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THE **JOURNAL** OF
AGRICULTURE
ILLUSTRATED

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NOTICE.—The subscription to the *Illustrated Journal of Agriculture*, for members of Agricultural and Horticultural Societies, as well as of Farmers Clubs, in the province of Quebec, is 30c annually, provided such subscription be forwarded through the secretaries of such societies.—**EDITORIAL MATTER.** All editorial matter should be addressed to A. R. Jenner Fust, No. 1 Kinkora Avenue, Dorchester Street West, Montreal—or to Ed. A. Barnard, Director of the *Journals of Agriculture, &c.*, Quebec.

OFFICIAL PART.

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NOTICE TO ALL AGRICULTURAL SOCIETIES.
PROGRAMME OF OPERATIONS, FOR 1891.

31st January 1891.

Agricultural societies are hereby informed that in their proposed programme of operations for the present year, to be submitted at the next meeting of the Council of agriculture on the 25th of February next, 1891, for approbation, they have to follow out the Revised Regulations of the Council hereto annexed.

Their attention is more particularly called to article 51, respecting free distribution of grass seeds; to article 58, respecting remittances of subscriptions under any form; to article 66 requiring that all balances in hand over \$40 be safely invested and bear interest; to article 87 respecting *Veterinary-Surgeon's fees*, and more particularly, to chapter VIII which completely changes the previous regulations respecting Competitions for best managed farms in future.

ED. A. BARNARD.

Secretary of the Council of Agriculture
and Director of Journal of Agriculture.

Department of Agriculture and Colonization.

Quebec, 4th February 1891.

FARM COMPETITION OF AGRICULTURAL MERIT.—NOTICE TO AGRICULTURAL SOCIETIES OF AGRICULTURAL DISTRICT NO. 2.

1. All agricultural societies in the counties of Bagot, Beauharnois, Brome, Chambly, Chateauguay, Compton, Drummond, Huntingdon, Iberville, Laprairie, Missisquoi, Napierville, Richelieu, Richmond, Rouville, Shefford, Sherbrooke, Stanstead, St. Hyacinthe, St. John, Verchères and Yamaska, are hereby notified that the Provincial Competition of Agricultural Merit in their district, (No. 2) shall take place this year, and all persons who have already obtained a prize for best managed farms in any previous County, or municipality or parish competition have a right to enter their farms, free of charge, in the present Provincial Competition of Agricultural Merit.

2. **ENTRIES**—All competitors in this district (No. 2) are hereby notified that the entries for Provincial Competition of Agricultural Merit, must be transmitted to the undersigned, on or before the first of May next, 1891.

3. **BLANK FORMS OF ENTRIES.**—Copies of Regulations and all information respecting such Competition can be obtained by writing to the undersigned.

4. In order to forward in good time blank forms of Entries to all who intend to compete and leave sufficient time to study out such forms before making their entries, competitors are respectfully requested to notify as soon as possible the undersigned of their intention to compete, so that such blank forms and all needed information may be sent to their address without delay.

ED. A. BARNARD,

Secretary of the Council of Agriculture and
Director of the Journals of Agriculture.

Department of Agriculture and Colonization.

Quebec, 4th February 1891.

NOTICE TO AGRICULTURAL SOCIETIES OF DISTRICT NO. 3.—
COMPETITION FOR BEST MANAGED FARMS, FOR COUNTIES, OR FOR MUNICIPALITIES OR PARISHES.

1. All agricultural societies in the following counties: Arthabaska, Beauce, Bellechasse, Bonaventure, Dorchester, Gaspé, Kamouraska, Lévis, L'Islet, Lotbinière, Mégantic, Montmagny, Nicolet, Rimouski, Témiscouata and Wolfe, forming together district No. 3., are hereby notified that they are bound to offer to all their members, this year, a competition for best managed farms, either for the whole county (or subdivision of county), or for each municipality or parish, in conformity with articles 111-112-113-114-115-116, and 117 of the revised Regulations of the Council of Agriculture, approved of by order in council dated 19 of January 1891 and published in the Official Gazette on the 24 January instant, 1891, a copy of which revised regulations is hereto annexed.

2. COMPETITORS.—All members of an agricultural society in district No. 3 have a right to enter their farms for the county, municipality or parish farm competition to be held this year, in order to be better prepared for the Provincial Competition of Agricultural Merit to be held next year.

3. ENTRIES.—Applications for blank forms of entries and regulations for the county or municipality or parish farm competition, should be addressed without delay to the secretary of the county (or subdivision of county) agricultural society, so that such blank forms be studied, filled up and transmitted to the secretary of such agricultural society on or before the first of May next.

4. ENTRANCE FEES.—All agricultural societies are bound to exact a special entrance fee of two dollars, above and over the annual subscription of one dollar, from all competitors for county prizes, but they are at liberty to reduce the price of such entrance fees, or do without entirely, in all municipal or parish competitions (see article 116.)

5. In all counties where but one Agricultural society exists which, consequently, would have a right to a grant of \$656 provided the amount of its subscriptions be \$400 or more, the county prizes must be \$100, \$60, \$40, \$30 and \$20, making a total amount of \$250.00.

6. In all counties where more than one society exists, the total amount of prizes must be as follows: The societies entitled to a maximum grant of four hundred and ten dollars net, should offer prizes to the amount of one hundred and fifty six dollars or more; the societies entitled to a maximum grant of three hundred and twenty eight dollars net, should offer prizes for a total amount of one hundred and twenty five dollars; and lastly those entitled to a maximum grant of two hundred and five dollars net, should offer twenty eight dollars in prizes, or more.

7. All secretaries of agricultural societies are bound to give to the undersigned, as soon as possible, the complete address of all members of their societies who wish to enter their farms for such County Municipality or Parish competition, so that blank forms and copies of Regulations be transmitted directly and without delay to the various competitors in their respective parishes.

ED. A. BARNARD.

Secretary of the Council of Agriculture and
Director of the Journals of Agriculture.

Resolutions of the Council of Agriculture.

COPY of the report of a Committee of the Honorable Executive Council, dated the 17th January, 1891, approved by the Lieutenant-Governor, on the 19th of January, 1891.

No. 57.

On the approval of certain resolutions of the Council of Agriculture.

The Honorable Commissioner of Agriculture and Colonisation, in a memorandum dated the 17th of January instant (1891), recommends that the resolutions, a copy whereof is annexed to the said memorandum, adopted by the Council of Agriculture, dated the 24th of December, 1890, be approved, pursuant to the provisions of article 1614 of the Revised Statutes.

(Certified)

(Signed)

GUSTAVE GRENIER,
Clerk of the Executive Council.

Quebec, 24th December, 1890.

1. Resolved that the sum due by the Saguenay society to Mr. Kerouack, for grain and seed, be paid out of the first grants due to the society.

2. The following divisions are adopted for the boundaries of the four districts for the competitions of agricultural merit which are not yet defined:

The second district shall comprise the part of the Province south of the St. Lawrence and south of the counties of Nicolet, Arthabaska, Wolfe and Mégantic. (This division comprises the following counties: Bagot, Beauharnois, Brome, Chambly, Châteauguay, Compton, Drummond, Huntingdon, Iberville, Laprairie, Missisquoi, Napierville, Richelieu, Richmond, Rouville, Shefford, Sherbrooke, Stanstead, St. Hyacinthe, St. John, Verchères and Yamaska,—22 counties and subdivisions);

The third district shall comprise the remainder, south of the St. Lawrence. (This division comprises the following counties: Arthabaska, Beauce, Bellechasse, Bonaventure, Dorchester, Gaspé, Kamouraska, Lévis, L'Islet, Lotbinière, Mégantic, Montmagny, Nicolet, Rimouski, Témiscouata and Wolfe,—16 counties);

The fourth district shall comprise all that portion north of the river St. Lawrence west of the county of Portneuf and not comprised in the first district (Montreal) already defined, Argensteuil (part of the Laurentides), Berthier, Champlain, Joliette, l'Assomption, Maskinongé, Montcalm, Ottawa, Pontiac, St. Maurice, Terribonne (part of the Laurentides), Three Rivers—12 counties and divisions);

The fifth district shall comprise the county of Portneuf and the remainder of the Province north of the Saint Lawrence (Charlevoix, Chicoutimi, Lake Saint John, Montmorency, Portneuf Québec and Saguenay—7 counties).

3. Next year (1891) the competition of agricultural merit will take place in the second agricultural region or district bounded as above.

4. It is resolved: 1. That, in future, the competitions for the best cultivated farms in the county be held only once every five years, and that they precede by one year the Provincial competitions in their respective districts: 2. That five prizes be offered in each county for the best kept farms, to wit: \$100, \$60, \$40, \$30 and \$20, in all \$250 subject to the exception in favor of all subdivisions of county societies, as regulated by clause 6 of these regulations;—3. That these prizes be adjudged according to the programme adopted for the competition of agricultural merit, with this difference that farms of 50 arpents and upwards under cultivation, shall be admitted in the county competitions; 4. That no money be granted unless the candidate has gained at least 60 points out of the hundred allowed.

5. The societies may, if they prefer it, replace the competition for the best cultivated farms in the county by competitions for parish or township farms, on such conditions as the directors of the society shall judge useful, provided, however, the total amount of the prizes offered be at least two hundred and fifty dollars for all the parishes or townships of the county.

6. In subdivisions of counties, the total amount of the prizes shall be in proportion to the total amount of the grant to which these subdivided societies are entitled; the societies entitled to a maximum of four hundred and ten dollars net, should offer prizes to the amount of one hundred and fifty six dollars or more; the societies entitled to a maximum of three hundred and twenty-eight dollars net, should offer prizes for a total amount of one hundred and twenty five dollars; and lastly those entitled to a maximum grant of two hundred and five dollars net, should offer seventy eight dollars in prizes, or more.

7. Any member of an agricultural society who shall have paid his subscription of one dollar, and a special additional entry of two dollars, before the first of May, shall be entitled to compete at the county competition of agricultural merit, and if he gains a prize

in this competition he shall be entitled to enter free in the following year in the provincial competition of agricultural merit, on complying with the rules concerning such competition.

8. That besides the county competition of agricultural merit, prizes be offered; 1. To the house-wife who, in each county, shall obtain from a single cow, the greatest quantity of butter in the year, or the equivalent of butter in milk; 2. To the house-wife in each county who shall obtain the highest net return from her poultry.

9. The council adopts clause by clause, the hereinafter annexed codification of the rules of the Council of Agriculture; this codification shall in future replace all the previous general rules, which are hereby annulled.

10. That Mr. Eugene Casgrain form part of the committee on Pedigree Books.

11. Resolved that the sum of fifty dollars be granted to Mr. N. O. Rinfret for the numerous services which he has rendered and the work he has performed in connection with the competition of agricultural merit.

12. The Honorable Commissioner of Agriculture lays before the Council an application to annul the general election of directors of the Agricultural Society of Bellechasse. The Council orders further information to be taken respecting the matter.

Extract from the minutes of the Council of Agriculture, dated the 24th of December, 1890. E. A. BARNARD.

Secretary of the Council of Agriculture and
Director of the Journal of Agriculture.

REGULATIONS OF THE COUNCIL OF AGRICULTURE IN FORCE ON THE FIRST OF JANUARY, 1891.

CHAPTER I.

The Council.

ART. 1. MEETINGS.—The regular meetings of the Council of Agriculture are fixed for the last Wednesday of each of the months of February, May and October.

ART. 2. CONVOCATIONS.—The notices convening the meetings of the Council shall be sent by registered letter to each member of the Council.

ART. 3. The veterinary surgeons of the Council shall be invited to attend all the sittings of the Council.

ART. 4. ADMISSION.—The representatives of the Press are admitted to the sittings of the Council of Agriculture.

ART. 5. No one can be heard before the Council of Agriculture, unless he has previously obtained permission.

ART. 6. ELECTIONS.—The election of the officers of the Council of Agriculture are held at the October meeting, in each year.

ART. 7. COMMITTEES.—At the same meeting the Council appoints the following committees: 1. The Committee on the Competition of Agricultural Merit; 2. The Committee on Agricultural Schools; 3. The Committee on the Journal of Agriculture; 4. The Committee on the Pedigree Books of the various breeds of registered animals.

CHAPTER II.

Committee and Regulations of Schools.

ART. 8. PRELIMINARY EXAMINATION FOR ADMISSION TO VETERINARY SCHOOLS.—The Committee on schools is charged with the duty of holding a preliminary examination of students who wish to enter the veterinary schools and it is empowered to appoint a delegate to represent it.

ART. 9. THE SECRETARY TO ATTEND THE SCHOOL EXAMINATIONS.—The secretary of the Council is bound to arrange with the directors of the Veterinary and Agricultural schools with reference to the preliminary examinations to be passed by students who are granted bursaries. He shall also attend the examinations.

ART. 10. VISIT TO THE AGRICULTURAL SCHOOLS.—The Agricultural schools shall be visited every three months, before the quarterly payment, under the special authorisation of the Commissioner, so as to encourage the schools and students to do their best, and the report on such visits shall be sent in as soon as possible to the Commissioner.

ART. 11. AGRICULTURAL SCHOOLS.—The Agricultural schools officially recognized by the Council, shall give efficient instruction to their students, and for that purpose shall cultivate, on the principles of model farming, a farm of not less than eighty-six *arpents*. The said farm shall have animals of improved breeds and the best of agricultural implements. A complete system of agricultural book-keeping shall be followed.

ART. 12. STUDENTS HOLDING BURSARIES.—Each agricultural society in the Province has the privilege of recommending a student to the Commissioner for a bursary, and such student shall be allowed free board and tuition at the agricultural school indicated to him, provided that he complies with the regulations approved by the Commissioner for the government of such schools.

ART. 13. Students allowed bursaries have to undergo a two months' trial in the schools, and to establish both their capacity and willingness before being definitively admitted to the privileges of free bursaries.

ART. 14. REPORTS OF AGRICULTURAL SCHOOLS.—Each Agricultural school is obliged to transmit to the Commissioner, on or before the first of September of each year, a detailed report on everything respecting: 1. The school proper, grounds, buildings, system of instruction followed; 2. The name and address of each of the students, the date of their entering and leaving the school, the degree of instruction attained by each of them, the place where each one comes from and where he intends to live when he leaves the school; 3. The remuneration given to each student for his work; 4. The results of the farming during the year, as regards the farm, garden, animals etc.; 5. The accounts of the farm, garden, cattle, etc., for the year ending on the first of April preceding.

ART. 15. Everything which does not directly relate to the instruction given, whether theoretical or practical, shall form the subject-matter of a special report separate from the annual report.

ART. 16. GRANT TO AGRICULTURAL SCHOOLS.—No grant shall be given to Agricultural schools which have not had an average of at least ten students during the preceding scholastic year, unless the Committee on schools consider that there are valid reasons for recommending the payment of the grant or of such portion thereof as they may deem equitable.

ART. 17. The annual grant to each school is \$2,000.00 payable quarterly in advance, provided such schools comply, in every respect, with the regulations approved by the Commissioner for their government, subject to the provisions of the preceding article.

CHAPTER III.

Pedigree-Books.

ART. 18. The Commission on pedigree-books consists of three members of the Council of Agriculture and of such specialists as the Council may appoint to act with them. They select a chairman and a secretary, who are elected every year.

ART. 19. The following books are established:

1. A stud-book for Canadian horses;
2. A herd-book for Canadian cattle;
3. A golden register for the same breed;
4. A herd-book for the different breeds of sheep;
5. A herd-book for the different breeds of swine;

ART. 20. The object of these books is to assure the maintenance of the purity of the best types of these various kinds of animals and to contribute to their improvement by judicious and constant selection.

ART. 21. The organisation, administration and supervision of the pedigree-books are centred in the Commission; they order the printing of the bulletins and decide finally upon all difficulties and differences of opinion which may arise. They elect a recording secretary from amongst their members, whose duty it is to draw up the minutes of their meetings. They have power to associate with themselves the specialists whose services may be necessary for the fulfillment of their duties.

ART. 22. The following are admitted to registration in the above mentioned pedigree-books: 1. Thoroughbred breeding animals which possess to an advantageous degree the form and qualities of their respective breeds. They are admitted only after a severe examination. Consequently, it is not sufficient that a fine animal be brought forward for such animal to be registered; its antecedents, origin and qualities must be established to the satisfaction of the Commission; 2. Animals whose sires and dams are already registered and which are strongly recommended to the

Commission by its delegates or by other authorities competent in such matters.

Art. 23. Every animal which possesses well defined characteristics to show that it is of a different breed from that in which it is classed, shall be excluded.

Art. 24. The book for original registrations is now open. From and after the the pedigree-book shall be strictly closed.

Art. 25. Original registrations are effected free of charge.

Art. 26. Owners of animals whose sires and dams are registered shall pay a fixed rate of for the first animal registered in the same year; and of for every additional animal registered in the same year, and they shall receive a certificate of registration.

Art. 27. Animals brought forward by stock-raisers shall be examined by the Commission or their representatives.

Art. 28. Should any member of the Commission bring any animals forward for registration, such member shall not take part either in the proceedings or in the voting.

Art. 29. A service book with counterfoil shall be handed to every owner of a registered male animal.

Art. 30. The owner of a female animal registered in the pedigree-book which is served by a registered male animal, obtains on the same day from the owner of such male animal, a certificate taken from the aforesaid service-book with the exact date.

Art. 31. The owner of a registered male animal which serves a female animal also registered, and belonging to him, takes a certificate of service out of the book under the same conditions.

Art. 32. In either case, the notice of the service intended for the secretary of the Commission, is detached from the book and sent to the secretary, within eight days, by the owner of the male animal.

Art. 33. The progeny is entitled to provisional registration in the pedigree-book upon payment of the fee mentioned in article 26, which fee should be forwarded to the secretary treasurer with the application for registration.

Art. 34. Such application, on a printed form signed by the breeder, shall contain the name given by him to the animal and its accurate description, accompanied by a solemn declaration in accordance with the provisions of chapter 141, section 3 of the Revised Statutes of Canada, to the effect that such animal fulfils in every respect the conditions required for such registration. The said declaration must be signed by the breeder and by a trustworthy person, thoroughly competent in such matters.

Art. 35. The declaration shall be forwarded to the secretary within thirty days from the birth of the animal. In return the breeder receives a certificate that the animal is provisionally registered in the pedigree-book.

Art. 36. The registrations are published by direction of the Commission in the *Journal of Agriculture*.

Art. 37. The bulletin also contains the list of animals whose registration has been ratified by the Commission.

Art. 38. Such ratification is given by the Commission or by their delegates to animals which are the progeny of animals originally registered or of their descendants which have themselves been previously ratified. In order to be ratified, the animal, if a male, must be at least a year old, females shall be ratified only after they have brought forth for the first time.

Art. 39. The ratification affects not only purity of breed but also individual qualities.

Art. 40. Every false declaration or attempt to deceive is punished by exclusion from the pedigree-book, for the present and for the future, of all animals belonging to the breeder who has been guilty thereof. Such exclusion, with the reasons therefor, shall be inserted in the bulletin.

Art. 41. The owners of animals registered in the pedigree-book are bound, within thirty days, to notify the secretary of the sales and deaths which have occurred amongst their herd, so that the necessary changes or erasures may be made in the bulletin. When the animals are sold for breeding, the name and residence of the purchaser must be given. Any inexcusable neglect in these matters exposes the owner to the forfeiture of the right to all subsequent registration.

Art. 42. The Commission are authorized to make such additional regulations as they may deem advisable for the proper working and carrying out of the preceding regulations.

Art. 43. The preceding regulations apply, *mutatis mutandis* to the various pedigree-books under the control of the Commission.

Art. 44. CANADIAN HORSES.—In order to be entitled to original registration, both horses and mares must be at least three years old.

Art. 45. CANADIAN CATTLE.—Only animals at least eighteen months old are admitted to original registration.

Art. 46. JERSEY AND GUERNSEY CANADIANS.—The progeny of cross-breeding between Jersey and Guernsey and Canadian cattle are registered in separate books, but they must be admitted in the class of Canadian cattle in all exhibitions where distinct classes are not open to them.

Art. 47. GOLDEN REGISTER OF CANADIAN CATTLE.—In this book are entered the cows which, in a test of seven consecutive days, shall have given a quantity of not less than 10 pounds of butter or have given 350 pounds of milk in ten consecutive days, or 6,000 pounds of milk in ten consecutive months, the whole subject to the regulations which the Commission are authorized to adopt in order to secure thorough regularity in the tests.

Art. 48. BULLS.—Every bull, the progeny of a cow entered in the Golden Register, shall, in addition to his proper number, have the letters G. R. (L. O.) inscribed opposite his respective entry.

Art. 49. SHEEP AND SWINE.—Original registrations are effected only for duly registered animals, upon an authentic certificate of registration by a recognized pedigree association and only in the case of animals of exceptional merit.

CHAPTER IV.

The most important points in the law governing agricultural societies.

Art. 50. It is the duty of each of the officers of agricultural societies to be thoroughly acquainted with all the articles of the law respecting Agriculture (Revised Statutes, Articles 1583 to 1683 inclusively) as well as with all the Regulations of the Council of Agriculture. However, their attention is especially directed to the following articles of the law.

1. AGRICULTURAL SOCIETIES.—Their object, Art. 1640.
2. do do —Their formation; subscription of members, Art. 1616.
3. do do —Every new society must be formed before the 1st may, Art. 1628.
4. ANNUAL MEETING —Art. 1649.
5. do do —How convened, Art. 1650.
6. do do General, special, how and why convened, Art. 1661.
7. DIRECTORS' MEETINGS.—How and when called, Art. 1653.
8. do do —Quorum to be five, Art. 1654.
9. ANNUAL ELECTION OF DIRECTORS.—Art. 1651.
10. do do —Contested, referred to the Commissioner, Art. 1664.
11. do do —New ones ordered by the Commissioner, Art. 1664.
12. Local election of a director, Art. 1651.
13. Election of officers and secretary, Art. 1651.
14. do do every year, Art. 1652.
15. Partial election, Art. 1652.
16. Duties of officers and directors, Arts. 1652 and 1655.
17. Scheme of operations of society to be made and furnished to Commissioner before first February, Art. 1659.
18. do do not to be changed without approval of Commissioner, Art. 1660.
19. Societies to furnish information required and comply with instructions of Commissioner, &c., Art. 1662.
20. do do to draw up and submit an annual report, Art. 1656.
21. do do to draw up and submit a detailed statement of their receipts and expenditure, Art. 1657.
22. do do to enter their annual report in their journal and send a copy to Commissioner, Art. 1658.
23. THE SECRETARY is responsible to the society, Art. 1663.
24. do do to give a security of \$800, Art. 1663.
25. do do shall transmit a copy of his security bond to the Commissioner, Art. 1663.
26. do do such security to be renewed whenever required by the society, Art. 1663.
27. do do to be paid a remuneration not exceeding 7 per cent of the amount expended, Art. 1648.
28. DISPUTES between societies or members, are submitted to the Commissioner, Art. 1665.
29. do Powers of Commissioner, witnesses, Art. 1665.
30. do Fines and costs, how recoverable, Art. 1665.
31. do A deposit of fifty dollars (\$50.00) to accompany the complaint, Art. 1666.
32. ANNUAL GRANT, of twice the amount paid by the members, provided at least \$80.00 has been paid by at least forty members, Arts. 1667 and 1668.
33. do do not to exceed \$800.00 per county, Art. 1668.
34. do do every county in the Province entitled to the grant, Art. 1617.

- 35 do the counties of Bonaventure, Charlevoix, Chicoutimi, Huntingdon, Ottawa, Pontiac, Rimouski and Beauce may be divided into two separate parts: A and B, each of which may receive \$500.00 less 18 per cent, Art. 1618.
- 36 do GASPÉ—The county of Gaspé may be divided into three parts: A, B and C, Art. 1618, 53 Vic., chap. 23, section 2.
- 37 do When payable and on what conditions, Art. 1669.
- 38 SUBDIVISION OF SOCIETIES how made, Art. 1670.
- 39 DRAWBACK OF 18 per cent on grant for agricultural instruction, &c., Art. 1673.

CHAPTER V.

Agricultural Societies, Regulations of the Council.

ART. 51. FREE DISTRIBUTION OF GRASS AND LEGUMINOUS SEEDS.—The societies are allowed to give each of their members a premium in the shape of grass or leguminous seeds, provided such premium in seeds be in all cases purchased wholesale and distributed by the society itself and that it does not, in any case, exceed one half the subscription of one or two dollars paid by each member, including the cost of purchasing and distributing such seeds and provided also that such subscription be made before the 15th of March, after which date no premium in seeds can be given.

ART. 52. PURCHASE OF SEEDS, IMPLEMENTS, &c., &c.—The above does not prevent agricultural societies from facilitating the purchase by their members of grain, and grass seeds, agricultural implements, &c., with the view of promoting agriculture, provided always that such purchase be entirely paid out of the special subscription of the members made with a view to such purchase and without in any way trenching upon the funds of such societies.

ART. 53. PURCHASE AND HIRE OF REGISTERED BREEDING STOCK.—The societies may, upon application to the Council, obtain permission to employ a portion or even the whole of the moneys of a society in the purchase or hire of registered breeding stock.

ART. 54. A PERMIT TO PURCHASE OR HIRE MUST BE OBTAINED.—Agricultural societies are formally prohibited from purchasing or hiring breeding stock, without a regular certificate of pedigree duly revised by the veterinary surgeon and by the secretary of the Council in advance, and with a special view to such purchase or hiring.

ART. 55. PERCENTAGE OF THE SECRETARY ON SUCH PURCHASES.—The percentage of the secretary-treasurer of a society upon each such purchase or hiring of registered animals, shall not exceed seven per cent upon each purchase amounting to \$430.00, or under, and the total amount so received by him shall not exceed thirty dollars, whatever may be the total cost of such purchase or hiring.

ART. 56. THE USE OF THE SOCIETY'S BREEDING STOCK shall be allowed in accordance with special regulations made by each society, and preference shall be given, if necessary, to the senior subscribers and according to the amount of their respective annual subscriptions.

ART. 57. DRAWBACK OF \$1.00 FOR SUBSCRIPTIONS.—Agricultural societies shall, each year, keep back from each of the prize-winners, either at an exhibition or at any competition whatsoever opened by the society, the sum of one dollar as subscription for the following year, but every other drawback is strictly forbidden.

ART. 58. ALL REMISSIONS OF SUBSCRIPTIONS ARE FORBIDDEN.—It is also forbidden to pay back to the subscribers of any agricultural society, any portion of the subscription made to such society for the purpose of obtaining the Government grant in favour of such society.

ART. 59. Every subscription of over \$2.00 by the same member shall be considered as a free gift to the society and no such excess or gift can be deemed a subscription entitling the society to the Government grant under article 1668.

ART. 60. CONTROL OVER THE SOCIETIES.—In order to secure to the Commissioner and the Council the Control of the societies enacted by articles 1659 and 1660 of the Revised Statutes, the secretary of every agricultural society shall send in to the Commissioner, as soon as possible after each meeting of the directors of the society, a duly certified copy of the resolutions adopted at such meeting.

ART. 61. The carrying out by an agricultural society, without special permission from the Council or the Commissioner, of any resolution or measure incompatible with the law or the regulations of the Council, exposes such society to lose the whole of the grant voted in favour of such society.

ART. 62. JOURNAL OF AGRICULTURE.—The Journal of Agriculture is the organ of the Council. Agricultural and Horticultural Societies, as well as Agricultural and Veterinary Schools, are bound to take cognizance of all the regulations and notices published in it without further notice.

ART. 63. The Journal shall be sent free of charge to the president and secretary of each society, and be carefully kept in the archives of the society.

ART. 64. DIRECTORS, THEIR RESPONSIBILITY.—Each of the directors is responsible to the society for the moneys he may receive for it. The directors shall furnish the secretary with a list of the subscribers who have paid their subscriptions to them. The date of such payments shall be entered on the list, as well as the amount paid by each, opposite their respective names. Such lists shall be kept in the archives of the society.

ART. 65. MONEYS OF THE SOCIETY.—No moneys of the society shall be expended except upon a formal resolution of the board of directors. Every amount received or expended shall be entered in the account book of the society, at the date of such expenditures or receipt.

ART. 66. BALANCES AT INTEREST.—Every balance in hand over \$40.00 shall be deposited in safe-keeping and bear interest in favour of the society.

ART. 67. AUDITING OF THE ACCOUNTS.—The accounts of the societies shall be carefully examined and audited before the annual meeting, each year, by two competent auditors who are not members of the board of directors.

ART. 68. THE SECRETARY, HIS DUTIES.—The secretary of every agricultural society shall strictly comply with the law on Agriculture and the regulations of the Council, in the performance of the duties imposed on him by his office and by the board of directors of the society.

ART. 69. HIS SURETIES.—The secretary and his sureties are responsible for all the moneys of the society expended without a written and formal authorization from the board of directors.

ART. 70. INSPECTION OF THE BOOKS.—On the demand of the secretary of the Council, the secretaries of societies shall send their books for inspection and even, if necessary, attend at the office of the Department of Agriculture to give the required explanations respecting their accounts etc.

ART. 71. POSTAGE.—This shall be chargeable to the societies, unless they have a regulation to the contrary.

ART. 72. ENGAGEMENT.—The directors may engage the secretary of their society on such conditions as they may deem reasonable. They are not bound to pay the maximum salary, which shall not, under any circumstances, exceed seven per cent of the amount expended by the society during the year.

ART. 73. MEETINGS, PROCEDURE.—The general meeting of the members of the society shall be held on the third Wednesday, of December, at the place, day and hour fixed by the president mentioned in the public notices convening the meeting. It shall be presided over by the president the vice-president or, in their absence, by one of the directors selected by the meeting.

ART. 74. do do —The secretary-treasurer shall act as secretary of the meeting and, if absent, he may be replaced.

ART. 75. do do —The candidates for office are proposed all together, on one list, by one of the members seconded by another; both must have paid their subscriptions for the current and the ensuing year.

ART. 76. OPPOSITION.—If one or more of the parties nominated is opposed, it shall be proposed, in amendment, that such or such person or persons be substituted for the person or persons mentioned in the main motion, provided such persons are members of the society and have paid their subscription for the current year.

ART. 77. VOTE.—If a vote be asked for by two persons entitled to vote, the president shall grant it and the secretary shall at once proceed to record the votes of those who have paid their subscription for the current year before the first of September, and their subscription for the ensuing year at least one hour before the meeting, and the president shall proclaim elected those who have the most votes.

ART. 78. MEETINGS OF DIRECTORS.—Every meeting of the directors shall be presided over by the president or vice-president or, in their absence, by one of the directors selected by the board, and every question shall be decided by the majority of the directors present. The person presiding over the meeting shall vote, and when the votes are equal he shall have a casting vote. The proceedings shall be entered in the minute book upon the order of the president, who shall sign them with the secretary, and a certified copy shall be sent as soon as possible to the Commissioner of Agriculture, at Quebec.

ART. 79. QUORUM.—The quorum at meetings of the board of directors is five.

CHAPTER VII.

Exhibitions and competitions.

ART. 80. THOROUGHBRED MALE BREEDING STOCK.—In view of the importance of encouraging societies to use only the best breeding stock, it is forbidden in future, to give prizes for male breeding animals unless they belong to pure registered breeds of cattle, sheep and swine.

ART. 81. REGISTERED CANADIAN CATTLE.—A special class shall be opened for registered Canadian cattle in all provincial, district or county exhibitions, and all the societies are bound to comply with this regulation.

ART. 82. SHEEP AND SWINE.—Agricultural societies are further obliged to open separate classes for registered sheep and swine, in their scheme of operations and in their prize-lists for county and district exhibitions.

ART. 83. The Council of Agriculture opens pedigree-books for all breeds of sheep and swine, the progeny of registered animals imported into this Province and considered worthy of registration.

ART. 84. COMPETITION FOR THOROUGHBRED ANIMALS.—In exhibitions where prizes are offered for registered thoroughbred animals, no entry shall be accepted by the secretary of the society until he has received the regular certificate proving the registration of the animal sought to be entered at such exhibition.

ART. 85. EXAMINATION OF STALLIONS ENTERED FOR PRIZES.—No stallion can be awarded a prize at provincial, district or county exhibitions, unless he has previously obtained a certificate from a veterinary surgeon approved by the Council that such stallion is sound and in every way suitable for breeding.

ART. 86. CERTIFICATES VALID FOR ONE YEAR ONLY.—Such certificates shall be renewed every year.

ART. 87. FEES OF VETERINARY SURGEONS.—The agricultural societies shall pay the fees of the veterinary surgeons, approved by the Council and recommended by the Commissioner, whom they get to attend their exhibitions, provided such fees do not exceed \$10.00 a day.

ART. 88. COMPETITORS.—The competitors in every county exhibition or competition, must reside within the limits of the county, unless there be a formal regulation of the society to the contrary.

ART. 89. do.—The competitors must have paid their subscription to the secretary or one of the directors, at the date fixed by the board, but not less than two months before such exhibition or competition. Those who have not paid before that date shall be admitted only on the conditions imposed by the society. In any case, they shall not pay less than double the ordinary subscription which is fixed by law at \$1.00.

ART. 90. do.—The competitors shall submit to the regulations of the society. In case of doubt the board of directors shall decide.

ART. 91. do.—No competitors shall be entitled to more than one prize in the same class and no animal can compete in more than one class, except for prizes offered for the best herds.

ART. 92. do.—The competitors must have been *bona fide* owners for three months of the animals or articles exhibited, except in the case of breeding stock imported into the Province during the year and every breeding animal, whether male or female, which takes a prize must be kept in the county or at least in the Province during the following season.

ART. 93. do.—When there is but one competitor in a class or when the animal or article does not deserve a prize, it shall be left to the discretion of the judges whether the prize is to be given or not.

ART. 94. do.—Competitors cannot place their names or their initials on the animals or articles exhibited on penalty of being excluded from the competition; except however in the case of registration marks on sheep.

ART. 95. do.—It is the duty of the directors to arrange so that the judges be left entirely free from all influence in the performance of their duties, and every competitor or his representatives who speaks to the judges without being requested to do so, while they are engaged in the duties of their office, shall be excluded from the competition.

ART. 96. do.—Industrial, domestic and dairy products must have been manufactured in the county during the year by the competitor himself or by a member of his family or by some one under his direction.

ART. 97. do.—Animals entered for competition must be strongly tied and, if the directors require it, they may be

brought into a special ring, so that the judges may easily examine them. Owners of vicious bulls, stallions, &c., are responsible for the damages caused by their animals. Every animal left untied or placed in any other spot than that indicated by the directors shall be ruled out.

ART. 98. do.—Brood mares shall be accompanied by their foals, so as to enable the judges to more easily determine their qualities as such.

ART. 99. do.—Every female breeding animal must be with young or have brought forth during the year of the exhibition, except in the special classes of animals for slaughter.

ART. 100. do.—No castrated male can be entered for competition otherwise than in the class of fat cattle, except draught horses and oxen, for which special classes may be opened.

ART. 101. do.—The competitor who, at an exhibition or competition, obtains a prize by fraud, bribery or false pretence, shall be deprived by the directors of the prize he has obtained at such exhibition or competition, and of the right to enter in any competition.

ART. 102. do.—Every animal or article exhibited must remain on the grounds up to the hour specified by the directors.

ART. 103. HORSE RACING.—No horse-race or trotting-race shall be allowed on the grounds during county exhibitions, except for the purpose of ascertaining the qualities of stallions or mares competing for prizes for their progeny, and no moneys belonging to agricultural societies can be applied, either directly or indirectly, to the encouragement of such amusements.

ART. 104. ENTRANCE FEE TO EXHIBITION GROUNDS.—In counties where there are suitable and fenced in grounds for holding exhibitions, the directors shall have the right to exact from every person not a member of the society an entrance fee not exceeding twenty-five cents.

ART. 105. do.—The sums derived from such entrance and admission fees shall be paid into the funds of the society.

ART. 106.—DISPUTES.—Disputes arising during the competitions shall be settled by the directors.

ART. 107. INTOXICATING LIQUORS.—The sale of intoxicating liquors on the exhibition grounds is strictly forbidden.

PLUGHING MATCHES.

ART. 108.—The place where the ploughing matches are to be held shall be selected by the directors.

ART. 109. COMPETITORS.—Only members of the society, their sons and employees can compete at such ploughing matches. A member's card admits only one competitor and must be applied for at least eight days beforehand.

ART. 110. do.—Every competitor must plough at least two ridges.

CHAPTER VIII.

Competitors for the best cultivated farms held under the direction of agricultural societies.

ART. 111. In order that each of the members of agricultural societies in this Province may efficiently prepare himself to compete for the honours offered by the Provincial Competition of Agricultural Merit, a competition for the best cultivated farms shall be organized by each agricultural society, at least once in every five years, during the year preceding the Provincial Competition of Agricultural Merit for the region in which such societies are situated.

ART. 112. These competitions for the best cultivated farms shall be opened by the societies, either directly, by county competitions, or indirectly by separate competitions by parishes or townships.

ART. 113. In county competitions the societies shall offer not less than five prizes, viz: First prize, \$100.00, second prize, \$60.00; third prize, \$40.00; fourth prize, \$30.00; fifth prize, \$20.00. (See exceptions, clauses 116 and 117.)

ART. 114. Farms of fifty arpents and over under cultivation are admitted to the county, parish or township competitions.

ART. 115. No competitor in a county parish, or township competition can receive a money prize unless he gains at least 60 points on the maximum of 100 obtainable.

ART. 116. The societies may if they prefer, replace the county competitions for the best cultivated farms by parish or township competitions, on such conditions as the directors of the society may deem expedient, provided always that the total amount of the prizes offered be at least two hundred and fifty dollars for all the parishes and townships of the county.

ART. 117. In subdivisions of counties, the total amount of the prizes offered shall be proportionate to the total amount of the grant to which such subdivided societies are entitled; societies entitled to a maximum of four hundred and ten dollars net shall offer prizes to the total amount of one hundred and fifty-six dollars or over; societies entitled to a maximum of three hundred and twenty-eight dollars net shall give prizes to the total amount of one hundred and twenty-five dollars or over, and finally those entitled to a maximum of two hundred and five dollars net shall give prizes to the total amount of at least seventy-eight dollars.

ART. 118. Every member of an agricultural society who shall have paid a subscription of one dollar and a special additional entry-fee of two dollars before the first of May shall have the right to enter for the competition for best cultivated farms; and if he wins a prize in such competition he shall also have the right of free entry, the following year, to the Provincial Competition of Agricultural Merit, after complying with the regulations governing the latter competition.

ART. 119. For such competition for best cultivated farms the society shall select one or more impartial and competent judges who shall render judgment in accordance with the programme of the Competition of Agricultural Merit given in the next chapter.

ART. 120. The Secretary of the Council of Agriculture shall give free of charge, to the secretaries of the agricultural societies the blank forms required for all such competitions.

ART. 121. Agricultural societies of counties and subdivision of counties shall be obliged, at the same time as the competition for best cultivated farms, to open a special competition: 1. for the house-wife in each county or subdivision of a county who shall obtain from the same cow during the year the greatest quantity of butter or the equivalent of butter in milk; 2. for the house-wife in each county or subdivision of a county who obtains the greatest net revenue from her poultry.

ART. 122. The secretary-treasurers of societies shall receive the entries for the county, parish or township competitions and the report of the judge or judges appointed by the society for such competitions.

ART. 123. It is the duty of every agricultural society to have such reports copied into its books so that they may be preserved among the archives of the society.

ART. 124. The originals of the judges' reports and the entries of the competitors accompanying such reports, shall be sent to the secretary of the Council of Agriculture for the information of such Council and of the Commissioner.

CHAPTER IX.

REGULATIONS OF THE DEPARTMENT OF AGRICULTURE AND COLONIZATION FOR THE PROVINCIAL COMPETITION OF AGRICULTURAL MERIT.

TO FARMERS.

ART. 125. Such are the conditions of this competition, that no indolent farmer need hesitate to compete for far that his want of means should prevent him from contending with competitors more favoured in this respect than himself.

ART. 126. The Judges will have to distinguish as their principal duty, those who make the best of their farms, without exhausting them, at the least outlay compared with the net profit they derive from them.

ART. 127. True merit and industry, not wealth, will insure success.

ART. 128. A diploma and a silver medal will be awarded to those who obtain the degree of: *Very great Merit*, that is, 85 points out of 100 assigned to perfect cultivation;

ART. 129. A diploma and a bronze medal for the degree of *Great Merit*, i. e., 75 points out of 100;

ART. 130. A diploma for the degree of: *Merit*, i. e., 65 points out of the 100.

ART. 131. For the purposes of this competition, the province has been divided into five agricultural regions, and the competition will be held each year in turn, commencing with number one district and ending with number five.

ART. 132.—The first district comprises the following counties: Jacques-Cartier, Hoch Jaga, Laval, Two Mountains, Soulanges, Vaudreuil, and that part of the counties of Argenteuil and Terrebonne containing the parishes and townships not included in the Laurentides.

(The Provincial Competition of agricultural Merit was held in this district in 1890.—The next County Competition for best managed farms must be held in 1894.)

ART. 133.—The second district shall comprise the part of the Province south of the St. Lawrence and south of the counties of Nicolet, Arthabaska, Wolfe and Megantic. (This division comprises the following counties: Bagot, Beauharnois, Brome, Chambly, Chateauguay, Compton, Drummond, Huntingdon, Iberville, Laprairie, Missisquoi, Napierville, Richelieu, Richmond, Rouville, Shefford, Sherbrooke, Stanstead, St. Hyacinthe, St. John, Vercheres, and Yamaska, 22 counties and subdivisions);

(The Provincial competition of agricultural Merit shall be held in this district this year, 1891.—The next County Competition for best managed farms must be held in 1895.)

ART. 134.—The third district shall comprise the remainder, south of the St. Lawrence. This division comprises the following counties: Arthabaska, Beauce, Bellechasse, Bonaventure, Dorchester, Gaspé, Kamouraska, Lévis, L'Islet, Lotbinière, Mégantic, Montmagny, Nicolet, Rimouski, Témiscouata, and Wolfe, 16 counties);

(The Provincial Competition of agricultural Merit shall be held in this district in 1893. County Competitions for best managed farms must now be held, by all societies therein, this year, 1891.)

ART. 135.—The fourth district shall comprise all that portion north of the river St. Lawrence west of the county of Portneuf and not comprised in the first district (Montreal) already defined, Argenteuil (part of the Laurentides), Berthier, Champlain, Joliette, l'Assomption Maskinongé, Montcalm, Ottawa, Pontiac, St. Maurice, Terrebonne (part of the Laurentides), Three Rivers (12 counties and divisions);

(The Provincial Competition of agricultural Merit shall be held in this district in 1893. County Competitions for best managed farms must be held, by all societies therein, next year, 1892.)

ART. 136.—The fifth district shall comprise the county of Portneuf and the remainder of the Province north of the Saint Lawrence (Charlevoix, Chicoutimi, Lake Saint-John, Montmorency, Portneuf, Quebec and Saguenay, (7 counties):

(The Provincial Competition of agricultural Merit shall be held in this district in 1894. County Competitions for best managed farms must be held, by all societies therein, in 1893.)

COMPETITORS.

ART. 137. Shall be allowed to compete: those you have won prizes in any county or county division, or parish or township competitions for the best cultivated farms.

ART. 138. In all cases, the competitor must cultivate, whether as proprietor, or as tenant, or as farmer, a farm of which at least *sixty arpents* in superficies shall be under cultivation, whether in hay, pasture, garden-crops, vegetables, orchard, small fruits, &c., &c.

ENTRIES.

ART. 139. The entries must be made on or before the 1st of May of each year by the competitors on forms provided for that purpose by the Department of Agriculture. These blanks will contain a certain number of questions, for the information of the Judges, to which the competitors are requested to reply.

ART. 140. The competitors will forward their entries to the secretary of the Council of Agriculture on or before the 1st May and no entry will be received after that date.

PROGRAMME.

ART. 141. DETAILS OF THE COMPETITION, AND BASIS FOR THE APPORTIONMENT OF POINTS.

Points common to all competitors:

	Number of points.
1. System of cultivation best suited to the soil and circumstances	4
2. Division of the farm into fields.....	2
3. Fences	4
4. Destruction of weeds	3
5. House and buildings.....	9
6. Agricultural tools and implements.....	5
7. Manure	5
8. The greatest degree of order, of method and of carefulness, as exemplified by the working of the farm as a whole, and in the condition of each part individually.....	5
9. Accounts; expenditure and profit.....	3

Points, subject to modification according to the different cases.

- 10. Permanent improvements, in relation to the peculiar circumstances of each farm (the apportionment of these points is left to the discretion of the Judges) such as the clearing off and utilization of stones, levelling, straightening of water-courses, drainage and water-furrowing, ditches, cross-furrows, soil-improvements, such as : clay on sand and sand on clay soils, turf, ashes, &c., ploughing-in green-crops, shelter for cattle, plantations of forest-trees, for shelter and other purposes, condition of and improvements in the sugary, where there are maple-groves, economical and handy watering places, siloes, state of the roads on the competitor's farm, and any other profitable improvements..... 15
- 11. Live Stock, race, breed, quality, number, adaptation to the soil, climate, markets, and to other circumstances that should guide the intelligent farmer in his selection, (under this head are included horses, cattle, sheep, pigs, poultry, &c.)..... 15
- 12. State of cultivation of : grain, meadows, pastures, green-crops, hoed-crops, orchards, gardens, small-fruits, &c., (apportionment of these points is left to the discretion of the Judges.)..... 30

100

sible, if these specialities are well suited to the circumstances of the competitor, and are of such a nature as to assure him a genuine profit.

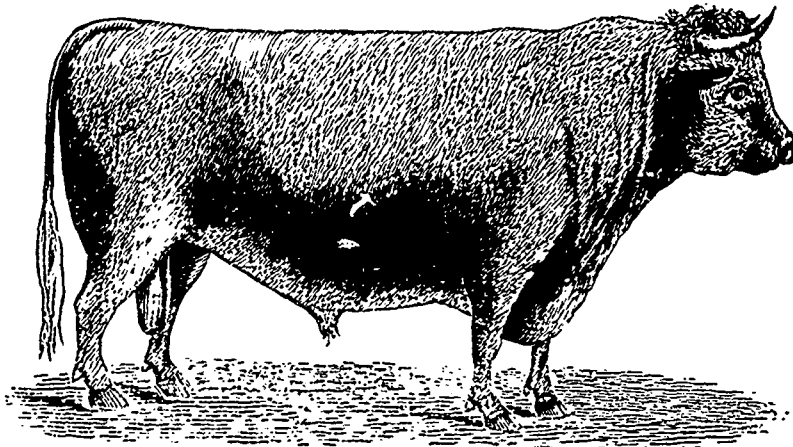
ART. 146.—The judges shall ascertain if every thing they are called upon to inspect on a farm, such as animals, implements, &c., really belongs to the farm in question, and forms part of its genuine stock.

ART. 147. WEEDS.—When the judges shall note any instance of serious negligence on the part of a competitor, in contending against the growth of weeds, not only shall they refuse to grant any of the points assigned in the programme to that item "Destruction of Weeds"; but, further more, they shall deduct a certain number of points, not exceeding five from the points given by them for other matters, and they shall make special mention of them in their report.

INSTRUCTIONS FOR COMPETITORS IN MAKING THEIR ENTRIES.

ART. 148.—The competitor shall give :

- (a) his name and Christian names in full ;
- (b) his place of residence, his parish or township, range or concession ;
- (c) his post office ;
- (d) the size of the farm, for which he desires to compete, i. s acreage and situation ;
- (e) its distance from the nearest railroad station or steamboat wharf ;



A MODEL DEXTER KERRY BULL.

OBSERVATIONS ON THE PROGRAMME.

ART. 142.—In their decisions, the Judges will be guided by the perfection of the cultivation, whatever may be the quality of the soil, the course of cropping, or the system of improvement pursued. They will endeavour to ascertain how far the competitor may serve, as a model or example, by the way in which he works his farm, without exhausting it, and at the least expense compared with the net profit he derives from it.

ART. 143.—In judging the buildings, the Judges shall begin with the farm-house, its situation, the precautions taken to secure its healthiness, drainage, ventilation, water supply, &c., &c.

ART. 144.—Not only shall the barn, the stables and cow-stalls, the piggery, sheep-shed, &c., be carefully inspected, but special attention shall be paid to the dairy, the poultry-house, the ice-house, &c. In this inspection, as well as in that of the farm implements and tools, the judges shall take particular notice of any improvement or useful novelty they may find, and give such a description of it in their report, that any one who chooses may make a trial of it and apply it to his own benefit, at home. At their discretion, the judges shall grant a number of points, in proportion to the importance of the said improvements and novelties, which points may be taken from the remainder of the points mentioned in the programme, not previously appropriated.

ART. 145.—In their apportionment of the points, the judges shall take into consideration, not only the more important operations of agriculture, but the details: butter, cheese, poultry-rearing, bees, domestic productions, &c.; and shall consider, as far as pos-

(f) he shall also state whether he occupies the said farm as owner, tenant or farmer and shall give the amount of the municipal valuation of the farm ;

(g) he shall give a detailed list of his stock kept and supported on the said farm for which he competes, mentioning the number of horses, colts, milch cows, butchers' beasts, bulls, young animals, sheep pigs, &c., showing, as far as possible, the breeds to which they belong.

(h) he shall state fully the system of cultivation he pursues.

(i) he shall state if he buys manure, and if so, how many one-horse loads a year ; or if he buys lime, plaster or other commercial fertilizers, how much and at what price.

(k) he shall give the quantities of the different grains, fodder, potatoes, vegetables, &c., he grew last year.

ART. 149.—The form of entry which will be sent to the competitors by the secretary of the Council of agriculture contains blanks in which replies to all these questions are to be entered. At first sight, they will appear too minute ; among others those about turkeys, ducks, geese, fowls, &c. ; but every good farmer knows the importance of these details, and when people consider, that, with a system of breeding so imperfect as ours now is, the exportation of eggs and poultry from Canada amounted in the year ending June 30th 1888 to two and a quarter million of dollars, it will be acknowledged that this is a detail which deserves serious consideration. It is not, then, exacting too much from any intelligent farmer to ask him to try and reply to those questions, as much for his own sake as to facilitate the task of the Judges.

ART. 150.—Competitors are requested to add to their answers a small plan or outline of the farm for which they intend to compete, showing its divisions or fields, with the dimensions of each, the situation of the buildings, the water-courses, ditches, &c. It is expected that this plan be drawn with the nicety of a surveyor; all that is required is an outline that any intelligent farmer, either himself, or with the help of his neighbours, can make at home.

Certified true copy of the General Regulations of the Council of Agriculture, as revised and codified at the special meeting of the 24th December last (1890).

(Signed), ED. A. BARNARD,
Secretary Council of Agriculture and
Director of the Journal of Agriculture
Quebec, 13th January, 1891.

Copy of the report of a committee of The Honourable 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 Dairy-men's Association.

The Hon. the Commissioner of Agriculture and Colonisation, in a memorandum, dated the twenty-third of January of the current

4 Of appointing a board of examiners for the examination of candidates for the office of inspectors, and of laying down regulations for the working of the said board;

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

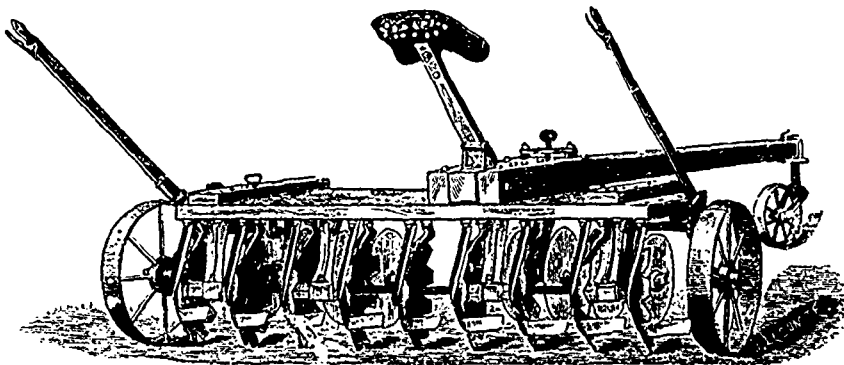
The said association constitutes, as follows, the programme of the formation and working of the syndicates, of their direction and superintendence, of the manner of conducting the proceedings of the board of examiners, and of the duties of the inspectors:

I

DIVISION OF THE PROVINCE.

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

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



CLARK'S CUTAWAY REVOLVING PLOW.

year, 1891, recommends that the regulations of the Dairy-men's Association of the Province of Quebec, a copy of which is annexed to the above memorandum, be approved.

Certified true copy.

(Signed) GUSTAVE GRENIER,
Clerk of the Executive Council.

REGULATIONS OF THE DAIRYMEN'S ASSOCIATION.

Whereas, by a law passed at the last session of the Legislature of the Province of Quebec, the Dairy-men'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;

No. of the division.

- Counties comprised in the division.
1. Gaspé, Bonaventure, Matane, Rimouski, Témiscouata.
 2. Kamouraska, L'Islet Montmagny, Bellechasse.
 3. Dorchester, Lévis, 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, Bromé, Missisquoi.
 11. Verchères, Chambly, Laprairie, Napierville.
 12. Beauharnois, Châteauguay.
 13. Huntingdon.
 14. Saguenay, Lac St. Jean, Chicoutimi, Charlevoix.
 15. Portneuf, Quebec, Montmorency.
 16. Three-Rivers, Champlain, St. Maurice, Maskinongé.
 17. Montcalm, Joliette, Berthier, L'Assomption.
 18. Hochelaga, Jacques-Cartier, Lava, Terrebonne, Deux-Montagnes.
 19. Argenteuil, Ottawa, Pontiac.
 20. Vaudreuil, Soulanges.

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 organise 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 the year following the issue of each number, it shall also contain general information in connection with the dairy-industry.
 - b. By means of the school-factory of the association, whose work shall be conducted with a view to the new organisation.
2. The superintendence of the syndicates shall be exercised by the association :
 - a. Through the Inspector-general and the inspectors of the syndicates, whose duties and office will be defined hereafter;
 - b. Through its ordinary officers as regards all private or public communications it may have to make to the representatives of the syndicates or to the representatives of the factories syndicated.
3. The association does not pretend to exercise any control over the interior management or 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 regular attention to the general keeping in order of the factories, and to the maintenance of cleanliness therein;
 - c. Good quality and uniformity in the products manufactured ;
 - d. A uniform system of book-keeping, sufficient to insure the exactness and integrity of the operations of the year which each factory will have to furnish to the association.

III

ORGANISATION AND WORKING OF THE SYNDICATES.

1. A syndicate shall be constituted by the associating together of creameries, cheese-factories, or other dairy-establishments to the number of not fewer than (15) fifteen, or more than (30) thirty, it shall have for its aim the spreading 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 Dairy-men'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 signature in duplicate of the proprietors or the representatives of the factories who wish to form themselves into a syndicate to a declaration, on a printed form, which shall be furnished by the association, and a duplicate of which shall be sent without delay to the secretary of the association, who shall acknowledge its receipt.
4. In each territorial division, syndicates composed exclusively of cheese-factories or of creameries, or of creameries and cheese-factories, may be established.
5. If in any division there be not found a sufficient number of factories whose representatives desire to form a syndicate, these

factories may agree with those of a 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 neighbouring division, provided that this permission hinder not the formation of a syndicate in the former division.

9. The representatives 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, purchases 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 this half do not exceed two hundred and fifty dollars (\$250.00) ; and the payment thereof shall only be made at the end of the dairy-season, after the report mentioned in the preceding article shall have been made to the association by the syndicate.

12. A subscription shall be paid by the proprietors, or by the representatives of each factory, to the 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 the 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 report shall not be made public except by consent of those therein interested.

IV

(I) 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 neighbouring factories, 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, all the instructions, therefore, he shall give, with the approbation of the association, are to be observed.
2. Before the opening of the season, or even during the season, if he see fit, or if he receive orders to that effect from the association, the Inspector-General shall call together the inspectors of syndicates, by groups, at the school-factory of the association, or at some other factory, and, keeping them there a few days, instruct them in their duties and in the best methods of manufacture.
3. After the opening of the season, the Inspector-General shall keep himself in communication with the inspectors of syndicates, by going at different times to pass two or three days alternately with each of them, to ascertain the efficiency of their services, their attention to instructions given, and the general good management 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 the 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, in proportion to his needs, with his assistance and advice, the inspector shall arrange his visits 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. This note-book shall be sent in to 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.

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 party or 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 chosen at the annual convention, or about that time.

2. 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 sufficient examination the board shall give a certificate of competence; this may state the degree of success obtained—pretty well, 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 each inspector who shall be guilty of a serious breach of the rules, or who, for any other grave cause, shall be considered unfitted to discharge his duties properly.

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

FARMER'S INSTITUTES.

FOR GOVERNOR HOARD'S DAIRYMAN—AN OPEN LETTER (1)

(1) *Hoard's Dairyman* is, unquestionably, the best authority on all matters pertaining to dairying, in America. The good work done by W. D. Hoard has been duly appreciated and he now fills, most ably—the Governorship of the State of Wisconsin. We recommend to our readers generally, *Hoard's Dairyman*—Weekly \$1 a year, address Hoard's Dairyman—Fort Atkinson, Wisconsin, U. S.

ED. A. BARNARD.

Retrospective.—I have just perused with care your excellent State Bulletin, signed by W. H. Morrisson, on Wisconsin Farmer's Institutes, in 1890. (1)

You will readily understand why I was not present, being some thousand miles away from the seat of battle. And yet,

(1) Address: W. H. Morrisson, Madison, Wis.—price 30c by mail—A most excellent book, of about 300 pages.

Governor Hoard knows how pleased I should have been to fight there and then, under his command.

However late these retrospective notes might appear, the subjects treated are all just as fresh and as opportune now as they were a year ago. Perhaps a little more airing out and stirring up of opinions through your most valuable *Dairyman*, may prove useful. [And through the *Journal* as well.

ED. A. B.]

Who started Farmer's Institutes in America? The Hon. C. E. Estabrook thinks he had the first thought of such work, in October 1884. Later on, through the able assistance of the regretted Hon. Hiram Smith, this useful first thought became a most bountiful reality. Hurrah! for Wisconsin.

Here, in Quebec, we are mighty slow people, with snow drifts some 25 feet high, often in winter, no exaggeration I assure you, and nearest neighbours to the North Pole. Of course, bringing farmers together would be a difficult enterprise, any way. Yet, early in 1870, the Hon. M. Joly de Lotbinière, then as now President of the Provincial Council of Agriculture, organised, with his official helpmates, a regular system of public meetings amongst farmers. They have been continued ever since. I am sure we have had some thousands of them, perhaps a hundred or more the first year, with really good large audiences, considering our bad winter roads. Bringing now 300 or more dairymen and farmers, from all parts of the province, to a three days Dairy Convention is a common matter and three regular sittings a day, from 9 A. M. to 11 P. M. are just sufficient to do a part of the work cut and dried in advance for such meetings. Shall we make it a week's sitting, is now in order, for future discussion amongst us. Have we had Farmer's Institutes and not known it, all that time? Possibly so; for we are here nearly all French Canucks, and know little of your English names for farmers' meetings.

However all this may be, blessed be those, like your revered, late Hon. Hiram Smith, good Governor Hoard, of Wisconsin, and many more, in America, who, through pure charity and thorough love of country, make it a life-study to improve agriculture, and enrich farmers.

Now, please let me roll up my sleeves, [*Rigid stanchions*] and pitch in. Dear Governor how you did pitch into that kindly disposed and thoroughly well meaning-distant relation of our common forefather, Adams (1) for his evident cruelty to animals. Well, he richly deserved it. I suppose rigid stanchions for all beasts, especially good milch-cows, must now be a thing of the past in the whole of your State, but more especially on the Wisconsin State Experimental farm? The stanchions, more especially the rigid, but all of them, deserve all the hard treatment you gave them. I hope that, by this time, they have all been cut up into kindling wood, for the preparation of warm soft cow food on the said experimental farm. Such moderate heat would, no doubt, have helped ventilation in many a nook and corner of those complicated manure-vaults and floor combined—unpatented, I hope—which Prof. Adams advocated at said meeting.

What a pity your excellent farm journal, Hoard's *Dairyman*, is not an illustrated publication. I would air out a drawing and plan of our modest stable arrangements, here in Quebec, just fitted to suit 98° in the shade, in summer, or 41° below zero, in winter. Of course, our cows do not give *much* rich milk in such extreme temperatures. Then they lie, all the year round on dry boards, without as much as one pound of litter, in all, in the twelve months. But remember, we are poor people, and besides, science tells us that good straw is exactly worth, for food, fully one half as much as the best of hay, weight for weight, in well balanced rations. What enlightened dairymen now a days, could afford to bed his cows, even his best, with a half bedding of good hay?

(1) L. H. Adams, Supt. Experimental Farm, Wisconsin.

But, I hear you ask, how much rich milk do you get out of your little Canadian cows, during the year? Well, we happen to have completed daily weighings, for the past year, on all of our stock. The cows weigh about 750 lbs. live weight. They have given from 7000 to 8000 lbs. each in twelve months, and the milk averaged 5% butter fat. Sir J. B. Laves, the world renowned Experimentalist, shows just such returns, for many years back, with considerable less fat in the milk, however, and with cows weighing 1200 lbs. each; therefore, consuming about a half more in daily rations than ours.—So much for long winters and cold Quebec.—Au revoir.

Quebec, January, 1891.

A. FRENCHMAN.

AERATION OF MILK.

During the session of November 27th, of the Dairymen's meeting at Sorel, Mr. McPherson reminded the convention that in order to obtain a greater yield from the milk, of superior quality, it should be aerated after it is drawn from the cow.—M. Dellicour, (a European, calling himself an Agricultural Engineer), asserted that aeration must be injurious to milk, since, during the mechanical movement it undergoes in the operation, the *microbes* existing in the circum-ambient air would get into it, and cause its deterioration. This opinion was contested briefly by M. Chapais, the assistant-commissioner of Dairy-industry, at Ottawa. I myself wished to raise an exhaustive discussion in opposition to this theoretical objection, which I hold to be utterly out of harmony with practice, but the time was too much taken up, so I promised the audience to treat the subject in the "*Journal d'Agriculture*."

According, then, to M. Dellicour, the aeration of milk is injurious to its quality, and, in order to give support to his opinion, he invokes the presence of our terrible enemies, the *microbes* and *bacilli*, which are always so ready to fly to the assistance of theorists in trouble. M. Dellicour will, I hope, pardon me, but I feel obliged to say that his opinion seems to me to have no serious foundation, and I will endeavour to the best of my ability to prove my assertion:

True, it is asserted, and pretty well proved, that the air is more or less peopled with microbes, in proportion to its purity; but, if these microbes always behaved as we are led to believe, the human race would very soon be completely poisoned. If microbes do exist in the air, oxygen also exists in it, and these interesting little animalcules do not like oxygen, which delightful gas is always ready to contend with our malevolent enemies the microbes, which cannot endure its presence, and always retreat before it, when it is not accompanied by mephitic, that is, stinking, gases. It is therefore clear that milk should only be aerated in places where the air is pure, and in that case, the beneficent oxygen gas which the milk seizes upon by affinity, will not dream of allowing the microbes to associate with it.

That aeration purifies milk no one can deny: our learned men say so in their writings publicly, and all thoughtful Canadian and other dairymen know it is so by experience. This purification is due solely to the introduction of the oxygen of the air.

M. Dellicour told us that he had read, very attentively, Mr. Lynch's book on "*Dairy-practice*." An interesting part of that book has certainly escaped him (1) for if he had noticed it, he would have never made the observation I complain of. This is what Mr. Lynch says on the aeration of milk:

"The aeration of milk, that is, its exposure to the air, by imparting oxygen to the milk prevents its deterioration. A thorough aeration will dissipate any bad smells that may have

(1) Mr. Dellicour's answer to this letter will be published in the March number of this Journal, and appears in the February number of the french edition.

Ed. A. B.

been absorbed by it. Atmospheric action, then, is most useful, but that atmosphere must be pure and healthy. When milk is defective, aëration, immediately, or as soon as possible, after milking, is essential, as in the case, for example, of a cow that is bulling, or that is feverish, or when she has been over-driven.

"The utility of aërating milk that has to be carried to some distance from the farm is indisputable."

Professor Robertson, the greatest Canadian authority, speaks thus on the subject :

"After straining, the milk must be aërated. Too often, the milk is poured into the can, just as it came from the cow, and left there. Hence flow the following results : 1. The nasty (1) animal flavour remains in it.—2. The germs of decomposition develop rapidly, and milk in this state is refractory to the influence of the rennet.

The peculiarity of the germs of fermentation is that they are peculiarly liable to develop in media where little or no free oxygen exists. When the aëration of milk, after it is drawn, is neglected, carbonic acid is formed, and this favours the development of microbes. Besides, if the patrons do not aërate their milk, it will require more of it to make a pound of cheese.

The aëration of milk seems to favour the action of certain ferments, which, without turning it sour, give it the necessary characteristic of ripeness. So true is this, that practice has proved that "cheddar-cheese cannot be made of perfect quality without the previous aëration of the milk."

This seems to be conclusive ; Mr. Robertson is not only a Professor but also a thoroughly practical man, and his opinion, like that of Mr. McPherson, is based on experience and not on some few experiments in the laboratory.

Lastly, Dr. Fleischman, in his incomparable treatise on Dairy-work, devotes the following lines to the aëration of milk :

The rapid cooling of milk after it is drawn from the cow, is not the only way of retarding its souring. We know that the lactic fermentation can be sensibly kept back by means of proper aëration. It is well ascertained that milk that has been put in contact with atmospheric air, will keep longer sweet than milk that has been kept in a close vessel. It has been asserted that oxygen acts on milk as a preservative. Under these conditions, we are satisfied of the great advantages presented by a thorough aëration of the milk, and we consider the apparatus made for that purpose of much practical utility. It is unnecessary to insist upon the air in which the process is carried on being perfectly pure.

Here, then, are opinions drawn from divers sources, and all positively in favour of the aëration of milk. Moreover, they are the opinions of practical as well as of learned men, who are always occupied in the search after the truth. In the face of such authorities, such theories as those of M. Dellicour fall from their own inherent weakness, and cannot be taken into serious consideration. (2)

It is undeniable that the aëration of milk assists its keeping quality, and favours the perfection of the butter and cheese made from it. I say no more on the subject : experience is sufficient to prove the correctness of our opinion.

(From the French.) E. MACCARTHY, C. I.

North Lanark Farmers' Institute.

At the Farmers' Institute meeting which was held at Lanark on Tuesday, Prof. Shaw spoke in the morning on the

(1) But is there really any nasty animal flavour in pure, clean milk ?

Ed. A. B.

(2) Mr Dellicour's views on *Aeration of milk* will be published in Annual Report (1891) of the P. of Q. Dairymen's Association.

Ed. A. B.

growing of rape. He thought there was a wide future for the cultivation of rape in Ontario. It will grow on any soil that will produce roots well. Fifty-four acres of rape were grown at the Guelph farm last year. The ground was sown to rye in the fall. One portion of this was pastured, the balance of it was cut and put into the silo. The ground was then ploughed and put into drills twenty-two inches apart, and the rape was put down with the turnip drill at the rate of one pound of seed per acre. The rape was then cultivated much after the fashion of turnips. The cultivation did not cease until the tops had met. The rape was also hand hoed twice. One man went over two acres a day the first hoeing, and three acres a day the second hoeing. The rape was a very fine crop. It answered the purpose of cleaning land just as well as a summer-fallow. Two crops were therefore grown on that land during the year, and the land was thoroughly cleaned at the same time. Most of the lambs fed upon this rape were bought in the county of Lanark. They were fattened on the experimental farm at Guelph, and at a handsome profit they were then sold to go to Buffalo. The speaker thought rape could be grown in Lanark as well as at Guelph, as it was an excellent section for growing roots. He thought the farmers of Lanark should try raising these lambs so that they would get \$2.00 more per head for them than they were getting now.

As a Professor at the Ontario College of Agriculture has, as will be seen above, taken up the question of growing rape to be fed off by sheep, a question I have been working at practically, as well as in my contributions to this periodical, for the last twelve years, I suppose the subject will attract some attention at last. I beg to add to Mr. Shaw's deliverance that, though rape is all the better for being hoed by man and horse, broadcast sowing will answer well ; and in this province, where one man would hoe such a crop, ten would leave it untouched. A. R. J. F.

MEDALS AND DIPLOMAS.

AWARDED TO FARMERS IN THE PROVINCE OF QUEBEC FOR WELL KEPT FARMS.

The Lieutenant-Governor has, through the recommendation of the Minister of Agriculture and Colonization, awarded medals to the following persons for having the best kept farms, as shown in the recent Provincial competitions. Gold medal highest award, Mr. Charles Champagne, St. Eustache.

Silver medals to James Drummond, Petite Côte ; Mrs. George Kydd, of the same place ; John Nesbitt, Côte de la Visitation ; George Irving, Pointe-aux-Trembles ; Archibald Oswald, Belle-Rivière ; Thomas A. Trenholme, Notre Dame de Grâce.

Bronze medals to Ovide Valiquette, Terrebonne ; Hormidas Hotte, Saint Martin ; David Morrin, Lachute ; Joseph Lortie, Sainte Justine ; James Hodge, Saint Laurent ; Jean Bte. Deslauriers, Valois.

Diplomas of distinguished merit to Chas. Champagne, Saint Eustache ; James Drummond, Petite Côte ; John Nesbitt, Côte de la Visitation ; Madame Geo. Kydd, Petite Côte ; George Irving, Pointe aux Trembles ; Archibald Oswald, Belle Rivière ; Thomas A. Trenholme, Notre Dame de Grâce.

Diploma of great merit to Ovide Valiquette, Terrebonne ; Hormidas Hotte, St. Martin ; David Morin, Lachute ; Joseph Lortie, Ste. Justine ; James Hodge, St. Laurent ; Jean Baptiste Deslauriers, Valois ;

Diplomas of merit to Joseph Gadbois, sr., Terrebonne ; Ludger Thérien, Saint François de Sales ; F. X. Rocand, St. Vincent de Paul ; Elie Benoit, Sainte Anne des Plaines ; Stanislas Auger, New Glasgow ; Wilfrid Ouimet, Sainte Rose ; John Doig, Lachute ; Thomas Dobbie, Lachute ; John Gordon,

Genoa; Nelson Albright, Saint Andrews; G. A. Barolay, Pointe Fortune; Antoine Bourbonnais Saint Polycarpe; Julien Bourbonnais, Saint Ignace; Victor Bourbonnais, Saint Polycarpe; William T. Hodge, Saint Laurent.

HOW TO DRIVE.

Most people think they know how to drive a horse or team of horses, but, as a matter of fact, few people really know how to drive, and few horses know how to be driven. The fault in both is want of training. No blame is to be attached to a horse for not knowing how to be driven. Bad driving, and wrong habits, resulting therefrom, render horses awkward and ungainly in their habits and appearance. Many horses that are perfectly gentle in the hands of good drivers become provoked and ill-tempered when drivers who cannot drive get hold of the reins. Not a few accidents occur in this way. Not long since, I was invited to take a ride with a friend who had recently bought a fine-looking, high-spirited horse. He thought he could drive, but he could not. We should have had a bad smash-up if I had not seized the reins at a critical moment. I was glad to get on *terra firma* again, safe and sound. I only regret that I did not frankly tell my friend that he needed to learn how to drive. I gave him some gentle, modest hints, but feared he thought me impertinent for so doing. I even asked leave to drive the horse a short distance, and found him as nice a driver as I would wish to handle. High-strung, but well-trained, knowing his business, and only needing a driver who knew how to manipulate the reins. I think my friend takes the *Witness*. If so, he will very likely have a suspicion to whom I refer. I will beg him not to be offended at what I have said, but to take the hint, and master the science and art of driving, so as to manage a truly magnificent horse in such a way as to show the fine points to the best advantage, and make it safe to ride behind him.

I have long meditated writing an article on the subject of driving, but having recently met with an illustrated one in that excellent weekly, *The Stock Growers' Journal* published at Miles City, Montana, I will make these few lines introductory to it, and bespeak for it not a perusal simply, but a careful study on the part of all who are desirous of knowing how to drive.

LINDENBANK.

There are various kinds of driving. The experienced and the inexperienced — the scientific and the unscientific — the graceful and the ungraceful. There are many ways of handling the reins, but only one right and proper way. Driving is a pleasure. It is very enjoyable to be bowling along behind

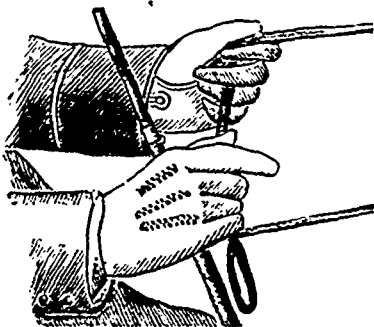


FIG 1—GOING STRAIGHT.

a spanking team, if you happen to be a good driver, and have thorough command of your horses. This, however, is almost impossible, unless you know how to handle the "ribbons."

For the benefit of the uninitiated, therefore, the following illustrations and directions have been compiled:

In driving you must hold your hands as in Fig 1, whether you have one horse or two:

You must appear to manage your steed without the slightest effect.

You must lean forward slightly in the seat, for nothing looks worse than to see a driver obliged to throw back his head if he pull up suddenly.

The hands should be about on a level in holding the reins. Hold the elbows easily, so that they will just clear the hips.

In turning to the right, the left hand holds the reins, and the right hand bears gently, as in Fig. 2.

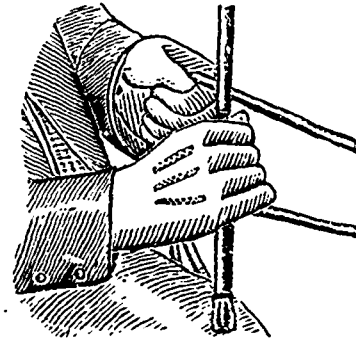


FIG. 2—TURNING TO THE RIGHT.

Hold your whip in your right hand always, upright. (1) But it is hardly ever to be used. Remember that. A spirited horse needs no urging beyond a touch, which is an indication of his master's will.

The whip is only to be used freely when the animal refuses to obey. And even then the horse is to be carefully examined to make sure nothing is wrong with it, making that the cause of the horse's fractiousness. Whip always in front of the pad, upon the foreleg or shoulder.

A pair of horses coupled too close to the pole will throw out their hind quarters when stopped suddenly. Both should be harnessed so that when the reins are crossed they will draw evenly.

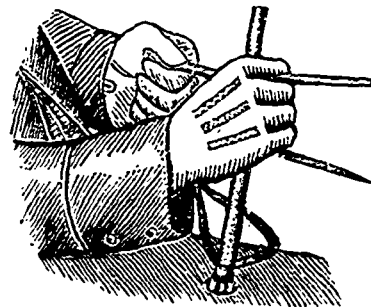


FIG. 3—TURNING TO THE LEFT.

When turning to the left advance your right hand and grasp the left-hand rein in the manner indicated in Fig. 3.

Hold the reins firmly enough at all times to keep them from slipping, yet lightly, so as not to pull on the horse and thus make him restive. Train your horse under all circumstances to wait until you tell him to go before starting. This is very important and will save you much annoyance, and perhaps your life.

(1) No: at an angle of about 45° across the reins. A. R. J. F.

When driving there must be no pulling and hauling first one side and then the other. A well broken, well-bitted horse needs as much pressure as is needful to keep his head straight and no more.

When you wish to stop your horse, do it in the manner

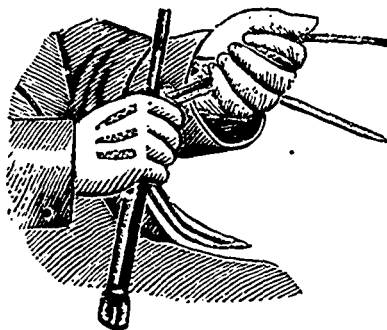


FIG. 4—STOPPING.

indicated in figure 4. There is no necessity of falling back with your feet in the air, or pulling your hands up to your eyes in the fashion of some drivers. Simply shorten up the reins with a turn of the wrist. (1)

ENSILAGE AND SWEDE TURNIPS.

I am anxious to increase my cows, am undecided as to building a silo, and would like advice. The earliest ensilage corn at present grown here will not "ear," and if some should form will not glaze, the yield being in the vicinity of 18 tons per acre. I can and do grow 18 to 19 tons per acre of Swede turnips at a cost of about 85c. per ton. Is a ton of ensilage made from corn as above described equal to a ton of Swede turnips for feeding milch cows kept for butter purposes? It appears to me that ensilage is popular only where turnips cannot be grown as successfully as here—600 to 800 bushels per acre, E. R. B. *Charlottetown, P. E. I.* [Indian corn when in full tassel, even before the kernel begins to form, has a greater nutritive value per ton than Swede turnips, and the question is not settled whether there is any increase in the aggregate amount of nutriment per ton of green corn, after it reaches the full tassel stage. We think that the maturing of the ear simply changes the form of nutriment, and what it gains in the ear it loses in the stalk, or that the aggregate amount of nutriment, per ton, is not increased. But B.'s question as to the comparative food value of Swede turnips and corn ensilage, at the stage of maturity he mentions, has been decided by numerous analyses in favor of the corn. Besides, one point does not seem to be considered by B., and that is the liability of Swede turnips to unfavorably affect the flavor of the milk, and butter. Yet it may be said that sour ensilage also affects the flavor of milk and butter. But why the ensilage is properly preserved it is sweet and not liable to this objection. Perhaps we may as well say here that a perfect remedy for the taint of milk, from feeding sour ensilage, and also Swede turnips, is found in heating the milk in a water bath, after being drawn to 135° F. The temperature fully dissipates any such taint, and may be applied to either case. We note the interesting statement of B. that Swede turnips can be raised on his island at 85c. per ton, which is an astonishingly low price, and must result from the lower price of labor with him.

(1) Two fingers always between the reins. Hardly one of the Montreal Tandem Club knows how to catch up his whip properly.

A. R. J. F.

This is as low a cost as ensilage can be raised and stored for in the United States, and it is no doubt considerably below the average cost of ensilage. We think that B. can rely upon the value and success of ensilage, siloed at the stage of maturity he mentions, and that it will be an important factor in increasing his milk and butter production. E. W. S.]

WEIGHT OF DUNG.

One cubic yard of well made and firm dung out of the middle of a dung heap would not weigh more than 15 cwt. We should be disposed to think that approximately 1½ yards would run to the ton. The firmest silage will only run about 56 lb. to the cubic foot, or 13½ cwt. to the yard; and we think that 15 cwt. to the cubic yard of dung is ample. Reliable and modern data are wanted, but the weight of a certain volume of dung must always be a very variable quantity.

THE FEDERAL EXPERIMENTAL FARMS,

By M. J. A. CHICQINE.

Mr. President,

From the very first organisation of the Dairymen's Association of the Province of Quebec, I have followed its labours with the greatest interest and the greatest benefit. The lectures and discussions which have distinguished its meetings, and which have been so opportunely published, constitute a new epoch in the diffusion of agricultural information in this country.

At this, the first time of my being present at any of its deliberations, I feel it my duty to congratulate the founders of the association on the patriotic enterprise they have undertaken; an enterprise which has been carried out with a devotion and success worthy of all praise.

In spite of my admission to your ranks only dating from yesterday, you have condescended to ask me to address you. Flattered as I, of course, am at this mark of your good will, I still am obliged to solicit your indulgence.

The subject I am about to treat is so vast, and embraces such a number of details, that it is difficult, not to say impossible, to find room in an ordinary lecture for a description in full of the *Experimental Farms of the Dominion* in all their importance and under all their different aspects.

These establishments, of quite recent creation, have already been so largely developed that it would take hours of talk were I only to sketch before you the operations of the Central Farm at Ottawa, the one that more specially concerns us.

My essay, then, will be limited to the pointing out of certain striking features, to tracing the chief points of interest to be met with, and to attracting your attention to a subject which I shall only skim over.

I am happy to think that in striving to extend the reputation of the Experimental Farm established in the suburbs of the Federal capital, for the common benefit of the two provinces of Ontario and Quebec, I shall meet with the approval of all the friends of progress, and more especially shall I second the intentions of the Hon. John Carling, Minister of Agriculture, who is particularly desirous of seeing our compatriots more interested in the object and organisation of this institution. Mr. Carling, during his long career as a public man, has always loved and favoured agriculture, and the Experimental Farm his now is most dearly loved work: to it he devotes not only his official attention, but also a great portion of his leisure.

Agriculture is essentially a matter of fact business, and

the further it is removed from the abstract methods of speculative science, the greater will be the benefits derived from it. (1) There is nothing positive or defined in the art of cultivating the soil: the various changes of climate and locality govern everything connected with it; the inconstancy of the elements, and the more or less mysterious caprices of nature, must all be reckoned with.

Experiments, then, must form the very basis of agricultural knowledge. All the progress heretofore accomplished is the fruit of experience, and if we wish to convince the farmer of the value of a new process or of the utility of any suggested improvement, we must refer him to the logic of facts and to the results obtained from them.

It is clear that the different discoveries in the art of agriculture are due to observation.

Before man learned the art of cultivating the soil, his life was that of a shepherd or grazer. The almost universal worship of the bovine race in the antique world shows that dairying is coeval with the creation.

Among the plants gathered for the food of their flocks and herds, the shepherds remarked some, the seeds of which, when scattered about round their cots, germinated and bore fruit. Hence, the first ray of light thrown upon the fact of reproduction from seed, followed quickly by the discovery of the nutritive value of cereals. Observing that the spots where their herds had rested were improved in fertility, they learned the value of manure. And so of the necessity of allowing land to lie fallow, as well as of the advantage of a rotation of crops; both of which were indicated from very early times by the evident poverty of land subjected to too frequent cropping.

Experimental agriculture, as long as it was left entirely in the hands of private persons, could only produce slow and partial results. More than one experimenter has been ruined by his love of progress, and statesmen have at last come to feel that it is the duty of the public authorities to bear the weight of this kind of investigation, so important is it to the nation. Now, in every country where agriculture is valued and held in honour, we see the creation of establishments devoted exclusively to the making of trials and experiments for the common good of the agricultural classes.

(To be continued.)

OUR ENGRAVINGS.

Dexter-Kerry Bull.—Of this animal, *Fascination* by name, the Mark Lane Express says: He is a model of his kind; a miniature Shorthorn in everything except colour. He is docile, and has every indication of propagating rich milking stock.

I never saw but one D. Kerry bull, and that was at Rougemont: he was *not* docile, but as wicked looking a devil as ever I saw with horns on.

Revolving plough.—I have rather a fancy for all new implements provided they are simple in construction and do not pretend to do half a dozen different things at once. Judging from the engraving, Clark's Cutaway Revolving Plough ought to break up the furrow for subsequent operations in grand style. But why call it a *plough*? *Cultivator* would be the proper name, but the American farmer is so anxious to run over a great deal of land at a very trifling expenditure of labour that the term *plough* applied to this implement will induce many to buy it imagining that outting up an inch or two of a stubble with it is all the cultivation required for the succeeding crop.

What says Mr. Wood Davis, a noted contributor to the Country Gentleman?

"In the other processes of wheat-growing, especially in

(1) Very good indeed!

A. R. J. F.

the West and in California, the saving of labour is very great, the land being ploughed with gangs of two, three, and four ploughs, turning furrows of from 24 to 42 inches."

The same gentleman expects, when two new implements he mentions are perfected—not later than 1893,—“to be able to prepare land, plant and cultivate corn, at an expenditure of $\frac{3}{10}$ of a day's work for each acre grown.

Can we wonder that the average wheat crop of the United States is so small, (11 bushels an acre) if this is the style of cultivation practised there?

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A person cured of Deafness and noises in the head of 23 year's standing by a Simple Remedy, will send a description of it FREE to any person who applies to NICHOLSON, 177, MacDougal Street, New York.

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MRS. WINSLOW'S SOOTHING SYRUP has been used by millions of mothers for children teething for over fifty years with perfect success. It relieves the little sufferer at once, produces natural, quiet sleep by freeing the child from pain, and the little cherub awakes as "bright as a button." It is very pleasant to taste, soothes the child, softens the gums, allays pain, relieves wind, regulates the bowels, and is the best known remedy for diarrhoea, whether arising from teething or other causes. Twenty-five cents a bottle.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES.

320 Powers' Block Rochester, N. Y.

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EXECUTIVE MANSION, SPRINGFIELD, ILL.

The elegant Concert Grand Piano, recently purchased of Messrs. William Knabe & Co., for the Executive Mansion, is proving satisfactory in every respect to myself and friends. It possesses great sweetness and evenness of tone, as well as volume and brilliancy—in fact, it is all that can be desired in such an instrument. Sincerely yours, MRS. J. W. FRER.

Messrs. William Knabe & Co. also supplied the White House and the Gubernatorial Mansion of Maryland, Pennsylvania, Virginia, Georgia and the Governor Generals of Canada with their magnificent instruments.