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Published under direction of the Board of Agriculture of Nova Scotia.

Omnium rerum, ex quibus aliquid acquiritur, nihil est agriculturâ melius, nihil uberius, nihil homine libero dignius.—Cicero : de Officiis, lib. I, cap. 42.

VOL. IV.

HALIFAX, N. S., APRIL, 1884.

No. 44.

OUR readers are aware that at the Annual Meeting of the Central Board of Agriculture, Major General LAURIE was requested to present the views of the Board to the Special Committee on Agriculture of the House of Commons at Ottawa. We are now enabled to present General Laurie's evidence, as given before the Committee:—

OTTAWA, March 20th, 1884.

The Committee met, Mr. Gigault in the chair.

Maj. Gen. Laurie, Halifax, called and examined:

By the Chairman.

Q. Would you be kind enough to tell the Committee what experience you have had in Agriculture?

A. I should, perhaps, first explain how I came to appear before you. I am President of the Central Board of Agriculture for Nova Scotia, and, almost by accident, I received a copy of the questions your Committee have been circulating through the country. I submitted them at once to the Board of Agriculture, but as they had not received a copy of the questions formally, they hesitated to take up the subject. I asked them to prepare answers, as we were desirous of assisting you in every possible way in the enquiries you were making. However, they demurred at first to consider the questions, because they had not come before the notice of the Board officially, and they did not know in what way any uninvited responses to the questions

might be considered by your Committee, and I then submitted the questions to the Provincial Government. We have no Department of Agriculture in Nova Scotia; the Board of Agriculture is the body really charged with carrying out the work of the Government in this branch of the public service. The Government, through the Provincial Secretary, requested me to submit the questions formally to the Board of Agriculture; and the Board of Agriculture, after considering them, requested me to put myself in communication with you, and, if possible, appear before you and give you such information as I possessed in regard to these matters. We were desirous of showing how anxious we were to support your action in the direction of advancing agriculture in the way you propose.

Personally, I have been engaged in farming in Nova Scotia since 1866. Of course, I have not taken up farming as a means of livelihood, but I have had a good deal of experience in agriculture, and have been President of the Board of Agriculture for some eight or nine years. In that way I have learned a great deal about agriculture. I cannot call myself an expert on matters relating to experimental stations, nor have I gone deeply into scientific farming, but at the same time I have striven, as far as in me lay, to improve the system of farming in our Province.

Q. Under what difficulties does the present system of agriculture labor, and in what respect is the Canadian farmer

placed at a disadvantage when competing in foreign markets?

A. I speak, of course, of the Nova Scotia farmer, because I am best acquainted with him. I have mixed with the farmers of that Province during my command of the militia for the last twenty-two years. The Nova Scotia farmer labors under these disadvantages, to my mind: He has received no agricultural education, by which I mean training in the sciences connected with agriculture, and concurrently in the application in practice of the knowledge so acquired. He, consequently, is quite unaware what his land is capable of, or how to obtain the greatest return for his labor and other outlay. Our fruit growers have given great attention to that industry, and with exceedingly good results; but, with this exception, and that of a few intelligent men who, under favorable conditions, are reclaiming marsh lands and carrying on their work profitably, the vast majority simply obtain a subsistence, and the results consequently are so discouraging, that, even when in any way money is acquired, it is invested in anything rather than farm property. There is no encouragement to invest capital in farm operations, because there appears no promise of a return; consequently improvements are not actively carried out. Hired labor is only employed at busy seasons, and, being irregularly employed, the supply is irregular and uncertain, and wages are high. This reacts, and men of means are discouraged from engaging in agriculture. Our young

men receive good advantages in education, but not in subjects which are directly of value to agriculture, and they go into over-stocked professions, and leave the country. We require, first, to fit them to remain at home and follow agriculture. For I conceive the native born is the best inhabitant a country can have.

Next, we want immigration of men of moderate capital. Farm property is exceptionally low and plentiful in the market, but, unfortunately, the capabilities of our Province are not well known in Europe, and hence intending immigrants do not come to us. We want men of some capital, as machinery is now a necessity, and manual labor cannot compete with it. Hence, those who attempt cultivation without machinery become discouraged and leave the country.

Q. What deficiencies have come under your notice in the cultivation of cereals, cultivation of roots and grasses, raising of stock and wool growing, production of butter and cheese, culture of fruit, and the ordinary use of fertilizers?

A. I do not quite understand whether you wish me to say what results have attended the cultivation of these crops in our Province.

Q. What defects have come under your notice—how is the system of agriculture defective in the cultivation of cereals?

A. I think I have covered that question pretty well in my first answer. I could, of course, tell you what we are doing in the cultivation of the various crops, but I do not think that would be an actual answer to your question.

Q. Would the importation of seed from foreign countries benefit our farmers?

A. We are doing all we can to improve our seeds by this plan, but it has to be done by private parties, and it is a matter of difficulty and expense to our farmers.

By Mr. Bain.

Q. Have you seedsmen who go largely into that line?

A. No, they do very little in importing themselves. We deal with Ontario seedsmen, and we find it more convenient to get our supply in this way, because we have the advantage of dealing with importers who operate on a larger scale.

Q. I suppose the field with you is not very large for the seed business?

A. No, not large. It is supplied very largely with foreign seeds through Ontario seedsmen.

Q. What is your experience with Ontario seeds? How does the change of climate and soil operate?

A. Very satisfactorily.

By Mr. Massue.

Q. Do you grow fall wheat?

A. I am experimenting with fall wheat. It has been tried and has been pronounced a failure, on account of our changeable winters. For instance, this winter we had no snow but constant frosts and changes until about the 1st of March. The ground has not been covered with snow at all. I have 25 acres of fall grain—2 acres of wheat and 23 acres of rye—and I am afraid I shall lose it all. I had some Ontario wheat—spring wheat—last year, and it was a very fine crop. It yielded 25 bushels to the acre.

By Mr. Bain.

Q. I suppose your changeable winters cause all the trouble in fall wheat growing.

A. It kills it sometimes. We could have very fine crops but for that.

By the Chairman.

Q. Would a general system of inspection and branding be likely to enhance the value of our butter and cheese in the home and foreign markets?

A. Of the sales of butter and cheese I have really no personal experience, but undoubtedly buyers would feel greater security in purchasing an inspected article, and in this way sales would be more satisfactory. Makers, also, would have a standard established which would stimulate them to aim at manufacturing an article of first quality.

By Mr. Bain.

Q. Has the factory system grown up with you?

A. Cheese factories have, but not butter. I do not think there is a butter factory in the Province.

Q. Are there no creameries?

A. There are no creameries, but the people of Colchester have gone into a large milk condensing business, which has absorbed the milk of the district to such an extent that it has rather paralyzed one or two cheese factories. They expect to handle this year about 8 tons of milk per day.

Q. I suppose the trouble is that you can give the farmers a higher price for their milk for the condensing process?

A. There is not much difference in the price paid for the milk, but the same men who were formerly engaged in the cheese business have turned their attention to this work of milk condensing. We propose to turn into cheese all the milk above what we can profitably condense. I think it is pretty well established that condensed milk offers us a better market. Cheese is uncertain: if you have to keep it on hand for any considerable length of time it deteriorates. We had to hold it over one year, and that discouraged us so much that we have turned our attention to condensed milk, for which we think we can get a steady continuous market, and also an article of merchandize that we can hold, if we find it desirable so to do.

By the Chairman.

Q. Would the importation of fruit tree scions and plants from Russia and other countries under climatic conditions similar to those of Canada, be of service to our fruit growers?

A. Our fruit growers are now experimenting with such imported species, and they expect good results from it.

By Mr. Bain.

Q. Do you know what points they have been imported from?

A. I do not. I am not much of a fruit grower myself, but I have put this question to several fruit growers and their answer is too short. They only say they are engaged in the work of importing and experimenting, but they do not say from what point they bring the new specimens.

By the Chairman.

Q. Would the appointment of a public analyst, to whom samples of soil and of home manufactured and imported fertilizers might be submitted, prove of advantage to our farmers?

A. Yes, if he was within reach, so that the samples might be sent him and information be promptly furnished in regard to them.

Q. What do you think of establishing an experimental farm or garden, where varieties of foreign grain, fruit trees and fertilizers might be tested, and whence such seeds, plants, etc., might be distributed throughout the Dominion, be advisable?

A. The climate conditions are so dissimilar that experiments made in the drier atmosphere and steady winter of Ontario would be of comparatively small value to the Lower Provinces, but experiments conducted where the conditions of season, temperature and rainfall are similar to those encountered by our farmers would be of very great value. Our farmers are now more or less engaged in experiments, but the labour is largely thrown away, as they have not the scientific knowledge to work out these satisfactorily, and they often arrive at wrong conclusions. But if an experimental farm was established in the neighborhood they could readily join in conducting these experiments, receiving instructions from the superintendent of the station as to the necessary conditions and points to which they should give attention, and these simultaneous experiments would be of more value than if conducted singly. It is very desirable that branch stations should be established. Our Dominion is very large, and the climate conditions are very dissimilar, so that a central station without the branches, would not bring all the benefits we desire. It would, without doubt, confer great advantages, but it should be supplemented by branch stations.

Q. Have you noticed any appreciable deficiency in the crops of your district, owing to the depredations of birds and insects?

A. Our wheat suffers very seriously from what we call the weevil, and this year the crop failed in many places. In fact, it may be said to have succeeded only where it was sown in a position where the crops would be exposed to the wind.

By Mr. Bain.

Q. Do you try early and late sowing, to see if you cannot fight the insects in that way?

A. We have tried all kinds of remedies, but so far as the time for sowing is concerned, our seasons are so short that we cannot afford to wait. I sow as early as I can: I sowed in April last season. I am situated between two lakes, and the wind has a pretty good sweep over my land. We had abandoned wheat growing for about 20 years, but it has been resumed again in some places, and I have gone on increasing the area till last year I had 25 acres.

By the Chairman.

Q. What crops and fruit products have suffered most, and from what classes of insects or birds?

A. Our wheat, as I have said, has suffered seriously from the weevil.

Q. Have your fruit trees suffered also?

A. They have suffered from insects—the borer and others—but as I am not a fruit grower, I am not prepared to give a clear answer on that point. I simply know from hearsay.

Q. What steps are taken to keep down insects?

A. For years the cultivation of wheat was abandoned with the hope of destroying the germs of the weevil, now they are beginning to grow wheat again, and the crop is becoming better.

Q. Have the timber trees of your district suffered any from insects?

A. Shade trees have suffered from caterpillars, but the timber trees in the forest have not suffered at all. The shade trees in the neighborhood of Halifax were totally stripped.

By Mr. Bain.

Q. What variety of trees do they attack mostly?

A. They do not seem to be at all particular. They attack any kind of tree they can find, in the shape of shade trees, in the neighbourhood of Halifax. I am told also, that they attack forest trees in some districts.

Q. Would you recommend the appointment of an entomologist, whose duty it would be to give information concerning birds and insects, injurious or beneficial, and the means of protecting the crops against their ravages, as likely to

accomplish any benefit to the farming classes?

A. Undoubtedly he would, if he was located in the neighbourhood within reach; but an entomologist 1200 miles away, unless he was either able to come to the insects or the insects to him, would not be of very great value. An entomologist, however, in connection with what you spoke of earlier—experiment stations—would, I think, be valuable.

By Mr. Landry, (Montmaguy).

Q. Do you not think an entomologist here at Ottawa would be able to render important service, by having cases reported to him here.

A. Not unless he was a witness of the damage done.

Q. But when he is acquainted with the nature and habits of the insect pests, do you not think he could give very important advice and information on the subject, even though he is far away?

A. I think he would be of far greater value if he was in the neighbourhood. I think it is highly desirable to have him where he can see the workings of the insects and take measures to eradicate them, and be responsible for their suppression or extinction.

By Mr. McDougald.

Q. You think the field is too large for one entomologist to do good service?

A. I think it would be beyond his capacity. Of course, he would be of some value.

By Mr. Landry, (Montmaguy).

Q. Do you not think that if it was possible only to employ one entomologist and have him placed in charge of a central station, he could give information to all through the whole country?

A. I think it would be far better than to have none at all.

By the Chairman.

Q. Have you read a book written by Mr. Saunders, of London, Ont., on insects injurious to fruit trees and crops?

A. I have not.

By Mr. Bain.

Q. I suppose an entomologist, situated locally, would be of use most where a local pest, peculiar to the district, should break out, because he could then go and examine the circumstances and all the conditions, and he would be able better to point out a remedy?

A. Yes, and if the central entomologist is able to visit the locality he would be just as useful.

Q. But take, for instance, the case of the tent caterpillar, which is found in all parts of the country and is pretty well known. In the event of a visitation from this insect in any distant part of the Dominion, the entomologist at the central station could be put in possession of all the facts by correspondence. But if it was a case in which a new insect

made its appearance, it would be his duty to visit the locality and observe the operations of the insect, and all the conditions?

A. Yes, I suppose so.

By the Chairman.

Q. Would it be desirable to extend the duties of the present system of veterinary inspection of stock in quarantine and, if useful, the staff also, with a view of dealing with the local development of infectious diseases, among farm stock and poultry throughout the Dominion, and the best means of stamping them out?

A. Do you mean by this to ask whether or not it would be desirable to extend the quarantine stations also?

Q. I mean, to have a veterinary surgeon employed by the Bureau here, who could visit any place and investigate diseases and give the necessary remedies for stamping them out.

A. You do not refer only to the importation of stock?

Q. Not only to imported stock, but to Canadian stock also.

A. With reference to the question of quarantine, we have no quarantine station for animals imported from the States nearer than Sarnia. Consequently, if we wish to import an animal from Boston, we have to bring it all the way round by the Grand Trunk Railway.

By Mr. Bain.

Q. Where is your nearest quarantine station?

A. At Quebec. We have none in the Maritime Provinces at all. If we wish to import an animal from Liverpool, we must bring it around by Quebec; if from Boston, we have to go round by Sarnia. This is extremely inconvenient; in fact, it practically prohibits importation to our Provinces. We earnestly desire that quarantine stations should be established at Halifax, and, it is suggested, at Yarmouth also, and that the staff should be held available to visit localities where there is any doubt as to the existence of infectious disease, and take the necessary steps to prevent its ravages. It is desirable that the veterinary staff should be composed of men of recognized ability, and that they should be made available also to enable us to import cattle direct.

By the Chairman.

Q. Is there in your neighborhood sufficient standing timber to supply shade, fuel, and other domestic wants?

A. So far, there is no deficiency; we still export lumber largely.

Q. Have any steps been taken to maintain this supply, or to re-plant where it has failed?

A. No steps have been taken in the direction of re-planting, but efforts are made to prevent the destruction of forests

by carelessly setting them on fire. We have suffered very much from the burning of our forests.

Q. What do you think of the establishment of a central bureau here, in Ottawa?

A. I think it would be of very great value, but I would urge strongly, as I have done already, that it should be carried on in connection with local branches, so that the proposal in reference to the employment of a public analyst, entomologist, and veterinary inspector, and the establishment of an experimental farm or garden, could be better considered and carried out. I think the central bureau would be of very great value, but it should have branches to do the work you desire to aim at.

Q. Don't you think the branches should be established by the Local Governments?

A. The great difficulty is the lack of funds on the part of the local authorities to carry out such a work. I have been pressing upon our Provincial Government to do something in this direction, but they find a difficulty in the question of means.

Q. Would the dissemination of hand-books and reports containing the data thus collected, on culture, stock-raising, dairying, poultry keeping, &c., have a beneficial effect?

A. I should say, yes—most decidedly, provided the information afforded had consideration to local circumstances and did not attempt to prescribe what was desirable for all localities from experience obtained in any one only.

By the Chairman.

Q. Have you studied the working of the Central Bureau at Washington?

A. I have not.

Q. Would you recommend the formation of a section devoted to agricultural statistics?

A. I think it would be of very great advantage in keeping our farmers informed when to sell and when to hold; would check them from over producing particular crops and stock and glutting the market, and would keep prices steady and hinder fluctuation and speculation. It would enable them to know how best to dispose of their produce. As an illustration, the farmer would always be in a position to feed his grain crops when prices are abnormally low, and the statistical returns would inform him if the fall was temporary or from local causes, and whether or not it was likely to remain steady throughout the year.

Q. Would the issue of monthly bulletins and abstracts, containing such information, be of sufficient advantage to warrant their publication?

A. I think it would complete the services rendered by a statistical bureau.

Q. Have you any further suggestions to offer?

A. No. I think the questions that have been asked have covered the ground pretty completely.

By Mr. Landry (Montmagny.)

Q. Is there any agricultural industry in your Province in operation?

A. We have a number of cheese factories and a large condensed milk factory.

Q. Is there not a starch factory?

A. No, I don't think there is a starch factory in the Province in operation. We have some meat canning establishments, which are in operation in Cape Breton, and I know they are canning fruit in the Annapolis Valley, and also corn and tomatoes; but it has only lately commenced, and it has not attained to any large dimensions as yet.

Q. Have you any beet sugar factories?

A. No. We manufacture our sugar by catching fish; that is, we catch fish and send them to the West Indies, and bring back sugar in return.

By the Chairman.

Q. Have you only one condensed milk factory?

A. Only one, and it was started last year.

By Mr. Massue.

Q. Does it pay?

A. Yes; it is paying 8 or 10 per cent., which is pretty good for an experiment.

Q. Do you think it is better than cheese-making?

A. The condensed milk factory was started by a company, the shareholders of which are largely those who composed the company who were engaged in cheese-making. They have suspended operations to go into the condensed milk business, so that it must pay better.

By Mr. McDougall.

Q. I suppose there is less competition in the condensing business?

A. I think, from enquiries I have made, that the principal inducement was that there was a more certain market.

By Mr. Massue.

Q. Where do they find a market?

A. At Winnipeg, and with the trade generally.

Q. Have you any agricultural schools in your Province?

A. We have not, but we very much desire to have one.

Q. You believe it would help agriculture very much?

A. I think your proposition for an experimental station should be associated with an agricultural college. The experimental station, the model farm, and the institution for imparting agricultural edu-

cation, seem to be bound up together, and are very necessary in our Province.

Q. Don't you think those colleges should be founded by the Provincial Governments?

A. I am afraid that if they are not established by the Federal Government, they will be delayed, in some cases for a considerable length of time. I think the Ontario Agricultural College is an institution of great value, and a number of young men from Nova Scotia are attending it. I consider that institution, and the farm in connection with it, are a fair sample of what the other Provinces should do in this direction. The prospectus and the theory of the institution could hardly be improved. The practical carrying out of the principles taught there, depends upon the young men who go for instruction. Cirencester College, in England, is largely attended by the sons of gentlemen, who bring their horses with them, and go out hunting occasionally. At that institution, young men are trained more to become managers of estates and gentleman farmers than anything else. Ownership and cultivation of land confers social position in England, so that I have known men of my own profession sell out their commissions in the army, and engage in farming for pleasure; but in a year or two, when the price of their commission was gone and they found they were losing money, they would denounce farming pretty strongly, and say that it did not pay. They were not practical farmers.

Q. I think one objection to experimental farming being engaged in by ordinary farmers, is that it is expensive.

A. Yes, and they have not time amidst the hurry of seeding and harvesting operations to attend to experimental work properly. In reference to agricultural colleges, we have, unfortunately, five degree conferring colleges in Nova Scotia. One of those colleges has attached to its curriculum facilities for obtaining instruction in law and medicine, and we have been urging that some other college should take up agriculture, but we are met by the statement from all who have examined the subject, that agricultural faculties attached to art colleges have invariably been failures.

By Mr. Bain.

Q. I presume there would be no money in them at all, that is, the revenue to arts institutions is generally provided from outside sources.

A. I think so; but still we suggested that the agricultural part of the college should receive assistance from the Government, but they might be associated with existing colleges so as to take advantage of their machinery, in the shape of lecture rooms, buildings and staff. From all sides, however, we have been

advised not to proceed with this scheme. I believe there is no reason why an agricultural faculty could not be attached to one of our colleges at an expenditure of \$3,000 or \$4,000 per annum. This would supply one Professor of Agriculture, a Veterinary Professor, and a farm manager. I believe, that of all things, it is necessary that theory and practice should go hand in hand in this work.

By Mr. Bain.

Q. I know on the American side they have separate agricultural colleges with special endowments, but some of them seem to be failures. There seems to be something in the detail of management which affects them; so much depends upon the practical manner in which they are managed. Unless it is practical the college is unsuccessful, and it seems to be difficult to combine practical agriculture with successful management.

A. I am sure there are difficulties to be met with; but then there is a greater difficulty than that you have mentioned; it is the difficulty of obtaining special endowments for special colleges. In view of that, the question arises whether the plan of establishing an agricultural faculty in an arts college is not more feasible.

Q. Especially when you have a farm that might be worked?

A. Yes. One fear is, of course, that the professor would have to perform extra work, but that is a matter of detail. Agricultural education is now become of first importance.

Q. In the older Provinces, we have arrived at the time when machinery has to do the work formerly done by hand, and to make his business successful a man has to look before him.

A. Yes: an experiment station, valuable as it would be, would not, to my mind, satisfy the wants unless it was associated with practical training; so that you could teach the uneducated farmer how to utilize the information you could give him. It seems to me that giving the results of experiments without showing the farmer how to utilize them, would be like telling an inexperienced man merely the names and powers of drugs, and putting him into a drug shop to prescribe from any bottle he might choose to select.

By the Chairman.

Q. Journals of Agriculture published in France, Germany and England, seem to be under the impression that experiment stations are practically agricultural colleges.

A. They should be necessarily allied one with the other.

Q. They seem to be under the impression that these stations are educational, because they speak of the good results to science combined with practice there.

A. A man who conducts an experiment station should be competent to impart instruction to others. You utilize his services to a larger extent by combining the two.

Q. They ought to have practical experience before you put them in charge?

A. Yes; and they might as well communicate their knowledge to others.

By Mr. Bain.

Q. Then the conditions of France and Germany are different to ours. Their country is an old one and has been settled for centuries: ours is comparatively new?

A. Still the increase in the demands upon agriculture are so great that, unless we obtain the utmost from our land, we are working at a disadvantage. The yield will not pay for the labor now-a-day unless we obtain full crops.

Q. Then, there is another thing; we would be content to change our system in view of the development of the newer portions of the country. Take, for instance, wheat growing; we might grow enough for our local wants, but it is a question whether it would not be as well to allow the North-West to grow wheat for exportation, and for the Eastern Provinces, which have good shipping facilities, to raise stock. I fancy, in the older Provinces we will have to go more into specialties as time progresses?

A. Yes. Did you notice Mr. Gladstone's latest advice to the farmers in Cheshire? He told them that, in view of the competition in wheat and stock-raising, coming from Canada and the United States, those lines of agriculture would soon be things of the past with them, and the best thing for them to do is to go into the making of jam.

Q. I notice that around Hamilton the farmers are doing less every year of general farming and are going into specialties. Take pumpkins. They used years ago to grow a few to feed to the cows, but now they grow them in quantities for the canning factories. Even four or five miles from the city, the farmers are leaving everything else to grow them. In fact, they are rapidly moving in the direction pointed out by Mr. Gladstone as that which the farmers of Cheshire should take.

A. Yes. With us the best farming districts are now being devoted to fruit; and our farm product would fall off materially if special lines of products were not adopted.

Q. Farmers must adapt themselves to circumstances, or, as the saying is, they will be left?

A. Undoubtedly; but education will teach them how to adapt themselves.

The Committee adjourned.

To the Editor Journal of Agriculture.

Sir,—If the Government wish to encourage the breeding of Thoroughbred Stock, I think the least they can do is to register without charge.

Yours,

FARMER.

Colchester, March 27, 1884.

233 RICHMOND ST., TORONTO, }
March 17, 1884. }

Dear Sir,—I am engaged, at the instance of the Ontario Government, in investigating the question of forest preservation and replanting, with the view, if found practicable, of Government action in checking the too rapid deforesting of the Province. The object is one in which, I have no doubt, you will take some interest; I have therefore ventured to ask your assistance in an important point. In noticing what experiments have been made in this Province, I find that little beyond rows of trees have been planted. I wish you could take the trouble to find for me whether, in your vicinity, any trees have been planted in blocks or squares—even a quarter-acre would furnish an example. I should like to know what trees were used, at what size and age planted, how far apart, what is the soil, what the size and age of the trees now, and generally how the plantation has succeeded. If you can find for me as many of these particulars as possible, and send me an answer as soon as may be, I shall be infinitely obliged to you, as I find such information very difficult to get.

Yours truly,

R. W. PHIPPS,

Clerk of Forest Preservation,
Ontario.

[We shall feel obliged to any of our readers who will kindly furnish particulars such as Mr. Phipps requires.—Ed. J. A.]

NEW TOWN AGRICULTURAL
SOCIETY, CO. GUYSBOROUGH.

NEW TOWN, EAST RIVER, }
St. Mary's Co., Guysboro', }
December 4th, 1883. }

According to notice, this meeting was convened for the purpose of organizing an Agricultural Society.

The meeting was called to order by appointing Angus Cameron, Esq., Chairman, and Joseph Cameron, Clerk.

The chairman explained the object of the meeting, and read the law relating to and for the encouragement of agricultural societies.

John A. Kirk, Esq., M. P., then addressed the meeting and gave some very useful information.

The chairman then asked if the meeting was prepared to organize an Agricultural Society, and, being answered in the affirmative, there were appointed the following officers, viz., *President*, Mr. James Gunn; *Vice-President*, Joseph Cameron; *Secretary*, Angus Cameron, Esq.; *Treasurer*, Thomas McBain; *Directors*, Angus E. Cameron, Peter Jordair, James McKay, John Fraser and Martin Gunn.

After being thus organized the Society was called the *New Town Agricultural Society*.

(Sgd.) ANGUS CAMERON,
Chairman.
JOSEPH CAMERON,
Clerk.

CONSTITUTION AND BYE-LAWS.

1st. That this Society shall be organized in connection with the Central Board of Agriculture, and in accordance with the Act for the Encouragement of Agriculture.

2nd. That it shall be managed by a President, Vice-President, Secretary, Treasurer, and five Directors, to be hereafter elected at the Annual Meeting on the first Tuesday of December in each year, and that the retiring officers and directors be eligible for re-election.

3rd. That the minimum annual subscription fee per member be one dollar, payable at or before the quarterly meeting in September every year.

4th. That the quarterly meetings of the Society be held on the first Wednesday in March, June, and September; but special meetings may, after due notice, be called when necessary, by order of the President, or on requisition signed by any five members of the Society.

5th. The President shall preside at all meetings of the Society, keep order, regulate discussions, state and put questions, and shall not permit, or allow any improper remarks of a personal or political character, sign all money orders on the Treasurer, and perform such other duties as belong to his office. In his absence the Vice shall take the chair, and in the absence of both the Society shall appoint a Chairman *pro tem*.

6th. The Secretary shall attend all meetings of the Society, keep a correct record of all its transactions, collect all moneys due, and pay them forthwith over to the Treasurer, notify members of the Society by postal card, advertisement, or personally, of each meeting, submit at the annual meeting a report of the proceedings of the Society, conduct all correspondence, and perform such other duties as belong to his office; but in his unavoidable absence at any meeting, it shall be his duty to forward all necessary books and papers, and the meeting may appoint a Secretary *pro tem*.

7th. The Treasurer shall receive all moneys paid him by the Secretary, acknowledge receipt of the same, and shall pay over only by an order from the President and Secretary, he shall also submit at the annual meeting a report of his proceedings.

8th. The Board of Directors shall take charge of and keep for the benefit of the Society, all live stock, grain, seeds, etc., belonging to the Society, and shall make such application of said property as a qualified majority of members of the Board present at any regular meeting may determine.

9th. The members of this Society agree to be governed by a vote of the majority of members present at any regular meeting, such votes to be taken by a show of hands, and in case of an equality, the Chairman shall have the casting vote, but shall not otherwise vote.

10th. Every important motion or resolution must be presented in writing, if requested by the President, before it can be debated, and any member speaking at meeting shall address the Chair, standing.

11th. Special Meetings of the Society or Board of Directors, require six days notice from time of posting, said notice to state the special business requiring attention. Any resolution having passed the Society shall not be reconsidered, altered or repealed at such special meeting.

12th. Twenty-one members shall constitute a quorum to transact business at any meeting of the Society, and with said number present the chair shall be taken punctually at the notified hour.

13th. At each Annual Meeting three members, not officers or directors, shall be appointed for the year next following to audit the Societys accounts.

14th. At any regular meeting of the Society the foregoing Bye-Laws may be repealed, altered or amended by a two-thirds vote of the members present, provided that three months notice of motion to that effect be previously given, and that the repeal, alteration or amendment shall be approved by the Central Board of Agriculture.

15th. Order of business at Annual Meeting:—

- 1st. Reading Minutes of previous meeting.
- 2nd. Collection of dues.
- 3rd. Report of Secretary.
- 4th. Report of Treasurer.
- 5th. Report of Auditors.
- 6th. Report of Directors.
- 7th. Report of Special Committee.
- 8th. Discussion of questions.
- 9th. Miscellaneous business.
- 10th. Election of Officers and Directors.

ANGUS CAMERON, *Sec'y.*
New Town, Dec. 27th, 1883.

BALMORAL AGRICULTURAL SOCIETY.

NORTH EARLTOWN, Dec. 27, 1883.

At a meeting held for the purpose of organizing an Agricultural Society, David Sutherland was elected Chairman and Hugh Munro Secretary. Speeches were made by different parties, all urging the advisableness of an Agricultural Society. It was then moved and seconded and passed, that the meeting proceed to the election of officers.

Donald Sutherland was elected President; David Munro, Vice-President; Alex. Baillie, Secretary and Treasurer. The following were elected as Directors:—John McLean, Hugh Munro, Esq., Hector McLean, Daniel McIntosh, Geo. McIntosh.

The President, Vice-President and Secretary, and Hugh Munro, Esq., be a Committee to draw out bye-laws for this Society, and have the same ready to submit at the next meeting. The meeting then adjourned to meet on the first Thursday in February, 1884, at 6 p. m.

HUGH MUNRO, *Sec'y, pro tem.*

February 7th, 1884.

Met according to adjournment, the President in the chair. Minutes of last meeting read and approved. The Committee then brought the bye-laws before the meeting, they were read clause by clause and adopted. The Secretary being authorized to send a copy of the same to the Central Board, together with a list of subscribers.

ALEX. BAILLIE, *Secretary.*

West Branch, River John, Pictou, N.S.

REPORT OF THE PROVINCIAL VETERINARY SURGEON.

HALIFAX, 31st Dec'r, 1883.

His Honor the Lieut.-Governor-in-Council, having been pleased to appoint me Veterinary Surgeon for the Province, I waited upon the Hon. C. E. Church, Provincial Secretary, and was instructed to enter upon the duties under the arrangements suggested by the Central Board of Agriculture and approved by the Government.

Under these arrangements, made at a meeting of the Board at which I was present, I undertook to attend at Provincial Exhibitions, and, from time to time, to visit the several Agricultural Districts of the Province professionally, so as to treat causes of Domestic Animals suffering from Disease or accident, or requiring operations performed;—the times and places of my attendance in localities to be arranged and advertised by the officers

of the Board. The scale of modified fees agreed upon was the following:—

Visits, including advice and prescription, \$1 for first, and 50 cents for each subsequent visit. Medicines, when required, to be charged extra at reasonable rates.

Operations to be charged from \$1 to \$5, according to nature and circumstances.

If called specially to a distance, at places or times not arranged and advertised by the Board, the charge will be \$5 per full day, and actual necessary travelling expenses. Shorter or longer time to be charged proportionally.

Hand-bills were printed and circulated in the several localities which I had arranged to visit, announcing the arrangements made; but, as the season was well advanced before my duties commenced, and the Exhibition season intervened, taking stock owners from home, as well as engaging my own time and attention, it was not practicable to do as much useful work during the available period of this year as I expect to be able to accomplish next season. The heavy expenses of railway travelling is also an obstacle, which I am informed the Board is endeavouring to overcome.

The following statement will show the number of visits made; the dates and places of such visits; the number of cases requiring, and which received, treatment; and the number of cases in which advice only was needed and given:

Date of Visit.	Locality.	No. of Cases Treated.	Advice only given.
1883.			
Sept. 18	New Glasgow	1	3
" 21	Herring Cove	1	2
" 22	Pictou Landing	1	1
" 23	New Glasgow	1	1
" 24	Truro Exhibition.	Inspection of Horses & Cattle exhibited	
" 25	"	1	1
" 26	"	1	1
" 28	St. John Exhib'n.	1	1
Oct. 1	Brookfield	1	3
" 27	New Glasgow	1	3
" 29	Pictou	1	4
" 30	New Glasgow	1	1
" 31	Antigonish	2	4
Nov. 4	Truro	1	2
" 14	Shubenacadie	1	1
" 19	Truro	1	1
" 19	Windsor	1	1
" 20	Kentville	1	1
" 21	Annapolis	1	1
Dec. 3	Stewiacke	1	1
" 8	Windsor	1	1
" 8	Truro	1	1
" 17	Falmouth	1	1
" 17	Windsor	1	1

Parturient Apoplexy in Cattle, commonly known as "Milk Fever."

As there has been considerable loss in the Province, and especially in the neighborhood of Halifax City, during the past season, from Parturient Apoplexy in Cows, I readily comply with a suggestion

of the Board of Agriculture to offer a few observations on the subject:—

No disease except such as are of a contagious or anthracoid type are more importance to stock owners than the Parturient Apoplexy, commonly called "Milk Fever." Its importance has been specially impressed upon this community by its great prevalence during the last two calving seasons.

Cows of all breeds are liable to this malady, but especially heavy milkers. It usually occurs at the tired and later periods of parturition, but of late seems to have no regard to age, condition, time or surroundings.

ITS PATHOLOGY.

The true pathology or nature and course of the disease seems to be as yet imperfectly known. The "toppage of milk or "suppression of lactation," one of the chief characteristics of this disease, is not the absolute cause but merely a symptom, having its signification, and which can be accounted for on physiological principles, in view of the effects of the disease disturbing the secretory function, so that "Milk Fever" in its literal sense is a misnomer.

SYMPTOMS.

Premonitory signs, which are seldom observed, may be looked for after calving. These are disinclination to move; staring appearance about the eyes; checked secretion of milk; accelerated pulse and respiration; with increased heat of mouth, extremities and system generally.

The *Second Stage*, which usually comprises the first noticeable symptoms, is in the majority of instances entered upon during the first twenty-four hours after calving. The cow shakes her head, kicks her belly, totters and staggers as if the hind legs or loins were weak, and she shortly drops. Usually there is tumefaction of the vulva with a yellow or brownish coloured fluid coming away. She stretches out her nose, turns her head around to her side, blows,—pulse quick and temperature high; coma sets in, and death may occur within six or eight hours.

The favourable symptoms will usually be noticed within twelve hours. These consist of returning consciousness, copious but normal discharge of faeces, increase in volume and strength of pulse, return of milk, and a desire to sit erect, partake of food, ruminant, &c.

TREATMENT.

Preventive measures are attended with success if properly instituted. Cattle that are predisposed to Parturient Fever should receive, before calving, low diet of a laxative nature, with an occasional dose

of oil, and the udder should be drawn regularly, as soon as the milk appears. Attention should be paid also to good housing and plenty of ventilation.

WM. JAKEMAN, V. S.

6 Rottenburg St., Halifax.

The past season, at the expense of a good deal of care, I made a careful test of the yield of a large number of varieties of potatoes. The test was made in one corner of the potato lot, the trial plot receiving the same care and cultivation as the entire field. Ten hills of each kind were planted in similar soil, so far as I could tell, throughout the test plot. The product was carefully weighed and the yield per acre deduced therefrom. The potatoes were planted in 3-foot rows, and the hills were 20 inches apart, so that each variety occupied 50 square feet. The early varieties did not rot at all, while all the late kinds suffered more or less from disease. Of the late varieties the yield per acre is given of both sound and unsound, and the amount of both also. I have no varieties of my own, and the experiment is made to arrive at the truth, and not to puff any particular kind. There are many new kinds that, in the hands of the introducer, were reported to have yielded two or three times what the old varieties did, but produce no better, and, in some cases, far less than the well known sorts. My experience is, that of the new candidates sent out for favor each year, and extravagantly puffed, not more than one in five is more valuable than the old sorts. The test plot was not rich garden soil, but rather poor potato land, manured at the rate of 10 loads of coarse hog dung per acre.

Variety.	Yield per acre. bush.	Rotten. bush.	Sound. bush.
Rural Blush	255	71	2474
St. Patrick	250	52½	1071
Queen of the Valley	163	50½	1124
Red Rose	247	29	218
North Star	163	..	153
Chicago Market	236	..	236
Grango	266	92½	173½
Late Snowflake	165	14½	150½
Late Beauty of Hebron	234	87	147
Advance	189	..	189
Blue Belle	219	61½	157½
Rocky Mountain Rose	192½	..	102½
Dunmore	219	29	190
Extimus	155	43½	111½
Invincible	254	116	138
Early Electric	189	..	189
Early Mayflower	199	..	199
Boston Market	250½	..	250½
White Whipple	210	43½	164½
Beauty of Hebron	283	..	283
Snowbank	39½	..	39½
Pride of America	254	..	254
Magnum Bonum	196	14½	181½
Brownell's Best	247	..	247
Early Telephone	239½	..	239½
Helle	236	136	100
Rose's Seedling	234	18	216
Wall's Orange	203	18	185
Snowflake	159	..	189
Burbank	291	14½	240½
White Elephant	262	51	214
Cool's Superb	299	69	230
Late Rose	274	18	256
Defiance	268½	25½	243½
Mountain Rose	58	..	98
Matchless	950	13	237
Champion of America	312	22	290
White Star	219	58	161
Early Rose	210	..	210
Silverskin	194	80	116
No. 4	237	13	224
No. 7	297½	87	210½
James Vick	269½	43½	255
Clarke's No. 1	305	..	305

It will be seen from the above table that the early potatoes did not decay at all, while of the late ones all kinds were more or less

injured. The reason was that about the time the early varieties were ripening we had a few weeks of dry weather, while after that there was a super-abundance of rain before the late potatoes. Of the kinds grown the past season for the first time, only one proved itself worthy of the high praises with which all novelties are sent on, and that one was the Rural Blush. It will be seen by the table that it produced 50 bushels per acre more than any one of the 44 varieties grown. It also proved to be the hardiest, suffering less from disease than any other late variety. The vines were vigorous, keeping green after the others were blackened by rust. Outside of the trial plot I planted 82 pounds, the product of which was 90 bushels. This is not remarkable compared with some yields of Blush that I see reported (there are several reports of its yielding at the rate of over 1,000 bushels per acre), but the 90 bushels were grown by common field culture, and with the same care as the other kinds. Not only is it a good grower, but it is also an excellent table potato. It is the one prize among several worthless sorts.

The Snowbank and Mountain Rose were sent out by the same growers last spring, at one dollar per pound, and praised with all the adjectives with which seedsmen are wont to puff any new variety, yet a yield of 39½ and 98 bushels per acre shows that whoever bought them was most emphatically disappointed. The Belle was sent out under the broad claim that it combined more good qualities than any potato grown, and has been praised by high authority, yet, as the table shows, more than half the crop was spoiled by rot. Rocky Mountain Rose was sent out under the aid of a table similar to the above, in which its yield per acre was figured at 998 bushels, while that of Early Rose was given as 365 bushels. Rose's Seedling, also produced by the same grower, was put at 907 bushels per acre. My test (entirely impartial) gives 192 1-3 bushels for Rocky Mountain Rose, 234 bushels for Rose's Seedling and 219 bushels for Early Rose. Rose's Seedling is a very handsome potato, but it does not yield anywhere near three times as much as Early Rose.

One other experiment I will report: Ten hills, planted with pieces cut according to Prof. Sturtevant's theory, produced at the rate of 218 bushels per acre, while the same number of hills planted with pieces of same size, but cut as nearly opposite to theory as possible, produced at the rate of 282 bushels per acre. The result was entirely contrary to expectations, as his theory looks very plausible and reasonable; and I can see no reason why pieces cut opposite to theory should yield better than the other. But there are the figures, though I do not understand them. The above report may be interesting to some of our readers. It has at any rate cost me a good deal of time and labor.—E. W. D. in *Cultivator and C. G.*

THERE was brought before the New Jersey Horticultural Society at Camden, an experiment in the use of a mixture of a ton of bone in twenty-five loads of stable manure, in which a saving of \$20 per acre was effected over the use of the manure alone. We have frequently had occasion to recommend this mixture of

bone meal and manure, as one of the most convenient and effective modes for the use of bone, and it is also recommended by Joseph Harris in his work on manures. The above mentioned report also states that in another experiment with twenty-five bushels of poultry droppings, mixed with 400 pounds each of cottonseed meal, plaster, fine bone meal and sulphate of potash, with ten bushels of muck added, making one and a half tons, at a cost of about \$17 a ton, the mixture gave as good results as some other fertilizers at a saving of \$20 a ton. The yard manure was applied in autumn or winter, the others in spring. By this means the experimenter, a successful market gardener, increased his receipts from \$1,750 a year to \$7,300. High manuring gave larger crops, two weeks earlier, and better in quality, which of course sold at much higher prices.

THE distinctive characteristics of the Aylesbury duck are great size, immaculate purity of white plumage, a large, broad, pale flesh-colored bill, a dark, prominent eye, orange legs, stately carriage, and excellence in quality as market birds. Aylesburys are, if well fed, prolific layers of fine eggs, the shells of those laid by the best strains being of a clear white. As sitters, Aylesburys are better mothers than Rouens, not being so unwieldy in their actions. The former are also noted for their hardiness and early maturity.—*Exchange.*

Advertisements.

Resolution of Provincial Board of Agriculture,
3rd March, 1882.

"No advertisements, except official notices from recognized Agricultural Societies, shall be inserted in the JOURNAL OF AGRICULTURE in future, unless prepaid at rate of 50 cents each insertion for advertisements not exceeding ten lines, and five cents for each additional line."

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Three Sizes Ground Bone

BEST FERTILIZERS IN MARKET.

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Agents wanted in unoccupied territory.

FOR SALE.

THREE THOROUGH-BRED AYR-
SHIRE BULLS,—2 two years old and 1
four. Very fine animals. Prices reasonable.

Apply to JAMES T. COOKE,
Churchville,
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SHORT HORN Durham Bulls and Bull Calves, FOR IMMEDIATE SALE, AT Lucyfield Farm.

Will be shipped on board Cars or Vessel free of
expense to purchaser.

1. *Prince of Braemar.* White, light roan, red neck. Calved 1st Jan'y, 1883. Sire Lord of Braemar. Dam Princess Dolly Gwynne. Length from base of horns to rump 6 feet 6 inches. Girth 6 feet 4 inches. Price \$100.
2. *Fourth St. Nicholas.* Roan. Calved 1st October, 1882. Sire Gwynne of Lucyfield. Dam White Rose of L field. Length 5 feet 11 inches. Girth 5 feet 8 inches. Price \$125.
3. *Fifth St. Nicholas.* White. Calved 14th March, 1883. Sire Second St. Nicholas. Dam Second White Rose. Length 5 feet 1 inch. Girth 4 feet 8 inches. Price \$65.
4. *Ozoman.* White. Calved 7th March, 1883. Sire Second St. Nicholas. Dam Colchester Queen. Length 4 feet 10½ inches. Girth 4 feet 5 inches. Price \$55.
5. *Domimon Prince.* Rich dark red with white blotches. Calved March, 1883. Sire Second St. Nicholas. Dam Oxford Princess. Length 5 feet 5 inches. Girth 4 feet 6 inches. Price \$65.
6. *Prince George.* Roan. Sire Second St. Nicholas. Dam Queen Caroline. Length 4 feet 10½ inches. Girth 4 feet 5 inches. Price \$60.

These animals can be seen at any time, they are not fat but in active condition, have no known faults, and their pedigrees trace back to English Herd Book on both sides.

Apply to
PROFESSOR LAWSON,
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FOR SALE.

THE Thorough-bred Short-Horn Bull
"KING HAROLD,"

No 154 Nova Scotia Register, two years old on 23rd January last. Color roan. Took first prize at Provincial Exhibition, at Truro, and also at Dominion Exhibition, at St. John, last fall. Price \$200.

—ALSO—

The Thorough-bred Short-Horn Bull
"PRINCE RUPERT,"

No. 213 Nova Scotia Register, one year old on 20th February last. Color red. Full brother to "King Harold," the first prize taker. Price \$125.

Address:—JOHN FITZGERALD,
Care of CHAS. C. GREGORY,

Antigonish, }
20th March. } mch

JERSEY BULL FOR SALE.

A THREE YEAR OLD, high pedigree
JERSEY BULL. Color steel grey and
white. Name "Glencairn of Lorrndale," No. 38
N. S. Register. A sure Stock-getter.

For price apply to PROFESSOR LAWSON, at
Halifax, or the subscriber, at Truro.

ISRAEL LONGWORTH.
March 14, 1884. mch

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