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

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

1894

*PRINTED BY ORDER OF THE LEGISLATURE*



QUEBEC  
PRINTED BY CHARLES FRANÇOIS LANGLOIS  
PRINTER TO HER MOST EXCELLENT MAJESTY THE QUEEN

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## **THIRTEENTH 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 1894, and of the Annual Meeting held at St. Joseph, Beauce, 4th, 5th and 6th December last.

THE SECRETARY-TREASURER OF THE DAIRYMEN'S

ASSOCIATION OF THE PROVINCE OF QUEBEC,

**EMILE CASTEL.**

St. Hyacinthe, May 2nd 1894.

# OFFICERS AND DIRECTORS OF THE DAIRYMEN'S ASSOCIATION

## FOR 1895

Honorary President : THE HON. P. B. DE LABRUÈRE, St. Hyacinthe.  
Honorary Vice-President : M. N. BERNATCHEZ, M. P. P., Montmagny.  
President : L'ABBÉ T. MONTMINY, St. Georges de Beauce.  
Vice-President : S. A. FISHER, Knowlton.  
Secretary-Treasurer : EMILE CASTEL, St. Hyacinthe.

### DIRECTORS

DISTRICT	NAMES	RESIDENCE
Arthabaska.....	MM. T. C. CARTIER.....	Kingsey-French-Village.
Beauce.....	PHILIAS VEILLEUX.....	St. François-Beauce.
Beauharnois.....	ROBERT NESS.....	Howick.
Bedford.....	H. S. FOSTER.....	Knowlton.
Charlevoix et Saguenay.....	J. D. GUAY.....	Chicoutimi.
Chicoutimi.....	JOS. GIRARD, M. P. P. ....	St. Gédéon, L. St.-J.
Gaspé.....	D. O. BOURBEAU.....	Victoriaville.
Iberville.....	MICHEL MONAT.....	Mount Johnson.
Joliette.....	SAM. CHAGNON.....	St-Paul l'Ermite.
Kamouraska.....	J. C. CHAPAI.....	St-Denis en-Bas.
Montmagny.....	GABRIEL DUMONT.....	Ste-Hénédine.
Montréal.....	ALEXIS CHICOINE.....	St-Marc.
Ottawa.....	J. A. VAILLANCOURT....	Montréal.
Québec.....	JOS. DEROME.....	St-Basile.
Richelieu.....	J. L. LEMIRE.....	La Baie du Febvre.
Rimouski.....	J. DE L. TACHÉ.....	St-Hyacinthe.
St-François.....	J. A. CAMIRAND.....	Sherbrooke.
St-Hyacinthe.....	M. MACDONALD, M. P. P. ....	Acton Vale.
Terrebonne.....	DR W. GRIGNON.....	Ste-Adèle.
Trois-Rivières.....	L'ABBÉ D. GÉRIN.....	St-Justin.

### Specialist-Adviser :

M. ED. A. BARNARD,

| | L'Ange Gardien, Mtcy.

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## LEGISLATION

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AUTHORISING THE FORMATION OF AN ASSOCIATION UNDER THE NAME OF "THE  
DAIRY ASSOCIATION OF THE PROVINCE OF QUEBEC"  
(1749 to 1755 Q. R. S. and Schedule)

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**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. 66, 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, s. 2 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; 50 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 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 methods to be followed for the production of milk, the fabrication of dairy produce, and, the advancement of the dairy industry in general, may subdivide the Province into regional divisions, in which syndicates, composed of proprietors 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 organised 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 organised 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, approved by the Lieutenant-Governor in Council.

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 board 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

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secretary-treasurer and also one director for each judicial district of the Province, chosen from among the members of the association, domiciled in such district. 45 v., c. 66, s. 7.

**1755.** The officers and directors of the association shall prepare and present, at the annual meeting of the association, a detailed report of their operations during the past year, indicating the names of all the members of the association, the amount subscribed and paid by each, the names of the factories, inventions, improvements and products which deserve public notice, and giving all the information which deserves public notice, as well as all the information which they deem useful in the interest of the dairy industry. 45 v., c. 66, s. 8.

#### SCHEDULE

##### MENTIONED IN ARTICLE 1750

We, the undersigned, agree to form ourselves into an association under the provisions of section thirteenth of chapter seventh of title fourth of the Revised Statutes of the Province of Quebec, respecting the Dairy Association of the Province of Quebec; and we hereby, severally, agree to pay to the treasurer annually, while we continue members of the Association, the sums opposite to our respective names, and we further agree to conform to the rules and by-laws of the said Association:

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## 52 VICT., 1889 CAP. XXI.

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

(Assented to 21st March, 1889).

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

**I.** 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.

## FARMER'S AND DAIRYMEN'S ASSOCIATION.

**"1755a.** The Lieutenant-Governor in Council may authorise the formation, in each judicial district of the Province, of an association, having for its object the promotion of agriculture, the improvement in 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 Colonisation 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 Agriculture and Colonisation, who shall, as soon 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

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officers and employés, and generally, the management of its 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 the 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 the title fourth of the Revised Statutes of the Province of Quebec, respecting Farmer's 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 HI, 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 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 intends to do business, such persons and all such other persons as may thereafter become member of such society, their heirs, executors, curators, administrators, successors and assigus, respectively, shall constitute a body politic and corporate, under the name of "the 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 where such society has its principal place of business, and be also, without delay, forwarded to the Commissioner of Agriculture and Colonisation. 45 V., c. 65, s. 1; 50 V., c. 7, s. 12.

**5478.** The declaration, to be made under the provisions 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. 45 V., c. 65, s. 9.

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§ 2.—*General Powers and Duties*

**5479.** Every society so formed, for the purposes 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 for the 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. 65, 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 this section. 45 V., c. 65, s. 7 ; 50 V., c. 7, s. 12.

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## SCHEDULE

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 provisions 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.

**5.** Ever violates any c offence, upon pay a fine not of prosecution imprisonment the said pena

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

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

*(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 :—

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**7.** For t violation of ar *primâ facie* ev sold, supplied or cheese, or c the test is ma adequate test, may be made

**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.

**8.** In ar of this Act, an deteriorated m proof of any o sections, shall conviction und have arisen, w the milk comp thereof was eff

**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.

**9.** No a Superior, Coun the Sessions of appeal shall be deposit made w adjudicated up as the court or conviction, unl such thirty day under "The Su

**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.

(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.

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**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 the 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 *prima 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 sections one, or two, of this Act, it shall be sufficient *prima 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 except 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, recognisance 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 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.

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**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 milk was sent, sold or supplied for any of the purpose 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 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 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 et levés*), the secretary shall count the votes, and the president shall declare the candidate who shall have the majority of votes.

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

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8. The president shall take the chair at the general meetings, and at the meetings of the board or 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 association. 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 up by the board, and the board shall also nominate the directors for those judicial districts which are not as yet 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 those of the board of directors, shall be called by notice in writing from the secretary-treasurer 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 before hand.

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 meetings 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 shall be subject to the approval of the board.

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### SYNDICATES OF CHEESE AND BUTTER FACTORIES.

BY-LAWS ADOPTED BY THE DAIRY INDUSTRY 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 twenty-third 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

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### REGULATIONS OF THE DAIRYMEN'S ASSOCIATION.

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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 authorised 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 organised into syndicates ;
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 ;

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And whereas, there is granted to each syndicate a sum equal to half the outlay incurred for the service of inspection and instruction organised 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 duties of inspectors :

## I

## DIVISION OF THE PROVINCE.

The province shall be divided as follows, for the purpose of the new organisation :

a. Syndicates of cheese factories or of cheese-factories and creameries :

No. of the Division.	Counties comprised in the division.
1	Gaspé, Bonaventure, Matane, Rimouski, Témiscouata.
2	Kamouraska, l'Islet, Montmagny, Bellechasse.
3	Dorchester, Levis, Beauce.
4	Lotbinière, Mégantic, Arthabaska.
5	Nicolet, Yamaska.
6	Drummond, Richmond, Wolfe.
7	Sherbrooke, Stanstead, Compton.
8	St. Hyacinthe, Bagot, Richelieu.
9	Rouville, Iberville, St. John's.
10	Shefford, Brome, Missisquoi.
11	Verchères, Chambly, Laprairie, Napierville.
12	Beauharnois, Chateauguay.
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'Assomption.
18	Hochelaga, Jacques-Cartier, Laval, Terrebonne, Deux-Montagnes.
19	Argenteuil, Ottawa, Pontiac.
20	Vaudreuil, Soulange.

b. Syndicates of butter-factories.

As any limitation of territory would be a hinderance 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 will 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 specially to the time of 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 representative 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 :

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 ensure the exactness and integrity of the operations of the year, which each factory will have to furnish to the association.

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## ORGANISATION AND WORKING OF THE SYNDICATES.

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1. A syndicate shall be constituted by the associating together of creameries, cheese-factories, and 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 the 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 the syndicate shall conform to the present regulations.

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

3. The syndicate shall organise by the signatures 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 neighbouring 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 neighbouring 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, &c., &c.

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 does 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 provincial 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 association ; moreover, they shall forward to the provincial 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 the 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 buyers and sellers, or between patrons and proprietors. They must, under pain of immediate dismissal, observe most guarded discretion in regard to all matters they note in the exercise of their duties, and reveal them to no one except to the society or to the officers and servants of the factories concerned.

##### § 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 ;

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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 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 establishments 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; this 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 their servants, and as regards questions of interior management, such as wages, payment of expenses, &c., 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 visit so as to make a regular routine journey 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, communications, 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 over 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 the course of his inspection ; from it he shall extract and forward a *résumé* 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 ; adding the list of factories visited, and indicating the probable route of his next week's journeys, in order that the secretary-treasurer may, 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, the maker or the president of the directors of any factory, communicate to such persons the tenor of such notes of his as concern that factory.

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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 foregoing 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.

This board shall settle, and publish immediately, a programme of the examination 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 the 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 obtained—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 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 the 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)

**H**ER 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 or by the use of skimmed milk to which there has been added any fat which is foreign to such milk.
3. 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 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.
4. 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.
5. 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.
6. 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 five dollars and not less than two dollars for every such cheese, or box or package 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 labour, for a term not exceeding three months, unless such fine and the costs of enforcing it are sooner paid.

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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 and butter have 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, 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 labour, 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-eights 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 labour, 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 the 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 of this 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 in that behalf.

## List

Parish or P. O.

Brownsville ...  
Dalesville ...  
Cambria ...  
Harrington ...  
Hillhead ...  
Lachute ...

Mabel ...  
Pointe aux C.

St. Andrews

Arthabaskav

Warwick ...  
St. Christopher ...  
Ste Clotilde ...  
Ste Elizabeth ...  
Ste Hélène d ...  
St. Norbert.

St. Patrick's

St. Rémi de

St Valère de

Stanfold ...

Tingwick ...  
Victoriaville

## List of the Members of the Association.

FOR THE YEAR 1894.

Parish or P. O.	Names.	Parish or P. O.	Names.	
<b>ARGENTEUIL.</b>			<b>ARTHABASKA.—Continued.</b>	
Brownsville .....	J. Morrison.	Victoriaville.—Suite.	J. E. Genest Labarre.	
Dalesville .....	F. Derbyshire.		G. St-Pierre.	
Cambria .....	J. Clarke.	Walker's Cutting . . .	Adolphe St. Laurent.	
Harrington .....	N. McCullock.		George Blanchette.	
Hillhead .....	E. Lighthall.	Warwick .....	Onésime Kirouac.	
Lachute .....	Geo. Campbell.	" St. Albert . . .	Albert Lainesse.	
	H. McKinnon.		A. M. Méthot.	
Mabel .....	A. Maissonneuve.	" St. Médard . . .	David Guilletette.	
Pointe aux Chênes . . .	Isidore Legault dit Deslauriers.		Jules Lupien.	
St. Andrews.....	John Knox.		Esdras Laliberté.	
<b>ARTHABASKA.</b>			Dominique Babineau.	
Arthabaskaville . . .	David Dumont.	<b>BAGOT.</b>		
	Albert Houle.	Actonvale .....	M. McDonald, M.P.P.	
	F. Bergeron.		Rév. L. L. Boivin.	
	B. Lavigne.		Joseph Beauregard.	
Warwick .....	A. M. Méthot.	Ste. Christine.....	Rév. J. Tourigny.	
St. Christophe———	Arthur Leblanc.		Jos. Dufault.	
Ste Clotilde de Horton	Hermine Beaupré.	St. Ephrem d'Upton.	Delphis Chicoine.	
Ste Elizabethd'Auteuil	J. O. Bourgault.		J. Maurice.	
Ste Hélène de Chester	Léon Camiré.	Upton.....	Solas Lapalme.	
St. Norbert.....	Alfred Ouellet.	St. Dominique.....	Norbert Fredette.	
	Nap. Toussignant.		Hector Lapalme.	
St. Patrick's Hill . . .	Zéphirin Genest.	Ste. Hélène.....	Eusebe Dufault.	
	Philias Laroche.		Antoine Sicard.	
	Rév. V. P. Jutras.	St. Hugues.....	L. T. Brodeur.	
St. Rémi de Tingwick	G. A. Proulx.		Alexis Toupin.	
	Jos. Proulx.		E. Lafontaine.	
	E. L. Levasseur.		Louis Poulin.	
	Léon Boucher.		Joseph Gaumond.	
St Valère de Bulstrode	Blanchette et St. Laurent.		Rév. Geo. Brown.	
	Jos. Trudel (2).	St. Liboire.....	Joseph Lemonde.	
Stanfold .....	Pierre Leclerc.	St. Pie.....	J. B. Racine.	
	Calixte Dion.		P. E. Roy.	
	Brissette et Beaudet.	Ste. Rosalie.....	Jos. B. Grenier.	
	Dame Vve Pellerin.		François Lemonde.	
Tingwick .....	D. Larivière.	St. Simon.....	Herménégilde Robert.	
Victoriaville.....	D. O. Bourbeau.		Narcisse Tétreault.	
		St. Théodore d'Acton.	Isidore Jodoin.	
			Joseph Bousquet.	

Parish or P. O.	Names.	Parish or P. O.	Names.
BEAUCE.			
East Broughton.....	Pierre Gagnon. Vital Champagne.	St. Lazare.....	Amédée Grégoire.
Lambton.....	Omer Lacombe. Octave Lemieux.	St. Michel .....	Médard Roy. Alphonse Furoy. Alexis Fiset. Fidèle Morisset.
St. Ephrem de Tring.	Philippe Poulin, fils d'Oliv. Octave Roy.	BELLECHASSE.—Continued.	
St. Côme de KennebecZéphirin Langlois.		St. Berthier (ville).....	Joseph Piette.
St. François.....	Philias Veilleux. Chs. S. Busque.	" (jonction) .....	J. F. Fernet.
St. Frédéric .....	Norbert Plante. Alphonse Lessard.	L'Isle du Pads.....	J. B. Côté.
St. Georges.....	Rév. Th. Montminy. Elzéar Poulin. Fulbert Garneau.	Lanoraie.....	A. Ferland.
St. Joseph.....	Joseph Taschereau. Jos. Lambert.	St. Barthélemi .....	F. X. Mayer. U. Léuyer. Joseph Bacon. W. Plante.
Ste Marie .....	Ferdinand Pépin. Stanislas Genest. Louis Marcoux.	St. Cuthbert,.....	Arthur St-Pierre. Edouard Trudelle. Alphonse Clément. Antoine Robeit.
St. Victor de Tring..	F. D. Turgeon.		Ulric Courchêne. Joachim Grégoire. Ernest Brunette. Isaie Marchand.
Rivière Gilbert .....	Pierre Gendron.	St. Damien de Brandon	Joseph Boucher. Vve. Euclide Boucher.
BEAUXARNOIS.			
Beauharnois.....	H. Roy. Elzéar Poulin. Jos. Charlebois.	St. Michel des Saints,S	J. A. Ménard. J. R. A. Archambault
Landreville.....	William Durnin. Thomas Durnin.	St. Zénon.....	Eustache St. Pierre.
St. Etienne.....	Laberge et Sauvé.	BONAVVENTURE.	
St. Louis de Gonzague.	H. Lepage. Geo. W. Gardner. J. L. Currie. Chas. Tait.	St. Alexis de Métapedia	Rév J. E. Pelletier. Denis Richard.
St. Timothée.....	Rév. Aug. Martel.	BROME.	
Valleyfield.....	Jos. Poirier fils d'A	Adamsville .....	P. O. Domingue.
BELLECHASSE.		Eastman .....	Euclide Phaneuf.
Buckland.....	Maximin Provost.	Knowlton.....	S. A. Fisher. Geo. Gingras. H. S. Foster.
Beaumont.....	Edouard Journeaux.	Sutton .....	Albert W. Woodward. W. A. Martindale.
St. Cajetan d'Armagh.	Philibert Langlois.	CHAMBLY.	
St. Charles .....	Frs. Roy. Damase Blais. Onésime Mercier.	Chambly .....	Napoléon Raymond.
	J. B. Paquet.	Longueuil.....	Cercle Agricole.
St. Gervais.....	John Goulet. Dr. P. Tanguay.	St. Basile le Grand..	Avila Trudeau, fils.

Parish or P. O.  
 Batican...  
 Champlain.. N.-D. du Mon...  
 Ste-Anne La...  
 Ste-Flore...  
 Ste-Genevièv...  
 tiscan...  
 St. Maurice...  
 St. Narcisse...  
 St. Prosper...  
 St. Séverin...  
 St. Tite....  
 Baie St. Paul...

Parish or P. O.	Names.	Parish or P. O.	Names.
<b>CHAMPLAIN.</b>			
Batiscan.....	L. P. Lacourcière. Pierre Lapointe.	Baie St. Paul.— <i>Co'd.</i>	Thomas Potvin, fils Nap.
Champlain.....	Jos. C. Félix.	Les Eboulements.....	Jos. Bouchard.
N.-D. du Mont Carmel	Luc Ducharme. Oscard Lord.	Malbaie.....	Samuel Ouellette. Jos. Bouchard.
Ste-Anne Lapérade..	Achilée Baribault. N. E. Clément. J. Gendron. J. A. Foley. Michel Loranger. Gilbert Latour. Octave Raymond.	Jules Bradet. Philippe Dufour.	St. Hilarion..... Evariste Demeules.
Ste-Flore.....	Uldéric Leblanc. Chs. B. Dugas.	St. Urbain.....	Charles Fortin.
Ste-Geneviève de Ba- tiscan.....	Auguste Trudelle. Jos. Massicotte Ernest Jacob. Philippe Trudel. Onésime Marchand. Eugène Massicotte,	<b>CHATEAUGUAY.</b>	
St. Maurice .....	F. X. Blondin. Antoine Laprise.	Allan's Corner .....	John Dunning.
St. Narcisse .....	Isidore Derouin. Trefflé Trudel. Dositheé Cossette.	Chateauguay .....	N. R. Laberge.
St. Prosper.....	Alfred Trudel. J. C. Trudel. F. X. O. Trudel. Désiré Cloutier.	Howick.....	Robert Ness.
St. Sévérin.....	Narcisse Bordeleau. Majorique Bordeleau. Epiphane Mongrain. Ovide Trudel.	North Georgetown..	Etienne Marleau.
St. Tite.....	Jos. L. Jacob. Jacob et Paquin Marchand et Massi- cotte.	Ormstown .....	Ths. McGill.
	Rév J. B. Grenier. Narcisse Marchand. J. A. Lambert. Lucien Lefebvre. Théodore Moreau.	A. S. Lloyd.	A. S. Lloyd.
<b>CHARLEVOIX.</b>			
Baie St. Paul.....	Alfred Gagnon. Charles Martel. Joseph Fortin.	John Finn.	J. W. Sadler.
		Riverfield .....	Jn. McGregor.
		Rivière des Fèves ..	Trefflé Lécyer.
		Stockwell .....	Rufus J. Patenaude.
		Ste Martine .....	Ed. McGowan.
		Ste Philomène.....	Joseph Poirier. Louis J. Primeau.
		St Urbain.....	Delphis Lacoste. F. P. Laberge. J. B. Damour. Joseph Lefebvre.
		<b>CHICOUTIMI.</b>	
		Bagotville .....	Firmin Paradis. Wilfrid Côté.
			Thomas Côté.
			George Bergeron.
		Chicoutimi.....	Ernest Gravel.
			Dr. L. E. Beauchamp.
			Méridé Fortin.
			Frs. Brassard.
			Richard Gagnon.
			Jean Perron.
			Algérie Maltais.
			Ernest Jean.
			Fois Perron.
			Mars Belley.
			George Maltais.

## Parish or P. O.

## Names.

CHICOUTIMI.—*Continued.*

L'Anse St. Jean.....	Zéphirin Desgagné.
N. D. de L'Assomption.....	Louis Aubin.
	Arthur Tremblay.
	Thomas Tremblay.
	Elie Girard.
St. Alexis.....	Jules Gauthier.
	Ernest Lavoie.
St. Alphonse.....	Pierre Tremblay.
	Jos. Buteau.
	Elie Tremblay.
	Adelard Tremblay.
Ste. Anne.....	André Bouchard.
	Xavier Savard.
	Henri Côté.
	Eugène Gagné.
St. Charles Borromée.....	Allec Larouche.
St. Dominique.....	Jos. Brassard.
	Jean Girard.
	Xavier Gagnon.
	Pascal Bergeron.
	D. Brassard.
St. Fulgence.....	Rvd. M. Gagnon.
St. Joseph d'Alma.....	Frs. Gagné.
	Frs. Harvey.
	Arsène Gauthier.
Escoumains .....	Rvd. M. Lajoie.
Sacré-Cœur.....	Chs. Lapointe.

## COMPTON.

Birchton .....	John McKie.
Chartierville.....	Onésime Tremblay.
Compton.....	Rasmus Havegaard.
	L. E. Duhamel.
East Clifton.....	E. S. Lussier.
	E. L. Demers.
Gould .....	J. L. Painchaud.
La Patrie.....	M. A. Piché.
Paquetteville .....	George Lefebvre.
	Ludger Lazure.
	Jules Adam.
Ste. Edwidge.....	Auguste Gérin.
St. Malo d'Auckland.....	Joseph Lemieux.
	Joseph Roy.
	Pacifique Breault
St. Romain.....	Joseph Boulanger.
Waterville .....	D. S. Davignon.

## Parish or P. O.

## Names.

## DEUX MONTAGNES.

La Trappe d'Oka.....	Emile Schmith.
	Jean Vigneau.
	Gab. Henry.
	Edgar Boileau.
St. Augustin.....	Ausias Duquette.
St. Benoît.....	Moïse St. Pierre.
St. Canut.....	Joseph Cyr.
St. Eustache .....	O. M. Paquette.
	Emile Laurin.
	L. W. J. Payment.
St. Hermas.....	Benjamin Beauchamp
	M. P. P.
	H. Pagé.
	Eugène Constantin.
	Félix Constantin.
St. Placide.....	Alphonse Dubreuil.
St. Scholastique.....	F. P. Richer.
Petit Brûlé .....	F. X. Charbonneau.

## DORCHESTER.

Frampton.....	J. B. Blais.
St. Bernard .....	Chas. Boulet.
Ste. Claire .....	Georges Richard.
	J. Léo. Cayouette.
	William Laflamme.
Ste Hénédine.....	Gabriel Dumont.
	Jos. Vézina.
Ste. Isidore .....	Joseph Dumas.
	Philias Tanguay.
St. Léon de Standon	Emile Blanchette.
Ste. Marguerite .....	Jean Boutin.

## DRUMMOND.

Drummondville .....	Conrad J. Caron.
	Benoit Lafond.
	Samuel Johns.
	Théodore Proulx.
	J. A. Gosselin.
	Elas Dionne.
	Norbert Martel.
Kingsey Fr'ch Village	J. P. Lefebvre (3).
	T. C. Cartier.
	Geo. Benoit.
	J. B. Bergeron.
	A. Francoeur.
Kingsey Falls .....	Rvd. G. E. Caron.

## Parish or P.

DRU

L'Avenir ..

St Cyrille de

St. Germain

St Guillaum

South Durh

Wickham ..

Wickham V

Cap Chatte

Grande Ri

Rivière des

Athelstan .

Cazaville ..

Dewittville

Dundee ..

Elgin . . .

Frontier . . .

Helena . . .

Herdmann.

Names.  
**GNES.**  
 le Schmith.  
 Vigneau.  
 Henry.  
 ur Boileau.  
 as Duquette.  
 e St. Pierre.  
 ph Cyr.  
 l. Paquette.  
 le Laurin.  
 J. J. Payment.  
 amin Beauchamp  
 P. P.  
 'agé.  
 me Constantin.  
 c Constantin.  
 onse Dubreuil.  
 Richer.  
 Charbonneau.  
**ER.**  
 Blais.  
 Boulet.  
 ges Richard.  
 o. Cayouette.  
 iam Laflamme.  
 iel Dumont.  
 Vézina.  
 ph Dumas.  
 as Tanguay.  
 e Blanchette.  
 Boutin.  
**ID.**  
 ad J. Caron.  
 it Lafond.  
 iel Johns.  
 dore Proulx.  
 Gosselin.  
 Dionne.  
 iert Martel.  
 Lefebvre (3).  
 Cartier.  
 Benoit.  
 Bergeron.  
 ranceur.  
 G. E. Caron.

Parish or P. O.  
**DRUMMOND.—Continued.**  
 L'Avenir ..... Hylas Duguay.  
                   Ephrem Charpentier.  
                   Jos. Duguay.  
                   Ant. Labonté.  
                   Clovis Duguay (2).  
 St Cyril de Wendover Napol. Raymond.  
                   Paul Valois.  
                   Rvd. Jos. Elz. Belle-  
                   marre.  
 St. Germain de Grant Olivier Lemaire.  
                   Michel Gauthier.  
                   Jos. Moreau.  
                   Nopol. Gauthier.  
                   Arthur Désautels (2).  
 St Guillaume d'Upton J. B. Vigneau.  
                   Jos. Duquette.  
 South Durham ..... Rvd. J. Béland.  
                   Ulférie Mongeau.  
                   D. N. McLeod.  
                   Henri Côté.  
 Wickham ..... J. H. Houle.  
 Wickham West ..... Calixte Lafrance.  
**GASPÉ.**  
 Cap Chatte ..... George Roy.  
 Grande Rivière ..... Rvd. T. C. Duret.  
**HOCHELAGA.**  
 Rivière des Prairies .. Delvica Adam  
**HUNTINGDON.**  
 Athelstan ..... Geo. W. Loomis.  
                   Jas. Sills.  
 Cazaville ..... Edouard Rose.  
                   Jas. Denny.  
 Dewittville ..... A. B. McDonald.  
 Dundee ..... A. Cooper.  
                   John A. Peets.  
                   John P. McCauley.  
                   Fred Cogland.  
                   Thos. McGill.  
 Elgin ..... John Smail, jr.  
 Frontier ..... George W. Fobes.  
 Helena ..... E. Meade.  
 Herdmann ..... W. Stott.  
                   G. Van Camp.

Parish or P. O.  
**HUNTINGDON.—Continued.**  
 Huntingdon ..... Peter Macfarlane.  
                   R. S. Feeny.  
                   John Taw.  
                   Henry W. Palmer.  
                   Chas. S. Walsh.  
                   W. R. Tannahill.  
 Kensington ..... W. Reddick.  
 Kelso ..... P. H. McIntosh.  
 La Guerre ..... John A. Finn.  
                   W. J. Baker.  
 Port Lewis ..... Chas. Swan.  
 Powerscourt ..... J. A. Plamondon.  
 St. Anicet ..... Samuel Aubin.  
 Trout River ..... W. Long.  
 Vicars ..... Francis Geo. Baillie.  
**IBERVILLE.**  
 Iberville ..... J. A. Nadeau.  
                   Romuald Tassé.  
                   Victor Tassé.  
 St. Grégoire ..... Thomas Barrière.  
                   Michel Monat.  
 St. Athanase ..... Louis Alph. Nadeau.  
 Ste. Brigitte ..... Godfroy Tessier.  
 Ste Sabine ..... Rév. A. V. Roy.  
                   Aldei Lanoue.  
 St. Sébastien ..... Pierre Brault, fils.  
 Sabrevois ..... S. J. Roy.  
**JACQUES-CARTIER**  
 Ste Geneviève ..... Urgel Lauzon.  
                   Edouard Legault.  
                   Venant Trépanier.  
                   J. B. Meloche.  
 St. Laurent ..... A. J. Coughtry.  
**JOLIETTE.**  
 Joliette ..... Jos Rainville.  
                   Frédéric Goyette.  
 Ste Béatrice ..... Gnésime Boucher.  
 Ste Elizabeth ..... Wilfrid Gingras.  
                   R. H. Beaulieu,  
                   J. A. Harel.  
                   H. Dudemaine.  
                   Louis Trudel.  
 St. Jean de Martha ..... Adolphe Beaudry.  
                   George Clermont.

Parish or P. O.	Names.	Parish or P. O.	Names.	Parish or P. O.
JOLIETTE.—Continued.				
Ste Mélanie.....	Zacharie Lepage. Jos. Clément.	St. Paul l'Ermite....	Samuel Chagnon. Frs. E. Dubé.	LOTI
St. Thomas .....	Maxime Coutu. Eugène Massé. Octavienne Massé.	St. Roch l'Achigan ..	J. J. Gareau. Philias Léveillé.	St. Agapit ..
KAMOURASKA.				
Ste Anne Lapocatière.	Rév. M. L. O. Tremblay, Philias Boucher. François Gendron fils. Joseph Boucher.	Ste Dorothée.....	Vitalin Bigras. P. D. Lorain.	Ste Agathe ..
St. Denis en bas....	Chas. Bouchard. Joseph Dionne, fils. J. C. Chapais.	St. Martin.....	J. L. Allard.	St. Edouard ..
Ste Hélène.....	Luc Bélanger.	Ste Rose.....	Cossette et Archambault.	Ste Emmélie ..
St. Philippe de Néry..	Thomas Leclerc.	St. Vincent de Paul..	Camille Elie Paré. Jos. H. Bellerive.	St Flavien ..
LAC ST. JEAN.				
Chambord .....	Octave Lefrançois.	Lévis.....	Carrier Laine et Cie.	Louisville ..
Hébertville.....	J. Elisée Hudon. P. E. Hudon.	St. Henri.....	Alexandre Paradis. Aimé Fortier.	Maskinongé ..
	Octave Hudon.	St. Lambert.....	Chas. Turgeon.	Nancy .....
	Servulle Tremblay.	St. Nicholas.....	Gabriel Desrochers. J. Bte Caouette.	St. Alexis de
Roberval.....	Luc Lizotte. F. Côté.	LÉVIS.		
St. Félicien .....	Rév. Jos. Girard.	L'Anse à Gilles .....	Eustache Ménard.	St. Justin ..
St. Jérôme .....	Geo. Perron. Chs. Simard.	L'Islet .....	Amédée Gaudreau. Lucien Bélanger.	St. Léon ..
	Jos. Gagnon.	St. Cyrille. ....	Athanase Morin.	St. Paulin ..
St. Prime .....	Adélard Perron.	St. Jean Port Joli...	Edouard Vaillancourt. E. L. Jean.	Ste Ursule ..
St. Gédéon.....	André Blanchard. Jos. Girard, M.P.P.	Ste Louise .....	Arthur Pelletier. Marius Pelletier.	Causapscal ..
St. Bruno.....	Ernest Desbiens.	St. Roch des Aulnaies.	Joseph Emile Pelletier. M. Aug. Pelletier. Frs. Castonguay.	Sandy bay ..
L'ASSOMPTION.				
La Chesnaye, St Lin.	E. Desmarais. J. P. Archambault.	LOTBINIERE.		
" St-Charles.	François Allard.	Lotbinière .....	Léger Pépin.	
L'Assomption .....	I. J. A. Marsan Alfred Longpré (2)		Joseph Beaudet.	
L'Epiphanie .....	Aimé Lord.		Urbain Hamel.	
St. Henride	Mascouche	Jos. Cadieux.	Arthur Beaudet.	
		Jean Marie Goulet.	Eug. Perron.	
Repentigny .....	Jos. N. Thouin.		Evariste Lauzé.	

Names.  
*Continued.*  
 el Chagnon.  
 L. Dubé.  
 s Léveillé.  
 Gareau.  
 le Beauséjour.  
 on Giguère.

in Bigras.  
 Lorain.  
 Allard.  
 tte et Archam-  
 lt.  
 h Lacasse.  
 le Elie Paré.  
 I. Bellerive.  
 que Vézina.  
 stin Allaire.  
  
 er Laine et Cie.  
 ndre Paradis.  
 Fortier.  
 Turgeon.  
 el Desrochers.  
 e Caouette.

che Ménard.  
 ée Gaudreau.  
 n Bélanger.  
 nase Morin.  
 ard Vaillancourt  
 Jean.  
 ir Pelletier.  
 is Pelletier.  
 h Emile Pelletier  
 ug. Pelletier.  
 Castonguay.  
 E.  
 Pépin.  
 h Beaudet.  
 in Hamel.  
 ir Beaudet.  
 Perron.  
 ste Lauzé.

Parish or P. O.	Names.
<b>LOTBINIERE.—Continued.</b>	
St. Agapit .....	J. N. Allard. Notaire A. Tremblay. Francis Roger.
Ste Agathe .....	J. Ernest Brochu. Pierre Beaudoin.
St. Edouard .....	Hippolyte Lord.
Ste Emmélie .....	J. J. Beaudet.
St Flavien .....	Saul Côté. D. U. Bernard. Louis Bibeau.
St Jean des Chaillons	A. A. Mailhot. Francis Hamel. Philémon Bernard.
St. Gilles .....	Rvd. S. Garon. Nazaire Demers.
St. Narcisse .....	Alphonse Desrochers. Onésime Farland. Didace Kirouac.
Ste Philomène .....	Ernest Lauzé.
<b>MASKINONGÉ.</b>	
Louisville .....	Frs. Dionne. Henri Gélinas. Hector Thouin.
Maskinongé .....	J. G. Héroux. Edelmard Voisard.
Nancy .....	Narcisse Constantine. St. Alexis des Monts.
St. Justin .....	Louis George Caron. Patrick Bellerose. Pierre Boucher.
St. Léon .....	Pierre Baril. Rvd. M. D. Gérin. Dr. C. J. Coulombe. Adolphe Ladouceur. L. Milot. Geo. Caron. Léonard Milot.
St. Paulin .....	Samuel Boucher. Henri Bergeron.
Ste Ursule .....	Norbert Fleury. Isaac Fournier. Henri Lessard.
<b>MATANE.</b>	
Causapscal .....	Zoel Boudreault.
Sandy bay .....	L. P. Aubut.

Parish or P. O.	Names.
<b>MEGANTIC.</b>	
Lemesurier .....	J. A. Hutchison.
Plessisville .....	P. O. Drouin.
Richardville .....	L. Arthur Caron.
Robertson Station .....	Aug. Simonneau.
StFerdinand Halifax	Louis Gilbert. Wilfrid Gilbert. Oscar Gilbert. Clément Croteau. Donat Camirand.
Somerset .....	Alph. Lord. F. T. Lavoie. Martial Lord.
Ste Sophie .....	Frs. Nadreau. David Simonneau.
<b>MISSISQUOI.</b>	
Abbotts Corner .....	H. E. Spoor.
Bérenger .....	Napol. Girard.
Dunham Flatt .....	Louis Larocque.
Farnham .....	Edouard Arpin.
Freighsburg .....	Rév. P. A. St. Pierre.
Malmaison .....	Elie Dagesse.
Mystic .....	M. M. Pharo.
Stanbridge .....	Ovila Courtemanche.
<b>MONTCALM.</b>	
St. Alexis .....	Ernest Liard.
St. Jacques l'Achigan	J. N. Marion. Dugas et Cie.
St. Liguori .....	Jos. Gaudet.
St. Marie Salomé ..	J. Ernest Gaudet.
<b>MONTMAGNY.</b>	
Cap St. Ignace .....	Jos. Eloi Jalbert (2) G. S. Dugal. A. F. Gagné,
Isle aux Grues .....	Charles Paul Roy. Georges Roy. A. Jos. Roy.
Montmagny .....	Jos. Alfred Vezina. George Dancosse (2) Alfred Dancosse. J. Emile Côté. Frs. Joseph Proulx. Alphée Colin. Edmond Rémiillard. Camille Després. Cyrille Tétu.

Parish or P. O.	Names	Parish or P. O.	Names	Parish or P.
	MONTMORENCY.		NICOLET.—Continued.	
Château Richer.....	Télesphore Rhéaume. Ed. Gariépy (2).	St. Grégoire.....	Hubert Dufresne. Joseph Morneau Luc Héon.	Grondines.
Ste Anne de Beaupré.	Cyrinus Marquis.	St. Léonard d'Aston..	Joseph Hébert. Ernest Doucet.	Deshambeau
St. François I. O....	Rév. J. C. D. Leclerc.	Ste Monique .....	Chs. Milot. B. A. Pothier. J. B. Beauchemin. Napol. Raymond. Victor Milot. Evariste St-Germain. Louis Girard.	Lachevrotié
St. Joachim.....	Isidore L'Heureux. Célestin Fortin. David Fortin. Hugh Brown. Antoine Thomassin.	D. Demers. Thomas Lafond. Z. Lemire.	Pointe aux	
St. Pierre I. O.....	Liména Gauthier.	Ste Perpétue.....	Ernest Beauchemin Luc Girard. Ed. Tessier. Hormidas Bergeron	Poiré..... Pont Rouge
	MONTREAL.	Ste Sophie.....	Damase Dubuc.	St. Alban
122 Torrance.....	Chs. Libercent.	St. Sylvère.....	Gaspard Côté.	St. August
St. Paul .....	Chs. Langlois.		OTTAWA.	Bélair..... St. Basile
Marché Ste Anne....	J. A. Vaillancourt.	Boileau.....	Joseph Danis.	St. Casimir
McGill.....	John H. Scott.	Buckingham.....	Geo. Robinson.	St. Gilbert.
562 St. Antoine.....	J. A. McDonald.	Maniwaki.....	Frère J. Laporte O. M. I.	St. Raymond
14 St. Luke.....	W. Wilson. A. W. Grant.	Montebello.....	Hurcher Huneault. Chs. S. Bennett.	St. Ubale.
512 Champlain.....	Napoléon Malo.	Montpellier .....	L. Montpellier.	Parliament
73 St. Mathieu.....	John Cunningham. Ths. Leming and Co.	St. Domingue.....	Rév. P. Dunoyer. Roch Jetté.	Séminaire .
176½ St. Hubert.....	Wilfrid Frappier.	Ripon .....	J. B. E. Major.	Sault aux
	NAPIERVILLE.	Papineauville .....	T. Bonhomme.	P. O. B. 10
Napierville .....	Rév. A. P. Tassé.	St. André Avellin..	J. E. D. Gareau. Emile Béisle.	111 St. Pie
St. Michel.....	Jos. Vanchesteing.	Thurso .....	Louis Sauvé.	Archevêché
St. Rémi.....	Chs. Huguet Latour.		PONTIAC.	56 Côte Ste
	NICOLET.	Elmside.....	A. W. McKechnie.	8 Petite Cl
Bécancour.....	Joseph Rochefort. Achille Carignan.		PORTNEUF.	105 Mount
Gentilly.....	Eusèbe Hould.	Cap Santé.....	J. M. Bernard. L. P. Bernard.	La Canard
Nicolet.....	Napoléon Desfossés. Rév. M. Proulx.		Gaudias Hardy.	Petite Rivi
	Moïse Proulx. Cercle agricole.		Gabriel Hamel.	Beauport .
Ste Brigitte.....	Joseph Lemire.		Félix J. Leclerc.	Charlesbou
St. Célestin.....	Cyrille Vigneault. Cyrille Fournier.	Ecureuils .....	Joseph Augé.	Ste Foye...
	Ludger Piché. Ant. Hébert.			
Ste Eulalie .....	D. Camirand.			
Ste Gertrude.....	Henri Piché. Henri Mailhot.			
	Noé Morrisette			

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M. I.  
cher Huneault.  
S. Bennett.  
Montpellier.  
r. P. Dunoyer.  
ch Jetté.  
B. E. Major.  
Bonhomme.  
E. D. Gareau.  
ile Bélisle.  
is Sauvé.  
C.  
W. McKechnie.  
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M. Bernard.  
P. Bernard.  
uidas Hardy.  
briel Hamel.  
lix J. Leclerc.  
seph Augé.

Parish or P. O.	Names.	Parish or P. O.	Names.
<b>PORTNEUF.—Continued</b>			
Grondines . . . . .	L. Archambault. Emile Hamelin. J. Herman Côté.	RICHELIEU.	
Deshambault . . . . .	Uldéric Benoit. S. U. Petit. F. X. Paquin.	St. Aimé . . . . .	Esd. St. Germain (4). H. Levasseur.
Lachevrotière . . . . .	Alfred Naud (2). Gédéon Laganière.	Ste Anne de Sorel . . .	Léonidas Latraverse. Napol Latraverse.
Pointe aux Trembles . . . . .	Joseph Angers. Alfred Clermont. Bernard Garneau. Philias Hardy.	St-Louis de Boussecour	Ant. St. Martin (2). Vadeboncoeur et Le- vasseur.
Poiré . . . . .	Aubert Bédard.	St. Marcel . . . . .	Rév. J. Beaudry. Jos. Casavant.
Pont Rouge . . . . .	Amédée Bussières.	St. Ours . . . . .	François Robillard. Amédée Bonier.
St. Alban . . . . .	John Savard.	St. Robert . . . . .	Edouard Durocher. Adélard Gaudette. A. Larivière et Cie. Onésime Lafond.
St. Augustin . . . . .	J. Eleusippe Moisan.	St. Roch . . . . .	Jos. P. Páquin.
Bélair . . . . .	Noël Massé.	Ste Victoire . . . . .	Alexis Collet. Donat Collet.
St. Basile . . . . .	Joseph Derôme. Charles Pelletier.	Sorel . . . . .	Hercule Paul Hus. Alf. D. de Grandpré. Ph. H. Duhamel. L. Wurtell.
St. Casimir . . . . .	Majorique Leboeuf. Roch Massicotte. Tessier et Rivard. Tancrède Germain.	<b>RICHMOND.</b>	
St. Gilbert . . . . .	Mérile Morrissette. Alfred Vallée.	Asbestos . . . . .	Adolphe Parenteau.
St. Raymond . . . . .	Louis Lesage.	Brompton Falls . . . .	Zoël Pellerin.
St. Ubale . . . . .	Maxime Hardy (2). Charles Hardy (2).	Castlebar . . . . .	J. E. Beauchemin.
<b>QUEBEC CITY.</b>			
Parliament . . . . .	Ed. A. Barnard. O. E. Dallaire.	Danville . . . . .	A. McCallum. Jos. Lafrance.
Séminaire . . . . .	Rév. F. C. Gagnon.	Upper Melbourne . . .	H. W. Armstrong.
Sault aux Matelots . . .	Côté et Roë.	Stoke Centre . . . . .	Nap. Lemire.
P. O. B. 1040 . . . . .	James Geggie.	St. George de Windsor	Adélard Marcotte.
111 St. Pierre . . . . .	L. Jos. Belleau.		Pierre Kirouac (2). A. N. Pinard.
Archévêché . . . . .	Rév. E. Poirier.	Flodden . . . . .	Aimé P. Morissette. Gilbert Stalker.
56 Côte Ste-Geneviève	Charles Mortureux.	Melboro . . . . .	James Dunbar.
8 Petite Champlain . .	Adjutor Gervais.	Richmond . . . . .	J. A. McLeod.
105 Mountain Hill . .	Carl Zetterman.	Windsor Mills . . . .	John Ewing. H. W. Palmer.
<b>QUEBEC COUNTY.</b>			
La Canardière . . . . .	Honoré Lortie.	<b>RIMOUSKI.</b>	
Petite Rivière . . . . .	Ambroise Jobin.	Bic . . . . .	Auguste Burns.
Beauport . . . . .	Pierre Lortie. Pierre Robert.	St. Fabien . . . . .	Alfred Belsil.
Charlesbourg . . . . .	H. A. Jos. Giroux.	St. Moise . . . . .	Rév. E. P. Chouinard.
Ste Foye . . . . .	Aug. Desjardin. Jos. Blais.	Rimouski . . . . .	Charles A. Bégin.

Parish or P. O.	Names.	Parish or P. O.	Names.	Parish or P. O.
<b>ROUVILLE.</b>				
Abbotsford (St. Paul).	Ludger Laliberté. Eugène Ménard. Henri Tétreault. Adélard Riel. Ths. Carignan.	St. Hyacinthe.— <i>Cn'd.</i> W. W. Pickett. Jules Van de Ker-Kove. Henri Failliott.	ST-HYACINTHE.— <i>Continued.</i>	SHE
L'Ange Gardien.....	Elie Barbeau. Adolphe Roy. A. Gauvin.	St. Jude ..... Xavier Larivière. Vertume Phaneuf.	Ste. Cécile..	
Magenta .....	Henri Bonneville.	Ste Madeleine..... Louis Chabot.	Roxton Pond Roxton Falls	
Marieville.....	F. L. Boulais. Alfred Lapierre.	ST-JEAN.	St. Joachim.	
Pauline.....	J. P. Rocheleau.	L'Acadie..... Joseph Deland. Ste Marguerite Cercle-Agricole.	Savages Mill South Ely..	
Rougemont Station.	Emile M. Dion. Adolphe Roy.	St. Valentin..... J. G. Bouchard. Alfred Nolin.	North Ely. St. Valérien	
Ste Angèle.....	Jos. Beauregard.	ST-MAURICE.		
St. Césaire.....	Henri Normandin. Hormidas Langevin. Frédéric Maynard. J. H. Vadnais.	St. Barnabé ..... Arthur Milot. Alfred Perron. Pierre Corriveau. Alph. Grenier. Thomas Lacerte.	Shefford Mo South Gran South Roxte Rochelle ... South Stuk Valcourt Ely	
St. Jean-Baptiste....	Clodomir Blanchard.	St. Sévère..... Euchariste Lamay. Pierre Lacerte.		
Ste Marie de Monnoir	Frs. Xavier Marcoux. Félix Bessette.	Yamachiche ..... Edmond Lord. Esdras Bellemare. J. Fort. Côté. Hercule Bourassa.		
<b>ST-HYACINTHE.</b>				
La Présentation.....	Frs. Chapdelaine. Ludger St-Pierre.	BONSECOURS.	SHEFFORD.	
St. Barnabé.....	Edouard Gadbois. Désiré Bourque.	Nazaire St-François. Joseph Desmarais. J. B. Roberge. A. Gouin. H. Laplante.	Waterloo ..	
St. Charles.....	Nap. Pratte. Arsène Gervais.	Dalling ..... J. Morin.		
St. Damase.....	Fromagerie du Pont. Fromagerie de Corbin. Francis Racicot.	Egypte ..... J. B. E. Cadieux.	Warden ...	
St. Denis .....	J. B. Anger.	Granboro..... A. Fossey.	West Sheff	
St. Hilaire .....	Frédéric Laperle.	Granby ..... Pierre Allard. Chs. E. Booth. Henri Allard.		
St. Hyacinthe.....	Damien Benoit. Albert Dumler.	Arthur Bourbeau. H. W. Boire.		
	Rév. M. Tétreault.	Lawrenceville. .... Wallis St François.		
	Rév. C. P. Choquette.	Mawcock..... H. Rocheleau.		
	Rév. J. B. Chartier.	Milton, East..... Pierre Fournier.		
	Rév. C. A. Baudry.			
	Louis E. Lussier.			
	Emile Castel.			
	Lambert Sarrazin.			
	André Salefranque.			
	J. de L. Taché.			

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Parish or P. O.	Names.
<b>SHEFFORD.—Continued.</b>	
Ste. Cécile.....	Rév. J. U. Charbonneau.
	Alph. Maheu.
	Frs. Dupaul.
Roxton Pond.....	D. Casanbon.
Roxton Falls.....	Chs. Brisebois.
	Louis Brazeau.
	Michel Houle.
St. Joachim.....	Pierre Casavant.
	Herménégilde Brazeau.
	Napol. Côté.
Savages Mills.....	Henri Purdy.
South Ely.....	Hiram Darby.
	Modeste Choinière.
North Ely.....	A. L. Darby.
St. Valérien.....	Arthur Marsan.
	Louis de Grandpré.
	Maxime Robert.
	Rev. F. P. Côté.
	C. E. Marsan.
Shefford Mountain..	Edward Doonan.
South Granby.....	James Duncan.
South Roxton.....	Charles Reynold.
Rochelle.....	David Daigneau.
South Stukely.....	W. Stanley Purdy.
Valcourt Ely.....	Joseph Véronneau.
	Hippol. Bombardier.
	J. G. S. Pelletier.
	Pierre Vinckelette.
	Edm. Salois.
	Philippe Rhéault.
Waterloo .....	Gédéon Boulé.
	Hormidas Boulé.
	Herbert Booth.
	Geo. H. Ferguson.
	W. H. Boire.
Warden .....	J. A. Lewis.
	Chs. E. Standish.
	James Hamilton.
	Joseph Doonan.
West Shefford.....	Z. S. Lawrence.
<b>SHERBROOKE.</b>	
Sherbrooke.....	William Morris.
	J. A. Camirand.
	J. A. Bourque.

Parish or P. O.	Names.
<b>SOULANGES.</b>	
Coteau du Lac .....	George Leroux.
Coteau Station.....	Jules Gauthier.
Pont Château.....	J. A. Bourbonnais.
Rivière Beaudette...	Frs. Méthot.
	Louis Méthot.
St. Clet.....	J. Bte. Marlean.
	Ferdinand Besner.
Les Cèdres.....	J. S. Leroux.
	Hector Constant.
St. Polycarpe.....	J. H. Leclair.
	J. H. Garaeu.
St. Télesphore.....	J. L. Chénier.
	Télesphore Chénier.
<b>STANSTEAD.</b>	
Barnston.....	G. B. Hall.
Barnston South....	Geo. E. Searles.
Baldwin Mills.....	L. E. Sutton.
Cassville.....	A. Thompson.
Coaticook .....	Edouard Morais.
Corliss .....	S. M. Gibson.
Dixville .....	P. F. Remick.
	Remick et Grady.
East Hatley.....	J. D. Morrison.
	U. D. Parker.
Fitch bay .....	R. F. Scott.
Heathton .....	W. W. Heath.
Kingscraft .....	W. J. Niblock.
Magog .....	Jos. N. Gauvreau.
	J. G. Merry.
Marlington .....	W. S. A. Buck.
Massawippi .....	Arthur W. Grindley.
Minton .....	N. E. Fish.
Oliver .....	G. B. Rexford.
Ste Catherine.....	Pierre Ménard.
Smiths Mills.....	W. Taylor.
Ways Mills.....	D. L. Taylor.
Stanstead .....	Percy A. Baldwin.
<b>TÉMISCOUATA.</b>	
L'Isle Verte.....	Chs. Préfontaine et frère.
	J. Jules Belanger.
Old Lake Road.....	F. Flo. Soucy.
Trois Pistoles.....	J. O. Massé.
St. Eloi.....	C. Godbout.
Ste. Epiphane.....	Aug. Breton.
St. Modeste.....	J. Bte. Thériault.

## Parish or P. O. Names.

## TERREBONNE.

Rivière à Gagnon.....	Joseph Racine.
Ste Adèle.....	D. W. Grignon.
St. Jovite.....	Joseph Desrochers.
St. Jérôme.....	Israël Dion.
Ste Marguerite.....	Rév. A. J. Moreau.
Ste Thérèse.....	Rév. M. Labonté. Frs. Dion.
	Toussaint Dion.
	Antoine Desjardins.
	J. D. Leclair.
	Emile Gratton.
	Emile Desjardins.
	Amédée Désormeaux.

## TROIS-RIVIÈRES.

Trois-Rivières.....	Phil. de Bellefeuille.
	J. A. Milot.
" (banlieue).	Hormidas Duval.

## VAUDREUIL.

Beauvoir.....	A. O. Roger.
Pointe Fortune.....	A. Catanach.
Rigaud.....	J. Eug. Séguin.
Ste Marthe.....	Peter Monahan.
St. Rédemptr.....	Geo. Valois.
Vaudreuil.....	Amédée Castonguay.

## VERCHÈRES.

Belœil .....	C. Choquette.
	Félix Blain.
Contrecoeur .....	Honoré Hanfield.
	L. E. Charron.
St. Antoine .....	Elie Gaudet.
	Ovila Bonin.
	J. A. Girard.
	J. Birs.
Ste Julie.....	Rév. J. C. Daigleault.
St. Marc.....	Alexis Chicoine.
	Dr. Leroux.
	Jos. Fontaine.
	Auguste Beaudry.
Ste Théodosie.....	Bruno Larose.

## Parish or P. O. Names.

## WOLFE.

Ham Nord.....	Napol. Patry.
St. Adrien.....	Albéric Boisvert.
St. Fortunat.....	Nap. Laventure.
	Pierre Girard.
	Jos. Pelletier.
St. Gabriel de Stratford	Etienne Picard
	Gédéon Héon.
Weedon .....	Frs. Ouellet.
	Jérémie Fisette.
Weedon Centre.....	Pierre J. Després.
Wolfestown.....	Joseph Descoteaux.
	Edouard Duguay.
Wotton .....	Eugène Lemire.
	J. E. Plamondon.
	Adélard Vigneux.

## YAMASKA.

Chatillon .....	Ovide Lépine.
La Baie du Fèvre.....	J. H. Lefebvre.
	J. T. Bélisle.
	J. Louis Lemire.
	J. Achille Bélisle.
	Calixte Allard.
	Elie Proulx.
	J.-Bte. Lemire.
	Uldéric Lévesque.
	Nazaire Lemire.
	C. B. Jutras.
	Eusèbe Proulx.
St. Thomas-Pierreville	Elie Boivin.
	Pierre A. Robillard.
	Elisée Parent.
	Ally Armand.
St. David.....	D. fils Chs. Larivière.
	Fabien Vanasse.
	Chs. Cyr.
	Herménég. Fontaine.
	Jacob Paré.
	Nap. Richard.
	H. C. Chamberland.
	Isaïe Drainville.
	Odilon Melançon.
St. Elphège.....	William Parent.
	André Hamel.
	Siméon Paquette.
	Roméo Hamel.
St. François du Lac ..	F. O. Duhaime.
	Emile Duhaime.
	Jos. Marcotte.

## Parish or P. O.

## YA

St. Michel ...

St. Pie Degui

St. Zéphire ..

Yamaska ...

Hawkesbury.

Names.	Parish or P. O.	Names.
<b>YAMASKA.—Continued.</b>		
Patry.	St. Michel	A. Melançon.
c Boisvert.		Thomas Delaney.
Laventure.	St. Pie Deguire	Edmond Dauplaise.
Girard.		Edouard Desfossés.
elletier.		Edmond Desfossés.
le Picard		Elie Boivin
n Héon.	St. Zéphire	Evariste Boisvert.
uellet.		Cyprien Jutras.
ie Fisette.		Edmond Laharie.
J. Després.		Hermann Lefebvre.
Descoteaux.		D. J. Parent.
ard Duguay.		Alexandre Simoneau.
le Lemire.		Jos. Turcotte.
Plamondon.		Adolphe H. Parent.
rd Vigneux.		Walter Parenteau.
	Yamaska	Narcisse Parenteau.
Lépine.		R. P. Parenteau.
Lefebvre.		L. Thérioux.
Bélisle.		
nis Lemire.		
ille Bélisle.		
le Allard.		
Proulx.		
Lemire.		
ic Lévesque.		
re Lemire.		
Jutras.		
le Proulx.		
Boivin.		
A. Robillard.		
Parent.		
Armand.		
s Chs. Larivière.		
n Vanasse.		
Cyr.		
iénég. Fontaine.		
Paré.		
Richard.		
Chamberland.		
Drainville.		
n Melançon.		
am Parent.		
é Hamel.		
n Paquette.		
o Hamel.		
Duhaime.		
Duhaime.		
Marcotte.		

Parish or P. O.	Names.
<b>ONTARIO.—Continued</b>	
Ste Anne de Prescott.	Joseph Blais.
The Lake	Simon Ouellette.
Lefavire P. O.	J. N. Bricault.
North Lancaster	Daniel R. McGregor
Warsaw	Thomas Lawry.
Clarence	Harry Smith.
Lalonde	Louis Boileau.
Chatham	A. J. Kahala.
Little Rideau	L. Gibson.
<b>MANITOBA.</b>	
Ste Agathe	Amable Toupin
Winnipeg	S. M. Barré.
<b>ETATS-UNIS.</b>	
Clarendon, Pa.	Octave Couture.
<b>FRANCE.</b>	
St. Brieuc	L'abbé Aignel.
Lisieux	Edmond Groult
Ouilly le Vicomte	C. Morice.
Grignon	R. Lezé.

## RECAPITULATION AND TOTALS BY COUNTIES.

Argenteuil.....	10	Missisquoi.....	6
Arthabaska.....	38	Montcalm.....	5
Bagot.....	27	Montmagny.....	17
Beauce.....	21	Montmorency.....	11
Beauharnois.....	12	Montréal.....	11
Bellechasse.....	14	Napierville.....	3
Berthier.....	21	Nicolet.....	37
Bonaventure.....	2	Ottawa.....	13
Brome.....	7	Pontiac.....	1
Chamby.....	3	Portneuf.....	37
Champlain.....	41	Québec.....	17
Charlevoix.....	11	Richelieu.....	25
Chateauguay.....	20	Richmond.....	18
Chicoutimi.....	42	Rimouski.....	5
Compton.....	17	Rouville.....	24
Deux Montagnes.....	17	St. Hyacinthe.....	28
Dorchester.....	11	St. Jean.....	4
Drummond.....	38	St. Maurice.....	11
Gaspé.....	2	Shefford.....	56
Hochelaga.....	1	Sherbrooke.....	3
Huntingdon.....	30	Soulanges.....	13
Iberville.....	11	Stanstead.....	23
Jacques-Cartier.....	5	Témiscouata.....	7
Joliette.....	15	Terrebonne.....	13
Kamouraska.....	9	Trois-Rivières.....	3
Lac St. Jean.....	15	Vaudreuil.....	6
Laprairie.....	9	Verchères.....	14
L'Assomption.....	16	Wolfe.....	15
Laval.....	9	Yamaska.....	38
Lévis.....	6	Ontario.....	11
L'Islet.....	11	Manitoba.....	2
Lotbinière.....	25	Etats-Unis.....	1
Maskinongé.....	24	France.....	4
Matane.....	2		
Mégantic.....	14		
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# REPORT "IN EXLENTO"

## OF THE

### THIRTEENTH ANNUAL CONVENTION

## OF THE

### DAIRYMEN'S ASSOCIATION

## OF THE PROVINCE OF QUEBEC

### HELD AT ST. JOSEPH, BEAUCE,

### THE 4TH, 5TH, AND 6TH DECEMBER, 1894.

1043

On Tuesday, December 4th, 1894, at 2 P. M., the Revd. T. Montminy, President of the Association, declared the Convention open.

#### APPOINTMENT OF COMMITTEES.

The following were appointed members of the committee :

For the examination of samples of silage : Messrs. S. A. Fisher, D. O. Bourbeau, and J. L. Lemire ;

For the examination of machines and implements : Messrs. A. Chicoine, S. Laroche, and G. Desrochers.

Mr. J. C. Chapais explained that in appointing the latter committee, the association took no responsibility upon itself for the decisions the said committee might arrive at.

## REPORT OF THE AUDITORS.

Mr. J. de L. Taché and Mr. C. D. Tylee, appointed by the board of directors as auditors of the accounts of the Secretary-Treasurer for 1894, not having had time to examine the books, promised to report thereon at the last session of the convention.

## Report of Mr. Elie Bourbeau,

*Assistant-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 first report as Assistant-Inspector of the Syndicates of creameries and cheese-factories. My engagement began on the 1st May last, and ended on the 15th of November.

During the season, I visited 26 syndicates, ten of them once, and eight of them twice. In my tour through the syndicates, I visited 241 cheese-factories, which I classify as follows : 156, first class ; 72, second class ; and 3, third class.

As to neatness, &c., these cheeseries run thus : 171, first class ; 56, second class and 14, third class.

In these factories, I examined 17,396 cheeses, and classify them thus ; first quality, 10,422 ; second quality, 6,254 ; third quality, 713.

As these data are not too encouraging, I think it right to give you some explanations ; and first, concerning the cheese-factories.

It is really sad to see so many inferior factories in this province, and I must say that, among those we call good factories, many are by no means what they ought to be, more especially as regards the protection of the cheese against variations of temperature. Owing to this defect it is that our fall cheese ripens so badly (sometimes not at all), for our cheeseries are too cold. This is the chief reason why the difference of price between our cheese and Ontario cheese increases by a quarter of a cent in autumn.

Besides the buildings, which are not perfect, there are several that are not suitably constructed either for making or for ripening ; and the maker who guarantees to make good cheese in such factories is, to say the least, imprudent.

I regret to have to say that there is a certain degree of obstinacy among some of the makers, who will not take the least pains to keep their factories in order ; and it is often these men who are loudest in their complaints against their patrons.

Although expected to h during recent attain to perf were falling o work with a one will admini price for all k reasons, the fi the erection o cheeseries, to the expense o the same or el greatest of th assuredly lose

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GENTLEMEN,

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Although the greater part of the cheese that I examined was of the best quality, I expected to have found more of such ; and if we have really made a great deal of progress during recent years, it is no less true that we have still a great deal to make before we attain to perfection. I have found that, while many were striving to improve, several were falling off, and that, it must be said, voluntarily : I am speaking of those men who work with a view to the quantity of yield alone, and there are many such ; of course no one will admit that he is guilty of this fault, the makers say the buyers pay the same price for all kinds of cheese—and I do not assert the contrary ;—but there are also other reasons, the first and more dangerous is that crazy spirit of competition, which leads to the erection of two or three factories where one would answer the purpose. These small cheeseries, to keep going, are obliged to make large yields, and this is usually done at the expense of the quality of the cheese ; the neighbors think themselves obliged to do the same or else "shut up shop." So far does the evil extend, that we hold it to be the greatest of the injuries that affect our business ; and if it lasts much longer, we shall assuredly lose the ground we have gained in the foreign markets.

In my opinion, the buyers could help us in the improvement of our cheese-making, by paying for the goods according to their value, and I hope that before long they will see the truth of this and help us ; for, on the day when each quality of cheese shall be sold for its own special value, the victory will be won.

Your obedient servant,

E. BOURBEAU,  
*Assistant-Inspector General.*

St. Hyacinthe, Nov. 30th, 1894.

The Board of Directors having retired to hold their annual meeting, the Revd. T. Montminy resigned the place of Chairman to the Revd. Abbé Côté, agricultural missionary, who addressed the meeting in these terms :

### REVD. MR. COTÉ'S ADDRESS.

GENTLEMEN,

Having been called upon to take the chair while the Board of Directors is sitting, and seeing that none of the lecturers are ready to speak, I will, in the interim, say something as to the importance of the making of butter in winter.

We have converted our village cheesery into a winter-creamery, and with the following results of our last year's work ; From November 15th to January 28th, we received 117,566 lbs. of milk, and we made 6,225 lbs. of butter, which brought us in,

the government grant included, \$1,585.24 ; and 19cts net to the patrons per pound of butter, the cost of making being 4cts. a pound ; the average of milk to butter was  $17\frac{3}{4}$  lbs. to 1 pound. The average fat was, in general, 5.2%, and the average of butter to the 100 lbs. of milk was 5.7 lbs., and we found the patrons in general satisfied with the system of payment by the fat-contents. There was a difference of about 30cts per 100 lbs. of milk between him who received least and him who received the most.

On the 9th of April last, 1894, we began anew to make butter, up to May 5th, four full weeks ; during which time we received 31,619 lbs., of milk, out of which we made 1,305 lbs., of butter, which returned us \$271.81, so that at that season it took  $24\frac{1}{2}$  lbs. of milk to the pound of butter. It is an important matter, that of winter butter-making, for it is the best way of getting all the possible profit out of our cows ; besides, it will be the means of compelling us to fatten a great number of hogs, at least one to each cow. We must come to this within at least three or four years from the present time.

I have done better than that this year, for with only 20 cows at the cheesery and creamery I have fattened 34 hogs. The manure is even more profitable than the butter and cheese. As to our operations for the current year, we hope to at least double, if not more, the make of butter of last year, and I think that in a few years we shall have to make butter all the year round, and this is what we should all aim at, so as not to overload the cheese market, which is limited to 25 million dollars, while the butter and pork market can take about 120 million dollars worth, of which two last we only furnish 1% while of the Cheddar cheese taken by England we send 60%.

## Lecture By Dr. C. J. Coulombe.

### *The Smaller Factories, and the Evil Effects of their Competition.*

During the last few years, farming has made marked improvement in our country ; the secrets and the demands of the land have been more deeply studied, and are better understood ; the farmer has left the beaten road and replaced the routine of past days with a more rational and more profitable system of cultivation. To-day, he directs the operations of the farm with a better knowledge of the nature of the soil and climate, as well as of the labour he employs, and of the market whither his products are sent, striving to produce those goods that the market demands in such form and condition as it prefers. He varies his crops ; he pays more attention to the law of restitution ; so he is better repaid for his labour, while, at the same time, he preserves the productiveness of his land.

But I believe that these great improvements in farming, which we see so gladly, have been chiefly brought about by dairying, and have been more emphatically shown in

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that branch of agriculture, as much as regards the production of milk, as in the improvement in the making of butter and cheese.

As regards the production of milk, the change is thorough, the farmer has determined to adhere to the dairy-breeds, and in every herd the selection of stock is made with the greatest care ; plenty of grass-seeds are sown ; the pastures being divided, add to the comfort of the cows ; each habitant has his field of green-fodder to fill up the intervals of dry weather, many farmers grow hoed-crops, though as yet on a small scale, and the success that attends these crops will soon bring about their development ; thanks to ensilage and to chopped and fermented fodder, the employment of which is becoming general, the period of lactation is expected to be prolonged, and winter-butter making, which is already carried on in many parishes, will soon become a certain source of profit.

As in the production of milk, so in the making of butter and cheese, is there marked progress. Our dairy-school has educated a great number of youths who have learned all the secrets pertaining to milk and the methods of making good cheese and butter ; our system of syndicates and inspection has greatly aided in vulgarising the best mode of manufacture, and at the same time has shown the dairy-farmer how to produce milk for the factory of the best quality. The successful exhibition of the goods from the Province of Quebec at Chicago in 1893, showed clearly that we can compete advantageously with foreign countries and with our sister provinces.

Our rulers, our devoted clergy, and "all men of good will," who have so nobly put their shoulders to the wheel to push along the vehicle of agricultural progress, may well be proud of the success obtained, as well as feel that they have merited the gratitude of their country for their devotion to this great national work. But the good results obtained ought to stimulate us to labour with still greater energy and activity, for if, after having examined the road already traversed, we look on that we have yet to travel, we shall see but too clearly that we have only entered upon the road of progress ; that many a reform, many an improvement, remain to be done, as well in farming in general as in that branch of it that is to interest us specially in this convention.

Among the different causes that seem to be most injurious to dairying, I may mention one which threatens to paralyse our endeavours, and a reformation of which is urgently needed : I mean the *small factories*, or rather, the *opposition factories*, which already exist in several parishes, threaten to increase in number, and are doing incalculable mischief.

These factories give rise to a multitude of troubles :

First, the makers or proprietors, to gain the patronage of some of the farmers, are, oh ! so very accommodating to them, and thus do not preserve and sometimes cause their neighbours to lose, that degree of independence which enables them boldly to insist on invariably having good, clean, well aerated milk delivered to the factory ; consequently the patron is often led by negligence to deliver inferior milk, and bad cheese or bad butter is the result.

And in these small factories ; so poorly supplied with milk that the maker even in summer, is compelled to receive milk only every other day ; it is easy to see that all the milk that arrives there must be gone off and spoiled to such an extent that no good article can be made from it, to say nothing of the patron losing an eighth or a tenth in the yield.

And more ; the makers at these small factories, hardly able to live on the meagre produce of their work, have not the means of providing a fit place for their business ; their tiny factories, built *à la diable*, in a hurry, are too hot in summer, and too cold in winter, to permit of the proper ripening of the cheese ; and sometimes, even the whole of the fittings of the factory are most deficient.

Under such conditions, the maker can have no taste for his trade ; and not seldom does he do his work carelessly, even if the whole establishment is not in a filthy state.

Generally speaking, these makers are not members of the Dairymen's Association ; they are outside the syndicates, have never visited the Dairy-school, and, in consequence cannot keep themselves *au courant* of the progress and improvements in the method of manufacture.

It is, too, in these little factories that we meet with makers who strive to get large yields at the expense of quality, and then send out their cheese in a green state, hardly out of the press, so as to make it weigh well, and thus prevent the discovery of those defects that ripening would make perceptible.

And it is in such factories that the maker tries to increase his profits by clandestinely making butter before he makes cheese (*from the same milk*), and thus sends out half-skims instead of full-milk goods, and that without stamping them with the proper legal trade-mark.

These are, in a few words, the chief troubles caused by the *opposition factories*, those *small factories*, the worst enemies of the dairy-trade of this country

1. They discourage the patrons of these factories because they are not well paid for their milk ;

2. *They greatly injure our reputation in the foreign markets.*

If these small factories are so hurtful to the dairy trade and to agriculture in general, it behooves us to strive heartily against an evil that threatens the destruction of our principal agricultural industry.

The difficulty is to find a direct remedy, one easy of application, suited to the radical extirpation of the indicated disease. But can we not arrive at this by indirect means ?

1. By the formation of syndicates in every place ;

2. By adopting for syndicated factories a special trade mark only to be applied to cheese of the best quality, and to be stamped on the cheese itself, so that no tricks can be played with it as has happened in the past time.

It might, perhaps, be as well to insist upon certificates of capacity from the makers, though this would be rather arbitrary, and I think it would be better to first try to

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persuade the public that it would be to their advantage not to encourage more factories than are strictly necessary to the proper carrying on of the dairy trade.

I believe that with a crusade, firmly and strenuously carried on, we might gain our object without disturbance, and restore our reputation on the market which is not yet what it ought to be ; and especially if, by means of the syndicates, no cheese is sent to market until it is ripe and *worthy of a mark of excellence*.

This important question : of the small opposition factories : was then discussed MM. Milton Macdonald, M.P.P., Jos. Girard, M.P.P., and J. D. Guay, of the *Progrès du Saguenay*, taking part in the discussion. Unfortunately, the stenographer could not send us his text of the speeches, and the reports in the papers are too scanty to be of any use.

*Mr. E. A. Barnard* said that one of the best means, for the good factories, of avoiding the creation and competition of the small factories, whose existence is injurious to the dairy trade, would be to take upon themselves the cost of the transport of the milk. Some of the factories already do so, twice a day, and in their districts no one has dreamed of building opposition factories.

*Mr. S. Théberge*, seconded by *Mr. l'abbé Côté* offered the following resolution :

"That a committee, composed of MM. Macdonald, Ed. A. Barnard, Jos. Girard, H. S. Foster, D. O. Bourbeau, J. de L. Taché, L. Taschereau, with the proposer and the seconder, be appointed to study the dairy-trade, to suggest proper means of favouring its progress, and to arrange with the Dominion and Quebec governments for the adoption by the federal and provincial legislatures of laws that have become necessary for the protection of the said trade ; with power to the said committee to add to its number as many members as it shall deem needful ; with a request to the said committee to report as soon as possible."

*Mr. Milton Macdonald*, M.P.P., seconded by M. J. Girard, M. P.P., proposed : "That a committee be appointed to study the question of the too great number of cheeseries in the province, and to suggest to this convention the most practicable means of putting a stop to this state of things ; that this committee be composed of MM. the Revd. abbé Côté, D. O. Bourbeau, W. Parent, J. Poirier, Ed. A. Barnard, with the proposer and the seconder."

*Mr. Macdonald's motion was put to the vote and carried.*

## Lecture by Dr. W. Grignon.

The cultivation of wheat and the feeding of cattle for beef not being very profitable in the Province of Quebec, on account of the strong competition we have to sustain with the growers of wheat and the breeders of cattle in the North-West, we must devote our attention to dairying.

But, as in all trades, this to be profitable, must be well managed.

The goods we send to market must be of the best ; if the English like *fresh* butter, we cannot compel them to eat stale butter ; consequently we must send them what they want, we must send butter fresh-made every fortnight or every week, and this will not be difficult to do if we have, as we probably shall have, steamers fitted up with refrigerators. Thanks to these conveniences, the demand for butter will become more pressing than ever, and the price will be enhanced. And for this reason we must keep up our present creameries and improve them, for if we turn them into cheeseries, there will shortly be an overloaded cheese-market and the price of cheese will fall.

At present, Canada sends more cheese to England than the United States sends (1) ; we beat her on that market. But at Chicago, the Americans regarding our fine butter and cheese, and the large profits they bring us in, with a jealous eye, determined to surpass us in both these goods; in quality as well as in quantity. To arrive at this end, some of the States have appointed lecturers, specialists, to teach their people how to make good butter and cheese.

Our market, then, is threatened with competition. To preserve our so profitable trade, let us send out only good butter, good cheese. To succeed in this, two things are necessary : 1. Good makers ; 2. Good milk.

As to the makers, the St. Hyacinthe dairy school, that excellent institution, will take the furnishing of them on its shoulders ; it is your duty, you farmers, to send in good milk. You must not be satisfied with ordinary care and cleanliness ; more than that is needed : the milk must be aerated to rid it of its animal odour, of its cowy smell, by means of the "aerator" that only costs a dollar, and will, with care, last ten years, and will fit on to any can. The thieves, the unclean, must be pitilessly expelled from the factory, as the profane were from the Temple.

The dairy industry being the best string the farmer can attach to his bow, it is clearly advisable to protect it by all possible means ; and the best means, in my opinion, would be to make our butter and cheese of the best quality, of the same unvarying color and flavour, to pack it in the same way, in boxes of the same size and lumber, so that the English consumer, whether on tasting our butter or cheese, or in simply inhaling its aroma, or in seeing the box, would say at once : "This is Canadian butter, or Canadian cheese ; it has its trade-mark impressed upon it, by its aroma, its colour, its bulk, its general appearance ; I will not take any other kind." There, that man we have as our life-long customer.

(1) I beg to say that "The United States" takes a verb in the singular, A. R. J. F.

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But, how shall we arrive at these results? How shall we lead all the makers of the province, so far apart from each other, to give the same uniform appearance to their goods, to produce cheese and butter of invariably the same texture and flavour? There is no other way to reach the patrons, and the makers than to unite them in syndicates, having under their control well-taught inspectors, who will labour to correct, in the makers, the faults committed in the manufacture of the goods, and, in the patrons, the errors committed in the production and the keeping of the milk, which must be of the best quality.

To have none but very extensive factories is one of the best means of making the goods we send to market uniform in quality. Then, we should see elsewhere what I saw at l'Isle Verte, Temiscouata, where M. Chas. Préfontaine has a creamery that takes in 33,000 lbs. of milk a day. On my asking him if it was long since he had been to Montreal to sell his butter, he replied: "It is 5 years since I had to run after customers for my butter: it is the customers who run after me. Dealers know that I make an enormous quantity of butter, and as exporters prefer buying 20,000 lbs. in one lot to buying 10,000 lbs. here and 10,000 lbs. there, my office is crowded with applications for butter." Your horse will always sell better if the purchaser comes to your house rather than if you have to run after the buyer in the market-place. Why should it not be the same with dairy goods?

And, to take good milk to the factory is not all; men must aim at taking as much of it as possible. To do this, we need: 1. Good milkers; 2. Good feeding for our cows both winter and summer; 3. Good cow houses and proper treatment in them by raised floors, curry-combing and brushing; 4. Plenty of light and air.

The best classes of cows are: 1. The Canadian; 2. The Jersey, pure or crossed with the Canadian; 3. The Ayrshire. The Shorthorn, Devon, and Hereford are more butchers' beasts than dairy cows. However, I do not mean to be too exclusive as to cows; when you have a good one that gives you cheaply a lot of milk, of good quality; whatever may be her breed, her name, her colour; rear her heifer-calves, for they will, very likely, take after their dam; rear her bull calves too, for they will perhaps transmit to their get the dairy-qualities of their mother, in accordance with the great principle that *like begets like*. Herds formed by *selection* are often the best.

The Rev. Père Dauth, curé of St. Leonard d'Aston, Nicolet, received, in 5 months of 1893, \$200 for the cheese made from the milk of only 5 cows! Seven pigs he fattened with the whey and a little barley-meal, so that his farm returned him a clear profit of \$400. How much land do you think he farmed for such a result? Only 15 arpents! (12.7 acres). "And, had it not been for my root crop, I could never have achieved such satisfactory results," said Mr. Dauth to me. There were 1 arpent in mangels,  $\frac{1}{2}$  in carrots, 2,700 heads of chou-moellier,  $\frac{1}{2}$  in corn, &c., &c.

Plenty of green-fodder, good, clear water and lots of it always handy, these are the requisite means of keeping cows well in summer, not forgetting plenty of shade.

A mixture of peas, tares and oats, 3 bushels *an arpent*, sown in succession every fortnight or so, from the last week in April to the first week in July, will constitute a good provision of green-meat up to the first week in October.

Pastures, divided into fields of 5 or 6 arpents, will always produce better feed than fields of 25 or 30 arpents undivided. From the first week in October to the first of December, our cows have to pass through a transition period, too often disastrous to their owner. If we have plenty of silage or a store of roots, this transition will be hardly felt. When once our cows are in their winter-quarters, with a few cut roots, mixed with hay and straw, chaffed, the cows will be well prepared for the ensuing winter.

Other points I need not touch upon, as to speak of their importance would be to insult your common sense, and to deprive you of the pleasure of listening to the addresses of the learned speakers who are to follow.

Thanks, Gentlemen.

#### SESSION OF TUESDAY EVENING

##### *Official Opening of the Convention.*

The Chairman read to the meeting the reply of his Grace Mgr Bégin, to the address requesting him to be present at the convention. His Grace regretted that, being detained at Quebec by many engagements, he was deprived of the pleasure of showing by his presence at the meeting the interest he took in the work of the association, and esteem in which he held its noble efforts. His Grace requested that the members of the association be informed that he bestows his blessing on their undertaking. (Cheers).

The Secretary then read the following telegram :

Quebec, December 4th 1894.

Sorry to be detained here by parliamentary duties : hearty wishes for the success of the meeting in the interest of agriculture and of the country.

B. DE LA BRUÈRE,  
Hon. President.

And a letter from Senator Bolduc, excusing himself for non-attendance, and expressing his good wishes for the success of the convention.

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### ADDRESS OF WELCOME

To the Rev. T. Montminy, President, and the Directors of the Dairymen's Association of the Province of Quebec.

Mr. President and Gentlemen,

The citizens of the district of Beauce, and particularly of St-Joseph de la Beauce, learned with the greatest satisfaction that the Dairymen's Association of the Province of Quebec had selected this parish for the seat of their thirteenth annual convention. And they are also particularly pleased at this, the officia opening of the meeting, to be able to offer you their thanks and to bid you heartily welcome.

During the last few years, the agriculture of this province has advanced with giant-strides. To a short-sighted and routine-like style of farming, such as was generally practised some 25 years ago, has succeeded a vastly improved and wise system, and therefore a more paying one, though, as yet, it is far from perfect. No one, however, can deny that there has been a marked progress in this important business, and it is now easy enough to see that the day is not far distant when the products of Canadian farming, now quoted at the highest prices on the foreign markets, will bestow a moderate income as the legitimate reward of all those who devote to them their life and their labour.

And, to whom do we owe this improvement, this great advance, and this well-founded expectation ?

Doubtless, in the first instance, to the advancement of primary instruction in the country parts, the people being thereby more than formerly enabled to profit by the perusal of newspapers and especially of agricultural papers.

Neither let us forget the noble and persevering efforts of different successive ministries of this province, particularly since 1880, to inflame the farmer with a taste for his art, and a love for his position, to stimulate and encourage him to follow along the road that leads to improvement.

But, Mr. President and Gentlemen, if we did not fear to wound your modesty, it would be only fair to attribute the greatest share of these great results to your association, founded by the patriotic devotion and sustained by the ardour, zeal, and the inflexible industry of its members. The work of agricultural regeneration, whose devoted apostles in this province you have constituted yourselves, is now firmly established, and bears within itself a germ of stability and increasing progress that nothing can destroy, for it is rooted in the very heart of the people.

You yourselves, Gentlemen, must have observed in the course of the meetings you have already held in twelve different places, and by the crowded audiences that attended them, how much and how highly your work is appreciated and yourselves esteemed.

To-day, you have come, Mr. President and Gentlemen, to devote yourselves to your judicious labours in the midst of this district of Beauce, of this New Beauce, the name of

which recalls the recollection of that fine part of France, so celebrated for the fertility of its farms and the productiveness of its crops ; you come hither to benefit us by your discussions, by your deliberations ; by your special studies and your long experience. Therefore, we bid you welcome.

Just as the farmers of the places you have already visited, so do those of Beauce appreciate your great work ; they understand its aim, its benefits, and all the patriotic feeling whence it flows.

And before closing our address, allow us to say how happy we are to receive this visit. We thank you from our hearts for having thought of us, but chiefly we thank you individually, Mr. President, for in that step of the society we recognise your unfailing devotion to the promotion, in this part of the province ; with which you are more nearly connected ; of that grand agricultural industry to which you have given so large part of your heart and of your labour.

A. CHASSÉ, Mayor.

JOS. VITAL NADEAU,

Sec.-Treasurer.

St. Joseph, Beauce, December 4th, 1894.

#### THE PRESIDENT'S REPLY.

GENTLEMEN,

In the name of the Dairymen's Association, I accept with gratitude your kind and sympathetic words of welcome. The Association, which has already spread the benefits of agricultural instruction pretty well everywhere, is lucky in having its convention, this year, in the fine and fertile district of Beauce. You pay me a personal compliment when you speak of the labours of our society. I do not accept undeserved compliments —I accept blame when it is deserved, but not compliments I do not personally deserve ; and if I thank you heartily for the kind words you have used towards me, it is because they have a reflex action on the association of which I am the President.

The first idea of holding a convention at Beauce arose seven or eight years ago. It was conceived by Mr. Antoine Taschereau, at the Arthabaska meeting. Mr. Taschereau whom you all know well, then proposed that the next meeting should be held at Beauce. But, unluckily, there were already invitations from other places, and the Directors thought that other places were more in need of instruction than Beauce.

Three years ago, all the Mayors of the county of Beauce again requested the Board to hold the next meeting at Beauce. Lastly, in 1893, a third request was presented to us, and we decided, that time, that our convention of this year should be held in the lovely parish of St. Joseph de Beauce.

And I am gratified with yeomen. For i Beauce. In my thank them, in

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And I am highly pleased at seeing all the members of the Dairymen's Association gratified with the presence at St. Joseph of so large a number of the neighboring yeomen. For myself, I confess that I am proud of belonging to this fine county of Beauce. In my turn, I congratulate, from my heart, the people of St. Joseph, and I thank them, in the name of the Association, for the cordial welcome they have given us.

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#### OPENING ADDRESS OF THE PRESIDENT.

GENTLEMEN,

We invited, last year, the Dairymen's Association to hold its annual meeting this year, in our county, because we thought that its importance deserved the honor of that visit. Indeed, it is a small province of itself in the province of Quebec (*imperium in imperio*) is this fine, extensive county of Beauce. It contains, established, 25 parishes, some in thirteen townships, some in the old seignories. These townships and parishes run along the superb Chaudière, the picturesque Lake St. Francis, and the high-roads of Kennebec and Lambton, which formerly were the only means of communication through this immense territory. At present, they have as auxiliaries the "Quebec Central" line, the St. Francis branch of which will soon reach St. Georges, on the Chaudière, while the other will penetrate the Western part of the county, across the township of Tring, the main line going on to Sherbrooke.

What resources, Gentlemen, are there in this vast stretch of land that is called the county of Beauce ! Almost inexhaustible wealth in timber, if we exploit it economically ; mineral riches, not only in the common metals but in gold, which was discovered in our county, by General Baddeley, as far back as 1835 ; landed wealth, capable of enriching twice the present population, if it is wisely used. But, unfortunately, one does not always know how to properly value the resources that lie within one's reach ; this land-wealth, of which I speak, we, like many others, have made but a poor use of.

Trusting to the fertility of the fine farms of the valley of the Chaudière, we have sought from them crop after crop, and never returned them anything. To such an extent have we neglected them, that they are now, in some places, over-run with weeds ; and that is the reason why we, like many others, have begun to fly to that grand remedy that is ever healing the ills of our agriculture, to the "cure-all" that has regenerated many a district of our province—dairying. This industry is personified in you, or as I would rather say, in us ; for I glory in being one of you ; us, members of the Dairymen's Association of the Province of Quebec ; and it is for that reason that we have been invited to improve the farming of the county of Beauce by offering her a share of those benefits that our society distributes wherever it goes.

The farmers of Beauce, thanks to your teaching, will, as others have done, improve in dairying, in which business they have started ; rather timidly, perhaps, at first, although they may lay claim to the credit of having been the first in Canada to use the Centrifugal Separator. You may be sure that they will do their best to prove to you that they who have solicited your presence here to-day, desire to assist those who are disposed to profit by the advantages conferred by your visit among them.

Begging you, Gentlemen, to pardon me for making this little plea in favour of my home, I proceed to throw a glance over the operations of our society during the present year. Last year, two remarkable events were inscribed in our annals : one, the opening of our new dairy-school and experimental station at St. Hyacinthe ; the other, our success at the Chicago Exhibition. As for our school, its usefulness has been satisfactorily proved and appreciated, since the number of its pupils has increased from 214 in 1893, to 268 in 1894. The special reports we have received are most satisfactory, and, as we are well aware that the officers of the institution are animated by a vast spirit of devotion and earnestness, every thing leads us to believe that our provincial dairy-school, already so distinguished, even abroad, for its fitting-up, and its excellent management, will prove both an honour and a benefit to us. Its Director, M. Damien Leclair, had the advantage last summer of visiting the country in which butter-making is carried to the height of perfection, if perfection is anywhere attainable in this world.

Accompanied by M. Gigault, the Assistant Commissioner of Agriculture, M. Leclair visited England, Ireland, France, Belgium, and especially Denmark. We have reason to believe, granting the spirit of observation that distinguishes the two travellers, that their journey will be of the greatest utility to us, especially as regards the improvement of our buttermaking which, up to the present time, has not marched with equal strides alongside of the progress made by our cheese-factories.

Our success at Chicago, I regret to say, appears to have in some sense a bad effect. In all things in this life, it invariably happens, that, after great exertions, a period of reaction occurs, which only shows itself, sometimes by a period of necessary repose ; but, at other times, unfortunately, by an attack of dangerous lassitude.

This is rather what seems to have happened to us, after the grand effort, so well rewarded, which we exerted in displaying at Chicago our success in dairying. It would appear that, intoxicated by the victory won there, some patrons, some makers, some economists, thought we had arrived at perfection. For this assertion I bring forward two data : first, the number of the syndicates remains stationary this year, instead of increasing as it ought to have done.

And what reason is given for the non-increase of the syndicates ? Some say that, after having had the services of an inspector for a year or two, they know as much as he, and have nothing more to learn. Others say that the cost of the syndicates is too high for small factories. To the former we reply, that the inspectors themselves have something fresh to learn every year, which new acquirement they in turn will teach to the

makers whose laziness,—the ignorance often found in the factor conduct their knowledge.

In such protected age factories came to our dairy i the great, the In them are maker and a work. This number, they and from 1,0 the evil that that again, d Chicago triu or Joseph, wi comes from C

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makers whose factories they visit. Besides, that spirit of easiness—called by some laziness,—the omission of certain necessary things—commonly called negligence,—and the ignorance of the rules of cleanliness—which fine spoken people call untidiness ; are often found affecting very learned people as well as the humble ignorant ; and, very frequently, the inspectors have those faults to correct, rather than mistakes in the working, in the factories of makers who nevertheless possess all the knowledge necessary to conduct their business properly if they would only take the trouble to use that knowledge.

In such cases inspection is useful, especially to the patrons whose interests are by it protected against the errors of their maker. As to those who protest that their small factories cannot afford the expense of the syndicate, they are really doing a great service to our dairy industry by such an avowal. For, in truth, these needy little factories are the great, the terrible, I am tempted to say the almost incurable disease that infects us. In them are no means of erecting a good building, good implements are wanting, a good maker and a good inspector cannot be employed, in fact, there are no means of doing good work. This is candidly admitted, and, yet, these small factories are increasing in number, they grow smaller and smaller, from 2,000lbs. of milk daily, they fall to 1,000lbs. and from 1,000lbs., they are now receiving only from 500lbs. to 700lbs. a day. This is the evil that is undermining our trade, this is the source whence comes the bad cheese that again, during the season just expired, threw a gloom over the splendid picture of Chicago triumphs, and which gave birth in England to those nicknames of *French cheese* or *Joseph*, with which the dealers in that country dress out all the inferior cheese that comes from Canada.

The second sign of that weakness that seems to have succeeded our success, is this : the press of our province has published, at different times, this year, articles in which people with better intentions than information, stated that we had done enough to encourage the manufacture of Cheddar cheese, and that it was high time to devote ourselves less to this kind, and to give more attention to the teaching of the way to make other kinds of cheese, especially of those for which France is so celebrated, a kind the manufacturing of which we ought to have taken up before. Evidently, the writers of these articles had brought away with them from Chicago the impression that we are perfect masters of Cheddar making, and that henceforth, we must turn to other things. All a mistake, says M. Gigault, on his return from Europe. They still say in England that they can distinguish between Ontario and Quebec cheese, and as long as that asserted distinction exists there, we must strive to improve our present style, rather than to devote ourselves to the making of fancy cheese, which we cannot hope to sell in a country where it originated, seeing that that country sends it here itself, a proof that it makes more of it than it can find use for.

The moral of all this is, that we must do our best to forward the work of the syndicates, both those of creameries as well as those of cheeseries, and to diminish as much as possible

the number of small factories, always excepting those that exist in places where there is not enough milk to keep a large factory going.

Since the foundation of our society, it has always tried to encourage things useful to the farmers of the province. It first founded an unpretending dairy-school, or rather aided a school-factory, and organised a rudimentary system of factory inspection, from the earliest year of its existence ; it has also encouraged by all the means in its power the formation of Farmers' Clubs.

Then, having gained strength, it enlarged its field of action. The school factory of early days, thanks to the efforts and liberality of our rulers, gave way to a splendid school and experiment station of the dairy industry. The cursory inspection of factories, as it formerly was, was replaced by our useful organisation of syndicates of inspection which have already given us such capital results. The Farmers' Clubs, only 30 in number, when our association began to use its efforts in their development, now are 500 and more.

These are, indeed, grand results, a great part of which our society may claim as due to its exertions. But this must not suffice to its spirit of initiative ; there still remains much to be done for the good of the farmer, and this must be the object of your constant attention and efforts. One thing, of great importance I will take upon myself to press on your attention : the construction of good roads.

A writer has remarked that the state of its roads is the measure of the civilisation and prosperity of a country. If the foreigners who visit our province measure us by that standard, they must have but a poor opinion of us, for our roads are, generally speaking, the worst I have ever met with. I have traveled in Europe, Asia, Africa, and America, and I grieve to say that, in a competition for bad roads, we should be found in the first flight. Our neighbour Ontario has begun to work on this road question. The Dairy Association of W. Ontario, at its convention of 1893, passed a resolution in favour of reforming the management of the country roads.

The Hon. the Commissioner of Agriculture of that province has acted in the direction pointed out by the above resolution, by publishing and distributing bulletins on this subject in 1893 ; and in 1894, a special society was formed, under the style of "Good roads Association of the Province of Ontario." Allow me to quote to you a passage from the speech of M. A. Patullo, president of the association, at the opening session : "Who can calculate the loss caused by the damage to horses and carriages—putting out of the question the loss of time and trouble—due to the bad state of our country roads ? In behalf of an industry I am specially interested in, I have made some inquiries into the matter. In round numbers, there are 2,000 cheeseries in Canada ; the cost of carrying milk, whey, and cheese, for each factory, probably amounts to \$1,000 a year—perhaps too a good deal more, that is, to \$2,000,000 a year for the whole country. It is indisputably true that with roads only approaching in goodness to the roads of England, this expense would be diminished by one-fourth. In other words, the profits of Cana-

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dian cheese-making might be increased yearly by half a million dollars, which is a fair interest on a capital of \$13,000,000!"

As this quotation shows you, Gentlemen, we, who are trying to use all means in the promotion of the interests of dairying are directly interested in this question of good roads. Indeed, among those 2,000 factories mentioned, this province figures for 1,273, to judge by our statistics of last year. Let us not then lag behind in a matter of such importance. Some countries are making a vast outlay on the construction and repairing of their roads. In the States, the county of Essex, New-Jersey, has spent \$1,700,000 in macadamising its roads. Union county, in the same state, has spent \$350,000, and the value of its property has increased from 100% to 500% in consequence of this outlay. Richmond county, Staten Island, New-York, has expended \$3,000,000 for the same purpose. England pays \$20,000,000 a year for road-repairs; France, \$28,000,000; and Italy has spent \$16,000,000 in the last five years.

While everywhere else, large sums are being laid out on the maintenance of the roads, knowing as the people do that this outlay is soon recovered by the extra value gained by the property, what are we doing for our roads? With few exceptions, our farmers take away a few refuse rails, from an old fence which is to be made anew, and use them to make their part of the road-fence. Then, they shovel out the mud from the ditch, or use the pebbles they find along the roadside to fill up the ruts and, then go calmly home, with the proud consciousness of having done their duty as citizens as far as the road is concerned. And so they live with a quiet, satisfied mind, until one night they smash a spring, break the leg of their horse, lame the doctor's back, or fracture the ribs of the curé, when they are obliged to fetch them for the sick.

I trust I shall find an echo in the meeting that will quickly bring about a reform in the maintenance of our country roads; and I submit the question to you with an assurance that you will discuss it and form before long, or rather at once while we are here, "*a company for the construction and maintenance of the roads of the Province of Quebec.*"

I have already detained you too long, Gentlemen. I will not occupy more of your time, precious as it is when important questions await your study and discussion. But before, I finish, I have a sad duty to perform: I have to speak of those of our members who have died since our last convention.

We have lost during the year, one of our teachers and directors. Mr. Henry Livingston, teacher of cheese-making at our dairy school at St. Hyacinth succumbed, in the flower of his age, to that terrible scourge consumption. At our last convention, at St. Hyacinthe, Mr. Chapais, Dominion Asst. Com. of dairying, speaking of Mr. Livingston's character, expressed himself in these terms: "In the person of Mr. Livingston, the association possesses a skillful teacher, one who cannot but be of great service to it, since he is devoted to his task. Conscientious, almost to excess, if in such a fine quality there can be excess, his work is all the more efficient from his knowledge of both the

French and English languages, which is now almost a necessary qualification for an Englishman in this province."

This eulogium, to which I can add nothing, is a fair measure of the loss we have sustained by the death of Mr. Livingston.

M. François Dion, a farmer of Ste. Therèse de Blainville, Terrebonne, a director of our society for his county, since 1886, we also lost last September, when he died suddenly; he was the very type of a modest and intelligent farmer, and might serve as a model to all our farmers. Keeping himself well informed on all agricultural subjects, applying to his farming all the improved methods capable of increasing his profits, always searching after novelties that merit attention and bringing to our board of directors ideas and principles ripened by experience, he was to us a valuable assistant in all questions that concerned our association.

Let us preserve a lively remembrance of those of our members who are no more, as an example to those who are selected to replace them. By a tradition thus preserved, the absent ones whom we regret will continue to do us those services which we so well appreciated during their lives.

TH. MONTMINY, Prte.

*Mr. Barnard.*—Mr. President, you have raised a question of great importance in your address. The question of the improvement of our roads is, in truth, one of the most pressing questions of the day, and for my part, I am ready to support you with all my power, for I am convinced that we should be conferring an immense service on our people, could we find means to improve the state of our roads. It is not only to-day that the need of improving our roads is making itself felt. I remember when, in 1878, a society was formed with this end in view : the improvement of the roads of the province of Quebec. This society was supported and encouraged by many politicians of the day, and M. de Boucherville gave it every assistance. Well, you know, we must not go backwards. If this idea was entertained in 1878, still more is it right that we should entertain it now. I therefore ask leave to propose the following resolution :

Proposed by Mr. Barnard, seconded by M. Guay, Chicoutimi : That a committee be appointed to study the question of the improvement of the roads of the province of Quebec, and to communicate with the government, with a view to discover the means of improving, as soon as possible, the said roads. (Carried unanimously).

MR. PRESIDE

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## Speech of the Hon. Louis Beaubien

MR. PRESIDENT AND GENTLEMEN,

I am delighted to see so many of you present here. Every day, these meetings brought together by the convention of the Dairymen's Association acquire greater importance. The experts, the specialists, attend them with zeal, and the public flock to them for instruction in that now important branch of our agriculture, the dairy-industry.

Without it, where would our agriculture be to-day? It is our salvation. At a time when the other products of the farm apart from butter and cheese are hardly saleable, it comes to the aid of our rural parts and sustains their progressive steps. The shopkeepers with their accounts paid, can meet their notes; the towns rejoice in the happy state of things, and our bankers assert that if our province has been able to pass successfully through the financial crisis that has raged everywhere during the past season, we owe it to the creameries and cheeseries.

I said that the other products of the farm were hard to sell.

How, indeed, can we contend with that immense West in growing grain? The time is past when we could profitably grow wheat, barley, and oats. We must try other things, every one agrees in that, and this numerous assembly is here to discuss the new methods.

I congratulate the Association on its labours, on its success: the laborers have been intelligent and unremitting; the success has been so marked that it must greatly encourage you in what remains to be done.

If now we encourage the sale of our dairy-goods, we shall be able to establish cheeseries and creameries in every parish. The movement has begun, it is rapidly increasing in force; every place invokes its aid, and our dairy school at St-Hyacinthe in spite of the numerous pupils it turns out, cannot yet furnish all the makers that are needed.

I see here many representatives of the clergy, among others an old friend of mine, your worthy president. Not only do they encourage us by their presence, but they boldly enter the arena; taking part in the discussions, they bring hither the fruits of their studies and the results of their experiments.

And it has always been so: the clergy have always greatly assisted the nation. Have they not from the first days of the country made themselves the companions of the settler, supporting him in his arduous-work?

Recall the sombre days when we had to change our flag; when, abandoned and without a leader, everything seemed desperate!

The clergy set themselves the task of gathering up the fragments of the over-powered and decimated population, and gave them learned instructors in place of those who had returned to France. Schools and colleges and universities sprang up. The small population of 65,000 souls remained staunch and multiplied wonderfully.

Now that the work of the higher education can stand alone, the clergy see that they can be most useful in another sphere : in agriculture, where, thank God, there will never be any fear of overdoing the work. They turn farmers, establish clubs, promote the foundation of creameries and cheeseries, take the farmer's son by the hand and lead him to the model-farm, to the farm-school, as they once led him to the college or university.

And do you, farmers, attend to the words of these devoted men who advise you the study of your noble profession. And study for yourselves and your sons, for study it you must. In these days, the man who does not advance falls into the rear. Men must keep themselves up to the new inventions of the day ; the old ones can no longer be of much use, you cannot be permitted to say : " My father did so and so, and I shall do the same." You cannot do it, except at the risk of poverty, of certain failure. You must listen to what is said, go and see how others succeed, imitate them and, if possible, beat them.

A great assistance to you in your work will be such meetings as these, to which every one brings and details his own experience.

Our fault is a want of curiosity ; that quality leads to enquiry, induces men to reflect on what they see elsewhere. There is many a way of improving one's farming, many ways there are of gaining information. There is the *Journal of Agriculture*, which now, thank God, reckons more than 40,000 subscribers. To the Clubs are distributed interesting documents, instructive books, all telling you of methods by which farmers can cultivate their land profitably. To some I would say : If you cannot, or will not, draw the necessary information from the publications that are sent you at so trifling a price, at least go and see how others succeed, and then imitate them. Get away from home, go about and learn. He who shuts himself up on his own farm, who never gives the labour, the experience of others a chance to impress him, he who secludes himself and carries on a barren system of cultivation ; this man has no share in the benefits that radiate from the labours, the experiments, the investigations of those men of good will who are at the head of the march of progress.

Let the father repeat this to the son ; let the son be perfectly sure of it ; let them say : Allons, let us make a change for the better, for a change is necessary ; let us seek to improve, to do better. We will imitate those who are prospering and who, far from borrowing, are, from the produce of their wise farming, lending money at interest, money earned by their good crops. We will go and visit the next parish, the next province if necessary, and always in search of good examples to follow,

And when at home again after these little journeys of investigation, of useful observation, the book, the paper, will be still more welcome.

Observe through what studies those professional men have passed to whom you apply daily for advice. What years of study, what sacrifices, to arrive at their present state of knowledge ! You do not surely imagine that you have nothing to learn, or

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that information will come to you without any movement on your part. More than ever is science invading the farm, and it goes thither to prove its absolute necessity ; more than ever are we convinced that the farmer's head is more useful to him than his arms.

Do not let us say, then, that we know enough ; let us, on the contrary, feel that we are only beginning to learn. There lie before us an infinity of improvements to make and very few already made. Let us start these improvements at once.

He who is thoroughly convinced that he knows nothing, or at least very little, is on the road to become learned. There is nothing so likely to decide us to fill up the vacuum as to be convinced that it exists.

You will then visit others to prove that they are successful, and, for that purpose, you will make more than one or two instructive tours, which will make a nice little change in your life.

You will receive and read the *Journal d'Agriculture*. In your turn, you will see the documents, pamphlets, &c., that we send to the 500 farmers' clubs of the province.

You will attend the meetings of your club, listening attentively both to the lectures and discussions you will hear. You will take part in the discussions, when you think you can be useful, or when you are in want of explanation or information.

You will feel bound to send to the model-farm or to the school-farm the son or sons whom you intend to follow your noble profession. You will endure the making of some of those sacrifices that you so easily submit to when you propose to make an advocate or physician of one of your family. It is high time that we should attend to the instruction in farming of the farmer's son. When he has attended school long enough, send him now and then to look at a well managed farm ; the Oka farm, for instance, the Experiment farm at Ottawa, and others.

And do not wait for this until the government pays all your expenses for this instruction. For many a year you have been paying out your money for the diffusion of the higher education in your families and in the province. I cannot blame you for it ; on the contrary ; but let something also be done for that member of the family, to whom is to be entrusted the family hearth, that heart of the country. Let that son be treated like the rest, have his share of the benefits of instruction ; not of that instruction that tends to exile him from his old paternal home, nor of that which will impel him into a worldly struggle for a more showy and fruitful career ; but of such teaching as will cause him to love both the roof and the land of his ancestors ; that will teach him how, by prudent work, he can make it productive, and by increasing its returns, make the whole family comfortable and happy. Happiness without cruel separation, without the depopulating of our country parts, all the family relations being, on the contrary, ready at hand to help one the other.

With dairying and a determination to attain to the proper way to farm ; provided you are willing to learn in some way or other, but at all events to learn ; competency

will implant itself in every farm. And the method of farming needed is one of the least costly. Fewer grain-crops, that no longer pay ; less ploughing, less hay and grain-crops ; more pasture, but well laid down, with good seed and well cared for ; the field of green-fodder well manured, well worked, well seeded, well hoed ; large enough to assist the pastures when the cows on the latter shrink up in milk ; large enough to supply food for the stock in winter. That is all the secret of succeeding perfectly on your farm. Do not waste your time in feeding bad milkers ; off with them at once to the butcher ; keep only those who descend from good milk-breeds, and do not starve the calves.

The creamery or the cheesery is close to you ; that is your machine for making money. If you are in earnest, you have everything needed to make your life the most agreeable, the most independent, the most desirable life a man can lead.

It is especially to the young, the hope of the country, I am speaking. The means of instruction I have mentioned are easily obtainable, they are within the reach of all. If they wish that prosperity should increase under their reign, that the future be fortunate, our parishes capable of feeding their inhabitants abundantly, by no means obliged to send into exile the overplus of their population or their paupers ; in such a case, let them listen to the wise counsels proffered unanimously by this vast assemblage : we invite them all to go and gain instruction to render them all the more certain of a successful career.

All the bursaries (*scholarships*) granted by the government are now occupied. They consist in the payment of the board and instruction of the pupils. In future, they will be assigned by the directors of the schools to the most meritorious of pupils who pay for their board.

This payment in our schools, i. e. of the Pères Trappistes at Oka, the school at L'Assomption, the one at Ste. Anne, and the one about to start at Compton, is \$7 a month : the teaching is gratuitous.

It consists in the teaching of ordinary farming, well executed, in arboriculture grafting, growing green-fodder, ensilage, the making of butter and cheese, artificial incubation, the making of cider and wine ; a little linear-drawing for farm-buildings ; some knowledge of veterinary practice, the municipal law necessary for a farmer to know ; the making and repairs of harness, farm-carriages, and certain farm-implements ; sufficient book-keeping to enable the farmer to keep accounts of his operations ; the art of draining and taking levels ; bee-keeping, farm-building, and some knowledge of agricultural chemistry.

Choose, my young friends, and you, fathers of families, choose for your sons. The sacrifices needed by their absence from home, equally with the outlay made for their instruction in farming will on their return be repaid you a hundred fold.

More than one father, while retaining over his son the authority that his experience in life insures him, will from him learn new methods of working his farm, many improvements on the old processes, and will have reason to congratulate himself on the instruction he has helped him to.

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I can state with pleasure that at present the people are becoming more and more anxious for instruction. There is great progress. The Journal is read, and when it does not reach the subscribers, we get severe scoldings for the neglect.

Two or three years ago we had no increase in the number of pupils in our farm-schools over what they were years before, they remained always the same ; hardly were there twenty of them. Now we have 80, without St. Hyacinthe, which is specially devoted to the making of dairymen, and which this year has instructed more than 300.

I have given particular care to *practical* work in our schools. The young farmer must learn to do all farm work well. Then comes theory, which shows him the reason why such work is done.

When our farmer shall be so prepared for his duties by having imbibed all the knowledge at his disposition, as does the man intended for the liberal professions ; then indeed our rural districts will be everywhere prosperous.

Look at the Scotch farmer, that good example of the art of farming wherever he goes ; see how he brings up his son, to instruct him in his business and keep him to it.

When the son leaves school, where he has learned to read, write and cipher, the father does not make him come and work away at the farm. No ; he prolongs the time during which he is deprived of his son's services ; later on, says he to himself, he will return well skilled in farming, more useful, more sure in his work ; and therefore, he sends him for two or three years to the best managed farm he can find.

When the lad returns, he will remain on his father's farm and even improve it having acquired all the best systems of cultivation. And by such means, Scotland has become what it is to-day, the country in which *la grande culture*, that system we ought to follow in this country, is the best carried out.

There is another way of teaching your sons. Manifold are the means, and if you do not make use of them, you are blameable, as blameable as he who allows the mind of his child to stagnate in ignorance.

You are not to say that we lay down for your acceptance only one system in particular. We do but indicate the different roads, one of which you may select for the training of that one of your sons whom you keep at home.

Take whichever one you please, but take one.

You cannot say that we try to make you dive into books that, you say, you have no time to read. Take the Scotch plan. Begin there if you like. I am not particular about the special book which, after all, contains nothing but a summary of the experience of all farmers. When your son begins to make his way, to find how good the practices he has been taught are, he will not be slow in having recourse to the book and to the *Journal d'Agriculture*. Find me a good farmer, if you can, who has begun by practical work, who has been successful, and who does not regularly read his *Journal*, and who has not a library, even if it be only a small one.

What is study, after all, if it be not the acquisition of information one did not previously possess.

Well, take which path you like, take hold of which end of the stick you please, but follow out the path for the benefit of your sons and of your country.

To encourage our farmers to embrace freely the improvements that have been introduced in cultivation, I would lay before them the style that is practised in a country where the climate is pretty nearly the same as in Canada. If we speak to you about the farming of France, of England, or of Scotland, you reply : "All very well, but the climate of those countries is much milder than ours."

You cannot say that of Denmark. I thought I should be doing you a service in teaching you what system was pursued there ; and to be quite sure of the facts, although we already had good reports about that country, I sent thither two men who were in a position to visit you after their return, to talk with you, to relate what they themselves had seen, to submit to be questioned, interrogated in every way, just like the spies who were sent into the promised land.

I selected my energetic and studious Assistant-Commissioner of Agriculture, M. Gigault, and the experienced director of the St. Hyacinthe dairy-school, M. Leclair.

These gentlemen will address you. They will instruct you just as they instructed me. Long live instruction ! They went and read in that great book that lay open to them in Denmark ; farms large and small, all, or nearly all, worked with a view to the business of dairying.

You and I, we who are always recommending winter butter-making, when double the quantity can be sold that is saleable in summer ; how glad are we to be able to quote the example of the Dane.

While the ardent sun of summer is in full force, when the cattle are exposed to its rays, when butter soon spoils and is hard to sell, he leaves butter-making to others.

He reserves himself for more favorable seasons ; his goods will reach the English market, not when butter is only worth 15 cents, but when it fetches 40 cents ; at the season when to preserve it with its aroma, if he has to keep it for some time, he will have at his disposal that grand refrigerator, winter. Retained under its beneficent guardianship, his goods are sold, without the loss of a single pound.

He does not loiter about complaining that the cold is too intense, that feeding cattle in winter is too costly. No, because he finds that it turns out profitable ; that the supply of manure is increased and improved, and that the productiveness of his land is enhanced daily.

This is example I propose to you. And we are beginning to follow it. Our prizes for winter butter, like the price it sells for, have already worked wonders.

During the first winter, at the starting of this plan, we gave as prizes to creameries ; \$2,002.95 ; in the second winter, \$3,489.95 ; and this winter, the amount exceeds \$8,000.00 !

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Here, then, is an advance that is encouraging ; see how the Danish system is taking root ; and it is because it pays. Those who laughed at this plan at its inception, do not laugh at it any more. Now, we have 104 creameries in operation during a great part of the winter. As these find that winter butter sells with great advantage ; that the cream itself in some cases sells high : they incite their patrons to increase the winter production of milk. We may hope then to see the day when, as on many a farm in Denmark, the greatest production of milk shall take place in January and not in July.

If, by the newly proposed steps, we can sell our summer butter in Europe, as fast as it is made, and thereby prevent its accumulation in our home ware-houses, our local markets will for many a long day take consumption for all our winter butter.

Thence forward, we shall be able to diminish our production of cheese, and avoid the risk of overloading the English market ; we shall be able to double the number of our creameries, rear more stock, and have more manure for our land.

Last winter (1893-94) a good deal of the butter used in winter in Canada was American butter ; at present, good butter sells for 25 to 30 cents at Quebec. Draw from this your own conclusions : will you sell your butter for 15 cents in summer or for 25 cents in winter ?

But you, at least many of you, must make some alteration in your cow-houses. Let them be well ventilated, with plenty of light. Let your cows be kept in comfort, warm and clean. Do not be afraid to brush and wisp them over. As to their food, that the cry may not be raised at once that the new system is absurd because it is ruinous, I will say this : if you know how to set about it, the new plan will not be more costly than the old one, though it will return you twice the profit.

Never forget to sow a field of green-fodder : it will be a standby. With it, both winter and summer, you will secure, whatever may happen, plenty of milk, if you make it large enough to supply food for all seasons. Dung it in the fall, plough it deep, and draw out the water-furrows. In the spring, harrow it, cross-plough, or grub it across to the same depth as the fall-furrow, then sow corn  $3\frac{1}{2}$  feet between the rows, and thin enough in the rows to let it partially ripen so as to form ears. Hoe it well, cut it as late as possible, but before the frosts. Chaff it into the silo, or, when you are threshing, put it into the hay in alternate layers with straw. Oats and tares, if you prefer them to corn, or clover, may be treated in the same way. Above all, make the field large enough.

In summer, when the sun has burnt up your pasture, give your cows all the green-fodder needed to keep up the yield of milk. The rest of the fodder, and there must always be plenty left, you will use in winter.

Sow another field with carrots, parsnips, mangels and potatoes.

When you compare, with the outlay I have proposed to you, the quantity of manure made in your cow-house, the higher price your butter sells for, the additional

value of your herd, now so well kept and fat, you will see that the balance is on the right side : others find it so, why should not you ?

Give, if necessary, something "to boot" for cows to calve in October or November in exchange for some of yours that have calved some time ; and take pains to accustom your cows by degrees to calve in autumn. To this end, put strictly in force the law that forbids any bull to be allowed to run loose. The worse bred the beast, the less will the fences stop him.

I know, as well as you, that it was difficult to sell our butter last summer, but I am about to advise you, because we must act prudently, to make less cheese and more butter and for this reason : effective measures are about to be taken that butter, freshly made, with all its flavour, may be placed in the refrigerator, where it will remain in a cold state until it is delivered to the European consumer.

Thanks to the spirit of initiative and good will of the Department of Agriculture, of the Federal Government, and of the railroad companies, we are to have refrigerators on the trains, in the warehouses of our towns, on the Atlantic steamers, at the landing ports of England.

To second these measures, so important to our agriculture, I am quite ready to do my share, to imitate, for instance, what is so successfully done in Australia.

There they give a premium on exportation of 4cts. a pound ; and this enables that country to vie advantageously with the States in the furnishing of butter to the English market.

And yet Australia is 9,000 miles from Liverpool, while our distance from that port is only 3,000 !

The Dominion government, after having, by one means or another, supplied us with refrigerators and heralded our butter on all the English markets, informs me that it can do nothing more.

Still, I think something more must be done. Our patrons of creameries as well as the makers, must have something to encourage them to set the new system going.

We cannot, like Australia, give a premium of 4cts. a pound, but I am ready to advise the legislature to give you at least a cent a pound for creamery butter exported fresh, regularly every week or at least twice a month, after having been inspected and stamped as such, the premium being given to the factory to be distributed *pro rata*, among the patrons.

Such butter will arrive in England, after being well advertised, as an article clad, so to speak, with an official character. It will have gone by the State-refrigerators, and will be necessarily good. The purchaser, attracted by all these precautions, by such guarantees, will be eager to buy the goods.

Thenceforth, this most important trade for us will be established ; we shall be able to diminish our make of cheese, and fearlessly increase our production of butter, and

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this, sent off in summer as soon as made, will no longer accumulate in autumn in our warehouses and stand in the way of the sales of our winter made butter. Our local market will be completely cleared, and ready to take at good prices all the butter made in the cold weather, to the great advantage of our farmers.

And this very moderate premium, even, will not long be needed. When once our goods are known, there will be a continuous demand for them. All we shall have to do is to send a uniformly good article : it will always sell easily on the English market.

Some persons oppose this plan ; these are the dealers who will have some trouble to sell inferior butter, bought cheap, on the markets whither our good premium butter is sent, after its inspection and stamping ; but it is my duty to look first to those whose interests are entrusted to me, to your interests, farmers of the province.

Others say : this is the business of the Dominion, and we are wrong to incur an expenditure that we might avoid. For my part, I should be glad enough if the Federal Government would take this premium on its own shoulders, and I beg all who talk thus to try and exert their influence to get this done, though after having tried it myself, I have reason to believe that the Federal Government will go no further than the providing of the refrigerators. As I feel persuaded that this premium is of absolute necessity, I am prepared, as I said, to advise the Quebec parliament to grant it.

There is nothing needed, say others, but the refrigerators to ensure this export trade. Now, I know the province pretty well, and I am quite sure there is more than that wanted to start with.

The maker must be induced to promise to provide, for every week, or for every fortnight, his regular *quota* of butter for export, to allow it to be inspected and branded, and never to fall short of his promised quantity all through the season.

New systems are invariably difficult to manage at first. A more seductive bait is needed than the distant mirage of a large return on the sales. There are risks in sight, the unknown accidents of a novel experiment.

To assist in aiding the first step, in sailing over new seas, the premium at least is there and certain.

In my position, it is my duty to declare it. The interests confided to me are dear to me, and, if I and all of you agree in believing in this premium as a remedy, it is my duty to have recourse to it.

Now, a remedy is necessary. Our dairy-industry suffered greatly during last season's work. The warehouses were dangerously full in the fall. There was, therefore, a slackening in the demand ; then, it is my duty to sound the alarm lest the European market be overloaded. Then, I say, make more butter. To which they reply : but the early summer butter is not yet sold. I cannot reply to this : make still more cheese.

I take the opinion of men of experience, and I willingly range myself on their side. Nothing pays but dairying : let us watch over it as over the pupil of our eye. Let us

guard it from all hindrances, give it every chance, and the prosperity of our loved country will go on increasing.

I have something to say about the ruinous competition among our cheeseries ; very often, where one or two would be enough, we see six or seven in the same parish. It is true enough that, in that case, the cheesery is nearer to the residence of some one of the patrons ; it is just that ; each wants a factory at his door, to save trouble. The newly engaged maker profits by this desire to carry off the patrons of the old one, and the factory that had worked successfully up to that time, which by its very success was the cause of the competition, begins to droop, gives no longer any profits ; and the new factory will do no better. Such is the end of that system which consists in mutually ruining each other.

One of the remedies for this sad state of things might possibly be to order that every maker should himself pay for the cartage of the milk. What induces the patron to attract the factory to his own place is that it is troublesome to take his milk thither if it is at a distance. Let the maker be obliged to go to the patron ; there will then only remain the contests between the makers themselves, and if they no longer have the patrons to back them, they will soon come to an understanding.

The large factories pay best, and it is they that make the best goods.

As to the creameries, it is easy enough to please each sufficiently populous group of patrons by giving them a skimming-station, that is, a separator. The patrons can thus take back their milk at once, and there will be only the cream to be carried to the factory.

I beg that the Dairymen's Association will aid me with its experience : I beg for the same assistance from all men of good will. Cost what it may, an end must be put to this disastrous competition among the factories ; we must concentrate our capital and our work in the larger groups, and remedy one of the dangers that threaten our industry.

In each of your meetings, I have insisted upon the necessity of having syndicates of creameries and cheeseries. The whole province must be syndicated. The syndicated factory profits by the experience of the inspector, who, at regular and frequent times during the season, is present at the making of a batch of butter or of cheese. He examines the milk on delivery, points out its defects, if any, tests it with the Babcock to show who they are who feed their herds well, and who send honest milk from their farms.

Some skilful and energetic makers there are, who can dispense with this inspection, but even they should submit to it were it only to set a good example to those factories where inspection is of absolute necessity, where the business is not yet understood, where the maker dare not speak firmly to the patrons ; they should submit to it, were it only to hinder the making of inferior cheese in the province, which is harmful to the work of all factories : the product of all going to the same market.

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With the inspection made universal, there would be no more cheese made with inferior milk, in badly kept factories wherein the aroma of the cheese is far from good ; no whey unused would be allowed to accumulate and rot, spoiling everything.

Whether it be large or small, every factory should esteem it an honour to belong to a syndicate. Thus, good methods of working would become universal. Good articles would arrive from all quarters ; the colour and even the very wrappers would prove seductive. Our cheese might then be branded with the mark of the province, and do us honour on the foreign markets.

Do you remember the numerous fine samples of cheese from your syndicated factories that were shown last autumn at the Quebec Exhibition ? All the factories must make their goods of that quality, and it is by means of syndicates that we shall succeed in this : it is by their means that a good reputation will be given to *French cheese*, and by their means we shall produce an article that cannot be displaced in the markets of Europe.

And it is you, oh intelligent makers, who made that fine cheese that was laureated and crowned with glory at the great Chicago Exhibition. Are you not deeply interested in keeping up the reputation of your goods ? Are you not anxious that all the cheese of the province should be always good ? The products of all the factories go to the same markets ; the bad cheese injures the sale of the good. Through the syndicates, this state of things will be altered.

I take the liberty of advising you to be careful in the make of the cheese-boxes and in the packing of the cheese in them. You would not believe what a bad impression is made on the buyers by these badly arranged boxes ; bad in appearance, and ill-packed. A careful attention to *dress* is altogether necessary (*cucullus non facit monachum*), the habit does not make the monk, so says the old saw ; true, but, all the same it can do him a great injury sometimes. Let your boxes then be suitable, and see that they do not injure their contents.

It is, I believe, a very important matter that the cheese should be inspected and branded with the name or number of the factory. I long to see the tail separated from the head-grain. The man, who with pains and skill makes a good article should receive the reward due to him, and not be confounded with the lazy and those who think they have nothing to learn. He ought not to see his cheese sold as *good Ontario*, and the reputation of his make never become known abroad. The cheese itself should be branded, and the number be so deeply graven that it cannot be erased.

If there is any thing that will assist our dairying, any hope for our farming, it is *good roads*. I cannot tell you how I rejoice at the proposal to form among you a society for the construction and maintenance of good roads. They are quite as much wanted as separators, and other factory implements. With them, your tanks will get fuller of milk, as the carriage will be easier. With them, you will have more large central factories, fewer of those little ones that are always waging an interneceine war.

Follow, if you choose, the Danish system, which M. Gigault will tell you about. It can be successfully carried on here. Let the municipalities enjoin each individual to round up his part of the road, and to cart and break the stones into macadam-size. There is no outlay of money there. The road can be prepared and the stones broken during winter. Any one who cannot pay in kind (*i. e. do the work*) will have to pay his share in money.

Near Montreal, beside the roads made by government, on which are tollgates, most of the roads have been macadamised by farmers in the way I have just mentioned. (1)

If great pains are taken to make channels on each side of these roads, to round them up, to harrow and roll them before laying on the stones, it will be found that for roads, where in general no heavy loads pass, the bulk of stone required is not so great as might be supposed.

In conclusion, I wish every possible success to your great and useful association. You have opened the road to many a step in advance for the province. I shall see with pleasure your numbers increase from year to year. You are setting a brave example in the matter of the overcoming that dull routine so prevalent here, in spreading abroad sound ideas, by which our rural districts will once more become wealthy, prosperous, and enjoy the fruit of an intelligent and persevering industry.

*Mr. Barnard.*—Gentlemen, allow me to say a word on the subject of the numerous invitations, received every year by our association, from the farmers of a great number of counties to hold our meetings at their places. Well, you see the conventions we hold, once a year. This is the first time that we have had the pleasure to visit Beauce, and yet, as the President said, it was, last year, the third invitation we had received. And how many other counties have sent us invitations during the last few years! It is clear we cannot go to every place to which we are invited. I think we have too many things to do. But there is a way to please every body: to organise in every district annual conventions of the Dairymen's Association. This would be a reduplication of the great convention of the Dairymen's Association. With the aid of earnest men, like Dr. Grignon, Dr. Coulombe, and Mr. Dallaire, I think it would be feasible to establish in every district a dairy convention like those we ourselves hold in some counties. We are overwhelmed with invitations, and, are, of course, very glad it is so, for it is a proof that the farmers are anxious for instruction.

But the misfortune is that we cannot go every where, though we do all in our power to accept the invitations we receive. Last year, there were more than two hundred agricultural lectures delivered in various parts of the province, but it too often happens that we cannot satisfy every request for lectures. Sometimes, a lecture is asked for by Champlain, and all our lecturers will be, at the date mentioned, in Chicoutimi. In spite of our wish we can do nothing. I think then that the best way to satisfy every body would be to hold, in each district, local conventions of the Dairy-Association, where all the farmers of that district could meet together.

(1) " *McAdam*, or *Macadam*, was a Scotchman who flourished about 1780. A. R. J. F.

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We have excellent lecturers, men of long experience, who thoroughly understand the wants of each district. I believe that this system would be of great service ; so I trust it will be established next year in every part of the province.

#### ADDRESS OF M. J. DE L TACHE

GENTLEMEN,

I am a man of good will : I am always ready to put myself at the disposal of those who wish me to speak on dairying ; but I have not much to say to-day.

As the Hon. Minister who has just sat down so well explained, dairying is now our great national resource, the industry on which the prosperity of our rural districts chiefly depends.

As in all other trades, it is success that encourages one ; what is the principal cause of the success of any industry ? The answer is : the easy sale of its products, the market.—The market for our dairy-goods is in England.—There, is purchased \$25,000,000 worth of cheese yearly. Out of that we furnish \$13,000,000 worth. I say : England buys twenty-five million dollars worth of cheese a year ; therefore we supply more than 50% of the cheese imported by England. That is, in other words, that if the English market were to fail us, Canada would see its exports diminish by thirteen million dollars.

But in such a case, should we have any other goods to send to the English market to compensate us for the loss our dairy-industry would incur ? No, for we hardly supply one per cent of the butter England imports. We should have to find another outlet for our cheese, or have some other product all ready to put on the market. As to finding another market for our cheese, that is hopeless. We must then find means to compensate ourselves for our loss by some other kind of goods. Gentlemen, England now buys annually nearly sixty million dollars' worth of bacon and hams, and more than sixty million dollars' worth of butter. Of these 120 million dollars' worth of foreign dairy-goods taken by England, we supply hardly any. We have, so to speak, given our attention entirely to cheese, the production of which, it seems to certain well informed men, is likely to be overdone. So that it is absolutely necessary that we should at once take steps to guard against any occurrence of the kind.

MM. Gigault and Leclair, in their tour through Denmark, found that we are greatly inferior to the Danes in butter-making. Now, the only way to compete with them on the English market, is to make and send thither an article of the best quality. We must then positively reform our system, or we shall never be able to stand competition on the market.

We are inferior to our competitors for three reasons :

1. Owing to the bad repute we have made for ourselves by sending bad butter to England : as a butter-producer, Canada stands very low in England. It is a very rare thing to hear Canadian butter asked for in English markets.

2. We have no means of preserving our butter and sending it to England in the best condition. We have not what is needed to keep butter fresh till it reaches the market. The countries that succeed in the export of butter send it in steamers fitted with refrigerators. We have nothing of the sort.

3. This cause comes from the other two,—it is the consequence of the other two. We have not put butter on the market in quantities large enough to earn us a reputation<sup>(1)</sup>. We are looked upon over there as being utterly unable to produce good butter.

We must then absolutely increase both our production and our exports, if we want to get the English to deal with us. I can and I must say, it is not the quality that is at fault. We are making as good butter as is made in any country. What is needed is the means of getting this article on the market in good order.

According to all the observations made up to the present, we are in a position to say that we are able to turn out as good butter as any country can. It only remains to deliver it on the market in the same state as when it leaves the factory, and for that purpose, we want a line of steamers fitted with refrigerators. Without that, we shall never be able to compete with other butter-producing countries.

An excellent way of encouraging the export of butter would be for the government to give a premium on the exportation of that article. It is done in Australia, and the statistics show that it answers. At any rate, we must indubitably manage to increase our production of butter, if we mean to be prepared against any thing that may happen. As I just said, the market for cheese may fail us all at once, and if we have no other goods to send to England, it will be most disastrous. I will not speak to you about bacon and ham : Mr. Barnard will give you a lecture on that subject. But, I will repeat what I have just said : it is absolutely needful that we increase our production of butter. We must take possession of the butter-market, otherwise, we run the risk of seeing, in a few years, our dairy trade completely ruined.

#### ADDRESS OF MR. LINIERE TASCHEREAU.

MR. PRESIDENT AND GENTLEMEN,

Casting a glance around this hall, looking upon this peaceful audience that fills it, on this minister of peace who presides over the meeting, I ask myself what miracle has occurred in this place ? How ! Here is the Temple of Themis transformed into a *cenacu-*

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*bum* of peace ! The harsh tongue of the Palais has, without a dispute, yielded its rights to the harmonious intonation of the peaceful arts. What ! No more quarrelling ? No more adversaries competing with one another ? No opposite interests ? Everything here breathes forth sweetness, union, concord ; the hearts of all are beating in unison and the voices are all in tune ! (1)

Then, a wonderful thing, a strange event ! As a lecturer at this peace congress, you yourselves see on this platform a disciple of the goddess of wrangling, an adept in that profession so beloved by the Normans, so detested by the Canadians ; i. e. by those Canadians who are not sprung from the Normans ; an advocate, in fact, whom the walls of this hall, so often the silent listeners to his pleadings, are to hear to-day, for the first time, speaking without contradiction, and pleading a cause already gained.

But, gentlemen, there is no prodigy in all this ; there is nothing singular, nothing extraordinary ; on the contrary, it is all in perfect conformity with the nature and order of things.

And this is so, because, when the question is about working in the cause of agriculture, of developing a taste for it, of aiding its advancement, of celebrating its benefits ; all men, without distinction of race, class, profession and aptitudes love to share in that work ; for we recognise that it is the oldest, the most noble of the arts, the grandest, the most necessary of all trades ; that it is the source and the impelling power of the prosperity of nations, and the occupation most worthy to be followed by human beings. And it is to-day the turn of agriculture to make itself heard in this hall. The voice of the pleader then must be hushed, to allow the voice of the lecturer and of the agricultural missionary to be heard : the study of the law and the interpretation of the civil and criminal codes must give place to the study of chemistry, and to the application of the laws of nature and of science to the cultivation of the soil.

Neither let us forget, gentlemen, that we are receiving to-day, for the first time in this district of Beauce and in this parish, the Dairymen's Association, a society founded with the unique intention of promoting and developing in this province the great agricultural industry, to make known and be appreciated its most useful principles, the improvements acquired by experience, and specially to strengthen here that business of dairying the benefits derived from which the country is already reaping in such abundance. Inspired by such motives, so purely patriotic, this association has never asked, and does not now ask, apart from a small contribution from each of its members, anything but the zeal, the labour, and the devotion of its worthy officials, and the good will of all the people of the province of Quebec. Disinterested in its views, its ambition consists in being able to spread abroad and scatter in profusion over the minds of the rural population the germs of sound agricultural instruction, to lavish on them in its tours throughout the

(1) The convention was being held in the Palais de Justice. *Cenacle*, in Latin, *cenaculum* was the guest-chamber in which the last supper was held. A. R. J. F.

province good advice, to excite in them emulation and the love of progress, reforms to be instituted, and to awaken in them sentiments of love for their profession : a society as you perceive, composed of men animated by the most sincere patriotism and the greatest devotion, and which, having come hither to continue its worthy mission and its gallant labours, well deserves that in its presence, and more especially before the end it pursues, all other interests should vanish, all discord cease ; that the temple of wrangling should become the temple of concord, and that every voice should unite with the voice of its members to glorify that art, that agriculture, of which these men are at once both the champions and the interpreters.

And is it not right that to an association like this the most cordial welcome should be offered ?

For my part, Mr. President, it is in yielding to such considerations as these, that I have accepted the agreeable invitation you have given me to address this meeting. And, indeed, if by accepting it and by speaking in public, this evening, I can testify in a tangible and convincing manner all the interest I take in the great cause of agriculture, all the admiration I feel for the Dairymen's Association, for its labours and its successes, and the deep esteem in which I hold all and each of its members, it is with the greatest satisfaction that I shall discharge this task. Happy shall I be, if the expression of my testimony shall arrive at the height of the objects to which I devote it.

But, do not imagine, Mr. President, that in your presence and in the presence of the eminent men who surround you, I am about to trust myself to speak on agricultural science. By no means ! I am too well acquainted with my want of acquaintance with the subject, with my incapacity to treat it, to run any such risk.

Let me rather, leaving agricultural science aside, treat of the farmer himself, in relation to his business, and of agriculture in general.

Love of one's business is of all the blessings one can enjoy on earth, one of the most precious and most rare.

Perfect happiness, it is said, is not to be met with in this world. True enough. The soul, destined by the Creator to an immortal existence, cannot be satisfied with the enjoyment of perishable possessions and a limited life : it has an insatiable thirst for infinite happiness, for supreme emotions.

Still, if there exist on this earth ; and there are some ; beings relatively happy, do we not find them among such as having embraced a certain condition of life find themselves fitted for it, delight in the duties it imposes, rejoice in the fortunate results it's exercise procures for them, strive every day to understand it better, to make it the more profitable, and in fact consecrate their whole life to distinguish themselves in it.

Worry, that feeling of bitterness which begets so many evils, has no hold on a spirit so entirely absorbed, and bad passions cannot find in a heart so deeply imbued with the love of its calling a soil suitable either to thrust out deep roots, or to leave extensive traces of its presence.

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How precious then to man must be a true passion for his calling, but how few are they who really possess it.

Does it come from ambition, from envy? Is it rather a caprice of human nature? At any rate it is the case, and invariably so, that man most frequently desires to be in a sphere differing from that in which he moves.

Does he see, near to, or far from him, another who seems to travel more rapidly than he along the road that leads to fortune, or to move with a more brilliant lustre on a larger theatre, he begins to condemn the path he had previously selected, on which he had based all his hopes. He tells himself he ought to have chosen another career; in it he would have obtained a greater and more rapid success; that, for him, life would have been pleasanter and better suited to his taste and his talents; and he moans over his choice and the past time, that can never return.

It almost always happens, however, that his regrets are ill founded, have no reason for their existence; they rather arise, in the mind of him who gives himself up to them, in a want of liking for his calling, which want is itself due to the apathy and indifference which he brings to the discharge of the duties which are incumbent upon him.

How glad should I be, Mr. President, if in this description I did not recognise the characteristics of some of our Canadian farmers. Alas, I cannot say it is not the case with some of them! How many are there whom we hear complaining of their business, depreciating it, despising it, and sighing after the day when it will be in their power to abandon it? How many young men every year leave the noble profession of their fathers, to run off in search of some other business, even if to find it they have at the same time to bid adieu to their native land.

Some, doubtless, do so, impelled by legitimate ambition or by special fitness for labours of another kind, without entirely quitting their country, to which they rarely fail to do honour. These men we must not blame; they only respond to the call of a higher voice; it is their duty not to resist its appeal.

But how many others desert the career, yielding to I know not what vague longings after change and movement, to the hints of ill placed pride, trusting to find in some other sphere a less laborious life, if even at the price of their independence; or attracted by the hopes of living in towns where they expect to find greater enjoyment, a larger field for their exertions, and greater liberty. Poor moths! dazzled by the light, they will shortly approach it too closely, burn their wings, and therefore perish.

But do not let us hide from ourselves that the greater number of our farmers who leave their calling, every year, and, directing their steps towards the manufacturing towns of the States, increase the formidable number of our exiled brothers, do so from despondency.

Want of success, accidental losses, ill luck, baffle their projects and deceive their hopes. They allow their courage to fail, and giving up the contest with misfortune, proceed

to seek employment from others to thereby earn the price of their daily bread. These last do not merit all our blame ; let us rather pity them and by no means abandon them. Leaving the others to the guidance of fortune, let us see if there is not a remedy for this despondent mood that every year carries off so large a portion of our population.

Yes, gentlemen, there is one, a sovereign remedy, infallible. Since it is want of success that begets despondency, let us substitute for it that success that gives renewed force to the mind and inspires it with courage.

Want of success often springs from ignorance. Well, let us impart to the unsuccessful farmer the information that ensures success ; let us teach him those ideas that will enable him to avoid accidents by foreseeing them, and to baffle the frowns of bad luck by endowing him with weapons to contend with it. For, in every profession, the secret of success is to possess the information that is peculiar to it.

Thus, to teach the youth intended for a farmer's life the fundamental principles of his occupation ; to instil into his mind at least the elementary ideas of agricultural chemistry ; to impart to him the methods of breeding stock ; to preach to all, young and old, the duty of abandoning the worn-out paths of routine, and lead them into the road of progress ; such is the end whither ought to be directed the efforts of all those who have at heart the future of this province, of those whose duty it is to watch over it.

Already, have those in high places felt the urgent need of putting this programme in execution, or rather of enlarging its execution.

The Dairymen's Association, as I said just now, founded with this intention, fulfills it with a courage and success worthy of all praise ; but the field of its operations, although extensive in itself, is restrained by the difficulty, or rather the impossibility, of its meeting more than once a year.

The erection of Farmer's Clubs in every parish, a work that has been earnestly pushed for some time, and from which such grand results have been produced, seems at present to be the most practical and favoured means of arriving at the desired end.

The eloquent lessons and the wise trainings of our lecturers and agricultural missionaries at the club meetings, cannot fail to bear good fruit, as experience has already shown. Are they numerous enough ? Do they visit the clubs often enough ? Allow me to leave these questions without a reply.

Again, it is for the promotion of this programme that our higher clergy have placed themselves at the head of this agricultural movement, in each parish, and that our bishops have shown themselves anxious that the curé of each parish should be the president of the club.

Our Canadian Clergy cannot resist this wise and pressing appeal of the episcopate. If all of them have not that zeal and taste for farming that you have, Mr. President, all without doubt, have at heart the progress and happiness of their fellow countrymen and

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love for their home. The past history of the clergy is there, all full of patriotism, of devotion, to guarantee that they will not refuse to cooperate in this work, so important as regards our future both religious and national.

Besides, we have heard that this programme of agricultural organisation having been laid before the sovereign Pontiff by Mgr. Gravel, Bishop of Nicolet, now at Rome, His Holiness, after having blessed the programme of the Canadian episcopate, pronounced these remarkable words : "The clergy should quit the sacristy and live among the people. The curé ought not to confine himself to the administration of worship, to the guardianship of the faith : he should be, besides, the adviser and the friend of the people, even in their terrestrial interests."

Our Canadian clergy had by no means need of this potent lever to excite their zeal for agriculture ; but they may find in these words from the greatest as well as the wisest of present statesmen and the most enlightened of Popes, both praise for their past conduct and a line of conduct for the future.

Supported by this supreme authority, blessed by a hand so powerful, approved by so far-resounding a voice, does not this work of the Clubs appear destined to produce surprising results ?

Then, when by means of similar organisations, the science of agriculture shall be placed within immediate reach of the farmer ; when he has acquired sufficient acquaintance with his occupation, and learnt the secret of extracting from it the greatest possible profit and of avoiding as far as can be done all mischances, he must only blame himself if his crops are not notably successful.

He must anyhow do his part.

What must he do, then, to gain this end ?

The farmer has three principal elements of success, which are at the same time three social virtues : industry, perseverance, and economy.

I will not delay you, Mr. President, by expatiating on these three virtues, and on the advantages conferred by their exercise. The time I am occupying in speaking is too precious for me to abuse your kindness. Let it suffice to say that the farmer who devotes assiduous, wise, enlightened labour to the cultivation of his fields : who is persevering in his undertaking, not easily discouraged at the first reverses, but profiting by the experience acquired daily to tread the path of progress ; who lives in accordance with his means, in comfort, but with economy and good management ; this man encouraged by his success, will ere long acquire with his easy circumstances, a true attachment to his noble, his distinguished occupation.

Noble and distinguished indeed is the occupation of the man who devotes himself to the cultivation of the soil, of the earnest expert in that business, the oldest and most necessary of all ; that derives its origin from the very cradle of the world, furnishing to the whole race of man the means of subsistence ; the mother of all industries, of all arts and the corner-stone of civilisation.

And all nations, at every stage through which the race has travelled, have held it an honour to celebrate its benefits, to give it every encouragement, and to recognise it as the source of the greatest riches.

To prove to you the titles of nobility due to agriculture, I will not, Mr. President, compel you to rise beyond the Deluge ; but what was that Earthly Paradise described in the Bible, but : "A delicious garden, where flourished all kinds of trees beautiful to the eye, producing the most exquisite fruit, the loveliest flowers, and which our first parents had to cultivate without fatigue ?"

And that promised land ; was it not : "A spacious and fertile country," of which Moses related that its rivers flowed with milk and honey ?

Then, when they were the People of God, was it not the principal, or rather, almost the sole occupation of the Hebrews to cultivate the land that they held in highest honour?

Their neighbours, the Egyptians, the Babylonians, the Persians, attributed to agriculture a sort of sanctity.

As for the Romans, how highly must they have esteemed it, when we consider that they searched for, and found among their farmers, consuls, generals and dictators who could wield a triumphant sword, or hold the reins of government in the same hands that had once held the plough.

This worship, if the expression may be used, that the people of old paid to agriculture, has also been paid by the moderns, all of whom have recognised that art as the basis and foster-father of all the rest.

For, is it not true that from the land man derives food, clothing, and dwelling-place, those three things indispensable to his existence ? Still, if each had to work with his own hands to procure for himself these things, how could the other arts, sciences, and industries be cultivated and developed ? It is clear, then, that part of the population must work to supply the wants of all, and this is the duty and the mission of the farmer. Hence, the reason why the encouragement, the development, and the progress of agriculture must be the object of the greatest attention on the part of all governments.

And the ancients thoroughly felt this, as do the moderns and the enlightened peoples of the present day. By promoting the progress of agriculture, governments do so not only with the view of improving the lot of the farmer, but also and especially to encourage an industry that is the great source of wealth, of prosperity, and of power to a nation.

Allow me, before concluding, to cite as a proof of this an episode, which I will take from the history of France ; because I do not wish to be thought to allude to the conduct followed by a certain government and a certain minister of agriculture of the present day ; and thereby to deserve the reproach of introducing politics into this meeting.

Henri IV had just ascended the throne of France. Finding the country feeble and impoverished by the successive wars it had been compelled to sustain, this great king

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enjoined his minister, Sully, to seek out means to increase the finances of the kingdom, and so to contrive that an era of prosperity might succeed so disastrous an epoch.

Sully took as the basis of the new political programme that he inaugurated, the following device : "Pasturage and the plough are the two udders of France;" and by rendering these fruitful sources more prolific, Sully found means to replenish the exchequer of the country, and to flood the whole nation with prosperity ; thereby realising the desires of this king, who was called : "The Father of his People."

In his memoirs, Sully says : Instead of making all the retrenchments that the sham enthusiasts never ceased bothering him about, he tried to diminish the pressure of taxation by increasing the public wealth by the encouragement of agriculture and the creation of high roads.

These words ; "pasturage and the plough are the two udders of France," were pronounced by Sully in 1608, the date of the erection of Quebec into a colony which Old France was then essaying to found in America, under the name of New France.

These words, Gentlemen, adopted by the illustrious minister of Henri IV. as the basis of the regeneration of the fortunes and power of Old France, are they not adapted to that New France, now, the Province of Quebec ? Applicable here for the same reason, why should they not produce the same effect ?

If our farmers profit by the teaching and encouragement they receive ; if the Dairymen's Association continues to exercise throughout the province its beneficent and patriotic function ; if our government aims at lessening the weight of the imposts by augmenting the public wealth through the encouragement given to agriculture ; it will not be long before we see this part of the New-France of old times, which is now called the province of Quebec, filled beyond measure with the blessings that pasturage and the plough, these two udders of prosperity and power for a nation, have caused to most abundantly flow over the land.

Then, the Canadian farmer, contented with, and proud of, his dignified position, will place all his glory and his industry in distinguishing himself in it, thus rendering himself at once useful both to himself and to his country.

## Lecture by Mr. Jas. Fletcher.

MR PRESIDENT AND GENTLEMEN,

I am pleased at meeting you all here to-day, and, in spite of my very moderate acquaintance with French, which I deplore and am trying to improve, I have consented at the pressing invitation of my friends MM. Chapais and Castel, to come hither and to read to you some notes on the work I am carrying on, in the interests of you and of all the farmers of Canada, at the Central Experiment farm at Ottawa. The work involves two branches :

1. An enquiry into the damage done to farm-products by insects, and a careful study of those insects, in order to discover cheap and efficient remedies against their attacks.
2. A study of both useful and of injurious plants ; in the number of the latter may be reckoned the parasitic diseases of fruit-trees, such as the black-spot of apples, mildew of the vine, and the potato-disease. Against all these, the Bouillie-Bordelaise is a satisfactory remedy.

The *bouillie* is prepared by dissolving 6 lbs. of sulphate of copper or blue vitriol, in 4 gallons of water, in a wooden tub. Then, 4 lbs. of quick-lime are slaked with 2 gallons of water, and more water is added and stirred, until a very fluid milk of lime is produced. This milk of lime is next passed through a sieve, or a coarse cloth into the vitriol-solution, the mixture being kept stirred during the operation. The *bouillie* is then ready for use, and may be applied to the potatoes by means of a sprayer, or from a watering-pot with a very fine hose.

For the potato-disease, I think the first dressing should be made about the 1st August, a second about the 15th, and should a third seem necessary, it may be given a fortnight later. The fungus of the disease passes the winter in the interior of the tuber, and the farmer sows it when he plants the sets. As soon as the plant begins to grow, the parasite grows too, develops itself in the interior of its host, and during August it produces on the leaves the spores or reproductive bodies. Then, the spores propagate the infection, either by being carried on to the leaves of the neighbouring plants, where they germinate, or by falling on the ground and being drawn along by the rain through the ground to the young tubers just forming ; on these they germinate and insinuate themselves into them. In the tubers, the parasite can develop itself rapidly at the expense of their material, and thence arises the autumn or *damp-rot* ; otherwise, after having vegetated for some time, it may rest inactive till spring, in which case, its presence can only be detected by a slight spot of *dry-rot*. The development of the parasite in autumn, either previous or subsequent to the harvesting of the crop, depends especially on the conditions of heat and moisture to which it is subjected

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Very few plants are free from parasitic fungi, which are now being carefully studied ; and before long, practical remedies will doubtless be discovered against a great many of them.

Another class of noxious plants is that of weeds, and it is very important that farmers should consider the enormous losses they suffer every year by these voracious parasites to which they abandon so large a share of their land. These plants do indeed smother the crops and deprive them of the food the farmer furnishes to them in the form of dung or other manures.

Among others, there is a weed against which I would warn the farmers of the province of Quebec ; it is the Perennial Sow-thistle, which, as observed last fall, has become very common on the farms along the Intercolonial. The leaves of this weed are rather soft, but prickly, the sap milky, and it has a bunch of about 6 flowers rather like those of the dandelion ; the stem is from 2 to 3 feet high. Some people call it the *crève-yeux*, the *eye sore*, because when threshing grain in which it is found, the men have to wear a veil to protect their eyes. It is found in grain-fields : no flowers are produced the first year, and it forms only a bunch (*rosette*) of leaves, that spread over the land and smother all the grain they cover. The second year, the sow-thistle produces both flowers and seeds, at the same time sending out numerous underground shoots on every side, from which arise new-plants. This weed I consider still more noxious than the Canada-thistle, because farmers do not esteem it as an enemy, and thus, left alone, it occupies, imperceptibly, a vast extent of land.

In my opinion, there are, at present, hardly any subjects connected with farming more important to agriculturists, and especially to dairymen, than an accurate knowledge of the numerous varieties of the grasses on which their cattle feed. If certain districts have earned a reputation for the excellence of their dairy-goods, they owe it chiefly to the quality of the grasses that grow there. In all habitable parts of the earth, grasses of some sort or other exist, that are good food for stock, and which are naturally able to stand the inclemency of the climate. Botanists are said to be acquainted with more than 6,000 species of grasses, and, in Canada, more than 300 distinct species growing wild. There is not the least doubt about the grasses being by far the most useful of all vegetables ; they vary in height from the little *bushy fescue*, which grows on the mountain-tops, to the gigantic bamboo more than a hundred feet high. Their importance is acknowledged when we reflect that all grains, maize, or Indian corn, wheat, barley, oats, millet, are grasses, as well as the sugar-corn and many others.

At Ottawa, we are studying a great number of fodder-grasses, in order to ascertain if they are fit for hay or as pasture grasses in this country. We have been working at experiments on these for four years. Among the grasses we have examined, are comprised most of the more highly valued grasses of Europe, and many of our indigenous ones that are promising. We grow each species separately, and take notes of the dates of sowing

flowering, cutting, and of the aftermath; of the weight of fodder to the acre; of the chemical value of the plant as stock food; of the more or less appetite of stock for it; and of its hardiness. We have, at Ottawa 150 species, and from what we have seen up to the present time, many of the kinds that are found in the mixture sold by seedsmen for permanent meadows can not be grown with profit in this climate. Besides, we must not forget that in a country so extensive and so varying in climate as Canada, many plants that are unsuccessfully tried at Ottawa, may succeed in other districts.

No grass is better known or more esteemed than timothy, *Phleum pratense*. It is upon the whole, the most useful grass for hay that can be sown. Its great advantages are: its sturdy growth, the great number of its shoots (*talles*); its heavy yield, the ease with which it is made and pressed without waste, and the fact that its value is so well known that it can be sold without any trouble. Its yield of seed is great; and nothing is easier to harvest, clean, and to treat, besides it can always be bought if wanted.

But timothy has some faults that must not be lost sight of; it shoots late in spring, and does not come to the scythe when the common red-clover is fit to cut; when mown too early, the bulbous formations at the bottom of the stalks are injured, and the aftermath is then poor. These bulbs, too, suffer from the attacks of insects and of field-mice. It is of no use for grazing, as horses, sheep, and pigs crop it too close, and it is then in danger of being killed by the frost. There is no second cut, practically speaking. All these characteristics show that timothy is by no means a perfect fodder-grass, and it would be well for all Canadian farmers to sow, as the complement of their meadows and pastures, other varieties that up to the present time have been sadly neglected; and the more so, since universal experience shows that timothy does not succeed in some places so well as other grasses.

Every one knows that the grasses for hay, and those for pasture, are not necessarily the same. For hay, we need those that come, as much as possible, to their best condition at the same time, and their best condition is when they contain the greatest quantity of the nutritive elements, and are most bulky. They are in the best condition for mowing, as soon as they are in bloom; at that moment, everything they have derived from the soil, or from the air, is more equally distributed throughout the whole plants than at any other period of their growth. The plant may grow and increase in size and weight; but, all the time it is busy in drawing from the stem and leaves their precious constituents, and passing them on to the seeds; these efforts tend to the preservation of the species, at the cost of the nutritive qualities. The seed then takes possession of a large proportion of the virtues of the plant, and if it ripens sufficiently to fall off when the hay is being made, the loss thus incurred is considerable. My advice, then, is in every case: *Mow as soon as possible after blossoming.*

There is another point, doubtless of minor importance, but that I may as well mention. Most Canada farmers say that, the best time to cut timothy is "between the first and the second bloom." This is an excellent rule, although, in reality, there are

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not two distinct blossomings. The ear of timothy is composed of numerous separate little flowers, some of which open early, and the rest in succession during three or four days. Early in the morning, about six o'clock, the timothy seems to have a violet tinge ; about nine, it seems white, because the *anthers* have shed their violet pollen ; later in the day, these anthers become yellow, and the next day brown. The appearance of this brown colour is what is called "the second bloom ;" so, if you want the best hay, cut your timothy as soon as the majority of the flowers are brown.

This is a good thing to know ; and if all would follow this rule, our hay-market would be all the better for it ; for people would very soon remark the improvement in quality. Now, there is a great deal of inferior hay made, because it is allowed to stand too long. This may proceed from various causes ; the farmer may have more hay to make and not enough men to make it in time ; again, it may happen, naturally, that another may prefer getting more money for a larger quantity of inferior hay, and he lets it stand, instead of cutting it at the proper time. By leaving it there longer, he gets more hay, and therefore more money ; but the purchaser finds that he has bought fodder inferior to what it would have been, had it been cut at the right season. Do you want to have timothy hay of the best quality ? Cut it as soon as possible after all the flowers are out and have shed their pollen.

*In a pasture*, we want grasses of different kinds that, one after the other, at all seasons of the year, come to their best condition. If you can make a mixture for hay and a mixture for pasture, so much the better. Two grasses that I think, should enter into all the mixtures that are sown in this part of Canada, are *meadow-fescue* and *Orchard-grass*. And these two do well with clover. The importance of having clover in a mixture and also of its entering into every rotation of crops, is that first, it makes about the best of hay, and is also a valuable fertiliser. Indeed, clover absorbs more of that important element of manures, nitrogen, from the air than any plant we can grow ; it thus takes nothing from the soil ; and much more than that : it enriches the soil instead of impoverishing it. It is therefore most important that all farmers should adopt a system of rotation of crops, in which their land should be, every few years, sown with clover : this plant gives, first, a good crop of hay, and then ploughed in, it enriches the land.

Which grasses are most suitable to any specific soil, is a question that chiefly experience must decide. But there are some which will certainly always yield a paying crop, all over this province ; and I will, in conclusion point out a mixture that all who try will find successful. I have sown it for the last four years, and always with good results. For an *arpent* : (*one sixth more for an acre. Trans.*)

Timothy.....	6lbs.
Meadow-fescue.....	3 "
Orchard-grass .....	2 "
Blue-grass.....	1 "
Franc-foin .....	1 "
Red-clover.....	2 "
White-clover (Dutch) .....	2 "
Alsike-clover.....	2 "
Lucerne.....	2 "
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Some of you may think it rather too heavy seeding ; but I am sure that one of the principal causes of failure in laying down land to grass is due to not sowing seed enough.

If clover and timothy are sown together without other grasses, I recommend 12lbs. of timothy and 8lbs. of clover to the *arpent*. For this the Mammoth and the Rawdon red-clovers are the best, as they come into bloom at the same time as timothy.

With the common red-clover, it is better to mix orchard-grass and meadow fescue.

Before sitting down, I wish to invite all present, who are in want of information on any branch of my work, to ask me to give it them by a letter addressed to the Experimental farm, Ottawa. Any letter of this sort goes free of postage, and I shall be happy to send you an answer.

About the horn-fly : I have here this evening several copies of a printed circular giving details of the history of this insect, and showing the best way to get rid of it.

Allow me to say, in conclusion, that I have never so much regretted that I do not speak French better, than I regret it to-day

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#### ADDRESS BY MR. GIGAULT.

GENTLEMEN,

In the address which was read at the opening of this meeting, we all applauded the words of gratitude and thanks that were spoken about our worthy president.

I am not surprised at seeing the county of Beauce holding so high a position in the province of Quebec, as regards dairying, for this county possesses, in the person of our president, a man whose powerful influence and great spirit of initiative must necessarily make itself felt among you. Beauce, as concerns dairying, is at the head of the province, for it has more dairy establishments than any other county.

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The subject I am called upon to treat is my voyage to Denmark. The Hon. the Commissioner, under whose orders I am fortunate enough to work, I say fortunate, because he is energetic and devoted to the interests of the farmer, entrusted to Mr. Leclair and me the duty of going to Europe in general and to Denmark in particular, to collect information on agriculture and especially on dairying. Denmark deserved to be visited, not only on account of its advancement in agriculture, but still more on account of the similarity of its climate to our own. We also made a special study of the English market, for the purpose of learning what goods it would pay us best to export thither. That the farmer may conduct his operations profitably, it is necessary that, being well informed as to the demands of the market, he should apply himself to the production of such goods as are best suited to the wants of the consumers, and for which he can get the best price.

We left this country on July 12th, 1894, for Liverpool, where our observations were to begin. We found out on our arrival that in England, the demands of every locality are not the same. Thus, for instance, Liverpool wants its bacon *lean*, the Londoners want it fatter. Salt butter sells well at Liverpool, but in London a great deal of butter is used without any salt in it. Every body, everywhere, agreed in saying that if we want to make our butter trade extensive and successful, we must positively make up our minds to have refrigerators on board the boats that ply between Canada and England. We were invariably told to adopt the system followed by the Australian exporters; this consists in keeping the butter away from the action of heat from the moment it is made till it is delivered for use. Another condition, essential to success, is that our butter must be sent fresh from the churn, and that we must by no means keep our summer butter for sale in winter. We were also advised not to oversalt it. On the other hand, it was admitted by many that we had often sent Canadian butter of excellent quality, and if we could ensure refrigerators on the boats, we might succeed in supplying a notable part of the English demand. This market is of great importance, for in 1893, England imported 2,327,474 cwts. of butter, worth about \$62,067,485.93. Out of this, Canada only supplied 43,160 cwts., while Denmark sent 934,787 cwts., worth \$25,000,000. France's share was 468,317 cwts.

The contribution of Canada to this enormous importation is very trifling, but probably it would be considerably increased, if we have refrigerators on our steamers, and send our butter over as soon as made. The article sent, too, must be of good and uniform quality.

Many reasons should lead us to aim at the development of our butter-trade. During the last few years, the annual imports of cheese into England have been almost stationary, and if we increase our production of that article by several millions of pounds we shall run the risk of overloading the market. To avoid a result so injurious to our interests, we must, without neglecting our cheese-making, try to develop our other agricultural industries, among which are butter and bacon.

One of the best pieces of advice that can be given to farmers is to grow a variety of crops, so that they may be in a position to supply the divers demands of the consumer, and also avoid overdoing the market with any one article, while the offerings of other articles may be insufficient.

As to cheese, the English importers told us that, for a year past, the quality of the cheese from this province has been greatly improving. In 1881, when Mr. Barré went to Denmark to study dairying, he found that between the cheese of Ontario and that of Quebec there was a difference in price of from  $1\frac{1}{2}$  to 2 cents a pound. Now we find that, if we take the report published by the Montreal *Herald*, the best Ontario cheese is selling at  $10\frac{3}{8}$  a pound, while the best Quebec cheese sells at  $9\frac{7}{8}$ ; so the difference between the two is reduced to  $\frac{1}{2}$  a cent a pound.

By this difference we lose about a quarter of a million dollars a year; and the reason for this loss is that the makers and farmers of Quebec do not take so much pains in the making of their cheese as they do in Ontario. This difference too tends to endanger our English trade. The greater production, the greater the difficulty of selling, and then, the advantage will of necessity rest with those who make the best goods. Feeling that competition is daily becoming more and more lively, every country is making earnest efforts to improve in dairying, and if we do not imitate them, we shall find it difficult to get rid of our stuff. The dealers in England are very prudent, and only buy goods that sell easily.

Mr. Anderson, of London, who buys a great deal of Quebec cheese, took me to a broker's who now refuses to take our cheese, because he has found in the past a difficulty in selling it on account of its want of uniformity; and so we can never too earnestly press the makers of this province to belong to the syndicates, since that is one of the best means of improving our manufacture.

In 1881, the States exported cheese to the value of \$17,304,416.40; in 1893, they only exported cheese to the value of \$7,602,184.20, a diminution of upwards of  $9\frac{1}{2}$  millions of dollars.

In 1893, Canada exported cheese that sold for 12 millions of dol'ars; whereas, in 1881, her sales amounted to only 4 millions.

Thus, the States saw, in 12 years, their sales decrease by 9 million dollars while the provinces in Canada, thanks to the efforts of our dairy-associations and of our leading farmers, have seen their production of cheese increase to the value of 8 millions since 1881. Should not such a result as this encourage us to redouble our efforts to make our manufacture perfect.

The exports of the States and of Canada together have hardly increased owing to the extraordinary depression that there has been in the cheese-trade of the States.

Although several English dealers advise us to increase our production of *Cheddar*, we had better act prudently in this. If we must not neglect this trade, we must not,

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on the other hand, increase its production to such a point as to exceed the consumption. We must not desert the creameries ; on the contrary, we should encourage them ; and for this reason : in doing so, we shall help, at the same time, to develop another not less important industry, the trade in hogs.

Denmark exports butter to the value of 25 millions dollars, and hog-meat to the value of 10 millions.

The best way of utilising all the sub-products of the dairy is to feed hogs with them. These two industries are exploited on a large scale, not only on account of the direct profits derived from the practice, but because they enable the Danes to get together a great lot of dung, which allows them to make their farms more productive, to increase their yield, and to make the exploitation of the land more profitable. We ought to do the same thing here. We have the butter and cheese ; we must grow the pork too. What kind of pork is needed for this trade ? Bacon, and hams. Before I left for Europe, the Hon. the Commissioner of Agriculture instructed me to visit the salt meat firm of Laing & Co., Montreal, where hams are prepared for export to England. The day before my visit, the firm had slaughtered 50 hogs, all of which came from Ontario. They cannot buy any in the province of Quebec. In England, we met Mr. Barnes, proprietor of a salt-meat store, at London, Ontario, where he makes a vast quantity of bacon. He made the same remarks as did Mr. Laing : "It is astonishing," said he, "that in your province people do not take to breeding pigs in connection with dairying." Up to the present time, our farmers have made their hogs very fat, for salt pork or fresh pork.

England buys bacon and hams to the amount of \$55,334,526.07 a year, while its imports of salt and fresh pork only amount to \$3,626,255.52. If we want to increase our production of pork, it is not fat hogs but lean hogs we must produce. Some experiments have been made on this point at the Experiment farm at Ottawa. They proved that, in fattening a young hog, it required very much less food to make a pound of meat than it took when the hog weighed over 200 lbs. There is in favour of hog-meat intended for bacon, a difference of 50 cents per 100 lbs., against over-fat hogs such as our farmers are accustomed to feed for the local market. If we allow the butter trade to fall off, we cannot develop this mode of growing hogs, which is one of the most important branches of trade for Quebec farmers. Details of the poultry markets, that we gathered in England, will be found in our report. All poultry should fast for 24 hours before being killed.

A broker in Liverpool imported last year, from Canada, 102 tons of poultry, for which he realised 12 to 15 cents a pound. He advised us not to send small fowls.

From what we hear about hay, the sale will not pay in England this year, as the crop is very large there. Some buyers there like pure timothy ; others mixed clover and timothy. As bands, most importers prefer wire to wooden hoops, though the wire has sometimes been the cause of accidents.

After having collected these notes about the English markets, we left for Denmark, the principal object of our journey. The population of this country approaches 5,000,000. The chief agricultural industry is butter making, which the Danes try to make profitable by improving their pastures and the quality of their butter.

What has been the result of this policy? From a statement that the English board of agriculture sent me, it appears that the agricultural exports of Denmark have increased by 55%, while Canada's agricultural exports have only increased by 40%. In 1881, Denmark's agricultural exports were \$22,277,115.33, and in 1893, \$40,900,347.53 These figures show that Denmark was right in improving her dairy-trade, as this improvement has enabled her farmers to increase considerably, not only the income from their farms, but also the national wealth of the country.

With the exception of Ireland, Denmark is the country where there is most stock kept to the square mile; and, consequently, the production of manure is the most abundant. If the Danish farmer pushes that system of agriculture that yields plenty of dung, he also takes the greatest care of that sort of manure. Nowhere did we see the dung lying under the gutters of the farm-buildings; it is always placed in the middle of the yard, in a spot where the soil is made impermeable, and round the mixture is a trench to receive the liquid oozings and lead them to the tank. In the opinion of the leading farmers, he who loses the urine, loses half his manure. All Danish farmers have liquid-manure tanks. Many make composts with ditch-scrapings, and the kitchen waste and farm-offal. With liquid-manure and these composts the pastures and meadows are dressed. We were surprised to see what a lot of cattle these farmers kept in proportion to the extent of their grass-land.

Eight years is the general rotation of Denmark. At least a tenth part of the arable land is in summer-fallow every year, and another tenth in hoed crops. This is thought necessary for the preservation of the productiveness of the soil, and for the destruction of weeds. A great quantity of roots is grown for stock.

We visited several creameries, where we saw butter in the making from the beginning to the end of the operation. The different processes of churning, the ripening of the cream, the Pasteurising, etc., were very interesting. In Denmark, as with us, the cows are housed for six months, from October 15th, to the end of April. (1)

When I finished speaking last night, I was about to say a word about the institutions established in Europe for instruction in farming or to promote its improvement. Among these, I should mention the butter-competition organised in Denmark, with a view to the improvement of dairying. There, it has been decided butter-competitions as conducted at the ordinary exhibitions, are of little value, because the exhibits do not always give an exact idea of the general value of the exhibitor's goods. In spite of our success at

(1) At this moment, Mr. Barnard proposed that, seeing how late it was, the rest of the address should be postponed to the next day; and although this was carried, we give here Mr. Gigault's speech without interruption.

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Denmark, Quebec cheese is still considered by the trade as inferior to Ontario cheese, and sells for less money. The difference is usually a quarter of a cent or half a cent a pound.

This is now the system established in Denmark for the competitions in dairy products. The secretary, appointed by the government for these competitions, sends a despatch to a certain number of makers, instructing them to send, by the next train or boat, samples of the last butter made by them for their ordinary trade.

This butter is not to be worked over again, but to be sent as it was prepared for exportation. It is forwarded to Copenhagen, and exhibited exactly as it is. There are eight classes for the classification of butter according to its quality. The names of the makers whose exhibits are placed by the judges in the first and second class are made public; while the other exhibitors receive from the secretary private letters, pointing out the defects of their butter, and the means of remedying those defects. From the information we receive, this system of competition has produced in Denmark the best results, and has helped to establish a great uniformity of quality in the butter.

I am happy to announce to you that the Quebec government has decided to establish competitions similar to those of Denmark. A credit of \$1,000 has been voted for the current year, and another of \$2,500 for next year. This competition will probably be held at the St-Hyacinthe dairy school.

Mr. Taché has proved to his own satisfaction how much good such competitions can do. A maker had great difficulty in selling his butter on account of its inferior quality. He sent a tub of it to Mr. Taché, for examination. Mr. Taché found out what the matter was, and showed the maker how to remedy the faults. Since that time, the maker has turned out excellent butter. The same good effect may be expected from our competitions.

All the Danish farmers can read and write. They keep perfect accounts of all their operations, as well as of their receipts and expenditure. They study all the acts of husbandry, done on their farms, are thoroughly acquainted with the management of manures, with the nutritive value of milk, of cereals, and of roots. They acknowledge freely that they owe it to the government that they are in a position to acquire the information that is needed to carry on their farms in a prudent and profitable manner.

Another thing we observed: the good roads that exist in Denmark. The royal high-roads, from one town to another, are under the control of a manager appointed by the State, and are kept up by funds raised from the rate payers of the district through which these roads pass. Good roads are there considered to be indispensable to the success of agriculture, and more particularly of dairying. Had we good roads all over this province, we should see fewer of those small factories of which so many complain. In Denmark, each farmer is obliged to furnish, yearly, a certain quantity of stone and gravel to mend his road. We ought to try this here. With cheerful acquiescence on the part of the rate-payers, we should, before long, have roads that would be an honour to the province, and at the same time an assistance to the progress of our agriculture.

Before I end, allow me to make a summary of my observations of last night. The English say that we often send out cheese too green. All the friends of agriculture in this province must unite in abolishing this fault ; our interests insist upon it. More care should be taken, too, about the wrappers of every cheese. As to butter, that trade must not be allowed to be endangered.

To encourage dairying in its every form and to vary our products, such is the end we should seek to gain. The production of cheese goes on increasing, and may become so great that it will exceed the demand. That is why we must not neglect the butter-trade, especially if we want to promote the pork-trade, which, to pay, must march *pari-passu* with butter-making. In 1881, Denmark only made a quarter of a million out of her hogs and last year, she exported \$10,000,000 worth ; her exports of butter and pork together rose to the sum of \$35,000,000.

As for our own trade, we for several reasons, ought to fatten hogs for bacon rather than for pickled pork. It costs less, and sells higher than salt pork. We must not forget either, that in 1893, England took bacon and hams to the amount of \$55,000,000, but for pickled pork and fresh pork she only paid \$3,000,000.

Among the grass seeds sown in Denmark the Danes like Orchard grass very much. Fields of Lucerne too are to be met with there. This latter has been tried in this province, but not very successfully.

On my return from Europe, I wrote to the Director of the Ottawa Experiment farm, asking what they thought of Lucerne. Mr. Fletcher replied, that this plant had done well, and that three full crops had been grown in some years ; but to grow it successfully, the subsoil must either be naturally dry, or thoroughly underdrained.

In Denmark, the yield of the crops is very heavy : 30 to 40 bushels to the *arpent* frequently (*35 to 46 to the acre*. A. R. J. F.). These large yields are attributed to the great quantity of manure made on each farm, to the care taken of it, as well as to the presence of lime in the soil. On every farm, we saw deep marl pits ; as marl contains a great percentage of lime, a dressing of it has the same effect as a liming.

Our agricultural associations would do great service to farmers were they to encourage, by prizes, experiments on the use of lime. They should be made on a small scale, because at least half of our farms already contain lime enough, and to add more would be injurious to the soil. But, on land poor in lime, liming would help to greatly increase their productive powers. In order to get these improvements carried out, we need the assistance of our agricultural societies whose object ought to be, not to encourage the methods of cultivation already pursued by farmers, but the improvements demanded by the progress of agriculture. They, if they thoroughly understand the duty incumbent upon them, can do a great deal for the promotion of farming. Nothing should be neglected that may assist the farming class, for the competition which they will have to support, will become more and more severe. The Danes themselves dread this competition ; of this we have a proof in the manner in which we were received by

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the President of the Bank of Copenhagen, on whom we called with a letter of introduction. Said he : "If I were a Danish farmer, I would not give you any information at all ; you already are doing us a great deal of harm, and if, through the information you pick up here, you succeed in improving your process of manufacture, and in increasing the yield of your farms, you will be in a position to enter into a disastrous competition with us." Danish farmers are perfectly aware of the difficulties they have to overcome to ensure success, but their love of work helps them to conquer these difficulties.

To give you an idea of the feelings that animate them, I will relate, before concluding, a conversation I had with M. la Cour, President of the Farm-school of Lyngley. While explaining to me the working of that institution, he observed : "We try to impress upon our students, not only agricultural information, but, in addition, energy and patriotic feeling."

That education produces happy results. Indeed, if Danish farmers labour with such ardour for the advancement and the improvement of agriculture, it is because in favouring their own personal fortunes, it tends to render their country great and prosperous.

Let us imitate them, and if we labour earnestly for the development of our agriculture, we shall increase both our agricultural products and our national wealth ; we shall succeed in abolishing emigration, we shall powerfully assist colonisation, our population will increase, and this province will occupy a position of which we shall have reason to be proud.

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#### SESSION OF WEDNESDAY, DECEMBER 5th, A. M.

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Officers and directors of the Association, were elected.

##### *Officers and Directors of the Dairymen's Association for 1895.*

Honorary President : HONORABLE P. B. DE LABRUÈRE, St-Hyacinthe.

Honorary Vice-President : M. N. BERNATCHEZ, M. P. P., Montmagny.

President : ABBÉ T. MONTMINY, St-Georges de Beauce.

Vice-president : M. S. A. FISHER, Knowlton.

Secretary-treasurer : M. EMILE CASTEL, St. Hyacinthe.

*Directors.*

DISTRICT	NAMES	RESIDENCE.
Arthabaska . . . . .	MM. T. C. CARTIER . . . . .	Kingsey-French Village.
Beauce . . . . .	PHILIAS VEILLEUX . . . . .	St. François-Beauce.
Beauharnois . . . . .	ROBERT NESS . . . . .	Howick.
Bedford . . . . .	H. S. FOSTER . . . . .	Knowlton.
Charlevoix & Saguenay . . . . .	J. D. GUAY . . . . .	Chicoutimi.
Chicoutimi . . . . .	Jos. GIRARD, M. P. P. . . . .	St. Gédéon, L. St.-J.
Gaspé . . . . .	D. O. BOURBEAU . . . . .	Victoriaville.
Iberville . . . . .	MICHEL MONAT . . . . .	Mount Johnson.
Joliette . . . . .	SAM. CHAGNON . . . . .	St. Paul l'Ermite.
Kamouraska . . . . .	J. C. CHAPAS . . . . .	St. Denis en bas.
Montmagny . . . . .	GABRIEL DUMONT . . . . .	Ste-Hénédine.
Montreal . . . . .	ALEXIS CHICOINE . . . . .	St. Marc.
Ottawa . . . . .	J. A. VAILLANCOURT . . . . .	Montréal.
Quebec . . . . .	Jos. DEROME . . . . .	St. Basile.
Richelieu . . . . .	J. L. LEMIRE . . . . .	La Baie du Febvre.
Rimouski . . . . .	J. DE L. TACHÉ . . . . .	St. Hyacinthe.
St. Francois . . . . .	J. A. CAMIRAND . . . . .	Sherbrooke.
St. Hyacinthe . . . . .	M. McDONALD, M. P. P. . . . .	Acton Vale.
Terrebonne . . . . .	Dr W. GRIGNON . . . . .	Ste-Adèle.
Trois-Rivières . . . . .	L'ABBÉ D. GÉRIN . . . . .	St-Justin.

*Specialist Adviser:*

M. ED. A. BARNARD,      |      |      L'Ange Gardien, Mtey.

**ADDRESS BY MR. ANTOINE TASCHEREAU.**

MR. PRESIDENT AND GENTLEMEN,

It was not a lucky thought, I assure you, that led you to ask me to address your convention ; for, the want of information and the inexperience that I feel sensibly, make it very difficult for me to speak on the subject before you. You have before you a man who is utterly devoid of all the knowledge needed to talk to you about the great trade to which you are so devoted, and for the success of which you have worked so earnestly. But, in my case, it is not good will that is wanting. I assure you that nobody feels a deeper interest than I in the progress and success of the dairy industry

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in this country ; I believe that in this lies the principal hope of the future of Canada. I believe that of all the discoveries that have been made, up to the present time, as regards manufactures, the discovery of the perfecting of the dairy-trade has been the most profitable to the people of the Dominion, especially to the population of the province of Quebec. I am speaking, Gentlemen, as a farmer, as an impassioned admirer of fine farms, of good systems of cultivation, of agricultural progress ; and, as such, permit me to bid welcome to all farmers in this meeting to our great county of Beauce.

We are both proud and happy to see so many people of importance here, so many of the clergy, and, as farmers, we thank them from our hearts for the interest they take in farming. I speak as a farmer, and more, as an impassioned admirer of fine farms, of prolific crops, of grand herds, and of all like things, and as a farmer, I thank all the members of the Dairymen's Association for having agreed to hold their convention, this year in the county of Beauce. And allow me to bid most heartily welcome to the Hon. the Commissioner of Agriculture, who has been good enough to exalt the importance of this meeting by his presence. Let me thank the respected members of the clergy, who display so much interest in the cause of agriculture. Their presence here is a pledge to us that the cause of agriculture is a righteous cause, and that, before long, we shall see it triumphant.

When, six years ago, I had the honor to ask that a convention of this Association should be held at Beauce, I hardly dared to hope that I should have the pleasure of seeing a little later, my request granted. I greatly congratulate myself at having been the first to make the request, and I am proud that the county of which I am a native should see assembled here so many men of merit, men so devoted to the cause of agriculture.

I said I would be brief, and I will keep my word. I will only lay before you the progress accomplished in farming, in this country, during the last 20 years ; you are all cognisant of it, but I feel sure you will be pleased at hearing it repeated to-day.

We have got on, gentlemen, both in our institutions and in our farming. As to our institutions, let us mention first the Journal of Agriculture ; for I consider that it is one of the most useful institutions in the country, and that it has been the cause of our making the first step in the path of progress in agriculture. It has now a circulation of 35,500 ; no other paper in the province has so many subscribers. Why has it acquired such a circulation, do you ask ? Because, I reply, this paper is the organ of the farmers of the province of Quebec. It is through this paper that they learn all about new systems of farming, the necessary reforms originated by men of enlightenment, men who, for many a long year have made agriculture a special study. It is through this paper that you have been made familiar with the investigations carried on by men like Mr. Barnard, Mr. Taché, and Mr. Chapais.

Have you anything to sell, any animal of great value to put on the market ? It is the Journal of Agriculture that you always employ to help you. It daily renders the

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greatest services to its 35,500 subscribers. I am right then in saying that this paper is to be esteemed a real institution.

Another institution, gentlemen, which does honour to our agriculture is the Farmers' Clubs. They offer to those who belong to them the advantage of profiting by the experience of the other members, and make the purchase of the different seeds the farmer requires come cheaper to him.

And there are also the competitions of the best cultivated farms; what have they done for us? Their object is the attainment of perfection in farming; and they must be an excellent means of obtaining that end, in that their effort is to stimulate farmers constantly to do their best, to excel one another in the conduct of their operations. When you see a farmer a member of one of the clubs, and preparing to enter as a competitor in the agricultural competitions, you may safely say that he is a good farmer; that if he has not as yet attained to perfection in farming, he will certainly and rapidly reach that position. It is to this that the government's action tended when it originated the agricultural clubs and competitions.

You saw, in the great demonstrations, the farmers carried up to the clouds of heaven by men who represented the government; you saw them decorated by the government wearing the insignia of their merit, recognised by the government. Gentlemen, the farming class is especially encouraged in the persons of the young, who can now say: "The inheritance left to us by our fathers, who were farmers, we can now, thanks to our rulers, preserve it. We can preserve that legacy, for we can learn, by means of these institutions, in what manner to preserve it."

Another institution, which has assuredly benefited agriculture at large, and, particularly, dairying, is the herd-book of Canadian cattle. Here, I am told, the farmers have incurred some blame; for, up to the present time, there are only 1,700 head on the register! Why is this? Every-day, you are told, that the Canadian cow ought to be sought after and preserved; that it ought to be kept pure and distinct from other breeds, and that, before long, this race will command the highest prices as a milk-cow. Why do not farmers hasten to register all cows of this race? It is hardly one-third of the cows of this race that is on the register now. It is very much to be desired that all farm-farmers should look to this point. It is the only way to get in future dairy-cows whose products will prove profitable.

As to improvements, gentlemen, allow me to mention one improvement whose importance, nay, whose necessity, has been long acknowledged in connection with the dairy: I mean ensilage. Why do not we, in Beauce, that is, so to speak, the leading county of the province in dairying; why do not we put in practice so useful a system as ensilage? Why do not we, who devote ourselves to dairying, possess the best of all foods, the most paying that is, for that business? The trial of it has been made, the example has been set: the system of ensilage, properly employed, is the best of all systems, that is, the most profitable to the dairy farmer. It is so, because by means of

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ensilage, you compound a food always suited to your cows, and that the food in question can be composed of anything that grows on the farm : you can use clover, maize, green fodder, in fact, silage can be made out of everything you cultivate.

And, now, let us speak of another institution, originated by the Hon. the Commissioner of Agriculture ; one that is entirely in the interest of the farmer, I mean the Haras National.

For many a long day has the need of an improvement in our breed of horses been felt ; but we did not know what breed would be the best for farm purposes. Mr. Beaubien, by starting the Haras National, applied a remedy to this state of things. The country, that is the farmer, will certainly benefit greatly by this assistance to the improvement of our breed of horses originated by Mr. Beaubien. I said, the country will benefit by this novelty, but I must except those counties where the farmers devote themselves to the breeding of trotters ; to those farmers, no system can be useful, no breed of horses will be more profitable than another. For with the ridiculous system of breeding trotters, no regard is paid to the qualities that distinguish a well bred horse, but the farmer's whole attention is paid to the qualification of a horse as a trotter, and if it turns out a failure as regards pace, the breeder has to put up with a horse that may be worth some forty-five or fifty dollars.

With this ruinous system, if you have a horse of eleven hundred to twelve hundred pounds, you sell him at the first opportunity, while you retain one that is badly built, worthless, and with no other merits than that he can trot a little faster than the one you sold. As soon as you find that he can do his mile in 2.30 even if he has certain vices, that is the horse you will keep, and feed as long as you have a bushel of oats in the granary.

Gentlemen, I mean to say, and I affirm it, with all possible conviction, derived from the experience of many years, that as long as Beauce devotes itself to breeding trotters, so long will her farmers lose money. It has been impossible, up to the present time, to make the farmers of this county see this. Let us hope that the importance of the Haras will eventually be appreciated here, and that the deplorable system of breeding only horses that are utterly unfit for farm-work will be abandoned.

We have other institutions, gentlemen, founded for the service of the farmer : the veterinary schools and the farm schools. The question of the veterinary schools is a very important one ; but, unfortunately, it is not appreciated by the farmer. Why are these schools not better attended ? I will try to show you : it is because well trained veterinary surgeons are for the most part confounded with *quacks*, who know nothing, and who often do more harm than good to the animals they attend. I think it is of pressing importance that measures be taken by government to protect licensed veterinaries from competition with these quacks. This I believe to be the only means of making veterinary surgery of some use here.

I cannot refrain from mentioning the great progress we have made in the case of agricultural implements. One remembers, indeed, that the first *mower* that was used here was bought by Mr. H. Delorme, and cost \$275.00 ! When we compare that sum with the price paid for such implements to-day, one can form some idea of the progress that has been made during the last few years. With your mowers, harvesters, and threshing machines, your work is now diminished by three-fourths of what it used to be.

All these improvements I have mentioned, gentlemen, are indubitably calculated to encourage farmers in their work. But the most important feature of the progress made that which it gives us the greatest pleasure to speak of, is the progress made in dairying. In speaking of the dairy industry, to the success of which the material future of our country is so indissolubly bound, I cannot refrain from mentioning, as benefactors to their country, the names of Messrs. Robertson, Chapais, Barnard, Taché, who have contributed so largely to the making of our dairy industry such as it is to-day. It is indeed a national work that these men have accomplished ; and, so, they may rely on the gratitude of the true lovers of improvements. But, if, on the one hand, we may congratulate ourselves on the stimulus farmers have received in connection with dairying, we must not, alas ! deny that this trade is menaced to-day by a great danger. I do not intend now to solve the question of the small factories, but I must say, with those who preceded me at this meeting, that the existence of too great a number of factories is a real danger to our industry. Supposing, in fact, that there are eight factories in a parish where only four are needed. Could the eight makers provide their factories with all the improvements that they could supply, if they earned twice as much as their present pay ? Of course not. What a pity it would be, were the existence of too many factories to render the working of the really good ones impossible ! At present, we have in Beauce 80 factories and creameries, that bring into that county, annually, nearly \$325,000.00. Would it not be a serious calamity, were our want of foresight and the disastrous competition of the small factories to cause the ruin of this industry ? No pains must be spared, gentlemen, to prevent such a misfortune ; a resolution must be firmly taken to-day to follow the advice given us at this convention, by competent men, who have at heart the improvement and prosperity of our country. Let us follow their counsel ; let us attend to the information they give us, and we may rest assured that we shall continue to advance along the path of progress and of agricultural prosperity.

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THE SALE OF GREEN (*unripened*) CHEESE.

## (DISCUSSION)

M. N. E. CLÉMENT,

In the course of my dealings as a seller of cheese, I have remarked a fact that I consider likely to greatly damage the reputation of our cheese : I speak of the sending for sale to Montreal, *green cheese*, that is, unripened cheese. As a seller of cheese at Montreal, I can state positively that there are in reality some abuses of this kind practised. First, we all know that cheese, that has not been properly ripened, is always in danger of becoming of inferior quality, however carefully it may have been made. Every one agrees in saying that any cheese that is sent out of the factory less than a fortnight old, cannot bear the joltings of a journey, the changes of temperature, etc ; and, yet, we often see on the Montreal market cheese hardly seven or eight days out of press, and sometime even not more than four or five days. It is then impossible for this cheese to be of superior quality when it reaches England. This must really be put a stop to ; I think that it is desirable that buyers should agree not to purchase any cheese that is not at least a fortnight old, or at least, that they should make a difference in the price.

Generally, the cause of this is the emulation of certain of the makers. To get a larger yield, within a given time, than their neighbour, they do not hesitate to send to market cheese insufficiently ripened. I say again, a stop must be put to this. I know what I am talking about, for last season I sold the cheese of twenty-eight factories. All the syndicated makers, at least, must agree not to send out any cheese of less than a fortnight's ripening ; and if, on the other hand, the buyers would agree to establish a difference in the price of cheese, according to its degree of ripeness, we should assuredly see before long an end to this state of things. I listened with pleasure yesterday to M. Beaubien advising the inspectors to adopt a special mark for the different qualities of cheese. No doubt, that system would have good effect on the general state of the factories.

*M. J. C. Chapais.*—I regret very much that the delegates of the Association of the dealers in butter and cheese of Montreal are not here, for I think this would be a good opportunity for the discussion of this question. I quite agree with M. Clément : this selling of *green-cheese* is an abuse that must be checked at once ; and, again, I regret that the dealers in cheese are not here, for, in my opinion, it is they who are best able to put a stop to this abuse, and they would doubtless have something to say about it. I ask then that this discussion be adjourned till the Montreal dealers or their delegates arrive.

*Mr. Ed. A. Barnard.*—I wish to draw the attention of the meeting to the fact that one of our largest manufacturers of apparatus used in the dairy has been at the expense of fitting up a special exhibition. I therefore invite all the members of this convention to visit immediately after the adjournment the exhibition of dairy apparatus.

of MM. Carrier & Lainé, of Lévis. They have been at considerable expense in bringing the apparatus hither, and I propose once more that immediately after the adjournment of this session we all visit their exhibition. (Carried unanimously).

*M. Taché.*—The President informs me that this session is adjourned till 11.30, to allow of all persons present visiting Mr. Carrier's exhibition.

The session then adjourned.

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#### SESSION OF WEDNESDAY, DECEMBER 5th, P. M.

*M. Barnard.*—At the opening of this session, I would suggest that the improvement of the roads of this province be the subject of our consideration. If you see no objection, we might enjoin the board of directors to take the means it thinks most feasible to obtain what we desire : the improvement of our roads.

*M. Chapais.*—The board is certainly ready to give all possible attention to this question ; but, if Mr. Barnard would allow me, I would propose that a committee be named to study the question, and to report to the board the result of its investigation. If Mr. Barnard would agree to this, I think we should arrive by this means more rapidly at a practical result. If this suggestion is acceptable, I think this committee should be appointed at once, so as to set to work as soon as possible.

*M. Barnard.*—This is what I proposed to the board yesterday ; therefore I of course agree perfectly with M. Chapais. I propose, then, "that this committee be appointed ; that an association be constituted for the improvement of the roads, and that the board of directors be earnestly requested to study the creation of the new association." (Carried unanimously).

And now I think that we, as members of the Dairymen's Association, ought to make it a duty to become members of this new society formed with a view to the improvement of our roads.

*M. Castel.*—Those who desire to become members of this association are hereby notified that a list of subscribers is open, at the head of which are already entered the names of the Hon. Commissioner of Agriculture, Messrs Fisher and Barnard. At the close of this session, those who wish to belong to the society can give in their names.

*M. Taché.*—At a meeting of the board of directors yesterday evening, we decided that a request be presented to the federal and provincial governments with a view to the obtaining of facilities for the conveyance of our butter to England in the best condition. As this request is to make part of the report of this meeting, I beg to be allowed to read it to you. (Yes, yes).

*M. Taché* then read the request, as well as the memorandum that follows :

THE PETITION OF THE BUTTER-MAKERS OF THE PROVINCE OF QUEBEC.

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To the Hon. A. R. ANGERS, Minister of Agriculture, Ottawa ;  
 " " L. BEAUBIEN, Commissioner of Agriculture, Quebec ;  
 " MEMBERS OF THE COMMITTEE OF AGRICULTURE in the Federal Parliament and  
 the Legislature of Quebec.

The petition of the undersigned respectfully states :

That the dairy-industry has been the means of enriching Canada for several years ;

That all the good produced has been accomplished because our country has succeeded in gaining a distinguished position in the manufacture of one single kind of cheese, of which it now sells, annually, to the amount of \$13,000,000 in the English markets out of a total importation of cheese by England of \$25,000,000 ;

That this importation of twenty-five million dollars' worth of cheese does not form an outlet on which it would be wise to count for ever, since Canada, a very small producing country, supplies 50% of the entire quantity, and moreover, since this importation has remained stationary since 1890 ;

That the Canadian producers have, in the farmers of the United-States, formidable competitors, far more in number, placed like them in advantageous positions for production, and already very far advanced in the manufacture of the same kind of cheese ; and, besides this, the Australian Colonies already are busily devoting themselves to cheese-making for exportation ;

That our exports of cheese have undergone a very rapidly increased ratio during the last few years ;

That it is of vast importance that we provide against the probable and near prospect of the production of the cheese we are now making attaining a figure out of proportion to the demand in Great-Britain, at present our only market ;

That if this source of revenue fail us, the position of Canadian agriculture would be seriously compromised ;

That the same English market, that only imports for \$25,000,000 of cheese, imports more than \$60,000,000 worth of butter, and nearly \$60,000,000 worth of bacon and hams, in all \$120,000,000 ;

That these figures alone show the fresh direction our dairy-business ought to follow ; to wit, the production of hog's meat and butter for the English market ;

That these two branches of production are perfectly suited to our climate, to our farming habits, and to the direction our agriculture has of late taken ;

That, besides, before the development of cheese-making, and before the Danes had created the business of making the finest creamery butter, Canada, at two different times, exported more than \$3,500,000 worth of butter ;

That, seeing the importance of not allowing butter-making to fail, and believing in its future, your petitioners have established creameries in this province ; that those establishments are being patronised by about 15,000 farmers, and represent a total value of \$500,000, or 50% of the capital invested in the cheese-factories of the province ;

That your petitioners are engaged in re-establishing our trade in butter with England and that through the dealers of the country, they have made some experimental exports for several years ;

That, as is superabundantly proved by trade statistics, these experiments have been absolutely fruitless, since our butter-exports of the current year do not amount to one per cent of the total imports of butter into Great-Britain ;

That the failure of these experimental exports is due to causes beyond the control of your petitioners, and notably to the following :

*a.*—The evil reputation acquired by Canada due to the former deplorable custom of sending to the English market butter stale in age, and much inferior to our fresh-made butter ;

*b.*—The absence of refrigerators on the steamers, and the consequent impossibility of supplying the English consumers with absolutely fresh-made butter, and getting the highest market price for it ;

*c.*—The irregularity of the exports and the consequent impossibility of establishing uninterrupted business connections, and of creating a regular demand for Canadian butters in England ;

That the production of creamery-butter now exceeds local consumption, and that, in view of the developments occurring in the making of butter in winter, it is advisable to free our market of the surplus of summer-butter which is better suited to the export-trade ;

That fattening hogs for export would be carried on in its best form with skim-milk, and that it would easily and naturally be an adjunct and a corollary of butter making ;

That for all the preceding reasons, that is to say :

*a.*—The uncertainty of the future of our cheese-trade ;

*b.*—The pressing need of ensuring new outlets for our agricultural products as they are now constituted and managed ;

*c.*—The enormous capabilities of the markets open to butter and bacon ;

*d.*—The importance of the capital already invested in creameries, and of the interests connected therewith ;

*e.*—The absence of exports of butter in spite of the efforts made to that end.

Your petitioners represent that it is of imperious necessity that immediate and energetic efforts be taken to develop our foreign butter-trade ;

That it is above all things necessary to direct towards the English market, for some years, a constant stream of our best butters, in every respect qualified to gain us a high reputation, and to attract the attention of consumers to Canadian goods ;

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That, as is proved by past failures, the measures to be taken are beyond the means of your petitioners and of our dealers, if left to their own resources, and that it is not reasonable to expect the necessary outlay to be made from private funds ;

That your petitioners solicit the aid of the governments of the country in the carrying out of these measures, and that they respectfully pray :

1. That while waiting for the creation of a line of fast steamers, our governments take upon themselves the installation of refrigerator-compartments, on board of certain steamers engaged in the British trade, sufficient to contain every week the fresh-made butter to be sent as above described ;

2. That our governments offer a premium, the amount of which shall be fixed hereafter, to all butter-makers who shall engage, under a regular form of contract, to furnish, every week, for the whole season, for immediate delivery on the English market, a fixed and regular quantity of butter thoroughly fresh, prepared and packed in accordance with rules to be subsequently laid down.

And your petitioners will never cease to pray, etc.

November, 1894.

#### MEMORANDUM

##### IN SUPPORT OF THE PETITION OF THE BUTTER-MAKERS OF THE PROVINCE OF QUEBEC.

*What market is open to our cheese?*

Great-Britain is our only cheese-market ; but this market is not open to our cheese exclusively. The following is a view of the way in which England's imports of cheese in 1893 — \$25,116,407 — are divided.

		Quantity	Value
		cwts.	£ stg.
1	Germany .....	2,965	7,995
	Holland.....	269,364	676,001
	Belgium.....	15,829	39,945
	France.....	58,346	181,763
	Other smaller countries...	1,875	4,364
		348,379	£910,098
	Lbs	39,018,448	\$4,429,144

	Quantity Cwts.	Value £ stg.
2 United-States .....	645,235	1,578,531
Canada .....	1,046,704	2,575,893
New-Zealand .....	37,043	96,139
Other possessions of the U. K..	101	257
	1,729,083	£4,250,820
Lbs. 193,657,296		\$20,687,323

Which means that the United-Kingdom imports :

1. Of cheese that is not Cheddar, and that we do not make.....\$4,429,144
2. Of Cheddar, which we make to the exclusion of every other kind .....20,687,323

Conclusion Our real market in England is only \$20,500,000.

#### WHAT POSITION DO WE OCCUPY IN THE ENGLISH CHEESE-MARKET ?

Query :—How much cheese do we sell to England ? According to the English trade-reports, whence are taken the preceding figures, we sold there, in 1893, 117,230,848 pounds, worth \$12,531,013. In other words :

We supply Great Britain with 50.4 o/o of its whole import of cheese, and 60 o/o of its importation of Cheddar.

#### WHITHER ARE WE TENDING ?

Query : When will our production exceed the wants of this market, the only one open to us ?

Reply : *Very soon.*

England's importation of cheese has been stationary since 1890 : here is the proof :

	Quantity Lbs.	Value \$
1889....	213,695,888	21,856,053
1890....	240,136,288	24,212,319
1891....	228,628,400	23,425,233
1892....	250,074,384	26,361,682
1893....	232,675,744	25,116,467

But if the English imports have been stationary since 1890, on the other hand, our production has gone on rapidly increasing for some years.

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In 1884, we exported 69,755,423 lbs. of cheese. In 1894, our exports exceeded 140,000,000 lbs. We have then *doubled our exports!*

Moreover, it is no exaggeration to say that our *production* is increasing at the rate of 10% per annum.

As both our exports and our production of cheese are about in proportion, here are figures that prove that it is justifiable to fix, for some years, the increase in production at 10 o/o per annum.

The course of our exports, according to the Dominion statistics, and in the financial years, ending June 30th, in each of the years mentioned, is as follows :

We exported in 1889	88,545,837		
" " 1890	94,260,187	Increase	6.5 o/o
" " 1891	106,202,140	do	12.7 o/o
" " 1892	118,270,052	do	11.4 o/o
" " 1893	133,946,365	do	13.3 o/o

Average yearly increase..... 11 o/o

If we fix the average increase of our exports at 10 o/o, whither will this lead us ? Hither :

	Lbs.	Proportion of Cheddar imported by England in 1893.
Probable exportation in cheese in 1894	147,400,000	66 o/o
" " " in 1895	162,140,000	72.6 o/o
" " " in 1896	178,354,000	77.8 o/o
" " " in 1897	196,189,400	87.8 o/o
" " " in 1898	215,808,340	96.6 o/o
" " " in 1899	237,389,174	106.3 o/o
" " " in 1900	261,128,001	116. o/o

This is how we are going at the ordinary rate of our exports.

Now, these figures : 261,128,001 represent :

1. 16% more than the *whole importation of Cheddar by England*, in 1893 ;
2. 143,897,843 lbs. or 123% more than England's whole importations of *Canadian cheese*, in 1893 ;
3. 11,053,707 lbs. more than the whole imports of 1892, the greatest England has ever made of cheese from all countries.

So that, in 1900, this country alone will produce more than the present consumption of England. But, in 1900, we shall not be the sole nation making cheese for the English market.

1. The States, our neighbour, make about five times as much cheese as we do ; their exports to England are about 60 o/o of our exports thither.

2. Australia, too, is beginning to make cheese.  
 3. New Brunswick, Nova-Scotia, Prince-Edward's Island, are only just beginning to enter into this trade, and will naturally greatly add to the production of the Dominion.

What shall we do with our cheese five years hence, three years hence ; perhaps, next year ?

#### WHAT SHALL WE MAKE OUT OF OUR MILK IN WINTER ?

The milking season prolongs itself yearly, because, and for very good reasons, winter dairying is one of the things we are advised to carry on.

What shall we make of our milk in winter ? Cheese ? But it is the opinion of experts and of the trade, that this season's cheese, certain to be inferior to the cheese of summer, will injure our reputation in England ; and suppose there is already too much summer-cheese ? Shall we make butter ? But if our local market is already over-done, for want of an export trade in summer-butter, winter-dairying will not pay.

It is therefore a matter of moment to the creameries, as well as to the numerous cheeseries whose patrons understand winter butter-making, that our summer-butter be exported.

#### BUTTER AND BACON-MARKET

The English imports of cheese have been stationary since 1890.

The following is the present state of the imports, into England, of two other great dairy-products, since 1889 :

	1889	1890	1891	1892	1893
Butter .....	\$49,857,229	\$51,581,060	\$56,410,073	\$58,230,591	\$62,067,617
Bacon and hams..	57,670,421	47,922,923	45,949,904	53,016,654	55,334,326
Total Imp. per year	\$97,527,650	\$99,003,983	\$102,359,977	\$111,347,245	\$117,401,943
Imports of cheese	\$21,856,053	\$23,212,319	\$ 23,420,233	\$ 26,361,682	\$ 25,116,467

If a stationary market of \$25,000,000 for cheese is making the fortune of the country, is it not worth the while of our governments to pay attention to an advancing market of \$117,000,000 ?

Every year's delay brings us nearer to the glutting of the cheese-market ; and every season lost adds to the list of our competitors on the English market.

#### WHO IS TO FURNISH THE PREMIUM ?

The butter makers of the province of Quebec ask for a premium of 1 ct. a lb. on 2,000,000 lbs. i. e., \$20,000, for one, two, or three years, according to the results obtained.

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If we succeed in establishing a *regular butter-trade with England*, we shall anticipate the glutting of the cheese and butter-markets. The glut would cause a lowering of prices : let us calculate briefly the loss a fall in price would cause to the province :

About \$6,000,000 worth of cheese, or nearly 66,000,000 lbs., of cheese were made in the province in 1894 :

$\frac{1}{2}$ cent per lb. fall on 66,000,000,	is equal to.....	\$330,000
1 " " "	" .....	660,000
$1\frac{1}{2}$ " " "	" .....	990,000

Cheese averaged this year  $9\frac{1}{4}$  cents in the province. If, in the years to come, it falls to 8 cents, the loss will be ONE MILLION A YEAR, or an average loss of \$900 to each cheesery in the province.

In 1892, the creameries turned out some 10,000,000 lbs. of butter; the average price of which was about 1 cent lower than the price of 1893 ; this represents a loss of \$100,000, or about \$400.00 to the patrons of each of the provincial creameries. To day's butter is fetching two cents less than last year at the same season. The whole of the creamery-butter in cold storage, as well as all the butter the farmers did not sell during the summer, is subjected to this loss ; we have no data to show the exact quantity represented.

#### HISTORY OF A PREMIUM.

Is this premium enough to give us a place on the English market ?

The history of the creation of the dairy-industry in Victoria, Australia, will illustrate the effect of the premium.

In the fall of 1889, the government of that colony made a contract with the dairy-farmers to send to England four lots of butter, the first of which was about 1000 tubs.

Later, the Houses voted £30,000, to be spread over several years, as a premium on butter exported ; and the following is the result of this policy of the Victoria government, from which arose the much discussed exports of Australian butter :

#### BUTTER EXPORTED TO ENGLAND FROM VICTORIA.

		Exportation of Canadian butter in the same time.
In 1889.....	147,056	\$ 30,600      \$ 340,131
In 1890.....	975,296	165,885      302,125
In 1891.....	2,243,696	514,704      1,056,058
In 1892.....	5,330,304	1,286,060      1,296,814
In 1893.....	11,871,328	2,662,933      Estimated 1,000,000
Total.....	Lbs 20,567,680	\$4,660,182      "
Estimated for 1894.....		\$3,500,000      "      \$500,000
		<hr/> \$8,160,182

So this colony, that in 1889 only exported \$30,600 of butter, has received, in return for the premium paid by the government, more than \$8,000,000 in cash as immediate profit, as well as a secure connection in England for the future. And our country is situated in conditions very much more advantageous than Australia to enable it to gain an equal degree of success if aided by our governments.

#### A QUESTION OF JUSTICE

Is the premium petitioned for a favour or a thing due?

The assistance of the government of a country is due to all industries in an equal degree. Almost the whole of the public money expended in Canada on the dairy-industry has gone to the cheeseries. There is no doubt about this during the period antedating 1884, for not until that year did creameries become general.

Since that time, by the very force of circumstances, the labours and the resources of the associations, the instructions of the inspectors, the influence of the syndicates, have been more especially devoted to the cheeseries.

It is for want of foreign trade for our butter that this has been so; but the care of the governments of the country does not the less owe to the creamery-patrons, that which they, individually, cannot obtain: a foreign trade in the goods they make,—because that advantage subsists for the cheeseries.

#### WHO ARE THE PETITIONERS?

The petition, which was sent to the Hon. the Commissioner of Agriculture, bears signatures that represent nearly 200 creameries out of the 250 in our province; and the names of the subscribers are among the most influential of those engaged in agriculture and in dairying.

This petition received the unanimous and hearty approbation of the convention of the Dairymen's Association held at St. Joseph de Beauce.

The Association of dealers in butter and cheese, of the Board of Trade of Montreal, representing a trade of \$15,000,000 a year, has seconded, in a special memorandum, the proceedings of the petitioners. It has also been supported by the *Chambre de Commerce* of Quebec.

Thus, the butter-makers, as well as the organ of the dairy-industry of the province, of the butter and cheese trade, the great trade of the province, are unanimous in the prayer that is submitted to the government.

For the petitioners,

J. DE L TACHÉ.

Quebec, December, 1894.

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The reading of the petition over, M. Taché proposed, seconded by M. J. C. Chapais, that the Committee entrusted with the presentation of this petition to the Hon. the Commissioner of Agriculture and his colleagues, and its prosecution to a successful end, be composed of :

MM. Milton McDonald, Jos. Girard, N. Bernatchez, D. O. Bourbeau, S. A. Fisher, Jos. Derome, L. P. Bernard, Jos. Lemire, Alexis Chicoine, J. A. Vaillancourt, John Scott, Chas. Préfontaine, A. A. Nicole and the Revd. M. Gagnon, of the Seminary of Quebec.

*M. J. C. Chapais.*—I rise to second M. Taché's motion. It is clear, as M. Taché and M. Gigault observed that if the cheese-market fails us, we must assuredly have something to fall back upon ; otherwise, our farmers will be ruined. Now, we cannot possibly carry on our butter trade without the improvement petitioned for in the system of shipment of our goods to England we now employ. The petition M. Taché has just read is very opportune, it strikes me, and I do not doubt it will be favourably received by our governments.

*Mr. S. A. Fisher.*—I do not intend to enter into a discussion on this matter, but I may say that I support with all my heart M. Taché's petition. I think that, as M. Chapais said, it is our greatest interest to improve our butter-production, lest our cheese-market fail us. Should this petition meet with a favorable reception, we shall have reason to be satisfied with the labours of this convention. Once more, I am entirely in favour of M. Taché's motion.

The motion was carried unanimously.

## Report of Mr. Peter MacFarlane.

### INSPECTOR-GENERAL OF SYNDICATES.

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

GENTLEMEN,

I have much pleasure in submitting to you my third annual report as inspector-general. I began my work for the association on May 1st, and I have been greatly assisted therein by M. Elie Bourbeau, whom you have engaged in the place of M. Saül Côté. We agreed to visit, together, all the inspectors, instead of each taking a district of the province ; by this means, we were able to form a better idea of the manner of acting of each inspector throughout the province.

I am happy to say that my remarks in my last report, on the inconvenience of the inspectors having each too many factories to look after, have borne fruit ; for, this season there was only one inspector who had as many as 25 in charge. It will generally be found that an inspector who has twenty factories under his care, and attends to them properly, has quite enough to keep him busy. In the county of Beauce, where we are now holding our annual meeting, there was only one inspector in 1893 ; I recommended the engagement of another ; this was not done, and the upshot of it was that the inspector had 30 factories to watch and a great deal too much to do ; so this year there has been no syndicate at all.

The Beauce cheese made a good reputation for itself with only one inspector for this one season ; but to derive full benefit from inspection, it ought certainly to have had two. St. Hyacinthe too earned great praise with only one or two inspectors for one or two years. This year, there was only one in this district for 5 counties. What do you think the cheese there sold for ? Invariably for a quarter-cent and even sometimes a half-cent less than the price of the county of Yamaska, and of the districts of Bedford and Beauharnois. Putting this depreciation at the lowest, a loss of a quarter-cent on all the cheese sold at St. Hyacinthe is equal to a loss of \$8,000 and upwards. That sum, together with the government grant, would pay the wages of 5 inspectors for the next 5 years, for the same territory where we now have only one ! How long will people rest in darkness and persist in depriving themselves of the light of progress

Another point to be considered is this : very good cheese is made in the neighbourhood of St. Hyacinthe, but it sells far below its value, because the buyers have not yet made up their minds to pay for cheese according to its value.

When visiting, with the local inspector, last October, one of the factories that sell at St. Hyacinthe, I remarked that, with the exception of one day's make that was good —it had been made by the inspector—all the rest was faulty ; the cheese was soft and pasty. To my remarks, the maker replied that he could make good cheese, but he could not get a copper more for it than for soft, pasty cheese, and by making that kind he could beat those who made the best cheese by 3 or 4 cents per 100 lbs. of milk. If buyers would agree to pay for cheese according to its true value in the market, bad makers would soon vanish. I sympathise greatly with a man who does not know how to make good cheese, and I pardon him freely ; but what can be done with those makers who deliberately make bad cheese, and, looking you in the face, tell you that they *can* make good cheese, but that, for the above reasons, they won't ? Ought there not to be a black list kept, in which should be inscribed the names of such makers, coupling with them the names of those who, buying their cheese, pay the full price for it ?

During the season, I visited 291 factories : 273 cheeseries and 18 creameries. I examined 23,600 boxes of cheese, which I classified thus : No. 1, 20,479 ; No. 2, 3,020 ; and culls, 101. I also examined 1074 tubs of butter, classified thus : No. 1, 1024 ; No. 2, 34.

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We were justly proud of our success at the Chicago show, and many predicted that, as there was no particular reason in view for maintaining the quality of our cheese, we were in danger of losing the place we had so rightly gained. But, I am happy to say, that both at Sherbrooke and Quebec, our exhibits of cheese were superior in quality to the samples sent to Chicago. At Sherbrooke, Mr. Pertee, of New-York, and at Quebec, Mr. A. A. Ayer, of Montreal, were the judges ; both had acted as judges at Chicago ; so we could not doubt their sincerity when they expressed their surprise at the excellent quality of the butter and cheese exhibited.

I have, besides, delivered 46 lectures in public, on dairying, in different parts of the province.

The greatest blame, I have to lay to the charge of the makers is that during the first two or three months of the season, they *will sell their cheese too green*. We had many complaints about this from England last spring. The Americans did not cut a very great figure at Chicago, but they gained great credit last spring by not selling their cheese too green. During last season, there was more *green* cheese sold here than usual and this will make the English more distrustful of us next year. Mr. Castel, our secretary, asked me to write an article for the Journal of Agriculture on this question : this I did, advising the makers and sel'ers not to sell too soon. Fearing lest some should go too far in the opposite sense, I also advised them not to keep cheese too long. My advice was not too well followed, and its neglect will cost some districts, particularly in the Eastern Townships, some thousands of dollars. I repeat my advice, even here ; don't sell your cheese too soon ; but, on the other hand, don't keep it too long ; nine times out of ten you will be the better for it.

Our exports have again this year increased, 3,000 boxes more than last year. This increase has been constant and gradual since 1886. I believe I can affirm, without fear of contradiction, that most of this increase comes from this province.

The average price this season has been about the same as last year, or perhaps even higher in some districts.

A mere trifle are our exports of butter. We must hope for some better plan of selling our good butter ; I say "good butter," for I believe our butter to be as good as that made anywhere.

I have not yet been able to abridge into a synoptic table (1) all the work of the season, only a few of the inspectors having as yet sent in their reports. The number of the syndicates remains the same as last year ; only, there was one more cheesery-syndicate and one creamery-syndicate less. As Prof. Robertson said lately, we have greatly improved the quality of our goods, but their external appearance still leaves much to be

(1) This will be found at the end of the supplement of this report.

done. We must try to have greater uniformity in the shape of the cheese ; to have well trimmed cheeses, and without cracks ; good boxes, too : then, we shall soon no longer have cheese that goes by the opprobrious name of " Joseph."

The whole respectfully submitted,

PETER MACFARLANE,

*Inspector-General.*

St. Hyacinthe, December, 3rd, 1894.

*M. Chapais.*—I wish to recall the attention of the meeting to a question that I consider to be very important ; I mean the selling, at Montreal, of *green-cheese*. The deputation of Montreal cheese-buyers has arrived, and I suppose they will have something to say on this subject.

But, first of all, Mr. Macfarlane will kindly give us his opinion.

*Mr. Macfarlane.*—I may say, generally speaking, that the inspectors have never advised any maker to sell cheese until it has become perfectly ripe. I met one the other day who told me that he had marketed his cheese when only a week old. I certainly never advised him to do so ; I blamed him severely, and told him he ought to have been cut down in the price, and should have been made to lose at least  $\frac{1}{8}$  cent a pound on the price of his cheese.

*M. Chapais.*—Now that we know, from the Inspector-general, that it is not the fault of the inspectors that some makers market their cheese in the *green* state, we have to find means to prevent this ; for it is a most censurable proceeding and ought to be given up at once. It seems to me that in this affair the buyers are the masters, and that they can make a radical cure of the disease if they choose. If they would agree not to buy any more insufficiently matured cheese, that alone would put a stop to the complaint. We count upon the buyers to help us to work a reform in this affair, and with their aid success is certain ; but I really see no hope of preventing these sales, if the buyers persist in accepting this immature cheese : In the name of the Association, then, I request the buyers to assist us in settling the matter.

*M. Vaillancourt.*—Four of us have been deputed to represent here the Montreal Association of the dealers in butter and cheese. I regret, for my part, that I was chosen to represent the Montreal dealers, for they could assuredly have selected a better representative than I. M. Chapais has just said that the Montreal buyers had a word to say in this meeting.

Gentlemen, I, as well as all those present, know how provoking it is to have cheese sent to market that is not what it ought to be, and I should only be too glad to put a stop to it at once ; but I think it would be more in accordance with justice to put the

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blame on the makers than on the buyers. This is what happens, three times out of four. And observe that this does not occur only with *green cheese*, but with badly made cheese, and cheese made with bad milk. If we happen to refuse a lot of bad cheese, we are certain, when the next sale occurs, to have no chance to buy any cheese, good or bad : for they will not sell us any at all. You will kindly believe that it is not because we like this sort of trade that we sometimes take lots of inferior cheese ; but because we are at times compelled to take them. Wherefore, I think it should first of all be the duty of the seller to pledge himself to send no more inferior goods to market. You may be sure the Montreal dealers will be very glad to hear that this has been agreed upon.

Moreover, I must ask you to observe that it is not only getting the buyers to lower the price that has to be done to get rid of the trouble, for I myself have seen certain sellers, who have been "cut in their price," return at the next sale with too fresh-made, or with badly made cheese. I therefore, once more, believe that the fault does not rest on the buyer alone.

*M. Plamondon.*—As long as you buy inferior cheese, you may be sure of having plenty of it offered you ; but, were it well understood that not one buyer would take bad cheese, you would find that very little of it would be marketed at Montreal. I maintain that the buyers are the chief sinners in these sales.

First, one may well say, the cause does not lie with the inspectors. Generally, if some accident happens in a cheesery, the blame is at once cast on the inspectors ; but in this case, it is not the inspectors who ought to be found fault with, but those who should distinguish between good and bad cheese, and who, for some reason or another, do not make the distinction.

I must ask you to forgive me for meddling with this discussion, for I fear my French is very imperfect. As M. Chapais says sometimes, I am but an imperfect French Canadian ; but in all cases I do my best, and beg you to excuse my faults.

*M. Chapais.*—M. Plamondon deserves to be complimented on having preserved the use of his native language, considering where he was brought up. If I once said, jocularly, that he was an imperfect French-Canadian, I take back the joke, for he is a true and good one, and his remarks are welcome.

*M. Plamondon.*—It is quite true that the makers trust too much to selling their inferior cheese at the same price as their good cheese : I have proved this myself. One day, I saw in a cheesery a lot of cheese not worth three cents a pound. I told the maker that it was damaged, and that he would be certain to have the price cut on it. On my next visit, he told me that he had sold that bad cheese as high as the good. This is the way the buyers spoil the makers, and, after that, we can do no good with our makers.

In the autumn of 1893, I went into the county of Portneuf, where was a certain cheesery with 250 cheeses in it ; half good half bad ; I, at once, told the maker so, pointing out the defects of the latter. On my next visit, the first thing he said was :

*"We have received our return, and we were not cut."* He went for the return, and I saw that he had sold at  $10\frac{3}{4}$  cents. I made him observe that this was not the highest market price, as M. Clément had got  $11\frac{1}{2}$  cents for his the same week. These things happen sometimes and are unfortunate for the patrons ; in the above case the maker was certainly responsible to them for the difference of prices ; and thus shows that the buyers do not always make the due distinction between good and bad cheese.

*M. Elie Bourbeau.*—Each ought to take his own responsibility. One great point in cheese, where buyers are often deceived, is the excess or scantiness of acid. I know that the buyer thoroughly understands the quality of the article by looking at it ; but this defect is one of the most difficult to ascertain, and may cause pretty numerous mistakes. I found myself once in a large cheese-store, with a good many buyers, M. Vaillancourt, I think, among them. My opinion was sought about the quality of a certain lot of cheese ; I found it to be *too acid*, while a buyer who was present had found it, a few minutes before, to be not acid enough ! This shows that buyers may easily deceive themselves in judging a lot of cheese by confounding acidity in cheese with sourness, and this, indeed, often happens.

*Mr. Scott.*—As for me, I always find cheese too acid, and I mention it here because I know that the sellers and makers persist in asserting that we never think it acid enough.

*M. Bourbeau.*—I fancy that what chiefly puzzles buyers is the difficulty of distinguishing between acidity and a certain degree of moisture always to be found in cheese. This, I think, may be the cause of the buyers' mis-apprehensions.

*Mr. Scott.*—I repeat that I find the cheese almost always too acid. This year particularly, there have been great complaints of it. The cheese was not ripe enough. It is, for the most part, the patrons who advise the maker to send off the cheese while still green, in order to have a greater weight of it at market. I do not think buyers could agree to buy no more cheese too fresh-made ; it would be impossible, in my opinion. Every one tries to do as large a business as he can. I think the syndicates ought to arrange this matter themselves. They might insist that the makers, under a weighty penalty, should not send any cheese to market unless it had been kept in the curing-room at least a fortnight in the fall and 12 days in summer.

*M. Veilleux.*—The greatest fault I have remarked in our Beauce factories is the occurence of the *butter-spot*. This, I think, is due to a fault in the making, by which the whey does not retain the surplus of butter-fat needed for the confection of the cheese. This is the greatest fault the buyers find with my cheese, and I believe it exists in almost all the Beauce factories.

*M. Bourbeau*—I beg to inform M. Veilleux that these *butter-spots* are due to the makers leaving too much moisture in the curd. If too much humidity is left in the cheese, or if it is not stirred enough, you will find that it will gather into lumps at once, and a froth will form on it. But when the curd is well stirred, and well dried, no butter-spots will be seen.

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*M. Veilleux.*—Is it enough if the curd is sufficiently stirred?

*M. Bourbeau.*—Yes; if you stir the curd until, on being pressed in the hand, it gives a *creaking* sound, you will have no butter-spots.

*M. Veilleux.*—But if we do not begin to work the curd till an hour after it is piled in lumps, should we be equally successful if we worked it in this way?

*M. Bourbeau.*—No; if you leave it an hour without working it, it is *an hour too long.*

*M. Clément.*—The instructions we have just received advise us, I think, not to give too much acid to our cheese; but I must say, and many agree with me, that the cheese we sell as first quality is made after the teachings of Mr. Macfarlane and M. Bourbeau, and contains but little acid. In spite of our following as far as possible the instructions of the inspectors, when it reaches Montreal, the buyers always find it too acid? I see nothing out of the way in leaving the curd a long time piled in blocks, provided it be thoroughly worked.

*M. Saul Coté.*—I have had many discussions with the buyers about the defects of cheese and its different qualities. To return to the question as to whether buyers are hard to satisfy or not, I must say that, according to my experience, they are not; for they always say that the inspectors are too severe; whereas, for my part, I say they are never severe enough. What! all these defects just mentioned, defects chiefly due to the carelessness of the makers, or to their obstinacy in not following the inspectors directions, are these to pass unnoticed, and depreciate our cheese on the foreign markets? Well! I say once more, the inspectors are never strict enough. As to myself, they found me severe enough as a buyer, last year, and they will find me still more severe next year. I affirm that the buyers and inspectors are never strict enough, because I am now speaking from the point of view of the general interests of the dairy-trade. Is it a means of promoting the dairy trade to send abroad an article that will lower the reputation of our manufacture? Is it a means of aiding the farmer and working for the improvement of our trade to make a few dollars extra this year? And yet, that is the inevitable result of the system followed out by the buyers, and even by some of the inspectors, viz to shut their eyes on the faults of an article even if that article is likely to lower our reputation abroad. Last year, I was an inspector, now, I am a buyer. Up to last year, I always put the little influence I had as inspector at the service of both buyer and makers; that is, that while being very strict, I always worked for the improvement of our system of making, and this I thought, and I think so still, is the best thing for the public interest. And it is not I whom they shall charge, as a buyer, with closing my eyes to even the slightest of defects in any goods I am buying. I began the year with paying ten cents; and when I found cheese that was not worth the box it was packed in, I left it where it was. When I found that a factory was using bad milk, I no more encouraged the maker in this proceeding, any more than I used to do when I was an inspector, and I made my purchases elsewhere.

Gentlemen, there are so many things that need improvement here, that we must be severe. Why, too, do some makers make the mistake of packing cheese in dirty, worn-out boxes? And why do they take so little care of it after it is packed? The boxes roll about the yard while the waggons are being loaded; they sometimes burst open on the boards, the cheeses escape, get dirty, and they do not show well at market. Another annoyance, too, of bad boxes is that those who handle them at market, not knowing how to deal with them without breakages, get angry, smash the box, and there is another cheese damaged, whilst, with a little more time and care, all this might be avoided. Once more, I do not mind the least appearing to be strict, for I am convinced that many improvements still remain to be made, and because I am speaking in the interest of us all: of buyers as well as of patrons, and of patrons as well as of buyers. Let all take what I have said in good part, and let sellers as well as buyers assist each other in promoting these different reforms, reforms that are needed, and are relatively easy of being carried out.

*M. Vaillancourt.*—One especially, might be easily carried out: the improvement of our way of boxing and packing cheese. Moisture often injures cheese. This proceeds from the fact that cheese is generally packed in boxes that are still damp, because they are newly made, and have not had time to dry. So, to cure this fault, it is only necessary to give the wood time to dry before boxing the cheese.

*M. Bourbeau.*—The first cause of this moisture in the boxes is, as M. Vaillancourt says, the want of care in the packing; it also sometimes arises if the cheese is not pressed enough in the box, and this, doubtless depends upon the fit of the cover. The whey exudes, and lodges between the cover and the cheese, and it is observable that it is always in that part that acidity is in greatest abundance. In consequence of this moisture, if it is exposed to the air, the cheese cracks.

*M. Parent.*—I have remarked that bad milk, milk that has began to turn sour, invariably causes too much acidity. But, in general, makers are afraid to refuse such milk, which would involve a change in the mode of making, because with their old bad process of making they get a larger yield and have far less work to do.

*M. D. O. Bourbeau.*—You think that would produce a better yield: I think it would be difficult to prove your statement in those factories that pay for milk according to its richness. It seems to me that, nowadays, it is the opposite that is admitted as the true principle, and if there are cheeseries in which milk is paid for according to its quality, that is done expressly for the purpose of doing justice to every one, and to encourage the production of good milk. The Babcock was introduced for this very purpose. No one can form any idea of the variation shown by that instrument in the different lots of milk. At home, we have found as much as ten cents per 100 lbs. of milk of difference. It is therefore clear that if bad milk were as useful and as profitable in cheese-making as good milk, the plan of paying for milk according to its richness would never have been adopted; it would not have been patronised as much as it is.

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*M. Louis Gilbert.*—I made an experiment last summer, and I confess that the result surprised me. I convoked all the patrons, and we compared the yields made from equal quantities of good and bad milk. The result, as I said, surprised us, for we found that good and bad milk produced the same quantity of cheese. We found that 3.5% milk yielded as much cheese as 4% milk. We tried the experiment again with two samples of milk, differing by 100 of fat in 100 lbs., and we found the result of the first experiment repeated. It is true that subsequent experiments, under the same conditions, showed a difference in favour of the good milk; but that does not make the previous results less surprising.

*M. Barnard.*—Yes, surprising indeed! So surprising, that I cannot but think that these experiments were not properly conducted: there must have been some error. Besides, this question has been long settled; for many a day, the contrary to what you state has been admitted as a principle, and I should think it a waste of time to discuss the question again. It has been long decided, and no one cares to re-argue the question, that it is impossible to get the same quantity of cheese from two samples of milk one of which is 100 richer than the other. I, once more, say that it would be a waste of time to re-argue a question that has long ago passed out of the province of discussion. I readily admit that the results of the experiments, as given by Mr. Gilbert, are given in good faith, but, the long and short of it is, there must have been a mistake in the calculation.

*M. Gilbert.*—As I said, I repeated my experiment, and I got the same result. I do not give this as conclusive, but I gave it to the meeting, so as to get at the opinion of the members on the subject.

*M. Barnard.*—We are here for the purpose of exchanging ideas and observations; I do not think your idea on this question will modify the opinion of the meeting, and the less so, because you yourself admit that the experiments made produced no conclusive result.

*M. Bourbeau.*—I do not rise to protest against M. Gilbert's assertions, for that would, I think, be useless, as I know how the meeting thinks on the subject. I will only say, with Mr. Barnard, that when one is not certain about a thing, one should hold one's tongue; but there are people who are never satisfied with things that are admitted and proved, but are always trying to upset received ideas: this is a very blamable practice. I, too, have made experiments on the value of milk for cheese-making; in my county, we have 20 factories, 13 of which pay for milk according to its richness, and these would now on no account return to the old system of paying by weight.

Now, since I am speaking, I want to say a word on the question of selling *green cheese*. This is how we do: every winter, the makers of our county meet several times, and consult on the means to be taken to remedy certain defects, and to improve certain weak points in our mode of manufacture. Last winter, we agreed not to sell any green

cheese in the following season, and we have not sold even one cheese in that state. Why should not this be done in other counties? Why should not the makers of different localities hold these winter meetings? It would be of great use to them. An exchange of views, proposals, and agreements to adopt measures calculated to ensure success in our trade, and then an onward march, all together, towards the same end: this would, I think, greatly improve our work. As I said, last winter we agreed to sell no cheese before it was a fortnight old, and I affirm that not one single *green cheese* was sent from our factories last summer. I am thoroughly convinced that, if every county held such meetings, a definite understanding on a crowd of undecided questions would soon be reached.

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#### REPORT AND LECTURE BY M. J. D. LECLAIR.

SUPERINTENDENT OF THE ST. HYACINTHE DAIRY-SCHOOL

I

MR. PRESIDENT AND GENTLEMEN,

I am really delighted at having to lay before you the report of the work of the St. Hyacinthe Dairy-School, from its establishment in November, 1892, up to the present time.

This school is your own; it is your association that received the important mission to push forward the dairy-industry of this country, and who discharge the duty, through its directors and its secretary, with a zeal beyond all praise. You are the men who, throughout the province, felt the imperative need of imparting to our dairy-products a form that ensured their sale, and this school has been your means of effecting it: it is the motive-power of the future, and by it the province of Quebec may hope to gain and to keep an honourable position on the butter and cheese-markets. If it be true that improvement is only a reply to a known want, or the knowledge of a demand and the means of satisfying it, you are travelling at a great pace along this road of progress, and the province may well congratulate itself on your labours.

Since the opening of the first course in January, 1893, the school has received 483 makers of butter and cheese, and we can safely predict that, in the present season, our members will not be less considerable.

It never occurred to the founders of the school, when they gave a series of courses of two or three weeks, that they could turn out in such a short time workmen of warranted skill, out of all those who were enrolled in the list of attendants on the courses. The first thing needed, the most pressing want, was to hold out the hand to the weak, to restore confidence to the timid, and to make all familiar with the processes of manufacture that would answer most perfectly the demands of the markets. This the school succeeded in

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doing, and is still doing it : we unite practice with theory, and give all the necessary explanations ; the discussions that ensue make the light that illumines the road to follow flash forth brilliantly. The school, I must confess, could only give certificates of attendance and assiduity, which are far from guaranteeing *capacity* ; for it is impossible for us to ascertain if each pupil is able to put in practice what he has been taught. By his work the artisan is known ; and we must have witnessed the work of our pupils for at least two seasons, before we can form an accurate judgment of their powers.

Some of the pupils told us plainly, on their arrival, that they had no wish to be instructed in the process of manufacture ; "we only come here," said they, "to learn how to test milk." Those who are lucky enough to be "cocksure" about everything, are very far from perfection, and it is usually such pupils as these who for any errors, blame the teaching of the school rather than themselves, and who try to make people believe that the certificate they hold is a testimony to their capability.

The Dairy-school thought fit to aid the farmers of the neighbourhood of St. Hyacinthe by seconding the efforts of the Quebec government to increase the winter-production of milk. To this end, we accepted all the milk offered us ; at first, it was so scarce, the custom of drying-off the cows early was so rooted, that, even the offer of a very high price, with difficulty brought us, the first year, a sufficient supply. Still, the example set by the more progressive farmers was alluring, and, I say it with pleasure, very soon, when the first sleighing arrives, we shall receive from 4,000 to 5,000 pounds of milk a day.

The production of milk in winter must lead us to the making of butter at that season ; and I have a piece of advice to offer you on this point. When, following the example of some of the countries of Europe, we produce equal quantities of butter in almost every season of the year, we shall also export butter at every season ; for, it is absolutely necessary that our trade suffer no intermission, and our butter must be such in quality as to increase the demand for it. Now, the butter-makers must remember the winter-butter and summer-butter demand different ways of making ; that the food, dry or ensiled, given to the cows in winter does not possess the same aromatic principles that grass possesses, and that the trade demands an article that hardly varies at all in flavour. This means, that the making should not be carried on mechanically, but after processes that will admit of our controlling the raw material as we wish.

Such, gentlemen, is a very concise description of the nature of the work done at the St. Hyacinthe Dairy-school, and allow me to say that the teachers are only too happy to labour for the accomplishment of the noble end you have proposed to yourselves.

## II

The Hon. Commissioner of Agriculture showed us yesterday the necessity of directing our attention to the exportation of butter. Dairying can only be prosperous on condition of all its branches being in harmony. We must hinder the glutting of the

cheese-market by keeping open the door of the butter-market. Dairying is like a river with two branches, butter and cheese : by compelling one branch to receive that which should feed the two, it will rise, burst from its bed, and do great damage. Too much of a good thing is a real evil ; moreover, we can export our butter profitably if we correct the faults people find with it, and take pains to make it such as the market requires. By which I intend to say, there is a radical change to be made in our method of exporting it, and in the preparation, both interior and exterior, of the article itself.

The low price of butter this year—1894—shows us emphatically that the English market will take no more stale butter, butter that has an off-flavour. Fresh-made butter reaches that country in greater annual abundance, and leaves ours to accumulate in the ice house. The English importers cannot see why we persist in trying to force upon them our stale butter : " You are the only people," said they to me and the Assistant Commissioner of Agriculture, " who keep on bustling about on a narrow round at the very bottom of the ladder ; why are you the last to come and ask what our taste and our wants require ; while we see all the others struggling to mount to the topmost round, to obtain the highest price."

This criticism, severe but just, made us blush ; we examined carefully the fine butters they revel in, and I am convinced that, if pains were taken to place our butters on the English market in a fresh state, the province of Quebec, with its rich pastures, and its plentiful supplies of running water, could produce butter good enough to satisfy the most skilful taster in England. " Where there's a will there's a way." We visited the producing countries, the creameries of Ireland, Denmark, France, and the workman therein have no special secrets : the germ of the butter-aroma is not mysteriously deposited in the cream, and if the Danish girls, employed in these factories, are one reason for their success, I beseech you to believe that our Canadian girls are their inferiors in no quality.

Yes, Gentlemen, the contest is possible, but it must be entered upon with thorough determination to do everything to please the consumer's taste. And how ? 1. The butter must be fresh-made, with very little salt, and dry, that is, containing but little water ; 2. The supply must be regular and constant : 3. Perfect fair dealings must rule : when butter is bought, the buyer does not want tallow, but he desires that the butter he gets to-day, with such or such a trade-mark on it, shall be always of the same colour, the same flavour, and packed in the same kind of box or tub ; 4. The exterior appearance of both butter and cheese must be neat : let us carefully dress-up our dairy-goods ; why turn them out carelessly, when the English consumer is willing to pay us for our trouble ?

The first of these conditions is not the business of the farmer or the maker : it belongs to the trade, and we may well rejoice when we see the liberal views of the Minister of Agriculture as regards the solution of this important and perplexing problem. The export-trade must necessarily be carried out on a new basis, and we know that all such innovations are difficult to manage. Still, it ought to be possible to reconcile the

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interests of the trade with those of the country ; it is a question of dollars, and easier to arrange than one for the alteration of the process of manufacture of any article of trade.

To make butter with very little salt in it, and with not too much water left in it, is not to demand impossibilities, and there is not a single butter-maker who could not do it. The process followed in Denmark to give this quality to their butter, may be copied to the letter ; but, without presumption, I think I may say that we can get the same quality with less working and less salt. I hope that, by the end of this winter-season, the St. Hyacinthe Dairy-school will be in a position to publish the results of the experiments that are being made there on this point.

The second condition is a constant and regular supply. It is easy to see how very natural this requirement is ; the customer being pleased with his first purchase, asks for more of the same sort, and again for more, and it gradually becomes a necessity, so much so that he will willingly pay a little more for an article that pleases him than for one that may even be superior in quality to it. And it is precisely this that established the great reputation of Danish butter : the Danes were the first to see that butter, being a perishable article, must be consumed at once. They therefore sent weekly consignments regularly to England, they found there eager purchasers, and took measures not to lose the trade by sending every week throughout the year goods for which they were liberally paid.

The encouragement given to the making of butter in winter will enable us to fulfil the regular demands that will be made upon us. The English consumer will never lose sight of us, will forget neither our name nor our brand, and we shall escape the great trouble of hunting after new customers.

The consumer wants to be sure that when he buys butter he does not get tallow. Thanks to wise precautions, oleomargarine is not allowed in this country ; but it might be as well, at the commencement of our new mode of export, to send with our butters a chemical analysis to show their purity, and by that even to force our competitors to do the same. Oleomargarine, or any mixture of it with butter, is to be sold in England as such, but it would seem that this fraud is becoming general to a sad extent in Europe, and that all butter, even if branded "Pure Butter," does not invariably turn out to be as branded.

The importer, for his part, wants an article uniform in colour, flavour, and packing. This point merits particular attention on the part of the exporters of fresh butter ; the position is a delicate one, and it is important that this arrangement (*assortissement*) be well made. We have visited the shops where butters are prepared by classifying them according to their colour and flavour ; it is natural to conclude that this classification is necessary, since so much trouble is taken about it. We come under the same obligation, now that we are preparing to contend for a place on the same market.

All the details we have mentioned up to the present, concern chiefly the workmen who convert the milk into butter ; but you, our farmers, I am glad to meet you here, in

order to remind you that your part is one of great importance in this reorganisation of our system of exporting butter. It is you who produce and supply the raw material, and, in spite of our good will and skill, we shall always be dependent on you for the quality of its products, butter and cheese. For, in very deed, you are the only ones directly interested in the business ; the cost of commission on sales and manufacture will not vary, and all increase in the sale price will be your net profit. So it is your interest to learn how to produce well-flavoured and well kept milk : doubtless, the agricultural lecturers will instruct you fully about the sorts, the quality, and the condition of the food of cows ; on their influence on the milk, and on the hygienic care needed in winter and summer to keep your cows in a good state of health.

A last piece of advice : put in practice, scrupulously, this fine maxim : "Never do to others what you would not that others should do to you." Or, as regards the present case, do not force others to eat what you would not eat yourself : must I repeat out loud what you sometimes say privately ? "I won't buy creamery butter ; I am too particular ; every body's milk ; there are all sorts of things in it." Must I repeat that the filth you leave in the milk is like that disgusting maggot that infests the flower, and thence finds its way into the heart of the fruit and spoils it. Exert yourselves then nobly ; let us go hand in hand, each doing his own part, and in a few years, pasture and the plough, as our distinguished lecturer, Mr. Taschereau, said last night, will establish the country on a prosperous footing.

#### DISCUSSION

*M. Préfontaine.*—Would Mr. Leclair please to tell us how the Danes pack butter ?

*M. Leclair.*—In my report of my voyage to Denmark I gave some information on the method of packing in Denmark and Ireland. The barrels or casks used in Denmark are of two sizes : 56lbs. and 112 lbs. They are lined and covered with parchment paper, which quite sufficiently protects the butter from all atmospheric influences. I have seen Irish and Australian butter in 56 lb. boxes : they too are lined with parchment paper : all the packages we saw were sightly and attractive : both boxes and tubs, are neat, clean, and give a good idea of the article within. They never fail to brand on every package : " Pure Butter " ; because oleomargarine has to be sold under its real name ; but the sale of a mixture of it with butter is carried on largely.

The box exhibited on this table contained Irish butter : I think the wood is rather thin and it would hardly stand a long voyage. The chief objection to our tinettes (besides prejudice, as having always held stale butter) is to the cover which can by no means be made to stick close enough. The parchment paper is *de rigueur* to preserve the butter and prevent the brine from running through and thereby importing a bad colour and appearance to the tinette.

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*M. Préfontaine.*—Do you think it would answer to cement both ends of the barrels for export-butter?

*M. Leclair*.—Without blaming those who do so, I do not think it is needed. If we send fresh made butter, as the Danes and all the other exporters do, the parchment-paper, will, if of good quality, sufficiently protect our butter.

*M. Chapais.*—Do you think we, in this country, can make butter equal in quality to the Danish butter?

*M. Leclair.*—Having seen both Irish and Danish butter made, and having tasted both, I can say with sincerity that we have no reason to fear competing with them. I nowhere tasted butter superior in make, more delicate, more developed in aroma than that which many of our makers turn out. Observe : I do not say all our makers, for I know that some of them take the cream just as they find it in the morning, without taking the trouble to make it what it ought to be (i. e. to ripen it). I saw that the Danes took great care of the cream, ripening it intelligently ; but I also saw that they troubled themselves but little about the other processes ; they looked upon these too much as only secondary matters ; at least I, from the point of a Canadian exporter, thought so. I conceive that for them, who have only a week to wait before their butter is on the market, the carelessness about the above secondary points may be immaterial ; but with us it is very different ; we must calculate on our butter being twice and even sometimes thrice as long before reaching the same market and being determined à *prix d'arrangement*.

*M. Gigault* has published figures that show the immense importance of England's butter imports ; if we could one day get a high price for our butter, it would be one of the best chances of ensuring the prosperity of this province. Were the cheese-market to fail us, and were we to be found without any other dairy product to send to foreign markets, our affairs would be seriously compromised.

*M. Taché.*—I am glad to hear what *M. Leclair* said, for I have always thought that our butter was as good as that of any country. I am convinced that all we need is a good system of packing and freightage to present ourselves with some prospects of success on the English market.

Although we hold, at present, an inferior position on that market, I consider that it would be by no means astonishing were we to find ourselves superior to all other countries, since our present inferiority is chiefly due to the impossibility we now labour under of putting our butter on the market in a good state of preservation. With the system we hope to have of refrigerator-steamers to carry our butter, there is every prospect of our soon possessing the market we are striving to secure.

*Dr. Grignon.*—To me it seems that the creamery-owners ought to be in a state of jovial merriment. Nothing can be more encouraging than the brilliant future before them. As for me, I am really tempted to give up the making of cheese, and to make nothing but butter. At any rate, if the cheese-makers cannot relinquish that industry, it is the duty of all already at the head of creameries to do their best to make their

business profitable. An era of prosperity opened to the province of Quebec when the practice of dairying began, and it is no use hiding from ourselves that it would be a disaster felt by all the people of the province were this industry to fail. Forwards, then, and keep your eye on the market.

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WEDNESDAY, DECEMBER 5th.—EVENING SESSION.

DISTRIBUTION OF THE INSPECTORS' DIPLOMAS.

The Secretary then proceeded to distribute their diplomas to the inspectors of cheeseries, as follows :

*Cheesery Inspectors* :—Messrs. Albert W. Woodward, Sutton ; J. E. D. Garneau St. André Avelin ; and L. P. Lacourcière, Batiscan : *optime*. M. D. J. Parent, St. Aimé de Richelieu ; J. Elisée Hudon, St. Jérôme, Lac St. Jean : *bene*.

MR. PRESIDENT :—I congratulate our successful candidates for diplomas ; their success does them honour, and is very pleasing to this Association, which recognises it by the grant of diplomas of inspectorship. These gentlemen are giving a good example to their young compatriots, and the chief desire of the Association, in whose name I am speaking, would be accomplished could they see the example they have set followed by all our young people. The success which we take pleasure in recognising and rewarding to-day, was formerly earned by many a painful struggle ; I mean when dairying was yet in its infancy. Now, thank heaven, and thanks to the exertions of some earnest men, we can offer to young men the means of studying agriculture and of thus ensuring their future living. Once more, and with all my heart, I congratulate our young graduates.

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Lecture by M. J. C. Chapais,

ASSISTANT DAIRY COMMISSIONER FOR THE DOMINION.

AFTER THE BATTLE WON.

MR. PRESIDENT AND GENTLEMEN,

Many years before the birth of Our Saviour, Jesus-Christ, history relates that the Carthaginian general, Hannibal, having invaded Italy, at the head of a formidable army, besieged and took the city of Capua. The beauty and the delicious climate of

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that place led him to pass the winter there, for the purpose of renovating the health of his weary troops. But, before long, the general had to repent of this step ; for after their stay at Capua, the soldiery, debilitated by the languorous pleasures they enjoyed there, could no longer contend successfully with the Roman armies, and the "luxuries of Capua" have taken their place in history as an instance of the danger that always exists in relaxing one's efforts after success.

Invariably are great efforts followed by reaction. This, at times, manifests itself under the form of necessary repose ; but, very frequently, it may be considered that he who reposes too long after a battle won, is the victim of a hazardous weakness.

Last year, we went to Chicago ; there, our troops, led by skilful generals, won a glorious victory. I, and many others with me, thought that the Chicago Exhibition was a grand success for us. Are we to understand by that, gentlemen, that we are to stop there ? Are we to reckon upon our victory of last year to entitle us to give ourselves up to a dangerous repose, and to yield to slumber among the delights of Capua ?

I repeat, sirs, that the exhibits of our products at Chicago were most successful ; but, at the same time, that success may turn out to be fatal to us, if the success, and the honours we won there, should close our eyes to the need there is of renewed contests, renewed struggles to sustain the reputation we have won. We must not slumber among the delights of Capua, but must work and strive without cessation, if we do not want to be passed in the race, and to see the efforts of the past rendered barren in the future. All, in our different occupations, farmers, makers, dealers, we must unite in improving our position, and by thus striving for the improvement of our dairy-industry, we shall, infallibly, improve our own individual condition.

There are, sirs, several ways of improving our dairy-industry, and in the few observations I am about to make, I will only lay before you some of them that I find in the notes taken in the course of the numerous tours I have taken in connection with that industry. I am in the habit of visiting your conventions for the purpose of describing certain methods that I myself have tried, or that I have seen tried by others.

We have several things that need improving or bringing nearer to perfection. First, our pastures ; no one doubts that pasture is one of the principal elements in the production of butter and cheese. I am going to make a few observations on some grasses productive of milk. One of these plants has already been touched upon here :

#### ORCHARD GRASS.

One of the most important needs of the farmer who devotes himself to dairying, is to have a good pasture at the beginning of summer, in order to get plenty of milk from his cows when, a short time after calving in the spring, they leave the cowhouse. Almost universally, in this province, the only grass-seeds sown are, for both pasture

and mowing, timothy, red-clover, white-clover, and alsike : it is rare to find a farmer who sows any other kinds. And yet, there are plenty of other good grasses that thrive in our climate, and which would be very useful in the pasture for producing milk. The "orchard-grass" or cocksfoot (*dactylis glomerata*) is one of them, and is, I am tempted to say, the best next to the clovers. In December, the Farmers' Clubs and the Agricultural Societies will all hold a general meeting for the election of their officers, and, immediately afterwards, a meeting of the Boards of Directors for the purpose of preparing the programme of their operations for the ensuing year. I should like to incite them to buy, as one part of their programme, a few pounds of Orchard-grass, to be distributed among the members, so that each may try it, and be satisfied as to its qualities. I am sure that, after a trial, every one would be so pleased with it that he would continue to sow it constantly for his pastures.

#### DESCRIPTION OF THE PLANT.

The description of this grass, as given by the Abbé Provancher, in his "Flora Canadensis," is as follows : Perennial, stem two to four feet high, rather rough ; leaves linear, upright, rather keel-shaped, glaucous, slightly roughened, the sheath divided only in the upper part, the ends sharp and jagged. Spikelets generally four-flowered, greenish, or violaceous, in unilateral, compact bunches (*glomérules*), or a unilateral panicle, with branches far apart. Flowers more or less ciliated (*eye-lashed*) on the keel of the lower glume (*husk*). Glumes very unequal. Anthers tall, yellow. Is found in Canada, in meadows, grassy places, especially if shaded. Flowers in June.

#### HABIT OF GROWTH.

This grass does well all over the province, up to 47° 30' latitude, and probably even further North. All sorts of soils, wet or dry, suit it, provided they are not absolutely soaking, and it succeeds in land too poor for other grasses. This renders it most useful to sow on dry banks, and poor land, to prevent land-slides. In fact, it will grow in almost every situation, but of course does best on rich loams. It stands droughts well, yields abundant crops of grass, particularly if it is fed or mown frequently. It does well in the shade, and it is to this quality that it owes its name of *orchard* grass. It should never be sown with timothy, for it becomes too hard for good hay before timothy is fit to cut. It is one of the best grasses for permanent pasture on account of its perennial qualities. Sown with common red-clover, the two are fit to mow together, and it rapidly grows again after being cut or pastured. It lives much longer than the common red-clover, which never lasts more than two years. All stock like it as a pasture-grass.

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## ITS CHEMICAL ANALYSIS.

In order to show its nutritive values, I give here a comparative table of the analysis of the Orchard-grass, in its green state and in hay, with that of clover in the same state. The table shows the quantities of water, salts, protein, of cellulose and other non-nitrogenous matters, of fat, contained in a hundred pounds.

	Orchard-grass, Green.	Red-clover, Green.	Orchard-grass, Dry.	Red-clover, Dry.
Water.....	73.0	70.8	9.9	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
Non-nitrogenous matters.....	13.3	13.5	41.0	38.1
Fat.....	0.9	1.1	2.6	3.3

The seed of Orchard-grass clings long to the stalk after it matures, and there need be hurry to gather it, as the birds, that are very fond of it, attack it as soon as it is ripe. It resembles a very small, aborted oat; in shape it is long, with a blunt point at one end and a sharp point at the other. It measures about  $2\frac{1}{2}$  lines in length, and  $\frac{1}{2}$  a line in diameter; very light; not 12 lbs. to the bushel. It is sold in the husk, is whiteish or gray in colour, and a good sample ought to give 50 o/o of germinating seeds.

## CULTIVATION.

Orchard-grass is sown with a cereal crop, like almost every kind of grass-seed in this province. If clover is sown with it, the two must be sown separately. Suppose that your barley, or other grain, is sown in well worked, well manured land, you may proceed thus: harrow thoroughly; sow 8 lbs. of orchard-grass to the arpent, and give one stroke of the harrows; next, sow the mixed clovers, at the rate of 10 lbs. of common red, 4 lbs. of alsike, and 1 lb. of white, rolling them in. You will not see much orchard-grass the first year, as it only goes to seed the second season, when you will see here and there, a number of tufts of it, for it tillers a great deal and grows in tufts. If you intend it for hay, mow as soon as ever the spikelets appear, never later, as it soon becomes too hard to make good hay. It is not thought to be fit for meadows, but if it is desired to sow it on purpose for hay, sow it thick, not less than two bushels 25 lbs. to the arpent. Hay from this plant loses 59 o/o in drying.

The Farmers' Clubs, during the last few years, have bought a variety of grass-seeds for experiments. Unfortunately, provoking blunders were made in the delivery of these seeds, occasioned by want of the knowledge needed to distinguish each variety ; and this was most perceptible in the clovers. This reminds me that, one day, a friend of mine told me that he had made up his mind to try the different clovers mentioned in the lists of the seedsmen. He bought Rawdon, Vermont, mammoth, large red-clover, and common red-clover. The following year, I asked him, knowing well what his answer would be, if his experiment had turned out well. Pretty well, he replied, but in one point I was surprised ; I thought to have had a great number of varieties of clover, and I only had two kinds. To preserve farmers from making such a mistake, and of whom I know several who have been victims, I proceed to point out the characteristics of the only two varieties of red clover that exist : common-red and the large-red.

In the catalogues of the seedsmen, *common red-clover* is called by the following names : Broad clover, common red-clover, meadow trefoil, biennial red, *trifolium medium trifolium pratense*, Western clover. In the same catalogues, the *large red* is called : cow grass, large late clover, large red-clover, mammoth clover, red perennial clover, sapling clover, Rawdon clover, Vermont clover, perennial red-clover, *trifolium pratense perenne*.

I will now mention their chief characteristics, which being different in the two clovers, enable us to distinguish one from the other with ease.

#### COMMON RED-CLOVER.

Leaves large, and not velvety ; flowers pale red and globular, with short stems which are hollow or pithy ; gives two crops, grows early in spring ; best kind for pasture.

#### LARGE RED-CLOVER.

Leaves long and narrow, velvety ; flowers deep red, and rather oval than globular, flowers on long stems which are solid ; only last one year ; late in spring-growth ; best for hay.

The reason why I gave to the common red the character of being best for pasture is that it is earlier than the large red by 3 weeks, which quality makes it fit to feed sooner. This clover, mixed with the orchard-grass, makes the best pasture that can be produced. The two seem to have been made by nature to live and grow equally in the same field. Both start early in spring ; both give two cuttings for hay ; they flower at nearly the same time ; and are ready to make good hay at the same time, if they are

mown young enough and before the flower is turned colour. Moreover, they complete each other for pasture, in this sense that, if sown together in the same piece, the clover that disappears at the end of two years, will be at its best and be still giving plenty of feed. I said, above, that the large red was better for hay than for pasture ; but that is not precisely my meaning. The large red-clover is good for pasture, because it is ready for grazing after the common red is finished ; but it is better than the latter for hay, because, when sown with timothy, it comes to the scythe at the same time, and improves the quality of the timothy hay, especially for cows. I know, of course, that, for marketing, pure timothy is better, but as I will never advise the farmer to sell his hay, I recommend him to improve it, by sowing large red-clover with his timothy, thereby making the best possible cow-hay.

The large red-clover yields much less seed than the common : this is the reason its seed is, in some years, much the dearer of the two.

Upon the whole then, we may conclude that the common red-clover is the better suited to pastures, and the large red for hay. Before concluding this lecture, as I have mentioned the seed of clover, I will proceed to give you a little idea how to discriminate good from bad seed. It sometimes happens that the seed we buy seems to be clean and good, and yet when sown, with every possible precaution and by farmers who understand their work, only a small percentage comes up. Had this seed been examined under a lens, it would have been found that instead of being smooth and shining, like little well matured tare-seed, as good clover-seed generally seems under the lens, it was dull and wrinkled, like unripe tare-seed. For want of being ripe, this seed will only partially germinate, and disappointments result. This fault is difficult to detect without a lens, and I therefore advise those who buy grass-seed for the farmers' clubs to get a good lens and use it when making their purchases.

*Lathyrus sylvestris* is a plant that was greatly recommended this spring, as a fodder-plant. Many people tried it and were disappointed with the results. I sowed it myself at three different times, after preparing the land with great care ; but it never came up ; so I cannot give any account of its success as cattle-food.

The growing of one crop must be very interesting to us : Indian corn or maize. Ensilage is no longer a novelty to any one, though there are many who have never tried it ; but every one knows that ensilage is one of the best means of getting cheap milk in winter. So, it is from the silage point of view that I am now about to treat the cultivation of maize. It can no longer be disputed that corn is one of the best plants for producing milk ; the thing is to discover the kind that is the best to grow for ensilage. At St. Denis de Kamouraska, I, this year, made several experiments on different sorts of corn ; I tried the small yellow Canadian, the Western, and a new variety : the Pearce's prolific, which was recommended to me, and the conclusion I arrived at was that Pearce's prolific will prove to be one of the best for ensilage.

And by this mention of ensilage I am led to speak, in a cursory manner, about the food that ought to be given to milch-cows. First of all, it is to be rich and always given in a moist condition. The feeding of the cow, so that she shall give the greatest quantity of milk, is one of the most important things about the farm, and yet it is the one thing most frequently neglected.

By plenty of rich food, you can always make your cows fit for the butcher, but that is not what is wanted, milk is what she is to be made to give, so it is of the greatest importance that you should know what treatment will secure this; for even the best milkers will only yield milk in proportion to the food they receive.

As I just said, the food must be moistened; even without silage, we can always have the food moist and slightly fermented. My advice is, to chaff the fodder, put it into boxes, and moisten it so as to let it soften. Food softened like this, having imbibed water and undergone a slight commencement of fermentation, is incomparably preferable to dry food. But pray understand that this food, chaffed and kept in boxes for a little time, as advised, is not thoroughly fermented food. No, at most it is only moistened and steeped to get the cows to eat it more readily.

You know that, in summer, our herds, owing to the mildness of the temperature and the lush grass of the pastures, give plenty of milk, and, when the cold season of autumn arrives we have to house them. Well, if the winter finds them in a cold cow-house, and they have to endure that cold 6 or 7 months, it will be very wonderful if they give much milk.

Next in importance to food, is the keeping the cowhouse warm: this is an absolute necessity. Hundreds of tests have shown that a cow kept in a cold place in winter eats much more and yields much less than if the contrary régime were observed. No use dairying unless you keep your cows warm. Not only will they not yield well during the winter, but they will feel the cold more in spring, especially if they come from more temperate climates than this, and here I am led to say a word about the Canadian cow.

The Canadian to my mind realises the most perfect type of the milch-cow that we have in Canada for the common run of farmers. The characteristics of the Canadian cow is hardiness and easy-keeping. As to her hardiness, that is easy to understand, for she has borne for two hundred years a climate colder than that of France. She is easily kept, and she is so much stronger in health and constitution than other breeds. You know, for instance, that when one is not well off, one's food is not rich; and yet look at the poor little children in poor families; do not they grow, and end by becoming as strong as, and often stronger than the children of the wealthy? The habit of living such a life has done everything. Acclimatized for 200 years, it is to this the Canadian cow owes her great hardiness. Here are some instances of Canadian cows that give good yields of milk, yields a good deal larger than those of many a foreign-bred cow which receives the same food.

We have the testimony of Mr. D. Macpherson, who tells us that after every sort of trial and test, he believes that a herd of Canadian cows would be one of the most of

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profitable. Mrs. Jones, of Brockville, Ont., who has one of the finest herds of Jerseys to be seen, holds the same opinion as Mr. Macpherson. Professor Robertson, Dominion Dairy-Commissioner, says the same thing. In his annual report, he gives tests, made at the Experimental farm at Ottawa, and the results are in favour of the Canadian cow. She is indeed the milch-cow of all others for us. Mr. Robertson himself in my presence last spring, before an excursion-party of farmers at the Experimental farm, said that the Canadian cow is the best of all cows for farmers who live in a climate like that of the province of Quebec. I do not see, then, why we should go hunting about after foreign types, when we have here a race recognised as being the best suited to our needs, and sought for by all those who have tried the different milking breeds. I myself have bought for English speaking people, in Ontario and elsewhere, fifteen of these cows in the last three years. People are trying to get them everywhere. I will not keep on upon this, for I think you are all of my opinion about it.

During the last few years, large yields of milk, really astonishing yields have been published. We have cows spoken of as yielding enormously of milk. This question is very interesting, especially when we want to know how much this milk costs per 100 lbs. Last year, in a bulletin published by the Agricultural College of Wisconsin, an account was given of the yield of several cows, and the result was given as being a good one : but the milk cost 96 cts. per 100 lbs. ! Mrs Jones, in her clever little book, gives the yield of a Jersey, very well fed, as costing 76cts per 100 lbs. : this, as you see was a much cheaper yield than the other. But I find something still better, on referring to an article in which it is shown that a herd of Canadian cows has given milk that only cost 44 cts per 100 lbs. ! So I was led to believe that there must be a great difference in the richness of these different milks ; but I found that the 44 cts milk was as rich as the rest. Then, I was convinced that it is of great importance to make a good selection of the food given to cows, so as not to have milk, however abundant, that costs too much. I will give you, here, a model ration that is within the means of every farmer. For a cow weighing 1,000 lbs. : 10 lbs. timothy-hay ; 10 lbs. clover-hay ; 6 lbs. of bran and 6 lbs. of oats. This ration represents 26 lbs. of dry matter, of which : there are 2.26 lbs protein ; 13.21 lbs. of carbo-hydrates ; and 0.70 lbs. of fat ; making in all, 16.17 lbs. of digestible matter, with a nutritive ratio of 1 : 6.05. This is for large cows ; deducting 20 o/o for our Canadians, you have a ration any one can afford.

There has been a good deal said about the difference in profits between butter and cheese. Those who favour butter-making, say that cheese is the more profitable, but, that, on the other hand, the whey is not good for much ; and in their opinion, the skim milk from the creamery is much better than the whey from the cheesery, which latter is hardly worth taking home. I will quote here some figures that will give the exact proportionate value of the two residues. Skim-milk is worth 25 cts per 100 lbs., and whey 10cts.

It is calculated that with 5 lbs. of *moulée*, and 5 lbs. of linseed added to 100 lbs. of whey, this would be as good as skim-milk. You see, then, that whey is not a thing to

be despised. Now, if you go and get sour or rotten whey out of the cheesery-vat, you will never do any good with it ; unfortunately, this is what happens at three-fourths of the factories, and, so, it is not surprising that people say that whey is good for nothing. Here, my friends, I appeal to the wives of our farmers. It is to their spirit of economy I address myself : if the wives would take the trouble to care for the whey, they would find indisputable means of using it profitably ; not, I am aware, if it arrives at the farm in a three-fourths rotten state, but when it is in good order. Let the wives attend to the whey ; let them claim it as their own, their business, and make use of the right they have to work it to a good profit. It is not one of their faults to neglect their rights : when they have any. Nowadays, people go so far as to say that every woman should have a vote. A girl, however, would understand this right otherwise ; she would say that every girl has a right not to a vote, but to a voter.

After having heard me speak of so many things as needing improvement, I shall perhaps be told : " But all these reforms you are talking about will cost money ;" or perhaps, " This has never been done where we live." But, because it never has been done, is that any reason why it never should be done ? Or, I may be told : " We don't know how to set about doing what you advise us to do," and when any one says that, instead of asking for explanations, he will not even take the trouble to try to understand us. Those farmers, who will neither learn nor try to understand, are often bad examples to their fellows. Invariably, when they meet any one who speaks of new things, they try to discourage others who are intelligent and progressive. They are always at it, distorting the sense of the instruction given, interpreting in their own way, and ready to condemn every novel plan. Ask them what the plan is that they are condemning, and they cannot tell you. They will give you a definition of it like that of the boy who had seen an elephant at a show, and told his little brother : " I saw a great ox, *en j'm rabettegris*(1)(whatever that may mean! Trans.), that was pulling up carrots with his tail." Such men, once more, set a bad example to their fellows ; they are the opponents of all improvement, of all progress, and refuse to learn or to understand. Be not ye like unto them ! Pay attention rather to those who labour for your good, who conscientiously study the best means of improving your position : you see what efforts they are now making to advance the cause of agriculture. All men of action are united, all their energies are concentrated in an endeavour to reach the end proposed, the restoration of prosperity to the farmer.

Gentlemen, there are two serious dangers now menacing the very existence of our dairy industry : the competition between makers, and the too great number of factories. Out of the number of factories in the province, there are but two-thirds that are really in a position to make the improvements needed to make good cheese. How can a maker get along who only receives  $\frac{3}{4}$  of a cent for making ? What improvement can he make in his factory ? This must be positively altered, or all work must stop. The too great number of our factories is one great cause of the inferiority of our cheese, and this

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inferiority of the cheese from the small factories lowers the price of our good cheese. In these small factories they have to take any milk they can get. How can they refuse a can of bad milk, when they have only received, up to that hour, a few hundred pounds of milk. And when one thinks of factories that work up only 1,000 or 1,200 pounds of milk a day, and very often only give the proprietor no more than a cent a pound for making the cheese ! At home, we have a factory where often 14,000 lbs, of milk a day are taken in ; we get 2 cents a pound for making, and we find that none too much, as we draw the milk from the patrons, and that costs us \$500 a year. But, observe ; if we draw the milk from the patrons, we do not take any bad milk to the factory ! It is very simple work : as we pass with the cart, the driver lifts the cover of the can, which is set on the road-side, and if there is anything queer about it, that is enough : the can remains there. Our factory is a model one, for we have capital enough to make any necessary improvements, and have it in our power not to take in a single drop of bad milk. This latter point is essential, for a maker cannot make good cheese out of bad milk.

One of the great obstacles to all progress in some factories is the ignorance of certain makers who engage themselves to do dairy-work without knowing anything about it. It is in vain one tries to show them some methods that might help them to gain some capacity for their work, they seem opposed to all instruction, and having no vocation of the trade are certainly to blame for undertaking the duties connected with it. They are not unlike that minister, who was as bad a preacher as ever lived ; so much so that even his mother, who was not likely to be too severe on her own child, could not help thinking his sermons detestable. One Sunday, as she was going out of the church, in despair at the utter failure of her son, she could not help asking him : " Can you tell me, John, what induced you to become a minister ? " " It was the voice of the Lord that called me, Mother," replied he. " Are you quite sure, John," replied she, " that it was not another's voice you heard ? " It seems to me that some makers, like those I mentioned just now, were not led to their factories by divine instigation.

How many factories have I seen in which the most elementary notions of cleanliness were unknown. A very determinate idea of what cleanliness really means, you see, is not formed. Very few feel that it is one of elements essential to the making of good cheese ; and if you take upon yourself to say something about it, to allude to it, the makers pretend not to understand you, or will try not to understand. They take it all with perfect indifference, like that maid whom her mistress blamed for not having dusted the table, saying : " Look, Mary, I have written my name in the dust you left on the table." To which the girl replied : " Just see what education does, Ma'am ! I couldn't do it, for I never learned to write." All these things it is sad to have to speak of, but they are true and must be mentioned. No mild treatment is due to those makers who know so little about their work ; and the more so, since the faults we find in them arise only from bad motives, negligence, or ignorance. Have I not seen, even this very year,

a creamery where *shallow pans* were still in use, though that system of setting milk has long been given up ?

The patrons cannot be too strongly advised to keep a constant eye on the makers. Many difficulties, many a loss, might be avoided, if the patrons would look a little more closely after their affairs. Need I, too, tell them what responsibility lies upon them, if they, as is too often the shameful case, take diluted milk or skimmed-milk to the factory ! I will not harp too long on this string ; but I advise all makers, and all committees of management, I insist upon it with all the energy at my command, to unmask without mercy and to prosecute all those who in this way sin, even the most trifling degree, against the rules of honesty.

We must also rise in our might against a system practised by some unscrupulous makers, and which is likely to greatly injure our business ; I mean the making of false returns of the operations of their factories. We all know that at the end of each season of making, the proprietors make a report for each of their factories of its working, a report intended to show, as exactly as possible, the conditions under which it is run, and the average production of each month of the season. Well ! there are makers who, to make their factory appear more successful than others, to make themselves out to be better workmen than their neighbours, and to the injury of the rest, do not blush at sending in reports that are entirely false. This is very sad, and is another cause of vast injury to our trade. I trust that, in future, all the makers will be sufficiently regardful of their reputation to act herein with perfect truthfulness. It is a matter of great interest to all.

A great responsibility rests upon the shoulders of the inspectors of syndicates, for it is on them that we depend for the improvement of the cheese in all the factories under their charge. They must strictly follow out the methods taught them at the Dairy-school, and obey the instructions given them by the inspector-general. In this, they must cast aside entirely their own opinions, even if they have reason to think they are more accurate.

And this leads me to say how greatly the need of syndicates is increasing in this province, as a means of annihilating the complaints that are formulated on the English market about *French cheese*, *Joseph cheese*, *Green cheese*.

Our attention must also be directed to butter-making. We shall soon have to stop increasing our make of cheese, in face of the fact that its consumption has not been increasing so to speak, in England for the last five years, and that other countries, as the United-States and New-Zealand are competing with us in the cheese-market. M. Leclair, the manager of our dairy-school at St. Hyacinthe, who has just arrived from Denmark, tells us that we make as good butter as the Danes make ; we only need to learn how to pack it and to deposit it fresh on the English market : and this we must learn to do.

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In his opening speech, the president of our association suggested for our consideration the importance of having good roads ; this, he said, was a point highly interesting to all dairy men, who have milk to cart to the factories. Indeed, if we study the difference of draught on a good and on a bad road, we find it to be as follows :

If a horse can draw 100 lbs., on a good road with moderate ascents, on a road rough and in a state of nature, it will be found that he can only draw :

90 lbs.	on an ascent of 1 foot in 100 feet.
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I must not conclude without protesting, in the name of the Association, to which I belong, against an opinion that has been expressed to-day, that more cheese can be made from poor milk than from rich. I greatly regret that such an opinion should have been expressed here, and I should still more regret its registration in the report of our deliberation without its being protested ; for this opinion is neither more nor less than a heresy in dairying. It is the opposite of the opinion long held by our body, and passed out of the realm of discussion, that rich milk yields more cheese than poor milk. I, therefore, am led to propose that this assertion, although an isolated one, be not entered in the report of our deliberations as having been admitted without discussion.

*M. Gilbert.*—When speaking of the experiment I had made on the subject of the quality of milk, I did not intend to force the opinion on you that bad milk was as good to make cheese with as good milk. I only wanted to tell you about the experiment, in order to get at your opinion, and to win from you an explanation of a peculiarity that I could not explain to my own satisfaction. I repent having been guilty of a heresy, but, fortunately, the Association found a man to stamp out that error forthwith.

*Mr. Barnard.*—If M. Gilbert does not persist in his assertion, we can say that the question is settled, can we not ?

*M. Gilbert.*—Very good.

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*The President.*—Allow me, gentlemen, to introduce to you M. Godbout, M. D., and M.P., who has kindly consented to address you.

## SPEECH OF DR. GODBOUT, M.P.

I must confess Mr. President and gentlemen, that it was with great hesitation I accepted your kind invitation to address you this evening. Not having for many a day belonged to the farming class, I have no longer the proper authority to treat the interesting question you have to discuss, and, I must avow it, I am unable to do so.

At any rate, gentlemen, if it be true that I no longer am occupied in the noble profession of agriculture, on the other hand I do not take a less lively interest in all that concerns, closely or distantly, the success of our farmers. It is on that account that I heartily rejoice at this association having been pleased this year to extend to my fellow-citizens of Beauce the advantages that follow everywhere its route through the counties of this province; and I am certain that I am the interpreter of all our people in offering to the distinguished members of this society our most sincere thanks for the honour they are doing us. Our thanks are due to all the members of this association, but above all are they due to the eminent man who presides over it, to that priest whose energy and great activity find means to promote the temporal interests while at the same time he watches over the spiritual interests of his parishioners at Beauce. With such men at the head of such institutions, we have everything to hope for the future of our agriculture. We have had, for several years, clear proof of the great advantages such associations can confer on a country.

Formerly, gentlemen,—I well remember the time,—farming was by no means considered one of the different professions in our land; it was carried on after the old routine; people did well what they could do, but real agriculture was not understood, and nobody devoted himself to the instruction of the farmer.

Well, gentlemen, you see what is the case now. Agriculture is, so to speak, the most fashionable of the professions; every body takes an interest in it; the farmer sees that his art is more respected than all the other professions; and the truth of what I say is proved by such demonstrations as are being made this evening.

Do we not see present at our conventions eminent members of the clergy, of the government, in a word, representatives of all the professions, of all classes of society? As it has been already repeatedly observed, it is agriculture, the progress of agriculture that makes the wealth and prosperity of a people. We may therefore be sure of this truth: it is agriculture, the success of the farmer, that will make of Canada a great country, a country prosperous in every respect. But, gentlemen, to this end, the best means of extracting from the land the greatest possible profits must be studied; and it is especially from this point of view that we recognise the immense value of the Dairy-men's Association.

Inhabitants of Beauce, we have here, as you well know, all that is needed for the development of dairying; our farms are admirably adapted to this business. We have everything necessary to make Beauce an excessively rich and prosperous county. Let

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us then profit by the valuable instruction brought in the train of this Association. Let us try to become acquainted with the most improved and perfected systems of dairying. We must walk along with progress, and if you wish to succeed, you must necessarily put in practice the lessons here given to you by men who have made a deep study of the questions in which you are interested.

Never forget the value of their teachings as to the making of good butter and cheese. If you mean to be successfull, you must positively employ as makers, well taught, competent men. I think you ought to propose to this meeting a project of making all the young men who intend to become makers of butter or cheese pass examinations on those subjects. I do not know if this plan is realisable or not, but it seems to me to be about the best way of arriving at a perfect method of manufacture. If, at the head of each cheesery and creamery you have an absolutely competent man, I have no doubt about the success of dairying in Beauce.

I would also suggest that societies of patrons and makers be formed, to meet from time to time, and exchange views, and relate their experiments to each other. I know that in a county like this, it would sometimes be difficult to hold meetings, on account of distance and bad roads in some parishes. But I am convinced that the usefulness of such meetings would amply repay you for all the sacrifices you would have to make in attending them.

Now, I heard read a petition that the association intends to address to the Dominion and the Provincial Governments.

I may say, Gentlemen, that I am sure that this petition will be very favorably received at Ottawa. As for me, I can assure you that I will do all I can to get this petition received in a friendly manner I belong to the Committee on agriculture, and so I was present at the first deliberations on the utility of having a line of steamers fitted with refrigerators to carry our butter and cheese. I then did all in my power to forward the interest of our farmers, and I, once more, assure you that I will do the same thing when your petition shall be presented to the Dominion Government.

I will detain you no longer, gentlemen, for I feel, as I said in when I began, that the ground is not solid under my feet, in spite of the interest I take in agriculture.

In conclusion, I thank you for the kind manner in which you have listend to me, and in the name of the county of Beauce, which I have the honour to represent, I once more thank you, the distinguished members of the Dairymen's Association, for the honour you have done us in holding your meeting here, this year.

*Mr. Fisher, vice-president, in the chair.*—Mr. Barnard, has been good enough to prepare an essay on the breeding and feeding of pigs, which he will read to us this evening. The subject is worthy of great attention, and is in the hands of a competent, intelligent man. In view of the swift, refrigerator-fitted steamers we are trying to get from government, the question Mr. Barnard is about to deal with is another point of great interest to the farmers and breeders of this province. I trust, then, that, in spite of its being so late, Mr. Barnard's lecture will be listened to with all the attention it merits.

## Mr. Barnard's Lecture.

### THE ECONOMICAL PRODUCTION OF PORK.

1. *The economical production of pork* should be of great interest to the patrons of creameries and cheeseries. This subject affects not only farming and trade, but the whole of our public, since the new business of sending half-fattened pork to England is likely to greatly increase and to become a source of vast profit to the province. It has been proved that the chief cause of the reintegration of our agriculture has been the manufacture of cheese for the English market. The province of Quebec already supplies nearly one fourth of the whole imports of cheese into England, and Canada supplies much more than one-half of that. On the other hand, the exports of butter from this province represent hardly one-half of one per cent of the English imports of that article, which are two and a-half times more than the imports of cheese. Again; our exports of bacon are insignificant, although England imports of that article more than twice as much in value as her imports of cheese amount to.

2. *The importance of the subject.*—The official figures given on the subject, in the report of M. Gigault's late tour in Europe, are most interesting. I give them here:

#### TOTAL ENGLISH IMPORTS IN 1893.

Cheese from all countries . . . . .	\$25,116,467
Butter " " " . . . . .	62,067,485
Smoked bacon and hams . . . . .	55,334,326
Other pork, fresh and salted . . . . .	3,626,255
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	\$146,144,033

Here, we have many millions of dollars, a large proportion of which might, if we really meant business, come into our pockets. We must then in future devote our attention to the production of only the best quality of cheese, and take care not to glut the market with that article, of which, it seems, there is no little danger. We should especially try to increase our production of butter of the best quality, that we may get our share of the 62 million dollars that England pays for that article; and lastly, we must in future do our best to make a better use of our whey and skim-milk, and of the different products of our land, which are now almost given away on our markets, and thus obtain a large part of the 60 millions expended by the English on her imports of bacon, hams, &c.

3. *Our pig-meat in England.*—The English dealers acknowledge that the pig-meat, prepared in this province, is equal to any in the world, and they engage to take any quantity of it. Here, then, is a new market open to us, one that promises to be even more profitable than that for butter and cheese. Now, these two industries, cheese and

butter-making affirmed that combined intelligent, a

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butter-making, are made complete by the economical fattening of swine, and it may be affirmed that wealth will be the lot of those who shall learn how to extract from these combined industries all the profit they will certainly bestow on those farmers who are intelligent, active, and enterprising enough to invest in them largely.

4. *Fat or lean meat?* When the farmer is fattening for the market, it is of the greatest importance to him that his meat should give him the greatest possible net return. Now, it is proved that, all other things being equal, the food needed to lay a pound of pure fat on an old hog, will produce as much as eleven pounds of young lean meat. This may seem incredible to those who do not habitually weigh their young pigs, as well as their food, daily, from weaning until they are put up to fat, a period during which they profit the most from their food, and who do not also weigh their old hogs towards the close of their fattening, when they put on nothing but fat. Nowadays, that dealers in towns pay as much, and even more, for young pork than for very fat pork, it becomes very important that the breeder should choose those breeds that yield the greatest quantity of half-fat meat, with the least possible amount of costly food.

5. *The lean meat of young pigs* is the most sought after on the English market. It sells very high in England, on account of its comparative rarity. When pigs are weaned, you may see them grow, provided they have good pasture in addition to the whey and skim-milk, kept sweet, and enriched by a very small quantity of flax-seed or its equivalent in other grain. They must of course be well protected by a shed from sun, wind, and rain, with a good fence, to prevent their being disturbed by other animals, and must be feed at regular intervals. We must not forget that young pork, treated thus, costs less to make than beef or mutton ; that its transport to England costs less, since it is salted and smoked, while bullocks and sheep go over alive, have to be fed on board, where they always lose flesh, and often die before reaching the market ; besides, the pig-meat sells at a higher price, pound for pound. The profits are all on the side of the making of young bacon, salted and smoked.

6. *Our Canadian Abattoirs.*—We now have, at Montreal and Sherbrooke, large establishments capable of killing, salting and smoking several hundred hogs a day. These factories buy all the young half-fat hogs they can find in the province, and as they cannot get enough of these here, they are obliged to get the larger part from Ontario and even from Manitoba. They pay for these young half-fat pigs, provided they be of good breeds, a higher price than for very fat hogs, although the latter cost more than twice as much to grow. We have therefore a right to say that this new trade is destined to make the fortunes of those farmers in this province who are wise enough to embark largely in it.

7. *The most favorable conditions* of breeding and fattening hogs deserve a special investigation. In a condensed form, they are :

a. The selection of the animals and their maintenance in vigorous health, so as to preserve their appetite in full play from birth to death :

- b. A proper temperature, according to the nature of the food. This important subject demands more development than we can afford it here ;  
 c. Thorough cleanliness ;  
 d. Quiet and comfort ;  
 e. Proper and plentiful food, given at regular hours ; no excess, therefore no waste.

8. *The selection of the animals for breeding and fattening* is of the highest importance. Their health must be perfect, so that they may derive the greatest possible benefit from their food from birth to slaughter. Next, they must, as far as possible, have that form that ensures a through production of the choicer parts of the meat, and this in an equal ration diminishes the inferior parts, and greatly increases the sale price. These results are secured by a careful selection of the breed, and of the individual pigs that are to be fattened. Particular care must then be taken to first select wisely the breeding-stock, to feed them properly with a view to their future office as sires and dams, and to keep them breeding as long as they produce, economically, fine, and numerous litters. As for the young pigs intended for fattening, a very rigorous course of selection must be gone through, and those that show the least signs of deficient health, form, etc., must be sold as sucking-pigs. The early maturing English breeds, such as the improved Yorkshire, are the type preferred by the trade in salt-meats. They have great appetites, grow very fat, on abundant but cheap keep, and their flesh is very much liked.

9. *Breeding*.—The best formed parents can only confer their good qualities on their offspring so long as they preserve their constitutions by means of plenty of daily exercise and proper food. The best breeders always leave their stock-pigs at liberty, particularly the sows ; keeping them as much as possible in the open air, in small yards, well sheltered and solidly fenced. In winter, the sheds and dung-pits, suit them capitally for exercise ; there, they pick up a good deal of food, and by their rooting, make the dung more uniform in quality and less liable to excessive fermentation, which is so injurious, particularly when the dung becomes white (*fire-fanged. Trans.*)

In summer, opportunity should be given the sow and her pigs to wallow in water and to root about in the ground ; this will both excite their appetite and give them a chance of finding edible roots of plants, which will tend to their robust and healthy growth. A small yard in an old orchard, where the pigs can work about when they like, will be as beneficial to the orchard as to the pigs themselves.

Not necessary to mention that they ought to receive besides plenty of food, varied in kinds and easy of digestion, so as to get them on as fast as possible, and as fat as comports with economy. In most cases, it will be pay best to rear pigs thus, at liberty, up to five or six months old, pushing them on towards the production of meat rather lean than fat. (1)

(1) We advise our readers to study Mr. Barnard's article on the principles of breeding, Journal d'Agriculture Dec., 1894, E. C.

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10. *Young April pigs.*—Try to have litters in early spring, that the piglings may thrive on the milk of their dam and on the abundance of skim-milk to be had at that season. April is the best month for this, or May at the latest, so as to have the young ones ready to go to work on the grass, when most plentiful, that is at the beginning of June.

11. *Temperature to be calculated by the sort of food.*—It has no doubt been observed that pigs fattening in cold weather have much better appetites and eat a great deal more than they do when fattening in hot weather. This is a very useful thing to know when we want to get rid of stuff that will rot and be wasted unless consumed at once. But it must be remembered that cold weather make animals want a great deal more food, a great part of which goes to keep up the warmth of the body. This then is a loss that is carefully to be avoided, when feeding on stuffs that have a real trade-value, as is usually the case.

12. *Absolute cleanliness.*—The animal, especially if he is kept shut up, needs, for his economical growth and fattening, thorough cleanliness, because this is likely to induce and keep up the appetite, facilitate digestion, and make the meat more wholesome and more delicate. If, in spite of everything, the appetite fails, it will be found useful to brush the pig regularly and briskly, and even to wash it, unless the weather is too cold.

13. *The manure.*—Cleanliness demands that both the solid and liquid dejections be frequently removed from the piggery, and that their putrid decomposition be prevented, so as to keep from the animals all bad smells, which, if not obviated, would certainly injure the health of the pigs and the excellence of their flesh. Nor ought the farmer to forget, that the dung, particularly of well fed beasts, is of great value, and its good and complete utilisation will secure the most considerable part of the profits that are to be expected from the breeding and fattening of hogs.

14. *The economising of the manure,* in connection with the feeding of animals, is a very important measure. When the greater numbers of the sties, where pigs are bred and fed in this province, are examined, one sees that a great loss of manure is inevitable. People do not seem to know, in general, that pig dung, particularly when the pigs are fattening, is worth about two dollars a ton ; taking urine and solid manure together. Do the farmers who let part of this escape think of what they are doing ? Are their farms so rich that they can find an excuse for such extravagance ? Let them then in future treat these matters with care, and they will soon be convinced that they will greatly increase their crops and thereby make a considerable profit.

15. The piggery should be so built as to prevent cold, dampness, or too great heat from injuring the progress or the fattening of the hogs. In cold quarters, the animal consumes utterly unprofitably a great proportion of his food, which would have contributed to the production of lean or fat, had the pig been better protected. Damp is still worse than cold, since it not only chills the beast, but is a constant cause of discomfort,

and even of divers diseases. If, on the contrary, the heat is excessive, the animal becomes languid, sweats, loses his appetite, and if he is already fat, suffers so much sometimes as to be stifled in his fat. The best temperature for fattening pigs is about 60° F. It is a temperature that can be easily kept up in the piggery, as also in the cow-house, stables, hen-house, etc.,—by building them with proper precautions, and above all by screening them from exterior cold.

16. *Quiet and comfort.*—The quieter and the more at its ease an animal is kept, the more economically it thrives and fattens. The comfort of stock is ensured by giving them healthy lodgings, dry bedding and plenty of it, constant supplies of pure air, half-light between meals, which will incline them to sleep, and lastly, by observing irreproachable cleanliness. During meal times and cleaning times, the doors and windows should be opened, so as to let in as much as possible of sunshine and fresh air, to purify the piggery thoroughly. It should also be fitted with good windows and shutters so as to be darkened, if wanted, though at the same time admitting fresh air day and night. The comfort of the fattening animals will be increased by giving daily in winter a few fresh-cut turnips, or other roots preserved in piles and protected from bad weather. The shut up pigs will greedily devour these and their digestion will be greatly assisted thereby. The mould that detaches itself from them will help to dry the boards and will absorb the bad smells that would otherwise adhere to them.

17. *Preparing for economical fattening* is a matter of great importance. It is desirable to get the young pigs into a state of perfect health and vigour, so as to enable them to digest the rich and abundant food required to fatten them, as well as to maintain their health during the few weeks of absolute seclusion within the narrow bounds of the piggery, that they will have pass with a view to the greatest possible economy in food, and the improvement of the quality of their meat.

It is very desirable that the sows and their young should be kept in the open air, in a good yard, where they will be fed and find pure water, good shelter, and plenty of dry litter. In this way, with some cheap food, they should be pushed along in flesh as much as possible, though without attempting to fatten them until they are "put up" for that purpose. It has been proved that, all other things being equal, the more quickly the animal fattens the less his fattening costs; and, besides, the dangers of sickness, so frequent at this critical moment, are greatly diminished.

18. *Subdivision of hogs put up to fatten.*—When several hogs are being fattened at once, it is necessary to subdivide the piggery into small sties, for two or three pigs of the same age and condition and used to feed from the same trough; otherwise, there will be constant quarrels, fights, and sly nips going on between them, to the great detriment of the weaker ones, and likely to injure even the stronger by the excitement caused

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by these rows and the loss of flesh consequent thereon : the more a fattening beast is ruffled, the less good his food does him. For this reason, the fattening sties should be small, only allowing the hogs put up for their last fattening sufficient room for eating and sleeping.

19. *The hog as a scavenger.*—The hog is omnivorous, and enjoys food that most of the other animals on a farm will not eat. In order, therefore, to get a profit out of swine, they must be made to consume food more or less coarse, such as is within reach of every farmer, such as refuse of every kind : whey, skim-milk, wash, trimmings of plants and roots, weeds, and unsaleable grain and seeds of every kind. Collecting everything carefully, mixing these matters with something appetising, and studying as far as possible the proportion of digestible parts contained in such a ration, is the right way to make bacon at the lowest possible costs.

20. *The feeding* of animals at a profit requires considerable knowledge and care. First of all, perfect regularity of feeding is absolutely necessary, so as not to disturb the animal. The cleaning out of the sty as well as the meals, should always be attended to at the same periods. Three meals a day are generally sufficient, provided they are given the first thing in the morning, at noon, and late in the evening. Fattening animals are induced to eat as much as possible, by varying the food, by giving it to them by small portions at once, and particularly by seeing that it is as rich as possible in the same bulk, and easy of digestion. Where winter is at hand, and the piggery is chilly, boiled potatoes, mixed with cracked and steeped grain, cause the pigs to take on flesh and fat rapidly. The evening meal may be profitably composed of richer, more heating food, such as cracked pease, to sustain the animal better during the night. But bacon fed in this way is costly, as we shall see further on.

21. *The rational feeding of stock*, and especially of hogs, is a difficult and, comparatively, little understood problem. During the last few years, agricultural science has rendered us services on this point that may be very useful. In order to understand the question, a few words must be said on the science belonging to it, and its application must be so made as to enable every willing and intelligent farmer to profit by it. This I proceed to do in the following explanations.

22. *The nutritive matters* needed to maintain the life, and for the production of work, or any other animal product—bacon for instance—may be divided into four distinct parts, that is :

*a. The Carbo-hydrates (non-nitrogenous)* which are found in all vegetables. Their chief, if not their only duty, is to produce the heat needed to support life.

*b. Protein*, nitrogenous matter, which alone produces animal force, which forms lean meat, skin, hoofs, hair, feathers, marrow, etc. Protein, too, may also be transformed into heat, or fat, according to the most pressing needs of the animal life. But

this transformation of protein into heat is generally much more costly than the cost of heat produced by the carbohydrates. It is calculated that one lb. of protein, is equivalent to 1.22 of carbohydrates for the production of heat, while the pound of protein, as estimated by their respective values as food, is worth five times as much as a pound of carbohydrates. In other words, if carbohydrates in food are worth  $\frac{1}{2}$  a cent a pound, protein is worth  $2\frac{1}{2}$  cents.

c. Fat, which serves the animal as a reserve of heat, also assists the digestion of the rough part of the fodder. It is deposited between the layers of lean meat, and greatly increases its value. One pound of fat can replace, if needed, 2.32 pounds of carbohydrates in the production of heat.

d. The mineral matters, which are indispensable in the formation of bone, eggshells, etc., have also the effect of purifying the blood, increasing the digestive power, and thereby ensuring health and even life. Most of the food given to pigs by farmers, contains a sufficient proportion of soluble minerals, though maize, and some of our grains are poor in minerals. In such a case, if the appetite decreases, or the animal seems lame, it would be advisable to give it daily a handful of unleached wood-ashes, or to leave some always by the pig to take when he feels inclined.

e. Water is indispensable in feeding, and the hog, to digest his food properly, requires more than either the horse or the ox. The rule is to give seven pounds of water to one pound of solid food. If too much water be used in prepared pig-food, the animal will be disgusted, and the food not well digested. It is an advantage to know the exact proportion of water contained in the different kinds of food employed ; a table, giving this information, will be found further on.

23. *The digestibility of the food* is of immense importance, for it is not what the beast eats, but what it digests that increases its weight. The undigested food passes away in the dung, &c., and no benefit remains to the animal. On the contrary, the work it has to do to pass these undigested matters, make it lose part of the benefit derived from the digested food, and may even cause severe complaints. A table, showing the digestibility of fodders and their composition will be found further on, and may be made very useful to the farmer, whom it will help to make many a saving in the feeding of his stock. For it has been proved that in giving them proper proportions of carbohydrates, protein and fat, three beasts may be as well fattened, as two fed upon chance rations. Of this some instances will be given presently. In feeding hogs, both lean and fattening, we must remember to choose foods easy of digestion, and to prepare them so as to excite the appetite of the animal. It must also receive a really economical and well thought-out ration, so as to enable it to extract, from the same quality and quantity of food, all the profit possible.

24. *Composition of food.* The following table gives the composition of the principal foods within reach of our farmers ; the table shows the quantities per cent of : 1. water ;

2. solids ; 3. foods, reckoned a pound ; 7. on these foods less rich in 25% less than calculate w/ such as bran more profit them.

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2. solids ; 3. carbohydrates (sucres) ; 4. protein ; 5. fat ; 6. comparative values of these foods, reckoning carbohydrates at  $1\frac{1}{2}$  cts. a pound, protein at  $2\frac{1}{2}$  cents, and fat at 3 cents a pound ; 7. the manurial value found in the dung of adult fat animals after being fed on these foods. The dung of young beasts, and of pregnant or suckling sows, is much less rich in fertilising matters. It is generally reckoned that this dung is worth about 25% less than the dung of old fattening beasts. By means of this table, a farmer can calculate what part of his crops he can sell with profit, and buy in its place other stuff, such as bran, cotton-cake, linseed, &c., which will do the cattle more good and leave him more profit than he would have made by consuming his own crops instead of selling them.

TABLE I.—COMPOSITION OF FOODS PER 100 LBS.

	FOODS.	Water.	Solid Matter.	Total protein.	Total fat.	Carbohydrates.	Digestible Protein.	FEEDING VALUE.			Fertilising value. per 2,000 lbs.	Total value.
								Per 100 lbs.	Per 2,000 lbs.	cts.		
Hay.	Average meadow.....	14.3	85.7	8.5	2.5	40.0	5.7	1.6	0.30	7.80	6.66	14.46
	Comfrey in flower.....	15.0	85.0	20.7	2.7	35.1	18.9	2.3	0.72	14.50	....	....
	Red clover.....	15.0	85.0	11.5	2.2	38.1	7.7	1.5	0.43	8.50	8.46	16.86
	Alsike clover.....	16.0	84.0	15.0	3.3	32.7	10.2	2.2	0.48	9.60	8.64	18.24
Green Fodder.	Pasture grass.....	80.0	20.0	3.5	0.8	9.2	2.7	0.6	0.13	2.60	....	....
	Grass near flowering.....	75.0	25.0	3.0	0.8	13.1	2.3	0.6	0.14	2.80	....	....
	Timothy.....	70.0	30.0	3.4	1.1	16.3	2.4	0.8	0.16	3.20	....	....
	Oats in flower.....	81.0	19.0	2.3	0.5	8.3	1.6	0.3	0.09	1.80	....	....
	Vetches.....	82.0	18.0	3.5	0.6	6.6	2.4	0.4	0.10	2.00	....	....
	Red clover in flower.....	83.0	17.0	4.6	0.9	7.2	3.8	0.7	0.15	3.00	....	....
	Red clover, young.....	78.0	22.0	3.2	0.8	9.5	2.2	0.5	0.11	2.20	....	....
	Green corn in flower.....	81.3	18.7	1.2	0.3	11.0	0.9	0.2	0.08	1.60	....	....
	Cabbage.....	90.1	19.9	2.3	0.9	5.3	2.2	0.8	0.10	2.00	....	....
	Leaves of kale.....	84.7	15.3	2.5	0.7	8.1	2.1	0.6	0.11	2.20	....	....
	“ of parsnips.....	80.0	20.0	3.2	1.0	9.5	2.6	0.8	0.12	2.60	....	....
	“ of carrots.....	82.2	17.8	3.2	1.0	7.1	2.7	0.8	0.13	2.40	....	....
	“ of beets.....	90.5	9.5	1.9	0.5	4.0	1.6	0.4	0.07	1.40	....	....
	“ of swedes.....	88.4	11.6	2.1	0.5	5.3	1.8	0.4	0.08	1.60	....	....
	“ of prickly comfrey.....	91.7	8.3	2.6	0.5	4.2	2.3	0.4	0.08	1.60	....	....

TABLE I.—COMPOSITION FOODS PER 100 LBS.—Continued.

Foods.	Water.	Solid matters.	Total protein.	Total fat.	Carbohydrates.	Digestible protein.	Digestible fat.	FEEDING VALUE.			Fertilising value per 2,000 lbs.	Total value.
								Per 100 lbs.		Per 2,000 lbs.		
								\$ cts.	§ cts.	§ cts.		
Roots, &c.												
Potatoes.....	75.0	25.0	9.1	0.3	60.2	2.0	0.3	0.16	3.20	....		
Artichokes.....	80.0	20.0	2.0	0.3	15.4	1.9	0.3	0.13	2.60	....		
Mangels.....	86.0	13.4	1.2	0.1	10.0	1.1	0.1	0.08	1.60	....		
Carrots, yellow.....	85.0	15.0	1.4	0.2	10.8	1.2	0.2	0.09	1.80	....		
Carrots, white.....	87.0	13.9	1.2	0.2	9.7	1.1	0.2	0.08	1.60	....		
Swedes.....	87.0	13.0	1.3	0.1	9.5	1.2	0.1	0.08	1.60	....		
Parsnip.....	80.0	20.0	2.4	0.5	13.0	2.0	0.4	0.12	2.40	....		
Turnips.....	92.0	8.0	1.1	0.1	5.3	1.0	0.1	0.05	1.00	....		
Pumpkins.....	91.4	8.6	1.2	0.1	5.2	1.0	0.1	0.05	1.00	....		
Grains, pulse, &c.												
Wheat hard.....	14.0	86.0	17.0	1.9	61.8	16.5	1.8	0.77	15.40	8.30	25.70	
" soft.....	14.0	86.0	10.9	1.7	69.3	10.6	1.6	0.65	13.00	8.30	21.30	
Barley.....	14.3	85.7	10.0	2.5	63.9	9.2	2.3	0.62	12.40	6.84	19.24	
Oats.....	14.3	85.7	12.0	6.0	55.7	10.7	5.3	0.65	13.00	7.38	20.38	
Corn.....	14.4	85.6	10.0	6.5	62.1	9.3	6.0	0.72	14.40	6.84	21.24	
Buckwheat.....	14.0	86.0	11.0	2.0	59.0	9.5	1.7	0.53	10.60	6.12	16.72	
Pease.....	14.3	85.7	12.4	2.0	52.5	20.8	1.9	0.84	16.80	12.06	28.86	
Beans.....	14.5	85.5	25.5	1.6	45.9	22.7	1.6	0.89	17.80	13.68	31.48	
" haricot.....	15.0	85.0	26.9	3.0	48.8	26.1	2.9	0.98	19.60	15.12	34.72	
Tares.....	14.3	85.7	27.5	3.0	45.8	25.3	2.8	0.95	19.00	13.68	32.68	
Vetches.....	14.5	85.5	23.8	2.6	49.2	21.9	2.4	0.86	17.20	11.88	29.08	
Flaxseed.....	18.3	81.7	20.5	37.0	19.6	18.0	33.7	1.57	31.40	12.24	43.64	
Hempseed.....	12.2	89.8	26.3	33.6	21.3	14.0	28.9	1.32	26.40	11.34	37.74	
Sun flowers.....	8.0	92.0	13.0	23.6	23.9	9.0	16.3	0.84	16.80	....		
Linseed cake.....	11.5	88.5	28.3	10.0	37.3	24.9	8.8	1.07	21.40	15.84	37.24	
Cotton ".....	10.1	89.9	34.3	10.9	27.4	30.5	9.8	1.19	23.80	20.88	44.68	
Bran.....	13.1	86.9	14.0	3.8	45.9	11.2	3.0	0.60	12.00	10.62	22.62	
Cummins.....	8.0	92.0	23.0	2.5	42.2	20.7	2.0	0.78	15.60	14.94	30.54	
Graves.....	6.7	93.3	74.3	23.0	....	74.3	13.0	2.24	44.80	....		
Dried fruit molasses.....	12.0	88.0	80.8	0.5	2.6	90.8	0.5	2.05	40.10	....		
Cow's milk.....	11.2	88.2	8.0	....	64.5	8.0	....	0.52	10.40	11.34	21.74	
Cow's skimmilk.....	87.3	12.7	4.0	4.0	4.0	4.0	4.0	0.24	4.80	2.16	6.95	
Whey.....	90.0	10.0	4.1	0.3	4.2	4.1	0.3	0.13	2.90	....		

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25. *Composition of rations.*—The preceding table shows the true composition of the different foods that farmers in this province use for their stock. Let us now see what is the experience of the most competent men in the selection of the foods most profitable to the farmer. These first rate practical men, aided by very learned scientists, have, by means of numerous experiments, succeeded in settling the quantities of carbohydrates, protein, fat, mineral matters and water, which will give the best results when given to farm stock, according to their age, weight, and the produce expected from them. The rations thus prepared are called scientific or theoretic ration, because they are based on things known and on certain rules, which now form a regular science, one which the practical farmers of the entire world may employ with certainty and profit in their daily practice.

26. *Whey and skim-milk* are such economical foods in the production of pig-meat that we have made them the basis of the rations we are about to give as examples. We shall see, however, in comparing the composition of these over-products of the dairy with that of the theoretic ration recommended, how important it is to perfect the feeding value of these wheys and skim-milks, whether for pig-feeding, for calves, or even for milch-cows, when these last have been accustomed to consume this kind of food so favourable always to the production of milk. (1)

27. Skim-milk contains almost all the qualities of fresh milk, except the fat, which the separator almost entirely removes. It contains, on an average, per cent : 4.2 of carbohydrates, 4.1 of protein, and about 0.3 of fat. In rearing calves or young pigs, this milk is restored to the average richness of fresh milk by the addition of some matter that is very rich and easy of digestion, such as flax-seed, which is richer in fat and more easily digested than anything we have at hand. It would be as well to remember that skim milk contains too great a proportion of water, and that it should be used to dilute, or as menstruum for cooking, the more solid foods. In this way, the greatest profit will be derived from its use.

28. *Whey*, though deprived of its protein and fat in the process of cheese-making, may still be used with considerable profit, by those who know how to use it, in the form of soup into which other solid matters, poor in carbohydrates, but rich in protein and fat, are introduced. In the specimens of rations given below, many examples of the proper use of this food will be found.

29. *Green clover*, cut when 9 or 10 inches high, is the best and cheapest food the farmer can find for the partial fattening of half-fat hogs.

In arranging a mixture, containing the proper amount of carbohydrates, of protein and of fat, 100 lbs. of green clover are worth as much as 16.6 lbs. of white haricot beans,

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(1) The numerous complaints that reach us from the cheeseries about the use of whey for cows, oblige us to mention here that Mr. Barnard only means whey in sound condition, perfectly sweet. In many of our cheeseries, unfortunately, the whey is very far from being returned to the patrons in proper condition. E. C.

or 10.5 of peas, or 20 lbs. of corn, or 22.2 lbs. of oats. Now, at the price these are worth to most of our farmers, the following is the comparative value of these different foods :

100 lbs of green clover-hay at \$6.00 a ton.....	7.5 cents
16.6 lbs haricot beans at 1 ct. a pound.....	16.6 "
18.5 lbs peas at 1 ct. a pound.....	18.5 "
20.0 lbs corn at 70 cts. per 50 lbs.....	28.0 "
22.2 lbs good oats at 1 ct. a pound.....	22.0 "

We see by these figures what a tremendous saving is made by rations adjusted with intelligence and with a knowledge of the principles that govern the rational feeding of animals.

30. *The cultivation of beans.*—After green clover, nothing is more economical for fattening hogs than dwarf and horse-beans. Beans ground, or in soup, will enrich rations composed chiefly of whey, skim-milk, and green-clover. Beans and haricot-beans (1) should be sown in rows and well hoed, but they require no costly manures. Two hogheads (*barriques*) of lime (*about 12 bushels. Trans.*) 200 lbs. of superphosphate (*i. e. without nitrogen*), and 300 lbs. of non-lixiviated ashes, to the arpent, should give a crop of at least 30 bushels ( $35\frac{1}{2}$  to the acre), if the seed is good and the land in good fettle. We hope our readers will make a trial of these crops next spring. And more ; if the grass is scanty, or fails entirely, bean-soup if made with skim-milk, will cause the cows to give plenty of rich milk, and the butter made in winter from this milk will be as good as summer butter.

31. *Cotton-seed-cake* is one of the best foods, the richest and most economical we can buy. Dung from cattle fed on this is so rich that the cake can be used with profit if for the sake of the dung alone. Farmers who are obliged to buy *moulée* for their stock, had better buy cotton-seed-meal instead ; it is worth, this year, from \$22 to \$24 a ton, wholesale. The Boston dealers engage to furnish car-loads at these prices at any station on any of the principal lines of rails in the province.

32. *Linseed*, called here flaxseed, is of all things the best to enrich skim-milk. Every farmer ought to grow lots of it. As will be seen further on, a small quantity of linseed may be used to great advantage to make a ration richer in fat, without adding an excess of carbohydrates, which excess is pure loss, even when it is not injurious.

*Prickly comfrey* has the advantage over all other fodder-crops of containing, proportionately, much more protein and fat and much less carbohydrates. Without prickly comfrey, it is often very difficult to make a combination of fodders without an excess of carbohydrates. Now, we repeat it : carbohydrates in excess are always a dead loss, and frequently the excess of heat they cause is injurious.

34. *Graves*, the scraps of the tallow-chandlers, are very useful in small quantities in pig-feeding, particularly so when employed to replace the protein and fat that are

(1) Whenever an Englishman speaks of *beans*, he always means horse-beans.—A. R. J. F.

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absent in whey. In fact, graves contain nothing but protein and fat, while the principal constituents of whey are carbohydrates. The value of graves in pig-feeding was clearly shown at the RR. DD. de l'Hôpital du Sacré-Cœur, at St-Sauveur de Québec, where these refuse pieces of the slaughter-house with vegetables formed almost the whole of the rations. The proper use of this food will be seen in the model-rations given further on.

35. *Theoretical and practical rations.*—We will now give, as examples, (table II) the theoretic rations for pig-feeding, and there point out some practical rations that are based on science as well as on the best results obtained by the most skilful farmers. Thus, our readers will see how they may compound their rations in future, by making use of the different foods they may have in hand or can buy with advantage.

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TABLE II.—PIG-FEEDING.

EXAMPLES OF THEORETICAL AND PRACTICAL RATIONS COMPARED.—FOR 100 LBS. OF LIVE-WEIGHT.

Sort.	RATIONS.	Lbs. Total.	Water lbs.	Solid lbs.	Carbo- hydrates.	DIGESTIBLE.		REMARKS.
						Prote- in lbs.	Fat. lbs.	
	Theoretical ratio :	<b>32</b>	<b>28</b>	<b>4</b>	<b>2.20</b>	<b>0.40</b>	<b>0.10</b>	
Pregnant Sow.	1st practical ration.							In this ration there is a little excess of water and solids—The excess of protein and fat will supply the want of carbohydrates.
	Whey .....	20	18.80	1.20	0.88	0.16	0.06	
	Red clover (green)	5	4.05	0.95	0.35	0.12	0.025	
	Oats .....	10	8.10	1.90	0.83	0.16	0.03	
	Total .....	35	30.95	4.05	2.06	0.44	0.115	
	2nd practical ration.							This ration is perfect, and rather richer than the theoretical ration. We recommend it above all. In winter the grass may be replaced by silage from young and good grass, or by a soup composed of best hay chaffed and whey.
	Whey .....	20	18.80	1.20	0.88	0.16	0.06	
	Young grass about 10 in. high .....	10	7.50	2.59	1.31	0.23	1.06	
	Total .....	30	26.30	3.70	2.19	0.42	0.12	
	3rd practical ration.							We see by this ration that skim-milk is worth twice as much as whey, provided that it is mixed with foods richer in carbohydrates, such as green timothy, or the chaff and bits of timothy-hay, made into soup instead of the green-grass.
	Skim milk .....	6	5.40	0.60	0.25	0.24	0.018	
	Young timothy before flowering..	10	7.00	3.00	1.63	0.24	0.08	
	Total .....	16	12.40	3.60	1.88	0.48	0.098	

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TABLE II.—PIG-FEEDING.—Continued.

EXAMPLES OF THEORETICAL AND PRACTICAL RATIONS COMPARED.—FOR 100 LBS. OF LIVE-WEIGHT.

TABLE II.—PIG-FEEDING.—*Continued.*

EXAMPLES OF THEORETICAL AND PRACTICAL RATIONS COMPARED.—FOR 100 LBS. OF LIVE-WEIGHT.

Sort.	RATIONS.	Lbs. Total.	Water lbs.	Solid lbs.	Carbo- hydrates lbs.	DIGESTIBLE.		REMARKS.
						Prote- in lbs.	Fat. lbs.	
	<b>Theoretical Ration.</b>	<b>32</b>	<b>28</b>	<b>4</b>	<b>2.00</b>	<b>0.80</b>	<b>0.25</b>	
	1st practical ration.							
	Whey.....	15.	14.10	0.90	0.66	0.12	0.045	Here, the little deficiency of fat is replaced by an excess of protein. In fact, this ration is sufficient for pigs of 110 lbs., instead of 100 lbs.
	Young comfrey...	5.	4.60	0.40	0.12	0.11	0.020	
	Gounds oats....	1.	0.15	0.85	0.55	0.10	0.053	
	Graves .....	0.50	0.04	0.46	....	0.36	0.066	
	Red clover (green).	10.	8.10	1.90	0.70	8.24	0.050	
	Total.....	31.40	26.98	4.51	2.03	0.93	0.234	
Suckling sow.	2nd practical ration.							In all these rations, in which whey is largely present, it would be better to make a soup of the whole lot, and thereby get all the good out of the beans, linseed, etc.
	Whey.....	15.	14.10	0.90	0.66	0.12	0.045	
	Young comfrey...	5.	4.60	0.40	0.12	0.11	0.020	
	Garden beans....	1.	0.15	0.85	0.48	0.26	0.029	
	Young clover....	10.	8.10	1.90	0.70	0.24	0.05	
	Linseed.....	0.35	0.6	0.29	0.07	0.07	0.117	
	Total.....	31.35	27.01	4.34	2.03	0.80	0.25	
	3rd practical ration.							In this one, the want of fat is compensated by excess of protein. The lack of water is no matter, if the animal can drink when he is thirsty. This ration is well balanced, and very cheap, where graves can be got at a low price.
	Skim-milk.....	6.	5.40	0.60	0.25	0.24	0.018	
	Timothy bef. flo'gn.	10.	7.	3.	1.63	0.24	0.080	
	Young comfrey...	5.	4.60	0.40	0.12	0.11	0.020	
	Graves .....	0.5	0.03	0.47	....	0.37	0.065	
	Total.....	21.5	17.03	4.47	2.00	0.96	0.18	

TABLE II.—PIG FEEDING.—*Continued.*  
EXAMPLES OF THEORETICAL AND PRACTICAL RATIONS COMPARED.—FOR 100 LBS. OF LIVE-WEIGHT.

Sort.	Rations.	Lbs. Total.	Water lbs.	Solid lbs.	DIGESTIBLE.		REMARKS.	
					Carbo- hydrates lbs.	Prote- in lbs.		
	Theoretical Ration.	<b>32</b>	<b>28</b>	<b>4</b>	<b>2.00</b>	<b>0.80</b>	<b>0.25</b>	
Pregnant Sow.	4th practical ration.							
	Skim-milk.....	10.0	9.00	1.00	0.42	0.41	0.03	Here, the linseed having been boiled, there will be enough water to complete the ration. The excess of fat will replace the carbohydrates. This ration is a very good one ; easy of digestion and very economical.
	Young comfrey....	5.	4.60	0.40	0.12	0.11	0.02	
	Green timothy....	0.	5.60	2.40	1.31	0.19	0.064	
	Linseed.....	0.5	0.08	0.42	0.09	0.09	0.168	
	Total.....	23.5	19.28	4.22	1.94	0.80	0.28	
	5th practical ration.							
	Skim-milk .....	15.0	13.50	1.50	0.63	0.62	0.045	Here, the beans are to be boiled in the skim-milk. The lack of fat and carbohydrates is abundantly replaced by the excess of protein. An excellent ration
	Young green clover	10.0	8.10	1.90	0.70	0.24	0.050	
	" comfrey....	5.0	4.60	0.40	0.12	0.11	0.020	
	White beans.....	1.0	0.10	0.85	0.48	0.26	0.029	
	Total.....	31.0	26.35	4.65	1.93	1.23	0.14	
Young pigs 20 to 60 days old.	Theoretical Ration.	<b>21</b>	<b>18</b>	<b>3.00</b>	<b>1.06</b>	<b>0.82</b>	<b>0.33</b>	
	1st practical ration							This ration is one of the richest in fat and protein.
	Skim-milk... ....	10.0	9.60	1.00	0.42	0.41	0.030	
	Garden beans....	1.0	0.15	0.85	0.48	0.26	0.029	
	Linseed.....	0.75	0.12	0.63	0.14	0.14	0.252	
	Young comfrey...	2.50	2.35	0.20	0.06	0.05	0.010	
	Total.....	14.25	11.57	2.68	1.10	0.86	0.32	

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TABLE II.—FEEDING PIGS.—*Continued.*  
EXAMPLES OF PRACTICAL AND THEORETICAL RATIONS COMPARED.—FOR 100 LBS. OF LIVE-WEIGHT.

Yo	Young comfrey.	2.10	17.50	1.10	0.00	0.00	
	Total.....	14.25	11.57	2.68	1.10	0.86	0.32

and the comfrey added to the soup. The excess of protein replaces the slight paucity of fat.

TABLE II.—FEEDING PIGS.—Continued.  
EXAMPLES OF PRACTICAL AND THEORETICAL RATIONS COMPARED.—FOR 100 LBS. OF LIVE-WEIGHT.

Kind.	RATIONS.	Lbs. Total.	Water. lbs.	Solid. lbs.	Sugar. lbs.	DIGESTIBLE.		REMARKS.
						Prote- in lbs.	Fat. lbs	
	Theoretical Ration.	<b>21</b>	<b>18</b>	<b>3.00</b>	<b>1.06</b>	<b>0.82</b>	<b>0.33</b>	
Young pigs from 20 to 60 days old.— <i>Continued.</i>	2nd practical ration.							
	Whey.....	10.0	9.40	0.60	0.44	0.00	0.030	Without graves, there would be too much carbohydrates in this ration. Whey, then, can be only used for young pigs food as an exception.
	Young comfrey....	10.0	9.20	0.80	0.12	0.18	0.020	
	Garden Beans....	1.0	0.15	0.85	0.48	0.26	0.020	
	Linseed.....	0.4	0.04	0.34	0.08	0.07	0.138	
	Graves.....	0.6	0.06	0.56	.....	0.74	0.078	
	Total.....	22.0	18.85	3.15	1.12	0.98	0.295	
	3rd practical ration.							
	Garden beans....	1.0	0.15	0.83	0.48	0.26	0.029	This ration has too much fat and too little protein. It would be better to substitute 1½ lb. of beans for ½ lb. of the linseed, the whole to be made into soup with the comfrey. In this ration there is supposed to be no milk available of any kind.
	Linseed.....	0.75	0.12	0.65	0.14	0.14	0.252	
	Young comfrey....	20.	18.40	1.60	0.48	0.40	0.08	
	Total.....	21.75	18.67	3.08	1.16	0.80	0.36	
Pigs 60 to 120 days old.	Theoretical Ration.	<b>32</b>	<b>28</b>	<b>4</b>	<b>1.67</b>	<b>0.53</b>	<b>0.20</b>	
	1st practical ration.							
	Whey.....	15.	14.10	0.66	0.66	0.12	0.045	This ration is strongly recommendable. In it and the following ones the quantity of linseed is too trifling to make the bacon soft.
	Young comfrey....	5.	6.60	0.12	0.12	0.11	0.020	
	" clover....	7.5	0.07	0.55	0.55	0.18	0.037	
	" grass.....	2.5	9.90	0.33	0.33	0.05	0.015	
	Linseed.....	0.3	0.05	1.06	1.06	0.06	0.10	
	Total.....	30.2	26.72	3.58	1.74	0.52	0.217	

TABLE II.—FEEDING PIGS.—*Continued.*

EXAMPLES OF THEORETICAL AND PRACTICAL RATIONS COMPARED.—FOR 100 LBS. OF LIVE-WEIGHT.

KIND.	RATIONS.	Lbs. Total.	Water. lbs.	Solid. lbs.	Sugar. lbs.	DIGESTIBLE.		REMARKS.
						Prote- in. lbs.	Fat. lbs.	
	<b>Theoretical Ration.</b>	<b>32</b>	<b>28</b>	<b>4</b>	<b>1.67</b>	<b>0.53</b>	<b>0.20</b>	
Young pigs of 60 to 120 days old.— <i>Continued.</i>								
2nd practical ration.								
Whey.....	10.	9.40	0.60	0.44	0.08	0.03		One third lb. of cottonseed meal and 1 lb of beans added to the whey make it profitable to use. But the meal must not be given to suckling sows or to very young pigs, as it is constipating. After the pig are 60 days old they may take it without fear.
Young clover.....	10.	8.10	1.90	0.70	0.24	0.05		
Garden beans.....	1.	0.15	0.85	0.48	0.26	0.03		
Cottonseed meal..	0.33	0.03	0.20	0.09	0.10	0.03		
Total.....	21.33	17.68	3.65	1.71	0.68	0.14		
3rd practical ration.								
Skim-milk .....	7.	6.3	0.70	0.29	0.28	0.02		This ration is the best and the most economical for young pigs. In this way two pigs of 100 lbs. even live-weight, can be fattened with the milk of one cow giving 14 lbs. a day of skim-milk.
Young clover.....	21.	17.0	4.00	1.47	0.50	0.105		
Total.....	28.	23.3	4.70	1.76	0.78	0.125		
Fattening ration of 120 to 200 days old.	<b>Theoretical Ratio.</b>	<b>32</b>	<b>28</b>	<b>4</b>	<b>1.65</b>	<b>0.64</b>	<b>0.25</b>	
1st practical ration.								
Whey.....	10.	9.40	0.60	0.08	0.08	0.03		This ration is perfect and very economical, as it enables us to utilise whey and young clover with very little grain. It is very fattening, providing we do not want to make our bacon too fat, but with plenty of lean meat in it.
Young comfrey....	10.	8.10	1.90	0.24	0.24	0.05		
White beans.....	1.	0.15	0.85	0.26	0.26	0.03		
Linseed.....	0.5	0.02	0.42	0.09	0.09	0.16		
Total.....	21.5	3.77	3.77	1.71	0.67	0.27		

TABLE II.—FEEDING PIGS —*Continued.*

EXAMPLES OF THEORETICAL AND PRACTICAL RATIONS COMPARED.—FOR 100 LBS. OF LIVE-WEIGHT.

Fattenin to 2						
	Linseed.....	0.5	0.02	0.42	0.09	0.09
	Total.....	21.5	3.77	3.77	1.71	0.67
						0.27

TABLE II.—FEEDING PIGS—*Continued.*

EXAMPLES OF THEORETICAL AND PRACTICAL RATIONS COMPARED.—FOR 100 LBS. OF LIVE-WEIGHT.

KIND.	RATIONS.	Lbs. Total.	Water. lbs.	Solid. lbs.	Sugar. lbs.	DIGESTIBLE.		REMARKS.
						Prote- in. lbs.	Fat. lbs.	
	<b>Theoretical Ration.</b>	<b>32</b>	<b>28</b>	<b>4</b>	<b>1.65</b>	<b>0.64</b>	<b>0.25</b>	
Fattening ration of 120 to 200 days.— <i>Continued.</i>	2nd practical ration.							
	Whey.....	10.	9.40	0.60	0.44	0.08	0.03	This ration is as good as it is rich.
	Young clover.....	10.	8.10	1.90	0.70	0.24	0.05	
	White beans.....	0.5	0.07	0.44	0.24	0.13	0.015	
	Cottonseed meal.....	1.	0.09	0.90	0.27	0.20	0.098	
	Linseed.....	0.2	0.03	0.13	0.4	0.03	0.067	
	Total.....	21.7	17.69	4.00	1.69	0.68	0.26	
	3rd practical ration.							
	Skim-milk.....	10.	9.00	1.00	0.42	0.41	0.030	
	Young green clover.....	5.	4.05	0.95	0.36	0.19	0.035	A very fattening but costly ration. The meals must be mixed with water. It is best suited to make very fat bacon.
	Pease.....	1.	0.14	0.86	0.53	0.20	0.019	
	Oats.....	1.	0.14	0.86	0.56	0.10	0.053	
	Linseed.....	.25	0.04	0.21	0.03	0.04	0.093	
	Total.....	17.30	13.44	3.88	1.69	0.94	0.230	

TABLE II.—FATTENING PIGS.—*Continued.*

EXAMPLES OF THEORETICAL AND PRACTICAL RATIONS COMPARED.—FOR 100 LBS. OF LIVE-WEIGHT.

KIND.	RATIONS.	Lbs.	Water.	Solid.	Sugar.	DIGESTIBLE.		REMARKS.
		Total.	lbs.	lbs.	lbs.	Prote. in. lbs.	Fat. lbs.	
	<b>Theoretical Ration.</b>	<b>32</b>	<b>28</b>	<b>4</b>	<b>1.65</b>	<b>0.64</b>	<b>0.25</b>	
4th practical ration.								
Skim-milk.....	10.	9.	1.00	0.42	0.41	0.030		This is a model-ration and very economical.
Young clover.....	10.	8.30	1.70	0.72	0.38	0.070		The clover must be very young, in full
White beans.....	1.	0.15	0.85	0.49	0.26	0.029		vigour, and not more than 9 to 10 inches high.
	Total .....	21.	17.45	3.55	1.63	1.05	0.129	
5th practical ration.								
Potatoes.....	5.00	3.75	1.25	1.03	0.10	0.015		This ration shows the excess of carbohydrates in
White beans.....	1.00	0.15	0.85	0.49	0.26	0.029		potatoes and the difficulty of making up a
Linseed.....	0.25	0.04	0.21	0.03	0.04	0.093		model ration in which potatoes form part ; at
Cottonseed meel...	1.00	0.10	0.90	0.27	0.30	0.098		least unless graves (1) are introduced.
	Total.....	7.25	4.04	3.21	1.81	0.70	0.235	

Fattening rations of 120 to 200 days.—*Continued.*

Mr. PRESIDENT  
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**37. NOTE.**—The intelligent farmer, who aims at making the fattening of pigs more and more profitable, will do well to observe, day by day, and year by year, every piece of information that may be of service to him in the future, for example ; the breed, age, vigour, and approximate weight of the pigs when put up to fat ; the exact quantity and the kinds of food used from weaning and during the time of fattening ; the preparation of the food ; the length of time taken to fatten, and the exact results obtained ; together with all the facts which may tend to add to our present experience and improve this very important industry.

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#### A REQUEST FOR EXPERIMENTS

ON CATTLE-FEEDING.

**THE SECRETARY** read the following resolution :

Proposed by Mr. E. Castel, seconded by Mr. J. C. Chapais, that considering the economical importance of a fixed and certain rule for the calculation of the food-rations of cattle, the Dairymen's Association of the province of Quebec earnestly requests the officers of the Ottawa Experimental farm and of the different agricultural stations of the United States, to make an experimental comparison of the different systems of "rational feeding," and especially of the two methods that may be distinguished by the names of their authors : that of Wolf and that of Crevat, with a view to the especial determination of the part that (*les sucres*) the carbohydrates play in the feeding of farm-stock.

Carried unanimously.

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SESSION OF THURSDAY MORNING, DECEMBER 6TH.

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#### ADDRESS OF MR. E. P. BENDER.

**MR. PRESIDENT AND GENTLEMEN,**

When present at the meetings of your society yesterday, I was highly interested in all that passed, and I feel convinced that if the advice given be followed in practice, particularly that relating to the necessity of being very careful in your mode of making, you will without doubt succeed in controlling the butter-trade of England. For many years, Gentlemen, I have devoted myself to that question. I have travelled over the greater part of Europe to study the value of agricultural products when manufactured, and the best way to market them. Danish butter is certainly as good as the best butter

we can make here ; in this there is nothing to surprise us, for the Danes had taken up this trade long before we did ; and having a market at their door, they realise larger profits than we can, and are thereby the more encouraged to produce the best quality and the largest quantity possible. Still, there is no reason why you should not get as good a price for your butter in England as the Danes get. I will go so far as to say that, if we make up our minds to do so, we of the province of Quebec can get better prices than the Danes get. There is only one thing needed here : the power of marketing our butter and cheese at their just value ; and if we had, as I hope we soon shall have, proper means of sending our butter in a fresh-made state to England, then we should get the true and fair price for our goods. Every farmer will then see the need of making good butter and good cheese, since the quality of the goods will be the sole arbiter of their price. If you put your butter in good order into the refrigerators for export, you cannot fail to find it in good order when it reaches the market. This butter will be firm and cool, and have preserved all the good points it had when just made ; so I see no reason why it should not fetch the highest market price.

I have, here, the prices for October last ; I take the average of the whole month, and I find that Danish butter sold in Liverpool in that month for 23 1/4 to 24 1/2 cts. a pound, while Canadian butter only brought 20 to 22 cts. Why this difference ? Solely, because the Danish butter reaches England in the best possible order. It is sent off in the most perfect condition, and arrives in England in an equally perfect state. Let us follow the same plan, and we shall assuredly obtain for our butter the same prices.

In the same price list, I see that fresh butter brought 28 to 32 cts a pound. I have tasted your butter, Gentlemen, and I never tasted anything more delicious. Why is there such a difference in the price it brings ? Once more, because of the imperfect means of shipment.

As to cheese, from the same price-list, I find that ours was selling for from 10 1/2 to 11 1/4 cents a pound, while foreign cheese was fetching 11 9/10 to 15 1/5 cents ; and yet we make as good cheese as is made in the universe. It is for these reasons that I strove so heartily in 1889 to get a grant from government that would enable us to secure refrigerators on our freight-steamers. I proposed that an *abattoir company* should be formed, as well as a line of rapid steamers with refrigerator-compartments. You know what happened : the dealers combined and agreed together not to allow this project to be carried out lest it should ruin their trade : "The farmers," said they, "must continue to sacrifice half their profits to us ; the scheme must be made to miscarry." They approached the government ; they seized upon the press ; they misrepresented my plan and called it an absurdity ; in fine, they spared no means of making it a failure, going so far as to say that it was an attempt to plunder English capitalists. They accused me of being a swindler, because I had succeeded in getting £15,000 from the town of Three-Rivers for the land that had been conceded to me. They said that I aimed at turning this deal to my own profit, while I have never received a copper, and was only the

holder of a "right" which the project should have, and were hurried away by the upshot of events.

This first proposal was not adopted, and the merchants thought that they wanted of means of sending mutton sold at Liverpool, meat that could not be shipped nearly 200,000 miles. You know that I have convinced them of the markets without the Atlantic, and ask the government to furnish the necessary grants. They will not listen to me, and the victim of their perfidy, of injuring all concerned, done to injure the meat trade, and the meat trade has suffered. I said : "It is not the meat trade that profits, but the cent profit per pound on the quotations, paid by the importers, and there remains a loss."

As you know, we have advantage of the fact that the dealers admitted that they had been injured by their prior action, and that we should be allowed to proceed.

Rapid steamers will furnish sufficient refrigerators for \$700,000 a year, and will be of considerable service in the case of steam-boats carrying cheese alone, and will be fitted with refrigerators.

And, now, we obtain a

(1) In 1848, Mr. Baron's house

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holder of a "resolution" of the corporation granting me the sum in question when the project should be on the road to execution. All these accusations, all these calumnies, were hurled at me by speculators who wanted to remain masters of your trade. And the upshot of their exertions was that my project failed.

This first check did not discourage me. I returned to England and proved to the merchants there that we were producing a great deal, without large profits ensuing, from want of means to market our goods ; that when beef was selling here for  $4\frac{1}{2}$  to 5 cents, mutton sold at the same price ; that, in this province, we had thousands of pounds of meat that could only be worked up into stock (*consommé*) ; that every year, there were nearly 200,000 calves that were thus treated, for want of other means of utilising them. You know that, in England and Germany, there are special markets for calves. (1) I convinced them that, on account of their great abundance here, we could supply their markets with plenty of meat of this kind ; and they replied thus : "Go back to Canada, and ask the government to guarantee interest of 4% on the capital you require, and we will furnish the money." Back I went to Canada and to Ottawa ; the government would not listen to me. The memory of the first attempt spoiled everything. Again, I was the victim of intrigue. I was accused of mis-representing the affairs to the government ; of injuring abroad the interests of the country. In fact everything was done that could be done to injure me. Still, I did not give up, but tried to make people see the importance of a meat trade with England. I saw pork selling on the market at  $4\frac{7}{8}$  cts. a pound, and I said : "It takes four pounds of food to make a pound of pork ; you have therefore  $\frac{1}{2}$  cent profit per lb, that does not pay. According to the Liverpool and Hamburg quotations, pork is worth in those markets 11 cents a pound ; allow 2 cts, for freight, and there remains 9 cents. A great difference, compared with the price here !

As you see, I had to combat many difficulties before I could make people see the advantage of such a trade to us. Many of those who had at first opposed me have since admitted that they did not originally understand my plan, and that they had altered their prior opinion. Among others, Mr. Bickerdike at last recognised the advantage that we should gain by a service of swift steam-boats.

Rapid steamers, Gentlemen, will never come here unless there be abattoirs to furnish sufficient freight to pay them. For coal alone, these steamers expend about \$700,000 a year. How do you suppose a company can go on like that without a very considerable traffic in *express goods*. The government, on applying to all the great steam-boat companies, received the same reply ; abattoirs are absolutely necessary for furnishing a sufficient quantity of express traffic, and that the freightage of butter and cheese alone was not enough to admit of a company's keeping up a line of rapid steam-boats fitted with refrigerators.

And, now, what should be the system employed in despatching our goods should we obtain a line of rapid refrigerator steamers ? One or two representatives of the butter

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(1) In 1849, Baron Rothschild's huntsman bought, in the Aylesbury market, Bucks., for the Baron's hounds, lots of calves at the rate of three for a guinea. A. R. J. F.

and cheese-syndicates must be chosen by these bodies, who should devote themselves wholly to the keeping of export-books. The exporters would only have to enter the amount of their exports in the books, at the time when they are sent off. You would receive, before starting, the price of your butter, at the inspectors, valuation ; if there is any difference in your favour, after its sale, you would receive it. You yourselves would control your own trade, and would have no account to render to any company. You would be completely masters of your business, and, through your representatives, would control the sale of your goods even before they were shipped. An inspector would be present at the time of despatching, to classify the different qualities of the goods. According to the lowest quotations, butter is worth, in England, 23 cts. a pound, and I saw it go as high as 32 cts. As the cost of exportation cannot exceed 2 cts. a pound, the profits, you see, would be large. I am not an exporter, and I am only here to detail my scheme to you, but every thing I tell you is a fact.

With the system I am trying to introduce, each farmer in the province could at least export : one beast, 5 calves, 5 hogs, and 6 sheep ; six pair of fowls, some partridges (*ruff d-grouse*), 100 dozen eggs, and 400 lbs. of butter : I give these as an average. Well, calculate<sup>(1)</sup> : a beast of 500 lbs. at  $4\frac{1}{2}$  cts., \$22.50 ; that is the price here. Veal, in towns, \$3.37, at  $7\frac{1}{2}$  cts. a pound ; sheep \$2.00 a head ; pork, 6 cts. a pound ; fowls, say, 50 cts. a pair, say, \$1.40 a couple for geese ; 90 cts. a couple for ducks ; 60 cts a brace for partridges ; and 20 cts. a pound for butter. Added up, the whole may amount to about \$212.73. Well, these goods, sent to England in refrigerator-steamers, would return you, in accordance with the market-prices of last October (1893) : for the beast instead of 5 cts.,  $12\frac{1}{2}$  cts. a pound. After the above quotations, you would make for the same quantity of meat \$45.00 ; for the pork, \$110.00, instead of \$60.00 ; the fowls you sell here for 50 cts. would there be \$1.00 ; a turkey \$1.98 instead of \$1.40 ; a goose, \$1.63, instead of \$1.40 ; ducks, \$1.44 a couple, instead of \$1.00 ; partridges a dollar each, instead of 25 to 30 cts. ; butter, 28 cts. instead of 20 cts. ; so that you arrive at last to the return of \$373.58, instead of the \$212.73, that you would have had here ; a difference worth trying for, is not it ? Less the cost of refrigerators, freight and commission, \$55.60, the farmer would get an additional sum of \$105.20. If only one-fourth of the farmers of this province had taken advantage of this plan, the surplus profit would have been \$5,260,000 ! I should like to have been heard when they accused me of trying to serve only my own purposes and not the interests of the farmers of the province of Quebec ; I do not know if, confronted by the figures I have just shown you, they would have persisted in accusing me of doing so. Well, Sirs, if you trust these calculations, if you agree with me that such a system of exports would be the source of great benefits to the farmers, I hope you will use all your influence with government to get a line of rapid steamers established, and to secure the institution of sufficient abattoirs. Up to the present time, we have not taken the means required to make our industries as profitable as they might be. But now is the time, more than ever, to make the improvements we stand in need of.

Besides trade : I will of ours, we have a quantity of butter or 6 cents a pound. Why send our bad goods ?

All the same address you for some years. My thanks.

MR. PRESIDENT

Last year I submitted to you many years ago, necessity, of course, that time, I founded an institution called Raiffeisen. It is being a *caisse populaire*, word will ring in people, and that parochial.

These institutions sprung from the same plan. I made known to the Catholic Church, which quickly fell into disfavour, and, a

(1) *Caisse populaire* word bank f

Besides the loss we suffer in the butter-trade, there is the loss we incur in the pork-trade : I will tell you why we incur this latter loss. It is because, here, in this country of ours, we have not the proper means of smoking hams. You know what an immense quantity of ham is consumed in England. Well, instead of selling your hog here, at 5 or 6 cents a pound, you could sell it in England, as the Irish bacon is sold, at 10 to 12½ cents. Why should we not send our pig-meat to England in refrigerators ? Why not send our bacon as we might send our cheese and butter, our fowls, eggs, and other goods ?

All these proposals I submit to you, Gentlemen, for consideration. I came hither to address you on a project to the accomplishment of which I have devoted all my efforts for some years : you have done me the honour to listen to me ; for which pray accept my thanks.

## Lecture by the Abbé Coté,

AGRICULTURAL MISSIONER.

AGRICULTURAL CREDIT BY MEANS OF COUNTRY BANKS.

MR. PRESIDENT AND GENTLEMEN,

Last year, at the meeting of the Dairymen's Association at St. Hyacinthe, I submitted to our public (in accordance with the advice and prayers of a man who, for many years has studied rural and domestic economy) the propriety, not to say the necessity, of establishing in every parish a saving and lending bank for farmers. At that time, I used erroneously the word *bank*, for it by no means conveys the idea of such an institution, which is called in Europe "*une caisse rurale*" (1) after the plan of Raiffeisen. In this province, it ought, I think, to be called the "*caisse paroissiale*," being a *caisse* in which all the parishioners deposit their daily savings. Besides, this word will recall a system that has constituted our strength as the French-Canadian people, and it is important that we should re-awaken and confirm as much as possible that parochial spirit on which depends our future.

These rural banks originated in Germany. It was a country school-master, a man sprung from the people, who witnessing the poverty of the people, thought out this plan. I may add that this man enjoyed the reputation of being a saint ; wherefore, the Catholic Church, always on the scent of everything that can add to the welfare of mankind, quickly felt the benefits that this institution must confer on the poorer rural population, and, at once, took it under her protection. So it was not surprising that it spread

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(1) *Caisse* signifies a cash-box, (cf. English *cash*), as well as lots of other things; but as the word *bank* fully conveys the meaning to an Englishman, we shall use it here. A. R. J. F.

not alone over Germany, but over Austria and Italy, even over Russia, and more recently over France, where, during the two years that have barely elapsed since the movement began, 150 of these banks have been started.

Already the Sovereign Pontiff had blessed this institution ; but he has just done so in an especial manner. A few weeks ago, that Pontiff of the poor, called into his presence a priest, whom he directed to propagate these banks over Southern Italy, and gave him his benediction at the same time that he blessed his work.

Let us now see : 1. *What these rural or parochial banks are.*—They are, as I said, banks in which all the parishioners may deposit their savings when they please, and which will give their depositors the same interest as the town saving-banks or ordinary banks pay, i. e., 3% or 4%, according to the time for which the deposits are made.

You will probably say to me : "Oh yes ! It is very likely you will get deposits, now that farmers can hardly make a living, and rarely have a sou in their purse ! To this I reply that there is more money in the rural districts than people fancy. I am a country curé, and in a parish comparatively new ; it having been constituted less than 50 years, and only having had a resident curé for the last 34 years ; in spite of which, being in want of from two hundred to three hundred dollars for the repairs, &c., of the church, I mentioned in a shop, where several people were present, that I would take as a loan, to be repaid in a year or in two years, three hundred dollars. More than this sum was handed over to me in a few days, and I refused just as much more. I have no doubt that, had I announced my wants publicly, I might have obtained as much perhaps as a thousand dollars, and that from people whom I should not have suspected of having laid by any money. Since dairying has been bringing money into our rural parts every month and even every fortnight, farmers keep a little on hand for unforeseen wants. They would probably keep more still in reserve, had they means to make the deposit without leaving home, and with perfect security.

2. *How are these banks to be established.*—In the same way that any other association is established. A few parishioners unite, with power to associate other parishioners with themselves ; all the parishioners if possible ; and make themselves conjointly responsible for a credit of a determinate sum of, say, one-third or one-half of the municipal valuation of their property. Thus, there can be nothing to fear in depositing one's savings in the hands of their secretary-treasurer, for their guarantee is more than sufficient ; even in the eyes of men of business ; to make one thoroughly confident of its safety. And, in fact, ins pite of thousands of these banks now established, not one has yet failed, or even caused the loss of one cent to the depositors during their fifty years of existence.

3. *How shall the money entrusted to these banks be invested.*—It is to be lent to the shareholders for some useful purpose and to improve their position : and this loan must never exceed a sum settled beforehand by the directors. First, to become a shareholder, a man must be steady, economical, sober, and, especially, honest. No one is admitted

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without these qualities, and unless he bears a good character. Then, to get any loan, the object of the advance required must be stated, and this must be some agricultural or trade improvement, for tradesmen can become shareholders. If any one uses the loan for any object other than the one mentioned in the application for the advance, and which is not approved of by the directors, they can demand the immediate repayment of the sum borrowed, and erase the borrower's name from the list of shareholders. Besides this, the borrower must furnish a bondsman who is solvent in the opinion of the directors ; and as the directors and shareholders are all fellow-parishioners, it will be difficult, if not impossible, to be deceived as to the solvency of the borrower, and his bondsman.

4. *What difference then will there be between the parish and the ordinary banks ?—*  
The chief differences will be as follows :

a. Ordinary banks only make loans at short dates and with heavy interest ; the parish-bank will lend at not exceeding 5 o/o and for the time fixed by the note, without renewal, except every five years as prescribed by law. The borrower will agree with the directors for the paying off of his note at periods that he thinks most convenient ; he will even be at liberty to pay it off at any time, and by instalments, whenever he pleases.

b. As there is no capital invested in these banks, so there are no dividends. The only expenses are such as are absolutely necessary and indispensable ; books, paper, ink, &c., and a small payment to the cashier for his work.

c. The directors discharge their duties gratuitously for one year. They are re-eligible indefinitely, but always act gratuitously. As there are no dividends, they are not tempted to do a great business, but they do a safe business.

d. The surplus, if any, and there will be some, can only be used for public improvements and for the general needs of the parish : it can never be divided among the shareholders.

e. If losses occur, the reserve should be employed to cover them.

f. The books are kept in a very simple way, and any one who has an ordinary idea of accounts, can easily act as accountant to these banks.

g. Lastly, the money of the farmers will remain in the parish, to the great advantage of the parishioners, instead of being sent to the towns to benefit the merchants, who can get money at home, and enrich themselves from their own funds, and not at the expense of agriculture, which needs all the savings of the farmers.

From all these considerations, I hold that the establishment of these banks would be of great use to all the parishioners and would improve their position, and on that account, until I have evidence to the contrary, I shall do my best to prove their advantages and to establish them wherever it can be done. I do not see why these banks, that have done so much good in Europe, should not be as beneficial in Canada. Here, then, gentlemen, I take my leave, and thank you for your kind attention.

*Mr. Barnard.*—To know that the project of establishing these rural banks had the support of the clergy was sufficient to show that it was a good project. We have long been satisfied on this point. For many a day, we have felt that when our clergy recommend any undertaking, that undertaking is all right. There is therefore nothing to fear in this project of the Abbé Côté, for I know that the clergy are all in its favour. I hope then that, with this encouragement on the part of the clergy, M. Côté will succeed in introducing these rural banks into all our parishes. I regret I cannot speak on the subject, and still more that M. Côté had not time enough to enter more into the details; but he said enough to convince us that the idea put forward by him is an excellent one.

*Mr Fisher.*—If the time for the departure of the train were not so near, I should like to say a few words on the silage-samples we have just examined; but, as time presses, I will send our committee's report to the Secretary for insertion in our annual report.

#### REPORT OF THE COMMITTEE

##### EMPOWERED TO EXAMINE THE SAMPLES OF SILAGE.

The samples of silage submitted to us were ten in number, marked from 1 to 10. We classified them as follows :

1. Sample No. 7, belonging to M. Joseph Trudel, of St. Prosper, county of Champlain.
  2. Sample No. 1, clover, to M. L. Timothée Brodeur, of St. Hugues.
  3. Sample No. 4, corn, to Mr. Milton MacDonald, M. P. P., Acton Vale, Bagot.
  4. Sample No. 8, corn, to M. Louis Gendreau, St. Georges of Beauce.
  5. Sample No. 9, to M. J. E. Plamondon, Wotton, Wolfe.
  6. Sample No. 2, to M. D. O. Bourbeau, Victoriaville.
  7. Sample No. 3, to L. Timothée Brodeur, St. Hugues of Bagot.
  8. Samples No. 5, to M. Louis Morin, St. Ours.
  9. Samples No. 6, to M. P. Lacourcière, Batiscan.
  10. Samples No. 10, to M. S. Fortier, St. Hermas, Deux Montagnes.
- Members of the Committee : S. A. Fisher ; D. O. Bourbeau ; J. L. Lemire.

#### TRADE MARK FOR BUTTER AND CHEESE.

*M. J. de L. Taché* proposed the following resolution :

“ Proposed by M. J. de L. Taché, seconded by Mr. Ed. A. Barnard, that the Dairy-men's Association cause to be registered a trade-mark for butter and cheese, the use of

which shall only be granted to syndicated factories, or to those factories that shall comply with certain other provisions of a programme relating to the buildings, the implements, the maker, and to the milk received at the factory, and so drawn up as to give to the factories using this trade-mark the credit due to their good manufacture, as well as to the public a weighty guarantee for the same ;

" And that this meeting entrust to the executive committee the duty of drawing up this programme." —Carried unanimously.

*M. Alexis Chicoine* then read the report of the committee on the apparatus and implements for the dairy.

" We, the undersigned, appointed as examiners of the apparatus and implements for the dairy, sent to this convention, beg to report as follows :

After having examined as minutely as possible all the implements and apparatus exhibited by MM. Carrier, Lainé & Co., of Lévis, and the Plessisville Foundry, are unanimous in stating that all these implements and apparatus are of the best kind, and that this firm deserves to be patronised by the public.

We also examined carefully a Danish hand-separator, shown by the Dairy-apparatus Company, which we found to be a very good one, and ought to be used by every one whose farm is too far from any factory or creamery to make it possible to send his milk thither.

All the threshing machines, chaff-cutters, &c., deserve our approval. Lastly, we examined an aérator-can by M. Thibault, which every patron of a cheesery or creamery, anxious to secure his own interests and those of the dairy-trade in general, should hasten to procure.

Signed,      { ALEXIS CHICOINE,  
                  SIMEON LA ROCHELLE,  
                  GAB. DESROCHERS.

The Secretary then send the following resolution :

" Proposed by M. Emile Castel, seconded by M. Alexis Chicoine, that the Department of Agriculture of Quebec be requested to impose upon the Exhibition Companies, provincial or regional, that it subsidises, the obligation of giving a series of special prizes for butter and cheese, on condition (to make these shows real and impressive object-lessons) that the products shown at these competitions be accompanied by a certificate of manufacture ; and that the butter and cheese that win prizes be purchased by the Exhibition Company together with certain lots of butter and cheese of inferior quality, that they may be shown and compared before the public, at fixed hours, by an expert whose duty shall be to display the defects and perfections of each lot, and to point out in the inferior ones the cure to be applied, or the care to be taken to avoid the recurrence of the defects."

*M. Linière Taschereau*, seconded by MM. Lessard and David Perron, proposed the following resolution :

" That this meeting offers its thanks to the numbers of the Dairymen's Association for the information imparted during this convention.

" And that the people of St. Joseph de Beauce are especially grateful to the members of the Association for the honour done to them by the convention being held at that town this year ; "—Carried unanimously.

*The President.*—As the convention is about to adjourn, before we separate I, as President, have a few words to say : first, I personally join with the people of Beauce in the motion of thanks to the directors of our Association ; I, personally, thank the directors for having kindly assented to the request of our fellow-citizens of Beauce that our meeting of this year should be held here. As President of the Association, I must most heartily thank the people of Beauce for the kind reception that have accorded us, and particularly do I thank the people of St-Joseph for the readiness with which they placed their houses at our disposal. In the name of the Association, I offer my thanks to all those who have been pleased to encourage by their presence the labours of our convention, and, in particular, to those papers that have sent their representatives to publish a report of our doings ; and I trust that the convention of next year (1895) may see our meeting as fully attended as the present one has been. This next meeting, a very important one, will be held at Waterloo, until which time I bid you heartily farewell.

#### SUPPLEMENT TO THE REPORT OF THE CONVENTION.

*Note.*—The essays that follow were to have been read at the meeting, but time having failed us to read them aloud to the audience, it was decided to include them, as usual, in the annual report.

#### REPORT OF MR. GEO. W. FERGUSON.

##### INSPECTOR OF SYNDICATE NO. 2 OF THE COUNTY OF SHEFFORD.

*To the Members of Syndicate No. 2 of the County of Shefford.*

GENTLEMEN,

I have great pleasure in sending you a short report of my second year's work as Inspector of your syndicates. My work began May 1st, and ended October 31st, during which period I tested milk on 154 days, without reckoning 175 short visits. The number of samples tested was 7,000, and I am happy to say that, upon the whole, I found a visible improvement in the quality of the milk in comparison with that of the previous

season. I had to send 20 letters of warning to patrons, to inform them that their milk seemed to me to be doubtful and below the normal quality ; but I was never compelled to resort to the extreme measure of imposing a fine. In the syndicate were 20 cheeseries and 2 creameries, the total production of which was 610 tons of cheese and 71 tons of butter, equal on the whole to about 750 tons of cheese.

Fifteen factories paid for milk in accordance with its richness as shown by the Babcock test ; and in each of these factories, 12 tests were made. In order to do this I had to make tests in two factories a day. In the other factories, I made 6 or 7 tests, but in this case my visits lasted the whole day, so that, in truth, these latter factories had just as much of my time as the others.

Undertaken as a kind of experiment, and, in some parts, with doubts as to its success, the plan of paying for milk according to its richness has succeeded perfectly and given thorough satisfaction. It put a stop to all suspicion of fraud, by watering or skimming, perceptibly improved the average quality of the milk, and assured to each patron to the last cent all his share of the profits, without giving one copper of his share to his neighbour. Not one of the factories that have adopted this system seems inclined to abandon it, while several others will doubtless join in the march and carry out the plan next year.

The resolution passed at your last annual meeting, by which the makers are bound to insist upon the inspection and acceptance of their cheese being in future made at their factory, instead of its being sold subject to inspection at Montreal, has also been faithfully observed, and has given the best results by suppressing the "cutting of prices," which were the cause of so much loss and, consequently, of so much discontent when the old way of selling was practised.

I owe it to the makers to tell you that I found them intelligent, capable and industrious ; always anxious to succeed in their trade, and invariably full of zeal to do their best for their patrons by making only the best quality of cheese.

In conclusion, allow me to bear witness to the courtesy and consideration I always received from patrons as well as makers, and to their good will, shown by their doing all in their power to assist me in rendering the inspection as effective and as useful as possible.

The whole respectfully submitted,

GEO. W. FERGUSON,

Inspector.

Waterloo, November 2nd, 1894.

# SYNOPTICAL TABLE OF THE

## REPORT

NOS.	NAME OF THE IN- SPECTORS. — CHEESERIES.	Factories.	NUMBER OF			MILK-TESTS Lactoden- simeter. Babcock.	Letters written.	Fines inflicted.	Patrons.	Cows.	No. of order.						
			Days of inspection		Short visits.												
			Milk	Tests													
1	P. O. Domingue.....	18	...	29	2007	20	1	...	...	1	1						
2	G. St-Pierre.....	30	123	3153	26	12	844	4707	3	2	2						
3	B. A. Pothier.....	23	106	61	710	20	...	...	...	3	3						
4	W.M. Parent.....	20	136	111	3383	288	7	788	4941	4	4						
5	Theod. Froulx.....	18	130	5310	613	14	2	646	...	5	5						
6	J. E. Parent.....	21	152	70	2464	3102	8	...	...	6	6						
7	H. W. Palmer.....	21	...	...	...	...	3	545	3997	7	7						
8	A. W. Woodward.....	21(1)	136	90	6521	2150	78	9	839	4435	9						
9	J. A. Plamondon.....	15	124	3943	746	11	5	605	3066	10	10						
10	D. J. Parent.....	21	114	60	4043	2616	66	7	1099	...	11						
11	C. S. Standish.....	20	115	3631	2442	23	6	760	5912	12	12						
12	A. Marsan.....	22(2)	154	175	1000	6000	20	...	520	13	13						
13	G. W. Ferguson.....	23	130	1130	130	97	2	439	6846	14	14						
14	Rob. Wherry.....	20	...	...	...	...	...	...	...	15	15						
15	Arth. Macfarlane.....	20(3)	143	54	3322	2528	19	9	703	5175	16						
16	A. S. Lloyd.....	20	140	59	142	5680	17	3	463	5870	17						
17	A. M. Ferguson.....	15	...	...	...	...	3	...	...	18	18						
18	F. Paradis.....	15	17	122	28	122	80	...	337	2273	19						
19	P. Tremblay.....	19	...	...	...	...	...	...	...	20	20						
20	J. E. Hudon.....	18	...	...	...	...	...	...	...	21	21						
21	A. L. Gagnon.....	23	131	64	4225	1924	31	1	920	5018	22						
22	F. X. O. Trudel.....	21	131	27	3750	150	23	1	...	...	23						
23	L. P. Lacourcière.....	15	124	3663	751	4	1	546	3004	25	24						
24	A. H. Parent.....	15	166	300	1303	751	59	1	546	4360	26						
25	J. E. D. Garneau.....	15	...	...	...	...	...	...	...	27	25						
26	J. W. Ross.....	15	...	...	...	...	...	...	...	28	26						
27	CREAMERIES,	15	...	...	...	...	...	...	...	29	29						
28	J. E. Gaudet.....	15	...	...	...	...	...	...	...	30	30						
29	G. Desrochers.....	15	...	...	...	...	...	...	...	31	31						

No. of order.	T	
	Milk received.	Milk
1	16121138885	16
2	1715221162	17
3	1715221162	17
4	1715221162	17
5	195709147	19
6	195709147	19
7	2015221162	20
8	2015221162	20
9	2115221162	21
10	221040588	22
11	221040588	22
12	231040588	23
13	241040588	24
14	256755711	25
15	256755711	25
16	269810313	26

REPORT OF THE INSPECTORS.

As we stated at page 166, we give here the usual recapitulatory table of the inspectors' reports. We regret to again have to say that a great many inspectors have sent in very incomplete reports for the season 1894, although they received in good time the most formal instructions as to their duties, and all the necessary blank forms. Most of them say in exculpation that the representatives of the syndicated factories are disinclined to deliver in this way the report of their factories. We would here remind them that their reports, as is pointed out in the formulæ furnished by the association, are only meant to be sent confidentially to the secretary of the association, to enable him to draw up the general statistics and the averages that appear in the above table.

The comparison of the yield of milk, of its yield in butter and cheese, of the price of milk, butter and cheese in the different syndicates, must contain a lesson of general interest that the Dairymen's Association thinks ought to serve to advance that business in our province. We therefore once more appeal to men of progressive views and to all the true friends of our great national industry.

We give here the notes to which the letters and figures in the synoptic table refer.

- (1) Only 16 factories have sent in their report.
- (2) 11        "        "        "
- (3) 18        "        "        "
- (4) 15        "        "        "
- (5) The report of the Soulages syndicate, sent in full, was lost on the road.

The milk was paid for according to its richness as shown by the Babcock test.

- (a) In the cheeseries.
- (b) In two     "
- (c) In 13 cheeseries and 2 creameries, 15 factories in all.
- (d) In 2 cheeseries.
- (e) In 2       "
- (f) In 4       "

## RECEIPTS AND EXPENDITURE OF THE ASSOCIATION, 1894.

### RECEIPTS.

ASSOCIATION : Members subscriptions.....	\$1011.00
Sale of reports and books.....	11.85
Sundry.....	18.26
Government grant.....	2000.00
	-----
	3041.11
SYNDICATES : Supplementary grant.....	\$ 1742.99
Grant 1894.....	1000.00
SCHOOL : Supplementary grant 1893.....	857.01
Grant 1894.....	2000.00
	-----
TOTAL receipts.....	\$6041.11
	-----
TOTAL receipts 1893.....	\$2600.00
	-----
Together .....	\$8641.11

### EXPENDITURE, PAYMENTS.

#### SEASON 1893.

ASSOCIATION (1).....	\$817.10
SYNDICATES.....	954.82
SCHOOL.....	961.20
	-----
	\$2733.12
	\$2733.12     \$2733.12
ASSOCIATION : Printing.....	\$644.35
Stationery, &c.....	\$121.01 }
Postage.....	\$237.38 }
Directors' travelling expenses.....	358.45
Expenses of the convention.....	64.20
Secretary-treasurer.....	194.60
Purchase of books and newspapers.....	591.00
Extraordinary expenses.....	11.95
	-----
	\$1964.54
	-----
	\$1964.54

Brought over--Season 1893.....	\$2733.12
" " 1894.....	1964.54
SYNDICATES: Salaries.....	\$830.00
Travelling expenses.....	1120.47
	-----
	\$1950.47
	-----
	\$1950.47
	-----
	\$6649.13
DAIRY-SCHOOL : Construction.....	\$313.64
Annual expenses.....	1679.34
	-----
	\$1992.98
	-----
Total.....	\$8641.11
Expenditure chargeable to season 1893.....	\$2733.12
	-----
Total expenditure paid chargeable to season 1894.....	\$5907.99

## DEBTS PAYABLE.—1894.

ASSOCIATION (I).....	\$788.06
SYNDICATES .....	284.84
SCHOOL.....	789.16
	-----
	\$1862.60

Audited and found correct,  
St. Joseph of Beauce, 5th December 1894.

C. D. TYLEE, }  
J. DE L. TACHÉ, } Auditors.

(1) This sum of \$788.60 due by the association in 1894, as well as another of \$817.10 remaining<sup>G</sup> due in 1893, does not arise from the association having exceeded its provisional budget in 1894, any more than it did so in 1893; but solely because it found itself compelled to make payments in advance in order to ensure the working of the Inspection of Syndicates, of which

The expenses paid in 1894 exceeded the receipts by.....\$788.17

And " " 1893 " " \$950.47

avoid for the future this apparent deficit in the yearly accounts, the Association has entreated the Minister of Agriculture of the Province to raise the annual grant for the Inspection of Syndicates to \$2,600.

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# Alphabetical Table

OF THE LECTURERS, SPEAKERS, REPORTERS

*And persons who took part in the discussion.*

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964.54

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789.16

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- MESSRS. BARNARD, ED. A.—47, on small factories; 59, on the improvement of the roads; 70, on the annual meetings and the Dairy *comitia*; 97, on the exhibition of Carrier, Lainé, and Co's utensils, &c., 115, reply to M. L. Gilbert; 136, lecture on the production of pork; 162, on country banks.  
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 " BEAUBIEN, THE HON. L.—59, address.  
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 " B. DE LA BRUÈRE, P.—50, telegram regretting, &c.  
 " BOURBEAU, D. O.—41, appointed member of committee on silage samples; 115, on the question of bad milk; 115, reply to Mr. Gilbert; 115, on unripe cheese; on winter-meetings of makers.  
 " BOURBEAU, ELIE.—42, his report as assistant inspector-general; 111, 112, on bad cheese.  
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 " CHICOINE, ALEXIS.—41, appointed judge of machines and apparatus; 163, report on the above.  
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 " CÔTÉ, SAUL.—1, on the defects in cheese and the duty of buyers.  
 " COULOMBE, Dr. C. J.—44, lecture on small factories.  
 " DESROCHERS, GABRIEL.—41, appointed judge of machinery; 163, report on do.

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 " GIGAULT, G. A.—84, report and address on his tour in Europe.  
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 " GODBOUT, DR. (M. P.)—134, address.  
 " GRIGNON, DR. W.—48, lecture; 121, on the future of the butter-industry.  
 " LAROCHELLE, SIMEON.—41, made judge of machinery; 163, report on do.  
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 " LEMIRE, J. L.—41, member of silage committee.  
 " MACDONALD, M. (M. P. P.)—47, resolution against small factories.  
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 " NADEAU, JOS. VITAL. 51, address of welcome.  
 " PARENT, W.—114, on acidity in cheese, and on bad milk.  
 " PLAMONDON, J. A.—111, on bad cheese.  
 " PRÉFONTAINE, M. (Isle Verte)—120, puts a question to M. Leclair on the Danish way of packing cheese.  
 " SCOTT, JNO.—112, on acidity in cheese.  
 " TACHÉ, J. DE L.—41, named auditor; 78, on export butter; 97, on the Carrier exhibition; 107, on the export butter premium; 121, on the future of our export-butter-trade; 162, on a trade-mark for our butter and cheese.  
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