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REPORT OF THE SPECIAL COMMITTEE

of the Legislative Assembly of the Province of Quebec

TO WHOM WERE REFERRED

THE REPORT

OF THE

LOWER CANADA

AGRICULTURAL SOCIETY;

AND, *H. 119*

THE SPECIAL REPORT OF THE AGRICULTURAL
SOCIETY OF THE COUNTY OF BEAUHARNOIS.

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Printed by Order of the Legislative Assembly.  
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QUEBEC:
PRINTED BY ROLLO CAMPBELL,
GARDEN STREET.

1852.

REPORT.

(Translation.)

THE Special Committee, to whom were referred the Annual Report of the Lower Canada Agricultural Society, and the Special Report of the Agricultural Society of the County of Beauharnois, have the Honor to Report, as follows :—

In conformity with the order of reference of your Honorable House, your Committee have examined, with all the care which the subject demands, the Report of the Lower Canada Agricultural Society, and the Special Report of the Agricultural Society of the County of Beauharnois.

Your Committee have understood with great satisfaction, that the publication in French and English, supported by the Society of Lower Canada, and known as “The Agricultural Journal,” is going on prosperously, and has a wide circulation.

The Agricultural Society of Lower Canada has set on foot an inquiry, the object of which is the solution of some interesting problems in practical Agriculture in Lower Canada ; and your Committee invite the attention of your Honorable House to the documents resulting from that inquiry, annexed to this Report.

Your Committee do not stay to consider the several questions which the Lower Canada Agricultural Society have proposed in the inquiry of which mention has been made, and which especially relate to the practice of Agriculture ; Your Committee feeling bound to attend more particularly to that part of the Report which indicates the legislative measures to be adopted for the advancement of Agriculture, and the diffusion of scientific facts and principles connected therewith.

The Special Report emanating from the Agricultural Society of the County of Beauharnois, strengthens the consolatory opinion held by your Committee, that Agriculture, as a science and as a pursuit, is making regular and rapid progress.

Your Committee consider it a duty to remark, that it is desirable that each County should make a special annual return, on the plan of the Report made by the Society of Beauharnois; but they must also remark, that it would be desirable that such documents should be entirely free from sectional prejudices, and sectional feelings.

Your Committee regret the colouring given to certain parts of the Report of the County of Beauharnois, particularly to that part of the Report in which allusion is made to the holidays (*fêtes d'obligation*) observed by Catholics; an allusion the more particularly unreasonable and misplaced, as it is the less probable that the Legislature will, by any act of their body, oblige Catholic farmers to labor on those days which are, by their Church, consecrated to the worship of the Creator.

Your Committee having in view the Report made last year to your Honorable House, and the documents annexed thereto, as well as the Appendix to the present Report, will confine its own action to the furnishing of the rough draught of a measure, which your Committee think it their duty to recommend to be adopted by the Legislature, as the best means to be taken at present for the encouragement of Agriculture, in a country which, (we cannot repeat it too often,) nature has especially created for agricultural purposes.

Your Committee recommends therefore, the appointment of two Superintendents of Agriculture for Lower Canada: one, for the united Districts of Quebec, Three Rivers, and Gaspé; the other, for the united Districts of Montreal and St. Francis; whose duties should be as follows:—

1. To visit their respective Districts once in the year.
2. To draw up an Annual Report of such visit within their territorial limits, which Report should comprise, among other matters, a description of the different soils,—the fertilizing matters appropriate to each,—a description

of the accidental changes to which the surface of each is subject,—of their natural aspect,—their condition in respect of drainage, clearing and cultivation,—the fertilizing matters which nature has provided in proximity to the hand of the cultivator, and the remedies which are applicable to the prevailing defects of the system.

3. To attend carefully to the proper organization and management of the Exhibitions hereafter mentioned; to audit the accounts of the different Societies of which they will, *ex officio*, be members; and the natural advisers, within the limits of their Districts.

4. To provide that there be one Society for Exhibition of Agricultural Products in each County; and in their Annual Reports, to give a detailed account of the affairs of each of their Societies, within the limits of their respective Districts.

5. To take care that each Common School is furnished with an Elementary Treatise on Agriculture.

6. In the course of their annual visitation, to give public lectures on Agriculture, at least one in each County.

7. As far as may be practicable, to be present at the several Agricultural Exhibitions of the County Societies.

The Superintendents will thus, it is plain, form the executive branch of the system recommended, and will, moreover, form the didactic body; the only one to be hoped for in the present state of affairs. The importance of such Exhibitions, as the Superintendents are to be bound to hold annually, is felt so forcibly in New Brunswick, that the Legislature of that Province, has considered it a duty to procure such an examination of its territory, to be made by the celebrated Professor Johnson, whose Report on that subject has given a new impulse to Agriculture.

It will be easily imagined, moreover, that the presence of the Superintendents, and their advice, will be powerful auxiliaries to those who aim at awakening the people from their apathy, and directing their steps in the road to improvement and reform. The Reports of the Superintendents will be the criterion of the state of Agriculture in the different Counties; and of the relative progress of different localities, in the production of grain and roots,

in the rearing of cattle, and in the various other branches of Agricultural industry. These Superintendents will, moreover, be the natural counsellors of the different Societies; and their office will be one of reference, where every person may obtain useful and needful information; as, where to procure an implement perfect of its kind, an animal of a eligible breed, or seeds of a superior quality.

Without dilating on the importance of this preliminary means of forwarding the progress of Agriculture in Lower Canada, your Committee passes on to the second step, which is the organization of Agricultural Exhibitions, of the nature of those which now exist, but with important modifications. Taking into consideration the increase of expense caused by the creation of two offices, and the publication of an Elementary Treatise, as above recommended, your Committee propose to reduce to £4,000, the sum now granted for Agricultural Exhibitions; which sum shall be annually placed at the disposal of the two Superintendents, who shall meet at Quebec, to share that sum among the different Counties, in due proportion to the population and extent of land, owned in each County; the population being taken as five, and the number of acres of land as one. In order to become entitled to a share of this grant, each County must form an Agricultural Society, composed of at least twenty-five members, subscribers of at least five shillings each; such Society shall elect, annually, a Board of seven Directors, of whom one shall be Chairman and another Secretary, which last shall have the management of the business and the funds of the Society. These Societies shall be bound to hold one or two Exhibitions in the year, of produce and animals, according to the present custom in Lower Canada; at which Exhibitions, prizes shall be awarded to the best productions, in such manner as may be ordered by the Board of Directors, of which due notice shall be given in every Parish in the County. The prizes so awarded, may be distributed in money, in books on Agriculture, in improved implements of field labor, or in superior kinds of seed. Counties which are of too great extent to derive the proposed advantages from a single Society, may form two, and share between them the sum belonging to the County,

conditionally, that each Society shall consist of twenty-five members, at the least, in each division. Competition for the prizes awarded at these Exhibitions, should be open to all the inhabitants of the County, in which the Exhibition is held.

Whenever a Society, or the Board of Directors of a County, or of the Division of a County, may consider the system of Exhibitions ought to be changed for some other, and that the Government grant, and the subscriptions, forming the aggregate fund at their disposal, might be more beneficially employed by being applied to the establishment of Model Farms, or Agricultural Schools, or in any other way or manner whatever; they may appropriate the funds to such purposes as they may deem expedient, provided that notice thereof shall have been previously given to, and consultation thereupon previously had with the Superintendent of their District.

Whenever it happens that a County Society is able, from the Government grant and its subscriptions, to form a fund amounting to £150 and more, such Society may cause Exhibitions to be holden in each Parish, if they appear likely to be beneficial.

Every County Society, or County Division Society, should be bound to transmit to the Legislature every year, a Special Report of its proceedings, and of the state of Agriculture in the County; and to the Superintendent of the District, an account of the Exhibitions, and of the application of the funds.

In recommending that your Honorable House, should confer on the County Societies, the right of regulating and disposing of the funds entrusted to them, and grant them the greatest possible latitude in the choice of the means to be employed for the improvement and prosperity of Agriculture, Your Committee aim at reconciling the conflicting opinions held by the public, concerning the efficacy of the various methods by which the farmers of Canada may be stimulated and encouraged. Your Committee have reason to believe that in so acting, you will see all the causes of dissatisfaction, now so rife, removed from the different Counties or Agricultural Societies. The obligation imposed on those Societies to consult the Su-

perintendents, will be a useful check upon the ill-effects which might otherwise arise from such a system. Your Committee beg to refer to the Report of the Committee of last year, for the suggestions which it may be thought expedient to offer to the Directors of the several Societies.

Lastly, your Committee suggest to your Honorable House, as a means of diffusing a knowledge of Agricultural matters, that a prize of One Hundred Pounds, be offered for the best Elementary Treatise on Agriculture, which shall contain, in one small volume, all the practical precepts of a good system; such prize to be awarded and paid to the person who shall have produced the work which shall be declared the best, by three persons appointed as judges thereof, by the Governor in Council. Those persons meeting at Montreal, in the month of June, one thousand eight hundred and fifty-two, for the purpose of examining the different works offered by competitors, in such manner as may, after the passing of the Act here suggested, be appointed in virtue of a Proclamation of the Governor General, declaring the object of competition, and establishing rules to be observed in submitting the various productions.

The Treatise in question should be translated from the language in which it may be composed, published at the expense of the Province, and distributed to families and School-Corporations, in the proportion of 50,000 copies in French, and 12,000 in English; and such distribution should be made by the Superintendents, in proportion to the population of their Districts respectively, and according to the last general census then proceeding.

Your Committee have no doubt of the efficacy of the means here suggested, and consider that the enactment of a Law, based on them, would be hailed with delight by a vast majority of the inhabitants of Lower Canada. Your Committee do not pause to consider other means of encouraging Agriculture, particularly the adoption of Model Schools of Agriculture; finding, as they do, too great diversity of opinion in the public mind, and being moreover confined within the narrow bounds of the present grant of the Legislature.

On this point, your Committee consider themselves bound to declare to your Honorable House their opinion, that the present grant is insignificant, when considered in reference to the important object in view; and they trust that the Legislature of the Country will feel the necessity of augmenting the grant, both for Upper and Lower Canada.

The whole respectfully submitted.

(Signed,) J. C. TACHE',
Chairman.

D. M. ARMSTRONG,
T. BOUTILLIER,
A. J. DUCHESNAY,
L. S. LACOSTE,
J. McCONNELL,
J. S. SANBORN,

August 12th, 1851.



APPENDIX.

TO the Honorable the Knights and Citizens, composing the Commons of Canada, in Provincial Parliament assembled, &c., &c., &c.

Annual Report of the Lower Canada Agricultural Society to the Provincial Parliament.

The Directors of the Lower Canada Agricultural Society have the honor of submitting the following Annual Report:—

I. Since their last Report to the Provincial Parliament, in one thousand eight hundred and fifty, the Directors of the Lower Canada Agricultural Society, more and more impressed with the necessity, as it regards this section of the Province, of making important improvements in its system of Agriculture, have devoted their attention and efforts to the discovery of the most practical and advantageous means of attaining that end. They have diligently sought to acquaint themselves with the wants of our agricultural population; and with the view of acquiring the largest possible amount of information on this subject, they have, in addition to their own private sources of information, availed themselves of the views and suggestions of persons of the greatest experience in these matters.

II. This, however, was not the limit which the Directors assigned to their inquiries. The object which the Lower Canada Agricultural Society contemplates, is not only to ascertain the condition of Agriculture in this part of the Province, but chiefly to suggest the most suitable methods of aiding the progress of the agricultural population, and of contributing to this end by publishing agricultural journals, public lectures, and other agencies which do not involve a greater expenditure than is warranted by the Society's resources.

III. The Directors of the Lower Canada Agricultural Society have also the satisfaction of being able to inform the Provincial Parliament, that they have succeeded in supporting their agricultural journals, both English and French ; that the circulation of these journals is not being diminished ; and that wood engravings have been added. The advantage of this publication cannot fail to strike every one conversant with agricultural pursuits. On this head, the Directors of this Society feel themselves bound to represent to the Provincial Parliament that they consider the publication of these journals of essential importance. They are organs of information to the agricultural population, by which the discoveries and inventions of others, as well as of the members of this Society, becomes known to all, and become the property of all. It is also by the attentive perusal of these journals that intelligent farmers learn to discern and adopt the most profitable methods of cultivating their lands. The Directors of the Society accordingly believe that it would be doing a great wrong to the agricultural population of Lower Canada, to suppress the publication of these two agricultural journals, which, moreover, are so suitably appreciated in the Report and remarks which accompanied it, furnished last year by a Special Committee of the Legislative Assembly.

IV. The Directors of the Lower Canada Agricultural Society felt it to be their duty, and what besides they owed in dutiful respect to the Legislature of the Country, to take into consideration and carefully to weigh the Report of the Special Committee of the Legislative Assembly ; for they do not doubt that the first deeply important step taken by the popular branch of the Parliament, will soon be followed by another, the consequence of which will be a gradually more enlightened and liberal legislation on this subject. And the Directors, after a careful examination of this Report, feel persuaded that they are consulting the interests of the Country by inviting, as they now respectfully do, the attention of the Legislature to the importance of the subject herein discussed ; and that they would be wanting in their duty to themselves and to their Country if, through indifference or apathy, they did not, so far as they could, supply our

Legislature with every information and suggestion on a subject of such vital importance.

V. The Directors of the Lower Canada Agricultural Society have reason to concur in the opinion expressed in the Report of the Special Committee of the Legislative Assembly, that the soil and climate of Lower Canada are unquestionably favorable for improved husbandry. They are also convinced that the rural population are industrious and intelligent; and yet, that with all these advantages the land does not yield more than a third of what it is capable of yielding. They do not hesitate to express their conviction that the cause of this is to be found in our bad system of culture, the chief defects of which are:—1st, the management of arable lands—the absence of a judicious rotation of crops suitable for the soil; 2ndly, the want of, or the improper application of manures which, however, is much more regarded by the farmers of the present day than was the case formerly: the third defect in our system of husbandry is, to use the words of the Committee's Report already alluded to, "the little care bestowed on the raising and management of cattle; then the defects of drainage in certain places; the little attention bestowed upon the meadow lands, and on the growth of plants for the support of the stock; and finally, the scarcity of agricultural implements of an improved description;" the superior advantage of which, the Directors of this Society are of opinion, is beginning to be felt more and more, in numerous localities.

VI. As regards the means to be recommended for remedying a system of farming so little advanced, the Directors of this Society are not entirely of the same opinion as the Special Committee of the Legislative Assembly; or rather, they do not think that the plan suggested should be adopted without some modifications, which they have now the honor to suggest, for the sole benefit of the agricultural population, as the Special Committee of the Legislative Assembly has already done with so much ability.

VII. They are then of opinion, to yield to the generally expressed desire in Lower Canada in this matter, that the County Agricultural Societies should be maintained, and

that prizes should be awarded more extensively than at present "for the best crops of vegetables for cattle," as the Special Committee so very properly suggests, "for the greatest quantity of manure, natural or otherwise, employed on land relatively to its extent; for the greatest quantity of compost created by labor; for the most productive meadow land, per acre; for the finest stock of cattle reared on the products of a farm in proportion to its extent."

VIII. The Directors of the Lower Canada Agricultural Society are of opinion, that besides prizes for the above mentioned important objects, there is one more necessary than them all, the influence of which would be most useful and advantageous to the Agriculture of Lower Canada. Reference is now being made to the expediency of granting one or more prizes for the best cultivated farms. This ought unquestionably to be the first and principal prize; for it often happens in Canada as elsewhere, that the farmer who obtains one, two, or three prizes for fat cattle, or for a sample of grain, has not the best cultivated farm in his parish. These prizes, accordingly, do not produce the result contemplated by the Legislature; whereas, on the contrary, suitable premiums attached to the best cultivated farms, would awaken among our agriculturists a spirit of emulation, which is very desirable we should possess and cherish.

IX. The Directors of the Lower Canada Agricultural Society, consulting the general interests of Agriculture, are of opinion that all persons whose occupation is Agriculture, should be permitted to compete for the different prizes. But they are also of opinion, that the prizes should not be awarded but to persons whose sole and exclusive occupation is Agriculture; the others should be honorably mentioned, and obtain certificates, *brevets* and diplomas, granted under the signature of the President of the Agricultural Society, or any other distinction and honor which the Society might think proper to award. They also consider it unsuitable that the same individual should receive more than one prize for any article of the same class of products, or for the same breed of animals, or for the best cultivated farm. In adopting these re-

strictions, an end would be put to that abuse of which many farmers complain—that of awarding all the prizes of an exhibition to a small number of privileged exhibitors ; but the best method, whereby this evil would be stopped, would be, in the judgment of these same Directors, to discontinue, in the selection of premiums, whatever can give countenance to these mercenary views. We should thus prevent the spirit of envy or opposition, making it be thought that covetousness is the only motive of certain competitors, and that certain individuals are privileged at these exhibitions. The Directors of the Lower Canada Agricultural Society are convinced that prizes in money greatly contribute to excite this passion of cupidity ; and they are of opinion that, to discontinue it as far as possible, they must suppress, in whole or in part, prizes in money, and substitute in their stead prizes in medals, books, and agricultural implements, which would be much more suitable and better adapted to serve the cause of Agriculture ; for, by this means, improved implements will come to be used under the eye of those for whom they are intended ; and the excellent suggestions, receipts, and recommendations treasured up in valuable Agricultural Treatises, would come to the knowledge of those who ought to profit by them, and who would doubtless make experiments which their reading of these Treatises would suggest. Nevertheless, the Directors of this Society would propose to leave to the discretion of the Judges of the Exhibition, the liberty of giving money instead of medals, implements, &c., to poor farmers, in whose case a small sum of money might be of great service.

X. After mature deliberation, the Directors of the Lower Canada Agricultural Society have come to the unanimous determination of suggesting to the Provincial Parliament, the suppression of District Exhibitions, which have by no means answered the purpose for which they were originated. They believe they can advisedly affirm that District Exhibitions being very often held irregularly, and without the requisite and necessary publicity, are of service to but a small number of persons who receive all the prizes, and that these exhibitions are generally but a

very mean and very poor exhibition of the products of the District.

XI. The Lower Canada Agricultural Society, comprising within the ends and objects of its institution those of obtaining correctly made out statistics, relative to the Agriculture of Lower Canada, and to the agriculturists themselves; the Directors of the Society suggest the advisableness of the Provincial Parliament legislating in such a manner, that the existing County Agricultural Societies shall make an annual report to the Lower Canada Agricultural Society; as this Society publishes two Agricultural journals, these Reports, drawn up with care, and a due regard to the Agricultural interests of the Country, would be inserted in these journals, and would thereby furnish this Society with the means of being exceedingly useful to the agricultural population, whose well being and wealth will constitute the general prosperity. The Legislature itself will then be in a more favorable condition for knowing the wants of the Country by the picture which will be presented to it of the improvements and growing prosperity of the farming population.

XII. The Lower Canada Agricultural Society highly estimate the importance to the Country of having, without delay, good Agricultural Schools and Model Farms, which appear to be much desired in all quarters. It is well aware what an impulse these establishments would give to Agriculture in Lower Canada; but it does not believe that the just and laudable desires of the people in this respect can immediately be fulfilled. It is decidedly of opinion that before establishing Agricultural Schools and Model Farms, in five of our Colleges and Schools, as proposed in the Report of the Special Committee of the Legislative Assembly, it would be of the greatest importance to form at once a sufficient number of competent Professors, who might fill, subsequently, the different Chairs of Agriculture in these Colleges and Schools, and superintend the Model Farms which would be attached to them with a view of attaining so desirable an object. The Directors of this Society suggest the nomination, as Professor, and with a salary remunerative of the services

of a man of first rate abilities, of a person perfectly qualified to instruct these Professors, who would afterwards fill chairs of Agriculture, and direct the Model Farms. They do not doubt that a course of two years, under such a master, would be amply sufficient to endow the Country with efficient Professors, and would be in a condition to appreciate the wants of our people. This scheme may possibly fail to secure the approval of several warm friends of Agriculture, who would like to see improvements more promptly effected ; but the Directors of this Society are convinced, that whoever will bestow on this subject the same degree of attention they have done, and will duly weigh the motives which influence them in suggesting this plan, will come to a similar conclusion. For it must be obvious to all, that nothing injures a project more than want of success from the moment of its coming into operation. And it may well be asked, what would our rural inhabitants think of a Professor who, while presenting himself to instruct the children of farmers, should not be in a condition to direct suitably, and with the necessary management, a farm to be a Model for all others ? It is necessary to say here, that these Professors ought to be sufficiently educated to give orderly instruction in Geology, Agricultural Chemistry, Botany, Veterinary Medicine, and other branches whose intimate relation to Agriculture is well known.

XIII. The Directors of this Society enter perfectly into the views of the Special Committee of the Legislative Assembly, who recommended the publication and circulation of practical treatises on Agriculture, and within the reach of our agricultural population. This is an excellent suggestion, whose importance this Society has long since felt, and to which its attention has frequently been directed during the last three years ; and it was to give it somewhat of a practical development that the agricultural journals have been set on foot. But now, however, thanks to the liberality of His Excellency Lord Elgin, a very excellent and brief pamphlet, from the pen of a practical farmer, is in circulation over the whole country, and is placed within the reach of all those who are devoted to the noble business of Agriculture.

This publication secures partly the end proposed by the Special Committee ; and the printing and extensive circulation of a convenient and appropriate analysis, in Lower Canada, of "The Agricultural Reader," which the Society intends publishing during the present year, will, in a great measure, meet the views of that Committee relative to the publication of elementary practical treatises on Agriculture. The Directors of the Lower Canada Agricultural Society cannot, nevertheless, but highly approve of the suggestions of the Committee of the Legislative Assembly on the subject of one or more prizes for the best elementary practical treatise on Agriculture. These prizes would no doubt have the effect of giving publicity to suggestions and recommendations of the highest interest, and of considerable importance in relation to agricultural concerns ; and every year furnishing a useful book for our country population, the publication of such treatise would not fail to throw new light on Agriculture in general.

XIV. The Directors of the Lower Canada Agricultural Society cannot but give their adhesion to the judicious employment of the sums voted annually for Agriculture, which the Special Committee of the Legislative Assembly recommend in their Report ; but as they believe that the interest of Agriculture require certain modifications which they suggest in the present Report, they have necessarily changed somewhat the arrangement which the Special Committee proposed. Thus, that the Agricultural Schools and Model Farms ought not to be established before the end of the two years devoted to the course for the education of competent Professors. The one thousand five hundred pounds which the Committee proposed to be voted every year, for the support of these Professors, will have amounted, at the end of that time, to the sum of three thousand pounds ; and to this last sum there may be added the further sum of one thousand four hundred pounds, being for two years' salary of the superintendents, at the rate of seven hundred pounds per annum, allowed for their time and travelling expenses, who probably will not be named until there shall have been Model Farms and Agricultural Schools

established ; they will thus arrive at a disposable fund of four thousand four hundred pounds. The Directors of the Society would suggest to grant from this sum, an annual salary of from four hundred pounds to five hundred pounds to the Professor appointed to qualify the teachers for our agricultural chairs ; also, to employ one thousand pounds in the purchase of implements, books and maps necessary for the Professor. This last sum should also cover the expense of salary, &c. In this manner, at the end of two years, there would remain a reserved sum of two thousand four hundred pounds, which would soon be equal to the expense of the first establishment of a Provincial Model School.

XV. And as the Lower Canada Agricultural Society has always enjoyed the distinction, from the very first, to be not only in name, but in reality and in fact, a Provincial institution in the strictest sense of that term, the Directors of the Society take this opportunity of declaring once more that their members have no personal or local interests to promote. They hope that the moral and social result of their labors has been felt in a salutary manner throughout the length and breadth of the land. It is allowed that in one respect, purely pecuniary, the place in which the Society holds its meetings ought to have, and in reality has, an advantage. But to establish a just compensation, the Directors of this Society suggest that in the arrangements to be made conformably to their recommendations, there be granted to other Districts and localities such advantages as shall be found just and desirable.

XVI. In a word, the occupancy of uncultivated lands has received the attention of the Directors of this Society, who think that the best means of colonizing this Country, is to continue the survey of the lands, and to open roads, which allow the laborer, the wood-cutter, and the clearer of untilled lands to settle wherever they think they shall be able to live honestly on the produce of the land which they shall render fruitful by their labor. It may, perhaps, be necessary also to legislate on the manner in which large proprietors are bound to sell, or to lease for cultivation, their extensive domains, and not to retard the

advancement of the country by retaining uncultivated lands of such vast extent.

XVII. The Directors of the Lower Canada Agricultural Society believe it is proper for them to call respectfully the attention of Your Honorable House to the Letters, Copies of which accompany the French version of this Report, and are annexed to it. They are answers to a series of questions, on the different branches of Agriculture, which this Society has thought fit to submit to persons who may be considered best informed on those important subjects. They will complete the answers made to the several questions which the Special Committee of the Legislative Assembly submitted last year along with their own Report. They cannot fail to be, in any case, a source of valuable information which, under the special care of Parliament and of the Lower Canada Agricultural Society, will no doubt redound to the general weal.

The whole respectfully submitted.

ALFRED PINSONEAULT,
President.

WILLIAM EVANS,
Secretary.

Montreal, May 20th, 1851.

OFFICE OF THE LOWER CANADA
AGRICULTURAL SOCIETY,

Montreal, April 13th, 1851.

SIR,

We have the honor to acquaint you, that the Directors of the Lower Canada Agricultural Society have "Resolved" to address the following "Queries" to gentlemen engaged in agricultural pursuits, and request answers to all or as many of them as you may be disposed to reply to. The object of the Directors is to obtain as much information as possible on these subjects from all parts of the Country, that the Society may have it in their power to make a useful Report to the Legislature next session. It is desirable that the "Queries" should be answered by the 20th April, instant:—

1st. What is the cause that a greater number of sheep are not raised in Lower Canada? Is the climate favorable to their propagation and keeping? Which breed or breeds would be the most suitable and profitable? Is the number of sheep augmenting or diminishing?

2nd. What is the most profitable mode of raising horses for the market? What breed of horses would sell to the best advantage? Would it be the pure Canadian breed, or the mixed breed?

3rd. What would be the most suitable and profitable method of raising neat cattle in Lower Canada? Can these animals be supported during the winter advantageously on straw alone? Would it be more profitable for farmers to sell their grain and hay, or to employ their produce in raising and fattening animals? If it would be more profitable to raise stock, what breed or breeds would be the best to raise, and upon what grounds is the preference founded? If breeding, generally, is found to be advantageous, what mode of culture should be adopted with that view and in connexion with it?

4th. Is it advantageous to keep milch cows? and which would be most profitable to make cheese or butter? What breed of cows do you conceive would be the best adapted and most profitable for the dairy? Which breed is the least expensive to keep? Would cheese making be profitable?

5th. Which are the most profitable breed or breeds of swine for Lower Canada, and what is the most profitable mode of raising and fattening them?

6th. What would be the best mode of keeping poultry? What breeds would be preferable? What food should they have which would be the most suitable and economical? Are they profitable to keep for market supply?

7th. Which would be the most suitable variety of wheat to sow in Lower Canada? Would the old white four months "*blé froment*" be suitable, and would it be safe from the fly? Do you know if the Black Sea wheat has degenerated in Canada; and if so, to what do you attribute this degeneracy? What means is there of restoring it to its original standard? What is your opinion of fall wheat? Can it be grown advantageously in Lower Canada, and if so, what is the best mode of culture for it? In some of the neighbouring States fall wheat is covered with branches before the winter sets in, in order to retain the snow upon the surface to prevent the frost from injuring the plants: Do you think the same means could be adopted advantageously in Lower Canada?

8th. Do you suppose that other grain crops should be cultivated in preference to wheat, and for what reason?

9th. Would you recommend the extensive culture of the potatoe; what variety would you prefer; and which particular varieties are least liable to disease; and what mode of cultivation do you find answered best for a crop?

10th. Do you think that turnips, mangel wurtzel, beets, carrots, and parsnips might be cultivated advantageously, and which would be the most productive and profitable?

11th. What variety of Indian corn would be the most profitable to cultivate; and would it be more profitable than the roots enumerated in the last query?

12th. What are the weeds prevalent in your part of the country? What means are taken to destroy them, and what would you suggest to get rid of them? Is summer fallow calculated to effect that object; and is it much practised; and if so, with what results?

13th. What other suggestions would you make upon the foregoing queries generally, or any other subject relative to Agricultural improvement.

We have the honor to be, Sir,

Your most obedient Servants,

ALFRED PINSONEAULT,

President.

A. MORIN,

A. FERRIE,

F. A. LAROCQUE,

H. L. LANGEVIN,

W. EVANS,

Secretary.

LETTERS.

DOON, 14th April, 1851.

GENTLEMEN,

I have the honor to acknowledge the receipt of a communication from you, requesting information and suggestions on agricultural subjects connected with Lower Canada.

I have had no experience in Agriculture in Lower Canada; but I am very willing to tender my humble opinion on agricultural subjects or pursuits, founded on my short experience with such pursuits in Canada West.

I will take the liberty of classifying my answers in the same manner as you do your queries:—

1st. I think that the climate of Canada is suitable for raising sheep, although the winters are long and severe. Sheep are liable to few diseases in Canada. Would recommend the Cheviot and Leicester breeds, as they are profitable for mutton, and yield a large fleece. Think these breeds are more profitable than smaller sheep, which yield finer wool, but much less of it, as the great quantity of wool enables the Cheviot and Leicester sheep to stand the Canadian winter well, and the woollen manufactures of Canada and the United States are, and will likely remain for some time to come, of the coarser qualities. The number of sheep in Canada West are increasing rapidly. Think that the manufacture of woollen goods, ere long, will form an important branch of the industry of Canada.

2nd. Would recommend a cross between the largest French Canadian and the larger Upper Canadian or American horse for general agricultural purposes. Would recommend breeding from large mares.

3rd. Would not recommend supporting cattle during winter on straw only. Would not recommend a farmer to sell hay or straw generally, unless he can get manure

in lieu, as it were, of the manure which said hay or straw might have been the means of producing, supposing he had fed the hay or straw to his own stock. Think that for beef cattle, a cross between the Durham and the common breed of the country is the best. For dairy or ordinary purposes a cross between the Devon or Ayrshire and the common Canadian is advisable. The common cow of the country is generally a good dairy cow, but it is small for feeding for beef. What is gained in beef from the Durham is lost in milk. Would recommend farmers in general in Canada not to turn their attention exclusively either to raising stock or grain, but to combine the two great branches of farm industry.

4th. Think that in general it would be profitable for Canadian farmers to make both butter and cheese, but would recommend most of their wives and daughters to take lessons in both these arts, as the greater part of both the butter and cheese made in Canada is not fit for keeping or for exportation.

5th, Think that the Berkshire is the best breed of pigs for Canada, as it has a better covering of hair which should enable it to stand the winter better than the Yorkshire breed; but if great care can be taken of the latter breed they will do very well. A cross between the two is a good breed. The Berkshire thrive best when fed at distilleries, as they are the more hardy. Pigs require care in breeding and raising the same as other farm stock. The keeping them dry and warm in winter is a great matter. No food will come amiss to a pig, and for that reason a few are always profitable about a farm.

6th. Unless farmers have the means of keeping poultry confined in a yard at some times of the year, say during seeding time, he had better not keep them. The most profitable way to feed poultry is to let them find their feed in the barn yard. Should think they would be profitable to raise in the vicinity of cities or towns. The dung from a poultry house is very valuable. The Polish hen is a good breed; it lays more eggs in a year than the common breed.

7th. Can give no advice about growing wheat in Lower Canada. For growing fall wheat in general, a cold wet

soil should be avoided. In the Huron District, in Canada West, a few years ago, spring wheat was the principal crops; but for two or three years last past the farmers have turned their attention almost exclusively to raising fall wheat, in consequence of the failure for several years in succession of their spring crops. The fall wheat yields a very good return for their labor, and is successful. Rust does more injury to the wheat in Canada West than anything else. It affects late rank wheat most. It is caused from a damp heavy state of the atmosphere, and is very injurious when it strikes the plant before the grain is pretty well filled. Would recommend farmers to cut their wheat before it becomes dead ripe, as the wheat will make brighter flour than if cut after becoming dead ripe; and there is not so much lost in harvesting, and the straw will make better feed for cattle. The Siberian spring wheat is the best spring wheat for milling.

8th. If wheat cannot be advantageously raised in Lower Canada, of course other kinds of grain, that yield well, should be cultivated. For instance, it surely would pay the Lower Canadian farmer to export barley to the United States or to Canada West during the present year, when it is being sold in the former country for over a dollar per bushel, and in the latter for between three and four shillings currency per bushel, provided they raised a surplus over what would be required for home consumption.

9th. Should think that it would be profitable to raise the potatoes or almost any useful root in Lower Canada, not only for the root itself, but the land by such culture is brought into good order for raising any grain crops.

10th. Think that turnips, mangel wurtzel, beets, carrots, and parsnips, might be cultivated to advantage in Lower Canada. For feeding to stock, should think the Swedish turnips most profitable.

11th. Not much acquainted with raising Indian corn.

12th. The most troublesome weeds to eradicate in Canada West are the pigeon weed and Canadian thistle. When land is very full of these noxious weeds a two year fallow is not too much to eradicate them. A summer fallow is sufficient to eradicate most weeds.

13th. Would suggest a rotation of crops. There are so many systems of cropping land, and so much depends on circumstances that it is difficult to advise generally. Would recommend Canadian farmers to pay more attention to taking care of the dung in the yard, and to get it ploughed into the land as soon as possible after being spread. Think that a great deal of land in Canada has been injured by taking too many crops of grain from it. When a farmer cannot get sufficient manure to keep his land in good heart, would recommend ploughing in green crops, such as clover, buckwheat, peas, &c., &c.

Would strongly recommend deep ploughing, as the roots require to get a considerable depth into the ground so as to enable the plants to withstand the great heat and drought of a Canadian summer.

Think that it would be economy to introduce double teams of horses in Lower Canada, instead of single horse-carts, sleighs, ploughs, harrows, &c. The horse-rake is a great labour-saving machine in making hay. Think that a greater variety of grass seeds might be advantageously introduced into Canada than merely clover and timothy.

Trusting that the foregoing will convince the Directors of the Lower Canada Agricultural Society that I have the will, if not the knowledge, to forward the interests of such a truly useful Society as you have the honor to manage,

I have the honor to be,

Gentlemen,

Your most obedient Servant,

(Signed,) **ROBERT FERRIE.**

To the Directors of the
Lower Canada Agricultural Society,
Montreal.

HATLEY, April 14th, 1851.

To Messrs. Hon. A. N. Morin, Hector L. Langevin,
Alfred Pinsoneault, Adam Ferrie, and
Frs. Ant. LaRocque.

GENTLEMEN,

I have the honor to acknowledge the receipt of your letter of the 3rd April, and in answer to the questions therein given, and submit the following answers:—

1st. The reason why a greater number of sheep are not raised in Lower Canada is, we have no market for the wool, and the market we have for the sheep is in the United States. Why we have no market for the wool is in consequence of our being supplied with British manufactures; therefore there is no inducement for men who possess capital sufficient for building woollen manufactories, to do so, being overstocked by that of the British. In my opinion the climate is as favorable for the propagation and keeping of sheep as any. I have had considerable experience in keeping sheep, and should prefer the Leicester ewe with Merino bucks. Sheep are diminishing in consequence of the want of encouragement in raising.

2nd. As to raising horses, great care should be taken to procure the best of stud horses. The best of brood mares are usually sent to market, whilst the more ordinary class are kept for breeding. The colts, the first year, should be kept well, with a sufficient quantity of good hay and a few roots; after that they may run with the cattle and sheep, and pick up the coarser fodder left by them. The English and Morgan horses are much admired, but I think the pure Canadian breed quite as profitable as any that can be raised.

3rd. Calves should be kept on the cow till they are three months old; after being weaned they should have a sufficient quantity of grass. In the winter each calf should be hid by itself, with a supply of good hay. These animals cannot be supported on straw unless it is cut and mixed with meal of some kind. It is more profitable for farmers to employ their produce in raising and fattening animals than to sell it. The short-horned Durhams are esteemed the highest among us at the present time. The

Devonshire and Ayrshire are excellent breeds which, I think, mixed with the short-horned Durham, are very good. In the localities contiguous to the market towns, perhaps the hay and grain might give the farmer as much money each year, if sold, as to employ it in raising stock; but should this process be followed up for any length of time, the farm would become exhausted and of little use. I think grain and hay can be more advantageously employed in fattening cattle than hay and root crops; but for calves and other young cattle, the root crops might be more advantageously used. Whenever grain is used in feeding either cattle or swine; it should be ground into meal.

4th. I think it profitable to keep milch cows, and make both butter and cheese; the former when the weather is cool enough to raise the cream, and the latter in that portion of the summer when the heat is too great to accomplish that object.

5th. Perhaps there cannot be found in the country a better breed of hogs than a cross of the grass-fed and Berkshire; for raising and fattening, give them peas and oats, three-fourths of the former and one-fourth of the latter, ground into meal, with the sour milk and whey from the dairy, and slops from the kitchen, and, if convenient, grass in the summer.

6th. For feeding poultry the coarse grains would be the best and least expensive food. As to feeding and raising for market, whether profitable or not I cannot say, as I am not acquainted with the market prices.

7th. I am not aware that the Black Sea wheat has degenerated in this portion of Lower Canada. The China and Tea wheat is considered the best with us. I think the climate too rugged and severe for the cultivation of winter wheat; however, all kinds of wheat as well as other grain should be sifted, to separate the large from the small kernels; the former only should be sown to prevent degeneration.

8th. The wheat has generally proved quite as profitable in this part of the country as coarse grains. I think any other crop, oats and peas, are the most profitable.

9th. Was it not for the rot, the potatoe crop is usually a very remunerating one ; but at present I would not recommend its cultivation to any great extent.

10th. I think it very doubtful that turnips, mangel wurtzel, beets, carrots, and parsnips, can be generally made a remunerating crop within Lower Canada.

11th. I think the Indian corn to be preferable to that of the root enumerated in the tenth paragraph of your letter ; and in consequence of the shortness of our seasons, and as this crop is often injured by early frost, I would prefer the earliest kind, say the small eight rowed, I think the best method of cultivating this crop, is to spread the manure upon the green sward, and after turning it carefully over, manure in the hill with hog manure. If the farmer has not a sufficient quantity of this manure he may increase it by previously throwing into the hog-yard or sty either horse manure or swamp muck, sometimes the application of plaster, at the time of the first hoeing, has an excellent effect.

12th. The most prevalent weeds are barweed, chicken weed, barn grass, and several other kinds, most of which might be destroyed by summer fallows ; but as this method of preparing crops is gone out of general use, and fall-ploughing taken its place, in consequence of the prevalent ideas that the summer fallow not only in its process exhausted the land nearly or quite as much as the growing of a crop, but leaves the land in a less favorable condition for a coming crop ; consequently the old method of hoeing or piling the manure in the yard to heat after being laid down, is the only means left for their destruction.

I have the honor to be,

Gentlemen,

Your most obedient and humble Servant,

(Signed,) SIMON BEANE.

PETITE COTE, 15th April, 1851.

SIR,

I beg to acknowledge the receipt of your letter of the 3rd instant, requesting answers to certain "Queries" on Agricultural matters, which I now give:—

1st. The climate of Lower Canada is well adapted for the rearing of sheep. I approve of the Leicester breed from their giving a good fleece of wool, coming early to maturity, and being kindly feeders. Have always found them a highly remunerative description of stock.

2nd. The raising of horses for market at present prices leaves a large return, as lots can be kept over winter on clover, hay and carrots, in high condition at small expense. I consider the cross betwixt the Canadian and Clydesdale the most valuable breed of horses, as they retain all the good qualities of the Canadian, at the same time that they are greatly superior in regard to size.

3rd. The keeping a dairy stock for the making of butter, with pigs of the Berkshire breed to consume the milk, I have found more profitable than the rearing of cattle for market. The Ayrshire cow is well adapted for the dairy, being hardy and a good milker. To keep cattle over winter advantageously, they would require to have a supply of roots along with their straw, and a sufficiency of corn and peas should be raised on the farm to fatten off the pigs; also, the wethers, and what cows that may not be found good milkers.

6th. I do not think the rearing of poultry for market is profitable; but for domestic use would recommend the Dorkings, they being good layers—a plump bird on the table—and their meat of a finer quality than that of the larger breeds.

7th. The potatoe is a most precarious root to cultivate. Have been most successful with the large early white variety, planted early on dry light soil manured the previous autumn. Turnips are also very uncertain, owing to the ravages of the fly; but the climate is most favorable for the culture of the mangel wurtzel and white field carrot; the former upon strong, and the latter upon light soil. A crop of six hundred bushels to the arpent being but an average yield; they can be safely stored in

large quantities if the root-houses are kept properly ventilated.

8th. The thistle is the weed most troublesome in this District. Summer fallow is very effectual for the cleaning of the land, but it is seldom practised.

9th. Upon a farm composed principally of light soil, have found stock more profitable than grain, which I grow merely as feed for the stock during winter; and for the purpose of renewing the meadows and pastures in seeding down the grass land, I sow more red clover than when the hay is intended for market; apply gypsum the first season, and cut when the clover is in bloom, which gives a heavy crop of a quality that sheep and colts thrive well upon, and have always a quantity of tares to cut green for the milk cows, when the pastures get dried up in midsummer.

I have the honor to be,

Sir,

Your obedient Servant,

(Signed,)

JOHN DODS.

To W. EVANS, Esquire,

Secretary,

Lower Canada Agricultural Society.

(Translation.)

D'AILLEBOUT, 15th April, 1851.

GENTLEMEN,

I have the honor to acknowledge the receipt of your letter of the 8th instant, requesting me to answer certain questions proposed by the Directors of the Agricultural Society of Lower Canada. I most sincerely regret that my limited acquaintance with the subject of the greater part of the questions submitted to me, prevents me from answering them in an efficient manner; for although I have been engaged in Agricultural pursuits since 1832, affairs of a different nature, to which I have been compelled to devote the greater part of my time, have prevented me from personally superintending the cultivation

of my property, and the attention I have been enabled to give it, has been so much divided, that I cannot pretend to a really practical knowledge of this important subject. In fact, seeing that I could not maintain constant watch over my lands, and fully convinced that being obliged to cultivate them by means of hired persons, left entirely to themselves, it was impossible to try any new systems; I have been contented to follow out the one most adapted to the means in hand, the custom of the country and the previous knowledge of the persons employed; science was altogether out of the question. I have, however, been always well pleased with the common system which, by introducing into it a few simple and inexpensive alterations, is sufficient to provide for a family, moderate in its wants, in a very satisfactory manner. Having concluded this preamble, I shall endeavour to answer in order the questions proposed to me.

1st. I see nothing which can operate to prevent the rearing of a larger number of sheep in this country, except the difficulty of providing pasturage in summer and forage sufficient for the winter. Grain crops principally being raised here, a sufficient quantity of land does not remain for pasture and hay to enable the farmer to increase his present stock. In general, each has a small flock of from 12 to 20, rarely exceeding 30 in number. Those furnish him with the wool requisite for the clothing of his family, and to make a small quantity of cloth for sale. The wool is seldom sold unwrought. I think the climate is favorable for the rearing of sheep, at least of small flocks, of the breeds generally kept in the country. A more succulent description of food than that generally employed, would be necessary to keep them in good condition. In winter, they are fed almost exclusively on pea straw, wheat or oat straw, sometimes a little chaff, and very rarely on hay. Our sheep are small, yielding from two to two and a half pounds of clean wool each, and a very small quantity of meat. I am of opinion that other breeds might be introduced with advantage; but at the present moment I know of very few persons who have endeavoured to procure them. As I have done no better than my neighbours, I am not in a position to in-

form you which would be the most desirable breeds; that would depend on the profit which might be made by them. Some kinds would produce more wool, others more flesh. As there are very few factories in the country, people would, perhaps, find it difficult, if they had much wool, to dispose of the surplus. It would also be necessary to ascertain whether the breeds producing the requisite wool could endure the climate, and whether or not the wool would be deteriorated by the severe cold of our winters. I am, however, convinced that it would be advantageous to improve the breed which we now have, or rather to introduce a more profitable one. I do not think that the number of sheep is much on the increase; it may keep pace with the increase of the population.

2nd. I do not know that I clearly comprehend the first part of this question. To rear horses successfully, it is, in the first place, necessary to provide them ample fodder, and to house them warmly in winter; and to sell them profitably they must be well-bred. Those of pure Canadian blood have become much more scarce than they were formerly. They are, in my opinion, more capable of enduring fatigue, more easy to keep, and less subject to sickness; and, accordingly, good horses of this description fetch good prices from our neighbours in the United States, who come every year for the purpose of buying them in large numbers. Our horses, crossed with the English or United States breed, are far handsomer animals, and much larger; but I am assured, nevertheless, that they do not command so high a price as the pure Canadian horses. One thing is certain, that for common use they have not all the good qualities which constitute the merit of the latter. Our inhabitants have very few means of improving the breed of their horses, owing to the difficulty of procuring good stallions; and it appears to me that the horses have degenerated for several years past; it would become, then, an important consideration to ascertain some means of preserving so useful a breed, which the high price obtained for them will shortly cause to disappear from the country. The only plan which I can devise to prevent that evil, is the establishment of stock-yards, at the ex-

pense of the Province, in the Districts of Quebec, Montreal, and Three Rivers, under the authority of the Provincial Agricultural Society, or otherwise, to which the inhabitants should have free access, and the use of the stables, on payment of a reasonable consideration, for the purpose of preserving the pure breed, which they might still possess, or improving that which might have degenerated in their possession. The increase of the horses raised in these stock-yards might be sold for the support of the establishments.

3rd. From the small experience I have had, and from the opinions of others which I have been enabled to collect, I do not believe that cattle could be raised for market with much advantage in the country. My reasons are, our long winters, the quantity of fodder that is necessary, and the low price they fetch. In our part of the country, that is to say, in the neighbourhood of my farm, an ox sells generally in the summer season at $1\frac{1}{2}$ d. or 2d. per pound, and in winter, at the market of L'Industrie, three leagues from here, at 1d. or $1\frac{1}{2}$ d. per pound. A milch cow, after having been wintered, sells from nine to twelve dollars. It is true, that the animals are small, and of the breed of the country. Cattle of improved breeds would, doubtless, command a higher price, but they would also cost more to feed, would be more difficult to rear, and would, I think, in the end, degenerate. Our cattle are fed during the winter on straw, very seldom on hay, except milch cows, to which a small quantity of hay is given in the spring, and accordingly, by that time they become very poor. The pasturage, the greater part of the time, is very bad, as it consists of the weeds which remain in the stubble of the grain gathered in the preceding year; our *habitans* not being accustomed to sow grass seed with their grain, and never converting their meadows into pasture. I have reason to believe that Canadian cattle, kept in good pasture through the summer, and fed on hay during the winter, would be considerably improved in quality, and would be more suitable for the climate; the cows, so treated, giving plenty of rich milk, yielding either butter or cheese.

4th. I do not know the names of the different breeds of pigs which are reared in the country, I have one myself which is a mixture of Chinese, Berkshire and those of the country. These are easy to keep in winter, and fatten rapidly; but they are generally small. I hear that Ohio pigs crossed with Berkshire, make a capital breed, which grow very large, and weigh 400 or 500 pounds each. In summer, we put our pigs out to grass, where they find sufficient food until the first hard frost. If they were turned into a clover field, they would continue fat the whole season. In winter, we feed them at a very small expense, with a mixture of half bran, half chaff, either of oats, millet, or linseed, hulls of peas, either soaked or what is better still, scalded. This description of food is sufficient until the grass is sprung. The very young pigs are fed with dry grain, either oats alone, or mixed with buck-wheat, barley or peas. They are fattened with oats, occasionally mixed with barley, buckwheat, or peas, and so ground. This is moistened either with greasy kitchen slops or with plain water. The best time to begin to fatten them in Lower Canada, when the necessary grain is to be had, is towards the middle of July, or at the beginning of August. They fatten much better, and much sooner when the weather is mild, than during severe cold, if there are no warm buildings to house them in. If the cold becomes very severe before they are fat enough, they must be fed with dry grain. The best descriptions of grain for this purpose, are peas, or Indian corn, when any is to be had.

5th. Having no experience on anything relating to poultry, I enclose you an article on the subject, prepared by my nephew, Mr. Louis Levesque, who has directed his attention to this branch of farming:—

“With regard to poultry, I should say, having some years’ experience, that the species of fowls called “hen-feather,” improved, is, perhaps, the kind best adapted to our country. The climate of Canada appears to agree very well with the constitution of this description of fowls. The henfeathers were brought to this country several years ago, as game cocks, and were for a long time preserved pure, that is to say, of their original size,

which is about four pounds and a half weight; when they became less rare, less care was taken of them, and they were allowed to cross with our common fowls. The result of this mixture of breeds, was most successful, their offspring gained considerably in weight, and after a few generations, and a little care, they almost bore a comparison with the Cochin Chinese cocks. We have some very fine specimens in this parish; one, I would instance, which measures thirty-three inches in height, and which would weigh in good condition, probably, nine or ten pounds. By crossing this breed with care and judgment, they might, I am of opinion, be reared to weigh eleven or twelve pounds, the greatest weight we could ever hope to give fowls in Canada. The henfeathers are able to support bad weather; getting their feathers in as short a time as our common chickens; a circumstance which ought to give them the preference over the Cochin Chinese, Shanghaes, and other Asiatic fowls. The hen is also as productive as that of any other breed in the country. The henfeather cock resembles a hen in shape and plumage, as its name implies; it may be very easily known, as it is altogether void of fringe on the back, and of sickle-shaped feathers at its tail; its colour is varied, but peculiar to itself. The female is difficult to distinguish from that of other breeds, only that it is heavier, considering its size, than the other species.

It is not more difficult to rear, than the common fowl—its food and wants being the same.

For fowls in general, I think that oats are the most economical for winter food; Indian corn may be used advantageously to fatten them. As regards rearing them for market, I cannot say whether it may be done profitably or not, never having made the experiment."

6th.—For a great many years they have ceased, in this neighbourhood, to sow the old fashioned *blé blanc*, or four months white wheat, on account of the attacks of the fly; and I do not believe that it can be protected from it. From that time, until the introduction of the Black Sea wheat, the kind most commonly sown, was the three months white wheat, a very poor substitute for that of four months. Since it was superseded by the Black Sea

wheat, I think that there has been but little, if any sown. The Black Sea wheat succeeded very well at first; but I think that it has degenerated, and no longer produces so much as at first. I do not know to what to attribute this, if not to the custom of always sowing the same grain on the same land; for it is well understood that, not only in vegetables, but also in the animal kingdom, repeated propagation between individuals of the same species deteriorates the quality of the offspring. The remedy in this case, would be to import some of the same wheat from abroad, or at all events, to procure it from a distance; so as to change the seed. With regard to fall wheat, I am thoroughly convinced, by my own experience, that it does not succeed in this part of Lower Canada. I have sown it for several years together, without success. It sometimes happens that in very favourable seasons, a tolerable crop may be obtained; nevertheless, this is so precarious, and happens so rarely, that the success does not repay the trouble. It is the spring frosts, after the departure of the snow, which, loosening the soil, expose the roots and destroy it. In very dry soils, perhaps, and in those which would not be subject to be turned up by the frost, it might succeed better. I have made the experiment in sandy soil, with some success, but such soil is not sufficiently strong, without the application of a considerable and expensive quality of manure, to authorise the expectation of a remunerating return. Without knowing the effect of covering the fall wheat with branches, before the commencement of the winter season, which, I am informed is done in some parts of the United States, I can say nothing about it: I am however sure of one thing, namely, that there would be great trouble in persuading our inhabitants to undertake it, even without taking into the account the difficulty of so burdensome and impracticable an operation in situations remote from the woods.

7th.—I think that in a great many cases, and especially on lands of superior quality, it would be advantageous to sow oats instead of wheat; particularly since we now find a profitable demand for them in the neighbouring United States.

8th.—I am decidedly of opinion, that the potatoe should not be extensively cultivated, because the disease which destroys the greater portion of them still exists. The kinds which our neighbours designate as the “red” and “yellow” potatoes, are large and yield abundantly; but they rot sooner than the white potatoes of the country, which, although small, keep better. These different kinds are grown for household use, and for cattle, without being excellent. The potatoe called “Pink-eye” is the best I know of for the table, and is less subject to disease than the preceding.

Experience has proved to me, that after taking up potatoes, before cellaring them, it is necessary to dry them in barns, or sheds, for at least fifteen days; taking care to shift them at certain intervals. I have heard it said that sprinkling the seed with powdered gypsum before planting, or with powdered charcoal, preserves them from disease. I have not myself tried these plans; but I have remarked that the measures which are so necessary to procure an abundant crop, are infallible means to make them rot, if carried to any extent.

I think that the best method of cultivating them, is to manure the land and plough in the autumn; and to repeat the ploughing in the spring before sowing.

9th. I have never sown turnips, except in new land; their cultivation is much more precarious than in old land, and as I have never seen the cultivation of them, nor that of beet-root, mangel wurtzel, carrots, or parsnips, extensively practised, I am incompetent to give an opinion on the subject.

10th.—Maize, or Indian corn, is cultivated to a much greater extent than formerly; and has succeeded very well; but I think it is sown much too thickly to be very productive. I should think that its cultivation would be preferable to that of the root crops enumerated in the preceding answer, inasmuch as Indian corn may be preserved without any difficulty; whereas roots require large cellars, and are liable to be spoiled in winter, especially turnips; I know that root crops improve the soil; whereas Indian corn has a contrary effect. I give my opinion,

however, with reserve, as it is not founded on practical knowledge.

11th.—The most common weeds with which I am acquainted in Lower Canada, are thistles, wild peas, mustard, Baston grass, buttercups, and the large and small daisy, many fields are ruined by what is termed twitch, or coach-grass, which is very difficult to eradicate. Live oats are very common in certain localities, likewise, a sort of *verge d'or*, known as “yellow rocket.” All these weeds are very detrimental to the growth of grain.

I have now answered the questions you have done me the honor of proposing to me ; and have done so, to the best of my knowledge ; without, however, any hope of having afforded any new information, by my remarks, on a subject which you doubtless understand much better than I do. I conclude then, without adding any thing further ;

I am, gentlemen,

Your very obedient Servant,

(Signed,) WM. BERCZY.

To Messrs. A. N. Morin, Alfred Pinsoneault,
Hector Langevin, Adam Ferrie,
and Wm. Evans.

(Translation.)

SAINT REMI, 15th April, 1851.

GENTLEMEN,

I have the honor to acknowledge the receipt of your letter of the 8th instant, and to answer to such of your questions, on agricultural matters, as lie within the scope of my ability.

1st.—The principal reason which prevents the rearing of a great number of sheep, appears to me, to be the small success obtained by the breeders. But the cause of this want of success seems to me to be, not, as many suppose, the rigour of the climate ; for experience shows, that a simple shelter is much preferable to a stable for sheep, and especially, to a stable that is too warm. What sheep suffer from, is not cold, against which nature has sufficiently protected them ; but a damp, and a malignant

scab, known in our country parts, as the "prurigo," which often seems to have no other source than the excessive heat of the stable. The sheep is easy to rear, eats very little, and although it prefers plants of the leguminous class before all others, yet some people give them, particularly the rams, no other food during the winter than wheaten or oaten straw. I consider the climate highly favorable to their propagation, and to their maintenance in good condition. The Canadian breed of sheep ought to be annihilated, for although sufficiently robust, it produces hair rather than wool. The farmers of this part of the country, are beginning to substitute for these degenerate breeds, others preferable, both for their size and for their fleece. These sheep are originally, either from the United Kingdom or the United States; but the crosses have caused their original characteristics to disappear to such a degree, as to make it difficult, even to a connoisseur, to tell to which of the three breeds their ancestors belonged. The death of a great number of lambs, in the spring, or rather at the end of the winter, is chiefly owing to the inclemency of the weather. This evil is easily remedied, by not giving the ram to the ewes before the beginning of November at the earliest; or at the time which will cause them to lamb at the beginning of April. Last year, I put the ram to my ewes on the 18th October, and I have only lost one lamb, and that by accident. I do not intend to admit him this year till about 15th December.

2nd.—Horses of the pure Canadian breed, undoubtedly command the highest prices in the American markets. This breed is considered the best adapted for all farm work, and would perhaps make the best travellers.

Unfortunately, this esteemed breed has nearly disappeared, owing to its mixture with other races. These crosses have certainly produced swifter and more elegant horses; but, at the same time, infinitely less robust.

3rd.—I have seen oxen and cows kept in good condition throughout the winter, merely with straw at the barn door. A sheep may be fed entirely on pea-straw. I am of opinion, that it is not only disadvantageous to the farmer to sell his grain and hay instead of making use of

it in rearing and fattening cattle ; but further, that this custom which might succeed for a time, especially on new land, is ultimately ruinous to the farmer. Lands, at first very productive, have so entirely lost their native fertility, that they have been abandoned, and have remained uncultivated, because their owners have neglected, almost altogether, the rearing of cattle, and have confined themselves to the production of grain crops, and, particularly, the bread-yielding kind. I have seen lands, which had become almost unproductive, by this process, gradually recover their former fertility, because the new proprietors applied themselves to the rearing of cattle. I may venture to assert, when we see a farmer who has made money otherwise than by usury, (one of the greatest evils of our country parts,) or on a new farm, by the cultivation of grain, we may confidently assert, that it is by the rearing of cattle that he has made it. If the farmer wishes to raise cattle for the butcher, he cannot, probably, choose a better breed of cows, than the "Durham," because this breed have the smallest bones and the largest amount of flesh. If he intends specially to make cheese or butter, I think he may be content with the Canadian cow, as being more hardy and less difficult to feed than imported breeds. The Canadian horse is, in my opinion, the best description to rear, both for farming purposes, and to sell to the Americans who hold them in particular esteem.

The farmer who proposes to attend, particularly, to the raising of cattle, ought to discontinue the cultivation of wheat, except for his own domestic use ; to sow a certain proportion of other grain ; to form natural or artificial meadows, and to sow a certain quantity of root crops, such as mangel wurtzel, rutabaga, and carrots, and not pasture his cattle in fallow lands, but in natural meadows, which have been properly laid down, and mown for a couple of years. He ought, especially, to do away with the ruinous fallow. But, especially, instead of dividing his land lengthwise, into two equal parts, as almost all the lands at present are in Lower Canada, he should divide it transversely, into several compartments or divisions, and to follow for each division a rotation of crops, adopted to

the nature of the soil. A division of this nature appears to me so essential to proper cultivation, that I do not see how we can hope for any striking improvement in our farming, before the great body of the farmers shall have adopted this system of division.

4th.—I consider it highly profitable to raise milch cows; and that the breed best suited, and most profitable, for dairy purposes, is the Canadian cow, that is, with our present system of cultivation. On an improved farm, however, where plentiful pasturage is to be had at all times of the year, some imported breed might be introduced with advantage; as, for instance, the Ayrshire.

5th.—Fall wheat has been grown for many years in this Parish, by farmers of English or American origin; but they have at last decided to abandon its cultivation. I am told that when it escapes the frost, it is much finer than any other species of wheat. The plan suggested of defending it from the effects of the frost, by covering it with branches, does not appear to have been adopted here. It is said, however, that the late frosts of the spring, more than those of winter, tend to destroy it. I conceive that the spring frosts would not have been so destructive to the fall wheat, if the soil had been thoroughly drained, and that the cause of its perishing has been the water, assisted by frost, and often, even the water alone. I am of opinion then, that by thoroughly draining the ground, in which fall wheat is sown, and covering it with branches, a new trial ought to be made, with a fair prospect of success.

8th.—I think that at all events, until an improved system of cultivation has been adopted, or until the sowing of wheat is limited to land which had been summer-fallowed, or had a double ploughing, wheat ought not to be our principal crop, as it now is. Of all our crops, wheat is, perhaps, that which, one year with another, yields the smallest return for the outlay. As a bread-yielding grain, it might be superseded, at least in such cases, by maize or Indian corn, and by buckwheat. This grain might be replaced, in a great measure, at least, by maize or Indian corn and buckwheat. Indian meal makes excellent bread, which, for

my part, I much prefer to the common bread. Buckwheat flour makes cakes, which are very palatable, if eaten while hot. If the produce of these two kinds of grain is uncertain, it is because they are sown too late in the season, especially the latter, which I have seen sown, in July. One reason, which confers on them a high value, is that they both aid in clearing the soil from weeds, and that buckwheat prepares it admirably for another crop.

I think that mangel wurtzel, Swedish turnips, carrots and parsnips, especially the two last mentioned, might be cultivated to advantage. The cultivation of turnips is very uncertain. I have never, among roots, found anything better adapted to feed milch cows than carrots.

10th.—The weeds which prevail in this part of the country, are chiefly the common thistle, coach-grass and a kind of grass, the roots of which are spreading, like those of the coach-grass, and which is commonly called "twitch." By laying down a field in grass, and mowing it for two or three years consecutively, thistles may be destroyed. Last year, I sowed buckwheat very thick, about three-fourth of a minot to the arpent, on a piece of land so covered with thistles, that I could not venture on it any other kind of grain. The buckwheat almost completely choked the thistles, and the few that did appear, were weak, and did not grow to seed. If I had cleared it once of thistles, they would have entirely disappeared. However, I am not sure that they will not come up again this year among the oats with which I shall sow the field; but have not the least doubt, that by repeating the buckwheat a year or two, I should entirely eradicate the thistles. Cleaning crops are the most usual method, seldom used however, of destroying coach-grass or twitch. Summer fallow-ploughing would be more expeditious, more sure, and a less expensive plan. I have sometimes witnessed wonderful results from summer fallow-ploughing; it is very little in use, however, in the neighborhood of Saint Remi.

These are the answers which my imperfect knowledge of the theory and practice of Agriculture permit me to offer to the Directors of the Lower Canada Agricultural Society. If they do not find in the preceding remarks,

anything new with regard to the noble art which they are striving to perfect in this country with so much zeal, I flatter myself that they will be, at all events, convinced of my endeavour to respond to the honor they have done me, and of the profound respect which is felt for them, and particularly for yourselves, by,

Gentlemen,

Your very humble, and obdt. Servant,

(Signed,) J. PHE. BOUCHER BELLEVILLE.

Alfred Pinsoncault, Esq., President ;

Hon. A. N. Morin, F. A. Larocque, Esq.,

H. L. Langevin, Esq.,

Wm. Evans, Esq., Secretary.

QUEBEC, April, 17th, 1851.

GENTLEMEN,

I have the honor to acknowledge the receipt of your letter of the third instant, containing thirteen queries on the subject of Agriculture, to which you require replies ; I am afraid however, even with the assistance of some of our most experienced farmers, I shall be able only to give you a small portion of the desired information.

1st. SHEEP.—I should say the climate is the real obstacle to the profitable raising of sheep, the expense of manufacturing wool and mutton for market, is greater here than elsewhere, owing to the necessity of feeding sheep through our long winters ; the system also of eating off crops, cannot be practised here, as in more favoured countries.

Now, I do not find any set off against these disadvantages,—Canadian wool is no better than European or Australian,—and the population in Canada are not sufficiently gourmand, to pay a fancy price for food. I therefore think, sheep will be kept as long as home manufactures, with regard to woollen goods, are made cheaper than those which are imported ; but should the duty be taken off, or reduced, the value of sheep will decrease : the number of sheep will probably increase with the po-

pulation ; but Canada, in my opinion, can never be a sheep country. In the Townships, the number and quality of sheep are increasing, whilst, on the contrary, in the Seignories, they appear to be diminishing ; very good mutton is sold in this market, from the Township of Leeds ; the price varies from 4d. to 5d. per lb. The Leicester breed answers very well ; it is almost the only breed we know anything about, as far as Canada is concerned.

2nd. HORSES.—In Quebec, a good sound carriage horse, (16 hands, and 12 cwt.,) would bring from £60 to £70, and would always be saleable at £50 ; in fact, the Morgan breed, well known in the State of New York, is the sort of horse we want. I once saw an American mare, the property of the late Dr. Fargues, sell at public auction for £92 ; she was bought by a French Canadian gentleman ; there was nothing unusual about the mare. The Canadian breed, though very good for a settler or a small farmer, is not strong enough or sufficiently handsome to bring in a long price, unless he is a very fast trotter, and then he is bought on speculation to sell to the Americans. I should say a pure bred Canadian horse would be well sold at £25 or £30 ; and then no person would buy him but a carter or a stage-driver. The best Canadian horses are nearly always stallions, which is an objection. The mixed breed is decidedly preferable, if a farmer wants to make money. The Quebec market is principally supplied with horses from the neighborhood of Melbourne and Sherbrooke.

3rd. CATTLE.—I do not think cattle can be supported profitably on straw alone ; straw in conjunction with turnips, and other food is the best way of consuming it.

4th.—I cannot farm my land without manure ; if therefore I can buy manure at a cheaper rate, than I can make it, it is more profitable to sell immediately than to look to returns from beef. Quick returns are the making up of a farmer, as well as any other trader ; the same remark is applicable to cheese and butter. I can sell milk at 3d. a quart, and butter at 1s. a lb. Were I at a distance from market, I would make cheese ; if not profitable, I would rear calves and pigs ; but these are questions any farmer can ascertain, before he has been six months on his farm.

Situated as my farm is, three miles from Quebec : I sell everything, and buy manure, which I can do, delivered on the land at 1s. 8d. the load ; I have also a deposit of peat or bog, on the farm.

I like the Canadian cow very well, she will live like a goat, upon almost nothing ; and be worth about as much when dead.

Small beef does not sell well in Quebec ; for the shipping and the soldiers, a larger sized animal is required.

The Ayrshire cow, I think an improvement on the Canadian ; she is a very good milker, and weighs more for beef.

The Canadian cow, crossed with the Durham, will give much the same quality of cow as the Ayrshire. I have a Durham bull, four years old, weighing two thousand pounds ; his calves, out of Canadian cows, look very well, for one year old.

I prefer the Durham, or a cross from him ; for he puts on beef quicker than the other breeds ; their tempers are generally better than the Ayrshire. My cattle have been fed this winter upon cut straw and roots, with a little cut hay, mixed up with the straw. One cow gives nineteen quarts of milk a day ; and my cattle look almost too well.

5th. PIGS.—Almost any of the improved breeds of swine are profitable. I have imported the large Yorkshire breed ; the boar weighed, when twenty-one months old, 550 lbs. ; he was not fat. I consider this the best breed for making mess pork. The Berkshire breed comes to maturity very quick, and go off best as porkers, if there is a market in the neighborhood. I boil all the food of my pigs, and I keep them in styes to collect the manure ; this I find the most profitable way of feeding and raising pigs. My pigs have been fed this winter, nearly, entirely, upon boiled turnips and damaged oatmeal, bought from the ships.

6th. POULTRY.—It is not profitable to keep a number of poultry ; but a few do very well. The Spanish are good layers and handsome birds. Turkeys answer best with us ; they grow fast, and destroy the grasshoppers. I think them invaluable for this purpose. I cannot raise poultry to supply the market at a profit ; but others must do so, as

the market is always well supplied. Spring chickens generally come from Montreal by the steamboats, and they are always sold cheaper than they can be raised here, owing to the difference of climate.

7th.—Black Sea wheat can be grown to advantage. I reaped, last season, over 100 bushels; it weighed 62 lbs. the Imperial bushel, and sold for 5s. the minot. Wheat, like cattle, must be well fed, and not grown too long in the same kind of land: as I do not suppose much attention is paid to this, I should imagine this wheat has degenerated. Very few farms can grow seed wheat, though nearly all may be made to grow wheat. My land is not fit to grow seed wheat, as the soil is not naturally a wheat soil. The subsoil of my farm is a bituminous shale, with not a particle of lime or clay in the neighborhood. I have some fall wheat growing in my garden now; it was sown last June; it has wintered well, and I intend making further experiments. Land which is sheltered might be made to grow fall wheat. I think a few branches, placed in the middle of the field—where the wind generally blows among the snow—a good thing. Fall wheat ought to be sown early, say, July, or August, so as to get well rooted before the winter comes in. I think wheat the most profitable crop to grow. Every farmer grows oats, and the demand for barley is limited. I have bought oats this winter at 1s. 3d. the minot, and barley at 2s. 6d.

I grow as few potatoes as possible; their cultivation is too uncertain; some of the early “rough-coats” do very well, as the young potatoes can be sold to the ships before the rot gets very bad; but I cannot recommend much attention to be paid to this crop.

A root crop can be grown advantageously in this neighborhood; the climate suits well. I grew 1000 bushels of Swedes last year; their cultivation benefits the land as much as a summer fallow. Wheat, after turnips, does well, and the soil is in good order for hay seeds. By the use of bone-dust, the turnip fly might be put at defiance. I should like to see a bone mill established. In growing roots I think a little of each kind

the best, not forgetting cabbage to fill up where the seed has missed.

Indian corn is not grown here as a field crop. I imported last year some of Kean's Forty days Maize, as grown under the auspices of Prince Albert, in Regent's Park, London; it ripened very well, and this season I shall have enough to sow an acre. Indian corn, with pumpkins, I think an excellent crop wherever it can be grown. The *marguerite* is our most troublesome weed, but cultivation always destroys it. Summer-fallow will certainly kill all the weeds; it is rarely practised; in fact a green crop answers my land just as well, as long as I keep it clean, and I benefit by the crop, which I should not do were I to summer-fallow. As an antidote to weeds, a summer-fallow is more suitable to wet clay land than a light soil like mine. Summer-fallow and sow fall wheat would answer, if the land was sheltered, and means could be taken to make the snow lie.

13th.—I would call your attention to the tenure of land in Lower Canada, or rather in the Seigniories, the tenure being of a nature to tax the improving holder, and otherwise injurious to the introduction of capital. The Seigniories suffer from various causes; amongst others, the Seignior is generally an absentee, and does little or nothing to improve his property; another cause is the want of capital amongst the occupiers of the land. I consider the Seigniories are so impoverished from overcropping that nothing can improve them but new masters and more money; in fact, the *habitans* are moving very rapidly into the Townships, where they find a better return for their labour. I would recommend a law to be passed obliging the Seigniors to commute, receiving of course an equivalent based on the actual receipts for the last ten or twenty years,—the new tenure to be in free and common soccage; in other words, I would make all Lower Canada into Townships.

A Lower Canada Provincial Show, similar to the one in Upper Canada, would give the Canadians a national interest in Agriculture, which they do not at present possess. I think one really good exhibition infinitely preferable to these miserable *exposés* we have attended for years

past. In England, the State of New York, and Upper Canada, this is a well established fact.

I have no other suggestion to make ; but I would recommend the Government, in case they grant any more money for agricultural improvements, to appoint Superintendents of Agriculture, as I do not think the Counties possess a sufficient number of intelligent and independent men, fit to be entrusted with the distribution of these grants.

I have the honor to be,

Gentlemen,

Your obedient humble Servant,

(Signed,) W. RHODES,

Late Capt. 68th Regt., and

President Quebec Agricultural Society.

To the President and Directors of the
Lower Canada Agricultural Society,
Montreal.

VIRTUE ROADHEAD, April, 17, 1851.

GENTLEMEN,

I have the honor to acknowledge the receipt of your letter on matters of Agriculture ; to which in my humble capacity, I beg to return the following answers to your questions :—

1st.—The reason why a larger number of sheep is not raised in Lower Canada, is caused by farmers knowing nothing about it, although the country is very favorable for the propagation of sheep : provided you keep the ram from the flock, until the fifteenth of November, and the lambs weaned at the proper time. It is a difficult matter to point out what breed would be the most profitable, either in wool, or mutton for the market ; if fine wool is the object, the Merino or South Down may be considered the best. If mutton is the object, then the Leicester or Teeswater breeds. Let ten or twenty farmers purchase a two year old Cheviot ram ; let them each select from his own flock six of his best ewes, and turn them out into

one flock about the fifteenth of November; this cross will improve the sheep of this country in both wool and mutton; the ram may be used in this way until he is six years old, but should never be allowed to cover his own progeny; here alone is the danger of what is called breeding in-and-in. I speak from experience. I have raised sheep in the above mentioned way to advantage.

2nd.—The most profitable mode of raising horses in Lower Canada would be to keep a pair of brood mares, which might perform most of the work on the farm, and nurse their colts at the same time. I think the pure Canadian breed the best.

3rd.—With regard to the raising of cattle in Lower Canada for market, it is so expensive that it does not remunerate and pay the farmer. But I would suggest a mixed breed, the Ayrshire bull and the Canadian cow, which would enable the farmer to bring to market butter and cheese in preference to American.

4th.—The breed of swine, I consider best for Lower Canada, is the Berkshire; they improve the common breed of the country. The most profitable way of raising pigs is to have an aged sow; she should produce two litters every year, one in April and one in August, and and be well supplied with milk from the dairy.

5th.—I consider that geese and turkeys are not very profitable to the farmer. Ducks and hens may be more profitable.

6th.—I believe an early kind of wheat is best adapted for Lower Canada. I do not think that the *blé froment* can be recommended; several farmers sowed it last year, and in very few cases has it doubled the seed; if sown late enough to escape the fly, it would suffer from rust. I do not believe that fall wheat can be advantageously cultivated in Lower Canada; it would be impossible to get branches to cover any part of it.

7th.—I do not believe that any other grain crop should be substituted for wheat, but that wheat should have its proper place. My oat crop, last year, which was sown upon hay that had been pastured the two preceding years, yielded thirty-one minots per arpent. If the same land, with the same labor, had been sown with wheat, I do not

think it would have yielded more than ten minots per arpent.

8th.—I would not recommend the potatoe to be extensively cultivated for some time to come, as the disease still prevails in Lower Canada, and no remedy yet found.

9th.—All the roots mentioned in your circular can be profitably cultivated, excepting the turnip.

10th.—Indian corn, that is, the Yellow Canadian, can be cultivated to profit, and may be safely planted until the first of June. It is not so good for cattle as the root crop.

11th.—As for the wild grass, such as wild thistle, &c., which grows about a farm, they can be destroyed by one year's summer fallow, except the wild oats, which requires three years of summer fallow to destroy them.

12th.—It is impossible for me to point out any particular crop most profitable to cultivate in Lower Canada. I would suggest that a variety of crops and stock may be raised as its soil will admit of; this will maintain an equilibrium in our markets, and prevent such distress as we have seen by the failure of a wheat or a potatoe crop. I have no means of ascertaining what the County of Montreal produces at present; but I will put a very low estimate on what it can be made to produce. Supposing the island to be thirty miles long and six miles wide, it will give 1254 farms of 100 arpents each; let each farm raise and sell fifteen sheep every year, and four calves; sell six to the butcher; also, four fat cattle and one horse, 600 bushels of grain of all kinds, and 1000 lbs. of butter, and 500 lbs. of cheese, and 1500 lbs. of pork, would show the following account for the County of Montreal:—

Sheep,	18,810
Calves raised,	4,716
Calves sold,	7,524
Fat cattle,	4,716
Horses,	1,254
Grain raised,	752,400 bushels.
Butter,	1,254,000 lbs.
Cheese,	627,000 lbs.
Pork,	1,881,000 lbs.

The above answers and remarks are humbly submitted to the Directors of the Lower Canada Agricultural Society, by their

Humble Servant,
(Signed,) WILLIAM BOA.

L'ASSOMPTION, 18th April, 1851.

GENTLEMEN,

I have the honor, herein enclosed, to transmit to you answers to the letter you did me the honor to address to me relative to Agriculture :—

ANSWERS.

1st. SHEEP.—In order to the possession of a good flock of sheep, a person must examine the nature of his soil.

The number of sheep kept would be quite large enough if of a good breed.

The climate is favorable for the rearing of sheep ; but the requisite attention is not given to this productive description of stock. The scanty supply of food while at pasture ; unsuitable food in winter ; the pens being too hot, unventilated, or deficient in cleanliness, are causes which weaken the flock and cause diseases and the scab, and produce mortality. Left to wander in the autumn, the sheep, mixing with other flocks, are often the cause of deterioration. No care is exercised in the selection, particularly of the males. The English sheep imported from Spain are the most profitable. The ram is superb, yielding from 18 to 22 lbs. of wool in a fleece ; the ewe from 7 to 8 lbs. The Dutch sheep, imported from India, produce two lambs a year, and twice as much wool as the French sheep. Mr. Joseph Christin, a well known farmer at L'Assomption, tells me, that from nineteen sheep, he obtained last year 125 lbs. of wool ; that for the last six years he has sold his lambs at from four to six dollars each. Mr. Christin thinks that the farmers ought to sell their bad sheep and purchase others of good breed, for sheep well fed and well tended

are as great a source of profit as cows. This is also the opinion of Captain J. Longpré, owner of fine sheep. At the County Show, held at St. Roch, some splendid sheep were exhibited; a ram was sold for fourteen dollars, and the one which took the second prize sold for ten dollars.

2nd. HORSES.—To rear good horses, the greatest care must be taken of them from their birth till they are three or four years old. They must not be wintered at the barn door. A good selection must be made of the particular animals selected for breeding. During gestation, the female must be well treated,—quiet and at liberty, but not absolutely deprived of exercise; she may even be allowed to work. The Canadian breed of horses is justly esteemed as best adapted to endure fatigue, and the most easy to keep. Crossing these with the large foreign horses should be avoided, on account of the immense quantity of food which the latter requires.

3rd. HORNED CATTLE.—Food adapted to the age of the animal in abundance at all times. Straw alone is downright murder; a great deal of it is required for litter. Mr. Amable Archambault, the President of the County Agricultural Society, and an experienced practical and theoretical farmer, says, “to make profit on any description of animal, he should always be improving, even in the stable.”

The Canadian breed is preferable, but it may be much and very advantageously increased in size, by giving the best of Canadian cows a bull of Scotch breed; this is the plan pursued by Mr. Archambault, who may be cited in all matters connected with Agriculture.

The intelligent farmer ought to invest all the funds at his command in the rearing of cattle, the making of meadows, for forage, whether in hay or roots, and follow the maxim of the Belgians, “manure your fields plentifully, feed your working cattle abundantly, and require from your lands and your cattle everything you desire.” Every possible endeavour ought to be made to accustom farmers to form forage meadows for the purpose of rearing cattle, and to be able to feed them plentifully, otherwise they will remain in bad condition. The history of Spanish

Agriculture is instructive, and ought to restore the courage of the farmer.

4th. Cows.—In order to have good milch cows, it is necessary to take the pasture into consideration. For all useful purposes it is advantageous to a farmer to possess good cows, but no greater number of them than he can provide for abundantly, both by rich pasturage and plenty of dry fodder, consisting of hay and roots, two pounds of the latter for every pound of hay, and a little chopped straw with the roots. The straw should be made use for litter, in order to have plenty of manure for clayey soils. The cow requires much care; which, however, is too generally denied.

A great number of farmers prefer making butter; but they assure me, nevertheless, that cheese is equally profitable. The Canadian cow, when well treated, gives a milk richer than that of any other cow; this is a consideration which entitles her to preference.

5th. Pigs.—The great hog of the country does not suit on account of the immense quantity of food which he requires; but with the Scotch breed, its offspring are useful and easy to fatten. The custom of fattening pigs with curds, roots mixed with potatoes, or potatoes alone, has no other effect than putting the animal in flesh; grain, ground or unground, as a means of hardening it, is known to every one, and is used to advantage for feeding; it is preferable under all circumstances.

6th. POULTRY.—The hen ought to be kept warm during the winter, and is very profitable, if fed plentifully with oats, buckwheat, or Indian corn. Poultry are fond of boiled carrots. Farmers consider hens most profitable. The turkey is difficult to rear; but it is easily fattened with potatoes cooked, finishing with Indian corn. Its flesh is then excellent. Geese and ducks do not cost much, but the mosquito destroys them.

7th. WHEAT.—Mr. Amable Archambault declares that he would prefer the old fashioned *blé froment*, if it were not for the ravages of the fly. It is now a difficult matter to procure any of it. Some farmers lately told me that they intended to sow some this spring. In the absence of the *blé froment*, Mr. Archambault considers Black Sea

wheat, on land which is in good order, the most productive; if sown thus it does not degenerate. Last year his crops were not so good on account of the heavy rains.

Fall wheat could not be successful here; the physical causes would be too detailed to explain; and on the American system, we should lose our money without a prospect of success.

8th. **WHETHER OTHER GRAIN IS PREFERABLE TO WHEAT.**—The intelligent farmer ought, when choosing his seed, to consult the nature of his soil, observing at the same time the prices of the grain in demand. I consider, and it is the opinion of many whom I have consulted, that a farmer ought always to preserve a strict proportion in his various seeds, so that if one description of crop fail, its loss may be compensated by another.

9th. **POTATOES.**—A vegetable serviceable to man as well as to cattle. The cultivation of potatoes ought to be carried out on a wide scale, if it were possible to prevent the disease with which it is so frequently attacked. Its cultivation, however, should never be allowed to take the place of grains, still less of clover-meadows. As a cleansing crop it is always useful. The red potatoes and the yellow are the most esteemed varieties.

By adhering to the precautions prescribed in the treatise I have given on the cultivation of this precious plant, success should result. This treatise appeared in the "*Echo des Campagnes*," the 6th April, 1851, No. 18. I regret that this newspaper has ceased to appear.

10th. **TURNIPS, BEETROOTS, CARROTS, &c.**—These plants are excellent food for all descriptions of cattle, especially for milch cows. I have had no experience in parsnips. These roots ought to be sown in drills, in a suitable soil, and are an excellent preparation for the ensuing crop. If the cultivation of these plants is considered only as food for man, the preference will be given to the potatoe. But if the prosperity of the State, in a general point of view, is taken into consideration, the preference will be given, in the first place, to clover, and in the second place, to carrots. Clover and all other plants constituting the nourishment of cattle, do not impoverish

the soil, which the potatoe, however, does, on account of the great quantity of farinaceous matter it produces.

11th. **INDIAN CORN.**—This productive grain is an assistance to the country. Indian corn requires a loose clean soil, and is an excellent preparation for the next crop. For several years past this grain has been cultivated on an extensive scale, and with good reason, for it relieves the misery of the poor, and is well adapted for the fattening of cattle; its cultivation ought, on every account, to be encouraged. The yellow Indian corn ripens soonest; the white produces more flour.

12th. **WEEDS.**—The thistle, of which there are several varieties, and many other weeds, are injurious to grain and impoverish the soil. Thistles may be destroyed in the early days of July with the scythe, and when cut, the cattle will eat them. Nothing has been formed by nature but for the benefit of mankind. The intelligent farmer cuts down the weeds before flowering, after which he ploughs, so that they serve very usefully in manuring the soil. Laying down land in meadow is the certain destruction of weeds.

Summer-ploughing is not practised in our neighborhood. It would, however, be highly useful, especially when the manure has been spread on the fields.

13th. **GENERAL OBSERVATIONS.**—Agricultural Societies are destined to produce very good effects, if the officers and friends of the undertaking prefer the improvement of the country to pecuniary rewards, which they ought to leave to the still indolent farmer.

Fine examples of disinterestedness have presented themselves in our County. I am perfectly assured that Agricultural improvement would make rapid strides, at least in this part of the country, if skilful and determined persons would but conscientiously lend a hand to the undertaking. A weekly journal, written in a style suitable to the people, and which would not cost more than 5s. a year, is necessary, as well as the distribution of little tracts having, as a principle of rotation, the treatise published by His Excellency the Governor General, the friend of the Agriculturist.

A taste for reading should be infused among the people by all possible means.

I have the honor to be,
Gentlemen,
With respect,
Your very humble and obedient Servant,
(Signed,) G. CHAGNON,
Secretary of the Agricultural Society
of the County of Leinster.

The President and Directors of the
Agricultural Society of Lower Canada.

ST. ANNE'S COLLEGE, April 19, 1851.

GENTLEMEN,

I feel but little qualified to answer in a suitable manner the questions which you put to me in your circular of the 8th instant. In order to do so, I ought to possess special knowledge, in which, however, I am entirely deficient. I ought to be a practical agriculturist, whereas I am but a poor amateur; notwithstanding this, I will, as usual, prove my good intentions; and the regular perusal of Mr. Evan's interesting Journal, and frequent intercourse with a great number of agriculturists having instructed me a little on the subject, I shall make a few remarks in answer to each of your twelve questions.

1st. SHEEP.—Our *habitans* do not rear a great number of sheep, because they do not comprehend all the benefits and profits resulting therefrom. They do not keep more than suffice for the making of a few ells of cloth, and for providing them with a little fresh meat in the fall. The low price of foreign cloth prevents them making it themselves, in sufficient quantity, with their own wool, as their cloth would cost them too dear. If we were possessed of manufactories to work up the wool, our farmers would not fail to produce more of it. It would be a clear profit for themselves and for the country in general. Instead of 10s., for instance, which they send to a foreign country for a yard of cloth, in many cases

damaged by the dye, they would pay here two or three pounds of wool, at the most, for the same kind of cloth without the dye. Farmers are constantly told, "Produce, produce"; but those who enjoin this upon them, forget to provide him a profitable market for his produce. That is, however, the main point. Meanwhile, until this market is found, we can do nothing better than to increase the home consumption of our home produce. We can do nothing better than approach nearer perfection. Its value will increase in the ratio of such consumption. If the severity of our climate has any influence on sheep, it affects only the quality of the wool. I cannot recommend any breed in particular, as I am not acquainted with foreign breeds, otherwise than through the treatises on Agriculture. The most desirable breed would be the one whose wool is the longest, and of a certain degree of fineness. Until matters are different, I think with Mr. Evans, that it would be better to try and improve our native breed of sheep, by importing a ram rather than ewes; it is more economical and more certain. I cannot say whether the number of sheep is diminishing or increasing. It probably remains as nearly as possible the same, every farmer following almost invariably his accustomed routine. I speak only of that part of the District of Quebec with which I am particularly acquainted. Our sheep are kept in pens too small and too close. Sheep require space, air, cleanliness, and very little heat. All this is wanting in our present pens, where they are kept crowded together by dozens for several months in succession.

2nd. All the answer that I can make to the second question, relative to horses and the manner of rearing them, is, that the pure Canadian breed is not extensively enough propagated, is too often mixed with foreign breeds, and that, in consequence, the breed of native horses is deteriorated and their value is diminished. The neighboring States would certainly be, as they have already begun to be, a profitable market for this description of produce, as well as for many others which they do not possess, and with which we are able to furnish them. It is then important to think seriously on this subject. Our horses-

are specially esteemed, because they are strong and able to endure fatigue, but they must be of pure breed. I speak of draught-horses.

With regard to those adapted to the saddle and light draught, it would, perhaps, be unprofitable for us to attempt to compete with our neighbors; but I do not mean to insist upon this subject, not being well acquainted with such matters.

3rd.—Food, abundant and suitable, moderate warmth, good water, air fresh and often renewed, cleanliness and health; these are, as all farmers know, indispensable conditions of success in the fattening of stock. In the selection of animals for the shambles, those of small size should be preferred; for it is well ascertained that the flesh of these animals is more delicate. Besides, a small animal eats less and fattens sooner than one that is larger. Our best milch cows are by no means the largest. Straw is not an adequate provision for cattle, and particularly for cows in winter; those that are so wintered are in a very weak condition in the spring. Very many of our farmers do not make such good use of their surplus straw as they might do. They spread it out on their fields, and leave it to waste before their barns. There are, it appears to me, two good plans for employing the surplus straw to advantage. The first is to make use of it as litter; this litter absorbs the urine of the cattle, and becomes, by this means, the substance of a fine manure. Thus, too, the animals are kept in a state of greater cleanliness, which contributes much to their freedom from disease. The second plan, successfully adopted by one of my friends, an excellent agriculturist, consisted in keeping as many horned cattle as he required, besides those necessary for farm labor and for breeding, to consume the surplus. This is his plan:—Until they are two years old the cattle are well fed with hay and with grain as far as circumstances permit. After that age they are wintered on straw alone, for two or three successive years, and finally, they are fattened during several months. By this means the straw is returned to the land which produced it, in the shape of a rich manure, and the cattle remain to indemnify the farmer for his care and trouble.

In many cases it would be more profitable to sell hay even at 20s. the hundred, oats at 1s. 3d., and barley at 2s. 6d., than to fatten oxen or pigs, in order to sell them at 3d. or 4d. per pound. In spite of all this, our farmers, deprived as they for the most part are, in the District of Quebec especially, of all prompt and cheap means of communication, to enable them to export their produce, prefer to fatten cattle, for which they can always get some sort of a price in money, and very often without going beyond their own door. True, it is, that in this case, they leave their manure on the land, which, of course, is a great object.

The fourth and fifth questions, relative to the best breeds of pigs and poultry, suggest to me nothing particular which any one does not already know.

I have to answer to the 6th question, that the descriptions of wheat which succeed best, are those commonly known as "Russian wheat," and "Black Sea wheat." The old four-months wheat no longer succeeds, on account of the fly which always attacks it. The only kind exempt from the ravages of the fly is the three-months wheat; it is, however, necessary that it should be sown about the 10th June. I speak of the lower part of the District of Quebec. That which is sown earlier, on the 20th May for instance, as I saw done here last year, languishes and is overtaken by the fly, while wheat of the same description, put into the ground fifteen days later, has succeeded perfectly. Russian and Black Sea wheat always degenerate when sufficient attention is not paid to the peculiarities of climate which each kind requires. What contributes at the same time to spoil the wheat is the too little attention paid to the condition of the seed, which is very rarely clean. The Black Sea wheat is now most in vogue in this neighborhood. Many of our farmers will no longer use the Russian wheat; I however, was very well pleased with the crop produced on my farm last year. This crop in fact, has succeeded the best. I can say nothing with respect to the fall wheat. I have never seen it sown here or in the neighbourhood. I think, however, that it would succeed if sown in a dry soil, not exposed too much to the wind, and sufficiently sheltered to remain covered with snow as long a time as possible. The plan suggested of

spreading branches would not here have the desired effect, on account of the violence and long duration of the winds on the shores of the river. Fences are the best means of retaining the snow, but they are very expensive.

In answer to question No. 7, I have to remark that, as in many cases, the wheat harvest deceives the expectation of the farmer, he should not cling too pertinaciously to this kind of grain. Indian corn and flax should be cultivated on a much more extensive scale. In speaking of Indian corn, I would speak of a small variety, for the large kind does not thrive well. What I have before said of the want of manufactories, when speaking of wool, may be applied with equal force as regards flax. The workmanship renders its use costly. The textures of wool, hemp and cotton from foreign lands create with us a formidable competition. The farmer finds it advantageous to cultivate a little wheat or other grain for which he always get a sure price, with which he procures at a low rate the cloth that he requires. It is not the fault of the agriculturist that he cannot obtain a better price for his produce; he must mount a step higher to discover the cause. That cause might be easily pointed out; but it belongs to others to examine into it seriously, and to apply to it at least the foundation of a remedy.

In answer to the 8th question, I would say that until a remedy be found for the potatoe disease, its cultivation to any extent must not be thought of. The particular kind least subject to the disease is a sort of blue potatoe, very long and very productive. The forty days' potatoes are very profitable.

In answer to the 9th question I would say that turnips no longer grow here. The caterpillars destroy the leaf and force their way even into the very heart of the root. Carrots are subject to rot like potatoes. The great white beet grow well. Red beet and parsnips are only cultivated on a very narrow scale in gardens.

In answer to the 11th question, relative to the weeds prevailing in our District:—They are mustard, *marguerites*, and twitch or couch-grass (*chiendent*); our *habitans* pull them up as soon as they appear, and succeed in destroying them very well when they take the trouble. But this

mode would not suffice if the weeds were in great numbers. In that case one or two summer-ploughings would destroy them completely. I have never seen this means employed in this neighborhood. It is to be hoped that it will be introduced where it is necessary.

I shall not enter into the consideration of any other matter; my letter is already too long. I willingly refer you to all that can be said and suggested on the subject by those skilful practical agriculturists whom you have consulted, and more particularly to Mr. Evans, the editor of our Journal, whose testimony on these points is of the greatest weight.

Permit me, gentlemen, to congratulate you on the resolution which you have adopted, to make a general report on the state of Agriculture, based on information collected from all parts of the country. If every one, as I hope will be the case, shows his readiness to answer, most useful conclusions will result from this Report, which will not fail forthwith to attract the serious attention of all those who have the will and the power to promote the prosperity of the country, understood and comprehended as it ought to be.

Be pleased then, gentlemen, to receive the assurance of my most respectful consideration, and believe me, ever

Your very humble and obedient servant,

(Signed,)

F. PILOTE,

Ptre.

To the President and Directors of the
Lower Canada Agricultural Society.

(*Translation.*)

ST. GERVAIS, 20th April, 1851.

GENTLEMEN,

In answer to your's of the 8th instant, after having consulted many persons engaged in farming, I have arrived at the following conclusions:—

1st. I consider the climate favorable for the raising of sheep, and their maintenance in good condition. The want of a vent for the wool, such as cloth manufactories, has rendered this branch of farming economy unprofitable. In their present condition, the sheep produce two pounds of wool, which may be valued at 1s. 3d. per pound. The Leicester breed is, in my opinion, the most profitable. A taste for manufactures begins to manifest itself. It is quite time to rear a greater number of sheep than are sufficient for the use of a family on a farm.

2nd. I cannot say which would be the best mode of raising horses for market. I should think that the Canadian breed would be preferred for laboring purposes; and a mixed breed for light draught.

3rd. The extensive cultivation of vegetables, such as turnips, carrots, parsnips, &c., would, in my opinion, be the most approved method of rearing cattle at a low cost. I do not consider straw, by itself, sufficient to feed cattle profitably during the winter; one-third straw with hay, or what is better still, with vegetables, would be, I think, sufficient nourishment. I would consequently encourage the cultivation of hay, vegetables, oats and good pasture grounds.

4th. The foregoing answers appear to me to apply also to this question. I may add that buckwheat, mixed with one-third oats, affords an economical method of fattening pigs.

5th. Hens alone, in my opinion, deserve to be encouraged for the return they make in eggs, besides their flesh, which sells very well. Success, almost certain, attends the rearing of chickens. Buckwheat is also the best food for fowls.

6th. I think "Black Sea wheat," in its primitive condition, preferable to all other kinds of wheat; but it de-

teriorates, and requires to be renewed at least every five years. I do not know to what cause to attribute the deterioration of Black Sea wheat. The old-fashioned white wheat is more exposed to the attack of the fly in this part of the country.

7th. I do not think that wheat should be exclusively cultivated, its success having been too uncertain for a great number of years.

8th. It is a certain fact, that the potatoe is of great assistance to farmers, and that they never raise a sufficient quantity. I cannot speak as to the cause of the disease.

9th. The cultivation of these vegetables is still a new thing in this County. Turnips here have the preference; and our Agricultural Society has thought proper to encourage its cultivation.

10th. I am not acquainted with the name of the kind of Indian corn which I consider most profitable; it is called here Ohio corn. I cannot say as to whether preference should be given to it over vegetables.

11th. The most common weeds in this vicinity are the twitch or couch-grass, (*chiendent*.) thistles and daisies. Summer-ploughings are the best means of effecting their destruction. The custom of so doing is, however, very rare.

I shall conclude by suggesting the establishment of Agricultural Schools, and the continuation of the present Agricultural Societies in a modified form. It does not suffice to reward what has been done under the present system if it is acknowledged that the system should be altered.

The whole, nevertheless, humbly submitted.

I have the honor to be,

Gentlemen,

Your obedient Servant,

(Signed,)

C. C. FORTIER, M.D.

DRUMMONDVILLE, (Eastern Townships,
Lower Canada, 20th April, 1851.

GENTLEMEN,

In acknowledging the receipt of your letter of the 3rd instant, I have the honor at the same time to reply to its contents.

1st. As sheep require a thick short bite on old pastures, they cannot be extensively raised where the farms (as is generally the case in the Seigniories) are small and chiefly arable. In many parts of the Townships, wild animals are still too numerous to make them safe stock. Were these impediments removed, however, the climate would render sheep breeding, in Lower Canada, on an extensive scale, a hazardous speculation. Although it is not necessary to assign, in a letter of this description, all the *pros* and *cons* on which my opinion is based, still it is proper to give some of the prominent grounds, to enable you to determine whether they are not overruled by others.

In Lower Canada, sheep, one year with another, are fed in winter quarters during six months of the year; allow one quarter of a ton of hay to each sheep for its winter food, which, on account of its being fed on the farm, shall be valued at 20s. per ton, say:—

One-fourth of a ton.....	£0	5	0
6 Bushels of oats during Winter.....	0	7	6
			<hr/>
	£0	12	6
			<hr/>

CONTRA.

4 lbs. of wool, a liberal average, 1s. 6d.....	£0	6	0
Value of the lamb.....	0	7	6
			<hr/>
	£0	13	6
			<hr/>

This shows a balance of one shilling on each sheep, to indemnify for losses of lambs and sheep, expence for summer grazing, keeping up fencing, attendance during the winter and lambing time, washing, shearing, interest on building, both for storing them and their fodder. I shall carry it out in figures for 100 sheep:—

Attendance during the winter and lambing season.....	£3	0	0
Washing.....	0	5	0
Shearing.....	1	5	0
Pasture for summer, 30 acres at 5s.....	7	10	0
Fencing.....	1	0	0
Expenses of buildings, &c.....	2	0	0
		<hr/>	<hr/>
	£15	0	0
Deduct the 1s. mentioned above on each sheep, 100s.....	5	0	0
		<hr/>	<hr/>
Balance—loss,	£10	0	0

I have made no allowance for manure, having taken that into consideration in valuing hay at 4 dollars per ton. This makes no allowance, whatever, for accidents of any kind, and supposes that each sheep rears its lamb.

Every breed has its advocates, which ought to be selected according to the quality of the food; Canadian sheep are not worth their keep. This county contains chiefly the Leicester breed, some of them very good, also a few Southdowns and Merinoes. All seem about on a par for hardiness. The number is quietly increasing.

2nd. The most profitable mode of rearing horses, is pasture in summer, and straw and carrots in winter. We have no home market for horses; the most valuable animals alone remunerate. Were it not for the neighborhood of the United States, no horses would be reared in the Townships. The average price of horses in the Montreal and Quebec markets does not exceed £15; for this sum an animal has to be kept, and the risk of damage incurred for five years.

It is true, that the demand for a few horses of higher value exists, but it is so limited that a single county in the Eastern Townships could supply it. The pure Canadian breed has many advocates, they are valuable as draught animals, but the price given for them for that purpose will not remunerate; occasionally good trotters are to be found, and long prices are obtained for them. First class Canadian horses will perhaps pay fully as well as any other breeds, but first class only.

3rd. The only profitable way to raise neat cattle is to keep them growing from the time they are dropped until they are fit for market. They cannot be fed advantageously on straw only during the winter. It would pay infinitely better (no comparison whatever) for farmers, where manure can be bought, to sell their hay and grain than to raise stock. In the Townships there is generally speaking, no market for hay. Growing stock is, therefore, resorted to as the means of disposing of the produce of the farm. I consider the most profitable breed to be short-horns or Durhams, on account of their early maturity, and because they undoubtedly give a larger return for a given quantity of food than any other breed.

4th. I prefer Durhams for the following reasons:— Should a heifer, at three years old, turn out a bad milker, she can be fattened and killed in the fall of the year, to weigh 700 lbs, which would pay her expenses, and leave a profit. Should a Canadian heifer, at the same age, have to be disposed of, it would be impossible to get her up to half that weight, or in other words, the breeder would lose about £5 by raising her. I have tried both! and speak or rather write from experience; on which all my observations are based!! A Canadian cow in her prime, any where in this District, can be had for about ten or twelve dollars in the autumn; she never was reared for twice that sum. As to which breed is the least expensive to keep; the smallest animal generally consumes the least, of whatever breed it may be. The Canadian cow would, therefore, supposing her to weigh 250 lbs. neat, be less expensive to keep than one of the same breed, or of any other breed of double that weight. But that does not follow that small beasts are the most profitable. Any person, travelling through Lower Canada, cannot fail to be struck with the difference of the condition in the neat cattle in the Seigniories, from that in the Townships. A Canadian seems to value his animal in proportion as it will stand starvation without dying, while the Township settler likes to have them in the highest condition.

Straw alone will not support cattle advantageously throughout the winter. They will require better keep towards the spring. With straw and one-fourth of a bushel of turnips daily, they will winter in good condition.

5th. The Berkshire swine are much prized in this country. We kill them at seven months old, between 200 and 300 lbs. weight, and at a year and a half old, averaging from 400 to 500 cwt. fed on green vetches, fresh mown during the summer, and potatoes with ground oats to finish them off in the fall.

6th. I do not think Poultry pay for market on those farms far from the Cities.

7th. The *blé froment* is by far the best ever sown. I cannot say anything about the fly, but Black Sea wheat has not degenerated here; flour made from it does not sell readily, nor does it make good looking bread. I have tried fall wheat during the winters of 1847, and 1848, and 1849, and it failed; it remained green, and survived until it began to grow in the spring; spring frost killed it during those years. Covering the ground with spruce branches would certainly save it; but where would the branches come from, year after year, to cover some hundreds, perhaps some thousands of acres in each parish throughout the Province; to say nothing of the cost as compared with the profits of cutting, carting, and spreading the branches in the fall, and carting them away in the spring.

8th. Wheat certainly pays far better than any other crop when it escapes the fly: no other crop comes near it.

9th. Potatoes pay well in the neighbourhood of markets, in the Townships they are chiefly grown for live stock, and pay even for that purpose.

10th. I cultivate, annually, about 4000 bushels of turnips, and about 500 bushels of carrots, and find them a sure crop, I have never tried parsnips, and have always failed with mangel wurtzel. My soil is a light sandy loam.

11th. Indian Corn is too troublesome a crop to harvest, to render it profitable, when done by hired labour. Turnips pay better.

12th. This being a newly cleared country, we are not troubled with many weeds.

13th. In conclusion, I would observe that were the Eastern Townships confined to Canadian Markets, all idea of prosperity would at once be abandoned. The prices of our only two markets of Quebec and Montreal are affected by the arrival of a single drover, and if a second drover happens to arrive on the following day, the market is glutted, and the prices of a glutted market have to be submitted to. There is scarcely a parish in the Townships which could not glut the Lower Canada markets for a month together; also less cattle go there, year after year, and when the Portland Railroad is finished, I cannot think that a single head could be sent to a Canadian market; even, at the present moment, when cattle have to march a three weeks' journey, incurring the risks of accidents and lameness on the road; walking off one third of their beef before they arrive, and paying twenty per cent. duty on their value (before that flesh has disappeared) at the American Custom House, it is found more profitable to send them to the American Market than to our own. How much greater will be the current that way, when the three weeks is converted into a few hours, and the beast delivered at his journey's end, in the same condition that he leaves his owner's stall. The tendency of that Railroad must be to increase the Township commerce with the United States; and, as a man naturally buys where he sells, so wean us from the Canadian markets altogether. The settler then finding that he has to pay 20 per cent. duty to go to market to sell, and $12\frac{1}{2}$ duty on what he brings, desires to be relieved from a position which consumes one-third of his income. Annexation appears to offer the relief desired; and it is mooted, not from a feeling of ill-will to England, but to recover the lost third of their income; and it has always appeared to me that if the Canadian Government, while expressing very properly its disapprobation of the advocates of the measure, had gone a little further, and at the same time had taken active and immediate steps to institute inquiries into the cause of the desire of Annexation, and had come forward with some counter proposals of relief:

that feeling of discontent, so closely bordering on disaffection which now prevails, would never have existed. The Townships' population is the most valuable frontier which could be opposed to the United States ; they are of one origin, language, and religion with their neighbours, are related to, and intermarried together, have the ties of kindred to make them friendly to each other, and the same intelligence and physical force to oppose if difficulties supervene. Let this population be against us, and we lose the most powerful fortress which Lower Canada possesses, as well as the most valuable portion of that part of the Province. If I have indulged in these observations, it is because I feel that a report from your Body ought to have weight with the Government, and I hope that you may consider it not unadvisable to allude to the peculiar position of this splendid and fruitful district, with a surplus produce and good markets within hail, from which, however, their connection with Canada precludes them, and of the value of which connection it seems difficult to convince them,

I have the honor to be,

Gentlemen,

Your most obedient Servant,

(Signed,) R. N. WATT'S.

To the President of the

Agricultural Society,

Montreal.

GASPE' BASIN, 22nd April, 1851.

GENTLEMEN,

I have the honor to acknowledge the receipt of a circular from your office, dated 3rd April instant, (received here only last post) requesting answers to several queries on Agricultural topics. It is with pleasure that I contribute my humble quota of information to the general stock on that interesting and important subject. Your letter was addressed to our Secretary, Mr. Joseph Eden, who handed it to me for reply.

No 1. SHEEP.—I do not know why sheep are not more extensively raised in Lower Canada, unless it is want of pasturage, and ignorance of how green crops, especially Turnips should be grown and housed. I consider sheep a most profitable kind of stock, and find it so by experience. They do not require a warm house in winter; a shed that will keep out rain or snow is sufficient. I know a farmer who keeps his sheep out of doors all winter; he says he does so to preserve their wool. I do not mention this as a lesson to follow, but to shew to what extent that animal can withstand the rigorous cold of winter. The rack in which they get their hay should not have spaces more than $1\frac{1}{2}$ inches, otherwise there will be as much of the provender wasted as eaten.

A flock of sheep should be kept for the sake of the wool, an indispensable article in a Canadian house; and the sheep is useful in another way, it is an animal that may be killed and consumed in one family, which is an object in rural Districts, when fresh meat is required in summer, and recourse cannot be had to town. I have remarked that sheep in Lower Canada are not subject to many diseases, which they are very liable to in the United Kingdom, as *foot rot*, maggots on the back, which I attribute to the dryness of our atmosphere and land—for rain and wet of all kinds are injurious to sheep. As to pasturage, I would here observe the lamentable backwardness of French Canadian farmers in this District; when a man has a lot of land, he should certainly cut down several acres beyond what he requires for tillage; this is easily done; he should have the trees and bush to fall in wind-rows, for convenience of burning, and also, that the soil or vegetable mould may not be consumed. Let him set fire, and in a few years they will be rotten, and may be speedily removed. But he need not wait for this, if, when the fire has passed, he, the poor man, would scatter the scrapings of his hay-loft and the seed collected at the head of his cattle in winter, now and again on the snow, over this burnt place, he will soon have a pasture at a trifling expense. Of course, when land comes to be properly laid down, nothing but clean good seed should be sown. It is bad farming when there is not pasturage enough for the

cattle of the owner ; land by it comes into great condition. I think the climate of Canada favourable to the breed of sheep ; but it is necessary to improve it, by the importation of Leicester, South Down, or Cheviot rams, as they will otherwise degenerate. I have observed that a ewe cannot raise twins with us on the usual feeding, and, consequently, seldom have two lambs ; in the old country, a ewe generally has twins, but her food, for the greater part, consists of grass and turnips. Sheep should be put to the ram about the 12th of November, that they may year about the 20th of April, (twenty-one weeks,) in the warm weather.

Our Agricultural Society has procured a fine Merino ram, and the sheep from him are a great improvement on the common ones, but they seem more tender and delicate. I have cut from mine, so crossed, on an average, four lbs. of wool, and the males have given me six lbs. each. Sheep are increasing fast in this District.

No. 2. HORSES.—The most profitable way of raising horses for the market must evidently be to give good mares, and only good mares (especially those inclined to have foals like the sire) to the best stallions that can be got, for the expense is the same in raising a fine colt and an indifferent one. In my humble opinion, the best breed for the country is the pure Canadian ; he is hardy, strong and swift, yet may not bring as high a price as the mixed breed, not being so showy nor such easy saddle-horses. But in the country, where we want the same horse to cart, plough, harrow, and drive in summer, and haul wood and travel fast, in deep road or no roads in winter, the pure Canadian is the best.

No. 3. CATTLE.—Cattle can be kept on straw all winter, but it cannot be expected that they would put up meat ; but if the straw was cut and mixed with mangels or turnips, or boiled grain, I think they would acquire flesh and some tallow. I find that dry cattle, allowed to run all summer in this place, are fit for the knife in the fall ; or, at all events, with three or four weeks' stall-feeding and plenty of hay, and a bucket full of sliced turnips morning and night ; but our cattle have access to marshes and good feed in the intervals.

I cannot say whether it is more profitable to raise stock or to fatten, but I think it best to do both; for where is there a market in country parts for much stock, at all events, both will find their level, and be ruled by circumstances of locality, soil, &c. I think a farmer should not sell any grain or hay but what would be quite superfluous after supplying plentifully what cattle he required, or could convert to any profitable purpose. Every middling farmer should fatten his winter's meat—a cow, two or three pigs, four or five sheep, all these he could do with proper attention and exertion.

No. 4.—I think it advantageous to keep milch cows, but not more than a farmer can feed well. I have no way of ascertaining whether fattening cattle or milking them is most profitable.

I have seen excellent cheese made by Scotch settlers, yet they continue to make butter for sale, I suppose for want of a market for cheese; but unless the dairy-maid knows how to make very good cheese, it would be better to confine herself to butter, as more generally understood. To make good butter, great cleanliness in every thing connected with it is indispensable,—pails, strainer, coolers, churn, &c. The butter should get no more working with the hand than is necessary to take out all the milk. The salt should be fine, and each churning should be packed at once in the vessel which is to contain it; it should be packed hard, and a little saltpetre, dissolved in water, spilled over it. As good butter as any I ever saw, and I have had some experience, is made in Gaspé, and I am glad to say, mine last year got the first prize.

The system so prevalent of turning milch cows out in summer to forage for themselves by road sides and in the woods is very objectionable; it may suffice for young and dry cattle, but milch cows should not be sent adrift. The time lost in seeking them should be taken into account, and the injury to the cows by occasionally straying off or escaping observation in the labyrinths of the forest for days and days together.

I would again allude to the absurdity of keeping more cattle than a man has food for, winter and summer; a cow well fed is worth two badly fed, and more profitable;

this should be impressed on the small proprietors. Stock never recovers their usefulness after partial starvation. I have known cows milk pretty well when fed on straw only, but they got it fresh, and plenty of it. I believe experiment has proved that the best fodder for horned cattle is oats cut green, (this is when the grain is forming,) better, it is said, than to allow the ear to ripen, and than to give both straw and grain to the cattle.

I have heard from a judge, that the Canadian cow to be found in the parishes is of good breed, originally brought from France, giving as much milk as can be consistent with richness—for large quantity and good quality are incompatible. The Dutch cow gives most milk, but it is the poorest. The breed, in many places, has degenerated by intermixture, &c., and requires only a bull of the short horned breed in each parish to renovate it. The Ayrshire and Durham, as also the Highland breed, are highly spoken of by the New Brunswick Agricultural Society.

No. 5.—I should say the swine of Canada are a degenerated race, capable of improvement only by importation from Ireland. Sows should litter in summer. A pig to fatten well, will require a comfortable hut—not too warm a bed—regular meat, of boiled vegetables with some ground oats or barley. Every farmer, not near a grist mill, should have a large hand-mill for this purpose; every pig should have a ring in its nose, even though shut up in a pen.

I will now advert to the useful act for “removing abuses prejudicial to Agriculture”. Unless this act is improved, there is little use in Agricultural Societies, or in importing improved breeds of cattle, sheep, horses, cows or swine. Strenuous exertions should be made to carry it out, and to inculcate, through the Societies and the Journal, the necessity and advantages that will arise from its strict application. It ought to be printed in your Journal for wider circulation. Let good animals be first introduced, and then “wage war to the knife” against all bastard bulls, runts of boars, low-bred horses, and crumply horned hairy rams, that the indifference of their

owners allow to run at large, and their business prevents from altering when young.

No. 6. POULTRY.—Fowls should be kept in a dry place in a warm stable, separate from the cattle; perches should be constructed, with boarding underneath to keep them clean; this would be a convenient place for geese and ducks; the latter should be separated by a partition. Some of the family should undertake the care of feeding the fowls; this duty, if delegated, will be neglected, and the consequence will be no eggs in February or March. Fowls should have grain enough in the morning (and no waste,) and at same time a couple of hand-fulls of gravel, a barrel of which should be provided in the fall.

Every house-wife should raise a few broods of geese, ducks, chickens and turkeys; they bring in some pocket money, and repay the trouble and expense. Goslings are the least troublesome to raise, next ducks, but the latter eat a great deal. Young turkeys are not much more troublesome than chickens, if they are constantly kept dry; the latter also are sometimes killed by a thunder shower. I believe the breed of fowls in this District is very good. We have had many opportunities of crossing them with those of other countries, by means of the shipping.

No. 7. WHEAT.—We find the Black Sea wheat do well in Gaspé. It ripens every season, and has not degenerated. I would recommend a process to obtain good crops and clean, which many of my neighbours adopt. In winter, when their children are not much employed, they have a bushel or so of grain picked by hand, and the produce of this is afterwards kept separate for seed. It is an excellent plan, and will remunerate the trouble. The necessity of cleaning seed well should be strongly inculcated. Some farmers have tried fall wheat in this District, and they speak rather favorably of it, but it is a risk. I think, if sown below Quebec, it should only be in favorable situations in good and dry land. The fly is yet unknown in this District.

No. 8.—I do not think a farmer should be confined to one kind of grain, but should sow all three, wheat, oats and barley.

At our last Agricultural show, there were twenty-two competitors for the wheat prizes, and the average weight of all was sixty-seven pounds twelve ounces per minot, (the Canadian minot contains exactly nine Winchester gallons); and ten samples of barley, average weight, fifty-four pounds nine ounces per minot; and eighteen of oats, average forty-one pounds nine ounces per minot.

No. 9. POTATOES.—There are so many conflicting opinions as to the best kind of potatoes, and the best mode of cultivation to escape the rot, that it is difficult to give confidence to any; all kinds and all modes have, I believe, in some instances, failed, with the exception of potatoes planted in new burned land; dryness is, however, I think, essentially necessary, both to the plant while growing and to the tuber when grown and while being dug and housed.

I would recommend that potatoes be not put in wet land, it is useless; that burned, if possible, be selected, as the ashes preserves them; that they be taken out of the ground and put in the cellar in dry weather. I thought mine would have escaped last year, they were planted on dry old lea, with seasoned stable dung, and in ridges trenched with the spade, yet one third-rotted. This year, I had them in drills put in with the plough, in a field having a gentle declivity with the fall of the land, that the surface water might run off; manured as last year's, after digging, as the weather was wet, I kept the potatoes in barrels, as picked a day or two, and then spread them out in the sun to dry before putting them away in the cellar. I observed that in a piece of my kitchen garden which had been dry, deep, and manured the fall before, planted with potatoes same time as the field, there was not one rotten. There is not a more profitable crop than potatoes. I would, therefore, recommend its culture; with ground grain they are good feeding.

No. 10.—It is necessary to the success of the turnip crop either to sow them in black land or to haul some peaty soil or swamp earth, to top dress to the depth of a couple of inches. I think turnips sown broad-cast and bush harrowed are better than when drilled in, as they increase on the surface.

But the turnips, in our short dry summer, will never grow to the size, or be so nutritive as in the United Kingdom. Carrots and parsnips are an excellent crop, and profitable if the land be well cultivated and manured.

No. 11.—I think Indian corn not suited to Lower Canada, it does not ripen well and generally.

No. 12.—I have observed couch grass in old rich fields and head lands. I believe a neighbour of mine succeeded in eradicating it by cultivating potatoes three years successively. I would first have the land carefully dug and turned over with strong four-grained forks and handpicked, then put in potatoes. It is difficult to banish this weed.

We have the "Ox-eye" daisy, or Margaret, which, though confined a few years ago to two or three fields, is spreading, as the seed is easily diffused by the wind and in the cattle dung. It is a bad weed, and should be rooted out by hand when in early blossom.

The thistle is not very prevalent, and it can always be destroyed in three years, by laying down the land with grass-seed, the best mode. We seldom have recourse to summer fallow.

No. 13.—I am of opinion that farming in Lower Canada is not a money-making business, or a good speculation to embark in; and the spring is so short, it cannot be extensively pursued. It will not repay much hired labour. Here it can, with certainty, be said:—

"He who by the plough will thrive,
"Himself must either lead or drive."

I know several men in this District, natives of England, Ireland, or Scotland, who came here within the last twenty years penniless, are now in comfortable circumstances. Their motto should be:—

"I eat my own ham,
"My chicken and lamb,
"I shear my own sheep and wear it."

There is a faint cry being raised of late against the county agricultural Societies, but though many of them may not be all that could be wished, still they promote the cause, and I am at a loss to know by what other agency so much good to Agriculture can be effected.

I think that if the Agricultural Society would import a first rate bull, a fine stallion, a couple of rams, and some superior pigs, good machinery, implements and seed, they would do more real service than by a hundred shows.

Every improvement is a lasting advantage to the farmer, small as well as great, in Canada; every step of progress and improvement in our Agriculture is a move in the right direction and permanently our own.

I have the honor to be,

Gentlemen,

Your obedient Servant,

(Signed,)

H. KAVANAGH,

President,

Gaspé Agricultural Society.

DUNHAM, April 23rd, 1851.

GENTLEMEN,

I beg to acknowledge the receipt of your circular on Agricultural matters. I will now proceed to the best of my ability to answer your queries.

1st.—The principal cause of the small number of sheep in Canada is, that we have no cash market for our wool, and our woollen manufactures are not sufficiently protected. The Leicester breed would be the most profitable, as mutton must be the principal object in raising sheep.

2nd.—The most profitable mode of raising horses is to give them good pasture in summer and good hay in winter, till they are three years old, then add a little grain. The mixed breed sell to the best advantage, being horses of all work, and strong.

3rd.—Cattle the same way, must be well fed when young. Calves should be fed with milk three or four months, then good pasture through the season. When put to hay, give them a warm stable, well littered with straw; add to their feed either carrots, turnips, or oats, that they may daily increase in growth. The hay and oats should always be fed to animals kept on the farm. In this section the Durhams are considered the most profitable. A rotation of crops is the best method.

4th.—I think cheese making has, for the last few years, paid better than butter.

5th.—Swine. A cross with the Berkshire is considered as easily raised and fattened as any other. The most profitable method for raising swine is to grind their food and boil it.

6th.—The black sea wheat is considered the best here, although it has degenerated. Fall wheat is grown in some parts of this county to advantage. It requires a dry soil.

7th.—I think Indian corn should precede wheat on all land that is sufficiently dry, for it prepares the land for wheat.

8th.—I would not recommend the culture of potatoes at all for animal food.

9th.—Much more attention ought to be paid to the cultivation of roots, particularly turnips and carrots. I would give the latter the preference, being quite as productive and much less liable to suffer by drought or fly.

10th.—The eight rowed yellow corn is generally considered the most suitable to our climate.

11th.—The Canada thistle is considered the most troublesome weed, but is removed by mowing for a few seasons.

12th.—I beg leave to observe that I think an entire change is necessary in the method of cultivating land in Lower Canada, before an attempt is made to raise good cattle, for without pasture in summer or hay in winter, (as is the custom in most parts of Lower Canada,) good cattle cannot be raised profitably. Farmers ought to plough no more lands than they are able to manure richly, and when two or three crops have been taken from it, seed it well with timothy and clover, and mow it some three or four years, when they will find thistles and other weeds disappear.

This course having been followed for a few years, he will find that he can raise quite as much corn, wheat or oats, on half the quantity of land that it used to take on the old system; and he will be able to add to the number of his animals at least ten per cent. annually.

I have the honor to be, &c.

(Signed.) STEVENS BAKER.

(Translation.)

ST. DENIS DE LA BOUTELLERIE,

24th April, 1851.

GENTLEMEN,

In answer to the circular issued from the Office of the Lower Canada Agricultural Society, dated the 8th April, 1851, I have the honor to submit the following :—

1st.—The climate of Lower Canada has nothing which operates against the breeding of sheep. By taking care to separate the ram from the ewes during a certain period in the fall, the dropping of the lambs may be regulated to take place about the end of April or beginning of May, and by this simple and easy method the mothers would rear them all; in the autumn they would look as well as those dropped during the winter, and we should not, as is often the case now, see all the lambs which are dropped in a rigorous season, and sometimes even a great number of the mothers, exhausted by the long suckling of their young, perish before they are able to find the proper food in the pasture. This is, in my opinion, one of the causes which prevent the rearing of a greater number of sheep in Lower Canada. I think, however, that more are now raised in this part of the country than formerly, and the practice of not putting the ram to the ewes until towards the end of November, is beginning to be adopted. Farmers generally keep as many sheep as they require to furnish them with the wool necessary for the making of the cloth, flannel, druggets, coverlets, shawls, stockings, &c., for domestic use, and which they now manufacture with very fair success in almost all well regulated establishments. It is probable that the want of an advantageous outlet for the sale of their wool, also operates to prevent the farmer from raising more sheep. The establishment of manufactories for the making of cloth, stuffs, &c., would tend to encourage our *habitans* to raise a much greater number of them. I think that in choosing from among our present breed the finest ewes and crossing them with a merino ram, we should succeed in producing, by this means, the best description of sheep we could possibly keep in this country, without seeing them degenerate. If, moreover, the destructive practice

of crowding the flock during the winter into too confined stables could be done away with; if pains were taken to prevent these animals from collecting on their fleece hay-seeds, chaff, and other dirt, which stick to the wool, gets entangled in it and renders it coarse, I am positive that we should produce wool here which would be hardly inferior to that produced in the neighbouring States. Some farmers have already, by this means, very much improved the quality of the wool produced by their sheep.

2nd.—The best breed of horses that our farmers can raise is, in my opinion, the pure Canadian. These horses fetch a good price in the United States; although generally of a smaller size than horses of other breeds, they are, nevertheless, sought after by lumberers, and as draught horses. By selecting the best and largest stallions for breeding, we should ultimately obtain from our large Canadian mares horses which are surpassed by few individuals of other breeds.

For beauty of form, proportion of limbs, vigour, docility and economy in the article of food, the Canadian horse is unrivalled.

The common custom of feeding colts during the second and third winters with fodder of an inferior quality, with what is left in the racks of other horses or with chaff, ~~and~~ depriving them of oats, is an erroneous system, the very reverse of which should prevail; a very moderate allowance of oats, however, is necessary to keep these young animals in good condition, but the best and shortest hay should be selected for them. They should be carefully cleansed from vermin to which they are subject, and be kept in a perfect state of cleanliness. They demand a great deal of manual care and require free air and exercise. The horse likes a thick litter frequently changed.

3rd.—The best system for rearing fine animals in Lower Canada would involve, in my opinion, a radical change in the system of cultivation in use in this part of the Province, the District of Quebec. I will explain: in order to raise fine animals, apart from the selection of a good breed, the essential point is to supply them with nourishment in abundance and of good quality. Now, I am far from believing that any kind of cattle can be profitably kept

throughout the winter on straw alone. I say, moreover, that it would be a difficult matter to cut sufficient hay on a farm of ordinary size, as well as providing pasturage and grain as food for the stock, especially if they are rather numerous; and I will further add that a beast can never be put in proper condition for killing, having been fed on hay alone. It would be necessary then to give it grain or oats, but with such expensive food, the animal often costs more than it is worth. Moreover, if many cattle are kept a great quantity of hay and pasturage is required, and thus little space is left for the grain necessary as food for the cattle; moreover, bread for the family should not be forgotten. Under our present system then, it is difficult to raise many cattle of a superior kind. I think, however, it would be very desirable to do so, for a great number of animals produce a large quantity of manure, and that really is the very thing wanted by our exhausted soil. Previous to the fatal potatoe disease how many thousands of minots of this precious tuber were harvested in this neighborhood, and what assistance they afforded to the farmer; it was the substitute for oats as food for all cattle except the horse. In place then of the potatoe, let us adopt other roots,—the turnip or carrot for instance; the last, especially, as the cultivation is hardly more difficult than that of the potatoe; its produce is equally great; it furnishes a species of food which is agreeable to almost any kind of animal. They may be used very profitably instead of oats, cost much less, and prepare the soil to receive at a later period a crop of grain which will produce twenty-fold. I consider our fine Canadian cows of Norman breed, well reared and fed, as the best kind of milch cows. They are not adapted for slaughter on account of their small size, but cross some of the largest with a fine Bull of the Durham breed, and you will have a splendid offspring suitable for slaughter, on account of their size and facility with which they may be fattened, I have had the good fortune to experience this myself. As a last resource, and in case of necessity, straw may be employed as fodder for horned cattle, but an animal fed exclusively on straw will never retain its good condition. Straw makes much better forage when it is chopped, but its pro-

per position is under the feet of the cattle, it is best adapted for litter, and as such becomes an excellent manure.

4th.—The milch cow and the sheep, are in my opinion, the two animals which make the best return to the farmer. I think that in this neighbourhood where good butter is produced, the preference should be given to it rather than to cheese, which however, might be made with profit; but I would rather recommend butter on account of the profit resulting from the use of the refuse of the dairy for the fattening of pigs and other animals, during the summer, by the addition to it of a few other matters. I have already stated above, that I consider our Canadian cow well worthy of preservation, I think it the easiest to keep and the least costly to raise.

5th.—The breeding of such tall and long bodied pigs, resembling hounds, of which we see far too many about here, ought to be abandoned. The Chinese pig appears to be the most thought of, but I prefer it crossed with other breeds of a stronger build. The pig should be farrowed in April, at the period when the cows begin to give their milk. They should be kept in a state of the most perfect cleanliness, and fed at first after weaning with great care. Pigs should be fattened in summer with the refuse of the dairy, bran or oatmeal; they are very easily and cheaply fattened at a later period,—potatoes or other vegetables carefully cooked, then crushed while warm and mixed with a small quantity of barley-meal, oatmeal or buckwheat, make excellent food for fattening pigs. Pigs should be killed at the commencement of the fall frosts. The finest boar of a litter should always be selected for getting stock. Notwithstanding its name and reputation, the pig is an animal which requires particular cleanliness in its food, the troughs which contain it, and in the place in which it is put; and it is owing to neglect of these precautions that people often keep these animals so long without being able ultimately to fatten them properly, so that they make but mealy pork after all.

6th.—Geese, turkeys, and chickens are the only poultry which I would recommend to be reared. The duck, voracious little creature, costs more than it is worth, and yet it fattens well. The hens known as “English” are pre-

ferable to ours, are bigger, produce finer eggs, and splendid chickens. Our breeds of geese and turkeys appear to me worthy of preservation; I have seen chickens and turkeys fed, and thoroughly fattened during the summer, on a cooked and mashed nurture of curds, bran, and potatoes. This food, which does not cost much, is eagerly devoured by poultry; on this diet they soon grow large and fat.— They are kept thus in the poultry yard until the first cold weather, it is then better to conclude the fattening process during the short time that remains, by feeding them with grain. They should be killed at the beginning of the hard frosts at the end of November. Our farmers take a great many geese and turkeys to market at Quebec, and generally sell them well. There is some profit, I think, in rearing poultry in the manner I have just described; very few chickens are reared, and they are generally small compared with those we see elsewhere. The food for fattening geese is composed of oats mixed with peas (*goudriole*); I do not know of any other method of fattening them successfully; to make geese thrive they must have a pond of clear water, or a brook in their yard or enclosure.

7th.—Our old fashioned “*blé blanc*” continually excites the deep and well deserved regret of our farmers. This is the description of wheat best suited to our soil, but which it is useless to sow at present, as it is inevitably destroyed by the yellow larvæ deposited in each ear by the Hessian fly. Black Sea wheat is the kind which ought now to be principally sown, as this wheat is better defended than any other kind from the attacks of the fly. However, in certain soils, after a few years it degenerates and does not arrive at maturity for four months. This inconvenience may, however, I think, be obviated by sowing this wheat alternately on low lands, or on sandy soil, or high lands, or *vice versâ*. I think that it degenerates only when it is sown constantly in the same soil, especially when that soil is low and moist. Fall wheat has never been sown in this neighbourhood to my knowledge. Any one who would successfully introduce it among us would render a great service to this part of the country; it is absolutely necessary to try it before passing an opinion on it. I fear, however, that our cold and damp climate would be fatal

to it; I am sure that it would be not only advantageous but also necessary to plant, as is the practice in other countries, branches to retain the snow on the surface of the ground, and to preserve and keep it there as long and as late in the season as possible. It would be necessary to choose, for this kind of wheat, an elevated situation, perfectly dry, and where water could never stagnate; one fortunate attempt of this kind would be immediately followed up by our farmers, and would produce a complete revolution in our agricultural practice. The principal advantage which would be derived from this description of wheat, would be to deliver us from the destructive results of the early frosts which cause such havoc in our harvest, and so often destroy the dearest hopes of the unfortunate farmer, by depriving him in one moment of the fruits of many months laborious and persevering labor. He who should first adapt this wheat to our climate would, in my opinion, be much more deserving of our gratitude, and would do us a much greater service than those who pretend to have found out a remedy for all our misfortunes, by annexing us to the neighbouring Republic.

8th.—So long as Upper Canada and the United States are able to furnish their wheat and flour at the present rates, and so long as the cultivation of the wheat remains as precarious here as at present, I do not see what advantage we could derive from continuing to cultivate it on any extensive scale; oats, barley and peas would pay better, and if we could succeed in obtaining commercial reciprocity with the United States, I am not at all apprehensive but that we should derive more than two-fold advantages by giving these kinds of grain the preference over wheat. It would then be necessary to cultivate the latter only for family consumption. I would not be understood to advocate the complete abandonment of the growing of wheat, but I wish it to be understood that it would be more desirable to vary our system by sowing several different kinds of grain.

9th.—I would not advocate the growing of potatoes to any great extent at present, on account of the disease; if this scourge disappeared I should be quite of a contrary opinion. We have suffered much more in this neighbour-

hood from the failure of the potatoe crop than from that of the wheat.

We consume three times as much grain now, as when every farmer gathered in from 800 to 1000 minots of potatoes or more. The red potatoes are less subject to rot than the others, without, however, being entirely free from the attacks of the disease.

10th.—My answer to the third question contains my opinion on this subject; I have only to add that the three first mentioned kinds, only, are common here, and that they succeed indifferently well. I would, however, prefer the turnip if it were not exposed to the ravages of insects. In the absence of potatoes it becomes necessary to adopt some of these vegetables to supply their place.

11th.—The white Indian corn thrives well in this neighbourhood; but unfortunately a small quantity of it only is grown, and as a garden vegetable. The same remark applies to all other vegetables except potatoes. Turnips have been cultivated a little more extensively since the disease in the latter; a few experiments have been made with Indian corn which have perfectly succeeded. But our fondness for routine has too deadening an effect upon what might be said and proved on this subject, I should prefer to raise root crops rather than Indian corn, the latter being liable to injury from the frost.

12th.—The couch grass may be found in many places, and ruins the soil wherever it grows. Such lands, when it is possible, are laid down in meadow. In sandy soils, the places infested with it are planted with potatoes, and thus it is effectually destroyed. Another plant which is very noxious, and unfortunately spreads in the most alarming manner, is that known by the name of "wild-mustard." I forget its scientific name. The method employed here to destroy it is, pulling it up by hand. This is done when the stem, having grown to its full height, begins to show at the top a yellow flower, which may be easily distinguished among hay or grain. It is generally pulled up after rain, when the ground is soft. Weeding can be employed with success only when the wild-mustard is in small quantities, or is just beginning to show itself in a field. Summer ploughings, unfortunately, are

not practised here: it is by far the best way of destroying weeds. It is pleasing to remark the absence, for several years from our fields, of that parasitical and troublesome guest, the thistle, which but a short time ago did so much damage to Agriculture. It is only by repeated mowings, during dry weather and before the plant arrives at maturity, that it is possible to destroy it. The period selected for this operation is when the stem, having attained its maturity, becomes hollow towards the end of June. When this stem is cut off a few inches above the ground, the lower part thus remains exposed to the heat of the sun, the rain which follow gets into the cavity, and soon effects the decomposition of the rest of the plant, even down to its root.

18th.—It is an undeniable fact that with the deplorable want of education in our agricultural community, it is only by the efforts and patriotic sacrifices of all enlightened and true friends of their country that the introduction of most necessary improvements in this useful and hitherto neglected science can be effected. Already, and it is no small matter, the Canadian farmer begins to perceive his inferiority on this score, compared with men of foreign origin. He admits that there might be a system superior to his own. He understands and appreciates the attempts which are being made to encourage and improve Agriculture. I have observed, for instance, with the greatest pleasure, the feeling of satisfaction and pride exhibited and manifested by a great number of our *habitants*, on the receipt of the little treatise so liberally offered to our agriculturists as a New Year's gift, by the noble and illustrious personage who now presides over the Government of the Canadas. Lord Elgin by this act, at once generous and philanthropic, has done more to render his name popular, and hand down his memory among our population, than if he had gained a glorious victory over the enemies of the country. There is one method which might perhaps be expensive, but which would, at the same time, be productive of immense benefit. I would speak of model farms. Let our Legislators reflect upon this. This measure is one of the most important of those with which they will shortly be

occupied. Let us trust that the last session of the present Parliament will not be brought to a conclusion without some steps being taken in the matter.

Let me be permitted only to add, that if an experiment is tried which is intended to be useful, a system at once simple and economical must be offered to our farmers. Any other must fail of success.

(Signed,) F. CHS. CHAPAIS.

St. Denis de la Bouteillerie,
24th April, 1851.

ST. PHILIPPE, 25th April, 1851.

GENTLEMEN,

I have the honor to acknowledge the receipt of your circular, in which you request answers to various questions on subjects relating to Agriculture in this Province. I ought first of all to confess my incapacity to answer these different questions so as to throw any new light upon the important subjects you are endeavoring to elucidate. I certainly am engaged in Agriculture, but my other pursuits are so varied and numerous as to enable me to spare but little time to it, and my knowledge of the art, either practical or theoretical, is consequently but very limited.

I shall not undertake to answer separately all the questions contained in your letter, for such an attempt would be altogether beyond my capacity. I shall confine myself to a few remarks on some of them, which appear to me to be most important, and with which I am most familiar.

Of this number, are the four first, which relate to the raising of sheep, horses, cows, &c. I am certain that a much greater number of sheep and other domestic animals than are at present raised in this Province, might be raised most profitably. The climate is very favourable to the rearing of sheep and to the keeping of them in good condition, but the method of feeding them in winter, generally adopted, is very bad. The greater number of those who rear sheep keep them in stables very often too warm,

where there is not sufficient room, and give them food which is neither succulent nor nutritious. I do not think, however, that sheep can be fed through the winter with the food used in different parts of Europe, and the attempt would probably fail. Turnips, the use of which in those countries is almost unlimited, produce in this country but very uncertain and doubtful crops; the storage of them is very expensive and difficult, and it is impossible to preserve them a sufficient length of time. Beet might certainly make a very tolerable return, and its cultivation ought to be carried on to a greater extent than hitherto; although its preservation is equally costly, and almost as difficult as that of the turnip. All the farmers in the country ought every year to cultivate several arpents of beet, with a few turnips, parsnips, carrots, and potatoes. There should be more beet cultivated than of any other root, especially in a light and deep soil. If the raising of these vegetables were more generally adopted, it would be a great improvement in our agricultural system, and it would thus become much more easy to maintain not only our sheep, but also our cows, horses, and other domestic animals, in good condition, during the long winter.

I think that the cultivation of the tare ought also to be introduced, and a certain quantity of it should be harvested before its maturity, to serve as forage. This might be given to sheep and other farm cattle, and might become an excellent substitute for straw, and also for the hay which is at present given them. Cattle might be fattened with it quite as well as with hay or grain, and, I dare say, even better, for cattle eat it with great avidity, and it is very nourishing.

With regard to the breeds of sheep which are best adapted to our climate, I think that all the kinds successfully reared in the North of Europe would succeed equally well here. I prefer, however, a mixture of some one of those breeds with our best specimens of Canadian sheep. I know of crosses of Canadian sheep with those of the Leicester and South Down breed, and *vice versâ*, which have succeeded very well. I am persuaded that by making these crosses in a judicious manner, we should obtain

a healthy breed, and one at the same time adopted to our climate and system of farming.

The same may be said of cows. I should prefer crosses of the best Canadian specimens with the Ayrshire breed, to specimens of either separately. I am also of opinion that cows of middle size should be preferred to those of a large size.

So long as we find that our horses sell for exportation to the United States, and elsewhere, as has been the case for several years of late, I think we ought to raise more of them than we have hitherto done. For my own part, I would raise the pure Canadian rather than any mixed breed. If we paid sufficient attention to their improvement, and treated them well, this breed, I am sure, would be more profitable than any other, both to raise and to maintain, and would make comparatively a better return for the expense.

However, as it does not suffice to know the different kinds of cattle which may be reared, with some chance of success and profit; but it is also of the highest importance to be able to provide for supplying them with food, both abundant and of good quality, at all seasons of the year; allow me to observe that the desired end can never be attained without a radical change in the system of farming now followed in this Province. The greater part of our farmers do not, so to speak, produce anything else but grain crops, without any system of rotation or manuring. Moreover, the land is generally covered with wild weeds, such as the thistle, the wild endive, and a great many other noxious and parasitical weeds, which people do not even take the trouble to destroy. I deplore this state of things, and think it absolutely necessary that it should be reformed. This tardiness in improvement may be attributed to many causes. The principal, in my opinion, are the want of education, and of institutions where the farmer may learn and early teach his children the science and practice of Agriculture in all its branches; to the scantiness of capital and the difficulty of obtaining it on loan at a pinch. Our rural population are very intelligent, industrious, orderly, and persevering. Place within their reach and power of adoption an improved system of Agriculture, by the estab-

lishment of model farms, and give them a more accessible and more extensive credit than that of the banking houses at present existing, and I do not hesitate to assert that in a few years you will render Canada a most flourishing country, and one most favorable to success in agricultural pursuits and for agricultural purposes.

It appears to me quite natural to add, that in order to assist in the formation of model-farms, the want of which is so deeply felt, and in the establishment of agricultural professorships, which several of our Colleges appear desirous of introducing, all elementary schools which receive Government assistance should be compelled to subscribe for a certain number of copies of the excellent Agricultural Journal published by your society, and to cause the scholars to read them. Other works of a similar character might be added, the reading and explanation of which would be productive of infinite benefit.

I have the honor to be,

Gentlemen,

With consideration,

Your very humble and obedient Servant,

(Signed,) L. A. MOREAU.

To the President and Directors of the
Lower Canada Agricultural Society.

(Translation.)

TRING, 25th April, 1851.

GENTLEMEN,

The object which the Lower Canada Agricultural Society has in view, is of too patriotic a nature to permit me to consider it other than a duty to reply to the letter which you have done me the honor of addressing me, dated the 8th instant. I regret that, owing to the distance from Tring of the nearest post office, I was not in receipt of it until the 22nd, and I fear therefore that my answer will reach you too late to be of any use; this must be taken as my reason for giving you very short and simple answers to the queries proposed in your circular.

1st.—I am of opinion that there is nothing in this country to prevent the raising of as great a number of sheep as in the countries most famed for their wool. I do not consider our climate unfavorable to the breeding of them. If the best breeds were selected, and more care taken and attention paid to keeping them in good condition, especially during the winter months, they would, in my opinion, become in a very short time a certain source of wealth to the farmer; though at present they hardly remunerate him for the expenses which they entail. The Leicester breed crossed with the Cheviot ram is the kind which, in my opinion, would afford the best chance of success.

2nd.—The pure Canadian breed of horses is, I think, best adapted to this country, and they are justly esteemed in the American markets. The two most serious errors of the farmer with regard to them is the bad choice which he makes of a stallion, and the little care which he takes of the colts in not giving them usually for the two first years more food than they absolutely require.

3rd.—The farmer who wishes to raise fine cattle ought first of all to proportion the number to the amount of hay and grain which he harvests; for it is quite plain that a small flock consisting of animals of good breeds, and kept in good condition, will be more profitable, and even possess a greater intrinsic value than a more numerous herd composed of puny and miserable animals. Straw without roots or hay is certainly insufficient to keep cattle throughout the winter in a proper condition. In spite of the usual low price of meat in our markets, I think that the farmer would realize more profit by raising horned cattle and sheep than by selling his grain. I should prefer these two kinds, because they present a greater chance of success; their flesh is the most generally in use, and they are not like pork, valuable on this account alone.

As to horses, the chances of profit are too variable, because so long a time elapses before their qualities can be ascertained.

I think that in order to raise in this way a great number of cattle profitably, it would be necessary to adopt a

system of rotation crops, and especially to pay more attention to pasture grounds and the cultivation of root crops.

4th.—I am not prepared to answer this question.

5th.—Although poultry is necessary as stock for a farm, I do not think they can be profitably reared for market.

6th.—Some experiments with the old fashioned four months wheat, made here last year, succeeded very well. For several years past, fall rye has been sown in this neighbourhood, and succeeded very well. I think that fall wheat would have the same success ; a trial is being made this year with a small quantity.

7th.—As wheat is the grain in the raising of which it has been most difficult to succeed, especially for several years past, I consider it more advantageous to the farmer to raise other descriptions of grain which he would also require, than to restrict himself to the cultivation of wheat.

8th and 9th.—Potatoes, planted with the hoe in our new lands, have not been attacked by the rot. I think that without diminishing the quantity usually planted, other roots should also be sown, such as turnips, carrots, beet, &c., as food for cattle during the winter.

10th.—I do not think the raising of Indian corn preferable to that of root crops, as it is no substitute for them.

11th.—In the new lands of our Townships we are almost altogether free from them, with the exception of the "green buckwheat" which is scattered through all the grain, to its great injury ; but in the neighbouring parishes of the County of Dorchester I have seen meadows in which the daisy formed two-thirds of the crop of clover or timothy. It is seen also to flourish in the fallows and grain. I should think that summer ploughings would destroy it ; but I think they are altogether unknown in this neighbourhood.

12th.—Without entering into details, I shall conclude by suggesting the following as the means best suited to improve the present state of our Agriculture :—1st. Study of the theory of Agriculture in our educational institutions. 2nd. Model farms. 3rd. Agricultural Exhibitions, and above all, 4th. The formation of Agricultural Banks.

The whole, however, humbly submitted.

I have the honor to be,

Gentlemen,

With sentiments of the highest consideration,

Your very devoted Servant,

(Signed,)

L. PROVANCHER,

Ptre.

To the Directors of the Lower Canada
Agricultural Society, Montreal.

ST. EUSTACHE, 28th April, 1851.

DEAR SIR,

I have many apologies to offer you for having delayed so long to forward you this answer to your letter dated 8th instant. Business and sickness in my family have prevented me from transmitting my answer earlier. In replying, I shall follow the same order observed in your circular, to wit:—

Answer to your 1st question.—The climate is tolerably favorable for the raising of sheep, and I am of opinion that the absence of cloth factories in this country is the principal reason why a greater number of them is not raised. I find that the cross of Canadian with the English sheep is the best. The number of sheep is decreasing.

2nd.—The most advisable method is to castrate horses while quite young, for when they remain entire they are very expensive. The Canadian breed is the best. Young horses ought to be well fed, especially for the first year, and with barley or oats boiled, but not with dry grain. Clover is very good for them.

3rd.—Calves should be well fed, especially during the first three or four months: for instance, they should be fed on milk just from the cow. It would be advisable to direct our attention to the business of raising cattle as much as possible. I think the Canadian breed of cows crossed with the Ayrshire bull would be the best. If the soil be suitable, I think the cultivation of potatoes the most profitable.

4th.—Yes ; and I would recommend the making of cheese in the months of May and June.

5th.—I think that the Berkshire boar with the Canadian sow would make a very fine breed, and that it would be desirable to cross the breeds, in order to have pigs that at eighteen months would weigh from three hundred to four hundred pounds. I would recommend their being well taken care of, especially while young.

6th.—I cannot answer this question.

7th.—I think that Black Sea wheat is the best. Farmers who have sown it early have generally succeeded the best in this Parish. It has, I think, degenerated. I think it very desirable to procure wheat for seed which has been grown at a distance of not less than eighteen miles from one's own farm. I prefer sowing wheat in heavy land : to make use of wheat which has been produced in soil of a contrary nature, and *vice versâ*. I do not think the growth of fall wheat desirable—it is too precarious—our winters being frequently too cold.

8th.—When the price of wheat is under five shillings, I consider the cultivation of other descriptions of grain more profitable, because of all grains wheat most impoverishes the soil. I find that clover and timothy, sown with barley, are most suitable to form artificial meadows.

9th.—Yes, if the soil permits of it. The red potatoes are the best, if the ground be high. I prefer planting in every third furrow, by ploughing ; and the autumn before the land should be well prepared, and the manure properly mixed in by ploughing. By this means potatoes are much less liable to rot than when the manure is placed in the ridges with the potatoes.

High and poor land is best adapted to the growth of potatoes, provided it be manured.

10th.—I consider carrots preferable.

11th.—I know nothing about it.

12th.—They are the thistle and the wild oat. Artificial grasses are the best means of destroying them ; and more clover should be sown in the places where they grow.

13th.—I would rather see Agricultural Societies directing their attention, not so much to offering premiums to encourage the raising of fine cattle or fine crops, as to

affording instruction in the means of producing them; and in my humble opinion, the Legislature ought to pay particular attention to the subject of Agriculture, which is of such vital importance as regards the prosperity of the country. The limits of a letter are too small to permit me to express the sentiments which I entertain with regard to this noble profession, the practice and encouragement of which, especially by an educated class of individuals, should be productive of results extremely profitable to all the members of society. To establish a correspondence with some of the European Governments, in order to obtain information on this subject, with a view to the best means to be adopted for the still greater encouragement of Agriculture. Lectures and practical instruction in this art in our Colleges, which might be brought about by a Government grant to enable the Directors of these Colleges to employ persons qualified to give instruction in this new branch of education, and to purchase a model farm attached to each of these establishments. The publication, at the expense of Government, of a little treatise, containing the elementary principles of agricultural knowledge, expressed in clear and intelligible language, and adapted to the comprehension of children, which, by the interposition of the Superintendent of education, might be introduced into each of our country schools, so as to diffuse amongst our present rising generation a taste for the practice of this noble and necessary art. These are such suggestions as may be found from time to time in the interesting Agricultural Journal of Lower Canada.

I could have wished by my answers and humble representations contained in this letter, to have made myself more useful to the Lower Canada Agricultural Society, but I have done my best.

I have the honor be,

Sir,

Your very obedient Servant,

(Signed,) J. L. DEBELLEFEUILLE.

WM. EVANS, Esq., Secretary,

Lower Canada Agricultural Society,

Montreal.

(*Translation.*)

ST. HYACINTHE, 25th April, 1851.

MY DEAR SIR,

Although I have expressed to you lately the hope I entertained of being able to answer the questions which have been addressed to me by the Lower Canada Agricultural Society, I am under the necessity of informing you that my business obliges me to forego the satisfaction I should have had in so doing ; and I would beg the gentlemen who signed the letter you did me the honor to address to me, to be pleased to accept of my apologies.

I have several times attempted the work, but the more I labored the more I perceived that the variety and importance of the subject, made it a work which it would be impossible for me to accomplish, according to your request ; I have therefore been obliged to resign a share in their labors which would have been highly agreeable to me, although probably of little use to those who have asked it of me.

I cannot, however, close this letter without expressing to you the great interest which I take in the continued efforts which the Society is making for the promotion of that art which, more than any other, may prove the foundation of our national prosperity. I earnestly hope that the Society will again represent to the Government and the Legislature, the urgent necessity of affording, without longer delay, effectual encouragement.

The necessity of model farms is no longer doubtful, and I think the Society ought to insist on their establishment. In a scheme of this nature, it would be supported by the whole country. Without model farms, Canadian Agriculture, whatever may be said to the contrary, cannot make any rapid progress. There are not in Canada a sufficient number of individuals able to make pecuniary sacrifices in order to make experiments ; and by a series of the necessary trials to establish principles which should serve as guides to a rational system of Agriculture.

If a model farm cannot be established in each County, or even in each District, at least let one be elected in both Lower and Upper Canada. These two schools might educate professors, who would have one great advantage

over those whom some people wish to bring out in great numbers from Europe, of having studied on the ground itself the different soils and the climate of the country, which they are to improve. But to arrive at this end, an adequate and liberal grant of public money must be made; and I cannot but think that we shall find in the Administration and in the Legislature the zeal which the general conviction that the encouragement and progress of Agriculture are absolutely indispensable to the prosperity of Canada, cannot fail to excite.

I am, Sir,
Your very obedient Servant,
(Signed,) T. BOUTILLIER.

(Translation.)

YAMACHICHE, 1st May, 1851.

SIR,

I acknowledge the receipt of your honored letter of last month. Notwithstanding the limited knowledge I possess of matters relating to Agriculture as a science, I hasten to answer some of your learned questions, with many apologies for my unavoidable delay.

The obstacle which stands in the way of raising a greater number of sheep, is the neglect of farmers and their want of precaution in leaving the males at large throughout the entire season, and thus causing the ewe to yearn at a period too cold and too severe for the lamb; and this I also believe to be the cause of the diminution in the number of sheep.

Horses of the pure Canadian breed certainly fetch the highest prices in the market.

Straw alone is certainly by no means sufficiently nourishing for cattle during the winter. I am of opinion, however, that it is more profitable for the *habitans* to dispose of a large portion of their hay and oats than to employ them altogether in the fattening of cattle, the price obtained for which is very low in these localities. If, however, at any time it should prove more profitable to rear cattle, I consider the Canadian breed best adapted

to our fields, considering the suffering and the hardships experienced by cows of foreign breed, which are generally of a larger size, in eating the short and scanty herbage.

The Canadian cow is, moreover, in my opinion, the best adapted and most profitable for dairy purposes; it is also the least expensive to rear. Cheese is profitable; but butter perhaps still more so.

Black Sea wheat is the most profitable, because it escapes the fly, but it has degenerated. The *blé froment* no longer succeeds, and the same would be the case with fall wheat.

Oats, at the present time, are certainly preferable to wheat, there being a much greater demand for them in our markets.

Turnips, beet, carrots and parsnips, as well as Indian corn, might be advantageously grown to a greater extent than they are at present.

The most noxious weeds in this part of the country are thistles, and the best means for their destruction is to make meadows or pasture grounds for several successive years. This experiment has often been tried, and always with success.

I have the honor to be,

Sir,

Your devoted and obedient Servant,

(Signed,) FRS. DESAULNIERS.

In answer to your queries, I beg to enclose the following answers:—

1st.—I should say that the loss of lambs has been so great for many years, in consequence of rams running at large with ewes the whole year; many farmers, to my knowledge, losing the greater part of their lambs. Farmers have bred so much in and in that the sheep in general are not worth keeping. The Leicester breed of sheep are the best to cross with. I think a cross between the South Down and the Leicester an advantage, particularly where the feeding is short.

2nd.—Large active horses bring good prices. I would recommend the Canadian mare crossed with a well bred stallion.

3rd.—A farmer with good pasturage can raise stock profitably, but they must have hay and turnips, or ground oats the first winter. Straw alone may keep them alive, but nothing more. Cattle well fed will be worth more at two years old than those badly fed at three years old.

If a flat farm with rich pasture and warm buildings, let him get the pure short horns; if hilly, the Devons will be the best; the Ayrshire breed are best for the dairy.

4th.—Butter in spring and fall, and cheese in the heat of summer, pays the best. The short horns are the best dairy stock where there is good pasturage, but under most circumstances, I should say a cross between them and the French Canadian cow. They are excellent milkers; their milk is rich.

5th.—The breed of pigs requires improvement. I should think the Chinese would do well to cross with the common breed, but the farmers cannot be made to pay for the use of a boar.

6th.—It pays very well to keep fowls and turkeys. The black Spanish and the Poland fowls are excellent layers, but the Malays or the Dorkings are the best for market. Barley and corn are the best food.

7th.—The Black Sea wheat is the one generally sown. The fly has not made such ravages last year as former years.

8th.—The best potatoe for table use is the "Copper Dun," cultivated in drills with a plough. I have found no difference between first ploughing in the dung or putting it in the drill; but I always use long manure and harrow them with a light harrow, as soon as they appear.

9th.—Carrots and turnips may be cultivated to advantage in a light soil, but for a general crop, the turnip is the best, and very good food for cattle.

I remain your obedient Servant,
(Signed,) U. AYLMER.

POULTRY.

The best mode of keeping poultry is to let them have the run of the yard, where they can have grass and gravel; and in winter give them a warm place, with gravel or sandy soil: ashes and mortar, are necessary for their health and comfort. They should be fed regularly, and always kept clean, with water before them. Poultry are fond of all sorts of grain, such as buckwheat, oats, Indian corn, wheat screening, &c. When you feed poultry for profit, you have to guide yourself on what is the most economical and cheaper to be procured. They will eat all kinds of vegetables in a green state. Cooked or raw, they are very fond of animal food. Flesh and fish, cooked or raw, is the best feeding, and they relish it; it makes them lay. Indian corn, at the rate of a gill per day, for each fowl, and now and then a feed of animal food, boiled potatoes and vegetables mixed together, with half the quantity of oats or buckwheat is a first rate feed. In the winter months give it them warm. Punctuality in feeding and clean water, is the secret to fatten and make them lay.

As for profit, I consider that poultry can be made to pay if they get the required attention. If you want eggs, I would recommend the English Dorking as one of the best layers; their eggs are not as rich as some other breeds. If you want a good egg, and of the richest flavor, keep the Cochin China or the Shinghae, or the great Malay. In the meantime, you have size and richness in the egg, and large size in the poultry, and rich flavored flesh. One three months chicken is equal in size to a year old hen of our dunghill fowl, and when you have once eaten the egg of these varieties, or tasted their juicy flesh, you find the other quite insipid and cannot relish them. I would recommend a cross of the Dorking with either the Cochin China or Malay. They improve in size in their laying, and the flesh is tender, white and juicy, and give you a breed plump and fine in appearance.

There are many breeds of fowls now in this country, to which the public are indebted to me.

I have at present, in my establishment, thirty different varieties of fowl; six of geese, some of them weigh thir-

ty pounds each; seven of ducks; thirty-six varieties of pigeon, besides sea-fowl, pheasant, &c. As a proof of what profit, and what can be done, I will cite you a few of the remarks made by the European Journals and United States papers.

The annual consumption of poultry and small game in the city of Paris usually amounts to 22,000,000. The quantity of eggs used in France exceeds, says one of the late Journals, 7,250,000,000; of which enormous number, Paris used about 120,000,000. The importation of eggs from Ireland in 1837, to Liverpool and Bristol, alone amounted in value to £250,000; the importation the same year from France was still greater.

It appears from the Custom-house returns of the year 1838, that eggs were imported into England (although loaded with heavy duties,) from the Continent, to the value of more than a million of dollars.

It has been ascertained that half a million of eggs are consumed every month in the City of New York. One woman, in Fulton market, sold 175,000 eggs in two weeks, supplying the Astor House each day with 100 dozen for five days of the week, and on Saturdays with 200 dozen.

The production and consumption of poultry and game in Europe may be judged of by the consumption of Paris, which comprised the following articles and animals, according to Count Chalsol:—931,000 pigeons, 1,290,000 chickens, 549,000 turkeys, 238,000 geese, 131,000 partridges, 177,000 rabbits, and 174,000 ducks.

The amount of sales of poultry at the Quincy market, Boston, for the year 1848, was 6,000,740 dollars; the average sale of one dealer alone amounted to 1200 dollars per week for the whole year. The amount of sale for the City of Boston for the same year, was over one million of dollars.

Your obedient Servant,

(Signed,) J. E. GUILBAULT.

To the President and Directors of the
Lower Canada Agricultural Society.

ST. HILAIRE, May 14th, 1851.

SIR,

I have the honor to acknowledge the receipt of a letter from the Directors of the Lower Canada Agricultural Society, containing questions to which they request me to give answers ; to many of which I am unable to do so for want of practical experience in this country. The farmers around me, from whom I might obtain the requisite information, are at this moment so busily occupied in getting their seed into the ground, that I find it impossible to bring their attention to the matters. The reasons generally assigned in this neighbourhood for not keeping more sheep are—prevalence of disease—negligence in keeping fences in repair—allowing males to be at large at all times—and having no market for wool. To these I could add as reasons why the sheep do not increase as they should do—wretched pastures in summer—confinement in close ill-ventilated stables in winter—and too early lambing. With regard to horses, I am inclined to prefer a cross between the Canadian and the Clydesdale, for farming purposes ; and I think a higher price could be obtained for them. For the Canadian, as it is at present, a fresh infusion of Norman blood, is very desirable, in order to restore the Canadian horse to what it was in years gone by. I do not believe that any cattle can be supported advantageously during winter on straw only. I have found them do well on cut straw, upon which was poured linseed meal mixed with water.

Up to this moment, I have not found the Canadian cow so profitable as others. I have Durham and Ayrshire cows, and a cross between them give me more milk, of much the same richness, upon equal feeding, than I do from the Canadian cow ; and when done with as milkers, they put on meat more rapidly, and to a much greater height. Perhaps on very poor pastures, the Canadian cow may have the advantage ; this experiment I have not tried.

I think the culture of root crops would be attended with very great advantage. On my soil, a stiff clay, I have succeeded best with mangel wurtzel ; but were the

land thoroughly drained, I have no doubt that carrots would be equally profitable.

I am feeding my cattle this year with both, and I think I have enough to carry me through this month. They keep well in a cellar that is properly ventilated. Several of my neighbours have taken to the four months wheat again, with success. One farmer has sown nineteen bushels of it this year. Fall wheat is, I fear, an uncertain crop; to me it has failed; but what I saved last autumn promises well at this moment. So long as the potatoe is subject to the malady which has of late years made its appearance, it would, I think, be folly to cultivate it largely.

The most prevalent weed in these parts is the Canada thistle, and I am sorry to say few, very few farmers appear to take any trouble to get rid of it.

I have the honor to be,

Sir,

Your obedient Servant,

(Signed,) T. E. CAMPBELL.

KINGSTON, 14th April, 1851.

In answer to queries suggested by the Directors of the Lower Canada Agricultural Society, I beg to make the following remarks:—

1st.—The climate of Lower Canada is favourable for sheep. Near large cities, when early lambs sell to advantage to the butcher, I should recommend South Down ewes crossed with a Leicester ram. The South Downs are the best milkers, and will fatten their lambs earlier. To keep as breeding stock, I would recommend the Leicester.

2nd.—I found the most useful horses for all purposes were from the Canadian mare, sired by a good useful English stallion. They were better for the saddle than when sired by a Canadian horse, out of an English mare, and equally good for harness.

3rd.—Calves should be fed the first winter on good fine hay, with a few roots ; subsequently they will, if brought up in the autumn in good condition, keep in the same condition if fed with good straw, and a few roots, or a feed of hay in the morning, and straw during the remainder of the day. Straw should be used fresh from the flail, and given in small quantities at frequent intervals. Turnips should be fed sparingly during the months of January and February, as they are of too laxative a nature in the severe cold weather if given in large quantities. Cattle properly attended to during the winter, with hay and roots, and turned into good grass in the spring, will be fit for the butcher in the latter part of June, when beef commands a good price. In the vicinity of towns, where farmers can procure a sufficient quantity of manure, it may be advisable to sell hay or straw, when it commands a fair remunerating price ; but on no consideration when he is far from town and cannot obtain manure, for though he may realize more at the time, he will lose afterwards, by the deficiency in the quantity and quality of his crops.

For beef cattle, I should prefer the Herefords and Devons ; they will give more beef than any other breeds. For milch cows, the Ayrshire breed.

4th.—In situations where pasturage is good, I consider a well-regulated dairy one of the most advantageous branches of Agriculture, especially if making cheese of the first quality is perfectly understood.

5th.—I believe the Berkshire pigs are as profitable as any. Though they do not attain so great weight as some of the larger breeds, they are considered to pay more for the food they consume. Pigs will degenerate faster than almost any description of stock, by breeding from too near a kin ; it is therefore advisable frequently to change the male from another stock of the same breed, but not related. The mode of fattening will depend on where the farmer is situated ; that must be left to his own discretion and experience.

6th.—In regard to poultry, I have had but little experience with different breeds.

7th.—I consider the old white wheat formerly sown in Lower Canada a valuable kind of wheat ; but until the

fly has left the country, I do not think it would be prudent to sow it to any extent. There is a kind of spring wheat sown in Canada West, called "club wheat," which is much approved of. I have no doubt it would answer in Lower Canada. I believe the Black Sea wheat has, in many places, degenerated; the cause may be attributed to want of precaution in changing the seed from a distance. Fall wheat is too hazardous a crop to be cultivated in Lower Canada to advantage. Covering the ground with branches would be too expensive to be adopted on a large scale, and the branches would be liable to be blown off by the wind in exposed situations.

8th.—Wheat is too often sown on the same lands, both in Upper and Lower Canada; the consequence is, that the produce is much less than formerly, and the quality of the grain much inferior. It should only be sown after a regular rotation. A rotation of soil I consider best for this country. By this mode of cultivation, if properly executed, the land would continue in good heart, and be free from weeds.

9th.—During the prevalence of the disease, I do not think it would be prudent to cultivate the potatoe to any extent.

10th.—All these root crops are beneficial. Carrots in particular, in a suitable soil, are a very valuable crop for every description of stock. In a regular rotation, root crops or Indian corn must be cultivated, unless you make summer fallow to a great extent.

11th.—Indian corn, when the season suits, is a very useful crop, the tops being excellent fodder for cattle and horses, independent of the crop of corn; and if properly cultivated, leaves the soil in good condition for wheat.

12th.—Summer fallow and preparing the ground for green crops, will always destroy weeds if properly executed.

I have the honor to be,
Gentlemen,

Your obedient Servant,

(Signed,) CHAS. PENNER.

To the President and Directors of the
Agricultural Society, Lower Canada.

FINANCIAL STATEMENT OF THE LOWER CANADA AGRICULTURAL SOCIETY,
 &c.—(Continued.)

	Dr.		Cr.						
	£	s.	d.		£	s.	d.		
<i>Brought over</i>	863	12	11		850	9	0½		
				<i>Brought over</i>					
				By paid sundry expenses, covering paper for Journals, writing paper, &c.	3	4	10½		
				By paid for writing and translating Reports, Circulars, &c.	7	19	0		
				By paid Notarial Contract with Mr. Lay	2	0	0		
	£	863	12	£	863	12	11		

E. E.

ALFRED PINSONEAULT,
President.

WM. EVANS,

Secretary.

MONTREAL, MAY 20, 1851.

REPORT
OF THE
AGRICULTURAL SOCIETY
OF THE
COUNTY OF BEAUHARNOIS,

To the Legislature of the Province of Canada.

The Committee of Management of the Agricultural Society of the County of Beauharnois, have the honor to present to the Legislature of Canada the following Report of their proceedings for the last agricultural year:—

For several years the Society had adopted the system of having four annual and two winter shows in different parts of the County, with two ploughing matches, for the greater convenience of the respective localities where they were held, and the fructification contemplated from so wide a diffusion of pecuniary and other advantages might have been sufficiently encouraging, had the funds of the Society permitted a distribution of premiums at each show, large enough to induce the exhibition of the best specimens in each class of competition. Experience, however, of the inadequacy of premiums, necessarily small under the system in question, led the Committee to adopt in June last a change, and to announce only one fall and one winter show, to be held at Durham, the most central place of the County, with an advertisement of premiums of fair encouragement. Though the competition was open to all exhibitors generally, a separate class in cattle was appropriated to French Canadian farmers.

The result justified the expediency of the change, for the exhibition, which took place on the 25th September, 1850, was in every department of a high order; and it

would be in defiance of all truth to assert, that in any country where such horses, stock and produce generally could be shown, its farming was not in an advanced state. Some American gentlemen attended, who had just been present at the great fair at Albany, and they did not hesitate to say, that there was a superiority in several specimens of stock on the ground at Durham over the same description at the former place. The Committee had to regret the almost total absence of French Canadians, not one entry being made in their exclusive class. It must be admitted, that though Durham be the geographical centre of the County, it may be somewhat too remote from the concentration of French Canadian farming, to make attendance there quite convenient. In some measure, however, to remedy this seeming obstruction, the Seigneur of Beauharnois appropriated an adequate sum, as a private donation, for an exhibition in the Parish of St. Timothy, the extremest on the St. Lawrence. But truth compels the Committee to state, that the money was not well bestowed. In fact, it had to be given for cattle and products of decided inferiority. The only good effect produced, was the manifestation of a disposition to give impartial encouragement to all classes.

The Winter Show came off at Huntingdon, on the 25th February last, a short distance from Durham, in some measure to suit the convenience of the Township farmers, who are far the most extensive, and finest cattle breeders. This exhibition was chiefly remarkable for the excellent and well-cleaned specimens of seed grain. As the Committee have directed much attention to this most important article, they were glad to see that so much success was attending their exertions. The bestial part was also very satisfactory—the more so from two very fine specimens of importation—a Devonshire bull, and a Clydesdale farm stallion.

The ploughing matches took place on English River, and in the Parish of St. Clement. The first, for British competitors, was distinguished for youthful skill in taking the higher premiums; and the second, for French Canadians, exhibited considerable improvement in work and equipment.

Without entering into minute detail, it may be generally remarked, that there is a steady and progressive improvement in the whole system of Canadian husbandry. Not only Legislative attention, but the public attention at large, is directed to the creation of a higher Agriculture, as the chief source whence commercial prosperity, and the increase of Provincial wealth is to flow. Farming is, in fact, now beginning to feel that onward impulse which the discoveries of physical science have imparted to almost all other professions.

No correct estimate can, however, be formed of the actual state of the Agriculture of the Lower Division of the Province, without distinguishing between the British and French Canadian systems. To lump the two together, and give it the general name of the Agriculture of Lower Canada, is as unfair as it is deceptive.

The fundamental principle of the British farming is *improvement* of the soil, according to the best established systems—practical as well as theoretical—and where it is deficient, the cause may be found in the want of capital to carry out the advantages of skill, or too limited space for the union of capital and skill. It is obvious that fifty or sixty acres of land under cultivation, (about the average of British cleared land on an hundred acre farm,) can only admit a very limited application of modern improvement, or even the employment of hired unskilled labor. That the British farmer is well aware of the power of these agents, in improving his Agriculture, and thereby augmenting his production, is evinced from his availing of them, as soon as he has, by gradual accumulation, acquired the requisite means. Hence, in those parts of the country which have been settled, for a period of twenty to twenty-five years, by industrious and economical farmers, the agricultural practice is not inferior to the general average of Great Britain.

The French Canadian system, on the contrary, involves the principle (if it may be so called) of *deterioration* of soil. The consequence is, that the Canadian farmer, after several years of cultivation, finds his soil exhausted, and himself impoverished. A great deal has been said and written on this subject, and many praiseworthy en-

deavours have been made to search out the causes of this retrogressive action, and to apply efficient remedies.—Legislative Committees have investigated the matter with much zeal and ability, and recommended many valuable and important modes of amelioration.—An Agricultural Journal is published in the French language, but its utility and influence are all but nugatory, from the still very limited spread of education, particularly among that portion of the present generation capable of agricultural pursuit. In the five Romish Parishes of this County, the existence of such a publication is hardly known, its circulation being confined to the Catholic Clergy. A few public-spirited individuals, of superior means and agricultural knowledge, are effecting, through the exhibition of improved method, some of the good attributable to model-farms. This last mode of instructing in improved husbandry would be that best adapted to ignorant in reading, were its operation not so restricted by the heavy expense of model-farm establishments. Of their utility, the Committee had for many years most beneficial experience, in the splendid model-farm kept up at Beauharnois, by the late Seignior, The Right Honorable Edward Ellis, at his sole expense.

Whatever remedial or ameliorating systems may, however, be proposed, the Committee are persuaded, from much observation and attention to the subject, must fail of the end contemplated, till what they unhesitatingly declare to be the two fundamental causes of the inferiority of French Canadian Agriculture are removed. The first is the want of general education, which obstructs the diffusion of agricultural knowledge through the press, and confines it either to oral communication or practical and palpable example, both of which are, from their very nature, extremely limited. The second is the absorption of so large a portion of the farmer's valuable time in week-day devotion, and the drain on his pecuniary means for the requirements of his Church. It is a moderate calculation that abstracts thirty such days from his own productive industry, and that of his family, not unfrequently at the most precious season of the year. Such a consumption of time may be for high and salutiferous pur-

pose, but it is clearly inconsistent with the efficient cultivation of his farm. With so heavy a tax on his labor, generally his only fund, it is impossible he can elevate his condition, far less enter into competition with his similarly unencumbered Protestant fellow-farmers.

Notwithstanding, the Committee are glad to have to report some advances towards improved French Canadian husbandry. Meadow cultivation, by sowing clover and timothy seed, formerly scarcely known, is practising to some extent. The cultivation, also, of root crops is spreading, and the dairy receiving greater attention. Good butter is becoming more common, but the manufacture of cheese is yet almost entirely neglected.

The Committee report, with much satisfaction, the continued efficiency of their Agricultural Society, which, through an existence of now twenty-four years, has been powerfully instrumental, not only in encouraging general agricultural improvement, but in the establishment of really good farming in the County of Beauharnois; and take leave to express a hope, that whatever ameliorative changes may be introduced into the agricultural art, the existing systems of District and County Societies may be maintained with the present liberal Legislative appropriation.

The whole most respectfully submitted.

L. G. BROWN,
President, Agricultural Society,
County Beauharnois.

Beauharnois, 2nd June, 1851.

**ACCOUNT OF RECEIPTS AND EXPENDITURE, AGRICULTURAL SOCIETY, COUNTY
OF BEAUHARNOIS, FOR 1850-51.**

	£	s.	d.		£	s.	d.
RECEIPTS.				EXPENDITURE.			
Feb. 25, 1850.... Balance in hand this date.....	6	5	6	Amount of Premiums awarded and paid at Cattle Show, at Durlham, this date			
Sept. 25, do ... Amount of Legislative Appropriation	150	0	0	Amount of contingent expenses for pens, special constables, &c.	122	5	6
Feb. 25, 1851... Amount of Subscriptions received to this date	58	2	6				
				Oct. 25, do ... Amount of Premiums awarded and paid at Ploughing Match, at English River, this date.....	10	0	0
				Nov. 5, do ... Do do do at Ploughing Match, at St. Clements, this date	5	5	0
				Feb. 25, 1851... Do do do at Show, at Huntingdon, this date, ... £48 5	49	15	0
				Contingent expenses there... 1 10	187	5	6
<i>Carried forward ..</i>	£ 214	8	0	<i>Carried forward.....</i>	£		

**ACCOUNT OF RECEIPTS AND EXPENDITURE, AGRICULTURAL SOCIETY, COUNTY
OF BEAUHARNOIS, &c.—(Continued.)**

	£	s.	d.		£	s.	d.
RECEIPTS.				EXPENDITURE.			
<i>Brought forward</i>	214	8	0	<i>Brought forward</i>	187	5	6
				Amount of Secretary's Account for stationery, postages, &c. for two years.....	3	16	6
				Amount of account for printing hand - bills, in English and French, and advertising Premiums in English and French news- papers, &c., for two years.....	23	5	10
	£			£	214	8	0
	214	8	0				

E. E.

L. G. BROWN,
President.

BEAUHARNOIS, February 25, 1851.

Sworn to before me, at Beauharnois,
this twelfth day of June, 1851.
R. H. NORVAL, *J. P.*

ERRATA.

Page 45, lines 15, 17, and 32; for "conch-grass," read "couch-grass."

The letters of the Rev. F. Pilote, and G. Chagnon, Esquire, should be respectively headed ("Translation.")

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