculture and dairying. They did me the honour to ask me to speak, but they must have been astonished when Mr. Maclaren introduced to them MR. MACDONALD! They imagined that they were about to listen to a grand speech in English. I did my best, and I endeavoured to acquaint the meeting with the progress made by our province of late years, due chiefly to the Dairymen's Association; I related the efforts made

MAYOR.

by it and the projects it had elaborated. I told them that our society had created here those Farmers' Clubs that had done so much for that progress in farming operations that has taken place during the last few years.

I spoke of the creation of the cheesery syndicates that have so greatly promoted dairying in Quebec. That institution was almost unknown till M. Chapais, who had been invited to one of their meetings the preceding year, related to them the results we gained from it. They were greatly surprised.

I also informed them that the movement in favor of improving the roads was another function of our association, as well as that the export of fresh butter to England was due to its influence, as it was owing to our endeavours that the Government arranged to have cold-storage on board of the boats that carry our goods abroad.

Listening to me one would have thought me a runaway Gascon, but I had to put a good face on it, and got out of my scrape as well as I could (1). M. Castel, who accompanied us, has composed with me, a rather lengthy description of our trip, which we will not read to you now; it will be published in our annual report.

Now we have been asked: Why hold your convention at Nicolet, a place so difficult to get at? One of the chief reasons for taking this resolution was that Mr. Gérin, parish-priest of St. Justin, who for twelve years has been one of the directors of the convention, expressed a desire to have the meeting held this year in his district. A desire expressed by him is looked upon as an order by our society, for he has contributed greatly to its success. I regret very much that his health keeps him at home, as it would have given him great pleasure to see in attendance such a crowd of people interested in dairying.

Nicolet, though isolated, and not easily reached, is by no means in the rear of other places. Its lumber trade is prospering. While yet but a little town, Nicolet is perhaps one of the best provided with religious and intellectual opportunities. At the head of your clergy you have the virtuous and distinguished Monseigneur Gravel. The college is one of the finest educational establishments in the country, and has turned out many of the best men of the day. You also have the advantage of possessing a commercial institution which offers us this evening the most cordial hospitality. In addition to all these, there is a convent that affords shelter and attendance to the unfortunate sick.

It was with pleasure that the members of the Dairymen's Association accepted the chance of visiting, for the first time, this pretty town.

Our Association has a right to be proud of its work, but the most active of its members know well that a great deal remains to be done. For the last two years we have been trying to encourage all those who are engaged in dairying

(1) The remark may be pardoned, that the Gascons were not celebrated for the modesty with which they recounted their exploits. For their characteristics (in fiction) consult "Les Trois Mousquetaires" of Dumas, and Sue's "Barbe-Bleue," especially the latter.—A. R. J. F.

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to make butter. It is true that this business has greatly increased in that period, but by no means sufficiently. If we all give ourselves up to cheese-making the English market for that comestible will be over done, but it is not so with butter; there we have a vast field for exploitation.

There will be, this year, I think a great increase in the exportation of butter. Makers must thoroughly understand that it is of the last importance that as much butter as possible should be made.

We must warn all associations of this province that every nation in the world is trying with all its power to get possession of the English market, especially the United States. The people of that country see that our cheese is a favorite there; they cannot forgive us for it. They are working hard to make excellent butter, and to make it liked in England. If we do not do our best to imitate their efforts, we shall lose the trade. Do not fancy that when you are told by a shopkeeper that the butter which you send him is good, that therefore it will be suited to the taste of the English consumer. There is still an advance to be made, and that is to consult the peculiarities of the English taste. If there ever was a time when dairying here was in danger it is now, and that is why we ask for the support of all people of the province, who look for the prosperity and welfare of the country, to lend us their most strenuous aid, and to teach their fellows to apply themselves heartily to the advancement of the dairy industry in the province of Quebec. (Cheers.)

REPORT

Of the delegates of the Dairymen's Association of the Province of Quebec to the Convention of the Dairymen's Association of Western Ontario.

To the members of the Board of Directors of the Dairymen's Association of the Province of Quebec.

SUMMARY.

THE ONTARIO COLLEGE OF AGRICULTURE.

1. Agricultural school.
2. Course of study.
3. Entrance examinations.
4. The teaching of Agriculture in the public schools.
5. Experiment stations.
6. Practical influence of the school at Guelph—Statistics.
7. Dairy school.
8. Home dairy.
9. Feeding and care of stock.

DAIRY SCHOOLS.

1. Strathroy.
2. Kingston.
3. Two weeks' course.
4. Sale management.

FARMS.

1. Bow Park.
2. Capt. Milloy's.
3. Other farms.
4. Dung and fertility.—Statistics.
5. Ploughing and water furrowing (drainage?).

DAIRY CONVENTION.

1. Pleasant reception of the delegates.
2. Remarks on the proceedings.
3. Lessons to be retained.
 - a. Turnips.
 - b. Temperature and moisture of ripening chambers.
 - c. Aeration and cooling of milk.
 - d. Small factories.
 - e. Paying for milk according to richness.
 - f. Table of badly kept factories.
4. Report of the directors.
 - a. Syndicates.
 - b. Supplementary conventions.

AGRICULTURAL DEPARTMENT OF ONTARIO.

1. Agricultural societies.
2. Statistical office.
3. Publications of the Department.
4. Budget of Department.
5. Farmers' Institute.
6. Agricultural experiment-union.
7. Societies of agriculture and art.
8. Dairy society.
9. Fruit growers' association and fruit experiment-stations.
10. Superintendence of good roads.

CONCLUSION.

Agricultural schools.
Dairy schools.
Dairymen's Association.
Distribution of reports.
Farmers' clubs.

THANKS—ADDRESS.

To the Members of the Board of Directors of the Dairymen's Association of the province of Quebec.

Gentlemen,

Invited by the Dairy Association of Western Ontario to be present at its 20th annual convention to be held at Brantford, Ontario, the 19th, 20th and 21st of January, 1897, the undersigned, Messrs. M. Macdonald, M.P.P., President,

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and Emile Castel, Secretary of the Dairymen's Association of the province of Quebec, accepted the invitation.

On this occasion they visited the Agricultural College at Guelph, with its dairy school, as well as the Kingston and Strathroy dairy-schools.

In conformity with a wish expressed to M. Macdonald by the Hon. Louis Beaubien, Commissioner of Agriculture, they also took advantage of the opportunity of gaining much valuable information from the Ontario Department of Agriculture at Toronto.

And they have the honor, gentlemen, to submit to you the following report, divided into five parts.

The first, devoted to the Ontario Agricultural College.

The second, to the dairy schools of Strathroy and Kingston.

The third, to some farms visited in the course of the tour.

The fourth, to the convention of the Dairymen's Association.

And the fifth, to the Ontario department of agriculture.

I.

THE ONTARIO AGRICULTURAL COLLEGE.

1.—School of Agriculture.—Founded in 1874, this College, better known as the "Guelph School," during the last few years has made rapid progress, a movement that we have seen attributed to divers causes, but chiefly to the policy of progress and liberal treatment pursued towards it by the Hon. J. Dryden, provincial minister of agriculture, and to the determination of the government to entrust to the principal of the school the entire control over the farm as well as over the college.

The Guelph College is admirably situated and fitted up, and is equipped with such a staff as is competent to instruct in practical as well as in theoretical work. The description of this magnificent establishment would take too much space in this short report.

Let us simply point out en passant, as being at once requisite in, and applicable to, our farm schools in Quebec, the practical lessons given in the so difficult art of judging stock. The animals are taken into a low hall, where the students, placed on rising benches, receive this technical instruction from the professors, and are themselves frequently exercised in this art.

2.—COURSES.—The regular course of study for those intended to be farmers is two years. It comprises both practical and theoretical teaching. The students are bound to work on the farm, but receive payment for it. Since 1887, a third year's course has been added for those who, having obtained a certain degree of success at the close of the second year, desire to prepare themselves, not so much for a farm-life properly so-called, as for teaching agriculture, horticulture, cattle-breeding, dairying, etc.

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M.P.P., President,

3.—ENTRANCE EXAMINATION.—All students entering Guelph have to pass an examination. Those who do not satisfy the examiners have to follow, in the college, a preparatory course in grammar, arithmetic, etc., in order to be in a position, in the shortest possible time, to follow the regular courses of the institution.

The college is thus guaranteed against the incapacity of the students who, following the courses without possessing the aptitudes and acquirements necessary to profit by them, would leave as dead branches (*fruits secs*), and enter into the world as utterly un instructed as they were when they entered the school. It is thus that the reputation of many schools has been compromised in the opinion of the public. These preparatory examinations seem to us to be a valuable precaution, both as regards the interest of the students and the interest of the college itself.

4.—AGRICULTURAL INSTRUCTION.—Although the Guelph school has cost the Province of Ontario, up to the present time, at least \$500,000 for purchase, buildings and fittings, and an annual sum of \$50,000 for its working expenses, no one in Ontario seems to regret the outlay or to dispute its usefulness. Instruction in agriculture is general throughout the whole province, and, as it generally happens, the educated fathers feel that their sons should be still better taught; so, to-day, not only is the question thoroughly discussed in Ontario of elementary instruction in agriculture in the primary schools, but, in addition to this, whether or not technical teaching in that art be given in a certain number of model-schools, where pupils from Guelph would be engaged to give lessons in agriculture and in the sciences connected with it.

5.—EXPERIMENT STATION.—To the college is attached an experiment station, the work at which has contributed to win for the institution the implicit confidence of the farmers of the Province. More than 15,000 of them visited the station during the month of June last.

6.—SOME STATISTICS.—Guelph is situated on the borders of two of the most populous districts of Ontario: West Midland and South Ontario.

These two districts represent 27 per cent. of the whole acreage of Ontario; 38 per cent. of its cleared land; 40 per cent. of its arable land; and 33 per cent. of the pastures of that province. Their value is equal to 39 per cent. of the value of the agricultural wealth of Ontario.

The average value of cleared land in the period from 1883 to 1895 was \$30.07 an acre in Ontario in general; it was in these two districts \$31.63.

The average value of the crops in the Province is \$14.54 per acre; in these two districts it rises to \$15.12, a difference of 58 cents per acre and per annum in their favor. As they have more than 3,000,000 acres under cultivation, this plus value of 58 cents reaches yearly to the respectable figures of \$1,800,000 in round numbers, or, for the period of 1882 to 1895, 25 millions! This is a pretty little sum, and the College must have largely contributed to these magnificent results; so no wonder it is considered to be a benefit to the country at large.

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7.—DAIRY SCHOOL.—Since 1893 there has been a dairy school attached to the College, and very successful has it been from the first, since which time it has much been much enlarged by a building that comprises a creamery and a lecture room, which alone cost \$8,000. The old building is now used as a cheesery, the new one as a creamery. The steam engines and boilers that supply heat and motive power are of the best construction.

The School only takes in winter a single series of 50 lads at most, for a course of two months, and the number of applications for entrance every year soon led to the opening of another at Kingston, and last year, to another at Strathroy. All these are under the superintendence of Dr. Mills, Principal of Guelph. The two last schools will be described later. The number of pupils that pass through the three is decidedly less than the number of pupils who attend our one school at St. Hyacinthe.

The new creamery at Guelph is very well fitted up, though the arrangement for the reception of the milk is not perfect. As to the visitors, we may point out that on one side of the building there is an upper gallery, from which any stranger can follow all the details of the system of manufacture.

Professor Dean, who is in charge of the Guelph Dairy School, practises the Pasteurisation of cream, and uses ferments for butter-making. He seems to be satisfied with the results. The apparatus used in Pasteurising is the simplest thing; a square box, made of double galvanised iron; heated by steam, the water is raised to the proper temperature; the cream cans are let down into it, and their contents gently stirred during the process. This apparatus is within the reach of the very smallest creameries,

The skim-milk and whey are Pasteurised before being returned to the patrons or sent to the college farm.

8.—HOME DAIRY.—The dairy school, besides the makers of butter and cheese, who follow the regular winter courses, constantly receives pupils of both sexes who wish to take a few lessons in the art of the home-manufacture of butter and cheese.

A similar course in the agricultural schools of Quebec would be a good thing.

9.—FEEDING AND CARE OF STOCK.—At the Guelph dairy-school there is a herd of cows kept, and this enables the pupils to study the economical production of milk of good quality. The produce of each milking is weighed regularly every day, and the quantity given by each cow is inscribed on a placard opposite its name. The ration for each cow is: Corn silage, 35 lbs.; clover-hay, 12 lbs.;—mangels, 15 lbs.; oats, bran, pea-meal, 2 lbs. each. The daily cost throughout the year is 12 cents, and all the cows we saw, though for the most part advanced in their lactation, were paying for their food.

II

DAIRY SCHOOL, AT KINGSTON AND STRATHROY.

1.—STRATHROY.—At Strathroy, a hundred miles to the west of Guelph, a new Dairy School was started in 1895. The superintendent Mr. Sleightholm, is a former pupil of Guelph, and a former teacher in the Itinerant Dairy School. This School cost, for the building, \$12,000 to \$13,000. It is a pretty edifice in white brick; the ventilation and arrangements are perfect, except as regards the reception of the milk. The engine and boiler are in an underground outhouse in the rear of the principal building; this, divided into two parts by a passage from end to end, encloses on the ground-floor, to the right on entering, the creamery and its appendages; on the left, the superintendent's office, the cheesery and its appendages. The lecture and pupil-rooms, bath and dressing-rooms, etc., are in an upper storey. The whole is remarkable, not for its perfect tidiness alone, but the immense amount of light afforded.

2.—KINGSTON.—As we said just now, the Kingston school preceded that of Strathroy. It was founded by the private initiative of some friends of dairying in the west of Ontario, aided by the Dominion Commissioner of Dairying and the University of Kingston. It is only fair to say that the municipality of that city liberally granted the building and land of the old "Collegiate Institute" for the purpose of founding this dairy-school. As there were in the old building the necessary lecture-rooms, the promoters of this school had only to build a combined factory for cheese and butter. At each end of the school, under a covered porch, there is, at a certain height, an entrance both into the cheesery and the creamery, on an interior reception-platform, and this permits the staff of each factory to receive, by means of a crane worked from within, the milk brought in by the patrons, who cannot by any possible means get on to the platform during the reception of the milk.

3.—A TWO-WEEKS' COURSE.—Both these schools give courses of lectures, etc., that generally extend over a fortnight; but a pupil may attend several courses in the same winter.

This winter, both schools easily got as much milk as was needed; but the first winter, Strathroy had to pay at the rate of 30 cts. a pound for butter fat, and last year, Kingston lost \$900.00 on that supply. In both, the price of milk is calculated at so much per pound of fat supplied.

4.—SOLE CONTROL.—These three dairy-schools are all under the control of the Ontario Department of Agriculture, and all three are directed by Dr. Mills, Principal of the Guelph College. Each has a local manager, responsible to the Director, who, in turn, is responsible to the Minister.

Erected into a principle, the appointment to the chief place in the greater number of the chief public offices of Ontario, the directors or responsible superintendents, to whom great liberty of initiative is granted, appears to afford very satisfactory results, for it incites the officers to a noble emulation and an ardent

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desire to justify the confidence reposed in them by their chief, by meriting the high opinion of the public.

Before quitting the subject of these schools, it is pleasant to mention that we found in the person of Mr. Ruddick, manager of the Kingston school, a former director of the Quebec Dairymen's Association; and in Mr. Harry Smith, head of practical butter-making at Strathroy, an old pupil of our St. Hyacinthe Dairy-school.

III.

THE FARMS.

1.—Four miles, about, from Brantford lies the Bow-Park farm, formerly the property of the Hon. Geo. Brown, but now carried on by an anonymous company, that recently bought it for \$35,000. The old house has been converted into a dairy and creamery; the manager occupies a newly built house, not quite completed.

This farm of 900 acres is devoted principally to the production of milk. Most of the crops are consumed on the farm by the cattle. Extensive sheds hold about 200 milch cows, chiefly crossed Jerseys or Shorthorns, 4 pure Jersey bulls, 127 pigs, 100 sheep, and 27 superb cart horses.

Last year the crops were:

50 acres of corn, part of which was used as green meat, and the rest packed in two enormous round silos, holding 1,200 tons, adjoining the cow sheds; 15,000 bushels of mangels; 5,000 bushels of turnips; 6,000 bushels of grain, wheat, barley and peas.

The fodder needed for the cattle is furnished by the farm alone; the straw grown on the farm is used for litter, and not stinted.

The dung daily taken from the cow sheds, etc., is taken at once to the fields where it is to be used, and put up in well shaped heaps, being moistened from time to time with urine from a tank near the cow house.

A very large sort of onion is also grown; last year the crop yielded 500 barrels. The farm employs 25 men in winter and 50 in summer. As labor is scarce, a very expensive machine has been installed by the directors for milking the cows: "The Thistle Milking Machine." As it would be of no use to our small farms in Quebec, we leave it here.

The milk is sold in Brantford, part as cream, part as milk; the surplus is made into butter.

This style of farming is only just started; it has cost a deal of outlay, and, as yet, no report of dividends has been made.

The vast extent of the buildings, where the men are now preparing the food for the stock, makes superintendence difficult, and it is to be feared that there is a source of considerable waste of time, fodder and grain; how to prevent this waste is a difficult subject to get at.

2.—**CAPT. MILLOY'S FARM.**—The sole object of the working of Capt. Milloy's farm, near Paris, is the production of butchers' meat. The feeding house, which contains a hundred head of beasts, is a new building, and is a perfect model of arrangement, comfort, and even of elegance. The cost was \$10,000. One hundred thoroughbred Shorthorns occupy the stalls.

The extent of the farm is 500 acres; it turns out all the fodder and grain needed to feed the cattle. The fattening beasts are fed on straw, roots, corn-stalks, and whole ears ground up together (corn and cob).

OTHER FARMS.—On our return from Capt. Milloy's farm, we visited several others of the ordinary type. All the farmers of this part of Ontario keep a multitude of stock, so as to consume at home as much of their crops as possible.

The usual ration is compounded of straw, roots, and corn, dry and in silage.

4.—**DUNG AND FERTILITY.**—The wintering of such a heavy stock of cattle must necessarily produce a monstrous lot of dung; well cared for as it is, this manure has sufficed up to the present time for the maintenance of the fertility of the farms of Ontario. Although, in general, inferior to the farms of Quebec, they give, with the exception of Manitoba, better crops than all the land of North America, as the following table shows:

PROVINCES OR STATES.	AVERAGE YIELD PER ACRE. FOR THE PERIOD, 1882-1895.			
	Fall Wheat.	Spring Wheat.	Barley.	Oats.
Ontario.....	20.1	15.2	25.5	34.3
Manitoba.....		20.2	27.8	35.5
New York.....	15.1		21.7	27.1
Pennsylvania.....	13.3			26.3
Ohio.....	13.9			29.9
Michigan.....	15.2			30.3
Indiana.....	13.5			26.8
Illinois.....	13.7			31.7
Missouri.....	12.1			24.8
Kansas.....	13.7			27.1
California.....	12.3		20.4	
Wisconsin.....		13.0	24.2	30.6
Minnesota.....		13.6	23.9	31.5
Iowa.....		12.4	22.2	31.8
Nebraska.....		11.4	20.8	27.2
Dakota.....		12.7		

This table opens with "fall-wheat," which is still pretty largely grown (17% of the crops) in Ontario. There being no snow on the ground, we could see that there was a very good plant. We were also struck with the enormous proportion of fields ploughed in autumn all through the country we traversed; but this was not surprising to those who know that roots in Ontario occupy 60%

of the arable land of the ordinary farmer besides the sum of fat in the differ

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of the arable land. There is therefore nothing surprising in hearing that ordinary farmers sell, one year with another, from 700 to 800 bushels of grain, besides the summer delivery of milk at the factories, and the beef and pork they fat in the different seasons of the year.

5.—PLOWING AND WATER-FURROWING.—We also remarked as we went along that the ploughing and water-furrowing were extremely well done.

IV
THE CONVENTION.

1.—KIND RECEPTION OF THE DELEGATES.—Your representatives were received by your Ontario brethren in the most agreeable manner. The account furnished by Mr. Macdonald to the convention of the progress of dairying in Quebec, particularly as to the rapid increase in butter production, owing to the bonus granted by the Municipal Government, and the facilities for cold-storage shipment, was received with enthusiasm.

2.—REMARKS ON THE PROCEEDINGS OF THE CONVENTION.—The makers of both butter and cheese of Ontario attended the meeting in crowds; but the farmers were less numerous than they are at similar meetings in Quebec. Many men of business were present, who, during the discussions, furnished valuable information, clearly and concisely expressed. Conducted by persons appointed for the purpose, the discussions went along smoothly.

The programme, published in advance in full, is strictly followed.

The associations of Ontario, three in number, have fewer members than the one Dairymen's Association of Quebec; nothing, however, is neglected that can add to the number of subscribers. Two members kept the door of the convention hall, collecting subscriptions and distributing badges, which may in some degree tempt men to subscribe. If the example of what is done in Ontario in this line is to be imitated in Quebec, we would suggest that a badge to be worn by the members of the Dairymen's Association be made. It would be an advantage for the members to be able to recognise each other in any place, and to be able to exchange useful hints under any circumstances.

4.—SOME LESSONS WORTH RETAINING.—We shall not recite in full in this report the grand programme of the Brantford convention, contenting ourselves with pointing out some of the points that were most earnestly debated.

a.—TURNIPS—In the first place, the use of turnips, or any other plant that can injure the flavour of milk, was condemned.

b.—TEMPERATURE AND MOISTURE OF RIPENING CHAMBERS—The meeting recommended the use in ripening chambers of a thermometer to regulate the temperature and a psychrometer (1) to regulate the degree of humidity. These two instruments have been used for a long time at the St. Hyacinthe school, where our cheese-makers can learn their use.

(1) A hygrometer, or moisture measurer, is probably what is meant.—A. R. J. F.

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c.—**AERATION AND THE COOLING OF MILK**—In Ontario, as in Quebec, complaints of the bad quality of milk are rife. Milk, thoroughly cooled by the patrons, has not always been aerated sufficiently, and bad smells may lurk in it imperceptible to the maker's sense of smell, at the time of the reception of the milk, on account of its low temperature. In this lies a danger, and an injustice to the maker, who being responsible for the quality of the cheese, often suffers from an evil that he cannot prevent, and the consequence is that the maker frequently advises the patron rather to aerate than to cool the milk. Aeration is a good thing, but if cooling is omitted, microbes multiply prodigiously, and the milk though perhaps not injured by bad smells may be dangerously contaminated by microbes. Both aeration and refrigeration, then, must be insisted upon, and patrons must be taught that aeration must, of all necessity, be made to take precedence of refrigeration.

d.—**SMALL FACTORIES**—People in Ontario still complain of the number of small factories, but we learned, not without surprise, that, in Ontario, a factory that makes from 60,000 to 70,000 pounds of cheese passes for a small one! If with factories like these, people complain that competition reduces the price of making to a minimum, and endangers the quality and reputation of the cheese, in consequence of the tendency it engenders to hire inexperienced workmen, what shall we say of Quebec, where, in general, factories are smaller, and the wages of the makers smaller still.

In face of the competition that menaces our dairy-trade, there are in the two above points a serious danger, to which the attention of farmers should specially be drawn by the departmental lecturers; for the inspectors of syndicates and the others employed by the Association might be suspected by farmers if they meddled with these things.

e.—**PAYING FOR MILK ACCORDING TO ITS RICHNESS**—In spite of the presence of Prof. Dean at Brantford, there was no mention made this year of the innovation he has tried to introduce in the way of paying for milk, in cheeseries, according to its richness. It is likely that the argument brought forward by Prof. Slyke, in the bulletin No. 110, of the Geneva, N. Y., Station, will end by convincing Mr. Dean and his partisans that Dr. Babcock's method is as suitable for cheeseries as it is for creameries.

f.—**LIST OF BADLY KEPT FACTORIES**—A proposal was also made at Brantford to have drawn up, by the teachers or inspectors, a list of untidy factories. This is not the first time such a proposal has been made; but, as it is a question full of difficulties in its application, it is to be hoped that all who are the cause of the suggestion, will end by perceiving that it is high time for them to put a stop to complaints of this kind.

4.—**REPORT OF THE DIRECTORS**—*a.*—**SYNDICATES**—The directors report to the convention that, after having met with much opposition on the part of makers or proprietors of factories, who dreaded an increase of expenditure, they have succeeded in forming a cheesery-syndicate as an experiment. The test was satisfactory, and amply justified the outlay.

b.—**SUPPLIES**
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b.—SUPPLEMENTARY CONVENTIONS—Independently of the annual convention at Woodstock, which was very successful, the Dairy Association of Western Ontario thought fit to hold four other conventions in February. These meetings were well attended, and gave the officers a chance of reaching such patrons and makers that could not attend the annual convention.

V.

THE ONTARIO DEPARTMENT OF AGRICULTURE.

The delegates of the Dairymen's Association, having had at Brantford the honour of being introduced to the Hon. J. Dryden, Minister of Agriculture for Ontario, and to his deputy, Mr. C. C. James, had the pleasure of an interview with the latter at his office.

The following is a summary of the information gathered in the course of that interview:

1.—AGRICULTURAL SOCIETIES—As regards the number, scope, and satisfactory working of these free societies for the improvement of agriculture, of its methods as well as its products, Ontario is without doubt at the head of all the countries of the world of the same importance.

Of these societies there are 19: 3 of dairying; 12 of breeding stock; 1 of arboriculture; 3 of various kinds, without mentioning the office of statistics, and of the organization of Farmer Institutes. All of them are liberally subsidized. They powerfully second the action of the Department of Agriculture, the Guelph College, and the Farmers' Institute.

The revival of the art of agriculture in the province of Ontario arose, it is said, in the labours of the *Commission* appointed in 1880 "to inquire into the agricultural resources of the province, what progress had been made, and what was the then condition of the said province, and everything connected with its farming." The voluminous report of that commission is justly considered as one of the most valuable contributions to the systematic knowledge of the theory and practice of agriculture that is to be found in the whole of the history of that art.

It was as a sequel to the work of that commission that arose successively:

The Office of Statistics (1882).

The Dairy Department at Guelph (1884).

The "Farmers' Institutes" (1885).

The Experiment-Union (1885).

The Bee Masters' Society and the Creameries Association (1887).

The creation of the Ministry of Agriculture, as it is to-day, placed at the head of the agricultural interests of the province, "and whose wise and liberal

policy has for its motto: education, diffusion of agricultural information, dissemination of practical knowledge, and of the results of experiments (1888)."

The Commission on dehorning (1888).

The enlargement of Guelph College.

The development of dairying, the creation of three dairy schools (1893-94-95).

Experiment stations in fruit-growing (1894).

The propagation, by a special teacher, of the methods of destroying parasites on fruit trees by spraying (1895).

The creation of a superintendent of good roads (1896).

2.—AGRICULTURAL STATISTICS.—The office of public statistics publishes yearly a report and bulletins on various subjects. The preparation of these statistics rendered necessary in 1895 the despatch of 160,000 blank forms for the insertion of reports on the crops, and 40,000 more for different purposes.

We have already, and we shall have again in the course of this report, had occasion to profit by the information supplied by this statistical bureau, which seems to us to be admirably organised, and whose method of working merits special attention.

3.—PUBLICATIONS OF THE DEPARTMENT.—The reports published by the Department of Agriculture form two splendid volumes; they are 23 in number; their issue (*tirage*) varies from 1,000 to 17,000, averaging 8,300 copies.

Within the last few years the Department has also published a great number of bulletins, of which no fewer than 1,500,000 copies have been distributed. Each member of the "Farmers' Institute" has a right to 8 copies of these reports, and to one of each bulletin.

4.—BUDGET OF THE DEPARTMENT.—Agriculture occupies a large space in the public accounts of the Province of Ontario, though it seems by no means to lament over the \$4,000,000 expended by its head since Confederation. In the \$251,000 inscribed in the budget for 1895, to the Department of Agriculture, we point en passant to the following items:

Guelph College (less the Dairy Department.....)	\$44,000
Agricultural societies.....	77,000
Dairying { Societies..... \$ 7,700	} 27,000
{ Schools..... 15,200	
{ Experiments..... 4,100	
Building societies.....	77,000
Statistics.....	6,500
Farmers' Institutes.....	10,000
Fruit experiment stations.....	2,600
Printing.....	14,000
Office and clubs.....	18,500
Various items.....	42,700
Total.....	\$251,000

5.—FARMERS' INSTITUTES.—The operation by the "Farmers' Institute" of an appointment of at Guelph, but and by an act, Lieutenant-Governor. Institutes are held by both skilful and competent attendants. "The Department of this organization will not rest satisfied until the most important industry, fitted for personally involving the spirit of farmers into co-operation with these conventional methods held at uncertain times. But how much and method, the system of the country.

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Each local information in the Institute is bound to be most successful familiarized with dairying, and a

A Farmers' Institute is organized by persons, subscribed of \$25 from the granted it by the Institute is organized

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5.—FARMERS' INSTITUTES.—Founded in 1885 by Dr. Mills, and put into operation by him with the generous aid of the professors at Guelph, these "Farmers' Institutes" have only just reached their meridian height: by the appointment of a special superintendent, Mr. F. W. Hodson, who, at first resided at Guelph, but now has an office in the Department of Agriculture at Toronto; and by an act, entitled the Act on Farmers' Institutes, which has given to the Lieutenant-Governor-in-Council the power of sanctioning the bye-laws. These Institutes are highly thought of in Ontario, as are their bye-laws and the way, both skilful and practical, in which they have been prepared by the superintendent. "Destined to gradually raise the condition of agriculture in Ontario, this organisation of the 'Farmers' Institute,'" says Mr. J. E. Bryant, of *Farming*, "will not rest satisfied with making agriculture (that which it is already) the most important industry of the country, but it will make it more than any other industry, fitted to ensure the prosperity, the happiness of its adepts. By provoking the spirit of research, of emulation and of imitation, by instilling a taste for personally conducted experiments, by putting experienced and successful farmers into communication with the inexperienced and unsuccessful farmer, these conventions never occur without doing some good, even when they are held at uncertain intervals, and are carried on with perfect freedom from control. But how much more influential will they be when, directed by firm management and method, they shall have become a quickening organ of the agricultural system of the country."

Judging from the increasing number of "Farmers' Institutes," and of the public that attends their meetings, their future seems to be assured. In 1885, 12 meetings were held, attended by 2,208 persons; in 1896, 666 meetings were attended by 102,461 persons.

Each local Institute has for its aim, not only the diffusion of agricultural information in its own district, but also the development of *local talent*, and the Institute is bound to strive to bring the ordinary farmer into contact with the most successful farmers of the district, so that the whole mass shall become more familiarized with the best and most profitable methods of tillage, breeding, dairying, and all that belongs to agriculture.

A Farmers' Institute is formed by the reunion in any district of at least 50 persons, subscribing at least 25 cts. apiece. This Institute has a right to a grant of \$25 from the Department of Agriculture, on condition that a similar sum be granted it by either the County Council or the Municipality in which the Institute is organized.

It is a rule in these Institutes that a majority of the Board of Directors be farmers.

Independently of the annual meeting, each Farmers' Institute is bound to hold at least five meetings in the district.

The regular delegation from the superintendent is present at only two of these meetings; additional lecturers may be sent to the other meetings, in which case their stipend is paid by the Department and their travelling expenses by

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the Institute; provided their funds admit of it, the Institute may hold other meetings, but in such cases they must find the pay and expenses of the lecturers.

The bye-laws of the Institutes, which have recently, after consultation and understanding with the Directors of the Institutes, been revised, enter more minutely into the means of the drawing up and publishing of the programme of local meetings, and the manner of holding them.

The Superintendent of the Institutes himself publishes a general programme at the beginning of the winter. For the season of 1896-97 this programme includes in the 11 districts of Ontario 193 regular meetings, 262 supplemental meetings, 456 subjects of the lectures, and the names of 52 lecturers. Two of the *beau sexe* were employed to lecture on domestic economy.

6.—AGRICULTURAL EXPERIMENT-UNION—With a creation dating from 1879 the Union has only enjoyed a real existence since 1886, when the system of co-operative experimenting was effectively instituted. This union, limited at starting to the former pupils of Guelph, soon secured as assistants a large number of practical farmers. In 1886, it had only 12 experimentalists, in 1896 there were 2,260! Here, too, success was ensured by method and organised work. Mr. Zavitz, a Guelph experimentalist, aided it greatly. In five years, more than 42,000 packets of select seed were distributed to voluntary experimenters, and each year sees increase the number of those who wish to enter the Union. Here, again, we see the daily gain in influence of the Guelph College; we see at the same time, in the reports of the experimenters, both a proof that practical agricultural work attains, from year to year, a higher level, and a sign that before long, farming in Ontario will rest entirely on scientific principles.

7.—THE SOCIETY OF AGRICULTURE AND ARTS has organised provincial exhibitions, ploughing matches, competitions of the best cultivated farms, the Veterinary College at Ontario, the registration in herd-books of cattle, etc. This association came to an end in 1895, the success of the Toronto, London, and Ottawa Exhibitions, all of which are *non-subsidised* private enterprises, rendering its services useless, and the registering of stock having been entrusted to the different Breeders' Associations, 12 in number.

8.—DAIRY ASSOCIATION.—Ontario had three dairy associations, viz., the Western, the Eastern, and the Creameries Association. The Minister of Agriculture, in a recent circular, expressed the hope that these three societies would join together to form one sole one, which would thus be more powerful and more efficient, and expending less on its interior administration, would leave more money disposable for the teaching and diffusing abroad of special information among both patrons and makers. This project of amalgamation was approved of by the Brantford Convention, and seems likely to be put into operation.

9.—THE ASSOCIATION OF FRUIT-GROWERS AND EXPERIMENTAL FRUIT STATIONS.—The Association of Ontario Fruit-growers is one of the most prosperous and has the greatest number of members; in 1895 it reckoned 2,475. It has done a great deal for the development of this branch of agriculture, and its last movement in the path of progress is not the least worthy of attention;

we mean the object, and at Ontario. Their knowledge of the value of fruits for the market is worth \$150.00 per acre. The possession of the land only return the

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we mean the establishment of EXPERIMENTAL STATIONS, very practical in their object, and at the same time very economical; there are now 12 of them in Ontario. Their direction is entrusted to fruit-growers or to nurserymen, whose knowledge of their business and trustworthiness is beyond cavil. The varieties of fruits for test are sent them by fruit-growers; the Government grants them \$150.00 per station, for which they are bound to make a report. This sum and the possession as their own of the trees and shrubs experimented on, are the only return they get for the cost and the management of the experiments.

10.—GOOD ROADS.—One of the latest creations of the Ontario Department of Agriculture is the appointment of a superintendent of roads. The movement in favor of the improvement of the roads began in Ontario in 1893, by an active crusade in the papers aimed at the arousing of public opinion. Then, a society was formed and took up this question; it appointed a teacher who went about lecturing all over the province; road-machines were sent to all the exhibitions, where they did their work before the eyes of the farmers, and there are at present in the municipalities ten times more of them than there were three years ago. Thanks to a capable and energetic superintendent, the Ontario Department of Agriculture hopes that improved roads will soon become general throughout the province. In the last report of this official will be found all the information necessary to explain the best manner of setting to work for the purpose in question.

CONCLUSION.

AGRICULTURAL SCHOOLS.—Like many other establishments, the GUELPH SCHOOL was at starting the object of much inimical criticism. The farmer-class of Ontario was slow to comprehend the benefits it must derive from a system of teaching specifically adapted to its needs. But its success is nowadays complete, admitted by every one; and on every side nothing but praises and satisfaction is heard. This school has become a national institution, far above the hyper-criticism of party.

Guelph resembles a nursery, not of good farmers alone, but of teachers, lecturers, agricultural journalists, and administrators. Many of its old pupils figure now among its professors; others hold similar positions in the universities and experiment stations of the States.

Others, in larger numbers, without being professors, contribute no less to improved agricultural instruction in the province as members of the Experiment Union, or as practical lecturers at the Farmers' Institutes.

Considering the services rendered by the former pupils of Guelph to the cause of progressive agriculture in Ontario, it may be asked if, in order to ensure the supply of future professors and lecturers, the Province of Quebec would not benefit by sending for a few years the best and most meritorious of her agricultural pupils to complete their technical education at Guelph. Could not a few scholarships be put up for competition for their aid, under certain conditions to be determined hereafter.

If, in Ontario, it is recognized as a necessity that the country children be prepared in the public schools, primary or model, for the higher education at Guelph, it must be confessed that we in this province, having no higher agricultural education going, are hardly more advanced as regards preparatory instruction.

Our schools of agriculture have often been reproached in the past with never having turned out a practical farmer, a lecturer, or a teacher of agriculture. Is the fault solely chargeable to the schools? We do not think so. The few pupils that they used formerly to receive went through no matriculation-examination, and were but too frequently utterly unprepared to follow the course of instruction given in the school. Some of the pupils, whose names we could mention, were still, when their terms were finished, unable to give a concise account of the lessons they had received. What could the professors get out of such pupils? One great advance was made when it was decided to assign the schoolships in our farm-schools to none but the most deserving; was there no chance then of more rapidly arriving at the improvement of holding matriculation examinations? It is neither by the architectural splendour of the buildings nor by the number of the pupils, but really by the success of the latter, that the province will judge of the advantages of the expenditure incurred in the construction and maintenance of its schools.

DAIRY-SCHOOLS—Ontario has now the advantage of having three dairy-schools, the one at Guelph being annexed to an establishment for superior education, provided with a chemical and bacteriological laboratory. Experiments are carried on there during 8 or 10 months of the year. The whole of these three schools have never had as many pupils passed through them as our one school at St. Hyacinthe. The patronage given to this one of ours by 1,200 makers since its foundation, would fully justify the department for reorganising it, with a view to more thorough instruction and to experimental researches into the difficulties that beset the making and ripening of cheese, so particularly due to our climate and to the richness of our milk.

THE DAIRYMEN'S ASSOCIATION.—The Dairymen's Association of the Province of Quebec has always been treated with great liberality by the Department of Agriculture, and has no reason to be jealous in this respect of any of the societies in Ontario, but there are also in our own province, two local associations whose members would, without doubt, benefit by being affiliated to our Association. The example of the Ontario societies is certainly worthy of study.

DISTRIBUTION OF REPORTS.—The Dairymen's Association sees with pleasure its reports distributed, by the Department of Agriculture, to the members of the Farmers' Clubs. Its Delegates learned during their trip that the cost of printing the reports of the Ontario associations is paid for by the department, which gives away 16,000 copies of it to each of the three societies.

The Dairymen's Association has still in its hands a good many copies of its older reports, which might be advantageously distributed among the members of the Farmers' Club.

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FARMERS' CLUBS.—An advantageous comparison might be instituted between the "Farmers' Clubs" of Quebec and the "Farmers' Institutes" of Ontario. Our clubs seem to us to be better suited to our wants, and to cover a much wider field. It is to them that we are indebted for the rapid progress made during the last few years, but it would be childish to deny the power of the organisation and the superior conduct of our neighbours for the rapid diffusion of practical knowledge and experimental data; perhaps, it would be useful for us to follow their example and infuse more method, more clearness and uniformity into the teaching of our lecturers; and when this has been done, to add to them a certain number of the best farmers in each district, of those whom the province of Ontario seeks to bring forward under the title of "local talent."

THANKS.

We cannot close this report, already voluminous as it is, without the expression of our deep gratitude to all those who, during our tour, received us so cordially and treated us so hospitably; and by name, we thank: The Hon. the Premier of Ontario; the Hon. John Dryden, Minister of Agriculture for Ontario; Dr. Mills, Principal of the Guelph School; Mr. C. C. James, Deputy-Minister of Agriculture; Prof. Dean, of Guelph; and the managers of the dairy schools of Strathroy and Kingston, and, lastly, the directors and officers of the Western Ontario Dairy Association, whose kind invitation was for us the occasion of a tour as useful as it was agreeable.

The whole respectfully submitted.

M. MACDONALD, President.
E. CASTEL, Secretary.

The President—And, now, gentlemen, permit me to introduce to you Monsieur Bourassa, who has been good enough to take a share of our work upon himself. I may tell you, and that with pleasure, that, like myself, he is an ordinary farmer, and has the progress of dairying in Canada greatly at heart.

ADDRESS OF M. HENRI BOURASSA, M. P.

My Lord, Mr. President and Gentlemen,

I must confess to you that when I made up my mind to attend this convention, the first at which I have ever been present, I had no idea of making a speech. I came hither to listen and learn, but sometimes, while teaching one learns, and that is the reason I have accepted the invitation to address you on the subject of our agricultural societies.

At the last session of the Council of Agriculture, I announced that I had prepared for the next meeting, which was to take place in the course of the present month, a bill intended to regulate the functions of the Agricultural

Societies, as well as of the Farmers' Clubs. I could not get the documents necessary for the preparation of my essay, so I postponed till a later period the submission of this project.

If agriculture in Quebec has really made the progress we see in the last few years, it is indebted for a large part of it to the Farmers' Clubs and the Agricultural Societies. But these institutions have not given us all that we were entitled to expect from them. I know the French-Canadian has in him the spirit of progress; he is habitually prepared to adopt a novel idea, but in the spirit of organisation he is often wanting. When we have made a step in advance, when we have discovered a new process, we are inclined to think that before this nothing that was done or made was good, and we want at once to replace the old system by the new one, oblivious of the fact that the new may, to great advantage, be grafted on the old.

We have not perhaps, in favoring the establishment of Farmers' Clubs, sufficiently taken into account that these clubs may sometimes enter into competition with the agricultural societies, and thereby create a rivalry between the two institutions. It has often happened that a certain number of the members of the agricultural society being, right or wrong, discontented with their directors, have found in the clubs a means of making war upon the society

The *raison d'être* of the farmers' club is found in its name. What is a club? It is the meeting of several persons composing the same society for the discussion of questions that interest them. It is thus that are formed religious, political, literary clubs, for the discussion of and formation of the ideas and interests of the common cause that it is desired to defend. The object of our farmers' clubs should be to collect the farmers together to discuss questions of agriculture, and to exchange among themselves information and explanations fitted to promote the interests of agriculture. These clubs may also be of great service to farmers by helping them to profit by the advantage of association in the purchase of seed-grain, of pure bred stock, of implements and machinery, suited to improve farming processes, etc.; but these advantages should be the consequence and not the chief reason of the work.

It often happens that the founders of clubs, wishing to attract farmers by the sole view to the present profit, have devoted their attention solely to the purchase of grass-seeds. Many clubs only combine for the purpose of listening to one or two lectures in the course of the year, and want to spend almost the whole money of the club in buying clover and timothy seed. This is clearly a mistake, nay, an abuse. If people only want to buy seed cheap, there is no need to get up a farmers' club to secure that end. Let 20 or 30 farmers put their money together and buy from the same dealer a sufficient quantity of seed, and they will not have to pay a higher price than that paid by the members of the clubs.

But, there is another more serious defect with which our farmers' clubs may be reproached; one that belongs to their present organisation; it is this: they trespass upon the domain of the agricultural societies by getting up agricultural exhibitions and competitions, that can never produce satisfactory results,

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because the field of competition they offer is too limited. All the competitors living in the same municipality, they cannot be numerous, the value of the prizes is trifling, no real emulation can exist. The competition of the agricultural societies, on the other hand, by setting the farmers of several parishes or townships to compete with one another, and having more means, can offer more numerous and more valuable prizes; consequently, the zeal and ambition of the competitors are more highly excited.

This coincidence in action of the societies and the clubs, has the effect, too, of weakening both and of offering a ready support to the rivalry and quarrels, to the local disagreements, which, as we all know, are as numerous as they are varied. In almost every part of the province in which the two institutions are at work at the same time, lamentable divisions occur. Some farmers only join the club because some others belong to the society, and conversely.

It is this to which I want to put an end, if possible, by restoring to each of these institutions the characteristics, attributes, and duties that belong to them, and by leading the members to work for their common success.

Although I cannot give you an exact abstract of the project I shall submit to the Council of Agriculture, I can point out its chief points.

The basis of the plan is to be made clear in two phrases: there shall be no society without clubs, no clubs without a society.

The people of each parish shall form a club. The combination of the club of a county or a region shall compose the agricultural society; consequently there will be only one subscription to be paid.

The president of each club shall be, by right, a director of the society, so the board of directors will be composed entirely of the presidents of the clubs. This will put an end to an abuse that has been found to exist in the election of the directors of several societies, when a few groups or clans often forced upon them boards of directors that did not do equal justice to all the localities that formed part of them.

Each club shall have the control of a certain sum destined to the purchase of breeding stock and seed grain, etc.

The clubs will have to meet frequently and to organise discussions. It will be the duty of the presidents to see to the proper conduct of these meetings, which may be held on Sunday afternoons. Members shall impart mutually the results of their experiments, and give their opinion on the various systems of farming, breeding, selection of breeds, etc.

The question of the "Journal d'Agriculture" offers several contradictory points of view. At present, the Government retains the price of subscription for each member of a club or society. It sometimes happens that one and the same family receives five or six copies. This absurdity must disappear. I think it would be better to leave to each the duty of subscribing to the Journal at a

moderate rate, and not to deprive the societies of a considerable revenue, a large part of which at utter loss—except to the printer. Besides the members of the clubs, at least each head of a household should be obliged to subscribe. At any rate, the Journal must be taken in by the president and secretary of each club; the principal articles, those which seem to respond best to the needs of the place, should be pointed out by the secretary at the meetings, where they should be read and discussed. The clubs might put themselves into communication with the editor of the Journal, who should enlighten them on settled points, and publish the results of any experiments the members of the clubs may have tried.

Exhibitions of farm produce, competitions of best cultivated farms, shall all be under the control of the societies, and, consequently, the parochial competitions shall be suppressed. The greater part of the funds will thus remain in the societies' cash-boxes, and greater and more numerous prizes can thus be offered for competition.

There will be many details to be considered, but I think I have shown you the chief points of the measure.

What I aim at is, instead of having two rival bodies fighting with and weakening one another, we should have two societies working for their common benefit, and continuing to impel farmers along the path of progress; the one, by inciting farmers to study agricultural information and science, and enabling them to combine for the better application of novel modes of cultivation and breeding; the other, by offering them the means of comparing the results of their experiments and stimulating them by the offer of prizes to the more deserving.

If we succeed in this, we shall have largely contributed to the welfare of our country. In all countries the farming class is the basis of society; and this is more particularly true in our own country and province.

But to attain this end farmers must unite their efforts and good will. In all classes union is strength; in the farmer-class it is the essential condition of its influence. Manufactures infuse into its capital the force of organisation; the liberal professions find in the individual learning and influence of their members the means of preserving their position in society. Farmers can only be powerful by their number, and, moreover, that number must be compactly organised. Let them unite then, let them no longer waste their strength in parish-strife or intestine quarrels, and they will soon find out how to enforce the recognition of their legitimate rights.

I thank you, gentlemen, for the kind attention with which you have heard me. Allow me, in conclusion, to congratulate you, in the name of this region that I represent in the Canadian Parliament, on the good your Association has done and caused to be done.

Let us continue to devote to the service of agriculture the means of action that providence has entrusted to us, and we shall be doing a real, a genuine service to our country at large.

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ABSTRACT OF THE SPEECH OF HIS LORDSHIP THE
BISHOP OF NICOLET.

Mr. President and Gentlemen,

I would that I enjoyed the ease of elocution and the brilliant ideas that he who has just addressed you possesses—with such endowment, I might perhaps find means to interest you even on a subject like agriculture, with which I am not very familiar.

The civil authority, in the person of our worthy Mayor of the rural district, seconded by the Mayor of the city, has welcomed the members of the Dairymen's Association. The religious authority equally feels the need of welcoming them. For, although the end of our ministry is not to follow farming, we can by no means divest ourselves of an interest in a calling so necessary as agriculture, a pursuit that so intimately concerns the class of people with whom we are in daily communication. And for that reason it is that I am happy to bid you welcome, and to say how glad I am to see you here. Besides the qualities, personal to your members, they have that of improving a cause that deserves all our attention, and is destined to restore prosperity to our rural homes—the cause of dairying. It will not be long before this art has restored to our homes the ease which used to reign among our farmers. For, if during the last few years you farmers have been poor, it has not always been so. A time has been when plenty reigned in our rural parts. There was comfort; farmers were proud of their lot, because everything went well with them; it was the "Golden Age" returned.

It must, however, be confessed that this was not entirely due to our energy, our intelligence, but rather to God himself, and to the exceptional circumstances in which we were placed. God gave us the land we possess, then rich and fertile. Our fathers had only to break up the land and sow the seed to be justified in anticipating an abundant return at harvest. For more than a century, farmers had an outlet for their products. When we passed from the hands of France into the rule of England markets were opened to us. We had not then those wide territories; there was no Manitoba, no "Far West," as wheat lands; it was a land of bisons. No one then spoke of "Black Sea wheat," nor of "Russian wheat;" none came from Australia, so that England was obliged to take our wheat to feed her troops and people. You who are no longer young will remember that in those days farmers got \$1.50, \$2.00, and \$2.50 a bushel for their wheat (1). So then there was plenty of money; their labor earned much; one was proud of being a farmer in such a time. The sons had no fancy for emigrating then; there was plenty at home.

Never will the country find itself so naked as after the conquest. It had lost even its male population; all able-bodied men had been carried off by the war; only children and old men remained; poverty was the lot of all. But a few years, and what a change! Easy circumstances returned everywhere. From 1763 to 1830, wheat selling at paying prices restored abundance to the country.

(1) The *minot* was one-tenth larger than the imperial bushel.—A. R. J. F.

During that period things went well; now, circumstances are altered. The Western States and Manitoba have become exporters of wheat, the countries of Europe too; markets are overloaded, and our wheat finds no buyer.

And more, our land is impoverished because what has been taken out of it has never been repaid. It is these two things that have cramped us: the over supply of the markets, and the impoverishment of our land.

Other means then had to be sought for: hay was tried. A risky crop is hay; in spite of its advantages it may also cause disasters. This crop also deceived us a few years later, as all the Western States began to grow it. Embarrassment returned once more, and was felt more by farmers than by others. People began to ask: What are we going to do now? Nothing sells; neither grain, nor hay, nor stock. What is to be done?

It was at that crisis that the leaders of the people, statesmen as well as clergy, began to induce farmers to adopt dairying. They expected it would lead to prosperity, and they were not mistaken.

This Dairymen's Association began its work some years ago; it pursued its end with energy, and won marvellous results.

The meeting of this evening ought to give us joy and pleasure, since we see by it that this association is following up its task of restoring prosperity to our rural population. For I willingly blend my lot with yours. You know well that if the farmer is at ease the bishop is not in difficulties; and, should the farmer be poor, the bishop is not likely to be opulent. We have no personal income, neither have our Sees; so that, for our daily needs we are indebted to the liberality of those whose spiritual destinies are in our hands. It is then nothing but natural that I should merge my lot this evening in the lot of the farmer.

The object then of this Association is to re-establish us in easy circumstances and to bring it to us in some degree. What means has it taken to secure its object? Lectures are the proposed means. Do you ask why? Because the edifice of all progress reposes on the basis of an idea, and it is in these lectures that is given to the farmers the idea that will help them to improve their condition. Otherwise, there is only the routine idea, applied in an irrational manner. It is an honorable thing to establish oneself in a tradition; but tradition and routine must not be confounded together. Routine is irrational, while tradition applies the methods of our predecessors in a rational manner. In order that our people may not be called a people given up to routine, the members of this association give lectures in different parts of the country, in order to allow each farmer to conceive sound, true, progressive ideas about his business; and when these ideas shall have arisen in their minds, our people will know how to ponder them.

There is one thing that gave me great pleasure it was to hear the member for Labelle praise the agricultural classes. One thing must be evident; for many a year the farmers have been but little noticed. Manufactures, factories,

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were noticed; boasts were made of what was being done in these establishments, people tried to regulate the lot of the workman, but the farmer was left to himself, and to such a degree that he began to think his business was the lowest of all. In those days, one heard farmers say to their children: "If you do not care to do any better, you will be a farmer like me." But if there is a noble profession, it is that of a farmer; if there is a profession in which perfect liberty is enjoyed, it is a farmer's; but in order that a farmer may appreciate his profession, it must compensate him a little for his pains. If he reaps no return for his trouble, he will think that his profession is not worth much; if, on the other-hand, it pays him well, he will like it, and induce his children to follow it.

Such was the condition of the farmer in this Province; no one gave him any encouragement, his crops did not sell, and he began to think no one was in such a hopeless condition as he was. The lads left for the States, and our fields needed hands, while our children were working for the foreigners, because they had no opinion of the life of the farmer. But if our public men would say, as M. Bourassa said just now: You are wrong to think that your life is not a noble one; not only have you the destinies of the country in your hands, but you have the genuine liberty, such as is enjoyed by no other class in the world. If every public man would talk to the farmer in this style he would end by believing it, and he would not be wrong. Let us unite in encouraging the farmer; let us try to get him to like his business, and this, added to the work done by the Dairymen's Association, will give us a well founded hope of seeing once more among our farmers the easy circumstances that their fathers enjoyed in their time.

ADDRESS BY MR. GEO. BALL, M.P.P.

Mr. President, my Lord, and Gentlemen,

I had no intention of addressing you this evening, but I must join my friend, the mayor of the parish of St. Jean-Baptiste de Nicolet, in welcoming the members of this convention. I will not waste precious time by a lengthy discourse, but only congratulate these gentlemen who have come from all parts of this province to join this fine meeting and encourage the people of Nicolet, who, on account of the difficulties of transit, do not often meet with encouragement. I thought I could at the same time congratulate our federal and local Ministers of Agriculture, but I find that circumstances probably unavoidable have detained both of them at their offices. I cannot say anything as to Mr. Fisher, but I know that M. Déchène, the Commissioner of Agriculture, is prevented from coming hither and for a good reason. He is one of the Cabinet that has only been six months in power, and at the opening of a session, the first under a new government, like the present, ministers have duties that detain them at their post. I saw M. Déchène a few hours before I left Quebec; he thought up to the last moment that he would be able to be present here, but finding it to be impossible, he begged me to make you his excuses.

And now, what can I tell you about dairying? I understand about as much about it as blind man does about colours, so I will limit myself to giving a word of advice to the farmer. I observed that those who preceded me have at heart the promotion of the prosperity of the agricultural classes. Well! there is nothing like dairying for that purpose; the future of this province depends upon it, and the future will prove that the gentlemen who have just addressed you were right when they told you that progress lay with that industry. For, in truth, Quebec cannot compete with the other provinces in the rest of the agricultural productions; our pastures, however, are good; we have plenty of hay; let us go freely into dairying, for therein lies our salvation.

There is the lumber-trade, too; that I know something about; it may bring you prosperity, but it cannot last long, whereas dairying is only at its commencement. Continue your labours, then, and before long we shall rival Ontario in all our productions.

SPEECH OF THE HON. SYDNEY A. FISHER,

Minister of Agriculture.

Mr. President and Gentlemen,

I beg to thank the President and officials of your Association for the honour they have done me in inviting me to this fine meeting, to take part in this convention. Two years ago I ceased to be an official of the Dairymen's Association, but previous to that time I had long been one, and I have never failed during the interval to be your friend and to feel an interest in your work. I am well acquainted with that work, and I must congratulate your president and all your office-bearers at having so well kept up the labours of their predecessors.

I am happy to see so good an attendance as I see this evening. It is the first time that I have been at Nicolet. I became acquainted with your city this evening, and I am rejoiced to meet here the same farmers, the same people whom I have met everywhere in the Province of Quebec. The same enthusiasm, the same energy I meet with in all who follow dairying. These gentlemen have done much for the farmer; there was a time in Quebec when the dairy industry was hardly thought of at all, but during the last ten years we have made such progress in it that we are almost in a condition to contend successfully with Ontario, the leading province in the Dominion of Canada as regards the dairy industry.

Since I have been Minister of Agriculture, it has been my duty to attend to the interests of the different provinces; but I am always most proud to visit Quebec, to come among its farmers, because I find in this my own province as much intelligence and enthusiasm for the future of agriculture as in the other provinces of the Dominion.

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But there is still progress to be made; we have not yet reached the limit of our greatest effort for the success of dairying has not yet been made. This year we owe many thanks to the Almighty; we are in a much more prosperous condition than we have been of late. Almost everywhere throughout the province the crops were good; the yield of our cows was more copious, and our products sold at fairly good prices. This is the reason why we have more money than in the last few years, and why trade is more flourishing. Prosperity has extended itself over the whole of Canada this year; to your intelligence and industry it is due, and it is the same qualities that will preserve it for us in the future.

Now, it is very late, I have just arrived from a longish journey, so I will not detain you any longer. I always feel much pleasure in attending meetings of this kind, and I will try to address you to-morrow at greater length. (Cheers.)

A LETTER FROM THE HON. C. DÉCHÈNE, COMMISSIONER OF AGRICULTURE.

The President read a letter from the Hon. C. Déchène, Commissioner of Agriculture at Quebec, excusing himself on the grounds of his parliamentary duties for not being able to accept the invitation of the Dairymen's Association to be present at the Nicolet convention.

DISTRIBUTION OF DIPLOMAS TO THE INSPECTORS.

The secretary distributed to the under-named the *diploma of Inspector of Cheeseries*.

M. Archie Smith, Huntington	marked	" Optime."
" Frank Herne, Anderson's Corner . . .	"	"
" J. A. Guertin, Lachevrotière	"	"
" François Robillard, St. Ours	"	" Bene."
" Pierre Tremblay, Jr., St. Alphonse . . .	"	"

COMPETITION OF CHEESE FROM THE SYNDICATES OF YAMASKA AND NICOLET.

The Secretary then read a summary of the result of the above competition, and the Judge, Mr. A. F. MacLaren, M. P., made a few observations on it. Mr. MacLaren having postponed till next day his remarks on the exhibit of cheese. The report of the competition will be presented later, as a whole.

LUMINOUS PROJECTIONS.

The Secretary of the Association then presented a series of projections on the subject of good roads. It is most intensely interesting to those connected with the dairy industry, and it is from the Association, as the President reminded the meeting, that the initiation of the movement in favour of the improvement of the roads had its origin.

The engravings which were used for the tableaux on glass for these projections were taken from the "Bulletin" on the roads, published by the Department of Agriculture, Quebec.

Tableau No. 1—Profiles of bad roads, comprises figures 6 and 7 of the bulletin

- " " 2—Tools used in making bad roads, figures 1 to 4 inclusive.
 " " 3—4 profiles of good earth roads, figures 11 to 14.
 " " 4—The road machine, 4 views, figures 8, 15, 16 and 17.
 " " 5—Stone roads, with culverts, figures 18, 19, 22 and 24.
 " " 6—Breaking stones, the machine, 3 views, figures 20, 21 and 22
 " " 7—Rolling roads, the roller and its effects, figures 9 and 10.
 " " 8—Badly kept roads, no ditches, figure 5.
 " " 9—Good roads, frontispiece.
 " " 10—Heavy loads on Macadamised roads, an engraving taken from a work by Prof. J. A. Holmes, on "The improvement of the public roads in the State of North Carolina," published in "The Year Book of the United States Department of Agriculture," 1894.

All those who take an interest in the question of the improvement of the roads in the province of Quebec are earnestly prayed by the Dairymen's Association to join the young Provincial Association of Good Roads, and to send in their names to the provisional secretary of the said association, M. O. E. Dallaire, St. Rose, county of Laval.

SESSION OF THURSDAY MORNING, DECEMBER 2ND.

The session opened at 10 a. m.

The election of officers and directors of the Association for the year 1898 took place as follows:

OFFICERS.

Honorary President: L'ABBE MONTMINY, St. George de Beauce.
 President: M. MILTON MACONALD, M. P. P., Acton Vale, Bagot.
 Vice-President: M. HENRI BOURASSA, M. P., Papineauville.
 Secretary-Treasurer: M. EMILE CASTEL, St. Hyacinthe.

DISTRICT

Arthabaska
 Beauce
 Beauharnois
 Bedford
 Charlevoix and St.
 Chicoutimi.....
 Gaspé.....
 Iberville.....
 Joliette
 Kamouraska
 Montmagny
 Montreal
 Ottawa.....
 Quebec.....
 Richelieu
 Rimouski
 St. François
 St. Hyacinthe.....
 Terrebonne
 Three Rivers.....

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DISTRICT.	NAMES.	RESIDENCE.
Arthabaska	MM. D. O. BOURBEAU.....	Victoriaville.
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Beauharnois	ROBERT NESS.....	Howick.
Bedford	C. H. PARMELEE, M.P.....	Waterloo.
Charlevoix and Saguenay.....	J. D. GUAY.....	Chicoutimi.
Chicoutimi.....	JOS. GIRARD, M.P.F.....	St. Gédéon, Lac St-Jean.
Gaspé.....	ALEXIS CHICOINE.....	St. Marc, Verchères.
Iberville	ED. MCGOWAN.....	St. Martine, Chateauguay.
Joliette	SAMUEL CHAGNON.....	St. Paul l'Ermite.
Kamouraska	J. C. CHAPAIS.....	St. Denis de la Bouteillerie.
Montmagny	ED. A. BARNARD.....	L'Ange Gardien, Montmor.
Montreal	J. A. VAILLANCOURT.....	Montreal.
Ottawa	J. H. SCOTT.....	Montreal.
Quebec	NÈMESE GARNEAU, M.P.P.....	Ste-Foye, Quebec.
Richelieu	J. L. LEMIRE.....	La Baie du Febvre.
Rimouski	CHS. PRÉFONTAINE.....	Isle Verte.
St. François	REV. V. CHAREST.....	Sherbrooke.
St. Hyacinthe.....	L. T. BRODEUR.....	St. Hugues, Bagot.
Terrebonne	L'ABBÉ COUSINEAU.....	St. Thérèse, Terrebonne.
Three Rivers.....	CHS. MILOT.....	St. Monique, Nicolet.

REPORT

Of MM. GABRIEL HENRY, of the Department of Agriculture, and ELIE BOURBEAU, Inspector-General of Syndicates, on their tour through Wisconsin.

(The report was read by M. Henry.)

Mr. President and Gentlemen,

M. Elie Bourbeau and I were sent last November to Wisconsin, in the interests of the dairy industry, by the Hon C. Déchéne, and we have the honour of presenting to you the following report:

GENERAL CONSIDERATIONS.

In this tour our attention was first directed to all that had been done in the State of Wisconsin to perfect the methods of making butter and cheese.

The information we obtained bears on:

1. The "curd-test," a new way of testing milk.
2. The cooling of ripening chambers by underground conduits, called air-ducts; a plan not yet tried here.
3. Central ripening chambers, a plan proposed for Wisconsin.
4. The general condition of Wisconsin dairying.
5. The methods of farming practised there, and which might be copied perhaps in some parts of Quebec.

I.—“CURD TEST.”

Object of this test.—Method of procedure.—Experiments tried at the St. Hyacinthe Dairy-School.

The Babcock shows the richness in fat of milk and detects frauds; the acetometer shows the amount of acid in milk.

The richness of milk and its acidity are two very important features, but there is another, no less important, of which, up to the present time, there has been no test; that is, the purity of milk as to injurious ferments and smells, the manner in which it has been kept by the patrons from the time it left the cow to the moment when it reached the factory.

Every season, factories incur great losses through the fault of one or more patrons who are dirty and careless, who bring in milk having a foul smell and otherwise filthy, and it must be remembered that the milk of one such patron will spoil the whole batch.

It may also, without fear of being deceived, be affirmed that if all the inferior cheese in Canada is classified by the trade under the head of “Quebec” or “French” cheese, it is due rather to the above fact than to any want of skill or knowledge of the makers, for, at present, many of them, even of the most skilful, can turn out nothing but inferior goods on account of the badly treated milk sent in to their factories.

Now, at Madison, has been perfected the method of Professor Gerbes, a German, known as the “fermentation test,” and Prof. J. W. Decker, the teacher of cheese-making there, has given the name of “curd test,” to a modification of the method.

It authorises a maker to say to A or B, patrons: “Your milk is badly aerated, badly kept. Look at the test that proves it.” He can be made to perceive the bad smell let loose from the milk, and make him feel *de visu*, with his own eyes, the damage his carelessness may occasion in the batch of cheese.

Simple enough is this method. It consists in taking bottles, holding about two pints (*chopine*) (1), a wide neck and a stopper fitting hermetically; in filling them two-thirds full of the milk of doubtful quality, using a separate bottle for each suspected patron. To each bottle is added ten drops of rennet extract diluted with water; the bottles are then placed in water, at about 100°, up to the level of the milk they contain; the milk curdles in a few seconds; when completely turned, the curd is to be crumbled with the blade of a knife, and the whey poured off as fast as it separates, at intervals, very narrow at first, but wider afterwards, replacing the bottle in the water still kept at 100°.

(1) Not the *chopine* by the “altitude” of which the player in “Hamlet” had grown since the Prince of Denmark had last seen him. Boys played women’s parts then. *Chopine* was a kind of clog, now known in England as a “patten.”—A. R. J. F.

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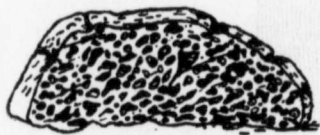
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When all the whey has run off, a lump of curd will be found in the bottom of the bottle, which is then to be left, well corked, for from 4 to 6 hours, at the same temperature of 100°, in water, the trough of tin-lined wood in which it is placed being hermetically sealed by a staunch cover, fastened very tightly down to prevent cooling.

When the time has expired, the lump of curd is removed from the bottle and may be broken and analysed.



FLOATING CURD.



FIRM CURD.

If there were bad smells in the milk they will concentrate themselves, so to speak in the curd and betray themselves sensibly to the olfactory nerves.

If injurious germs were present in the milk they will be developed, and the curd will be more or less light, and more or less pierced with pin-holes.

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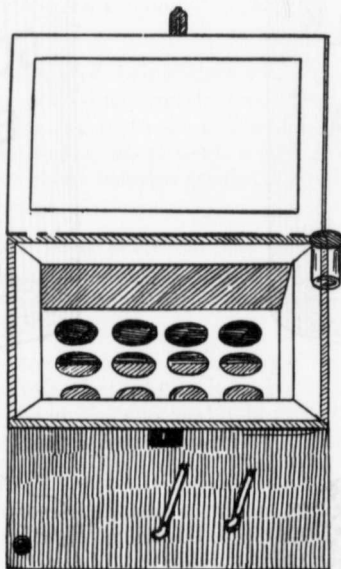
But if the milk was good, the curd will have a pleasant smell and be perfectly close and firm.

This lump of curd allows us to detect all the faults the tested milk can impart to the cheese, and then to trace back the causes that brought about the bad quality of the milk.

Thanks to the kindness of Prof. Decker, we tried this plan at Madison, and learned perfectly how to put it into practice.

Since our return, experiments have been made at the St. Hyacinthe Dairy School by M. E. Bourbeau with the best results, and the method has been entered into the list of subjects taught. Patrons who were in the habit of bringing bad milk have been warned, and the test explained to them.

I am engaged with M. Bourbeau in making a small apparatus of 50 bottles, occupying but little room in the factories and of practical service; it is also very cheaply constructed.



This novel test of milk, if it extends in the Province, will certainly cause a great improvement in the quality of butter and cheese, since, by its use, careless patrons can be more easily looked after, and we may hope, too, that one of the principal reasons of the bad reputation of Quebec cheese will disappear more rapidly and that many of the faults in making may be obviated, to the advantage of all concerned,

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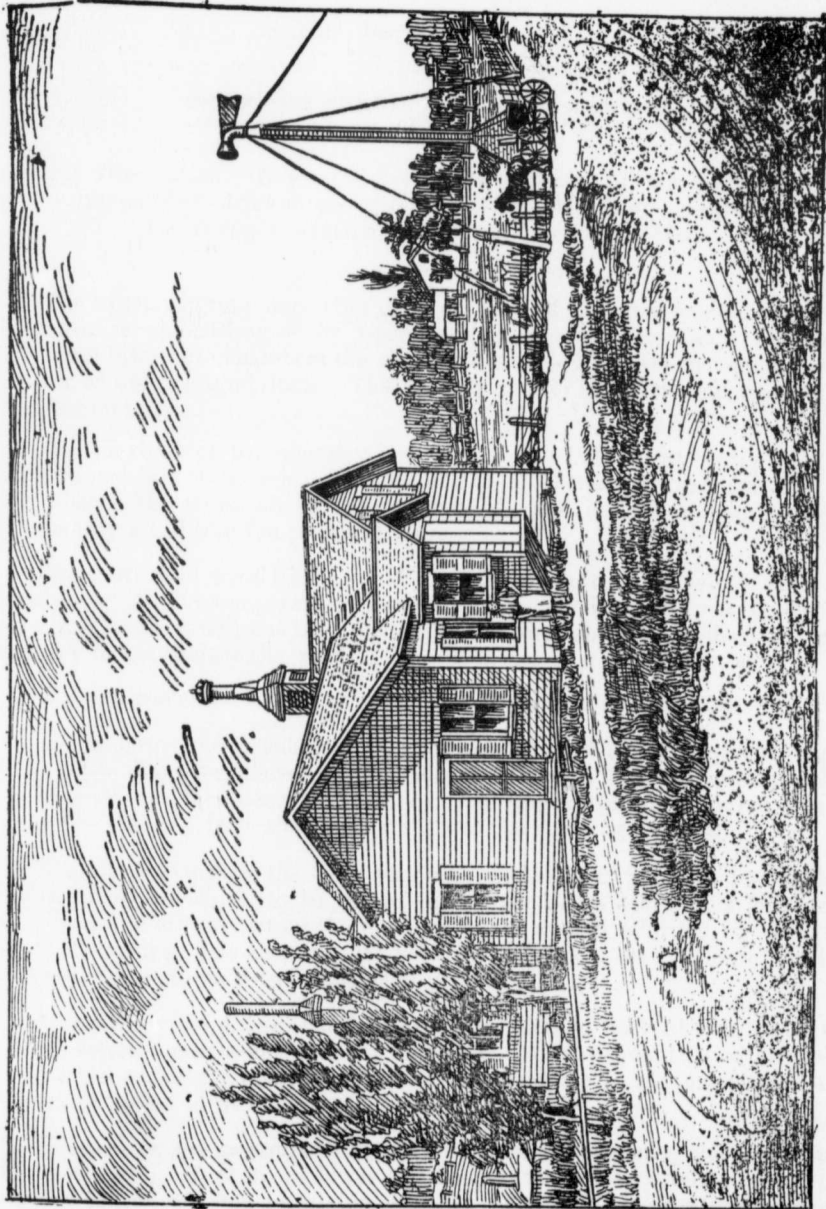
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M. KASPAR'S CHEESERY AT NICHOLSON WISCONSIN.



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II.—AIR DUCTS.

COOLING THE RIPENING CHAMBERS IN CHEESERIES.

General Description.—Laying the conduits.—Theory of the working of the apparatus.—Advantages of the practice.—Means of accelerating the draught.—Its drawbacks and how to cure them.

The accompanying engraving gives an idea of the new mode employed in Wisconsin for the cooling of the ripening chambers in cheeseries. It consists in leading into those chambers the air which is made to travel through a certain number of underground ducts. The air gets cool in the ducts and acquires the desired humidity.

On the right of the cheesery is seen an isolated shaft; at its top is a cowl like a funnel laid on its side. The opening of the funnel always points to the side whence the wind blows, turning with it, and is kept in the necessary direction by a tail-like fan placed in its rear.

The shaft is of wood; iron would heat the air in it, which would have two drawbacks: 1. The temperature of the ripening chamber could not be kept so low; 2. The air would not travel so easily, the draught of the shaft having a tendency to act against the wind.

A sheet iron shaft, moreover, would cost more than one in wood.

The underground circulation is carried on through ten to fifteen drain-pipes, six inches in diameter, placed side by side, at a distance of three to four inches, and nine or ten feet below the surface. The pipes are one hundred feet in length, the distance from the exterior shaft to the ripening chamber.

The air arriving in the pipes vaporises all the moisture that covers their insides. Now, moisture, to be turned into vapor needs heat; this heat being taken from the air circulating there, becomes cool, and, in addition, by the very fact of its cooling, gets nearer to its point of saturation, that is, more moist, if we consider the effects it is capable of producing.

At a determined pressure and temperature, air can only absorb, under the form of vapor, a maximum quantity of water. When a quantity of air holds as vapor the maximum quantity of water proportionate to its temperature and pressure, it is said to be saturated.

The greater the pressure and the lower the temperature, the less vapor does air contain. If, then, we lower the temperature of a certain quantity of saturated air, its pressure remaining constant, a part of its vapor must deposit itself in a liquid form, and it will only retain the quantity it can hold at the new temperature.

As long as the air, at a determined pressure and temperature, is not completely saturated, it has a tendency to vaporise the water with which it comes in contact, and this tendency is the stronger the farther it is from its point of saturation ; in other words, the drier it is.

If the temperature of a certain volume of air not saturated be lowered, it is brought nearer to its point of saturation, it has a weaker tendency to vaporise the water with which it comes into contact, and, without in reality containing any more moisture, it will conduct itself as if it were more moist.

Now air, in travelling through the underground ducts, (1) absorbs the humidity of their insides, (2) cools itself by that very absorption as well as by coming into contact with the pipes that are of the same temperature as the ground.

The more porous and the better conductors of heat the pipes are, the more will the air in them become cool. But to this there are limits, as we shall find later on.

We see now how this air, cooler and nearer its point of saturation as it is, has the effect, (1) of cooling the ripening-chamber, (2) of greatly diminishing the evaporation of water from the cheese.

In practice last summer in Wisconsin, they succeeded in several factories in maintaining these chambers between 60° to 65° F. throughout the hottest part of the summer, and the loss of weight from the ripening cheese was almost entirely arrested.

In Mr. Kaspar's cheesery, Nicholson, Wis., a photogravure of which is appended, when once the apparatus was set to work, 529 pounds of cheese (small ones, 20 lbs. each) weighed exactly as much after 17 days as they did the first day. Another lot of 428½ lbs. only lost 3 lbs. in 17 days.

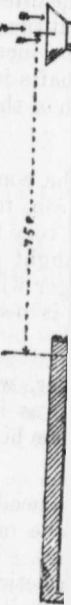
In Wisconsin, it is admitted that the average loss of weight in cheese during ripening is about 3½ % in 15 days ; with the underground ducts described this loss can be reduced to 1 %, which represents a gain of 2½ lbs. on the 100 pounds of cheese, or 15 lbs. in 15 days for 600 pounds.

Besides, cheese ripens much more regularly, loses its shape less, and, consequently fetches better prices.

In Mr. Kaspar's factory, the apparatus, including the exterior chimney, cost \$104 ; the cost of the digging of the ditches not being reckoned, as the patrons did it.

Is not that an outlay likely to bear a good rate of interest ?

In order that the system may work well, there must be, in the factory itself, a good ventilating shaft, to ensure a proper circulation of air in the ripening-chamber. For this, see the details in the engravings.



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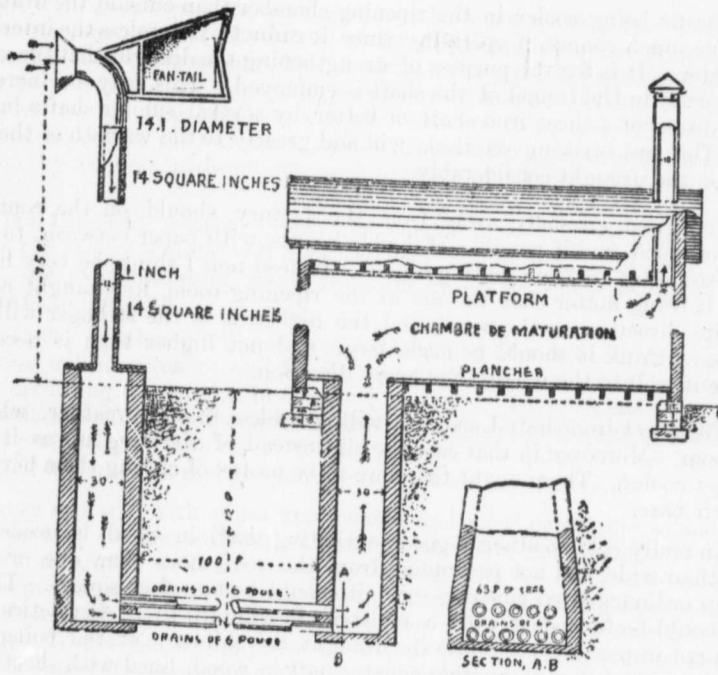
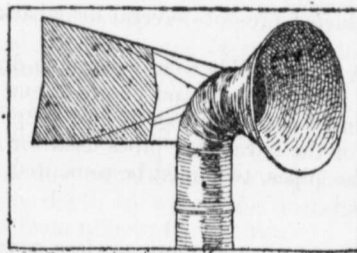


DIAGRAM SHOWING THE POSITION OF THE VENTILATION DRAIN.



VENTILATION SHAFT.

To aid the circulation of the air in the ripening-chamber, it would be well to let in the cooled air through several openings placed in the floor along the walls, or along two opposite walls, and to draw off the warm air through other holes, which must not be opposite the former ones, but be placed in the floor, along the opposite walls, or in the *axis* of the chamber.

The air being cooler in the ripening-chamber than outside, the draught will not have much chance of operating, since it cannot exist unless the interior air is the hotter. It is for the purpose of strengthening the draught that the swiftness of the wind in the funnel of the shaft is employed. This may be increased by the addition of a sheet iron shaft, or better, by several similar shafts instead of one. The sun striking on these will add greatly to the warmth of the air, and increase the draught considerably.

The great air-shaft, away from the factory, should, on the contrary, be made of wood, and if possible, of double boards, with paper between, to prevent the descending air from getting heated. It need not, I think, be very high; the air in it being hotter than the air in the ripening-room, its draught acts in an opposite direction to the wind, and the higher it is the stronger will be that action. I think it should be made large, and not higher than is necessary to expose it well to the winds from every direction.

The sheet-iron shaft I spoke of will be useless in cool weather, when there is no sun. Moreover in that case the air, instead of warming up as it ascends, will get cooler. There ought therefore to be means of closing them hermetically at their base.

In really cold weather, a good ventilating shaft, in wood, is needed, rather high than wide, and not protruding from the roof more than one or two feet. For an ordinary sized ripening-room, it should be two feet square. This shaft, too, should be furnished with a register, allowing it to be hermetically closed when not in use, or to regulate the draught, the chimney of the boiler may be used; surround it with another square shaft in wood, lined with sheet iron, and let it be in direct communication with the ripening chamber. When the boiler is not going, the draught will be weak. In hot weather, such a shaft would be handy.

The system of "air ducts" presents several drawbacks:

1. In wet subsoils, it is impossible to use common drain-pipes placed end to end, for the water would get into them and choke them. In this case, the ends of the pipes must be strongly cemented together to keep the water out; or else iron pipes must be used, or the burnt clay pipes used for sewers. Moreover, the wells at either end of the pipes, too, must be cemented. The land close to the air ducts might be drained.

Earthen-ware pipes are always more or less porous, and allow a little moisture to leak through into the interior; and this, as we said before, assists the cooling of the air and imparts to it some moisture. But with the impermeable sewer pipes, or cast iron ones, this is not the case, and the air cannot cool itself by contact with the interior sides of the pipes, to which it will communicate its heat, which they in turn will impart to the ground by their property of conductivity (?). The stronger conductors of heat the materials they are made of, the stronger will be the soil itself; the more easily the air cools, the fewer pipes will be needed.

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Thus, with iron pipes, the cooling would be much greater, the dimensions of the interior surface and the nature of the soil being the same in both cases. But if the soil is a worse conductor of heat than the pipes, the choice of pipes of earth or iron will not be important, since, in this case the cooling will depend more upon the soil than upon the pipes. The air circulating through these pipes, impermeable as they are to moisture, cannot help approaching its point of saturation by cooling, without any real increase of the quantity of vapor it contains.

In hot thundery weather, when the outside degree of humidity is considerable, the air, by cooling, will approach near enough to its point of saturation to make the evaporation of water from the cheese in the ripening chamber insignificant in quantity.

But in dry weather it will not be so, and the loss of weight in the cheese by evaporation will be greater; and for that reason it is that there will be found a varying, according to weather, in the same cheesery. There should be means to give, in this sort of dry, hot weather, sufficient moisture to the air, and this may be done by allowing a little water to run through the ducts, for which reason they should be laid with a slight fall in one or the other direction.

In very wet soil, with pipes uncemented and very permeable to moisture, the air, in hot, stormy weather, in passing through the ducts will become completely saturated with moisture, its cooling will be less, since it cannot evaporate more than a limited quantity of water, and the earthen pipes are but poor conductors of heat; the ripening chamber will, on this account, be warm and damp. To get rid of dampness, in this case, it will be useful to scatter a little quick-lime over the floor, or to lead the air from the ducts over or through a basket filled with lime and placed in the shaft through which the air enters the ripening chamber.

We see now that the working of these apparatus will vary greatly in accordance with the outside atmospheric conditions and the nature of the soil in which they are situated; so, when one of them is to be built, great attention must be paid to the nature of the soil.

In Wisconsin, where the subsoil is not very wet, and the climate relatively dry, the system gives the best results.

I did not hear of any experiments having been tried in that State to determine the minimum depth in which the ducts should be laid. The depth generally adopted runs from nine to twelve feet.

2. Vermin are sure to get into the ducts if they can, and if a rat or mouse chance to die there, the air will become, so to speak, poisoned, which will necessitate a costly cleaning out of the pipes. To prevent such mischances, the ends of the ducts should be guarded by carefully fitted covers of metallic network, rather fine in the mesh.

3. And, now, as to mould. The most favorable conditions for developing mould are: (a) moist air; (b) stagnant or unrenewed air; (c) rather high temperature; (d) air full of injurious germs.

But with the above system, the air may be constantly renewed, cooled, and, as we have seen, the moisture can be regulated up to a certain point. Remains the question of germs. To avoid any risk from them both the chamber and the ducts must be disinfected from time to time. To do this, first remove the cheese, burn sulphur at the base of the outside ventilating shaft, so that the fumes of sulphurous acid may circulate through all the ducts, and travel thence through the chamber in which sulphur may be burnt as well. But, before this, the chamber should be washed with a solution of caustic soda or of formalin. (1) Then, open all the windows, to allow the fresh air to circulate freely, selecting for the purpose a fine dry, warm day.

This being thoroughly carried out, it will be months before any danger from germs need be feared.

4. If the pipes are not cemented together, another inconvenience may occur: the foul air from the soil may rise into the chamber, making its way thither through the ducts. So, on every account, the pipes should be cemented, and it is neither a long nor a costly job to do it.

III.—CENTRAL RIPENING CHAMBERS.

Their advantages as regards successful ripening, and the facilitation of the sale of cheese.

Many factories have no proper ripening-chambers, and their proprietors have not the means of improving those they have. Where such is the case, the cheeses have to be sold very green, the maker having to put up with a reduction in price. Or, if they are kept some time, they ripen badly, begin to spoil; another reason for a fall in price. As has been proved over and over again, particularly this year at the cheese-competition organised at St. Hyacinthe by the Department of Agriculture, it is the second-rate cheese that suffers the most in the above condition, the better made qualities having more powers of resistance against the agents of deterioration. And it must not be forgotten that the large quantity of badly ripened cheese sent to market every year causes great injury to the repute of Quebec cheese.

The same effects have been produced from similar causes in Wisconsin, and the professors in the Madison dairy-school are working out the organisation of central ripening-chambers.

Such chambers should be situated in districts where the cheeseries stand the thickest, near a railroad station, and within reach of the greatest possible

(1) *Formalin* is a 40 per cent. solution of *formic aldehyde*, used, in defiance of the law, as a preservative of milk. It has been found to cause, in families, severe fits of vomiting.—A. R. J. F.

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number of factories. They should be built with all the most modern improvements, and placed under the care of an experienced man, who would manage carefully the ripening of all the green cheeses sent thither, so as to win for them a higher market price, and, so as to cover over and above that, the cost of ripening. This is quite feasible, for, as we have already seen, by the use of Air Ducts it is possible to reduce the loss of weight in cheese by 15 lbs. in a fortnight, per 600 pounds.

Besides, it is to these chambers that buyers would resort. The cheese there would be classified so as to form lots all of the same quality and style, and, in consequence, fetching a higher price. The payments would be made there, thus saving the makers much of the expense of collection.

The thing is being worked out in Wisconsin. It might be worth while to work it out in certain centres in the province of Quebec.

IV.—GENERAL CONDITIONS OF DAIRYING IN WISCONSIN.

Number and style of factories—Markets and prices—Good qualities and defects of butter and cheese in that State—Sales.

Great progress has been made of late in Wisconsin dairying. It received its impulse from very competent, very earnest men, such as Professors Russell, Babcock, Farrington, Decker, Richter, and others, and great sacrifices have been made in favour of this industry.

The improvement of the breed of cows has been seriously studied by these men as well as the care of both cow and her milk; the management of factories, the methods employed in making, and the practical instruction of the makers, have all been deeply pondered.

In this State there are at present 200 creameries and 1,500 cheeseries. The creameries are grouped together only in certain districts, and for this reason, we were told, the districts in question are more suited to the making of butter than cheese; the climatic conditions are not the same.

The average of milk taken to the factories is about 4,000 to 5,000 lbs. a day to each factory.

According to Messrs. Babcock and Decker, out of ten cheeseries now at work, there is not more than one well fitted up; but, judging from the movement that has now begun, they hope to see good factories at work everywhere before very long.

The chief characteristic of Wisconsin dairying is that most of its goods are sold for local consumption, particularly at Chicago and Milwaukee. The prices are much higher than export prices, and the patrons received last year nearly a dollar for the hundred pounds of milk.

We tried, at random, several cheeses in all the factories and cold storage, we visited. Everywhere, we found the flavour good, and we nowhere met with those coarse flavours so common in the cheese of this province. Doubtless, this is due to the patrons sending the best of milk to the factories, as well as to the kind of cheese made. Home consumption requires a cheese less firm than that required for exportation, a kind that Monsieur Bourbeau says is more difficult to make good, for keeping, as regards flavor. All the cheeses made for the local trade weigh about twenty to twenty-five pounds each.

As to the butter, so much cannot be said; all that we tried in the cold storage at Chicago was more or less disagreeable in flavour, almost all tasting like suet. The packing was not very different from ours, and, under this head we can support advantageously any comparison with Wisconsin. The size and shape of both boxes and tubs are about the same as those we use, and the butter was packed with the same care, or rather, was not packed with any more care.

As to payment, the Madison school pays the patrons one cent less for the pound of fat than the Elgin butter maker pays for the pound of butter. For both butter and cheese it is the system with official quotation of prices and the system of selling by auction, which are preferred in this country.

Thanks to the kindness of Mr. W. Kinnaird, a large dealer in butter and eggs at Chicago, we were present at a meeting of the board that fixes day by day the price of butter and eggs in that town, and to the same gentlemen we owe it that we were allowed to see the chief cold storages of Chicago.

V.—METHODS OF CULTIVATION PRACTISED IN WISCONSIN.

Indian corn for cows—Preparation of maize stalks—A sample ration—Rotations—Silage—Hogs.

We sought for information on Wisconsin farming wherever we could get a chance, and we visited several farms.

Almost invariably, maize forms the basis of cow-food, either as silage or as dry fodder, both stalk and grain. Sweet corn is the sort usually grown.

When the stalks are nearly ripe they are cut close to the ground and left two or three days in the field to dry. They are then gathered into small bundles and set up against one another; all the heads are tied tightly together, and the butts spread out so that the air may penetrate through the lot. This is called putting the corn in shock. In this state it is left till the stalks are dry and the ears hard, when it is put into mows. Others, when the stalks are not quite

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dry, make smaller mows of about a thousand bundles each, the bundles being placed against a stout frame of lattice work, in pyramidal form, which admits the air into the interior; and it is thus preserved for winter use.

There is a cow-ration, little known here, which was described to us by a farmer as being very satisfactory. Pull the ears, then put the stalks through the "shredder," a machine that reduces the whole into a kind of very fine hay-chaff. Of this give the cows as much as they will eat; about 20 lbs. a day per 1,000 lbs. of live weight. To complete the ration, add a mixture of two-thirds oats to one-third corn-ears, ground up grain and cob together, at the rate of three-quarters a day per cow. A little oat-straw may be given after every feed, especially at night, diminishing a little the corn-shreds.

This ration, which is constantly used by the farmers in the part we visited, gives, as we were told, excellent results. It is very cheap; much cheaper even than hay.

The rotation followed by our friend the farmer is: 1, corn; 2, oats or barley; 3, pasture. Very little, if any, hay is grown. The greater arable part of the farm is in corn.

This system of feeding can only be right in districts where corn grows well, and where the stalks can be dried under good conditions. This requires a climate relatively dry in the fall, and where the winter does not come early. Such is the climate of a great part of Wisconsin. But where these conditions are fulfilled and the land is rich and in good order, it must be very advantageous, as corn-stalks and grain are a very cheap form of rations. It might perhaps be well to try it in some parts of Quebec.

A farmer told us that in his district a single man can cultivate and harvest 60 acres of corn, by employing ploughs, horse-hoes, and the peculiar harvesters that are now selling in great number in Wisconsin. The apparatus for shredding the corn-stalks into fine fibrous chaff is becoming very popular, and so is silage.

Lastly, farmers there are breeding lots of pigs, which they fatten on whey or skim-milk, barley, oats, and maize.

DISCUSSION.

Dr. W. Grignon—Would not the local government be disposed to grant a premium or so to get the ventilation system spoken of by M. Henry tried in this province? It would serve to encourage those who would like to make such an improvement. Might not the Board of Directors of the Association recommend the Department of Agriculture to grant a premium for that purpose?

M. William Parent—In these experiments, were the ripening-chambers situated in the upper storey of the factories? Everyone knows that ripening-chambers so placed are always dry. If the ducts carry moisture, the proper degree may be perhaps attained.

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In accordance with the judge's decision, the money prizes were distributed as follows:

Number of marks obtained.	PRIZE.	NAMES OF THE PRIZE-WINNERS.	Syndicate of Yamaska. Money.	Syndicate of Nicolet. Money.
95	\$20	Albert Boisclair.....		\$20 00
94	17	Adélarde Boisvert.....	\$17 00	
93½	13	Théogène Lépine.....	13 00	
93	12	Gaspard Côté.....		12 00
92½	11	Fred. Thérien.....		11 00
92½	11	Dolphis Coll.....	11 00	
91½	9	Naz. Lemire.....	9 00	
91½	9	Luc. Girard.....		9 00
91½	9	Elie Duhaimé.....	9 00	
91½	9	Thomas Bellisle.....	9 00	
91½	9	Roch P. Parenteau.....	9 00	
91	8	Arsène Houle.....		8 00
90½	7	Ludger Bellisle.....	7 00	
90½	7	Léon Paquette.....		7 00
90½	7	J. B. Vigneault.....	7 00	
90½	7	Paul Bergeron.....		7 00
90	7	Edouard Giguère.....	7 00	
90	6	Alfred Baron.....		6 00
90	6	Uldéric Lévesque.....	6 00	
90	6	E. Z. Duguay.....	6 00	
90	6	Hubert Dufresne.....		6 00
90	6	Jos. Trottier.....		6 00
90	6	Ev. St-Germain.....		6 00
	208		\$110 00	\$98 00

The Dairymen's Association having offered to each Syndicate a gold-medal' a silver medal and a bronze medal for distribution among the prizemen in the competition; keeping in view the notes of the Inspectors of Syndicates, as kept in their memorandum book of daily visits; these medals are assigned as follows:

NICOLET SYNDICATE.

- Gold medal M. Jos. Trottier, Gently.
- Silver medal M. Evariste St-Germain, St. Monique.
- Bronze medal M. Gasp. Côte, Bécancour.

YAMASKA SYNDICATE.

- Gold medal M. Roch P. Parenteau, Yamaska East.
- Silver medal M. Uld. Lévesque, La baie du Febvre.
- Bronze medal M. Adélarde Boisvert, St. Thomas de Pierreville.

After the reading of these decisions, Mr. McLaren, who had arranged on a table in front of him the two best and "two least good" of the competing cheeses, as well as the cheeses he had sent from Ontario to serve as a specimen for

comparison, Mr. McLaren, we say, gave an object lesson in English, which, unfortunately, the reporter could not take down, and of which we give an abstract from memory.

The judge drew the attention of the meeting to the fact that the Ontario cheese was the better looking; the sides are perfectly upright, the surfaces of the top and bottom cut them at right angles; they are as smooth as can be, without the slightest hollow or the least swelling (1). This cheese has lost no marks from its appearance; and so with No. 26; No. 20, which stands first on the list, lost a half-mark on account of ugly swellings that disfigure one of the ends; the same defect has caused the others to lose a half-mark. Generally speaking, even in the worst exhibits, the *colour* is satisfactory; the *texture* is only seriously defective in two of the last cheeses. As to *flavour*, almost perfect in Nos. 7 or 8, it is in many others (including the Ontario specimen) a little inferior, owing to an after-taste of whey. The judge was sorry that he had been asked to send for a cheese made in the first part of October, as the September make would have been better. It was a pity that the cheese for this competition had been made so late in the season; several specimens had doubtless suffered in the ripening (*from cold?*), and had a slightly bitter taste, which would not have been present had they ripened in a proper temperature. One or two are cracked, due probably to the cold. Taken as a whole, the lot is satisfactory, particularly if we consider that it comes from 35 different factories, representing the entire make of a district of Quebec; apart from the negligence of some makers in the final dressing of their cheese, the lot is pretty equal in colour and texture, which does credit to the makers and their inspectors. As regards faulty aroma, the blame for that must be shared equally between the makers and patrons, but there is no doubt that, when the aroma is bad, as in Nos. 5 and 22, it is the patrons that are in fault as much as the makers; the careless treatment of the milk or of the cans is certainly at the bottom of the defect.

After this so badly reported object-lesson, the judge cut the best and the worst cheeses and sent slices around to the spectators.

Next, M. J. de L. Taché translated into French the notes prepared by Mr. McLaren.

REMARKS BY MR. A. F. MACLAREN, M. P.

Mr. President and Gentlemen,

While I was waiting at the Windsor for the departure of the train to come hither, I called to mind a letter I had received from your worthy secretary, telling me that he hoped I would not fail to come to Nicolet to act as judge of cheese at your competition. As he said in addition, in his letter, that several lecturers had disappointed him, and could not be present, it struck me that

(1) *Sans le moindre cordon*, caused in some cheeses, we presume, by the bandage not being properly adjusted.—A. R. J. F.

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you would probably invite me to address you, and to say a few words on the Ontario system of making cheese.

I beg to assure you that I am highly gratified and feel greatly honored at having been asked to come from such a distance, from Stratford, Ont., to pronounce upon the merits of the cheese in this competition of two of your syndicates.

It was a good idea, I think, to ask those who are dairying in the West to come East and see what their friends in Quebec are about. I also think it would be money and time well employed for those who are occupied with the same business in the East to travel Westward, and inform themselves as to the manner in which dairy-work is conducted there; for I might stay here for ever and a day explaining to you how we do our work in Western factories, and very little good would you reap from my words, in comparison with the harvest you would gather were you to visit us at home and learn by personal observation, from the body of our farmers, how they treat their cows; how they feed them; how, and in what places they strain, aerate, and cool the milk; how, and where, they keep it during the night; whether the atmosphere in which it is kept is pure or impure; the kind of pail used at milking; at what hour the milk is sent to the factory, and whether it is carried under a cover or exposed to the full effects of the sun.

If, following up your visits, you were also to attend at a factory and see yourselves how the work is done there, you would first observe a splendid brick-built factory, with a ripening-chamber thoroughly separated from the vat-room, and that from the press-room; you would then meet a cheese-maker, observant, skilful, prompt, careful, in a word thoroughly accomplished; he receives the milk himself; by no means leaving it to one of his apprentices; he examines every can as fast as it is being poured into the weigh-can, so as to be able to distinguish the patron that sends good milk from the patron that sends bad milk. You would find him on a tidy, well swept platform, with an equally tidy weighing machine, whose beam glitters so brightly in the sun's rays that it might serve as a mirror. The weigh-can and shoot are clean and bright, a double strainer of cotton-cloth is laid across the vat ready to receive the milk; the vat, as bright as a new pin outside as well as inside, dippers, curd-knives, pails, cans, glass-measures, strainers, curd-drainers, the press, the factory-floor, sink, washing-vats, floor-drains, in fact the whole factory, perfectly clean and ready to receive the patron's milk in the most praiseworthy manner.

We will suppose for a moment that the patrons of this factory take the greatest possible care of their cows, that they only feed them on the best fodder and mixtures; plenty of water and all the salt they want, the farmer will see that they have. They are milked night and morning at the same hour; only perfectly bright tin pails are used for milking into; the milkers wash their hands well before beginning; the milk is strained through a white cotton strainer, kept very clean, into the large can in which it is taken to the factory.

Now the milking is done, let us suppose, and one of the farm hands keeps on stirring and airing the milk for an hour or more, so as to let all the bad

animal smells and all heat escape; then it is cooled, and left in the can, to pass the night in a place where the atmosphere is pure, and not in the cow-house, to absorb all sorts of bad smells.

If all these rules were thoroughly observed by every patron who takes milk to a factory we should not have so much badly flavoured cheese, for no man can turn out good, well flavoured cheese from milk with a bad aroma.

I may say that I have gained much experience in my travels through all this country and inspecting their factories; I also have gained much in consequence of the opportunities I have had of comparing the qualities of cheese from the different parts of the Dominion. I may say that, by acting as judge of cheese at the Chicago Universal Exhibition, I had a grand opportunity of not only comparing the Canadian with the States' cheese, but also those sent from the several provinces of the Dominion with one another; and I must tell you frankly that, although our cheese enjoys a vast reputation in the old countries, it representing 60% of the importations of that comestible into England, we must still strive to improve it, and see that our entire make be of the finest quality; for I must add, much to my regret, that a large proportion of the cheese made in Canada last year is not what it ought to be, when one considers for a moment the means possessed by our farmers of gaining information nowadays, thanks to our dairyschools, our Commissioners, to the lectures by butter and cheese-makers, our inspectors and our travelling instructors, to the bulletins sent out by government, to all the efforts made by the Hon. Sydney Fisher, our new Minister of Agriculture, himself a farmer and milkman, to develop the greatest interests of this country; when we think of all this, I say, and see how much remains to be done; when one sees the patrons refuse instruction as to the best way to manage their milk, it is impossible to help saying that it is really discouraging, for not even the best makers in the province need even try to make good cheese from foul, impure, carelessly kept milk.

Now, I may just as well say at once that I did not come here to tell the people of Quebec how to make good butter and cheese; I came that I myself might learn and acquire information; but still I may advise those who intend building a new factory to adopt the best and most complete plans, so to make the floors and gutters (1) that not a drop of whey or buttermilk be lost, so to arrange the ripening-rooms and press-rooms that they can be kept perfectly cool in hot weather, and at a temperature of 75° when ripening cheese in spring, and not higher than 62° or 63° in the fall; for autumn milk is so rich that a temperature higher than that I have indicated would infallibly injure the flavour of the cheese. The best way is to preserve the temperature at about the degrees I have named, both night and day, until the cheese is ripe, for I may tell you plainly that variations of temperatures are highly injurious to cheese and cannot fail to compromise its flavour. Without having come here to teach you the best way to heat your ripening-room, I may mention that, in our district, some are heated by hot air furnaces, others by coal-stoves, surrounded by great casings of tin set a few inches

(1) *Rigoles*: the little sunken furrows, so to speak, that carry off the water of washing-up.—A. R. J. F.

from the floor-level of the stove, in rising this, in some, is generally practised by some proprietors as a regular ripening

It is worth noting throughout the country in order to be agreeable thing for a car-load or more the proper texture ripening as it ought

On the other buyer to drive up fences and gates even in the boiler string, and no one the cheese; sometimes one of the directors open the door, so factory. And with the press all the vats badly cleaned boiler covered with indeed a wood-stove the cheese; you find nibbled by mice on level; the cheese corner, and a pile pipes; cheese bad curd, and in flavoured cheese was sold at delivery, and management, and cry out

Now, I ask continue to allow as the one we have notes on certain facts I have selected them

No 1.—Fact carefully finished apple-like flavour room heated to 45°

from the floor-level; by the latter method, the hot air, between the casing and the stove, in rising causes a circulation of hot air throughout the chamber, and this, in some, is quite sufficient. Now that winter dairying is being more generally practised, and steam is being used in factories throughout the year, some proprietors have fitted steam-pipes in their ripening-chambers to ensure a regular ripening of the cheese.

It is worth while to add that, during my course of visiting the factories throughout the country, nothing gave me greater pleasure than to find everything in order in the vat-room as well as in the ripening-room; and it is a most agreeable thing for a buyer of cheese, on entering into a ripening-room to inspect a car-load or more of cheese, to find all of the same size, all clean and tidy, with the proper texture and flavor, the temperature equable and right, the cheese ripening as it ought to ripen, and the whole in perfect order.

On the other hand, you cannot conceive what a nuisance it is for a cheese buyer to drive up to a cheesery at this time of year (December 1st), finding the fences and gates all about the place, a heap of cord-wood chucked about anyhow, even in the boiler-room, the doors fastened with a leathern thong or a bit of string, and no one to bid you welcome. You go to the next farm to try to get at the cheese; sometimes you find the key there, sometimes you do not; but you find one of the directors of the factory, who accompanies you thither and breaks open the door, so that in one way or the other you succeed in getting into the factory. And what do you find there? The ripening-room in a terrible state, with the press all rusty; the floor sticky and glutinous with whey and filth; the vats badly cleaned; the curd-drainer thrown aside anyhow; the engine and boiler covered with rust and dust. Enter, then, the ripening-room and there is indeed a wood-stove in a corner, but no fire in it. You go to work to examine the cheese; you find it of all sizes, the tops and bottoms cracked, sometimes nibbled by mice or rats; the bandages all broken; the shelves dirty and out of level; the cheese lop-sided and swollen at the sides; a pile of boxes in one corner, and a pile of tubs in another; the stove filthy and rusted; leaky stove-pipes; cheese badly ripened, chilled, sticky, pasty, just like its original form of curd, and in flavour, sour, bitter, reminding one of the taste of stale butter. The cheese was sold at the highest market price; the buyer now refuses to accept delivery, and maker, sellers, directors and patrons all lift their hands in astonishment, and cry out: Oh! what a rogue!

Now, I ask you, how in this country, in these enlightened times, can we continue to allow all these difficulties to continue; can we permit such factories as the one we have been talking of to exist. I am about to read to you some notes on certain factories that our inspector handed to us at the last meeting. I have selected the following out of a great number of reports on factories:

No 1.—Factory clean, well kept in order; cheese well made, very clean, carefully finished off, uniform in shape, appearance capital; some lots with an apple-like flavour; others taste of turnips; cheese ripening fairly well; ripening room heated to 42° F. by a large, square stove.

No. 2.—Factory pretty clean, but very untidy; cheese well made, uniform in height, roughly finished off, appearance bad; apple-taste in some; cheese ripening fairly; ripening-room, temperature 54° F., heated by a large square stove.

No. 3. Factory clean and tidy; a stove in the ripening-room; cheese well made but in texture a trifle crumbly (*court*), uniform in height, perfect in finish, clean, and good to look at; some lots apple-flavoured; one or two turnipy taste; cheese, ripening well, in a temperature of 60° F., 20% of moisture; a wood and coal stove.

I might go on talking to you for a week like this, but in one word I will simply say: I trust no one of my listeners is a maker who has left his factory in such bad order, or who has taken charge of a factory in which everything, within and without, was not perfectly clean, well kept, and in consummate condition. If there is anything that annoys me it is to see a maker and a cheesery in bad order. I myself have seen in a cheesery a maker at work in trousers and apron that would stand alone! I have visited cheeseries where the buyer was obliged to catch hold of vat or sink to prevent falling on the slippery, filthy, messy floor. I have seen makers who, one would think, had worn the same clothes, the same apron, for the whole season without having them washed! Others I have met with who seemed to have a daily change of dress, fresh and neat. They are those I like to see; but I must renew my assurance that I am not here to find fault; and, in conclusion allow me to say to all those who send milk to the cheeseries and to the patrons: Do all you can to carry nothing but the best of milk to the factory. To those who employ makers: "Never hire any but the best; pay them well, so that they may never hesitate to engage all the assistance they need to make the best of cheese, and to keep their factory in the best order. In this case they can also purchase the best supplies, and the result will be that your cheese will fetch the highest market-price, and you will have the additional advantage of possessing a factory and a maker of both of which you may be justly proud."

A word, now, to the makers: I know what I am talking about, for I myself was a maker for five years: I want to see you all set to work next spring with a determination to keep everything in and about your factories as clean and tidy as possible, by means of water, soap, and that indispensable medium called, in figurative language, "elbow-grease." Keep your persons, your clothes, vats, strainers, sinks, strainer-cloths, curd-knives, shoots, in a word, everything about the place, in the most perfect state of cleanliness. Make your cheeses all of the same height by weighing the curd. Thoroughly cleanse the shelves and keep them clean; do not let them get awry; turn the cheese every day, keep it in the proper temperature; never leave it till the last of it has been sent off. Do not trust the keys to strangers under the pretence that they will go and keep up the fires for you, and never allow anything to compromise your good reputation as a maker. Insist upon having the best milk, and, to gain your end refuse any that does not come up to the mark. When you get it in good condition you have everything in your hands, and it is your own fault if you turn out bad cheese.

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Mr. Wilkins moulds?

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The President meet at the inn, a proposition to s

M. J. de L. T M. Pâquet's lectur will now return. composed of Mes C. H. Parmelee, project (2), in ord or not.

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M. Poulin— makers, and, at tl injustice. I thinl association, or all

(1) Why are the -A. R. J. F.

(2) A bill, brought

I may also add here, in conclusion, that many cheese owe their damaged flavour to the farmers taking back in their cans (1) sour whey, or whey on the road to decomposition. The whey-vats, too, should be kept as clean and sweet as the cans and milk-vats, for stale, rotten whey is much more dangerous to the cans than is fresh whey.

The President—All present are invited to put to Mr. MacLaren any question they please concerning cheese and its manufacture.

Mr. Wilkins—Are not the cracks in cheese due to using dirty, greasy moulds?

Mr. MacLaren—That may be one of the causes.

The Secretary then asked all the delegates that had not paid their subscriptions to pay them.

The President—I request the directors of the Dairymen's Association to meet at the inn, at noon, for a session of the Board. Now M. Taché, who has a proposition to submit to you, has the right to speak.

M. J. de L. Taché—Yesterday afternoon we had a discussion, elicited by M. Pâquet's lecture on small factories. I spoke of a project, to which subject I will now return. I propose, then, seconded by Dr. Grignon, that a committee, composed of Messrs. Macdonald, M. P. P., H. Bourassa, M. P., J. C. Chapais, C. H. Parmelee, M. P., the proposer and seconder, be charged to study my project (2), in order to see if it is worth while submitting it to the Government or not.

A Delegate (name unknown)—I think the trade should be represented on the committee.

M. J. de L. Taché—The reason of the composition of this committee is that the members are chiefly present or past M. P.'s, and that it will be easier, on that account, to get into communication with the Government. As to Dr. Grignon, he is a promoter of co-operative societies, and I thought that he ought to form part of the committee.

The Same Unknown—I know many shopkeepers who are in favour of the suppression of small factories.

M. Taché—I will add M. Vaillancourt's name.

M. Poulin—The scheme has two objects in view: the instruction of the makers, and, at the same time, the suppression of the small factories, without injustice. I think M. Taché's committee ought to lead all the members of our association, or all other persons, to offer him their suggestions on the best means

(1) Why are the large cans used by milkmen in London, Eng., called *churns*? They are!—A. R. J. F.

(2) A *bill*, brought into parliament, is, in French, a *projet de loi*.—A. R. J. F.

of arriving at a successful result. I know that a man may be very intelligent, but more resources will always be found in ten heads than in one.

The leading idea is that there shall be a school, such as already exists, under the control of the Government. I am in favour of the Government being the ruling spirit, as it is already in the schools it controls. Let it be this school that confers diplomas on the makers. One reason for exacting these diplomas is that the expense may be employed in paying the inspectors and in indemnifying the proprietors of such small factories as were established in good faith before the adoption of the law. If you have no law, you will continue to have small factories. There are in it two principal points: the cheese-makers' diplomas and the abolition of small factories.

A gentleman requests me to ask the committee to give notice to the public, before it goes to work, and to seek information from all who are willing to give it. At first it may find itself a little puzzled, but after enquiry it will be easy to select the best means to adopt. I would not that the committee should act in too great a hurry; let it take the necessary time. When it has reported, let the report be submitted to a still more numerous body of those interested, and let a special session of the association be convoked for the discussion of the leading points.

Mr. R. Haven—It might be better to send the two questions together.

The President—As the matter will not be decided before the next convention, the committee invite all those who have ideas to submit to it, to send them in to the committee within a few months from the present date.

M. J. de L. Taché—I understand that M. Poulin invites the public to give its ideas on the subject, so I enlarge my proposition:

“Proposed by M. J. de L. Taché, seconded by Dr. Grignon, that a committee composed of Messrs. Macdonald, M.P.P., Henri Bourassa, M.P., J. C. Chapais, C. H. Parmelee, M.P., Jos. Girard, M.P.P., Némèse Garneau, M.P.P., D. O. Bourbeau, J. A. Vaillancourt, the mover and the seconder, investigate the question of the limitation of the number of butter and cheese factories, with a view to the establishment of a plan for the establishment of factories in this Province.

“That this committee make an enquiry into this subject, study the possible solutions of the question, and particularly the project put forth by the mover before this convention, and report upon it to the Board of Directors with such advice as it shall think fit to offer.” (Carried.)

The session then closed.

AFTERNOON SESSION OF THURSDAY, DECEMBER 2ND.

The President opened the session at 1.30 p.m., and informed the meeting that the next annual convention would be held at Valleyfield.

ADDRESS OF

Mr. President

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ADDRESS OF THE HON. SYDNEY ARTHUR FISHER, MINISTER OF AGRICULTURE.

Mr. President and Gentlemen,

I have a few words to say to the members of the Dairymen's Association, but I must, in the first place, ask for your indulgence to my faulty pronunciation and my errors in speaking a foreign language. You know that French is not my maternal tongue, and I have great difficulty in expressing myself in that tongue. Still I am so deeply interested in the labours of your association that I cannot allow this occasion to pass away without addressing a few words to you on the dairy-industry and its present condition in Canada.

This year, we have seen the greatest yield of dairy-products in Canada that has ever been known. A year ago, I made a prediction before the convention, as well as before all the great meetings of farmers, both in Quebec and Ontario, in which I had an opportunity of speaking. I called attention to the fact that for three years the production of butter had doubled each year, that is to say, that our export of that article would be twice that of the previous year. Up to this day, my prediction may not have been completely realised, but I know, from information received from the exporters and from the best judges of the question, that there is a sufficient quantity of butter now ready for exportation to ensure the realisation of my prediction before the end of the season.

This is a very important thing for us, since the exportation of cheese has reached its maximum. Last year we sent to England 60% of the cheese that country imported. That is to say, out of the whole quantity of cheese sent to England from abroad, we furnished 60%. This year our exports thither have been even greater still; and I believe that by the end of the year it will be found that we have sent to England 70% of all the foreign cheese purchased by the English. The situation is serious, for we have now reached the greatest possible proportion of cheese that we can send to England. You see what has happened; we have had a good price for our cheese during the whole season; a good demand for it; but at the close of the season prices fell, and exportation ceased. This shows that we have reached the maximum of our exportation of cheese to England.

What are we going to do now?

We must set to work butter-making. I am rather proud of our position in this affair, for five or six years ago I told men engaged in dairying that this state of things must inevitably occur. For several years I have been advising our people to take to making butter.

Canada cheese has gained a great reputation. Ontario began, Quebec followed; at present we are in an excellent position in this respect. But as to butter, we are only beginning that branch of dairying. Nevertheless, if all the milk that served to make butter had been made into cheese instead, our export of that article might have increased a little, but our cheese would have fetched

6 to 5 cents a pound instead of 10 and 8 cents. There, then, you see, is a danger to be avoided.

Exporters warn us that it is dangerous to make fodder-cheese; then, why not make butter while the cows are housed; only beginning cheese-making when they go to grass? Let us, therefore, make butter as long as our cows are foddered, for then butter of good quality can be more easily made than can cheese. We must not increase our make of cheese; but a great demand for our butter has arisen, and we shall be turning out butter for many a long year before the butter-maker arrives at the state in which the cheese-maker now is. This is the first point upon which I want to insist.

Another point I wish to lay before you is this:

Our butter and cheese suffer greatly from the land journey, the sea voyage, and the heat in summer. The greatest enemy our dairy trade has is the heat. I would emphasise this point; heat does more harm to our dairy products than does anything else. In hot summers then, like ours, ice-houses and refrigerators must be used. They are positively necessary, especially for butter, but also for cheese; both these products must, absolutely must, be kept in refrigerator-chambers; the butter from the day it is made, the cheese from the day of its being ripe; up to the time of their delivery for consumption in England. There is no other plan safe.

We have had experience of this, this season. You probably know that this year I arranged a system of refrigerator-cars and steamers to safeguard our perishable commodities in transit to England. We tried an experiment to see the difference on their arrival in that country between two invoices of butter of exactly the same quality, sent, the one in refrigerators, the other by the ordinary means. All the reports I have received are unanimous in saying that the difference in quality between the two shipments is very great.

But to have refrigerators on cars and steamers is not enough; they must be had in factories to preserve the goods up to the very day on which they are sent off. Last spring, I offered a small grant of \$50.00 for the first year, and \$25.00 for each of the succeeding ones, that is to say, \$100.00 to each factory that would set up a refrigerator-chamber. The Province of Quebec, unfortunately, did not seem to care for this advantage. Ontario and the Maritime Provinces accepted the grant, but not Quebec. Why, do you ask? I really do not know, but it is a fact; the Province of Quebec has not profited so much as the rest by the offer.

Wishing to give proprietors of creameries another chance, I agreed with Professor Robertson to extend this grant to next year, on the same terms. (Cheers.)

I hope you will avail yourselves of this offer. You have at home every facility and all the materials needed to make this cold-chamber cheaply. The \$100.00 grant will probably pay for half of all that a cold-chamber will cost you.

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There is another question I wish to treat: the question of ripening-chambers; it is a disgrace to our dairy trade. Professor Robertson has tried experiments this year to find out the temperature most conducive to the proper ripening of cheese. He found a great difference in value between cheese kept in a temperature above 70°, and cheese kept in a temperature of 66°. There is a loss of more than a cent a pound. The best temperature for cheese is 64° to 68°; but if the temperature exceed 70°, the cheese is depreciated in quality at once. A cheese, in order that it may retain all the good qualities, should never be kept in a temperature exceeding 68°. How many of our ripening-chambers are so constructed that the temperature there never exceeds 68°? Very few, I fear. But if you wish to improve your cheese, if you desire to establish a good repute for the "French" cheese, you must positively so improve your ripening-rooms that their temperature shall never exceed 68°.

In this province we have a conjunction of circumstances very favourable to the making of good butter. We have good pastures, the Canadian cow, probably the best for milk—(cheers)—a people of very cleanly habits, always ready to listen to good advice; we are near the shipping-ports; our butter has not to travel long distances in the cars to reach the place of exportation; there is no earthly impediment to the making and exportation of excellent butter in this province. We succeeded last summer, hot as it was, in sending from Edmonton, 2,000 miles from Montreal, to England, by means of refrigerators on the cars and in the steamer, butter that reached England in the same good condition and with the same good qualities that it possessed before it left the creamery; and by this transaction, we succeeded in establishing a new, a fresh reputation for our butter on the English market. It is for you, the maker, to profit by this good reputation. Buyers there found that Canada butter has as fine a quality as can be wished for; it is for us to profit by this advantage; we have a prospect of gaining a footing on the English butter-market; do not let it slip.

I must not detain you much longer, but there is one thing I wish to tell you: Ontario, from which province we have learnt much, to the great benefit of our own, possesses in her system of Farmers' Institutes a means of agricultural education that I would gladly see transplanted here. It is a series of meetings arranged for the whole province by a central board at Toronto. To these meetings two or three specialists are sent to deliver lectures and discuss matters interesting to the farmer. This method of instructing our farmer-class is one of the best possible, and it is in it that we must look for the basis on which is erected the progress accomplished by Ontario. Our Farmers' Clubs are an imitation of this plan, but they are only the first weak commencements, there is still a vast deal to be accomplished.

I have thought it well this season to organise in Quebec a series of lectures like those the Ontario people have, to explain the system of refrigerators and to treat of the health of our stock. There is a good deal of excitement at present about the mischance at the Experimental Farm, where the disease, *tuberculosis*, has attacked our cattle. I therefore arranged a series of lectures to be given in almost every part of the Province, by Messrs. J. E. Chapais, P. Macfarlane and Castell. I trust these meetings will prove beneficial.

There are many things nowadays that need explanation to the *habitant*. Formerly, the great majority of our *habitants* thought that agriculture consisted in nothing but manual labour, the daily work of every man; that neither intellect, study, nor investigation was wanted. But those days are past; we now have to study farming, for in it we find the whole of the sciences exemplified in their practical application. Agriculture needs all the practical information possible, and it is for that reason that I have organised these meetings whither the farmers can resort to talk over the matters that interest them, listen to the lectures, and inspect the illustrations, as we had an opportunity of doing last night, and shall have another opportunity of doing to-night. This is the best way to instruct farmers. The young, the sons of farmers, can visit the agricultural schools for their teaching, and I hope that our youths will profit by the advantage the schools offer to them; but, as to their fathers, who cannot leave home, these meetings seem to be the only means by which instruction in agriculture can be imparted to them.

To the lecturers whom I named just now, I have added Dr. Daubigny, the director of the Laval Veterinary School. He will enlighten you on the subject of the diseases of animals. I trust the directors of the Dairymen's Association will allow M. Castel to accompany my officers, with his magic lantern, to illustrate the lectures, and I believe this will turn out to be greatly to the advantage of the Association. For, if M. Castel takes a tour through our rural districts, he will, without the slightest doubt, induce a very great number of the farmers to enter our Association, and the province, as well as the Association, will benefit thus by his trip.

Once more, a few words. I am happy to inform you that an invitation has been sent you from Mr. MacLaren, President of the Dairymen's Association of West Ontario, to attend their next convention. I had the pleasure last year, as well as on a previous occasion, to be present at the Ontario meetings, and I may say that I have always got a great deal of useful information there. Mr. MacLaren hopes for the attendance of as large a number as possible of French-Canadian farmers at the next convention. I hand you the invitation, and I advise as many of you as can possibly attend to do so. You will rarely find a better chance of passing so profitable, as well as so useful a holiday, than in taking part in the great meeting which will be held at London, Ontario, the 19th, 20th and 21st of January next. There will be a reduction of fares: a return ticket can be had for a single fare. You will do well to profit by such an opportunity.

The Secretary having handed to Mr. Fisher the programme of the "Farmers' Institutes," the Minister added:

Here is the list of the meetings organised in Ontario for the present winter. As you see it is a long one; it comprises 512 meetings, at each of which two or three accomplished lecturers will contribute information to the stores of the farmer. We must have some such system as that in Quebec. (Cheers). I wished to begin this year, but it is not one of my duties to arrange meetings in Quebec, for I am Minister for the whole Dominion, and these meetings are rather within the jurisdiction of the local government; but I have done my best to set an example,

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and I hope it will be followed. I trust that everybody will press the government at Quebec to provide us as soon as possible with a system like the one in Ontario. (Cheers.)

I have already spoken at too great length; I thank you for the attention with which you have listened to me, and for the opportunity you have afforded me of once more attending the Annual Convention of the Dairymen's Association. I thank you very much, I protest most sincerely that I am always proud to meet, as I do to-day, men whose business is farming and dairying.

The President—I think that I am acting as the mouthpiece of everyone present as I rise to thank Mr. Fisher for the interest he takes in our Association. I thank him, too, for having granted another year for butter-makers to conform to the conditions by the fulfilling of which they can earn the grant for refrigerators. We thank him for having laid aside his numerous occupations to come hither and honor us with his presence. I must tell you that we ought to be proud to have at Ottawa, as Minister of Agriculture, a citizen of the province of Quebec. Although I do not share his political opinions, I described him in Ontario as: "*The right man in the right place.*"

I regret that I too must bid you adieu for the present. I am called back to Quebec, and I must take the 3 o'clock train. Our vice-president leaving at the same time, I must beg M. D. O. Bourbeau, who has arrived at the eleventh hour, to replace me in the chair; that shall be his punishment for tardiness.

I beg to offer my cordial thanks to those members of the press who have followed our labours in this meeting with a view to their promulgation through the country.

MR. BARNARD'S RESOLUTION.

Mr. Edward Barnard then read the following resolution:

"Considering the fact that the best English and Scotch Cheddar is actually worth in the British markets from 18 to 23 shillings more per 112 lbs. than our best Canadian cheese, and the best Danish butter from 14 to 18 shillings more than our best Canadian brands:

"Considering also, that the dairy products from the province of Quebec are far from being known and appreciated on the British markets as they deserve to be; the Province of Quebec Dairymen's Association, assembled at Nicolet, respectfully request that the Hon. Sydney Fisher, Minister of Agriculture, at Ottawa, and the Hon. Melville Dechène, Commissioner of Agriculture, at Quebec, takes jointly such measures as will secure a careful examination, by competent men, in Great Britain, of the best dairy goods from this province, in order to obtain a fair estimate of their value, as compared with the best products of the same kind on the British market, and that also such information be obtained as

will enable our makers in the province to improve our butter and cheese to the best of their ability." (This was greeted with loud applause.)

M. D. O. Bourbeau then took the chair :

If the President intended to inflict a punishment upon me, he perfectly succeeded, for I find myself thoroughly punished, although greatly honoured by the position conferred upon me.

LECTURE BY MONSIEUR J. B. RICHARD,

Lauréate of the Mérite Agricole.

FARM YARD MANURE.

M. Chairman and Gentlemen,

It was with great deal of pleasure that I accepted the honour done me by the Directors of the Dairymen's Association of the Province of Quebec, in requesting me to address this numerous meeting in a subject that seemed easy to treat.

Having for some years cultivated an ungrateful farm, I was obliged to use a great deal of manure, and I fancied that I was familiar enough with its employment to be able to talk sensibly about it; but I soon discovered that I was mistaken. I soon found that to treat this question properly, I ought to possess considerable scientific acquirements, but I have none, and in spite of all my good will, I am too old to acquire any.

I cannot, therefore, hope to interest any one present, unless there should be some farmers in my position, who may perhaps profit by the experiments I have made, and I leave to our agricultural chemists and learned agronomes the easy task of treating this question from a scientific point of view.

It is useless, Mr. Chairman, to repeat that our older farms in Quebec are worn out; that for a hundred years and more we have been drawing from our land crops of grain and hay, which have been usually sold off the farm, without ever, or hardly ever, thinking it necessary to restore to the land the fertilising elements that these crops have carried off. And it is only during the last few years that it has been noticed that we were reaping that which we have sown, or in other words, that we were following a road that was leading us to inevitable ruin.

A cry of alarm was heard. Our clergy, always watchful, regardless of trouble, and self-sacrificing when the interests of the people are concerned, even as to their temporal affairs; our government, our statesmen, all felt the danger that menaced our agriculture, and at once devoted themselves to the task of arresting the threatened disaster.

And, assuredly, all those who care for their farms and those who care for their families

There still remains a neglectful of care in providing imprudently for superb herds of not pay so well source of income questions to be will mention to

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Everyone who has tillage, manures

I do not, however, make a few curious manure.

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No, Mr. Chairman, I have laid hold of crops from the

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If we are to find the best method the best condition they may produce

Many plans of our herd farmstead; circle

Recourse has been taken to Chemical manure

And, assuredly, the successful results that followed must excite the pride of all those who contributed to them, and we farmers ought to thank Providence and those whom it made use of to accomplish that work of progress.

There still remain, however, blotches on this fair picture, many of us being neglectful of certain most important points. We have succeeded admirably in providing improved implements which greatly lessen our hard work; we have superb herds of cattle, though, for want of suitable and abundant food, they do not pay so well as we expected; owing to which, dairying, though it be our chief source of income, is not yet very profitable to many of us. There are still some questions to be studied over, and especially to be put into practice, of which I will mention two, which from my point of view are most important:

The drying of the subsoil, and the restitution to the land, in the form of manure, of the fertilising materials that our crops have been carrying off from it in past years.

Everyone knows that land undrained is hard to till; and without good tillage, manures, of whatever kind or in whatever form, are as good as wasted.

I do not, however, intend to enlarge upon these two subjects; I shall only make a few cursory remarks on the latter, manures, and especially on farmyard manure.

As I said at first, I cannot treat this question scientifically, since agricultural chemistry, as our *savants* understand the term, is beyond my acquirements. It is no easy matter for me to remember the names of different matters that reciprocally act on one another, and that have the effect of destroying that which is injurious, and of exciting those combinations which infuse activity into the different elements of the soil that furnish food to our plants.

No, Mr. Chairman, not having had the advantage of pursuing special studies, I have laid hold of things as best I could; my laboratory is my field; and my crops form the solution of problems.

For many years I have been making experiments with varied results, but all of them have convinced me of the necessity of using manures. For, indeed, there is no land so fertile, no crops so little exacting in their demands, that the judicious application of manure will not improve them.

If we are thoroughly convinced of this truth, we shall devote ourselves to finding the best means of obtaining these precious matters, of preserving them in the best condition, and of employing them in the most efficient way, so that they may produce the desired results.

Many plans have been suggested for the increasing of the quantity of the dung of our herds: all are good, but all are not equally well suited to every farmstead; circumstances must guide us in our selection.

Recourse has been often had to absorbents, such as lime, plaster, etc., etc., Chemical manures are also used, to supplement the manure of our stock and

very satisfactorily they act. I approve of the use of these manures when circumstances demand it, but I must say with regret, that very, very frequently they ought not to have been used; for if there be more economical means, those are they we should employ, and not have recourse to costly manures, except under extreme circumstances, and after having utilised the refuse of every kind that encumber and befoul the environs of the farmstead. The weeds that grow freely along the roads, the fences, and the ditches, and which are too often allowed to ripen seed, to be afterwards sown broadcast over our fields, and greatly, as you all know, to injure our crops; refuse straw, glumes, form an absorbent when used for bedding, and greatly extend the quantity and quality of the dung; fern, cut at the proper time, dead leaves, sawdust, which I believe to be the best of all litter as regards its absorbent powers, especially for cows when housed, these are all means of increasing the manure heap in bulk, and of improving its quality.

I shall be told, perhaps, that waste of all kinds is carefully collected, for as a rule we are a cleanly, tidy people; that there are no weeds on our land, a statement that I do not always feel inclined to believe; that we are too far from the great forests and the saw-mill to get saw-dust, leaves or fern!

But, gentlemen, there is another means; one that is within reach of us all there is no farmer who can say that he has no earth, no ditch-banks, a foot or more higher than the middle of the field forming a dike which prevents the running off of the water, and which it would be an immense gain to remove. Well, sirs, let part of the money that would otherwise be expended in the purchase of artificial manures, from Smith's Falls or Capelton, be spent in labour for carting loads upon loads of this injurious earth. All seasons, except when the ground is frozen, are good for this work; if the ditch-banks are dry, which is the best, lay them in heaps in the buildings near the cow shed; if you have no room for them under cover, put them outside, close to the same. Take twice the bulk you mean to use during the winter; make the heap narrow at the base and as high as possible; make it up into the shape of a cone, to prevent the rain getting into it. When the earth is dry, cover it with a little dung, as fast as the cattle make it; if you fear the loss of manure by this, leave the heap quite bare, a layer of 8 to 10 inches will freeze, perhaps, but the middle will not, and by making a hole at the base, and enlarging it when needful, you will have during the entire winter plenty of mould which you will spread over your cowhouse floor at the rate of three shovelfuls a day for each head of cattle. The house should be cleaned out thrice a day. I mentioned the smaller quantity, but a great deal more may be used, and every one can see that the more mould is used the less urine will escape and the more the bulk will increase. After a crop from a field manured with this compost, the farmer who is watchful over his interests, will need no more advice as to the manufacture, preservation, and the increasing of his manure pile. For I have proved from my own experience, that manure treated in this way, containing more than half its bulk of mould—though mine is not mould but only sand—will produce more abundant crops than when the same number of loads is used to the acre of ordinary uncomposted dung. Besides, this plan produces a very short-stapled dung, which combines more

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freely with the land, and yields immediate results; the liquid part, that is, as you know, the richest part, is completely absorbed, and even with an unstaunched floor, not a drop is wasted.

But, in my opinion, the greatest advantage of this method lies not only in the increase of the bulk, but in the abolition of all loss of ammonia, which otherwise would disengage itself from the droppings in cowhouse and stable; by the preservation of the whole of the liquids, the addition of the mould or sand in proper quantities, hinders the fermentation, which, if excessive, causes the dung to lose two-thirds of its value. Here is the proof of this:

I stored in a suitable place 75 loads of common dung. I allowed it to ferment, taking care to raise the side of the mixen, and even watered it to preserve the necessary humidity. Five or six months afterwards, the 75 loads dwindled down to 25. When these 25 loads were being spread on an arpent of land, I spread 25 loads of fresh dung on an adjoining acre (observe that this compost contained only about half its volume of good dung, the remainder being sand), and the result was, that, planted the same day, under the same conditions and with the same care, the tobacco produced 200 lbs. more to the arpent (223 lbs. to the imp. acre), with the compost or non-fermented dung, two successive years; the oat-crop, nearly a load, or 8 to 10 bushels; the clover, the fourth year, nearly twice as much; the corn a better yield with the compost, and the potatoes yielded about the same in both cases. To confirm my results, I will cite a high authority, the report of the Ottawa Experimental Farm for 1895. The quotation proves also to us the superiority of farm-yard dung to all other manures.

LOSS OF WEIGHT IN DUNG DURING FERMENTATION.

"As there is a good deal of difference of opinion among farmers as to the real loss caused in the weight of dung during fermentation, we made, last season, the following experiment at the Experimental Farm at Ottawa, in order to collect further information on the subject:

On the 7th of March, 1895, two tons (4,000 lbs.) of horse, and the same of cow dung, fresh from the cow house (and stable), were placed in a shed, on boards set near each other on the earth. The dung thus covered was not washed by the rain. It was turned over and weighed once a month, and the midden was carefully watched, so that its proper condition in regard to moisture might be observed. The following are the results of the monthly weighing:

	Weight of dung in lbs.
March 7, at the beginning of the experiment . . .	8,000
April 6, weight reduced to	5,530
May 7, "	4,278
June 7, "	3,947
July 6, "	3,947
August 7, "	3,480
September 7, "	3,142
October 7, "	2,812
November 7, "	2,685
December 7, "	2,600

On July 6th, about four months having expired, when the first dung had been reduced from 8,000 to 3,480 lbs., it was in the condition supposed to be the best; the consistency was pasty, it could easily be cut with a spade, and mixed in with the land without trouble. Afterwards, it became more crumbly and could be rubbed to powder without difficulty. On December 7th, the dung was frozen hard, and had to be broken with a pick-axe. We intend to continue to weigh it up to the end of the year, and to repeat the experiment next season with the same quantity. In the nine months of the experiment, the weight of the dung subjected to it fell from 8,000 lbs. to 2,600 lbs., a loss of more than two-thirds of the original weight!

According to the accounts of the experiments made during the last eight years on the effects of manures on the crops, the details of which are given in the preceding pages, it would seem that the fertilizing effect of recent dung is equal, ton for ton, to that of rotten dung for almost all the leading crops. The question of the best and most economical manipulation of farm yard manure is one of the most important for farmers everywhere, since the dung of animals is one of the most valuable of all dressings. From the results of several analyses it is computed that 20 tons of good farm-yard manure contains about 196 lbs. of nitrogen, 120 lbs. of phosphoric acid, and 182 lbs. of potash, which, estimated at the lowest rate at which they can be bought in Canada in artificial manure, represents a sum of at least \$45. When we reflect that in Canada there are at least 4,000,000 head of cattle and nearly a million horses, to say nothing of sheep and swine, it must be very important indeed to make the best use of the dung produced by this vast number of stock, in its manipulation and employment, so as to preserve to the crops as much as possible of the fertilising matters it contains. (Report of the Experiment Farm, 1895, p. 43.)

The cause of the exceedingly trifling yield of Nos. 16, 17, 18, 19, is that a hollow in these plots was drowned out by a heavy rain soon after the plants came up. This being followed by a hot sun, the greater part of the young stalks were cut off before the water could get through to the drains. (Same report, 1895, p. 41.)

As you see, these experiments at the Experimental Farm confirm in every respect those which I have myself made.

You see the importance of the care that every intelligent farmer ought to devote to the making and preservation of farmyard manure, since it is the richest, the most complete, the least costly, and the most easily comatable of all.

If, by the means described above, the quantity and quality of the manure can be considerably increased, it can also, by judicious treatment, be considerably economised. I fail to see why we put 50 loads on an arpent, when 25 loads will grow quite as heavy crops.

Will you allow me, Mr. Chairman, to relate in a few words the history of my system of farming? I think it would be the best way of making myself understood.

EXPERIM

No. of Lot.	MANURES (To th
1	Mixed horse an to the acre in year since.....
2	Mixed horse an the acre in 18 since
3	No manure.....
4	Mineral phospl pulverised, 50
5	Mineral phosp pulverised, 50 soda to the ac
6	Farm yard dun mentation, 6 t phate, undiss 500 lbs. to the mixed, and before spread
7	Undissolved mi der, 500 lbs. lixivated wo
8	Undissolved mi der, 500 lbs.; lbs. to the ac
9	Mineral superpl acre.....
10	Mineral superpl of soda, 200 lb
11	Mineral superpl of soda, 200 1,500 lbs to th
12	No manure.....
13	Fine bone dust,
14	Fine bone dust ashes, 1,500 ll
15	Nitrate of soda,
16	Nitrate of potas
17	Sulphate of am
18	Sulphate of iron
19	Common salt (cl the acre.....
20	Sand-plaster or 300 lbs. to the
21	No manure in 1/ superphospha

* Eleven acres mal

EXPERIMENTS WITH VARIOUS MANURES ON POTATOES.

No. of Lot.	MANURES APPLIED EACH YEAR. (To the acre, not arpent.)*	EASTERN SIDE OF LOTS.					Total yield per acre.
		Yield of 7 rows of Early Rose.	Yield of 5 rows of Queen of the Valley.	Yield of 5 rows of Daisy.	Yield of 5 rows of Early Sunrise.	Yield of 5 rows of Queen Early.	
		Lb.	Lb.	Lb.	Lb.	Lb.	Bois. Lb.
1	Mixed horse and cow dung, well rotted, 12 tons to the acre in 1888; 15 tons per acre every year since.....	206	193	179½	189½	151	306.20
2	Mixed horse and cow dung, recent, 12 tons to the acre in 1888; 15 tons per acre every year since	287	213½	221	213½	163	366
3	No manure.....	120	93	82	85	54	144.40
4	Mineral phosphate, undissolved, but finely pulverised, 500 lbs. to the acre.....	125	105	54½	60	39	127.50
5	Mineral phosphate, undissolved, but finely pulverised, 500 lbs., and 200 lbs. of nitrate of soda to the acre.....	142	95	80	96	60	157.40
6	Farm yard dung, partly rotted, in active fermentation, 6 tons to the acre; mineral phosphate, undissolved, but finely pulverised, 500 lbs. to the acre; the two composted, well mixed, and allowed to heat several days before spreading.....	258	179	185	183	147	317.20
7	Undissolved mineral phosphate in fine powder, 500 lbs.; 200 lbs. nitrate of soda; unlixivated wood ashes, 1000 lbs. to the acre....	178	130	132	125	74	213
8	Undissolved mineral phosphate, in fine powder, 500 lbs.; unlixivated wood ashes, 1,500 lbs. to the acre.....	180	99	90	80	74	174.20
9	Mineral superphosphate No. 1, 500 lbs. to the acre.....	149	103	81	86½	88	169.10
10	Mineral superphosphate No 1, 350 lbs.; nitrate of soda, 200 lbs. to the acre.....	162	80	92½	101½	72½	169.30
11	Mineral superphosphate No. 1, 350 lbs.; nitrate of soda, 200 lbs.; unlixivated wood ashes, 1,500 lbs. to the acre.....	227	153½	156	160	127	274.30
12	No manure.....	81	94	55	85½	44	119.50
13	Fine bone dust, 500 lbs. to the acre.....	116	85	29	50½	28	102.50
14	Fine bone dust, 500 lbs.; unlixivated wood ashes, 1,500 lbs. to the acre.....	174	139	96	128	76	204.20
15	Nitrate of soda, 200 lbs. to the acre.....	52	71	45½	93	40	99.50
16	Nitrate of potash, 150 lbs. to the acre.....	99	103	106	101	35	148
17	Sulphate of ammonia, 300 lbs. to the acre.....	89	78	47½	57½	15½	95.50
18	Sulphate of iron, 60 lbs. to the acre.....	91	99	53	53	9	103.20
19	Common salt (chloride of sodium), 300 lbs. to the acre.....	94½	76	37	10½	1	73
20	Sand-plaster or gypsum (sulphate of lime), 300 lbs. to the acre.....	75	56	19½	24	7½	60.40
21	No manure in 1889; 500 lbs. of No. 2 mineral superphosphate each subsequent year.....	82	64	39	48	38	90.20

* Eleven acres make 13 arpents; 100 acres = 118 arpents.—A. R. J. F.

I work nearly 100 arpents of land ($84\frac{1}{2}$ acres), of which from 30 to 35 are in hoed-crops: tobacco, roots etc.; the rest in hay and grain. I have no pasture, for my cattle, etc., are stall-fed throughout the year. My system is *intensive*, i.e., I get out of my land every year all that it can yield. The rotation is one of 5 years. The first year, after meadow, autumn-ploughed, in the spring, before the land thaws, I lay on 25 loads of dung to the arpent, in heaps of half a load each; as soon as the land is thawed (my farm being well drained, no water ever stands on it), I spread the dung with a fork, and follow at once with the disc-harrow which operation mixes the earth and dung, lightens up the former, destroys the excess of humidity, and allows both heat and air to enter, whatever may be the temperature, but, of course, all the quicker if the weather is fine. I work the land over again across the former path of the harrow; the good effects of the earlier work are more appreciable in this one, and a few days afterwards the piece is covered with weeds, which I completely destroy by another and equally severe harrowing.

This is, according to my experience, the least costly and best means of employing dung.

Never having fermented, its volume is greater, and a greater extent of land can be manured. Mixed with the ground at the surface, it is in readiness for the rootlets that surround the germ, and furnishes the young plant with food at the time when it most needs support. The plant begins to grow, the roots extend along the surface and meet with that slight but sufficient quantity of food. As time progresses they develop more rapidly, penetrate deeper; the dung, under the action of heat, air, and moisture, decomposes and penetrates more deeply into the soil, it follows the roots or they follow the manure.

In the case of hoed-crops—and dung ought never to be applied to any other—the hoeing and earthing up replace nearer to the roots all the manure that was either being wasted between the rows, or at least was only acting as an aid to the weeds, whose destruction would be additional work.

I shall be told, perhaps, that with such a slight dressing of dung the crops must carry off the whole of it with them, and leave the land as poor as it was originally. I do not think so. Each plant draws from the soil, in the greatest quantity, that substance that it finds best suited to its particular needs, and which is called its *dominant*. Farm-yard dung being the most complete of all manures, supplies to the first crop of the rotation a sufficient quantity of what it needs; the rest remains behind in the land for the use of the subsequent crops, as you are about to see.

The second year I grow the same plants (tobacco); I change the sites of the other hoed crops, but 25 arpents and upwards grow tobacco two years running. At my first ploughing, after meadow, I turned in the second crop of clover, which, in general is pretty heavy; in the second furrow, i.e., the following autumn, I restore to the surface the clover and the fertilising elements it contains that I had warehoused, so to speak, in the soil by the previous ploughing. Useless to say that I give the land all the working I think it needs, and so

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Thus, a coat applied as I have rich land. When the food it produces after-crops, and way. In order recounted, the land consists, in the first working general have used for the am not afraid conditions, is equal mistake to imagine

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I keep my cattle enough food for summer if it were year. I sow clover timothy to give

these second year's crops of tobacco are as abundant as the crops of the first year. The third year, I sow oats and barley, separately, with eight to ten pounds of Vermont red clover, and two to three pounds of Alsike, and reap heavy crops of these grains. The fourth year of the rotation, two crops of hay, 5,000 pounds an arpent; the fifth year, only one crop, always in the first week of July, and the after-math ploughed in in the fall.

Thus, a coat of twenty-five one-horse loads of well managed dung to the acre, applied as I have described, produces five very fine crops, on by no means rich land. Whence, I conclude, that every plant that grows there appropriates the food it prefers, and the surplus remains in the land for the benefit of the after-crops, and that this mode of treating dung is very much better than the old way. In order that the manure may produce such effects as those I have recounted, the land must be properly prepared to receive it. This preparation consists, in the first place, in thorough drainage to admit of deep ploughing and working generally. The subsoil-plough, or rather the *subsoil-hooker*, which I have used for the last five years, has produced very satisfactory results; and I am not afraid to say that the use of this implement, under the requisite conditions, is equal in effect to a good dressing of dung. It would be a great mistake to imagine great crops can be grown if this point is neglected.

If we are thoroughly convinced that devoting proper care to the making and preservation of manure, will double and triple its value, we shall go to work at once. When we shall have exhausted all the means we possess of restoring to the soil its former fertility, if we discover that it needs still more manure, then, but only then, we shall beseech chemistry and trade to impart their treasures to us, and we shall doubtless be justified in expending money in order to supply the well proved insufficiency of our farm-yard dung.

DISCUSSION.

M. Théophile Trudel—I should like to hear some explanation of the way in which you feed your cattle that never go out of the house.

M. Richard—There are plenty of people better able to give you information on this point than I, but as you ask me, I will tell you willingly.

My farming is not common farming; still whatever sort of farming I practised, I should practise it in just the same way. The first reason why I keep my cattle always in the house is that I want to work all my land, and to make it produce from one end to the other. Pasture is a waste of land, and I know that, generally, persistent retention in the house is preferable to putting cattle to grass.

I keep my cattle indoors because it is cheaper. The land that grows them enough food for the entire year would certainly not keep them through the summer if it were left in grass, for I get enough out of it to keep them all the year. I sow clover alone; yet, the second year of the lea, I put in sufficient timothy to give me the mixed hay I need.

I grow enough green fodder to feed my cattle all the summer, and to have some over to dry for the winter. For this I sow oats, pease, barley, and vetches. My root crop consists of swedes, carrots, potatoes, and plenty of maize.

My stock is in the shed in the spring and I keep them there all the summer, having corn enough for them until the clover is ready to mow. In ordinary seasons I begin to cut clover about June 15th, before it flowers. My cattle get this clover long enough, till the roots are ready, and I go on alternating food in this way all the summer. In the fall, at harvest-time, I ensile part of my corn and clover. I grow only the Canadian corn, called "wild corn," the quality of which is excellent, so excellent, that when we have not time to pass the stalks through the chaff-cutter, the cattle eat it up just as they would eat a bundle of good hay. It is very rich, this corn, it beats all other kinds, and yields a great deal of grain. I do not allow it to ripen thoroughly; I cut it, and pluck the ears as soon as my crops are in, and grind it, cob and all; on this my horses are fed up to about March 15, and they get fat on it. I keep my hay for the market. That is a sketch of my system.

• *An unknown delegate.*—How many arpents of corn do you grow?

M. Richard.—Five or six.

The Unknown.—How many cows have you?

M. Richard.—Seven or eight, fewer sometimes. I do not keep much stock as I can buy dung in the village.

M. Barnard.—It must not be forgotten that we have on the programme a notice that there is to be a discussion on manure.

When I am on my feet I must congratulate the lecturer on his magnificent essay; he has done us an incalculable service. We can discuss other things later, but now we have to attend to manure, its preservation and increase. M. Chapais is on the programme charged to examine M. Richard, and I will help him if the meeting will allow me.

M. Chapais.—Have you observed that when your dung is long it does not act so well the first season as when it is short?

M. Richard.—Yes, I have, and I avoid using it when long. That which I buy is short and mixed with my own turns out invariably in a short form. The greater part of my dung I buy in summer and that is how I manage to make it short. I have a place where I put my dung bought in summer; I can always get a chance at some time of the year to cart in earth—that is, sand. I lay down 18 inches deep of sand over a space of 40x75 feet. I cover 12 feet wide of this sand with dung, and that done, I cover the dung with a layer of sand as thick as the layer of dung; I lay another layer of dung covered with sand, and when spring arrives I have no long dung left. It is this treatment that allows me to use this manure in spring; I used to be obliged to use it long in spring before I thought out this plan and that of using the disc harrow; with that implement I have succeeded in mixing the two, dung and the soil, perfectly

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together. I have several other implements, the use of which demands well prepared land, but I have succeeded in so preparing my land that I can employ every one of them.

M. Chapais—Do you hoe your crops to kill the weeds?

M. Richard—Yes; but, as I said before, I kill most of the weeds before sowing. As to the recent manure from the village, I spread that on the land as soon as it is thawed, and I go over it with an implement that begins its amalgamation with the soil. Four or five days later, I can send the disc-harrow over it; at that time the land is covered with weeds already germinated and growing, and the implement destroys them before I put the seed in. I have no trouble with the weeds on the 35 arpents I sow in hoed crops. I settle them with my two horses, a man, and my machines.

M. Barnard—If your land were difficult to run the water off from, a heavy soil, for instance, would you advise the use of recent dung, full of weed-seeds?

M. Richard—Yes, I would. If I had had such a farm ten years ago it would, by this time, be perfectly drained. It would not be so troublesome to drain as my white sand. With my plan in operation, heavy land is easier to drain than my sand (1). By this time my heavy land would be friable, and I could use green dung.

M. Barnard—I am rejoiced to hear your answer. I approve of your system, but I should like to call your attention to the fact that if anyone tries your plan of farming, without having previously drained his land, he will fail in his object.

M. Richard—Just so. I told you at starting that unless the land is perfectly drained, I believe all cultivation (profitable?) to be impossible. My own experience proves it, since I lost time and money by employing artificial manures that did no good because my soil was not sufficiently drained.

M. Barnard—M. Richard has several times repeated that if he had a heavy land farm, he would not use sand. As there are 9 farmers out of 10 in Quebec who have ditch-banks, I would advise them to use that earth in preference. Now, a remark: If one was making a compost-heap and had some slabs to cover it, would it not be better than to leave it exposed?

M. Richard—No doubt it would.

M. Barnard—We perfectly agree in this, then?

M. Richard—I make my weeds germinate in the fields. I do not think a commencement of fermenting heat in the mass would cause all the weed-seeds to germinate. An excessive heat is needed to destroy them. The best plan is to start them into life in the field, and then destroy them with your implements.

M. Barnard—A compost cannot be made without three elements: heat, moisture and decomposition, not fermentation. In taking every precaution to destroy the weed-seeds that start afterwards, I think with you. I want to draw

(1) *Egoutter* really means to draw the water off land by open furrows. The French have taken our word "drain" to signify an underground duct; whence, "drainer," to drain.—A.R.J.F.

your attention to the fact that if M. Richard's system is to be successful the land must be thoroughly drained. M. Richard's furrows of drainage (water-furrows) are $3\frac{1}{2}$ feet deep. I desire to attract your attention to this: his system of farming is the systematic employment of a rotation of crops in the fullest sense of the word. We have here a farmer who has made his fortune, and who gives us an address for which if the government had paid fifty dollars it would not have been dear.

M. Richard—If I had been discussing the drying of the land, I should have explained why I was in such haste to cast out my dung before the land thawed; if I were to wait for the thaw, the wheels would sink in, and the job would be much longer about.

M. Barnard—Not on the snow?

M. Richard—No, not on the snow. I would advise farmers of heavy land to divide the arpent into four, or at least into three, instead of into two. I would make three ridges to the arpent, instead of two. I am satisfied that the heaviest and hardest soils can be worked in ridges of 45 feet wide, and even of 50 feet provided that the ploughing be done 12 inches deep. But if people keep on with their 5 inch-furrows, this layer will become as hard as a brick.

M. Barnard—This is at present an almost unknown subject; it is useless to discuss it; nothing but experience can give us information on it. Perhaps M. Richard would find it pay better to drain with pipes at seven or eight dollars a thousand.

I again thank M. Richard, and I think his essay deserves all the publicity that can be given to it.

M. l'Abbé Côté—I remember that M. Brodeur, at Joliette, last year, made the same objection as to M. Richards' system as applied to heavy land; and a man then present said he had found M. Richards' plan answered on his heavy land.

M. Richard—At Joliette, there are dozens who have followed my plans. Every one is now working heavy land in this way. M. Arsène Piquet has 90 arpents in 50 feet ridges, just like mine. Out of the 90 he has 45 in tobacco, and his crop was finer than that of his neighbours.

M. D. O. Bourbeau (Deputy President)—Just now, M. Barnard very properly reminded us that we must not wander from the programme; so, in my capacity of deputy-chairman I invite all those who have questions to ask to put them; now is the proper time. I invite the person who a little time ago brought about an interesting discussion on feeding, to continue his questions; he will be welcome.

The Unknown Delegate—M. Richard has answered my question, and I am satisfied; I have nothing more to ask.

M. Barnard—Our programme of to-day contains a question of the greatest importance; it was treated yesterday by M. Bourassa, with how much success I need not remind you (see p.); it concerns the Agricultural Societies and the Farmers' Club. If you will allow me, I have something to say on this subject.

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M. Bourassa does not seem to be fully convinced of the good that Farmers' Clubs can do, and, in fact, have already done; but I am certain that he would find, in well managed Clubs, the power needed to promote all agricultural improvements. I cannot too warmly recommend the erection of Farmers' Clubs; they are the most efficient means of causing the necessary improvements in farming to penetrate everywhere.

Permit me to remind you that Monseigneur Bourget used to send, from 1870, a circular to his clergy recommending the establishment of Farmers' Clubs. They are an essential part of the parochial organisation, and I will say more: when the curés, the clergy, need help, it is in the Club that they will find it. If, in this parish, two or three men are found who have the resolution required to rouse the people and show them that the thing wanted by the curé or the bishop is for the benefit of their families, then two or three men are powerful enough to transform the feelings of the whole. They unite with the others in a club, where questions of common interest are discussed, and state their opinions manfully. If a solution of the question cannot be reached, there is a very simple way of solving it; they have only to write to the Journal d'Agriculture, through the secretary of the Club, and an answer will be given. From that moment, the enquiry of two or three persons, who have joined together for the discussion of a question of common interest, will be read by all who receive the Journal, and the questions put will have their answer. But the Journal's reply will not be definitive, and without appeal; there remain the fifty thousand readers of it who can enter into the discussion and, in their turn, make known their views on the question. There, then, is an instance of the importance of a club, and of what it can do.

There is another thing I wish to call your attention to. It is a thing we advised the first club organized to do. After having arranged and drawn up a certain number of ideas of public utility, it is to visit the farmers who shall have begun to make experiments and to find out how they have succeeded. Had we been fortunate enough to find a M. Richard in every parish, we should soon have found the influence for good of a good example. I say, then, that after having met, we must try to put into practice the ideas that have been suggested by discussion, and relate to the Club an account of the profits or loss that has attended their realisation.

As soon as this work has been done in the public interest, and the results of the researches and experiments of the members of the Club have been sent to the Journal, much good may follow. You know that the Journal is received by fifty thousand persons, and you can see at a glance what marvellous effects can be reached by its means.

M. l'Abbé Charest—I thoroughly agree with all the eulogia that M. Barnard heaped upon the Farmers' Clubs. All are agreed in recognising not only privately, but publicly, and in every way, the immense good that the Clubs have done in every place in which they have been established. For my part, I can speak with appreciation of their actual success. In my inspection district I have fifty-two Clubs to visit, and from year to year I am more and more surprised at the

benefits conferred on agriculture solely by the work of these Clubs. There is, I repeat, an immense amount of good to be done, and that has already been done, by means of the Clubs, on account of the intimate connection between them and the parish. But let us look into it closely. It was proposed yesterday to blend into one sole association the Clubs and the Societies. In my opinion, this would be an error. Still, I do not desire a complete separation; no, let the presidents of the Clubs be directors of the Societies, that is enough; but let us take care that the Clubs be not towed along in the wake of the Societies. If the Clubs do not retain their liberty of action, as they have done up to the present, it may be asserted without fear that their utility and *raison d'être* are by that very loss, destroyed.

Every parish likes its little exhibitions, its family affairs, so to speak. How many farmers, especially in our Eastern Townships, do not get a chance of sharing in the county competitions! Many farmers are too poor to compete, and too far off to be able to transport their produce to those shows; but in their parish they can always find it convenient to exhibit, and sometimes to their great benefit. Why not leave to those earnest and industrious settlers in our new parishes in the Townships the advantage of holding their exhibitions and competitions in any way they like, so long as they follow the directions already given by the provincial authorities through the laws that govern our Farmers' Clubs?

Doubtless, the agricultural societies are the older of the two, and they have done a great deal of good. The clubs come to their assistance; but they must not be so bound (*inféoder*) that they may be enabled to absorb them and make them vanish. I have assigned them a duty at once different and yet tending to the same object: the improvement of agriculture and of the state of the farmer. If we unite them too closely, the union will not increase their power; it will, on the contrary, become their weakness.

Yesterday afternoon it was said, with reason, that the butter and cheese trade were two arms whose work intelligently done must bring prosperity to the farmer. Employing this comparison, I say, in my turn that the agricultural societies and the farmers' clubs, well managed, and each following its proper line of action, are two powerful arms, whose joint labours will eventually produce the progress of agriculture, the prosperity of the farmer and the reward of merit among the poor as well as among the rich. But if you bind these two arms by too restrictive fetters, you hinder their movements, and their natural actions, and their exertions thus paralysed will by no means result in the desired end; they will be rather a source of misunderstanding, of quarrels, and bring in no profit to the agriculturist.

There, you have my opinion; see the clubs have, as heretofore, their own manner of acting; let each parish be its own centre (*chez elle*), it must not be placed at the mercy of certain persons who, as has often happened, have not feared to convert the county exhibition into a speculation more or less honest.....(Cheers.)

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M. Barnard requested, supported by the meeting, that these remarks might be published in the "Journal d'Agriculture."

There was no idea of making the Government interfere with the clubs. If we wish for an official Government organisation, we should not on that account cease to have independent parochial organisations. I agree thoroughly with the last speaker on the advantage of allowing every parish to hold exhibitions. I am in favor of the farmers' clubs, and specifically of farmers' clubs outside the official organization; for it is they that have always done us, and will always do us, the greatest amount of good.

M. l'Abbé Côté—When a farmer wins a prize, that will encourage him to improve his farming; he will be anxious to mount still higher to join the county competition and try to win prizes there. This will encourage him still more to improve his farming. In order that the clubs and the societies may be more closely united, I should like to see the president of each club a director of the society. He knows pretty well the needs of his parish, while the directors of the societies are as often badly as well selected. They are not elected by the parish they represent, and I have just come from a parish where nobody attends the exhibition of the Agricultural Society because it had never been represented there by one of its members. Again, there are parishes that are too far from the grounds. There must be an agreement to hold their exhibitions at a more central place. I have passed 22 years in the same parish, and there we are 24 miles from the county exhibition grounds. There has been only one man in all that time who attended the show, and that because he was promised a prize for his horse! If every parish could be interested in the societies by appointing as director the president of the club, I think both institutions would be benefited.

M. Barnard—In 1867, some one said to M. Boucherville, then premier of Quebec: try to arrange matters so that the Farmers' Clubs may represent the parish on the Agricultural Societies-board. Nothing is easier; as soon as there are ten members of a Club, let a law be passed enabling the ten to elect a director for the parish. That law was passed in 1876. The next year an addition was made to that law, and leave was given to elect, on the 2nd Wednesday in December, the parish directors to the Society, if there were ten members of the Clubs. In the law concerning the Clubs you will now find special references to the Societies. The Clubs can now form co-operative societies for the county. At general meetings are considered the needs of the county, and the greatest latitude is allowed to the Club-meetings for consultation about the interests of the parish. In the county of Chambly, this system acts famously. We can thus in this way get rid of the real drawback pointed out by M. Charest. Let that which must of necessity be done in the parish be done there, and let that which concerns the general interests of the county be settled by the Council of the Agricultural Society, as it is in this country with regard to the Dominion and local governments.

M. l'Abbé Charest—The Club must always be allowed to preserve its liberty of action. For instance, there is the county of Compton, in which there is an Agricultural Society; they are almost always the same who win the prizes

at their exhibitions; all rich Englishmen. The Canadians who do not live at Compton, but at the other end of the county near Lake Megantic, are not likely to drive off to the show at Compton with a little calf for the simple pleasure of saying that they have been to the exhibition. I am convinced that in the new parishes parochial exhibitions are needed to encourage the people and it is the Clubs that will provide these competitions. The farmers, too, of these parishes will as often gain encouragement by the prizes won in their parishes as the rich proprietors who exhibit at the great shows.

In Wolfe, where there are two Agricultural Societies, there are parishes that are too far off from the county show grounds to be ever able to compete there. Still, thanks to the Club, these parishes have their own parochial competitions, which answer well, and greatly encourage the parishioners.

Full and entire liberty is the condition by which the Clubs can sustain themselves. They must be capable of acting independently of the Agricultural Societies. If it is desired to unite the two institutions, they must not be too closely bound. First, let every parish hold its own competition; then will come the county exhibition; but the whole must not be subjected to the county Agricultural Society, for if it is, the Society will overwhelm the Club, and the Societies have never done the eighth part of the good done by the clubs in the past, and which they will continue to do in the future.

Mr. R. Haven—Allow me to say a word about the Clubs and the Societies. It makes but little difference whether the county is divided into one or two Societies, the Society into ten or twelve Clubs. Cannot this discussion be abbreviated? Cannot the Society be "regionalised" in such a way that each division of the county may have its competition. A county, for instance, might be divided into five regions: north, south, east, west, and centre. In a previously arranged rotation, the parishes of that part of the county in which the exhibition is to be held may be drawn by lot, and in this way the distances to be traversed would not be so very great, and each parish would have its charm of the exhibition being held there in its town. This is about what is done in France, where each district has in its turn an agricultural exhibition. (Applause.)

M. D. O. Bourbeau (Deputy President)—This subject of farmers' clubs is so important that I should like to tell you that I agree fully in the remarks that have just been made. The clubs it is that do more good to the masses, to the greater number, to the smaller farmer. They are productive of vast benefits in the counties to the poor and wealthy alike. The clubs confer benefits to some farmers even who are not disposed to profit by the advantages offered to them, as the father watches over the interest of his children.

As it has been observed, it would be a very good thing if the directors of the Agricultural Society were elected by the farmers' clubs, so that we could always have the man we wished for to take care of our interests in the County Agricultural Society.

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There is another thing that must not be neglected. In every parish there are always some indifferent persons, who are not given to following advice. They are ready enough to accept the benefits this advice may give them, but they will not "take any chances." I found again, last year, persons who would not join a club because it cost money. We devised a plan to show them that it would cost them nothing at all. There is a dollar to be paid out, but that dollar is returned in grass seed. I said to myself: as I am a tradesman and sell grass seed, I will pay for them and keep their seed. So I told them: I am going to pay your subscription for you; all I ask for is your names. You will easily see that this was not a losing affair, this of paying for them. Every farmer buys several dollars' worth of seed, so that from the moment he has bought his seed, he, by the very fact, has become a subscriber. Thus it was that we made them understand that it cost them nothing to become members of the club, and we had, moreover, the advantage of showing a long list of members to the Department of Agriculture at Quebec. In the fall, we receive a good lot of money from the government, which we expend in a variety of ways; sometimes we buy breeding stock; at other times, implements; and last year, when we bought half a dozen spring-tooth and other harrows (*herse à levier*), harrows very rapid in their action, and which prepare the land splendidly. We bought them with the government funds, and next year we intend to buy another half dozen. Thus, we shall have a dozen of them to distribute over the different townships of the parish, and all the people will benefit by their use. I ask you if we had not had this club to benefit our farmers in this way, how many of them would have the means to provide themselves with one of these implements?

There are many more other peculiarities of the clubs that I will not delay you over, because they are established in every parish and are perfectly well known. Still, as a meeting like this may be productive of much benefit, I will venture to add a few words. Let us encourage the clubs, because in many parishes the farmers seem indifferent to them. They neglect meeting together to discuss their own interests. If they had a better appreciation of the efforts of those at the head of the country, if they knew all that they are doing to ensure us prosperity, they would pay more attention to the institutions with which we have been endowed. People do not flock to the club meetings as they ought to do. I know not how it is, but there is among the French-Canadians a disinclination to follow advice. When a meeting is announced, only a very few members attend. I may be mistaken as to the five parishes that surround us, but it is in truth the case with the parishes of our district. Still, it is a common observation that it is they who frequent the club meetings that win most of the prizes at the competition; and they, too, are those who succeed best in their business.

An Unknown Delegate—This system may allow of your buying agricultural implements, but I have not been allowed to do so.

M. Barnard—As secretary of the Council of Agriculture, I have been compelled to cause the law, which forbids anyone to pay the subscription of another without it being known, to be observed. The law insists that the secretary

declare under oath, that the moneys have been disbursed by such or such persons. If M. Bourbeau has done the reverse, I am sure he will not repeat the deed.

Our farmers have acted thus: even when they might earn 3^o/_o, they will not pay the dollar. They tell us, give me the profit if you like but I will not risk a sou, that I won't. This is one of the national errors, and so it was that the men like M. Bourbeau have paid money out of their own pockets to make farmers understand all the benefits to be derived from the clubs.

M. Castel read a letter from Dr. Rinfret excusing himself for not attending the meeting, and enclosing an essay which he was to have submitted to it.

THE PROGRESSIVE PASSAGE OF FARMING ON A LARGE SCALE TO INTENSIVE, OR FARMING ON A SMALL SCALE. (1)

BY DR. C. I. RINFRET, M.P.

There are two points on which agree all those who are interested in the promotion of the interests of the farmer, that farming must be intensive, and a regular rotation of crops be followed, if it is to be profitable.

I think that a good plan for the gradual introduction of intensive farming among the average class of farmers, as well as the best way of getting them to adopt a system of rotation of crops, would be to establish county competitions with prizes for those who do their work in the best way, in hoed crops two or three arpents in extent, and to continue these competitions for several years until some regular system of rotation shall be definitely established.

Let us premise by saying that the rotation should be only applied to a part of the farm: one-third or one-fourth, or 20 to 30 arpents for a farm of 75 to 100.

And it might be done thus: the Department of Agriculture might offer a certain number of prizes, and distribute among those who would compete circulars pointing out the number of marks assignable to each specified operation: So many marks for preparation of the land, for water-furrowing, for filtering, —so many for best crops of turnips, mangels, potatoes, etc.

The circular would show, besides, how to grow each of these hoed crops with the manures best suited to each (farm yard and artificial).

The direct application of this instruction, encouraged by the prizes offered, would have, in my opinion, the effect of teaching the farmers more easily, and in a way more interesting to them.

(1) The French word *intensif* is untranslatable into English except by a periphrasis; intensive farming means getting by much manuring and cultivation the greatest possible amount of produce from the land.—A. R. J. F.

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The first competition would only concern 2 or 3 arpents in hoed crops on a piece that had borne grain the preceding year.

The second might consist of :

1. Hoed crops, 2 to 3 arpents.
2. Grain, do
3. Clover, do

And so on until the rotation is completed.

These county competitions would have these advantages :

Of applying, directly, the agricultural instruction furnished by the Department of Agriculture by or through circulars, which would indicate besides the proper places to buy artificial manures, the mode of their application, etc.

Of showing farmers how much may be made off a little bit of land when thoroughly cultivated.

Of establishing competition to a great extent, and to diffuse instruction more rapidly than by any other method.

Of showing what excellent effects arise from a proper system of rotation.

These competitions would be within easier reach of the mass of farmers than were formerly the "competitions of the best cultivated farms" in the agricultural shows ; and, in my opinion, if well organised and managed, they would be much more useful.

The Secretary then read the following letter :

St. Hyacinthe, 27th November, 1897.

M. EMILE CASTEL,

Sec. Dairymen's Association, P. Q.

Sir,

At the Montmagny meeting, in 1892, of your Association, I had the honor to address the convention on the advantages offered by Manitoba to dairying, and on the position occupied by our fellow-citizens in this business. To-day, I am happy to find that they continue to work industriously and successfully, not only in the making of butter and cheese, but also in the confection of condensed milk. The Company, a French Canadian one, has adopted an English trade mark, so as to avoid arousing the prejudices too well known to exist against anything French. I am glad to offer you, for examination at the Nicolet meeting, two samples that I have just received from M. l'Abbé Joly, curé of St. Pierre, Man. who has so largely contributed to the material prosperity of this thriving parish.

Pray accept my best wishes for the progress and prosperity of your important, your useful, association. With regret at not being able to be present at your interesting discussions,

I am, yours sincerely,

G. A. BEAUDRY, Priest, Chan.

The Secretary then read the

REPORT OF MR. CHAS. WILKINS,

Inspector.

To the President and Directors of the Syndicate of Butter and Cheese Factories in the County of Drummond.

Gentlemen,

I have the honour of presenting to you my second annual report in my quality of Inspector for your Syndicate. I began my travels the 10th May, and I am to end them on the 6th inst., forming a total of 154 days' work. During that time I travelled 1,800 miles, and visited 3 combined creameries and cheeseries, and 18 cheeseries. I paid 210 visits, an average of ten to a factory. I examined 9,623 cheese, of which 120 were extra, 5,884 first class, 3,540 second class, and 71 third class. I tested 2,031 samples of milk with the lactodensimeter, and 270 with the Babcock for the discovery of frauds. Apart from these tests, I found 16 cases of mixing with water, 4 of skimming, and 8 suspicious. I tested milk during 70 mornings, which gives an average of 2 watered samples or skimmed every 7 mornings; and as there are 13 factories that pay for their milk by weight alone, and receive milk for 150 days, this is equivalent to 1,550 days for one factory, and had I been present at every factory every morning during the summer to test the milk, I should have found 556 samples of milk either watered or skimmed. I notified the culprits both personally and by letter; I imposed and got in the fines, which I handed over to the secretary of each factory. I am happy to add that no patron, after his first warning, returned to his bad practices.

There are eight factories that paid for milk according to its tested richness, and the plan gives satisfaction to all the patrons except a few. I made 2,100 tests with the Babcock, that the patrons might be paid in this way. I found, I am happy to say, fewer 2nd and 3rd class cheese this year than last. But there has not been so much improvement made as I hoped to see, on account of the careless treatment of the milk sent to incompetent cheese-makers, and on account, too, of the small, badly constructed factories.

These three faults are, in my opinion, the cause of the depreciation of our cheese, which some delight in calling *French cheese*, and which, in many cases, sells for a half-cent less than Ontario cheese.

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If farmers would reflect and calculate, they would understand how these faults are one cause of ruin to them, for the loss of a half-cent signifies \$200,000 to the patrons, which would be enough to pay the wages of all the head-makers at all the factories in the province at the present rate. This, taken together with the loss to the makers by the cut in prices, would save enough to engage none but first-class men in future. So, the best plan to remedy this evil would be to induce the government to compel every maker to pass a strict examination and to win a diploma with a certificate of capacity. May the time come when the farmers shall unite for the cartage of milk in each township (centre), and encourage a large, well built factory, provided with a maker of the first class. This would ensure an extra product. The best thing for you is to adopt the means of sending off your products, of which there are several :

1. Send one of the men of the place to Montreal or St. Hyacinthe to sell.
2. To send straight to the exporter.
3. To send to a broker.
4. To sell to buyers who go from factory to factory.
5. To sell to the Board of Trade.

Many of these means have their drawbacks, but the best in my opinion is the Board of Trade, or perhaps sending to a broker who does not buy on his own account.

In conclusion, I repeat what I said last year: Furnish clean, sweet milk, patronize large factories, and see that none but first rate makers are engaged. Sell through the Board of Trade, and, if possible, get your cheese accepted at the factory. See that your boxes are good and the cars clean.

Give the buyers the equivalent of what they pay for and I am convinced you will be successful in this branch of trade.

I have the honor, etc.,

M. Barnard—Last evening the judge of cheese told us that some of the cheese had lost half a cent a pound in value through the fault of the maker alone. The patrons are often in fault, but we must not forget that there is still an immense improvement to be made in the practical manufacture. We must not forget this fact which was impressed upon us yesterday, and which should serve as a lesson to us.

Now I wish to remark that the Danes are in advance of us as regards butter and yet Quebec is better fitted than Denmark for the production of this article. Observe, please, that the Danes have increased their make of butter in enormous proportions during the last 40 years, and yet they still get the highest price on the market. Let us, too, do our best to improve our butter, to increase our make, and thus add to the wealth of our country.

M. l'Abbé Côté—I think we ought to advise all patrons, proprietors of factories, only to make cheese in the four months of June, July, August and September, and to make butter the rest of the year; in spring, up to grazing time, in autumn, when the milk begins to become richer. What happened to us this October? Why, we made cheese during the first half of that month and we only got 73 cents per 100 lbs of milk and latterly only 70 cents. We made butter in three weeks of November and we got 78 cents; there is, however, a vast difference between him who got the most and him who got the least return; I think it is 35 cents. It is certain that if we restrict the make of cheese to four months, better cheese and better butter will be made. This is the reason why I recommend every parish to have a cheesery that can be converted into a creamery in winter. We made 4,660 lbs. of butter in three weeks, and I think we shall keep on up to January, that is, that there will be milk enough to pay the expenses of the creamery. Last spring we worked from early in April to the beginning of May. This is not so profitable, because the milk is poorer; but I think the butter is much better. I hope if we want to succeed, we shall not find in our cans that which we found in one last Monday: a box of blacking! I do not think it will happen again, for the can's proprietor was so heartily ashamed of himself that he will not be caught again.

I think if it were possible to have in every parish a cheesery convertible into a creamery, people would not be slow to see that in autumn butter pays better than cheese. The buyers and the Journal have warned makers not to make fodder-cheese; but there are always some who persist in making it. I know one who worked a week after All Saints' Day, and who sold the product as October cheese.

Still, I am happy to say that the make of butter is increasing yearly.

Mr. Wilkins—With your leave, I beg the meeting to observe that, in my report, I called the attention of the convention to the question of diplomas. I see, too, in the programme that there is to be a discussion on that subject, but as yet I have not heard a word about it.

I met a maker last year who kept a ferment only one day and used it for cheese the following day. To make this ferment I saw him dip out a pailful of whey from the tub that had not been washed out for years, and he poured it into the milk-vat in spite of my attempts to dissuade him. I observed many faults of that kind among the makers, and that is the reason why I proposed that there should be a law compelling makers to take out diplomas, and even then, the diploma should be good for only one year; the maker should, after examination passed, have a certificate for a year, as a test of ability, and if at the end of that year his inspector finds that he understands his work, he should then have his diploma, but not before. By doing this you will raise the value of cheese 2 or 3 cts. a pound, and you will then have sufficient means to pay first class makers in Quebec.

Gentlemen,

At your request which dairying is to say a few words of the country in general and of the Island enjoy over

Situated in the north of the island from Nova Scotia the island may be justly called a paradise. Its climate is charmingly pure and free from fogs. Surrounded by mountains to those of the interior such conditions, the interior province the night is sure to be clear. The landscape, frequently very fine, with towering rocks forming a plain; but to contemplate with there is one sight universal neatness all the buildings, white-washed, and are doing well; the change of any character

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DAIRYING IN PRINCE EDWARD ISLAND.

By MR. ALBERT W. WOODWARD.

Gentlemen,

At your request, I will try to give you some information about the way in which dairying is carried on in Prince Edward Island. Allow me, first of all, to say a few words, as an introduction, on the climate and condition of that country in general, so that you may judge of the advantage the farmers of the Island enjoy over those of other countries.

Situated in the southern part of the Gulf of St. Lawrence, and separated from Nova Scotia and New Brunswick by the Strait of Northumberland, the island may be justly called, as it is called, the "Garden of British North-America." Its climate is charming in summer, being free both from excessive heat and icy fogs. Surrounded by the Gulf of St. Lawrence, whose waters are exactly similar to those of the ocean itself, the freshness of the sea breeze is delicious. Under such conditions, the average temperature is far cooler in summer than that of the interior provinces of the Dominion. In summer, though the day may be hot, the night is sure to be cool, and favorable therefore to the preservation of milk. The landscape, without ever being sublimely grand, is always attractive, frequently very fine. There are not, as in some countries, lofty mountains or towering rocks from which one may allow the eye to wander over the neighboring plain; but there are nevertheless a few elevated positions wherein we can contemplate with pleasure the maritime view. In driving through the country, there is one sight that always favourably impresses the traveller, namely, the universal neatness that distinguishes the farms and houses. All the farmhouses, all the buildings, aye, the very fences that surround the steading, are painted or white-washed, and have a most fascinating appearance. The farmers in general are doing well; they are careful of their own interests, and ready to take advantage of any chance to improve their condition.

In giving you an abstract of the work accomplished on the Island, I do not propose to relate the whole story from the start to the present time; I shall rather try to show how the work differs from that of the other province. First of all, I must remind you that dairying only began in the Isle a few years ago, and this gave the farmers an opportunity of profiting by the experience of others in building proper factories and introducing the best machinery. Hence, a good deal of the rapid progress made, and the position occupied on the English market. Having imported from the other provinces thoroughly skilled men, it was very much easier for the Islanders to accomplish in a few years that which cost much time to the other provinces, abandoned as they were to themselves, and working solely with their own means.

With Professor Robertson, whose indefatigable energy never rests from promoting the interests of dairying in Canada, assisted by skilful cheese-makers, and starting as it did at a time when dairying and factory building had been carried to some degree of perfection in the other provinces, the Island quickly

placed itself in the first rank of the dairy provinces of Canada. It is true that in no part of America do the climate and condition of the country surpass those of the Isle.

The soil is red sandy loam, easy to work. Although the land does not seem to be very strong, still it yields heavy crops of grain, but it needs frequent dressings of dung to maintain its fertility. Every sort of grain, except corn, is grown; though corn is sometimes grown in small quantities, the nights are too cool to allow of good crops being regular.

The former mode of farming had by no means the object in view of maintaining the fertility of the soil; just the reverse. The chief crops were oats, sold off the farm, potatoes and hay. Everything was sent away, so that the fertility of the soil was much more worked out of it than if these products had been consumed on the farm. The soil of the Island is able to yield heavy crops of grain, which would do for feeding cows for winter dairying.

The cows are of all kinds, though one can perceive signs that go to prove that the farmers are entering on a course of improvement as regards their herds, not only as to their increase in number, but also as to the breeds kept. Though the progress is slow, it will certainly be realised, for the farmers appreciate the importance of good cows, and as some have succeeded in improving their herds, their success will lead others to imitate them, and the results will be the same as the results realised elsewhere.

In some districts Ayshires have been introduced, and seem to be popular for the dairy. The wintering of stock appears to be the greatest difficulty, the cow-houses being generally badly built; too many of them are small, badly lighted, badly ventilated, and in most cases the cows suffer from cold. There is very little lumber on the Isle. Still, I must allow that in this country there is a good deal of improvement, for the farmers have found out that, if the cows are to give a good yield of milk, the best way to ensure it is to feed them properly. But it is not only in Prince Edward Island that progress is needed in this connection; all over the Dominion, and in great numbers, are to be found farms where the farmer might improve his lot by giving more attention to the welfare of his cows, and by building better cow-houses to protect his herd from the cold. With good warm barns, well lighted and ventilated, the cow will become more civilised, a *better citizen*, by giving her owner larger returns.

To return to my subject, I will start by telling you about the milk when it leaves the farm for the factory. I should state that factories here all belong to companies of shareholders. The milk is carted by contract, a man contracting to carry all the milk on a fixed route, at the rate of so much per 100 pounds, (the charge varies from 5 to 10 cents per 100 pounds), according to the quantity to be carted. The whey is returned to the farm in the milk cans; a great mistake, of which I shall have to treat later on. There are two great errors committed here by the farmers, of which I regret to say Quebec farmers are equally guilty, though not on so large a scale. Of the immense mass of information given on dairy matters, the makers, up to the present, have received the

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better part, and the farmers have been rather neglected. What they now need is a little more knowledge of the way to treat milk, so as to make them more skilful in this part of their work.

The first of the two errors I spoke of just now is the case of bad cans, whose badly fitting covers necessitates the use of cloths under them to prevent the milk from spilling. Many of these cloths are horribly repulsive; they look as if they were but rarely washed. Although this might be called a necessary evil, on account of the badly fitting covers, I have done all I can to get the men to give up the use of these cloths. The second error is the leaving of the returned whey in the milk cans till the evening. I have seen as I was passing, at 6 p.m., the milk platforms, the whey still in the milk cans, just as it was brought back from the factory, and I am positive that it was allowed to remain there until the farmer was obliged to empty it out on account of the can being wanted.

As I said before, and I repeat it, as long as farmers persist in the practice of bringing back the whey in milk-cans we shall always have, more than ever, bad flavors in the milk. I have pointed out this error to many of the farmers, and a good many of them see that it ought to be put an end to, but they say that if they put an end to this practice on their own farms, they will not get a cent more for their milk, unless the suppression is general; unfortunately, they are right. Still there is a remedy; and if it were applied, not only would it improve the quality of our Canadian cheese, but it would get rid of half the inferior cheese we now see on the market. The remedy is this: the buyers do not make enough difference in the price for quality. All cheese ought to be priced according to quality; three classes might be made, so that the man that makes good cheese should receive a good price, and he who makes bad cheese a bad price. I know that this plan will not receive the cordial approbation of the buyers; but why should not the same differences in price that are made for wheat, for instance, be made for cheese. This question demands attention, and I hope that they who are in a position to defend it will become its advocates.

The present state of trade offers no encouragement to the maker to improve the quality of his cheese. If a skilled maker turns out cheese superior to his neighbours, he cannot get a cent more for it. Suppose the proprietor pays this man \$10.00 more than the neighbour gets, on account of his superior skill, he will not receive a cent more for his make, though he can see a difference of at least a half-cent in favour of the cheese made by the skilled maker. Hence, an actual encouragement to proprietors of cheeseries to hire none but second-rate makers, provided they can make cheese that will pass on the market at the current rate, or market price.

In the present state of business, good cheese helps the sale of bad, and the man who makes bad cheese knows that, and will go on making bad cheese as long as it is so; but if, by leaving off paying a good price for his make, we establish a system that forces him to turn out good cheese, either he will improve the quality of his goods, or he will have to give up making, in which latter case he will probably be replaced by a better maker.

I therefore advise that, in order to increase the quality of our Canadian cheese, there should be a greater difference in price in favour of the best. Another thing that is well managed in the Isle, and is not well diffused in Quebec, is the purchasing of butter and cheese, weight and quality guaranteed, either on the quay or at the factory. The practice of sending cheese to the buyer, *subject to his inspection after he has accepted delivery*, leaves the maker at the mercy of the rise and fall of prices, or, in other words, the maker it is in many cases who has to bear the fall, and act as a buffer between buyer and seller, when the market falls. If only competent men were as a rule employed as buyers, the weight and quality might be guaranteed at the factory, and the cheese paid for on delivery. Were this plan put into practice, there would be an end to those troubles and drawbacks that sellers are often obliged to go to Montreal or elsewhere to rectify a complaint made by the buyers; this is another argument in favour of marking the price of cheese according to its quality, as I remarked just now.

FACTORIES—In order to succeed in making cheese of the highest quality, we must have buildings fit for its manufacture and ripening. I regret to say that the makers are not always fortunate enough to have such at their service. In many factories, it is utterly impossible to keep a constant temperature in spring and autumn, and to keep the ripening-chamber cool enough in summer. A maker may do his best to turn out the best cheese, but in such a ripening-chamber as I am speaking of, he will not often succeed. If he does succeed, up to the time of taking the cheese from the press, it will very likely be ruined in any ripening-chamber where the temperature is not under control. In Prince Edward Island the makers do not suffer from these defects in the construction of bad factories or fittings, for I think that the factories of this Island are the best in Canada, so I shall include in these notes of mine a brief description of some of their peculiar arrangements. Never will there be a too determined resolution to do away with the smaller factories in order to replace them by larger ones, that the uniformity of the cheese may the more easily be controlled. The larger and less numerous the factories, the more easily will it be to secure uniformity in the cheese. Then, in the Island, I do not say that there are too many factories; but there are enough for our present needs, and a few more would tend, by lessening the profits, to diminish the interest borne by the farmers in the dairy industry. There are a few small ones, but the greater part of them, receiving, during the height of the season, from 6,000 to 18,000 pounds of milk daily; they have from 2 to 5 vats, and consequently, from 2 to 5 men. The fact of having larger factories, better installed, not only adds to the interest felt in them by the farmers, but tends to excite a certain competition among the buyers, who know perfectly well that, in a larger factory, there is a much greater chance of finding better and more uniform cheese. If it were possible to get rid of one-fourth of the factories now at work in Quebec, we should not only have better fitted up factories, but we should have at the same time an increase in the price of cheese for the self-evident reason I have just laid before you.

In some cases on the Island milk has to be carted 8 miles to the factory, though this is not common. The size of the cheeseries varies with the quantity

of milk that the quantity greater ories there was g drainage and a f buildings that th Everyone of thei spring, which no summer. The va and grooved boar running through the machinery a much more stea that is, they ha and yet, why ta cheaper on acco working curd, th

MAKERS—T employing young because they can a very difficult ti factories can affe to improve the q of, and, with the skilful, and carel that can be done their employés, industry, and to succeed. No on throughout these here lies in the f factory until he

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of milk that the distance can supply, but they are all large enough to treat a quantity greater than that they receive at present. In the building of the factories there was great pains taken to choose a site and a *lay of the ground* where drainage and a full supply of water could be secured; so well finished are the buildings that the temperature is much more easily controlled, than formerly. Everyone of them is paneled outside with shingles, and white-washed every spring, which not only makes them look better, but helps to keep them cooler in summer. The vat-room and the ripening-chamber are finished inside with tongue and grooved boards, the floors are well laid, with a slight fall towards a gutter running through the middle, so as to facilitate the washing. All the utensils and the machinery are of the best kind; the boilers are all large, and able to supply much more steam than is at present needed; the vats, however, have one defect, that is, they have no tap, but a siphon is still used to draw off the whey; and yet, whey taps do not cost much more than siphons, and are, in the long run, cheaper on account of the better results they produce in the case of quick working curd, they carrying off the whey much more rapidly and completely.

MAKERS—There was a rather wide spread error in all the provinces, namely, employing young apprentices in the factories instead of experienced makers, because they can be hired for less wages. It is a great mistake. I know it is a very difficult thing to get good makers for the money the owners of small factories can afford to pay; but it must be clearly understood that, if we want to improve the quality of our cheese, some of the small factories must be got rid of, and, with them, bad cheese. The makers, in this Island, are very persevering, skilful, and careful in their work. All their interest lies in their work, and all that can be done for the promotion of their own welfare and of the welfare of their employés, they do. Their aim is to co-operate for the success of the dairy industry, and to impart to it all the improved processes of work, and they succeed. No one can avoid observing the neatness and cleanliness that reigns throughout these cheeseries, outside as well as inside. The secret of our success here lies in the fact that no maker is engaged to take the management of a factory until he has had at least three years' experience as an apprentice.

One thing I want to say, from which a good deal of mischief arises, is that there is a sort of false emulation among the makers as to which shall secure the greatest yields. There seems to be a tendency among the proprietors to engage a maker who tries to make large yields. They do not seem to understand that the yield ought to be shown, and in the majority of cases is shown, *on the scales*, for no maker can succeed in getting a large yield without leaving a great quantity of moisture in the cheese, and thus lowering its value or lessening the weight every morning of each patron's milk by two or three pounds, in order to appear to be making large yields. I like to see a man striving to make large yields, but I do not like to see a man neglecting quality in favor of quantity; this leads me to address you on the subject of the actual making of cheese.

In speaking of the making of cheese and the methods employed, I do not mean to lay down any fixed rule, or to assert that one system is better than another, or that the ideas of one man are more advanced, theoretically, than the ideas of his neighbour; but rather to lay before you the natural laws and the

methods best adapted to the treatment of the various conditions of milk for the production of the best quality of cheese. Were it possible to receive milk in the identical state in which it was when it left the udder, the making of cheese would be much simpler, and need much less skill; but milk, at its delivery at the factory, has already undergone many changes, each of which is a difficulty more, and demands more skill to be exerted in the making of a superlatively good article. It is also a recognised fact that milk is never two days alike, wherefore, to be a good maker of uniform cheese a man must know how to treat the differing milks, and adapt his methods of working to the demands of each sort of milk. No doubt butter and cheese both can be made routine-fashion with fair results; but both are more likely to turn out well and are more easily made if the laws of reason and good sense are followed.

In my travels I found many makers putting too much routine-work into their method, whence came a want of quality and uniformity in their cheese.

There are great differences of opinion as to the proper treatment of differing qualities of milk, so I will not give you my own ideas on the subject. There is, however, one point on which I have given my opinion in public, and which I should like to mention here, and that is the cooking of the curd at a high or low temperature. If the normal temperature be taken at 100°, 102° would be high, and 104° extreme. I do not particularly favor a high temperature at all seasons and in all climates, but still, I do cook at a high temperature, when the state of the milk requires it. The only danger that can arise from a high temperature in cooking is of having a too dry, too hard a cheese; but this danger is not very great, since with time this cheese will come to. We have two sorts of milk with which the cooking temperature must be high, they are stale milk, nearly sour, and very rich milk. In dealing with these milks, the great difficulty is to get the curd dry enough before the full development of the acid. Were it feasible to get all the moisture out of the curd before it becomes sour, there would be no difficulty in treating stale milk; but in reality, it is utterly impossible to obtain with sour milk a curd sufficiently firm, at least without resorting to an excess of working, which is not good for the cheese, and which of course should therefore be avoided as much as possible.

I have not time to discuss all the details of this question, so I will only observe that if it be impossible to devote all the time necessary to the forming of the curd before the full development of the acid, other means might be sought for. First, we know that the finer the curd is cut, the quicker it cooks and the faster it dries; secondly, heat drives off moisture and firms the curd, and this renders it less susceptible of being lost in the whey (*s'abimer*) through too much working than if it were softer. I well know that hot temperatures in cooking may be carried too far, but it is in this that a maker has a chance to display his judgment.

There is one point in which the methods followed in the Isle differ from the Quebec methods. The milk is late in reaching the factory; reception rarely begins before 8 o'clock, and in many cases half past ten sounds before it is all

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These contagious country? To that not to say that, if horned stock, in (

delivered; this accounts for the quantity of too advanced milk received in summer. It is much easier to make an extra good cheese in the Isle than in most parts of Quebec, on account of the fact that the milk does not need so much working, the curd firms much sooner, and, with a normal milk, it can be cut into larger pieces without loss. When the proper acid is present the curd is put into the strainer or on racks, when it is stirred very lightly, after which it is allowed to gather together, is very slightly piled up, and as soon as the hot iron test shows threads of $\frac{3}{4}$ to 1 inch long, it is ground. The only curd-mill used in the Island is Harris'. After grinding it is stirred for one to three hours, according to the quantity of moisture it contains. I think the racks are very handy and do well, especially with a curd that works fast, because they are very useful in getting rid of the excess of moisture it contains.

Want of a fine aroma and of keeping quality are the two great faults in the Island cheese. I might expatiate on this subject, and also on the finish of the cheese, wherein the Isle is far in advance of Quebec. The cheese is turned in the moulds every morning, which is a far easier task than in Quebec, on account of the late arrival of milk at the factory.

But I fear I am abusing your patience and taking up your time, so I will conclude by saying that it is not only to keep up our reputation, but to improve our dairy industry that we must keep moving; by so doing we shall succeed in maintaining the position of our cheese in the world's markets, and thereby attain the highest price going.

CLOSING SESSION—THURSDAY EVENING, DECEMBER 2.

THE ABBE COTE IN THE CHAIR.

LECTURE BY DR. N. T. DAUBIGNY, M. V.

Mr. Chairman and Gentlemen,

Not knowing anything about the making of butter and cheese, I do not attend this great meeting for the purpose of speaking of the advantages of dairying to the farmer.

I am a Veterinary-Surgeon, Inspector of stock for Canada, and am sent hither by the Minister of Agriculture, the Hon. Sydney Fisher, to address you for a short time on the contagious diseases of cattle, and, among others, of tuberculosis, or consumption, a subject of great interest, which affects both the public welfare and this society, and in a very great degree the public health.

These contagious diseases, have they appeared in different parts of the country? To that I reply in the affirmative, as far as I know, and I hesitate not to say that, if we had the right to inspect all the animals, among others the horned stock, in Canada, we should be surprised at the number of subjects

affected, and still more at the value that the affected animals represents, which is several hundreds of thousands of dollars.

I may be mistaken in expressing myself thus ; I should be glad to find that I am wrong, but I do not think I am mistaken. The facts are these : A Mr. Clark, of Ottawa, killed all his cattle that were affected with tuberculosis or consumption, 40 in number, and if his cowhouse has not been properly disinfected, the cattle that replace those that were slaughtered will be tainted as soon as they inhabit the infected cow-house. This is the reason why the Hon. Mr. Fisher is employing every means in his power to banish the invading plague, in the interest of the public good. Thus, Gentlemen, it is your duty to aid him to obtain sanitary legislation for the Dominion to place us on an equal footing with the countries across the ocean, where it is understood that domestic animals form one of the most important branches of the national wealth.

Every fortnight, I receive a sanitary bulletin, published in France, and I find that ever since they had there a sanitary police, contagious diseases have been gradually disappearing. But there are, perhaps, in this meeting some who will ask : how is it that we never used to hear of contagious diseases in this country, and yet, all of a sudden, we are told that they are prevalent ? If I am asked this question, my reply is that for twenty years there has been an inspection of imported and exported animals ; from time to time the chief inspector has visited a few herds, but, apart from that, there has been no regular inspection, and it is this that the Minister of Agriculture wishes to secure, in order to watch over the arrival of cattle here from over the ocean, and I was expecting to hear that, in the discussions of yesterday and to-day, there would be some allusion to the danger of making butter and cheese from the milk of tuberculous cows ; for it has been proved that the germ of consumption or tuberculosis is not destroyed in the usual process of making butter or cheese, since to kill it, requires that the milk be raised to 190°F. to 195°F., and if foreigners hear that our cattle are afflicted by this complaint, there is no doubt that at some indeterminate time, we shall have to keep our meat and dairy products for our own consumption.

Before entering into details about tuberculosis, let us see how animals, generally speaking, contract diseases :

A month ago, we were surprised by the sudden arrival of cold weather (I say we, for I, too, am a farmer), and we took our cattle into their winter quarters without taking the trouble to look at the healthy state of the stables and cow-houses.

I know that in the County of Nicolet there are plenty of good buildings, well arranged, i.e., fit to maintain the health of stock ; but I also know that in many a corner of the county it is just the reverse ; the buildings are close, with no ventilation to get rid of the dung-laden air, no light, in a word they are just like a stove ; our cattle are condemned to pass the winter in this bad home, whence they depart in spring, blanched, weak, exactly like a plant that has passed the winter in a cellar ; whereas, if we did just the reverse, by placing our animals in proper quarters, with pure air, light, ventilation and good food, they would be

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rarely ailing, but vigorous, eating freely, ready for work, and would return greater profits in meat, fat and milk—all conditions which incur but little outlay.

Allow me to state a fact connected with the bad state of farm buildings. This spring one of my neighbours came to me to get me to look at his cows; I went, and as I entered the cow-house, which was surrounded by filth, I saw fourteen or fifteen living skeletons. The building had no other issue but the door, that was always shut, no light, three or four inches deep of dung on the boards, some stinking water, poultry roaming at will over rack and manger, dung in the space between the partition (*entre-jeux*) which had been there since the fall, in fact nothing can be filthier than that cow-house; and yet the farmer did not see the reason why his cattle should be weak, anæmic, incapable of standing up. I began by telling him that if his cattle were thin, it depended on the foul condition of the cow-house and the bad fodder they had been fed upon during the winter. Give them good hay, oatmeal in their drink, air and light, adding a ventilator to their house, and before long you will find that you have no longer to lift them up by the tail; instead of passing an hour in lifting them up every morning, you can go to work on your land, which will pay you better.

I forgot to tell you that one of those cows had a wooden plug stuck into each horn; "What is that for?" said I; "She has got the *horn-complaint*," replied the farmer. The fourth cow had a cord tied to her tail, and I was told she had the *vertigo*! The last but one had certain red blotches all along the vertebral column, and my friend told me that a man had informed him that this cow had *le flot* (an imaginary disease). Finding myself in the presence of these non-existent complaints, and this barbarous treatment, I asked him why he allowed the quack to so maltreat his poor cows; what is his name? So and so? Yes. A stupid idiot, for I know him well!

All the same, my *habitant* had perfect confidence in the man and in his treatment, so much so, that I had immense trouble in convincing him that these diseases had no real existence; and it must be confessed that he is not alone in his credulity, for during the twenty years in which I have been practising, I have continually had to struggle against deeply rooted prejudices in every quarter, for there are people who prescribe for everything, who hesitate at nothing, and who know everything. At last, I retired from the spot advising my man to consult so and so, a neighbour, and that at his farm he would see with his own eyes that taking good care of stock gave less trouble and paid far better. He went, and I feel sure he will do better in future, for he has plenty of courage, and good intentions, and I am convinced that my advice has filled him with emulation to surpass the neighbor, to whom I sent him, in his care of his stock.

To return to the contagious diseases of horned stock.

Tuberculosis or Consumption:—What are the causes of this complaint? Its sole cause is the entrance into the animal economy of Koch's *bacillus* or germ. Close packing (*co-habitation*), exhausted air (*air aspiré*), expectoration, in-and-in breeding, selection, improvement of breeds; all these prepare a soil favorable to the germ of tuberculosis.

Tubercles are found in all the organs, among others in the udder, the intestines, liver, omentum, mesentery, but most frequently in the lungs. In order to enable the owners of cattle to detect the complaint, I will give some signs or symptoms which will help you to do so if you will bear them in mind.

First, its evolution is not always the same, it may be only six months incubating, as it may be 5 or 6 years, precisely like consumption in man.

Here are the chief symptoms :

First period—(This may pass unperceived.) Slight dry cough, remittent night and morning; shivering, hair dull and bristling along the back, which is arched; dull in movement; hair falls out; stretches out fore-legs; breathing regular; secretion of milk normal; plump.

Second period—Dry cough more frequent, hoarser, running at the nose, breath jerky, hair dull and bristling, less appetite, less milk, animal begins to lose flesh.

Third period—Breathing difficult, rattling, uncertain (*grouillante*) or jerky, hair stronger, more frequent shiverings, running at nose increases, cough frequent, but arrested from weakness, hardly any appetite, rumination nearly nil, skin almost tight to the ribs, hard, dry; milk, if any, bluish, watery; sunken eye, increasing as the fever increases, marasmus or atrophy follows, and the animal dies slowly in a complete state of consumption.

Is this consumption in cattle a new disease? No, it is as old as consumption in human beings. Moses, in his laws, ordered that the flesh of animals attacked by this complaint was not to be eaten. In the 11th century this disease was evidently known to every nation.

Is it contagious in man? Yes; it is proved now that the bacillus or germ of human consumption is identical with that of cattle tuberculosis. Then, are you really going to ask me if the flesh of cattle attacked with consumption is fit for food? I will describe to you, before you ask me that question, a report made September 26th, 1896, by a commission of scientists at Paris (hygienists, veterinary-surgeons, doctors of medicine), in which it is said that all meat from tuberculous animals should be excluded from food, though some assert that if the part affected be removed, the rest of the animal may be eaten with impunity. While this doubt remains, it would be wise to confiscate all tuberculous meat, in the interest of society, and to avoid inflicting incurable injury on its consumers. Besides, the meat has lost all flavour, is soft and repulsive in appearance. At Montreal, in the Eastern-Abattoirs, the inspector pitilessly condemns all meat from tuberculous animals, even when there is only one organ affected, and he does well.

So much for the meat; now as to another point, one that concerns all who have cows: Is the milk of tuberculous or consumptive cows virulent or not? Here I quote the decision of the commission I mentioned just now. "Raw milk is contagious to both children and adults, unless it has been sterilised at a

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temperature of 190° to 195°, so as to destroy the bacillus or germ of the tuberculosis, and the infection is propagated by the consumption of preparations made with the milk, including butter, cheese and whey."

These awkward discoveries aroused attention at Ottawa. About the same time, tuberculosis was discovered at the Experiment-Farm. Samples of milk from the cows kept there were taken, and from the milk-dealers' cows in that city, and submitted for examination to Dr. Robillard, so that it is high time that measures be taken to stop the progress of this terrible disease.

We know of no treatment capable of contending with this dreadful complaint; it can only be identified by the tuberculin test. For that, it is necessary to carefully watch the temperature of the animal at least five times at every interval of two hours the first day. After that, inoculation is performed and eight or ten hours afterwards, the temperature is again tested to see if reaction has taken place, by which last examination it can be decided whether the animal is affected or not. If all the cattle are diseased, the best plan is to knock them all on the head and disinfect the place.

Anthrax—It would seem that this disease is not doing much harm, for it is seldom heard of now. Still I can tell you that for the last eighteen years I have known of its existence in a village near Montreal, where it commits ravages yearly. Four or five years ago I was called in by a medical man to examine a horse; I examined it and at once saw it had *anthrax* (1). I told the owner to turn the horse out into a field about 120 yards off. The same day one of his neighbors, knowing that I was there, sent for me. I went to his place, where I saw a fine horse that he had just driven from the village, gay and lively when it left, it reached home with its head lowered. The same thing with the doctor's horse, and before I reached Montreal the two horses were dead.

I did not tell these people what to do with the bodies; I suppose they buried them as is usually done in such cases; but this is a bad plan, as the bacteria are not destroyed by it; the worms carry them to the surface, where other animals will absorb them. In France, all animals dying from anthrax are burned, and another practice is to convert them into a valuable manure by means of sulphuric acid. Pasteur cultivated the virus and succeeded in cultivating it sufficiently for inoculation, so that we can now render our cattle insusceptible of anthrax. I do not mean to say that this immunity lasts for ever, but it will answer perfectly if the operation is repeated every five or six years.

Actinomycosis, or lumpy jaw.—Twenty years ago, we heard of nothing but this disease; it was prevalent everywhere, and was supposed to come from kicks, thrusts from horns, etc. At last it was called a kind of cancer. The agent or origin (*sic*) of this disease was not known at that time, but since the study of microbes has been carried to such perfection, it has been found that this complaint is due to a fungus—*actinomyces*—found in mouldy fodder. It is very contagious as to men; a coachman, being very thirsty, drank from the trough used by a horse that had the disease, and the man caught

(1) *Anthrax* is the Greek for coal.—A. R. J. F.

it. Another man, suffering from the same complaint, kissed his sweetheart, and she caught it. You see, then, how contagious this disease is. Six or eight years ago, I was visiting an establishment near Montreal; I was asked if I had any cure for this disease. I replied that my remedy was to slaughter the horse; and yet this animal was being used as a sire!

Another disease is chicken cholera, and a good deal of harm is done, for a friend of mine lost 300 chickens by it. It is incurable, and, as yet, it is not considered to be worth attending to. There is also consumption in poultry.

We must really arouse ourselves, and try to vanquish all the plagues that by degrees are ruining our property. Let us hasten to put ourselves on a level with Germany, France, and the other countries of Europe.

This is nearly all I have to say to you this evening. I do not despair of having before long, a sanitary police, governed by laws enacted to protect us against all contagious diseases that threaten us with invasion.

I thank you, gentlemen, for your attention. I trust that henceforth you will attend to my advice, and see that your buildings are well aired, well lighted, and well ventilated; this will help to protect your stock from all sorts of complaints.

MAGIC LANTERN SLIDES.

M. Castel exhibited, with magic lantern, the following slides, accompanied by a few commentaries from Dr. Daubigny: an abstract of the preceding lecture.

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| 1st slide, a tuberculous cow | Lungs. |
| 2nd " " " | Walls of the pleura. |
| 3rd " " " | Piece of liver (hard). |
| 4th " " " | Omentum. |
| 5th " " " | Small intestines. |
| 6th " Heifer | Lumbar marrow. |
| 7th " Tuberculous pig | Piece of the spleen. |
| 8th " Jaw of ox | Actinomyces, tuberculous; lumpy jaw. |
| 9th " Actinomyces (fungus) of the above tumour. | |
| 10th " Sectional view of Actinomyces. | |

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LECTURE BY MR. J. C. CHAPAIS, (1)

Assistant Dominion Dairy Commissioner.

SELECTION OF MILCH-COWS, AND ECONOMY IN THEIR FOOD.

SUMMARY :—*Crisis in Dairying.*—Competition the chief cause.—Fall in prices of dairy-goods on the market.—History of the causes of this fall.—How to meet it?—How can the cost of producing milk be lowered?—In two ways.—The first: the improvement of the milch-cows of Quebec.—The total profit to be realised by their improvement.—How to improve the herds of milch-cows.—Definition of a good milch-cow.—Choosing a good milk-breed.—Superiority of the Canadian cow.—Proofs of this superiority.—Individual aptitudes of milch-cows.—Hereditiy.—Pedigree.—Their importance in breeding milch-cows.—Study of four types of cows of different breeds, as regards the cost of milk.—Different appearance of these types.—Type of the beef-beast.—Type of the milk-beast.—Exterior form of good milkers.—Importance of a thorough knowledge of them.—Study of these marks in the best types of Canadian and United-States milch-cows.—The head.—The neck.—The shoulders.—The dew-lap.—The brisket.—The ribs.—The milk veins.—The milk-springs.—The tail.—The legs (*pattes*).—The udder.—Secondary signs.—Second way of lowering the cost of milk production.—Lowering the cost of the food of milch-cows: by the use of ensilage; by the use of tubers, roots, corn; by laying down better pastures than we have at present; doing so by the use of orchard-grass.—Its description.—Its qualities.—Its nutritive value.—Its seed.—Growing it with clover.—Proof of its economy in figures.—Importance of the practice of economy in the production of milk.

Mr. President and Gentlemen,

Dairying, like all the other agricultural industries, has been for some years in an awkward state, and it is to competition that this crisis is due. Our market for butter and cheese is the English market, and this, thirty years ago, was supplied by the United-States more than by any other nation. But a time came when the Americans, desirous, as people say, of taking two profits out of one deal (1), skimmed their milk and made butter from the cream, and then replaced the cream in the milk with cotton seed oil or lard, from which mixture they produced a debased cheese, known to the trade by the name of "Filled Cheese." This lost them their good name on the English market, and just at

(1). This lecture was illustrated by M. Castel's magic-lantern.

(1). Literally: "two millers' tolls out of one grist." "*Mouture*," French, for the miller's due, is still called in Scotland "*Multure*," from *Moudre*, to grind.—A. R. J. F.

that moment Ontario began to turn out a good cheese, and, about 1882, Quebec entered heart and soul into the movement. By the year 1893, Canada, by degrees, had displaced the States in the English market; and while their exports kept gradually diminishing, ours kept increasing in about the same proportion.

But in 1893, when, at the Columbian Exhibition, we carried off almost all the prizes for butter and cheese, the producers in the States of these goods were startled, aroused themselves, and began to reform their method of cheese-making, so that, now, they have partially regained their position on the English market. For our part, we have, year by year from that date, increased our production. Of about \$26,000,000 worth of cheese imported into England last year, it may be fairly said that Canada furnished, in round numbers, \$17,000,000 worth, out of which sum Quebec figures for \$8,000,000.

Seeing how great was the profit made by Canada and the States out of dairying, other countries set to work on the same lines a few years ago: Australia and New Zealand, to wit. And, now, from all these causes the English market is glutted with cheese, and this is the true reason why the price of that comestible is so low to-day.

The table on page 185 is a fair summary of the state of the trade in Canadian cheese:

The problem that now awaits solution is, how to make dairying pay in spite of the fall in prices; for it is, in truth, the only part of farming that returns any real profit. We have plenty of prospective industries that our governments are busy in promoting, such as the exportation of beef, mutton, poultry and fruit, assisted by a whole system of cold-storage and refrigerating compartments; but all this is still under study, and the real business, the most important of all for us farmers of the province of Quebec, is, and will be for many a day, let us hope, the dairy industry.

The gradual fall in the price of our cheese on the English market being granted, how are we to set about still getting a fair profit from our milk in that form. Several means may be tried. One of the first that occurs is the *decrease of the cost of the production of milk.*

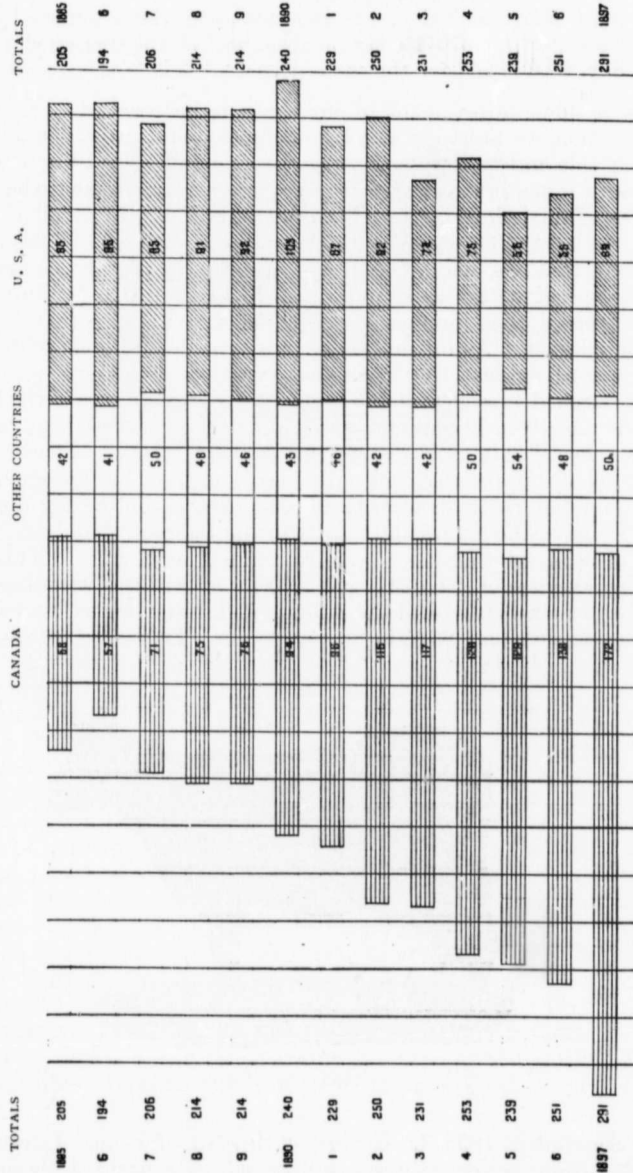
I.

This decrease of cost may be obtained, in the first place, by *the improvement* of our cows, as regards the quality of milk they yield at present.

I do not exaggerate when I say that not more than one-third of the cows of the province are good milkers. And yet, how many out of this third do not give as much milk as they ought to give from bad food and bad lodging. It is then especially on that side of our dairy business that we must look. Let us reflect for a moment on the effect that only a slight improvement would have on the general profits of the industry.

From the last census, 1891, it appears there are 549,644 milch cows in the province. Let us suppose that science, or the improvement of the breeds, should

ENGLISH IMPORTATIONS OF CHEESE.
Millions of Lbs.



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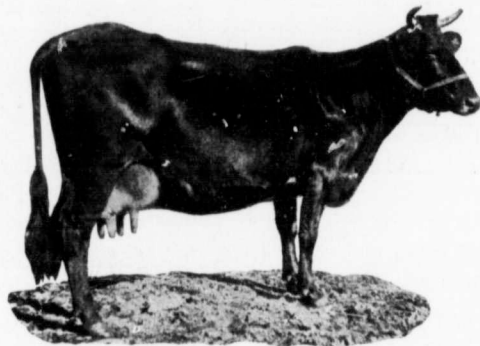
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increase the yield of each cow by a quart a day, from May to October; at three cents a quart this would increase the income of the province by \$16,486.00 a day, that is \$1,824,753 for the six months; and if the increased yield were two quarts a day, \$3,649,506 for the same period!

How is this improvement of our herds to be reached? In order to reply to this question, we must get at a true definition of a profitable milch cow. The most profitable milch cow, is the cow, never mind about her breed, that gives every year, for the longest time, the greatest yield of the richest milk at the least cost. This definition contains the words: "Never mind of what breed;" does this mean that no regard is to be paid to the breed of cows one selects for a herd, but that we may go happy-go-lucky at it? By no means. On the contrary, we had better look and see if there is not to be found here in our province a breed that supplies more generally than any other breed the above defined milch cow. As for me, the search is made and done with; and, without saying a word against the Holsteins, Ayrshires, Gurnseys or Jerseys, I have long ago satisfied myself that the best cow for our farmers is the little Canadian cow. She has given her proofs, and I do not need to repeat the tale of her good qualities. I will only quote two facts, to show how she deserves appreciation, and how she is appreciated not only here, but also by foreigners. In 1895 a herd of Canadian cattle, bought by Messrs. Charles Colburn & Son, of Portlandville, N.Y., gave the following results to the Babcock test: one, 9.8 of fat per 100 lbs. of milk, another 8.6%, a third and a fourth, 8.2%. This, for the four cows, is an average of 8.6 of fat per 100 lbs. of milk, a very high test indeed. Mr. Colburn took his herd to the Atlanta Exhibition last October, and brought back three medals and \$625 in money prizes. This is a portrait of one of the cows.



THE COLBURN COW.

In September, 1895, Lt. Governor Howlan, of Prince Edward Island, had a fine Canadian heifer eighteen months old. He wanted to show her at the Charlottetown Exhibition, held at the latter end of September, but it having been represented to him that there was no class opened for her breed, he entered

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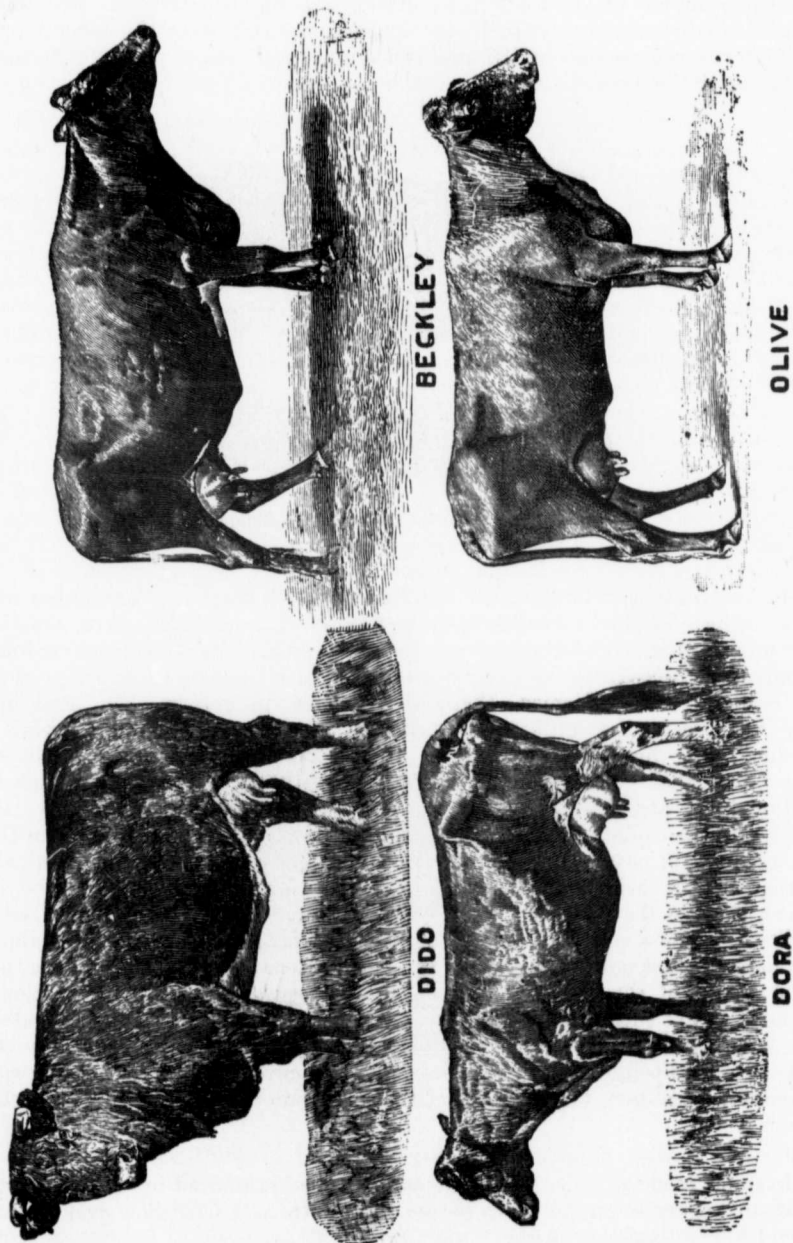
her, by permission of the committee, among the English Jerseys. She suited the pure-bred Jersey very well in appearance, and won the second prize. This heifer is represented in the annexed engraving, from a photograph taken the day after the competition.



LT.-GOVERNOR HOWLAN'S CANADIAN HEIFER.

If the question of breed must not be neglected, there is another that must not be neglected either, and that is the individual fitness of the cow as a milker. Because a cow is an "Ayrshire," a "Jersey," a "Canadian," it does not follow that she must necessarily be a good milker. In all breeds there are good and bad milkers. The farmer, then, that desires to reform his herd must study with care the milking propensities of the cows that he wishes to introduce into his herd to reform it, and he must bear in mind two things: first, that the cow gives a good quantity of rich milk, and that her lactation lasts at least ten months out of the twelve; and secondly, that she inherits these qualities from her ancestors. It may accidentally happen that, from a caprice of nature, a good cow is the offspring of a bad one. But, as a general rule, the heifers of such a cow as the former produces will be bad milkers, because the character of the good milker, their dam, is not fixed by heredity. Such a cow is not a purchase for a farmer who aims at establishing a herd of good milkers, to perpetuate them afterwards, and to improve them by the rearing of the heifers that come from the cows that are the formation of the herd. What such a man needs is cows that for three or four generations come from good milkers, from mother to daughter. It is here we see the great share that pedigree has in the breeding of thoroughbred stock. The more marked the hereditary type, the easier the formation of good herds of first-class milkers.

In order to show you the enormous difference presented by different types of cows, in regard to the profit to be got out of them, I will show you the four cows, "Dido," "Becky," "Aline," and "Dora."

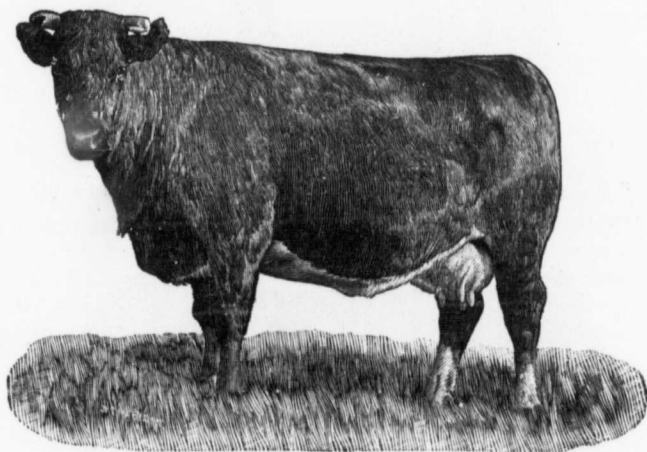


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These cows belong to the Minnesota Experiment-Station, the herd of which establishment has been for several years subjected to a series of experiments of a most interesting nature, with a view to establish the cost of a pound of butter. These tests, etc., were under the management of Prof. Haecker, and to his kindness we are indebted for the engravings of these four cows and of two others to be mentioned hereafter. The professor, for experiment purposes, divided his herd into four groups, each of which is represented on the slide you have before you. "Dido" is the type of the butcher's beast; "Becky" of the general purpose cow, with a tendency to make meat; "Olive" of the common country cow; and "Dora" of the good milkers.

The first of these cows, "Dido," is a shorthorn, weighing 1,250 pounds. Her butter cost $15\frac{3}{4}$ cents a pound, the average of her group being 15 cents a pound.



DIDO

The second, "Becky," is a half-bred Jersey, weight, 950 lbs; her butter came to $12\frac{1}{3}$ cents a pound, that of her group to 13 cents

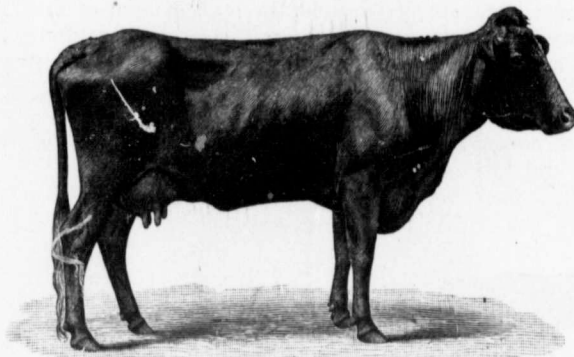


BECKY

OLIVE

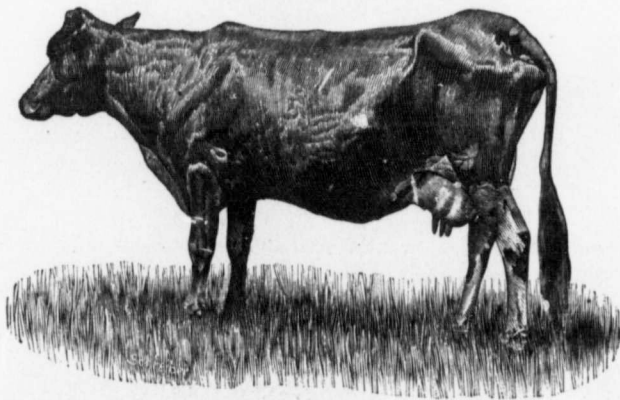
DORA

The third, "Olive," a half-bred Guernsey, 800 pounds in weight, gave butter costing $11\frac{1}{2}$ cents; her group cost $12\frac{1}{2}$ cents.



OLIVE.

"Dora," the fourth, is a Jersey of 875 lbs. The group's butter, 10 cents Dora's, $9\frac{1}{2}$ cents.



DORA.

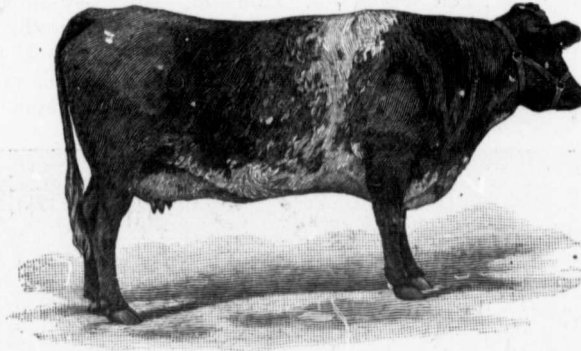
These figures are enough to show how important it is for the farmer to keep cows of good milk-type, able to yield good milk at a reasonable cost for food. Let us suppose then, for a moment, the case of a farmer whose cows are all of the first type; his dairy-work would be carried on at a loss with butter at the price it is at present. Contrariwise, if we can find a farmer whose cows are all of the latter type, we can assert without fear that his dairy work would result in paying him well.

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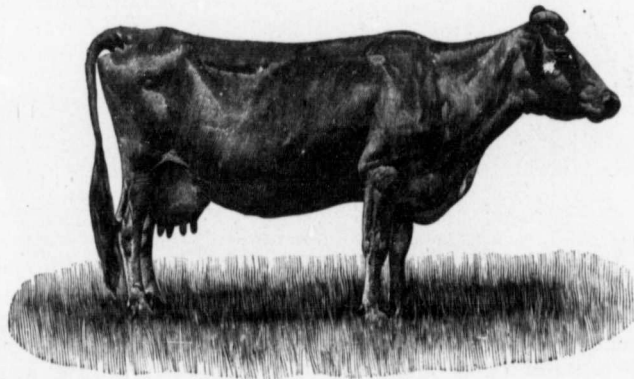
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Still more clearly is this shown by a second and more recent experiment by Professor Haecker, to whom we are indebted for the engravings of the two cows, "Ethel" and "Houston," with adjoining diagrams.



ETHEL.

Ethel weighs 1,200 lbs., a grade Durham. She was classified by Mr. Haecker at one time among the groups of butcher's cows, at another among the general purpose cows. In the experiment we are now considering, she calved December the 20th. On the 1st January, a few days after calving, her butter cost for food the same as Houston's cost.



HOUSTON.

Now, the latter formed part of the same group as Dora, and was always the best of the group, and in the former experiment produced butter at a cost of only 9 cents a pound; but, since that she has done much better. Houston is a cross

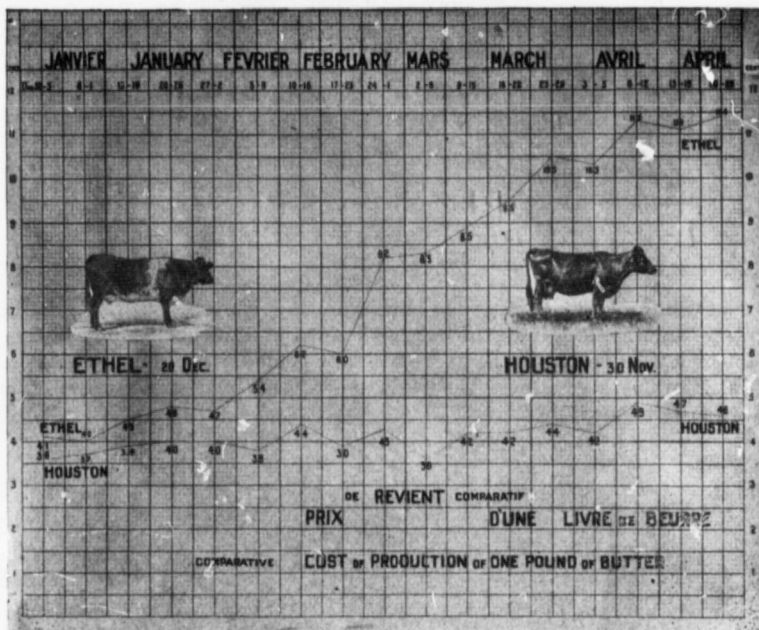
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between Guernsey and Jersey, and weighs 925 lbs. Calving, in the second experiment, on the 30th November, on the 1st January she was giving butter at 4 cents a pound, just the same cost as "Ethel's" butter.

Just as the diagram before you shows, the cows were kept under observation up to May 1st; and while the "Houston," Guernsey-Jersey, butter fell during three weeks to less than 4 cents a pound, as cost of production, and continued invariably below 5 cents all the experiment-time, "Ethel," the Shorthorn cross, gradually increased in the food-cost of her butter, week after week, till, four months after calving, it reached hard upon 12 cents a pound.



In examining carefully these two cows, as we did the other four, are not you, as well as I, struck with the immense difference between the two types, or the better to state the point, the difference between *the butcher's cow*, "Dido," and *the dairy cow*, "Dora," between a bad milker like "Ethel," and a good milker like "Houston"? This leads me to speak to you about the necessity of a dairy farmer thoroughly understanding the points that characterises a good milker, so as to be able to select a good milker when he has to buy one. If he is ignorant of these points, and has to buy a cow at a time when she is dry or nearly so, he cannot judge of her capabilities by seeing her milk and weighing the yield, but must trust to the seller's good faith, and he, the seller, having to estimate the value of the animal on sale, will be always inclined, even almost unintentionally, to exaggerate that value. On the contrary, he who is well drilled in the knowledge of the points of a good milker will have an infallible guide to go by.

It is therefore we will study the best milch-c

There, then, Jones, of Brocky and that is sufficient perfection of bui

Now, see "I D. F. Wilbur, On the World's Dair



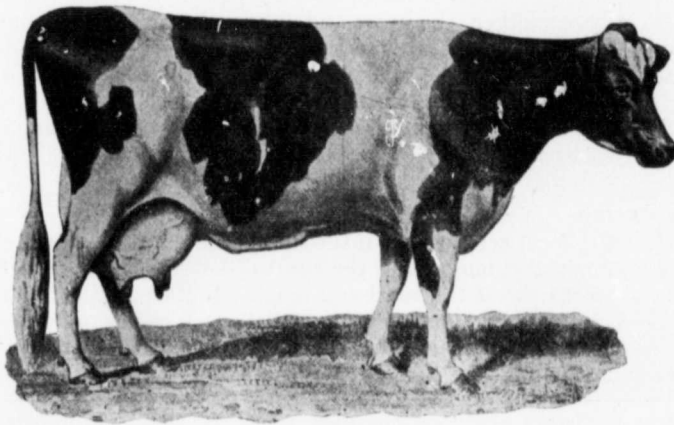
It is therefore useful to dairymen to know the points of a good milker, so we will study them together, by examining attentively the portraits of two of the best milch-cows of this continent.



MASSENA.

There, then, is "Massena," a Jersey from the well-known herd of Mrs. Jones, of Brockville, Ont. She has produced 640 pounds of butter in a year, and that is sufficient praise in itself. She presents within seven points the perfection of build and signs of a good milker.

Now, see "Pauline Paul," the Holstein (2199 H.H.B.), the property of Mr. D. F. Wilbur, Oneonta, N.Y. This cow, known in the States as "The Queen of the World's Dairies," has given, in 365 consecutive days, 1,154 lbs. of butter!



PAULINE PAUL.

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Studying the two almost perfect types, it will be easy enough to detect all the exterior points that distinguish a good milch cow. (1)

Head—The head of a good milker is delicate, feminine in appearance, lean, the horns fine, not only at the points, but from the spot where they are attached to the head.

Neck—The neck is slender and loose.

Shoulders—The shoulders are cut-away in front, at the place where they unite with the neck.

Dewlap—This fold of skin and flesh which, in the ox and the larger type of butcher's cow, falls from the throat to between the fore-legs, is almost entirely absent in a good milker.

As regards the "points" of the head, the neck, the shoulders and the dewlap, compare "Dido" with "Dora" on the one side, "Ethel" and "Massena" on the other.

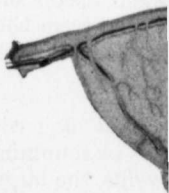
Brisket—It is customary to compare the outward form of a good milker to a soda-water bottle; and, indeed, when we consider a cow like Massena, looked at from the side, we see at once that her fore-quarters are much less developed, much slighter than her hind-quarters. As soon as the line separating the shoulders from the cavity of the brisket is passed, the carcass is seen to increase in size. A good milker's brisket is very full; or has, as the saying is, and very true it is, a carcass like a barrel; and when the physiology of the production of milk is thoroughly understood, it is easy to see how it must be in a good milker. Lots of milk presupposes lots of blood, and, consequently, well-developed blood-vessels. In a good milker, the heart and lungs, that, with veins and arteries, constitute the circulating apparatus of the blood, are very much developed, and as they are enclosed within the brisket, insist upon the last possessing a large cavity, a spacious chamber for their reception. Hence, that full carcass, or barrel, which we always find in a good milker. (Look at "Massena" again, and compare her with "Olive.")

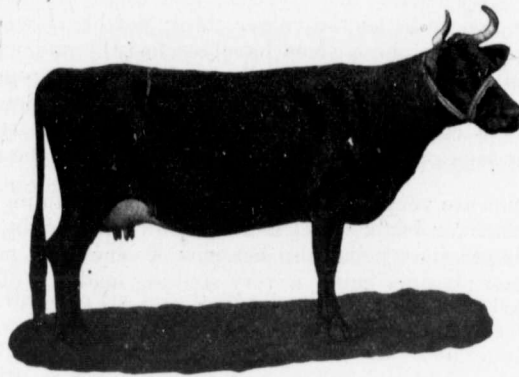
Ribs—Another of the signs distinguishing a good milker is the space between the ribs; for it is clear that if the frame of the brisket is well developed, as we said just now, this must cause the ribs to be spread wide apart to form a larger cavity for the use of the heart and lungs. If we pass the hand over the ribs of a good milker, we perceive at once that muscles occupy a pretty large space between each rib, and the thing is clearly perceptible, even to the eye, in a cow that is not too fat, like the one in this portrait.

(1) While M. Chapais was explaining these points, M. Castel was displaying on the screen, as they were named, the cows mentioned by the lecturer.

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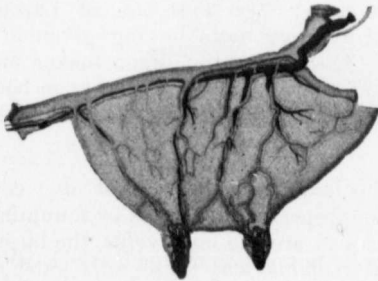




DEMERS' COW.

She is a Canadian cow, the property of M. Demers, of St. Eustache, county of Deux-Montagnes. This cow won the first prize and championship of her class at the Montreal Exhibition of 1896.

Milk veins—This powerful circulation of the blood, shown in a good milker by the development of her barrel, is still more evidenced by the size of what are called the milk-veins. These are, as everyone knows, two large veins, that, extending themselves from under the belly of the cow, appear there like two thick cords running under the skin, and more or less developed according



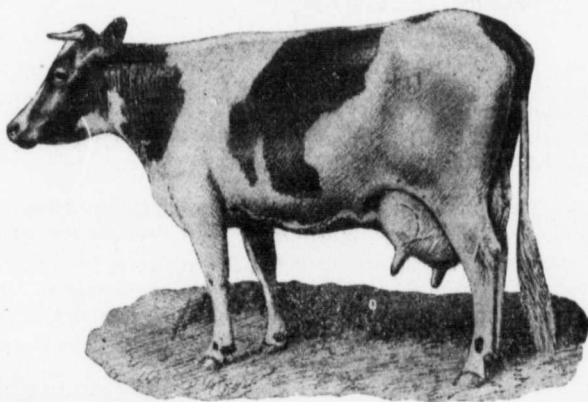
UDDER.



MAMMARY GLAND.

to the milking propensities of the cow, and these are lost in the udder, carrying thither, not milk, as the vulgar think, but blood, which is there converted into milk. When these veins have reached the udder they branch out into several smaller veins which distribute the blood through the different parts of it. The whole is clearly depicted in the two annexed cuts, which represent, the one a cow's udder whence the skin has been stripped, the other, one quarter of the same opened in such a manner as to show the mammary gland.

The milk-veins are very prominent in Massena and Pauline Paul, (*v. supra*) and in "De Kol 2nd Pauline" (*v. cut*), and this cow you ought to see, not only on account of this peculiarity, but also as a cow of very great powers of producing milk and butter; besides being a very striking instance of the transmissibility of hereditary gifts.



DE KOL 2ND PAULINE.

"De Kol 2nd Pauline" belongs to Messrs. Henry Stevens & Son, of Lacona N.Y. She holds the official record of four-year-old cows, having given in a week 24-148 lbs. of butter at 80% of fat. This record is by no means surprising when one recollects that "De Kol 2nd Pauline" is descended from both "Pauline Paul," whom you saw just now (*v. p. 193*) and from "De Kol 2nd," whom you will see presently (*v. p. 198*).

Milk gates or fountains.—The milk-veins issue from the brisket of a cow through two orifices which are called, again improperly, milk gates or fountains. It is evident that the larger and better developed are the milk veins, the larger the orifices through which they flow. This explains why these milk gates or doors, when large, are a good prognostication of the milking tendency of the cow.

Tail.—A good milker's tail is always slender, long and supple (*v. Pauline Paul and others*). In the butcher's cow, formed as the tail is, firm, very stout,

short bones (vertebrae) and stiff; the vertebrae are slender and supple in general have a curve below the point of the bones in the front to utilize her food rather than for the

Legs.—In a good cow, some, the teats are

Udder.—Not so since it is the laborer should, first of all off under the bell which should naturally full. The quarters teats are placed very

Here is a Guernsey owner Mr. Chas. S.

at the Columbian being dried off for in her udder surplus is the only deficiency usually lost 7 months the neck being a

short bones (vertèbres), firmly attached the one to the other, it is short, stout and stiff; the vertèbræ of the milker are the very reverse of the others, being long, slender and supple. As to the length, it has been ascertained that good milkers in general have a tail, the last vertebra of which hangs $1\frac{1}{2}$ inches to 2 inches below the point of the hock. This slenderness of bone and tail, as well as of all the bones in the frame of the good milker, is due to a temperament that leads her to utilize her food principally for the production of loose and watery tissue rather than for the formation of coarse bone.

Legs.—In a good milker, the legs are slender and lean, and so short that, in some, the teats are at their extremity not more than ten inches from the ground.

Udder.—Nothing in the cow better deserves our attention than the udder, since it is the laboratory in which the milk is made; in a good milker, the udder should, first of all, be large, well developed, elongating itself and rounding itself off under the belly in a fine curved line, and rising high between the thighs, which should naturally be wide apart, to afford more room for the udder when full. The quarters, too, of such an udder are well developed, and therefore the teats are placed well apart.

Here is a Guernsey, "Fantine the 2nd" (3,730 A. G. H. B.) entered by her owner Mr. Chas. Solveson, of Nashotah, Wis., in the competition of dairy-cows



FANTINE 2ND.

at the Columbian Exposition at Chicago (600 lbs. of butter in a year, including being dried off for 5 weeks before calving). A very proper cow in general, but in her udder surprisingly good. Massena's udder is not so good in front; but it is the only deficient point in that superb cow (v. page 193). In competitions she usually lost 7 marks out of the 100, 5 of which were for a faulty udder, 1 for the neck being a little short, 1 for the line of the back being a little sunken.



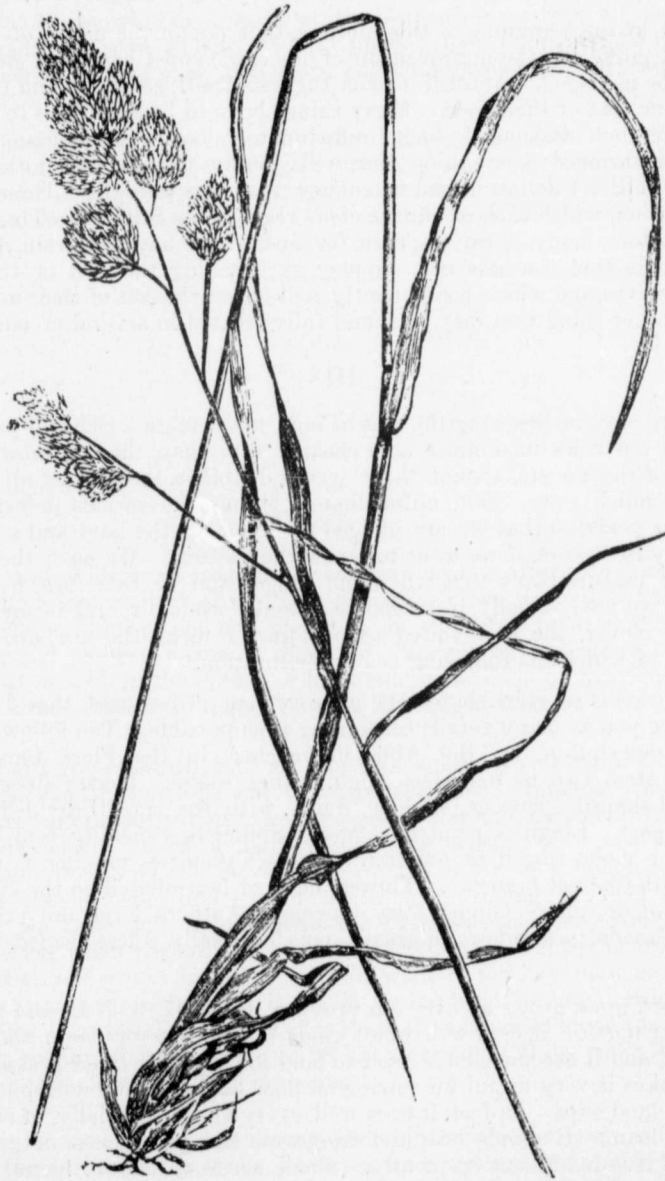
DE KOL 2ND.

We have here a view of the udder of "De Kol 2nd," taken from the rear ; it is perfect of its kind. The official record is $83\frac{1}{4}$ lbs. of milk in one day ; $536\frac{3}{4}$ lbs. in 7 days, during which she gave 26.57 lbs. of butter. She is the dam of De Kol 2nd's Pauline, whom we saw in the engraving, and also of De Kol 2nd's Queen, record 28 lbs. 7 oz. of butter in 7 days. Does not this tell in favor of the influence of heredity ?

The udder of a good milker when emptied should be flabby and in folds ; soft as a rag, to use a common phrase. Big udders are sometimes met with that remain big when emptied ; these are what are termed fleshy udders, and never belong to a good cow ; their bulk is due to an abundance of flesh, that leaves but little room for milk.

Secondary Indications.—There are several other signs of a good milker that one meets with in the same animal as the others I have just mentioned. Such are a fawn-color round the eyes, the vulva, the interior of the ears, and between the thighs ; the existence of tiny yellow pellicles inside the ears and on the udder ; the suppleness of the skin and the fineness of the hair on the udder ; the marks called the "escutcheon," on that part which the believers in this sign call the "mirror." I call these signs secondary, because they only act as corroboratives of the indicia given by those I have mentioned.

By a little study of the signs of good milkers on animals of the best class, and by accustoming oneself to examine every cow one sees from the point of view of her signs as a milker, the eye becomes trained, and in a very short time one becomes a capital judge. And this is what every farmer interested in dairying should aim at, if he desires to get together a first-rate dairy-herd of cows.



DACTYLIS GLOMERATA—ORCHARD GRASS.

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II.

I said, at the beginning of this address, that one of the means of lessening the cost of milk, was the improvement of our cows, and I have just shown how this is to be managed. Another means suggests itself, secondly, and that is to diminish the cost of their food. Many things have to be studied as to economical cow feeding. Ensilage, which, unfortunately, is not yet common enough among our farmers, is one thing that will greatly tend to lessen the cost of producing milk. I do not intend to enlarge upon this to-night. The reports of our association, which each of our members receive, are full of it. The substitution of potatoes, mangels, carrots, corn, for most of the hay and grain, is another of the things that farmers may employ in lessening the cost of the ration his cow receives, and which, consequently, will lessen the cost of their milk-yield. This is another thing that may be found fully treated in several of our reports.

III.

A third way of lessening the cost of milk is to create a rich and productive pasture for our cows in summer, at a cheaper rate than that we now provide by means of the clovers, though the clover is doubtless the best of all pasture-plants for milch cows. But, unfortunately, it has the serious defect of only lasting two years, so that we are obliged to break up the land and sow clover again every two years, if we want to renew the pasture. We have then to find some other pasture-plant that will stand longer and be, therefore, less costly. This plant we have already, if we choose to make use of it, and, in my opinion, it is, after clover, the best suited to pasture. I mean the Orchard-grass or Cocksfoot, of which the following is a representation.

This grass is so valuable for the improvement of pastures, that I think it well to give you as many details concerning it as possible. The following is its botanical description, by the Abbé Provencher, in the *Flore Canadienne*: Perennial, stem two to four feet high, rather rough. Leaves linear, plane, rather keel-shaped, glaucous, slightly rough, with the sheath divided only in the upper part. Lingules pointed, jagged. Spikelets generally four-flowered, greenish or violet-tinged, in unilateral compact glomera, making a unilateral panicle, with distinct branches. Flowers more or less ciliated on the keel of the lower glume or husk. Glumes very unequal. Anthers large and yellow. Is found in Canada, in meadows, in grassy spots, especially where shaded. Flowers in June.

Orchard grass grows all over our province, up to 47° 3' N.L., and probably still further north. It does well in all kinds of soil, dry or damp, though not if swampy, and it accommodates itself to land too poor for other grasses. This quality makes it very useful for sowing on poor land and on dry sloping banks, to prevent land-slips. In fact, it does well everywhere, especially, of course, on good clay loam. It stands heat and frost well, and yields lots of grass, particularly if it is fed or cut frequently. Shade seems to suit it; hence, its name of orchard-grass. Must not be sown with timothy, as it is too hard for feed by the time timothy is fit to cut. Nothing can be better for permanent pasture,

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prolong the dura
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because it is perennial. Sown with common red clover, or the small red, it becomes fit for mowing or grazing at the same time as they do, and springs again rapidly as soon as cut. It lasts much longer than common red clover, which never lasts more than two years, and all animals like it excessively in a pasture.

To show the nutritive value of orchard grass, I give here a short comparative table of its analysis, both green and as hay, with that of clover as a comparison. It shows the quantity of water, salts, protein, cellulose, and of other non-nitrogenous matters, and of fat, contained in 100 lbs.:

	Orchard-Grass	Red-Clover	Orchard-Grass	Red-Clover
	Green.	Green.	Dry.	Dry.
Water.....	73.0	70.8	9.8	15.3
Salts.....	2.0	2.1	6.0	6.2
Protein.....	2.6	4.4	8.1	12.3
Cellulose.....	8.2	8.1	32.4	24.8
Other non-ni. matters.....	13.3	13.5	41.0	38.1
Fat.....	0.9	1.1	2.6	3.3

The seed of Orchard-grass sticks long to the stem after it is ripe, and there need be no hurry to harvest it. It is something like a small abortive oat, is long in shape, blunt at one end, and with an elongated point at the other; $2\frac{1}{2}$ lines long and one-half a line in diameter. Very light; not above 14 lbs. to a bushel. It is sold in the glume or husk, and is whitish or grayish in colour. Out of a hundred seeds, in a good sample, fifty ought to grow.

Orchard-grass is sown, like all other seeds here, with a grain crop; if with clover seed, the two *must* be put in separately, thus: Suppose your land is in good heart and properly fitted, sow the grain first and harrow it in well, and then follow with 8 lbs. of orchard-grass to the arpent; give one turn of the harrow, and then sow the clover mixture of 10 lbs. of common red, or small clover, 4 lbs. of alsike, and 1 lb. of white clover, rolling the field afterwards. You will not see much orchard-grass the first year, as it only runs to seed the second season, when you will see a quantity of tufts all over the piece, as it tillers a great deal and grows in tufts. If you want it for hay, mow as soon as the spikelets appear, never later, as it would be too hard for hay. It is not advisable to sow it in meadows, but if it is desired to be sown alone for hay, it will require a seeding of from 25 lbs. to 28 lbs. an arpent (30 lbs. to 33 lbs. an acre). Hay from this plant loses 59% in drying.

In order to show the vast saving made by the use of a grass of this kind to prolong the duration of pastures, let us see for a moment, how much the renewal of a clover pasture of five acres every two years would cost. For a good pasture, 10 lbs. of small red, 4 lbs. of alsike, and 1 lb. of white clover are needed.

Calculating these at ordinary market prices, say ten cents for the red and the alsike and sixteen cents for the white, we have the following statement :

10 lbs. of small red.....	\$ 1 00	
4 lbs. alsike	40	
1 lb. white	16	
	<u> </u>	
	\$ 1 56	
	× 5	
For 5 arpents		\$ 7 80

Labor would cost :

1 ploughing.....	\$ 2 00	
Sowing, harrowing and rolling.....	1 00	
	<u> </u>	
	\$ 3 00	
	× 5	
For 5 arpents.....	\$15 00	\$15 00
		<u> </u>
		\$22 80

So the cost of 5 arpents of pasture, every year fresh sown down with clover alone would be \$22.50.

Whereas, with a mixture of orchard-grass and the clovers we should have a pasture lasting 4 years on ordinary and 6 years on very good land.

Cost of laying down pasture for 4 to 6 years :

10 lbs. small red	\$ 1 00	
4 lbs. alsike.....	40	
1 lb. white.....	16	
8 lbs. orchard grass.....	1 44	
	<u> </u>	
	\$ 3 00	
	× 5	
For 5 arpents.....		\$15 00

For labor :

1 ploughing.....	\$ 2 00	
Sowing, harrowing, rolling	1 25	
	<u> </u>	
	\$ 3 25	
	× 5	
For 5 arpents.....	\$16 25	\$16 25

So 5 arpents of land cost every 4 or 6 years, with clover and orchard grass mixed.....	\$31 25
And, as during 4 years, there would be required two seedings with clover, we get the following figures for the four years.....	\$44 60
Pasture with mixture of clover and orchard grass.....	<u>31 25</u>
Balance to good.....	\$14 35

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But were we dealing with first-rate soil, when the pasture will live out 6 years instead of 2, then the balance would be larger still.

Cost of pasture, with clover alone for 5 acres, 6 years or 3 seedings	\$68 40
Cost of mixture for 5 acres, 6 years.....	31 25
	<hr/>
Balance to good.....	\$37 25

As may be easily seen, this question of the economizing of the cost of the production of milk deserves to be studied in every point. In it there is no detail too trivial for the practical farmer who aims at getting from dairying the maximum of profit at the least outlay. This is the only way to contend with success against the competition that is causing the progressive fall of the profits of the dairy industry.

REPORT OF THE AUDITORS.

M. J. de L. Taché read the following report:

NICOLET, December 2nd, 1897.

We, the undersigned, appointed to verify the accounts of the Secretary-Treasurer, declare that we are obliged to content ourselves with submitting to the Convention the balance-sheet of the Association as made out by the Secretary-Treasurer, and for the following reason: We have not sufficient time at our disposal to make such a verification of the accounts as ought to be produced in such a case.

We recommend, besides, the Board of Directors in future to have a proper verification of the accounts made out by expert accountants paid for the purpose.

(Signed) J. C. CHAPAIS, } Auditors.
 J. DE L. TACHÉ, }

ASSOCIATION:
 Printing
 Stationer
 Traveller
 Convent

Secretary
 Purchase
 Extra ex

SYNDICATES:
 Salaries.
 Traveller

SCHOOL:
 Annual e
 Winter v
 Summer
 Expense
 Deficit, 1

RECEIPTS AND EXPENDITURE OF THE ASSOCIATION

IN THE YEAR 1897.

RECEIPTS:

ASSOCIATION:		
Balance 1896.....	\$ 160 40	
Subscriptions received.....	982 00	
Sale of reports, etc.....	29 50	
Sundries.....	4 74	
Government grant.....	2,000 00	
		\$3,176 64
SYNDICATES:		
Balance 1896.....	\$ 407 10	
Balance of grant, 1896-97.....	600 00	
Government grant, 1897-98 (on account).....	1,716 25	
		2,723 35
SCHOOL:		
Balance, grant 1896-97.....	679 34	
Working—Winter 1896-97:		
Dominion grant.....	\$3,000 00	
Provincial grant.....	4,170 42	
Sales of butter.....	5,627 96	
Sales of cheese.....	1,439 18	
Sundries.....	21 22	
	14,258 78	
Working, summer 1897, making sundries...	399 51	
Repayment school 1897-98.....	218 31	
		15,555 94
		\$21,455 93
Balance due to Secretary.....	34 62	
		\$21,490 55

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EXPENDITURE.

ASSOCIATION :		
Printing.....	\$ 922 98	
Stationery, etc.....	418 68	
Travelling expenses—directors.....	305 89	
Convention expenses.....	287 67	
Secretary and assistant.....	940 00	
Purchase of books and papers.....	316 52	
Extra expenses.....	132 52	
	<hr/>	\$3,324 26
SYNDICATES :		
Salaries.....	\$ 1,020 00	
Travelling expenses, etc.....	1,223 78	
	<hr/>	2,243 78
SCHOOL :		
Annual expenses, 1896-97.....	\$ 679 24	
Winter working, 1896-97.....	14,257 70	
Summer working, 1897.....	299 51	
Expenses, 1897-98.....	220 34	
Deficit, 1898.....	365 62	
	<hr/>	15,922 51
Total expenditure.....		\$21,490 55

RECAPITULATION.

	ASSOCIATION	SYNDICATES	SCHOOL
Receipts.....	\$3,176 64	\$2,723 35	\$15,555 94
Repayment by the Syndicate to the Association of pre- vious advance for account..	479 57	479 57	
	<hr/>	<hr/>	<hr/>
Expenditure.....	\$3,656 21	\$2,243 78	\$15,555 94
	3,324 26	2,243 78	15,922 51
	<hr/>	<hr/>	<hr/>
Surplus.....	\$331 95	Deficit	\$366 57
			331 95
			<hr/>
Balance due to the Secretary.....			\$34 62

Saint-Hyacinthe, February 15th, 1898.

I, the undersigned, hereby certify that I have examined the above accounts, and upon comparing them with the entries and the receipts, etc., I find them perfectly correct. I would recommend that in future those books be kept by double entry.

W. W. PICKETT.

SUPPLEMENT TO THE SIXTEENTH REPORT OF THE DAIRYMEN'S ASSOCIATION.

THE READING OF THE FAT IN SKIM MILK, BUTTER MILK
AND WHEY, ACCORDING TO

PROFESSOR BARRINGTON.

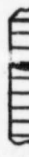
The Babcock test phial is so constructed that each division of the scale, for the measurement of fat, represents two-tenths of one per cent. When testing a sample of milk containing less than that quantity of fat, the results, as read by different operators are expressed in different ways: as one-tenth; a trace of one-tenth; or 1, 2, 4, or 5 hundredths of one per cent. With a view to showing, as exactly as possible by a drawing of the percentage represented in the neck of the phial, a few globules of fat, when the skim milk contains a minimum of fatty matter, the following observations have been made: A few samples of skim milk were tested by both the Babcock and by gravimetric analysis (by which latter process the fat is extracted by ether and weighed in the philosophical scales, *balance de précision*); these samples did not contain fat enough to completely cover the surface of the fluid in the neck of the phial. Care was taken only to select samples containing the smallest possible quantities of fat, such samples, indeed, as would be commonly considered to be absolutely fatless, but which in our experience, we find to contain nearly one-tenth of 1 per cent. The fact that in the test no fat is found in such samples is doubtless due to some error of the manipulator in his conduct of the test.

After each test, a drawing was made representing the shape and appearance of the globules of fat in the neck of the phial. The sample was then sent to the chemist, and the percentage of fat determined by the usual gravimetric method.

VIEWED FROM ABOVE.

.2

VIEWED FROM THE SIDE.

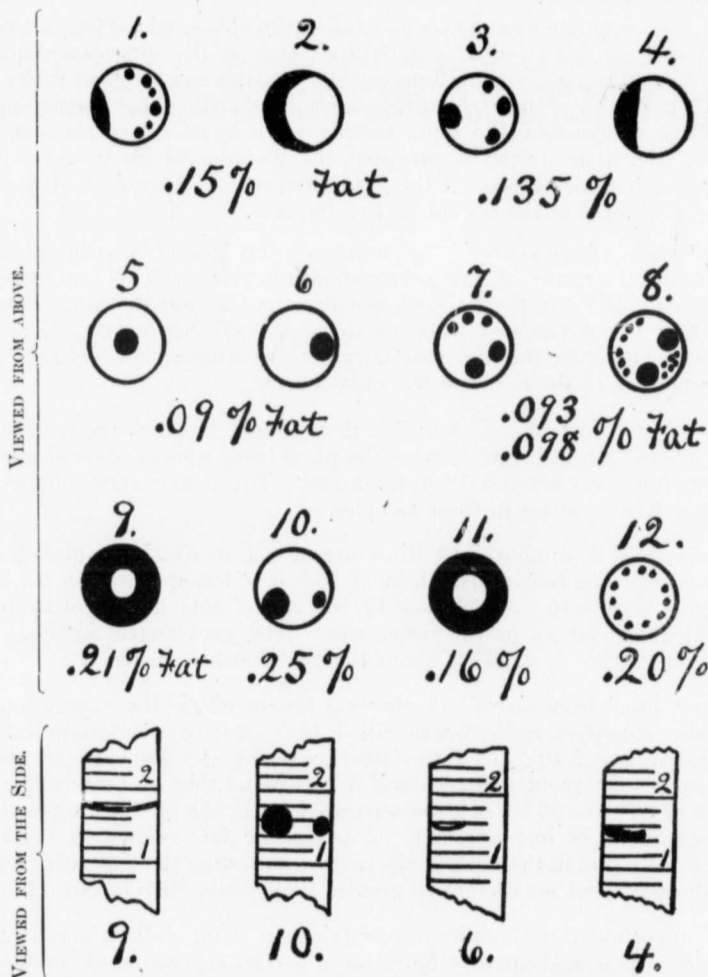


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The above represents, as seen from the side and from above, globules of fat in the neck of the Babcock phial, when the tested skim milk contains the minimum of fat. The dots and rings represent the fat; the figures above the rings represent the numbers of the series of tests; and those below the percentage of fat shown by the gravimetric analysis. The four diagrams of the last row at the bottom of the cut, represent a side view of the fat in the neck of the Babcock phial.

Nos. 1 to 4 represent four tests of the same sample of skim milk. The percentages of fat inscribed immediately below these diagrams show the results of the gravimetric analysis of the same samples.

The following is a description in detail of the above cut: The "viewed from above," 1 to 4, are drawn after four Babcock tests of the same samples of skim milk; the duplicate gravimetric analysis of the same sample gave 0.15 per cent and 0.135 per cent. of fat; the difference not exceeding that usually met with between two analyses of the same sample made by an expert chemist. If the three very tiny little drops be excepted, the globules of fat in these Babcock tests, represented one division of the graduated scales, or were two-tenths thick, as is shown in fig. 4 at the bottom of the diagram.

The "viewed from above," 5 to 8, represent the tests of two different samples of skim milk; the result of the gravimetric analysis was 0.09 and 0.098 of fat. The drops of milk (?) in the Babcock phial were of almost the same diameter as those of Nos. 1 to 4, but they were not so thick. As No. 6 shows (side view at the bottom of the cut), the fat was only a thin pellicle that did not entirely cover the surface of the liquid in the phial's neck.

The "viewed from above," 8 to 11, show proofs, in which the pellicles of fat were larger, the liquid in the neck of the phial being almost covered, and when the layer of fat was about 1-10 in thickness. The gravimetric analysis gave 0.21 % and 0.16 % of fat in these samples.

The "viewed from above" 10, illustrates a test, in which the globules in the phial's neck were no larger than those of Nos. 5, 6, but appeared in the shape of a sphere and were 4-10 % thick (see 10, last row of cut), instead of looking like a thin pellicule of fat, as in the other case. The gravimetric analysis in the sample showed 0.25 % of fat, or about thrice as much as in No. 5.

The "viewed from above" 12, shows a test in which the separation of the fat was almost perfect, as there was only 1-10 % of it, or even less, in the sample. The analysis gave 2-10 % of fat. Other tests by the Babcock of the same sample were subsequently made, and it was found that by using a third more acid (17.5 cc + 5, 73 = 23.33. cc.), the separated fat in the phial's neck was barely equal to one-tenth of one per cent. A pellicle of fat completely covered the surface of the liquid in the neck of the bottle; on testing the same with a surplus of acid, the separated fat was much greater in quantity than in No. 12.

This experiment, with many others tried on skim milk, showed that the addition of surplus acid causes a much more perfect separation of the fat. If it is desired to get an exact test of skim milk by the Babcock, great attention must be paid to the following details:

- 1—The cleanliness of the bottles.
- 2—To use about $\frac{1}{3}$ more acid than usual.
- 3—The apparatus must be driven up to its proper speed.
- 4—It must be worked for 5 minutes as hard as it will go.
- 5—Minutely scrupulous attention to the thickness of the fatty globules, no less than to their surface as seen from above.

As there are of one per cent. of the loss of fat between phials, for testing that purpose.

As there are but few samples of skim milk that contain less than a tenth of one per cent. of fat, it is not practicable, with the milk-test bottles, to get at the loss of fat below from 0.05 to 1 per cent. ; but the trade has for sale sample phials, for testing whey and skim milk, and it is wise to make use of them for that purpose.

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LIST
OF THE PROPRIETORS OR MANAGERS OF THE CREAMERIES AND
CHEESERIES IN THE PROVINCE OF
QUEBEC, 1898.

ARGENTEUIL.			Creameries.	Cheeseries.	Combined Cream. & Ch.
MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.			
Arundel	Rév. Père Bouchet	Huberdeau	1		
"	Wm. D. Graham, jr.	Arundel		1	
Chatham	Thos. Ross & Son	Hawkesbury, Ont.		5	
"	Amédée Leroux	St-Eugène, Ont.		3	
"	W. J. Morrow	St-Andrew's East		1	
"	Hormidas Pilon	St-Philippe d'Argenteuil	1		1
"	Janvier St-Onge	Mabel		1	
"	Xavier Desforges	Greces Point		1	
"	Alfred Sicotte	Pine Hill		1	
"	Cheese Factory Co	Brownsburg		1	
Gore	Joseph Cyr	St-Canut, comté Deux-Montagnes.		1	
Grenville et Augmen- tation	Thos. Ross & Son	Hawkesbury, Ont.		2	
"	Joseph Bonhomme	Papineauville, comté Ottawa		1	
"	A. F. Arnold	Vankleek Hill, Ont.		1	
Harrington	Thos. Ross & Son	Hawkesbury, Ont.		3	
Lachute (ville)	"	"	1		
Mille Isles	W. H. Good	Mille Isles		1	
"	Wm. Maxwell	Cambria		1	
St-André	Thos. Ross & Son	Hawkesbury, Ont.		1	
"	John F. McLean	St-Andrew's East		1	
"	W. J. Morrow	"		1	1
St-Jérusalem	Thos. Ross & Son	Hawkesbury, Ont.	1	1	
"	W. J. Morrow	St-Andrew's East		1	
"	Walter Smith	Lachute		1	
Total				3 31	2

ARTHABASKA.

Chénier	Philius Laroche	St. Patrick's Hill		1	
"	P. O. Larivière	"		1	
"	Onesiphore Lemay	"		1	
"	F. V. Lessard, Notaire	"		1	
"	Xavier Moreau	"		1	
"	J. E. Beauchemin	ou Castlebar (Co. Rich)		1	
"	Anselme Caron	Warwick		1	
"	Rev. P. Jutras, ptre, curé	"		1	
"	Zéphirin Genest	St-Patrick's Hill			1
Carried forward				8	1

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Ste-Elizabeth de W
St-Louis de Bland
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St-Rémi de Tingw
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St-Valère de Bulst
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Ste-Victoire
Tingwick
Victoriaville
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Warwick
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Warwick (Village)
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ARTHABASKA—*Con.*

MERIES AND

MUNICIPALITIES. PROPRIETORS OR MANAGERS. POST OFFICE. Ch C CC

Carried forward..... 8 1

Chester-Est	Ferdinand Fortier	Ste-Hélène de Chester	1		
"	Léon Camiré	"	1		
"	Pierre Dumas	"	1		
"	Nap. Alain	"	1		
Chester-Nord	Pas de rapport				
Chester-Ouest	Nap. Brunelle & Vallières	St-Paul de Chester	2		
"	Achille Galibois	"	1		
"	Louis Boulanger	"	1		
"	William Moreau	"	1		
"	Alexis Roberge	"	1		
"	Benjamin Fouquette	"	1		
"	Irenée Bergeron	"	1		
"	Alphonse Moreau	"	1		
"	Joseph Leclerc	"	1		
"	Placide Lehoulrier	"	1		
"	Nap. Brunelle	"	1		
"	Narcisse Grenier	Fecteau's Mills (Wolfe)	1		
Stanford	Edmond Baril	Stanford	1		
"	Calixte Dion	"	1		
"	Hon. Provencher	"	1		
"	Geo. Blanchette	"	1		
"	Cie de beurre et fromage	"			1
St-Albert de Warwick	Nap. Hébert	St-Albert	1		
St-Christophe	Albert Houle	Arthabaskaville	1		
"	Uldérie Beaudoin	"	1		
"	Eugène Pellerin	"	1		
"	Arthur Leblanc	"	1		
"	Joseph Michel	"	1		
Ste-Clothilde de Horton	Hector Michel	Ste-Clothilde	1		
Ste-Elizabeth de Warwick	Edouard Desfossés	D'Auteuil	1		
St-Louis de Blandford	Adolphe St-Laurent	St-Valère de Bulstrode	1		
"	Nap. Fortier	Blandford	1		
"	Donat Desfossés	St. Louis de Blandford	1		
St-Norbert	Joseph Prince	Arthabaska-Est	1		
"	Dolphis Boissonneau	"	1		
"	David Dumont	Arthabaskaville	1		
"	A. Ouellet	Arthabaskaville-Est			1
St-Rémi de Tingwick	Lazare Moreau	St-Rémi de Tingwick	1		
"	Jos. & Adélar Proulx	"	1		
"	Edm. Levasseur	"	1		
St-Valère de Bulstrode	J. L. Blanchet & Boucher	St-Valère de Bulstrode	1		
"	Eusèbe Lupien	"	1		
"	Pierre Leclerc et fils	St-Rosaire	1		
"	Adol. St. Laurent	Walker's Cutting	1		
Ste-Victoire	Paul Tourigny	Victoriaville	1		
Tingwick	P. D. Larivière	Trout Brook	1		
Victoriaville	D. O. Bourbeau	Victoriaville			1
"	Léonce Nault	"	1		
Warwick	Nazaire Vidal	Warwick	1		
"	Alfred Bergeron	"	1		
"	Agenor Bergeron	St-Paul de Chester	1		
Warwick (Village)	Abdon M. Méthot	Warwick			1
"	Jules Lapièrre	"	1		

Total..... 4 54 5

Creameries.
Cheeseries.
Combined
Cream. & Ch.

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BAGOT.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	CC
Acton	M. McDonald.	Acton Vale.			1
St-André d'Acton	S. Lapalme.	St-Ephrem d'Upton.	2		
Ste-Christine	M. McDonald.	Acton Vale.	1		
"	Cedras Asselin.	Ste-Christine.	1		
St-Dominique	Harris Brabant.	St-Dominique de Bagot.	1		
"	Flavien Dupont.	St-Liboire.	1		
"	M. Larose.	St-Dominique.	1		
"	Philibert Dussault.	St-Dominique de Bagot.	1		
"	Emile Chagnon.	St-Dominique		1	
"	Norbert Fredette.	"	1		
"	Fernando Lapalme.	St-Liboire		1	
"	Josué Touchette	"		1	
St-Ephrem d'Upton	Delphis Chicoine	St-Ephrem d'Upton.		1	
"	E. J. Hetu.	"		1	
"	Louis Côté.	"	1		
Ste-Hélène	F. X. Brunette	Ste-Hélène.	1		
"	Michel Houle.	"	1		
"	Ant. Sicard.	"		1	
"	Trefflé Lemoine	St-Théodore d'Acton.		1	
St-Hugues	L. T. Brodeur.	St-Hugues.		1	
"	Syndicat du 4e rang.	"		1	
"	Antoine St-Martin	"	1		
"	Adélaré Lanoie	"		1	
"	A. Brasseur.	"	1		
"	Louis Beatregard.	Cavignac		1	
St-Liboire	F.-X. Lajoie	St-Liboire.	1		
"	Elz. Rivard, fils.	"	1		
"	Ludger St-Pierre.	"	1		
"	Jos. Lemonde.	"		1	
St-Nazaire	Joseph Lafrance	St-Hyacinthe.		1	
"	Jos. Demers	East Wickham.		1	
"	Aurèle Leclerc.	St-Nazaire.	1		
St-Pie.	Elie Lapalme.	St-Pie.		1	
"	Hector Lapalme	"	1		
"	Jos. Morin	"	1		
"	Elie Breton	"	1		
"	Cléophas Vadnais, fils.	"	1		
Ste-Rosalie	Jos. Laliberté	Ste-Rosalie.	1		
"	Aug. Lemonde.	"		1	
St-Simon	Azarie Deslauriers	Clairvaux		1	
"	L'Heureux et Tétrault.	St-Simon de Yamaska.	1		
"	Honoré Charland.	"	1		
St-Théodore d'Acton.	Isidore Jodoin.	St-Théodore d'Acton.	1		
"	"	"		1	
"	Elphège Héту	"	1		
"	"	"		1	
"	Jacob Laflamme	"		1	
"	Adrien Laflamme.	"	1		
"	L. de Grandpré.	"	1		
"	Joseph Bousquet.	"	1		
"	J. Vincennes	St-Jean de Wickham.	1		
Upton	Jean Maurice	St-Ephrem d'Upton		1	
"	Solas Lapalme.	"	1		1
Total			1	31	23

MUNICIPALIT

Adstock Nord.
"
Aubert Gallion.
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Aylmer
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Broughton
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Gayhurst
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Lambton
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Metgermette Nor
Shenley
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"
Shenley Dorset.
Jersey et Marlow
"
"
Saints Anges
"
"
"
St-Benoit Labre.
St-Côme de Kenn
"

BEAUCE.

Ch	C	CC	MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	CC
			Adstock Nord	Pierre Rancour	Adstock			1
			"	Nadeau & Cie	"			1
		1	Aubert Gallion	Philibert Gauthier	St-George Beauce	1		
	2		"	Chs Morin	St-George Est			1
	1		"	Olivier Caron, père	"			1
	1		"	Joseph Paquette	"			1
	1		"	John Gosselin	"			1
	1		"	Adelbert Loubier	"			1
	1		"	Joseph Bolduc	"			1
	1		"	Joseph Maheu	"			1
	1		"	David Poulin & fils	"			1
	1		"	Bénoni Poulin	"			1
	1		"	G. Gagnon	"			1
	1		"	Joseph Thibodeau	"			1
	1		"	Gédéon Roy	"			1
	1		"	Joseph Busque & Cie	"			1
	1		"	Arthur Bolduc	"			1
	1		Aylmer	Nap. Beaudoin	St-Henri, Cté Lévis			1
	1		"	Massé & Cie	St-Fortunat, Cté Wolfe			1
	1		Broughton	Vital Champagne	East Broughton			1
	1		"	Thomas Lagueux	"			1
	1		"	Etienne Grégoire	"			1
	1		"	Jos. Dodier	"			1
	1		"	Thos Roy, commerçant	"			2
	1		"	Jos. Grégoire	"			1
	1		"	Abraham Dodier	"			1
	1		"	James Filion	"			1
	1		Gayhurst	Jean Paré	"			1
	1		"	Gilbert Dallaire	"			1
	1		Lambton	Nich. St-Hilaire et frère	D'Israëli, Cté Wolfe			2
	1		"	C. B. Lavigne	Lambton			1
	1		"	Blondo Poulin	"			1
	1		"	J. E. Roberge	"			1
	1		Metgermette Nord	Abraham Poulin	St-Zacharie			1
	1		Shenley	Jos. Demers	St-Honoré	1		
	1		"	Anselme Mercier	"			1
	1		"	Louis Fortier	"			1
	1		"	Jean Jobin	"			1
	1		"	J. O. Nadeau, jr.	"			1
	1		"	Jos. McLean	"			1
	1		"	Alex. Paradis	"			1
	1		"	Théophile Dubé	"			1
	1		Shenley Dorset	Thomas Maheu	St-Martin			1
	1		Jersey et Marlow	Jos. Em. Pelletier	"			1
	1		"	B. Tanguay	St-Gédéon de Marlow			1
	1		Saints Angés	Henri Giguère	Saints Angés			1
	1		"	Ferd. Mercier	"			1
	1		"	Gédéon Labbé	"			1
	1		"	Jean Faucher	Ste-Marie			1
	1		St-Benoit Labre	Omer Poulin	St-Benoit Labre			1
	1		St-Côme de Kennebec	Irénée Bélanger	Linière			1
	1		"	Pierre Roberge	"			2
	1		"	Irénée Bélanger	St. Côme			1
1	31	23	Carried forward			2	52	2

BEAUCE—*Con.*

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
Brought forward.....			2	52	2
St-Ephrem de Tring...	C. E. Pagé & Lacombe...	St. Ephrem de Tring.....			1
"	Oct Roy.....	"			1
"	A. Bisson, Poulin & Cie..	"	1		
"	Narc. Pomerleau, Grenier & Cie.....	"			1
"	Louis Marcoux & Cie.....	"			1
"	Noel Massé.....	"	1		
"	Olivier Poulin, Lachance & Cie.....	"			1
St-Elzéar.....	Richard Lessard.....	St. Elzéar.....	1		
"	App. Drouin.....	"	3		
"	Siméon Maheux.....	"	1		
"	Marc Grégoire.....	St. Séverin.....	1		
St-Evariste de Forsyth.	Lachance & Blais.....	St. Evariste.....	1		
"	Labonté & Labonté.....	"	1		
"	Louis Bernier.....	"	1		
"	Cyrille Francœur.....	"	1		
St-François.....	Rév. Zoël Lambert.....	St. François, Beauce.....	1		
"	Joseph Bernard.....	"	1		
"	Gab. Veilleux.....	"	1		
"	Jean Fortin.....	"	1		
"	Vital Pépin.....	"	1		
"	Chas. Bolduc.....	"	1		
"	Jos. Veilleux.....	"	1		
"	Joseph Thibaudeau.....	"	1		
"	Gédéon Doyon.....	"	1		
"	Jules Poulin.....	"	1		
"	M. Doyon.....	"	1		
"	W. Potvin.....	"	1		
"	Nap. Beaudoin.....	St. Henri, Lévis.....	1		
St-Frédéric.....	F. X. Plante.....	St. Frédéric.....	2		
"	Hilaire Gilbert.....	"	1		
"	Joseph Vachon.....	"	1		
"	Joseph Jacques.....	"	1		
"	Ephrem Lagueux.....	"	1		
"	E. Gagnon.....	"	1		
"	Mag. Gravel.....	"	1		
St-Joseph.....	Thomas Doyon.....	St-Joseph, Beauce.....	1		
"	Clotaire Lessard, fils Bén.	"	1		
"	Vital Roy.....	"	1		
"	Noel Roy.....	"	1		
"	Aug. Perron.....	"	1		
"	Omer Giguère.....	"	1		
"	Aug. Jacques & Cie.....	"	1		
"	Ev. Poulin (From. Grand Montagne).....	"	1		
"	Geo. Cliche.....	"	1		
St-Joseph (Village)....	Morin & Cie.....	"	1		
St-Marie.....	De Bacourt.....	Scott Junction.....	1		
"	Havard & Grégoire.....	La Beauce.....	1		
"	Marcoux & Jolicœur.....	"	2		
"	Marcoux & Cie.....	"	1		
"	Vital Cliche.....	St-Joseph, Beauce.....	1		
Carried forward.....			5	101	5

MUNICIPALITE

St-Pierre de Brou
St-Samuel.....
St-Séverin.....
".....
".....
St-Victor de Tri
".....
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".....
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".....
Beauharnois.....
Ste-Cécile.....
".....
St-Clément.....
".....
St-Etienne.....
St-Louis de Gonz
".....
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".....
St-Stanislas de K
".....
St-Thimothé.....
".....
Notre-Dame Aux
de Buckland..
Roux, Bellechas
Daaquam.....
".....
St-Cajetan d'Arm
".....
St-Charles.....

BELLECHASSE—*Con.*

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
	Brought forward.....		4	3	
St-Etienne de Beau-	Nap. Beaudoin.....	St-Henri Lévis.....		1	
mont.....	Dr Phi. Tanguay.....	St-Gervais (Village).....	1		
St-Gervais et Protais.....	Pierre Fortier.....	".....	1		
".....	Amédée Grégoire, 3e rang.....	".....		1	
St-Lazare.....	Ferd. Laflamme.....	St-Lazare.....	1		
".....	Guil. Chabot.....	".....		1	
St-Michel.....	Jos. Gagnon.....	St-Michel.....	1		
".....	Alph. Furoy.....	".....	1		
St-Nérée.....	Frs. Breton.....	St-Nérée.....	1		
St-Philémon.....	La Cie de beurre de St-Philémon (Rév. Chs. Lévesque, ptre curé, gérant).....		1		
St-Raphaël.....	Philiat Gonthier.....	St-Raphaël Est.....	1		
".....	Jos. Bolduc, fils.....	".....		1	
".....	François Morin.....	".....		1	
".....	George Roy.....	Arthurville.....	1		
St-Valier.....	Horace Corriveau.....	St-Valier Station.....	1		
	Total.....		12	10	

BERTHIER.

Berthier.....	Joseph Chênevert.....	P. O. Lavaltrie.....	1		
".....	Joseph Fernet.....	Berthier Junction.....	1		
".....	Thomas Plante & Cie.....	St-Barthélemy.....		1	
".....	Pierre Comtois.....	".....		1	
Visitation de l'Isle du					
Pads.....	Thomas Sylvestre.....	".....		1	
".....	Hormidas Brunette.....	".....		1	
St-Antoine de Lavaltrie.....	Jos. Clément.....	Berthier (en haut).....	1		
St-Barthélemy.....	Xavier Mayer.....	St-Barthélemy.....	1		
".....	Louis Morand.....	".....		1	
St-Cuthbert.....	Jos. Lacourse.....	St-Cuthbert.....	1		
".....	A. Maillé.....	".....	1		
".....	Dr Coulombe.....	".....		1	
".....	Jos. Drainville.....	".....		1	
".....	J. Marchand.....	".....		1	
".....	Vve Ant. Robert.....	".....		1	
".....	Joa. Grégoire.....	".....		1	
".....	Arthur Fournier.....	".....		1	
".....	Jos. Delcour.....	St-Barthélemy.....		1	
".....	M. Dauplaise.....	".....		1	
".....	N. Clément.....	".....		1	
".....	Arsène Mayer.....	St-Justin, Maskinongé.....		1	
".....	Edouard Rainette.....	St-Damien.....	1		
St. Damien.....	Rémi Charbonneau.....	St-Gabriel de Brandon.....	1		
".....	Thos. & Camille Mondor.....	St-Damien.....		1	
".....	Jos. Boucher.....	".....		1	
".....	A. Denomé.....	".....		1	
St-Gabriel de Brandon.....	Jos. Ayotte.....	St-Norbart.....	1		
	Carried forward.....		4	12	11

MUNICIPALITI

St-Gabriel de Bra
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" (vil
St-Geneviève de
Berthier.....
St-Joseph de Lan
"
St-Michel des Sai
"
St-Norbart.....
"
"
St-Zénon.....

Mann.....
Maria.....
Matapédia.....
New Richmond..
Port Daniel Ouest.
Restigouche.....
Shoobred.....
St-Pierre du Lac M
pédia.....
"
Bolton Est.....
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Bolton Ouest.....
"
Brome.....
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BERTHIER—*Con.*

Ch C CC	MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch C CC
	Brought forward.....			4 12 11
4 3	St-Gabriel de Brandon.	Edwin Remington.....	St-Gabriel de Brandon.....	1
	"	Norbert Leblanc.....	"	1
1 1	"	Norbert Rocheleau.....	"	1
1 1	"	Narc. Dubeau.....	"	1
	"	J.-Bte. Barrette.....	St-Edmond.....	1
1 1	" (village).	Louis Jacques.....	St-Gabriel de Brandon.....	1
	Ste-Geneviève de			
	Berthier.....	Pas de rapport.....		
1 1	St-Joseph de Lanoraie.	Arthur Ferland.....	Lanoraie.....	1
1 1	"	Adol. Parent.....	"	1
1 1	St-Michel des Saints	Léandre Ménard.....	St-Michel des Saints.....	1
1 1	"	Tous. Gouin.....	St-Zénon.....	1
1 1	St-Norbert.....	S. Denis.....	St-Norbert.....	1
	"	David Fréchette.....	"	1
	"	Arcleste Dubeau.....	"	1
	"	Joseph Ayotte.....	"	1
	St-Zénon.....	Eust. St-Pierre.....	St-Zénon.....	1
12 10	Total.....			6 23 13

BONAVENTURE.

	Mann.....	Pas de rapport.....		
1 1	Maria.....	Rév. Jacob Gagné.....	Maria.....	1
	Matapédia.....	Denis Richard.....	St-Alexis de Matapédia.....	1
	New Richmond.....	Wm. Cyr.....	Black Cape.....	1
	Port Daniel Ouest.....	Rév. Aug. Gagnon.....	Port Daniel Est.....	1
	Restigouche.....	Pas de rapport.....		
	Shoolbred.....	Ernest Allard.....	Robitaille.....	1
	St-Pierre du Lac Mata-			
	pédia.....	R. Nolin.....	St-Pierre du Lac.....	1
	"	P. Brillant.....	"	1
	"	C. Michaud.....	"	1
1	Total.....			8

BROME.

	Bolton Est.....	George Salls.....	South Bolton.....	1
	"	W. Reynolds.....	"	1
	"	Ludger Bachand.....	St-Etienne de Bolton.....	1
	"	J. N. Labelle.....	Vale Perkins.....	3
	Bolton Ouest.....	Allen Kilburn.....	Foster.....	1
	"	Rufus Blunt.....	West Bolton.....	1
	Brome.....	R. J. Ladd.....	West Brome.....	1
	"	Arthur Creddinon.....	"	1
	"	Jesse Benham.....	Sweetsburg, Missisquoi.....	1
	"	J. M. Miltimore.....	"	1
	"	Geo. A. Miller.....	Gilman.....	1
	"	W. M. Mitchell.....	Brome Corner.....	1
	"	Elmore Grimes.....	"	1
4 12 11	Carried forward.....			3 12

BROME—Con.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C	C
	Brought forward.....		2	12		
Brome.....	Geo. A. Robb.....	Iron Hill.....	1			
".....	Ephraïm Lapierre.....	Laroche.....	1			
".....	Mason Woodward.....	Fulford.....	1			
Eastman.....	Arthur J. Whitehead.....	Eastman.....	1			
".....	Euclide Phaneuf.....	".....		1		
Farnham Est.....	Jos. Daniel.....	Sweetsburg, Missisquoi.....	1			
".....	Phi. Domingue.....	Adamsville.....	1			
".....	Alph. Boright.....	East Farnham.....		1		
".....	T. Allen Hawk.....	Brigham.....		1		
".....	Thos. L. Burnett.....	Farnham Centre.....			2	
".....	Thos. Hart.....	Adamsville.....			1	
".....	Mallon Toof.....	Sweetsburg, Missisquoi.....			1	
Knowlton.....	Geo. W. Wilson.....	Knowlton.....	1			
Potton.....	R. G. Crowell.....	Potton.....	1			
".....	Walter Lesnard.....	West Potton.....	1			
".....	Siméon Sargent.....	Mansonville.....	1			
".....	Sam. Elkins.....	" Station.....	1			
".....	Alfred Bailey.....	".....	1			
Potton.....	Jos. Labelle.....	Vale Perkins.....			1	
Sutton.....	H. O. Wales.....	Sutton Junction.....	1			
".....	Milton Darbe.....	North Sutton.....	1			
".....	Eph. Charbonneau.....	Sutton.....	1			
".....	Gasper Willey.....	Abercorn.....	1			
".....	A. A. Esty.....	".....	1			
".....	Wallace Leonard.....	Glen Sutton.....	1			
".....	G. H. Boright.....	Sutton.....			1	
	Total.....		9	27	6	

CHAMBLY.

Longueuil.....	Pas de rapport.....					
St-Basile le Grand.....	Rocheleau & Laporte.....	St-Basile le Grand.....	1			
".....	Avila Trudeau, fils.....	St-Mathias, Rouville.....		1		
St-Bruno.....	Rév. N. A. Valois.....	St-Bruno.....		1		
Ste-Famille de Boucherville.....	Albert Dumler.....	Boucherville.....		1		
St-Hubert.....	Louis Brosseau.....	St-Hubert.....			1	
	Total.....		2	3	1	

CHAMPLAIN.

La Visitation de Champlain.....	L. P. Carignan.....	Champlain.....		1		
".....	Jacques Dontigny.....	".....		2		
N.-D. du Mont Carmel.....	Philippe Rheault.....	Valmont.....		1		
".....	Joseph Cossette & Lord.....	".....		1		
".....	Luc Ducharme.....	".....			1	
St-Adelphe.....	P. N. Chailly.....	St-Stanislas.....		1		
".....	A. Lambert.....	St-Tite.....		1		
	Carried forward.....			7	1	

MUNICIPALITES

Ste-Anne de la Pé.....
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St. F. X. de Batis.....
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Ste-Geneviève de I.....
can.....
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St-Jacques des Pils.....
St-Luc.....
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Ste-Marie du Cap.....
Madeleine.....
St-Maurice.....
".....
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St-Narcisse.....
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St-Prosper.....
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St-Séverin.....
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St-Stanislas.....
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Ste-Thècle.....
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St-Théophile du I.....
St-Tite.....
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".....

CHAMPLAIN—*Con.*

Ch C CC

MUNICIPALITIES. PROPRIETORS OR MANAGERS. POST OFFICE. Ch C CC

Brought forward.....

7 1

.....	2	12	Ste-Anne de la Péraade	N. E. Clément.....	2 et 4 Foundling st., Montréal...	1		
.....	1		"	A. Latour.....	Ste-Anne de la Péraade.....		1	
.....	1		"	Eléar Ricard.....	".....		1	
.....	1		"	Honoré Gendron.....	".....		1	
.....	1		"	Victor Leduc.....	".....		1	
.....	1	1	"	Michel Loranger.....	".....		1	
.....	1		"	Jos. Godin.....	".....		1	
.....	1		"	Edouard Douville.....	".....		1	
.....	1		"	Zéphirin Marchand.....	".....	1		
.....	1		St. F. X. de Batiscan	Chs. Gouin.....	Batiscan.....		1	
.....	1	2	"	Ludger Duval.....	".....		1	
.....	1	1	"	Ernest Tourigny.....	".....		1	
.....	1	1	"	Ovide Lacourcière.....	".....			1
.....	1		"	Louis Léger & Cie.....	".....		1	
.....	1		"	Pierre Lapointe.....	".....			1
.....	1		Ste-Geneviève de Batis-	Ernest Jacob.....	Ste-Geneviève de Batiscan.....	1	1	
.....	1		can	Léopold et Art. Marchand	".....		1	
.....	1		"	Hubert Veillette.....	".....		1	
.....	1	1	"	Ed. Dessureau.....	".....		1	
.....	1		"	Eph. Dessureau.....	".....		1	
.....	1		St-Jacques des Piles	Aristide Lambert.....	St-Tite.....		1	
.....	1		St-Luc	Anselme Beaudoin.....	Vincennes.....		1	
.....	1		"	Jos. O. Beaudoin.....	".....		1	
.....	1		"	Geo. Goyette.....	".....		1	
.....	1		"	Pierre Marchand.....	".....		1	
.....	1		"	Hubert Nobert.....	".....		1	
.....	9	27 6	Ste-Marie du Cap de la	Xavier Lapointe, fils.....	Cap de la Madeleine.....		1	
.....			Madeleine	Maxime Cossette.....	Valmont.....		1	
.....			St-Maurice	Philippe Rhéault.....	".....		1	
.....			"	Frs Ducharme.....	St-Maurice.....		1	
.....			"	Ant. Laprise.....	".....		1	
.....			"	Oscar Nobert.....	".....			1
.....	1		St-Narcisse	Isidore Derouin.....	St-Narcisse.....		1	
.....	1		"	Dosithé Cossette.....	".....		1	
.....	1		"	Wilfrid Boulanger.....	".....		1	
.....	1		"	Trefflé Trudel.....	".....			1
.....	1		St-Prosper	Désiré Cloutier.....	St-Prosper.....		1	
.....	1		"	Azarias Audy.....	".....		1	
.....	1		"	Alfred Trudel.....	".....			1
.....	2	3 1	St-Séverin	Narc. B. Bordeleau.....	Proulxville.....		1	
.....			"	Maj. Bordeleau.....	".....		1	
.....			"	Trefflé Veillette.....	".....		1	
.....			"	E. Mongrain.....	".....		1	
.....			St-Stanislas	Joseph Jacob.....	St-Stanislas.....	1		
.....			"	Jean Jacob.....	".....	1		
.....	1		Ste-Thècle	Chs Audy.....	Ste-Thècle.....		1	
.....	2		"	Alfred Trudel.....	St-Prosper.....		1	
.....	1		St-Théophile du Lac	Trefflé Trudel.....	St-Narcisse.....		1	
.....	1		St-Tite	Paquin et Jacob.....	St-Tite.....		1	
.....	1	1	"	Théod. Maurault.....	".....		1	
.....	1		"	Mar. Massicotte.....	".....		1	
.....	1		"	Frs. Marchand.....	".....		1	
.....	1		"	Aris. Lambert.....	".....			1

Total..... 5 49 8

7 1

CHARLEVOIX.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
Baie St-Paul (Village)	Chs. Martel	Baie St-Paul		1	
Les Eboulements	Médéric Bouchard	Les Eboulements	1		
"	Alexis Tremblay	"	1		
"	Chs. Tremblay	"	1		
Settrington	Eva. Demeules	St-Hilarion	1		
"	Phy. Guay	"	1		
Ste-Agnès de Murray					
Bay	Frs. Harvey	Ste-Agnès de Charlevoix	1		
"	Bon. Desgagnés	"	1		
"	Jos. Bergeron	"	1		
"	Thos. Bouchard	"	1		
St-Etienne de Malbaie	Jules Bradet	Malbaie	2		
"	Odilon Pilot	"	1		
St-Fidèle de Mont					
Murray	Antoine Perron	St-Fidèle	1		
St-Irénée	Ferd. Gauthier	St-Irénée	1		
"	Elie Boucher	"	1		
St-Louis, Ile aux					
Coudres	Louis Perron	Ile aux Coudres	1		
"	Geo. Tremblay	"	1		
St-Pierre et St-Paul de					
la Baie St-Paul	Henri Coté	Dufour	1		
"	Wilfrid Simard	Baie St-Paul	1		
"	Wm Tremblay	"	1		
"	Gédéon Perron	St-Placide de Charlevoix	1		
"	Jos. Simard	Baie St-Paul	1		
"	Jos. Fortin	La Mare (Charlevoix)	1		
"	Jérémie Ménard	Baie St-Paul	1		
St-Siméon	Rév. M. P. Hudon	St-Siméon	1		
St-Urbain	Chs. Fortin	St-Urbain	1		
Total			26	1	

CHATEAUGUAY.

Ormstown (village)	Macpherson & Ferguson	Ormstown		1	
St-Antoine Abbé	James McGill	Stockwell	1		
St-Clothilde	Pas de rapport				
St-Jean Chrysostôme	Max. Huberdeau	St-Chrysostôme	1		
"	J. J. Brown	"	1		
"	John Boyd	"		1	
"	Jos. Tourangeau	"		1	
"	Macpherson & Ferguson	Huntingdon		1	
St-Joachim de					
Chateauguay	Narc. R. Laberge	Chateauguay		1	
St-Malachie d'Ormstown	Allan Grove Co.	Ormstown	3		
"	James Sangster	"	1		
"	C. of Farmers	"	1		
"	J. W. Sadler	"	1		
"	John Dunning	Allan's Corner	1		
St-Martine	Ed. McGowan	St-Martine	2		
"	Etienne Marleau	North Georgetown	1		
St-Philomène	Frs. P. Laberge	St-Philomène	1		
St-Urbain Premier	Cyprien Primeau	St-Urbain de Chateauguay	1		
"	Ed. McGowan	St-Martine	1		
Carried forward			4	13	4

MUNICIPAL

Très-St-Sacren

"

"

"

Bagotville

"

"

"

Bourget

"

Chicoutimi

"

"

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Grande Baie

N. D. de Laterrière

"

"

St-Dominique de

quières

"

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"

St-Cyriac

St-Fulgence

St-Jean

Tremblay

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CHATEAUGUAY—*Con.*

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	CC
Brought forward.....			4	13	4
Très-St-Sacrement	J. S. Dunning.....	Cairnside.....	2		
"	John Thompson.....	North Georgetown.....	1		
"	Robert Anderson.....	Cairnside.....	1		
"	Macpherson & Ferguson.....	Huntingdon.....	1		
"	John McGregor.....	Riverfield.....			1
Total.....			4	18	5

CHICOUTIMI.

Bagotville	Firmin Paradis.....	Bagotville.....	1		
"	Elie Tremblay.....	".....	1		
"	Jos. Buteau.....	".....	1		
"	Jos. Maltais.....	".....			1
"	Wilfrid Côté.....	".....	1		
Bourget	L. P. Gaudin.....	Rivière à l'Ours.....	1		
"	P. Gauthier.....	St-Charles Borromée.....	1		
"	Alex. Larouche.....	".....	1		
Chicoutimi	Jean Perron.....	Chicoutimi.....			1
"	Jean Girard.....	Jonquières.....	1		
"	Louis Guay.....	Chicoutimi.....	1		
"	Frs. Brassard.....	".....	1		
"	Rich. Gagnon.....	".....	1		
"	E. Tremblay.....	".....	1		
"	E. Fortin.....	".....	1		
"	Jos. Maltais.....	".....			1
"	Félix Boily.....	".....			1
Grande Baie	Ernest Lavoie.....	".....			1
N. D. de Laterrière	François Brassard.....	Laterrière.....	1		
"	Tremblay & Perron.....	".....			1
"	Arthur Gaudrault.....	".....			1
"	Alfred Tremblay.....	".....			1
St-Dominique de Jon-					
quières	Paschal Bergeron.....	Jonquières.....	1		
"	Th. Lapointe.....	".....	1		
"	Chs. Fortin.....	".....	1		
"	Jean Girard.....	".....	1		
"	Jos. Gagnon.....	".....	1		
"	Paschal Angers & Cie.....	".....			1
St-Cyriac	Lazare Vaillancourt.....	St-Cyriac.....	1		
St-Fulgence	Jos. Harvey, fils.....	L'Anse au foin.....	1		
St-Jean	Zéph. Desgagnés et al.....	L'Anse St-Jean.....	1		
Tremblay	Ernest Gravel.....	Tremblay.....	1		
"	H. Côté.....	".....	1		
"	Ovide Villeneuve.....	".....	1		
"	Jos. Bouchard.....	".....	1		
"	Jos. Savard.....	".....	1		
"	Louis Boucher.....	".....	1		1
"	Louis Gagné.....	".....			1
Total.....			2	29	8

Ch C CC

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COMPTON.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C	MUNICIPAL
Auckland.....	Joseph Roy.....	St-Malo.....	3			
".....	Jos. Brault.....	".....	1			
Bury.....	Wm. Bacon.....	Robinson.....	1			St-Hermas....
".....	N. St-François.....	".....	1			".....
Chesham.....	A. E. Dumoulin.....	N.-D. des Bois.....	1			".....
".....	Philippe Dumas.....	".....	1			".....
Clifton.....	Louis Ladouceur.....	St-Edwidge.....	1			".....
".....	Saül Raboin.....	".....	1			St-Joseph du I
".....	Boulé & Gérin.....	".....				".....
".....	Gaspar Boulay.....	".....	1			Ste-Monique ..
Clifton Est.....	E. S. Lussier.....	Clifton Est.....	1			St-Placide....
".....	Joseph Viens.....	Charrington.....	1			Ste-Scholastiqu
Cookshire.....	Rufus H. Pope, M.P.....	Cookshire.....	1			
Ditton et Clinton.....	Jos. Brillon.....	La Patrie.....	2			".....
Eaton.....	John Mackie.....	Birchton.....	1			".....
".....	Amos Hanley.....	Eaton.....	1			".....
Emberton.....	Rév. A. Tremblay.....	Chartierville.....	1			".....
Hereford.....	Aurèle Choquette.....	Paquette.....	1			".....
".....	Wm. Melrose.....	Perryborough.....	1			".....
".....	Aug. Gérin.....	Coaticook, Stanstead.....		1		
".....	Frontier Manfg Co.....	Hereford.....	1			
".....	J. P. Dupuis.....	St-Herménégilde, Stanstead.....		1		
Marston-Sud.....	Nap. Lemieux.....	Lac Mégantic.....	1			
Newport.....	E. S. Lussier.....	Clifton Est.....	1			
".....	Andrew Mewell.....	".....	1			
Sawyerville.....	Jos. Boyd.....	Sawyerville.....	1			
Waterville.....	Pas de rapport.....	".....				St Anselme....
".....	A. T. Harvey.....	".....	1			".....
Westbury.....	Ferd. Fontaine.....	Weedon, comté Wolfe.....		1		".....
Fairview Cheese Fctry.....	R. W. Doak.....	Hillhurst.....		1		St-Bernard....
Whitton-Nord.....	Pas de rapport.....	".....				".....
Winslow-Nord.....	Omer Lacombe.....	St-Romain de Winslow.....	1			Ste-Claire....
".....	Compton Model Farm.....	Compton.....			1	".....
Total.....			4	26	4	St-Edouard de Frampton

DEUX-MONTAGNES.

L'Annonciation.....	RR. PP. Trappistes.....	La Trappe, Oka.....	1			".....
".....	Wm. Lalonde.....	Oka.....	1			".....
".....	Raphaël Charest.....	".....	1			".....
St-Augustin.....	E. Lanthier.....	St-Augustin.....	1			St.Germaine du Etchemin
".....	Osius Duquet.....	(Village).....		1		".....
".....	F. X. Charbonneau.....	Petit Brûlé.....		1		".....
St-Benoit.....	Samuel Fauteux.....	St-Benoit.....	1			Ste-Hénédiine ..
".....	Jos. Cyr.....	St-Canute.....		1		".....
".....	Léon Pilon.....	St-Hermas.....		1		".....
St-Canute.....	Jos. Cyr.....	St-Canute.....		1		".....
".....	M. Rochon.....	".....		1		".....
St-Eustache.....	Emile Laurin.....	St-Eustache.....	1			St-Isidore....
".....	Oscar Paquette.....	".....	1			St-Justine....
".....	John Hamilton.....	Grande Frenière.....	1			".....
".....	Théodule Lesage.....	St-Eustache.....	1			".....
".....	(Village).... Binette & Brunet.....	".....	1			".....
Carried forward.....			10	3	3	

DORCHESTER—Con.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
Brought forward.....			3	24	2
St-Léon de Standon	Pierre Chouinard.....	Standon.....		1	
"	Chas. Tremblay.....	".....		1	
"	Edouard Journeaux.....	".....		1	
"	Eugène Leclerc.....	".....		1	
St-Malachie.....	Nap. Beaudoin.....	St-Henri de Lévis.....		1	
"	Job Mercier.....	Ste-Ange, Beauce.....		1	
Ste-Marguerite.....	David Cloutier.....	Ham Sud, Wolfe.....		1	
"	Jos. Maure.....	Ste-Marguerite.....		1	
"	Jean Trachy.....	Ste-Hénédine.....		1	
"	Nap. Beaudoin.....	St-Henri de Lévis.....		1	
St-Maxime.....	P. de Bacourt.....	Scott Junction, Beauce.....	1		
St-Odilon de Cranbourne	Linière Maheux.....	St-Odilon.....		1	
"	Jean Foucher.....	La Beauce.....		1	
Watford-Ouest.....	Ludger Caron.....	St-Prosper.....		1	
Total.....			4	37	2

DRUMMOND.

Durham.....	David McCarthy.....	Ulverton.....		1	
"	G. A. Harel.....	".....			1
"	Clovis Duguay.....	L'Avenir.....		1	
Durham South.....	J. B. J. Préfontaine.....	Durham South.....	1		
"	James Dowd.....	".....		1	
"	Albt. Hyde.....	".....		1	
"	Henry Côté.....	Danby.....		1	
Grantham.....	Joseph Jones.....	Drummondville.....		1	
"	Art. Marcotte.....	".....		1	
"	Benoit Lafond.....	".....		1	
Kingsey-Falls.....	T. D. McCallum.....	Danville, Richmond.....	1		
"	Rév. G. E. Caron.....	Kingsey-Falls.....		1	
"	E. Pothier.....	".....		1	
Kingsey.....	Jos. Lefebvre.....	French Village.....	1	1	
"	Geo. Benoit.....	".....		1	
"	Proulx & Lefebvre.....	".....		1	
"	Amédée Franceur.....	".....		1	
L'Avenir.....	John McDougal.....	L'Avenir.....		1	
"	Duguay & Cie.....	French Village.....		1	
L'Avenir.....	Joseph Duquette.....	L'Avenir.....		1	
"	Emile Allard.....	".....		1	
"	Cléophas Dionne.....	Drummondville.....		1	
"	Jos. Beulac.....	L'Avenir.....		1	
"	A. Charpentier.....	".....		1	
St-Eugène de Grantham	Delphis Drolet.....	St-Eugène de Grantham.....			1
St-Germain de Grantham	Olivier Rajotte.....	St-Germain de Grantham.....		1	
"	Dontail Dionne.....	".....		1	
"	Frédéric Moreau.....	".....		1	
"	Eugène Girard, fils.....	".....		1	
"	Michel Gauthier.....	".....		1	
"	Olivier Lemaire.....	".....		1	
"	E. Sylvestre.....	Duncan Station.....		1	1
"	Adélar Lanoie.....	St-Guillaume d'Upton.....		1	
Carried forward.....			3	28	3

MUNICIPALIT

Wendover et Sin

" "

" "

Wickham

"

Wickham Oues

Douglas East...

Gaspé Baie Sout

Grand Rivière.

Grosse Isle....

Havre Aubert..

Havre aux Mai

L'Etang du Nor

Ste-Anne des M

St-Norbert du C

" "

L'Enfant Jésus

Pointe aux T

Riv. des Prairie

Sault au Récoll

Longue Pointe

St-Léonard ..

Maurice

Verdun.....

HUNTINGDON.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
Dundee	Macpherson & Ferguson	Huntingdon		1	
"	D. M. Macpherson	Lancaster, Ont	1	1	
Elgin	Smail Bros.	Kelso	1		
"	Macpherson & Ferguson	Huntingdon		3	
Franklin	Narc. Beaudin	Russelltown-Chateauguay			1
Godmanchester	Macpherson & Ferguson	Huntingdon	6		
"	W. H. Walker	"	1		
"	R. S. Feeny	"	1		
Havelock	Max Patenaude	Stockwell-Chateauguay	1		
"	N. Beaudin	Russeltown	1		
"	G. Gamelin	"	1		
Hemmingford	Thomas Boyce	Hemmingford	2		
"	(village)	"	1		
Hinchinbrooke	Geo. W. Loomis	Herdman		3	
"	Macpherson & Ferguson	Huntingdon		4	
"	Martin Connell	Dewittville	1		
"	John A. McDonald	Athelstan			1
"	Farquhar & Oliver	Rockburn			1
Huntingdon	Macpherson & Ferguson	Huntingdon			1
St-Anicet	Masson & Caza	St-Anicet	1		
"	Syn. de Cultivateurs	Cazaville			1
"	D. M. Macpherson	La Guerre			1
"	"	Port Lewis	3		
"	James Irvine	Cazaville	1		
Ste-Barbe	Olivier Hainault	Ste-Barbe	1		
Total			7	27	

IBERVILLE.

St-Alexandre	Amb. Labrecque, fils	St-Alexandre	1		
"	Narc. Brault, fils	"	1		
St-Anne de Sabrevois	S. J. Roy	Sabrevois	1		
St-Athanase	Solyme Davignon	St-Athanase	1		
"	Amb. Poirier	"	1		
St-Brigide	Osiyas Archambault	St-Brigide			1
"	Godfroy Tessier	"	1		
St-George de Henryville	S. J. Roy	Sabrevois	1		
"	Léon Bénard & Cie	Henryville	1		
St-Grégoire	Thos. Barrière	Mount Johnson	1		
"	Michel Monat	"	1		
"	Frank Solime	Versailles Station	1		
St-Sébastien	Pierre Breault, fils	St-Sébastien	1		
"	Alphée Lamothe	Pike River, Missisquoi	1		
Total			3	10	1

JACQUES-CARTIER.

Ste-Anne de Bellevue	Conrad Vallée	Ste-Anne de Bellevue	1		
Ste-Anne de l'Isle	Télesphore Madore	"	1		
Carried forward			2		

MUNICIPALITÉS

Ste-Geneviève	...
"	...
"	(vil)
St-Laurent	...
"	(ville)
St-Raphaël de Bizard	...
Bienheureux Alp de Rodriguez	...
"	...
Joliette	...
St-Ambroise de K	...
"	...
St-Béatrix	...
"	...
St-Charles-Borrom	...
"	...
St-Côme	...
"	...
St-Elizabeth	...
"	...
St-Elizabeth	...
"	...
St-Emélie de l'E	...
"	...
"	...
St-Félix de Val	...
"	...
"	...
St-Jean de Math	...
St-Mélanie	...
"	...
St. Thomas de Nord	...
St-Thomas de Nord	...
St-Paul de Lava	...
"	...

KAMOURASKA.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	CC
Kamouraska (Village)	Joseph Beaulieu	Kamouraska	1		
N.-D. Mont Carmel	Chs Roy & Cie	Ile aux Grues Montmagny	1		
N.-D. de la Riv. Ouelle	J. A. Pelletier	Rivière Ouelle		1	
St-Alexandre	J. J. Bélanger & Cie	St-Alexandre	1		
St-André	Desjardins & Marquis	St-André	1		
"	Harvey & Cie	"	1		
"	S. Dugal	"	1		
Ste-Anne de la Pocatière	Farm Schools	Ste-Anne de la Pocatière	1		
"	Frs. Gendron	"		1	
"	Wilbrod Roy	"	1		
"	Jos. Boucher	"	1		
St-Denis	Aug. Dionne	St-Denis	1		
St-Germain	Edr. Pelletier	Cap St-Ignace, Montmagny	1		
"	Ls. A. Levéque	St-Germain	1		
Ste-Hélène	Edr. Pelletier	Cap St-Ignace, Montmagny	1		
St-Louis de Kamouraska	Rd N. H. Michaud, curé	St-Louis de Kamouraska		1	
St-Onésime d'Ixworth	France Gendron fils	Ste-Anne de la Pocatière	1		
St-Pacôme	Pierre Levéque	St-Pacôme	1		
"	Levéque & Danjou	"	1		
St-Paschal	J. B. St-Pierre	St-Philippe de Néri	1		
St-Philippe de Néri	Joseph Lavoie	"		1	
Total			3	15	3

LAC ST. JEAN.

Delisle	Alfred Gagné	Delisle	1		
Hébertville	Oct. Lemay	Hébertville	1		
"	A. Lemay	"	1		
"	Servule Tremblay	" (Caron)	1		
"	Charles Tremblay	" (Lac Kenogami)	1		
"	Joseph Déchene	"	1		
N.-D. d'Hébertville (vil)	Philippe Hudon	" (village)		1	
Normandin et Albanel	Alph. Poirier	Normandin		1	
Roberval (village)	Luc Lizotte	Roberval	1		
St-Bruno	Stanislas Pilote	Pasteur	1		
St-Félicien	Naud & Germain	Poiré, Portneuf	1		
St-Gédéon	Jos. Girard	St-Gédéon	1		
"	André Bouchard	"	1		
St-Jérôme	Eli Gagné	Metabetchouan	1		
"	Chs. Simard	"	1		
"	Jos. Gagnon	St-Jérôme	1		
"	J.-Bte Bergeron	"	1		
"	Octave Hudon	Metabetchouan	1		
"	Jos. Baillargeon	St-Jérôme	1		
St-Joseph d'Alma	Edm. Bergeron	St-Joseph d'Alma	1		
"	Liguori Harvey	"	1		
St-Louis de Metabetchouan	Octave Lefrançois	Chambord	1		
St-Méthode	Jos. Potvin	St-Félicien	1		
St-Prime	Adélar Perron	St-Prime	1		
"	Côté & Lavoie	"	1		
St-Thomas d'Aquin	Alfred Boivin	Lac Bouchette	1		
Total			1	23	2

MUNICIPALITE
Laprairie de la leine
St-Constant
St-Isidore
"
St-Jacques le Min
St-Philippe
L'Assomption
" (Vi
"
"
"
Laurentides
L'Epiphanie
Repentigny
"
St-Charles Lache
St-Henri Mascou
"
"
St-Lin
"
St-Paul l'Ermite
"
St-Roch l'Achiga
"
St-Sulpice
"
"
St-François de S
"
St-Martin
Ste-Rose de Lim
"
"
St-Rose (Village
St-Vincent de P

LAPRAIRIE.

Ch C C C

MUNICIPALITIES.

PROPRIETORS OR MANAGERS.

POST OFFICE.

C C C C

Laprairie de la Made-				
leine.....	Eus. Martel.....	Pierreville, comté Yamaska.....	1	1
St-Constant.....	Jos. Fyfe.....	St-Constant.....	1	
St-Isidore.....	J. S. R. Pagé.....	St-Isidore (Village).....	1	
".....	Ed. McGowan.....	St-Martine, Chateauguay.....		1
St-Jacques le Mineur.....	Elz. Martin.....	St-Jacques le Mineur.....		1
St-Philippe.....	Léandre Gobeil.....	Baie St-Paul, Charlevoix.....		1
Total.....			2	4

L'ASSOMPTION.

L'Assomption.....	Ne report.....			
" (Ville).....	Rév. J. Bte Jobin.....	L'Assomption.....	1	
".....	Alfred Longpré.....	".....	1	
".....	Jos. Parthenais.....	".....	1	
".....	Jos. Chevalier.....	".....		1
".....	Philippe Lanoie.....	".....		1
Laurentides.....	Edm. Desmarais.....	Laurentides.....	1	
L'Epiphanie.....	Jos. Morand.....	L'Epiphanie.....	1	
Repentigny.....	Jos. N. Thouin.....	Repentigny.....		1
".....	Aimé Lord.....	".....		1
St-Charles Lachenaie.....	Wilfrid Frappier.....	Lachenaie.....		1
St-Henri Mascouche.....	Sam. Chagnon.....	St-Paul l'Ermite.....	1	
".....	Adélarde Bourgouin.....	Mascouche.....	1	
".....	Alph. Soucisse.....	".....	1	
".....	Louis Lamoureux.....	".....	1	
".....	Jean Durand.....	".....	1	
St-Lin.....	Brien & Gauthier.....	St-Lin.....	1	
".....	T. Corbeil.....	La Plaine, Terrebonne.....	1	
St-Paul l'Ermite.....	Sam. Chagnon.....	St-Paul l'Ermite.....		1
".....	Philius Leveillé.....	".....		1
".....	F. O. Lachapelle.....	".....	1	
St-Roch l'Achigan.....	Jos. Delongchamp.....	St-Roch l'Achigan.....	1	
".....	E. Gariépy.....	".....	1	
".....	A. St André.....	".....		1
St-Sulpice.....	Arthur Chicoine.....	St-Sulpice.....	1	
".....	Jos. Robitaille.....	".....	1	1
Total.....			17	4 5

LAVAL.

St-François de Sales.....	Delycia Adam.....	St-François de Sales.....	1	
".....	O. Veillette.....	Louiseville, Maskinongé.....	1	
St-Martin.....	J. L. Allard.....	St-Martin.....	1	
Ste-Rose de Lima.....	A. Lahaie.....	Ste-Rose.....	1	
".....	R. Couvrette.....	".....	1	
".....	I. G. Héroux.....	".....		1
St-Rose (Village).....	Archambault & Cossette.....	".....		1
St-Vincent de Paul.....	Pas de rapport.....			
Total.....			5	2

LÉVIS.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	C	C	C C
St-Etienne de Lauzon	Victor Plante	Baillargeon	1		
St-Henri de Lauzon	A. Beaudoin	D'Artagnan	1		
"	Adolphe Fortier	St-Henri Village		2	
"	Nap. Beaudoin	D'Artagnan	1		
"	Zéphirin Talbot	"	1		
St-Lambert	de Bacourt	Scott Junction	1		
"	Jos. Paquet	St-Lambert		1	
St-Nicholas	Alph. Bergeron	St-Antoine de Lotbinière	1		
"	Frs. Fouquet	Darveau	1		
"	Chs. Filteau	Fréchette	1		
"	Xavier Lambert	Ross Mills	1		
Total.....			2	10	

L'ISLET.

L'Islet	L. A. Boucher	L'Islet	1		
"	O. Carboneau	"	1		
"	Eust. Ménard	L'Anse à Giles	1		
"	Cyrus Houle	Trois Saumons	1		
St-Aubert	(Syndicat de Cultivateurs) Rev. Chs. A. Leclerc	St. Aubert	1		
St-Cyrille de Lessard	Désiré Mercier	St-Cyrille de l'Islet		1	
St-Jean Port Joli	Edr. Vaillancourt	St-Jean Port Joli			1
"	Jean Gilbert	"	1		
St-Louise	Alphée Collin	Montmagny, Montmagny	1		
St-Pamphile	Honorius Chouinard	St-Pamphile	1		
St-Roch des Aulnaies	Aug. Pelletier & Cie	Village des Aulnaies	1	1	
"	Dolard Gendron	St-Roch des Aulnaies		1	
Total.....			9	3	1

LOTBINIÈRE.

Deschailions	Francis Hamel	Parisville			1
"	Edr. Barabé	St-Jean des Chaillons	1		
"	Arthur Paris	Parisville		1	
"	Victor Chandonnet	"		1	
"	Joseph Dubuc	St-Jean des Chaillons		1	
St-Agapit de Beau-rivage	A. Tremblay & Cie	St-Agapit	1		
"	Geo. Olivier	"			1
St-Agathe	Honoré Paquette	St-Agathe	1		
"	Oct. Boulanger	"	2		
"	Francis Massé	"		1	
St-Antoine de Tilly	Alphé Aubin	St-Antoine de Tilly		1	
"	Alph. Bergeron	"		1	
"	Félix Lambert	"		1	
"	G. Laroche & J. Côté	"		2	
St-Appolinaire	Ferd. Fortier	St-Appolinaire		2	
"	Alphé Aubin	St-Antoine de Tilly		1	
A reporter.....			5	12	2

MUNICIPALITIE

St-Croix	.....
"
"
St-Edouard	.....
"
"
"
St-Emélie	.....
"
St-Flavien	.....
"
"
St-Giles de Beauri	.....
St-Jean des Chaill	.....
"
"
St-Louis de Lotbin	.....
"
"
St-Narcisse de rivage	.....
"
St-Patrice de rivage	.....
St-Philomène de tierville	.....
"
St-Sylv. de Beauri	.....
"
"
"
Hunterstown	.....
Louiseville	.....
St-Alexis	.....
"
St-Ant. de la Rivière	.....
Loup	.....
"
"
St-Didace	.....

MASKINONGÉ—*Con.*

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	CC
Brought forward			1	6	
St-Jos. de Maskinongé.	Vve Ant. Saucier	Pont de Maskinongé	1		
"	Victor Sicard	Maskinongé		1	
"	N. Clément	Pont de Maskinongé		1	
"	M. Dalcourt	Maskinongé	1		
"	Arm. Dauplaise	Louiseville		1	
St-Justin	Fournier	St-Justin	1		
"	Pierre Bussières	"	1		
"	L. Ant. Caron	"		1	
St-Léon le Grand	Roy, Caron & Boisvert	St-Léon	1	2	
"	Paul Boisvert	"	1		
"	Sam. Lefrançois	"	1		
"	F. X. Dionne	"	1		
"	Wilbrod Ferron	"	1		
"	Thos. Roy	"	1	1	
"	Léonard Milot	"		1	
"	Arthur Lessard	Ste-Ursule		1	
St-Paulin	Henri Bergevin	St-Paulin	1	2	
Ste-Ursule	Alfred Lessard	Ste-Ursule	1	1	
"	Norbert Fleury	"	1		
"	Isaac Fournier	"	1		
"	Henri Lessard	"	1		
"	Sam. Boucher	"	1		
"	Tous. Grenier	"	1		
Total			5	25	6

MÉGANTIC.

Halifax Nord	Pas de rapport				
Halifax Sud	Beaudoin & Provencher	Beaudoin	1		
"	Louis & Oscar Gilbert	St-Ferdinand	2		
"	Louis Thibault	"	2		
"	Masse et Gilbert	"	1		
"	Masse & Bergeron	"	1		
"	Barth. Pelletier	"	1		
"	L. Gilbert	"		2	
Inverness	John F. L. Cox	Glen Murray	3		
"	Thos. Davidson	Millfield	1		
"	Wm. Coté	Inverness	1		
Ireland	Beurrerie de Maple Grove	Maple Grove	1		
"	Xavier Masse	New Ireland	1		
"	Jos. O. Roy	Richardville	1		
"	Basile Tanguay	Black Lake	1		
Ireland North	F. Mercier	"	1		
"	Louis Filion	Thedford Mines	1		
Leeds	Robert Anderson	Wilson's Mills	1		
"	Fréd. Gagnon	West Broughton, Beauce	1		
"	J. A. McCallum	Leeds Village	1		
Leeds East	Alfred Gagné	Leeds Est	2	2	
"	Delphis Roy	West Broughton	1		
Nelson	Fran. Masse	Boissonneault, Mégantic	1		
Plessisville	P. O. Drouin	Somerset		1	
Somerset North	Turcotte & Roy	St-Julie Station	4		
Carried forward			4	28	3

MUNICIPALITI
Somerset South ..
"
"
Ste-Anastasie de ..
"
St-Pierre Baptiste ..
"
Thetford Nord
"
"
"
Bedford
"
Cowansville
Dunham (village) ..
Dunham
"
"
"
"
Farnham
Farnham Ouest
"
"
"
Frelighsburg
N.D. des Anges de S ..
bridge
N.D. de Stanbridge ..
Stanbridge
Stanbridge Station ..
Sr-Armand East
" West ..
"
"
St-George de Clare ..
ville
"
"

MISSISQUOI—*Con.*

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
	Brought forward.....		5	21	6
St-Ignace de Stanbridge	Alex. Roy.....	Mystic.....		1	
"	Em. A. Russell.....	North Stanbridge.....		1	
"	Jerred Hawk.....	".....			1
St-Thomas de Foucault.	Mr. McGarry.....	Noyan.....		1	
Sweetsburg.....	J. Labombarde.....	Sweetsburg.....		1	
	Total.....		5	25	7

MONTCALM.

Chertsey.....	Alex. Rivet.....	St-Théodore.....		1	
".....	Ludger Beauregard.....	".....		1	
Kilkenny.....	Geo. Bennett.....	New-Glasgow, Terrebonne.....	1		
".....	Moïse Sauriol.....	540 rue Mont-Royal, Montréal...		1	
Rawdon.....	John Lane.....	Rawdon.....		1	
".....	Ritchie Boyce.....	".....		1	
".....	Mag. Barrette.....	".....		1	
".....	C. Beauséjour.....	".....		1	
".....	John Parkinson.....	".....		1	
St-Alexis.....	Oct. Magnan.....	St-Alexis.....		1	
".....	Ern. Liard.....	".....		1	
St-Esprit.....	Ray Lesage.....	St-Esprit.....		1	
St-Jacques.....	Clément Laviolette.....	St-Jacques.....		1	
".....	Nap. Marion.....	".....		1	
".....	Fréd. Goyette.....	".....		1	
St-Julienne de Rawdon.....	J. Bte. Payan.....	St-Julienne.....		1	
St-Liguori.....	Joseph Gaudet.....	St-Liguori.....		1	
".....	Aquila Lefebvre.....	".....		1	
".....	Moïse Brault.....	".....		1	
St-Marie Salomé.....	Louis B. Fontaine.....	Rue Lanaudière, Joliette.....		1	
	Total.....		10	10	

MONTMAGNY.

Berthier.....	Boucher & Mercier.....	Berthier (en bas).....		1	
Cap St-Ignace.....	J. Eloi Jalbert.....	Cap St-Ignace.....		1	
".....	Edm. Bélanger.....	".....		1	
".....	Edouard Pelletier.....	".....		1	
Montmagny.....	Geo. Fournier.....	Montmagny.....		1	
".....	Wilfrid Proulx.....	".....		1	
".....	Naz. Bernatchez.....	".....		1	
Montminy.....	Désiré Delagrave (gérant).....	St-Paul du Bruton.....		1	
".....	Théop. Nicole.....	".....		1	
St-Antoine de l'Île aux Grues.....	Roy & Cie.....	Île aux Grues.....		1	
St-François Rivière du Sud.....	Adélaré Bélanger.....	St-François Montmagny.....		1	
".....	Jos. Blais.....	".....		1	
St-Pierre Riv. du Sud.....	Zéph. Cloutier.....	St-Pierre.....		1	
".....	Elzéar Blais.....	".....		1	
	Total.....		10	4	

MUNICIPALITI

Chateau Richer.
L'Ange Gardien.
".....
Ste-Anne de Bea
Ste-Famille I. O.
St-Féréol.....
St-Jean I. O.....
St-Joachim.....
St-Pierre I. O.....
".....

St. Tite des Caps

Napierville.....
St-Cyprien.....

St-Edouard.....
".....
St-Michel Archan

St-Patrice de She
ton.....

St-Rémi de la Sall
".....

La Nativité de B
court.....

".....

".....

Nicolet.....

".....

Ste-Angèle de Lav

Ste-Brigitte des Sa

St. Célestin.....

".....

".....

St-Edouard de Gen

".....

Ste-Eulalie.....

".....

".....

NICOLET—*Con.*

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
Brought forward.....			1	18	3
Ste-Gertrude.....	A. Ouellette.....	Ste-Gertrude.....	1		
".....	Jos. Picher.....	".....	1		
".....	Noé Morissette.....	".....	2		
".....	Narc. Dorion.....	".....	1		
".....	H. E. Fontaine.....	Rivière Gentilly.....	1		
St-Grégoire le Grand.....	Hubert Dufresne.....	St-Grégoire.....	1		
".....	Luc Forest.....	".....		1	
".....	Olivier Hébert.....	".....	1		
".....	Luc Héon.....	".....	1		
".....	Auréus Bergeron.....	".....	1		
".....	Luc Thibodeau, sr.....	".....	2		
".....	Gédéon Houle.....	".....	1		
St-Jean Bte de Nicolet.....	Pas de rapport.....	".....			
St-Léonard.....	Jos. Ern. Doucet.....	St Léonard d'Ashton.....	1		
".....	Hyac. Cloutier.....	".....	1		
".....	Xavier Lacourcier.....	St-Léonard.....	1		
".....	Jos. Hébert.....	St-Léonard d'Ashton.....		1	
Ste-Marie de Blandford.....	Alfred Baron.....	Ste-Marie de Blandford.....	1		
Ste-Monique.....	J. B. Beauchemin.....	Ste-Monique.....		1	
".....	Syndicat de Ste-Perpétue.....	Ste-Perpétue.....	1		
".....	E. Desfossés.....	".....	1		
".....	Syndicat du Grand St- Esprit.....	Grand St-Esprit.....	1		
".....	Thomas Lafond.....	La Baie, comté Yamaska.....	1		
Ste-Perpétue.....	Luc Girard.....	Ste-Perpétue.....	1		
".....	Eug. Beauchemin.....	".....	1		
St-Pierre les Becquets.....	Jos. Audet.....	St-Cécile de Lévrard.....	1	1	
".....	Paul Spénard.....	St-Pierre les Becquets.....	1		
".....	Alfred Naud.....	".....	1		
".....	Ferd. Cinq-Mars.....	".....	1		
".....	Amb. Tousignan.....	Ste-Sophie de Lévrard.....	1		
St-Samuel.....	Adol. Bergeron.....	St-Val're de Bulstrode, Arthabaska.....	1		
Ste-Sophie de Lévrard.....	Paul Barabé.....	Ste-Sophie de Lévrard.....	1		
".....	Naz. Trottier.....	".....	1		
".....	Damase Dubuc.....	".....		1	
St-Sylvère.....	Nestor Parent.....	St-Sylvère.....	1		
".....	Henri Mailhot.....	Ste-Gertrude.....	1		
St-Wenceslas.....	Albert Thibodeau.....	St. Wenceslas.....	1		
".....	Télesp. Vigneau.....	Aston Station.....	1		
Total.....			3	51	8

OTTAWA.

Amherst.....	Norbert Racicot.....	St-Rémi.....	1		
".....	R. H. Conroy.....	Aylmer.....	1		
Aylmer.....	P. M. A. Labelle.....	Aylmer Est.....	1		
Aylwin.....	Gordon & Reid.....	Aylwin.....	1		
Buckingham.....	Gorman & Henwood.....	Buckingham.....	1		
".....	Thos. Ross & Son.....	Hawkesbury, Ont.....	1		
".....	Mr. Lamarche.....	Angers.....	1		
Hartwell.....	Jos. Joly.....	Chêneville.....	1		
Carried forward.....			2	6	

MUNICIPALITI

Hincks.....					
" (South)...					
" (East)...					
L'Ange Gardien.					
Lochaber (North)					
".....					
" (West)					
Lochaber East ..					
".....					
Lorn.....					
".....					
Masham.....					
Montebello.....					
N.-D. de Bonseco					
Northfield.....					
Pointe Gatineau.					
Portland.....					
".....					
".....					
Ripon.....					
".....					
".....					
St-André Avelin.					
".....					
".....					
Ste-Angélique...					
".....					
".....					
".....					
".....					
St-Malachie.....					
Suffolk & Adding					
Templeton (Est.)					
".....					
".....					
Templeton (Est)					
Thurso.....					
Wakefield.....					
" (Ouest)					
".....					
Wright.....					

OTTAWA—*Con.*

			MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	CC
			Brought forward.....			2	6	
.....	1	18	3	Hincks	Jos. Lasalle	Lac Ste-Marie	1	1
.....	1			" (South).....	R. & H. Conroy	Deschênes Mills	1	
.....	2			" (East).....	Pas de rapport			
.....	1			L'Ange Gardien.....	Damase Meilleur	Angers		1
.....	1			Lochaber (North).....	John A. Dent	St-Sixte	1	
.....	1			"	J. Jacob	North Nation Mills	1	
.....	1	1		" (West).....	Peter McLaughlin	Lochaber Bay	1	
.....	1			"	George Ross	Silver Creek	1	
.....	1			Lochaber East	Rév. J. Chatelain	Thurso	1	
.....	1			"	A. Rochon	Thurso	1	
.....	2			Lorn	Wm. Farrell	Farrelton	1	
.....	1			"	Wm. Gibson	Lasalles	1	
.....	1			Masham	Aug. Trudel	Ste-Geneviève, Champlain	1	
.....	1			Montebello	Ferd. Huneau	Montebello	2	
.....	1			N.-D. de Bonsecours.....	"	"	1	
.....	1			Northfield	Aug. Trudel	Gracefield	1	
.....	1	1		Pointe Gatineau	Pas de rapport			
.....	1			Portland	H. Charberlain	Lucerne	1	
.....	1	1		"	Thos. Ross & Son	Hawkesbury, Ont.	1	
.....	1			"	F. X. Charbonneau	N.-D. de la Salette	1	
.....	1			Ripon	Albert Aubry	Ripon	1	
.....	1			"	Louis Neveu	Montpellier	1	
.....	1			"	Alfred Provost	Valencay	1	
.....	1			"	Louis Quesnel	Côte St-Pierre	1	
.....	1			St-André Avelin	Avila Chenier	St-André Avelin	1	
.....	1			"	J. Bte Major	"	1	
.....	1	1		"	Jos. Bellisle	"	1	
.....	1			Ste-Angélique	W. C. Edwards & Cie	North Nation Mills	1	
.....	1			"	Alderic Lalonde	Portage de la Nation	1	
.....	1			"	Théod. Bonhomme	Papineauville	1	
.....	1			"	Jules Bricault	Plaisance	1	
ka.	1			"	Vve H. Robinson	St-Amédée	1	
.....	1			"	Jean Rieux	St-André Avelin	1	
.....	1			"	Horm. Pilon	St-Philippe, Argenteuil	1	
.....	1	1		St-Malachie	F. M. Gorman	Buckingham	1	
.....	1			Suffolk & Addington.....	Stan. Archambault & Cie	St-Emile de Suffolk	1	
.....	1			Templeton (Est).....	Damase Meilleur	Angers	1	
.....	1			"	Trefflé Lamarche	Cousineau	1	
.....	1			"	Société de fromage et d'Angéline	L'Ange Gardien	1	
.....	3	51	8	Templeton (Est).....	Wm. Muir	Ste-Rose de Lima	1	
.....	1			Thurso	Louis Sauvé	Thurso	1	
.....	1			Wakefield	Pas de rapport			
.....	1			" (Ouest).....	Wakefield Cheese Co.	Wakefield	1	
.....	1			"	Wm. Farrell	Farrelton	1	
.....	1			Wright.....	Chs. Tremblay	Pointe aux Trembles	1	
						Total.....		
						4	46	1
.....	1							
.....	1							
.....	1							
.....	1							
.....	1							
.....	1							
.....	1							
.....	1							
.....	2		6					

PONTIAC.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
Bristol.....	A. W. McKechnie.....	Elmside.....		1	
Clarendon.....	Pas de rapport.....				
Ile du Calumet.....	F. H. Rouleau.....	Calumet Island.....		1	
Litchfield.....	Patrick Sloan.....	Vinton.....		1	
Portage du Fort.....	Pas de rapport.....				
Shawville.....	".....				
Témiscamingue.....	".....				
Total.....				3	

PORTNEUF.

N.-D. des Anges.....	J. P. Moreau.....	Montauban.....		1	
N.-D. de Portneuf.....	M. S. Delisle.....	Portneuf.....		1	
".....	Narc. Piché.....	".....		1	
".....	Jos. Ford, jur.....	".....		1	
".....	Daniel Papillon.....	St-Basile.....		1	1
".....	Frs. Marcotte.....	".....		1	1
".....	Géd. Hamelin.....	Lachevrotière.....		1	1
Pointe aux Trembles.....	Alfred Clermont.....	Pointe aux Trembles.....		1	
".....	G. A. Roche et al.....	".....		1	1
".....	Philias Hardy.....	".....		1	1
".....	Sim. Gingras.....	".....		1	1
St-Alban, Alton et Mon-					
tauban.....	Octave Naud.....	St-Alban.....		2	
".....	Hubert Perron.....	".....		1	
".....	John Savard.....	".....		1	
St-Augustin de Des-					
maures.....	Phydime Rochette.....	St-Augustin.....		1	
".....	Wilf. Vézina.....	".....		1	
St-Basile.....	Bishop, Pepin & Cie.....	St-Basile Station.....		1	
".....	Jos. Morissette.....	".....		1	
".....	Décarreau, Bernard & Cie.....	St-Basile.....		1	
".....	Louis Robitaille.....	".....		1	
".....	France Bédard.....	".....		1	
".....	Leclere & Marcotte.....	".....		1	1
".....	McCarthy, Bernard & Cie.....	".....		1	1
St-Casimir.....	Rivard & Lacourcière.....	St-Casimir.....		1	
".....	Tessier & Rivard.....	".....		1	
".....	Alfred Foley.....	".....		1	
".....	Henri Lachance fils Alf.....	".....		1	
".....	Jos Perron.....	".....		1	
".....	Roch Massicotte.....	".....		1	
".....	Tanèrede Germain.....	".....		1	
Ste-Catherine de Fos-					
sambault.....	Wilfrid Vézina.....	Cap Santé.....		1	
".....	Amb. Bussières.....	Pont Rouge.....		1	
St-Chs. des Grondines.....	Ls. Archambault.....	Grondines.....		1	1
Ste-Famille du Cap					
Santé.....	J. M. Bernard.....	Cap Santé.....		1	
".....	Wil. Vézina.....	".....		1	
".....	Gab. Hamel.....	".....		2	
St-Gilbert.....	Oct. Naud.....	Poiré.....		1	
".....	Hubert Paquin.....	St-Gilbert.....		1	
Carried forward.....				15	26 1

MUNICIPALITIE

St-J.-Bte. des Ecur
Ste-Jeanne de Neu
"
St-Joseph de Desc
bault.....
"
"
St-Raymond.....
"
"
"
St-Ubalde.....

Beauport.....
L'Ancienne Lorette
St-Ambroise de la J
Lorette.....
St-Chs de Charlesl
St-Dunstan du Lac
port.....
Ste-Foye.....
St-Gab. de Valcart

Sorel.....
St-Aimé.....
"
"
Ste-Anne.....
St-Joseph.....
"
St-Louis.....
"
"
St-Marcel.....
"
St-Ours.....
"
"
"
"
" (Ville).....
St-Pierre de Sorel.
St-Roch.....
St-Robert.....
Ste-Victoire.....
"

RICHMOND.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
Brompton	J. Léo Cayoutte	Brompton Falls	1		1
"	Arthur Martelle	"	1		
"	Zoël Pellerin	"	1		
Cleveland	Wm. Houle	St-Cyr		2	
"	Joe Ledoux	"	1		
"	Jos. Lefebvre	French Village, Drummond		2	
Danville	A. M. McCallum	Danville	1		
"	S. Leet & Son	"	1		
"	Joe Lafrance	"		2	
Melb. & Brompt. Gore	H. L. Burt	Upper Melbourne	1		
"	A. McKey	"	1		
"	John A. McLeod	Melborough	1		
"	John Monroe	"	1		
"	Gilbert Stalker	Flodden	1		
"	Jas. McNaughton	"	1		
"	John Watson	Kingsbury	1		
"	James Dunbar	Melbourne Ridge	1		
"	H. W. Armstrong	Upper Melbourne	1		
"	Wm. D. Stalker	Melbourne Ridge	1		
Richmond	Wm. Houle	St-Cyr		1	
"	Miss Thompson	Richmond, Que.	1		
Shipton	J. R. Dennison	Denison's Mills		1	
"	R. Smith	Nicolet Falls	1		
"	Joe Parenteau	Asbestos	1		
"	J. Mablé	Slatington	1		
Stoke	Frs Dubreuil	Stoke Centre	1		
St-F.-X. de Brompton	Bédard, Lamontagne & Cie	St-F.-X de Brompton	1		
"	Pierre Labbé	"	1		
"	Arnold Lindsay	Windsor Mills	1		
St-George de Windsor	Jos. Lépine	St-George de Windsor		2	
"	Geo. Richer	"	1		
"	Ad. Marcotte	"	1		
"	Pierre Kirouac	"	1		
"	Noel Thibault	"	1		
Windsor	J. A. Camirand	Sherbrooke	1		
"	Charles Bégin	Windsor Mills		1	
"	Alex. Henderson	Corris		1	
"	Wm. Laroque	Windsor Mills		1	
Total			5	37	

RIMOUSKI.

Dalibaire et Romieu	Eug. Verreau	Petits Méchins	1		
MacNider	Chouinard & Roy	MacNider	1		
Matane (village)	Fraser & Gagnon	Matane	1		
" (parish)	Harrison & Truchon	"	1		
"	Stan. Thibault	Petite Matane	1		
Mont Joli	Jos. Chouinard & Cie	St-Fabie	1		
"	Jos. Roy	Station		1	
N.-D. Sacré-Cœur	Emile Bélanger	N.D. de Rimouski	1		
St-Anaclet	Arthur Marmen	St-Anaclet		1	
St-Angèle de Mérici	Jos. Ross	St-Angèle de Rimouski	1		
"	Victor Thibault	"		1	
Carried forward			7	4	

MUNICIPALITIES

St-Benoit Jos Labre
Ste-Cécile du Bic..
"
St-Damase
St-Donat
St-Fabien de la
Ha! Ha!
"
Ste-Félicité
"
Ste-Flavie de Lepag
"
"
St-Gabriel
St-Germain de
mouski (ville)
"
St-Joseph de Lepag
St-Luce
"
St-Mathieu de Riou
"
St-Moise
St-Octave de Métis
"
"
St-Pierre du Lac
St-Simon de la E
Ha! Ha!
St-Ulric de Matane
St-Valérien
"
"
Tessier
"
"
Marieville
N.-D. de Bonsecours
"
"
"
St-Ange Gardien
"
St-Angèle de Monno

SHERBROOKE.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
Ascot	Valéri Duplin	Ascot Corner	1		
"	Moïse Rainville	Sherbrooke	1		
Compton	A. Gérin	Coaticook, comté Stanstead	3		
Lennoxville	Société, J. A. Hayes, gérant	Lennoxville	1		
Oxford	Jean Plante	Roch Forest	2		
"	Horm. Laplante	South Stukely, comté Shefford	1		
"	A. J. Whitehead	Cherry River	1		
Sherbrooke (Ville)	Alp. J. Camirand	Sherbrooke	1		
Total			2	9	

SOULANGES.

La Station du Coteau	Emery Sauvé	Coteau Station	1		
St-Clet	J. Bte. Marleau	St-Clet		1	
St-Ignace du Coteau du Lac	Jos. A. Bourbonnais	Pont Château	1		
"	Jos. Lalonde	Coteau du Lac		1	
St-Jos. de Soulanges	Hector Constant	St-Dominique des Cèdres	1		
"	Emery L'Ecuyer	"	1		
"	Sam Leroux	Cèdres	1		
" (Village)	Oliv. Charlebois	Cèdres	1		
St-Polycarpe (Village)	J. H. Leclair	St-Polycarpe	1		
St-Télesphore	H. Gareau	St-Télesphore	1		
"	Ls. Charlebois	"	1		
St-Zotique	Frs. Méthot	Rivière Beaudette	1		
Total			10	1	1

STANSTEAD.

Barford	Jas. Mullin	Coaticook	1		
"	Ev. Vincent	Villette, Compton	1		
"	Phi. Tougas	Dixville	1		
"	A. Leblanc	"	1		
"	Olivier Trudeau	Coaticook	1		
"	Pilette & Dupont	St-Herméngilde	1		
"	J. P. Dupuis	"	1		
"	Louis Dupuis	"	1		
Barnston	G. B. Hall	Barnston	1	1	
"	E. N. Heath	Way's Mills	1		
"	Fred. L. Brown	"	1		
"	W. J. Niblock	Kingscroft	1		
"	C. A. Kezar	South Barnston	1		
"	W. W. Heath	Heathton	1		
"	H. E. Corliss	Corliss	1		
"	Edwin C. Wells	Ladd's Mills	1		
"	A. St-Martin	Coaticook	1		
Coaticook	A. Gérin	"	2	4	
Dixville	Alb. Humphrey	Dixville	1		
Hatley	J. Morrisson	East Hatley	1		
"	B. Reed	"	1		
Magog	S. Carrier	Magog	1		
" (village)	Pas de rapport	"			
Carried forward			6	22	

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MUNICIPALITIES.	PROPRIETORS OR MANAGE.	POST OFFICE.	Ch C C C
Brought forward.....			6 22
Stanstead	S. W. Sargeant	Way's Mills	1
"	W. W. Heath	Heathton	1
"	C. A. Kezar	South Barnston	1
"	H. E. Corliss	Corliss Mills	1
"	Fred. Martin	Barnston	1
"	W. K. Baldwin	Baldwin's Mills	1
"	Wm. Brown	Way's Mills	1
"	Jos. Colt	Hatley	1
"	Jas. McKay	North Hatley	1
"	Moïse Rainville	Katevale	1
"	Alex. Thompson	Cassville	1
"	F. H. Remick	Fitch Bay	1
"	W. B. Bullock	Marlington	1
"	Chs. A. Jenkins	Smith's Mills	1
"	Geo. B. Hall	Barnston Corner	1
"	Eug. A. Baldwin	Stanstead Plain	1
"	Nelson Fish	Minton	1
"	Jas. Morrison	East Hatley	1
Total.....			7 35 4

ST-HYACINTHE.

1	La Présentation	M. A. Piché	Présentation	2
1	N.-D. St-Hyacinthe	La Banque de St-Hyacinthe	St-Hyacinthe	1
1	"	J. A. Archambault	"	1
1	St-Barnabé	Jos. Langevin	St-Barnabé	1
1	"	F. H. Chapdeleine	"	1
1	"	Philius Leblanc	"	1
1	St-Charles	Clod. Milette	St-Charles, Riv. Richelieu	1
1	St-Damase	Z. T. Marchessault	St-Damase	1 1
1 1	"	Jacques Jodoin	"	1
1	St-Denis	J. Bte Phaneuf	St-Denis, Riv. Richelieu	1 1
1	"	Pierre Anger	"	1 1
1	"	Michel Richard	"	1
1	St-Hyacinthe le Confes- seur	Ecole d'Industrie Laitière	St-Hyacinthe	1
1	St-Jude	Aug. Germain	St-Jude	1
1	"	Pierre St-Germain	"	1
1	"	L. A. L'Heureux	"	1
2 4	Ste-Marie Madeleine	Horm. Larue	St-Denis, Riv. Richelieu	1
1	"	Nap. Chabot	Ste-Madeleine	1
1	St-Thomas d'Aquin	Grégoire Charbonneau	St-Thomas d'Aquin	1
1	"	Michel Piché	La Présentation	1
1	"	Nap. Bienvenu	St-Thomas d'Aquin	1
Total.....				18 7

ST. JEAN.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
St-Bernard de Lacolle	L. A. Corbière	Lacolle	1		
"	Jas. W. Stewart	Henrysburg	1		
St-Jean	J. A. Langelier	St-Jean	1		
St-Blaise	Sam Roy	Sabrevois, Iberville	1		
"	Thomas Girard	St-Jean		1	
St-Luc	Fabrique de fromage	St-Luc		1	
Ste-Marguerite de Blairfindie	Henri Ouimet	L'Acadie	1		
St-Valentin		J. M. Hébert	St-Valentin		1
"	Cyrille Boudreau	"			1
Total			3	4	2

ST. MAURICE.

La Visitation de la Pointe du Lac	Olivier Duplessis	Pointe du Lac	1		
"		Thomas Déchesne	"		1
"		Télesphore Fréchette	"		1
Ste-Anne de Yamachiche	Adrien Milot	Yamachiche			1
St-Barnabé	Ed. Paquin & Lefrançois	St-Barnabé			1
"	Pierre Corriveau	"			1
"	Thos. Lacerte	"			1
"	Alphonse Grenier	"			1
"	Phi. Gélinas	"			1
"	Wilfrid Elliotte	Moulin Chorette			1
"	Z. Héroux	St-Sévère			1
St-Boniface de Shawenegan	Pas de rapport				
St-Elie	Ludger Rivard	St-Elie			1
"	Isate Déchaine	"			1
St-Etienne des Grès	Rap St-Onge	St-Etienne des Grès			1
"	Nap. Ringuette	Ste-Ursule, Maskinongé			1
Ste-Flore	Hilaire Lupien	Ste-Flore			1
"	Benjam. Lavergne	"			1
"	Alf. Terrien	"	1		
"	Uldaric Leblanc	"			1
St-Mathieu	Thos. Déziel	St-Mathieu de Caxton			1
St-Sévère	Victor Milot	St-Sévère			1
"	Alfred Ferron	"			1
"	Paul Pelletier	"			1
"	Tous. Grenier	Ste-Ursule, Maskinongé			1
Trois-Rivières (ville)	Horm. Duval	Banlieue des Trois-Rivières			1
"	J. A. Milot	Ste-Marguerite Rivières	1	1	
Yamachiche	Thos. Meunier	Yamachiche			1
"	L. E. Lajoie & Cie	"			1
"	Hercule Bourassa	"			1
"	Thos. Roy	St-Léon, Maskinongé			1
Total			4	15	12

MUNICIP.

Bégon
 Fraserville ..
 St-Patrice ..
 Hocquart ...
 Isle Verte ..
 Madawaska ..
 St-Antoine ..
 St-Arsène ...
 St-Clément ..
 St-Elloi
 St-François-X

St-Hubert ...

St-Louis du F
 St-Paul de la
 Trois-Pistoles

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St-Epiphanie .

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Whitworth ..

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Doncaster

New-Glasgow .

Ste-Adèle

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Ste-Agathe

Ste-Anne des P

St-Janvier

St-Jérôme

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Ste-Marguerie

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VAUDREUIL.

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
Como	Simpson & Larôque	Hudson	1		
Newton	Don. S. Morrison	Peveril		1	
"	Ant. Besner	Ste-Justine de Newton	1		
Pointe Fortune	Thos. Ross & Son	Hawkesbury, Ont.	1		
Rigaud (village)	J. Bte. Besner	Rigaud			1
Ste-Jeanne de Chantal					
de l'Ile Perrot	Azilda Daoust	Ile Perrot	1		
"	Eus. Peladeau	"		1	
St-Lazare	Oscar Denis	St-Lazare de Vaudreuil	1		
Ste-Madel'ne de Rig'ud	Trefflé Pilon	Rigaud		1	
Ste-Marthe	Alf. O. Ranger	Beauvoir	1		
"	Michel McMann	Ste-Marthe	1		
"	Peter Monahan	"		2	
"	Rosario Séguin	Séguin		1	
St-Michel de Vaudreuil	Basile Charlebois	Vaudreuil	1		
"	Osias Brasseur	"	1		
"	Paul Denis	"	1		
" (village)	Amédée Castonguay	"	1		
Très Saint Rédempteur	Geo. Valois	St-Rédempteur	1		1
"	Nap. Quesnel	"		1	
Total			12	7	2

VERCHÈRES.

Ste-Anne de Varennes	Oct. Allard	Varennes	1		
St-Antoine, Riv. Cham-					
bly	Cartier, Archambault & Bonin	St. Antoine	1		
"	Nap. Birtz	"	1		
"	Elie Gaudet	"	1		
St-F.-X. de Verchères	Jos. Dansereau	Verchères	1		
St-Julie	Louis Blain	St-Julie de Verchères	1		
St-Marc de Cournoyer	Alexis Chicoine	St-Marc	1		
"	Gasp. Leroux	"	1		
St-Mathieu de Belœil	No report				
Ste-Théodosie	Bruno Larose	Ste-Théodosie	1		
Ste-Trinité de Contre-					
œur	Jos. Cormier	Contreœur	1		
"	Ls. Fontaine	"	1		
Total			4	7	

WOLFE.

D'Israeli	S. E. Adam	D'Israeli	1		
"	Albert Rondeau	South Dudswell		1	
Dudswell	W. C. Bishop	East Dudswell	1		
"	T. C. Osgood	Dudswell Centre	1		
"	James Andrew	"	1		
"	Ephrem Lizée	Marbleton	1		
"	W. W. Oughtred	"	1		
Garthby	Achille Jacques	Garthby Station	1		
"	Bisson & Lepage	"	1		
Carried forward			1	8	

MUNICIPAL

Ham (Nord)

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YAMASKA—*Con.*

MUNICIPALITIES.	PROPRIETORS OR MANAGERS.	POST OFFICE.	Ch	C	C C
Brought forward.....			13	3	
St-Ant. de la B. du F.	J. N. Duguay & Cie.	La Baie.....	1		
St-Bonav. d'Upton	Sa. Pelletier.....	St-Bonaventure d'Upton.....	1		
"	Dorilla Desmarais.....	"	1		
"	Eus. Proulx & Cie	La Baie.....	1		
St-Elphège.....	Siméon Paquette & Cie.	St-Elphège.....	1	2	
"	R. Hamel & Coll.....	"	1		
St-David de Déguire..	Nap. Richard.....	St-David de Yamaska.....	1		
"	Chs. Cyr.....	"	1		
"	Horm. Lebrun.....	"	1		
"	Moïse Desblois.....	"	1		
"	Jacob Paré.....	"		1	
St-François du Lac St-	Narc. Parenteau.....	Yamaska Ouest.....	1		
Pierre.....	Martin & Fontaine.....	Pierreville.....	1		
St-Guillaume d'Upton.	Louis Vallée.....	St-Guillaume d'Upton.....	1		
"	E. Saucier.....	"	1		
"	J. B. Vigneault.....	"		1	
"	Adélaré Lanoie.....	"		1	
St-Michel d'Yamaska.	Parenteau & Parenteau.	Yamaska.....	1		
"	C. Robidou & Cie.....	"	1		
"	(village). Roch P. Parenteau.....	"	1		
"	Thos. Delaney.....	"	1		
St-Pie de Guire.....	Edm. Dauplaise.....	St-Pie de Guire.....	1		
"	V. Beaulac et al.....	St-David de Yamaska.....	1		
"	Nap. Richard & Cie.....	"	1	1	
St-Thomas de Pierre-	Wm. Parent.....	St-Elphège.....	1		
ville.....	Duhaime & Frère.....	St-François du Lac.....	1		
"	Félix Desfossés.....	St-Pie de Guire.....	1		
"	Allie Amant.....	Pierreville.....	1		
St-Zéphirin de Courval.	Herm. Lefebvre.....	St-Zéphirin.....		1	
"	Jos. Rousseau.....	St-Zéphirin.....	1		
"	Toussaint Roy & Cie.....	"	1		
"	Zéphyr St-Germain.....	"	1		
"	Onésime Cloutier.....	"	1		
"	Toussaint Roy.....	"	1		
"	Omer Parent.....	Berthierville, Berthier.....	1		
"	Aimé Leclair et al.....	St-Zéphirin.....	1		
"	Elisée Parent.....	"	1		
"	Alex Simoneau.....	"	1		
"	Emile Lahaie.....	"	1		
"	G. P. Rousseau.....	"	1		
Total.....			3	49	8

Argenteuil .
 Arthabaska .
 Bagot.....
 Beauce.....
 Beauharnois
 Bellechasse .
 Berthier...
 Bonaventure
 Brome.....
 Chambly...
 Champlain .
 Charlevoix .
 Chateauguay
 Chicoutimi .
 Compton...
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 Drummond .
 Gaspé, No. 1,
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 Huntingdon .
 Iberville...
 Jacques Carti
 Joliette.....
 Kamouraska.
 Lac St-Jean .
 Laprairie....
 L'Assomption
 Laval.....
 Lévis.....
 L'Islet.....
 Lotbinière...
 Maskinongé...
 Mégantic....
 Missisquoi...
 Montcalm...

COUNTIES.	CREAMERIES.	CHEESERIES.	COMBINED C. AND C.
Brought forward.....	175	811	154
Montmagny	10	4	0
Montmorency	9	2	0
Napierville	6	3	1
Nicolet	3	51	8
Ottawa	4	46	1
Pontiac	0	3	0
Portneuf	17	39	1
Québec	4	1	0
Richelieu	2	21	4
Richmond	5	37	1
Rimouski	21	24	0
Rouville	0	25	6
Saguenay	0	4	0
Shefford	3	48	10
Sherbrooke.....	2	9	0
Soulanges	10	1	1
Stanstead	7	35	4
St-Hyacinthe	0	18	7
St-Jean	3	4	2
St-Maurice	4	15	12
Témiscouata	14	4	0
Terrebonne.....	15	10	0
Vaudreuil.....	12	7	2
Verchères.....	4	7	0
Wolfe	4	45	1
Yamaska	3	49	8
	337	1,323	223
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ALPHABETICAL TABLE

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