



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

VOL. I.

HALIFAX, N. S., DECEMBER, 1867.

No. 34.

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EDITORIAL NOTES.

The County and District Agricultural Societies throughout the Province have been more dilatory this year than formerly in sending in the attested Returns required by law. This has caused much delay and trouble in adjusting the proportions of grants due to the various Societies. Now, however, that the Returns are complete, it is gratifying to find that the Societies have increased in number and in members. The usual list of Societies, with amounts of subscriptions and proportions of grant, will be published in next number of the *Journal*.

We would direct attention to Mr. Bustin's paper, in the present number, on the cultivation of Cabbages as a field crop. No vegetable is more necessary for maintaining the health of a country household in this Province, during the winter, than the cabbage; every farmer ought to grow a supply, and store them in pits for winter use. In this recommendation we include Savoys, Brussels Sprouts, and Scotch Kate or German Greens.

Professor How's paper on Plaster may probably induce some of our farmers to experiment, with the view of ascertaining whether plaster cannot be profitably used as a manure in this country, where it can be had at so cheap a rate.

We publish this month the Bye-Laws of several Agricultural Societies that have been recently formed. We often have enquiries for forms of Bye-Laws, and can recommend those now published as simple and judicious, and suggestive of what is required in the management of an Agricultural Society.

The Annual Reports of Agricultural Societies are beginning to come in, and will be printed as rapidly as we can find room for them. The Onslow Society's Report is a concise model of what we should like to have from every Society in the Province. We desire likewise, however, to receive at this season, a statement of the crops, to aid the Board of Agriculture in preparing the tabular return, which is annually sent in with their Report to the Legislature.

Persons desirous of obtaining copies of the List of Prizes offered for competition at the Great Exhibition to be held at Halifax in October next, may do so on applying at the office of B. G. Gray, Esq., Bedford Row.

In answer to several enquiries, we beg to state that the Spring (Fife) Wheat, imported by the Board of Agriculture from Ontario, is now offered to Agricultural Societies at \$2.50 per bushel. It is in bags, and will be put on board the cars without extra charge. No less quantity than a bag full (about 2½ bushels) can be sold.

THE BIG BUFFALO EXHIBITION.

Our friends in the States know well how to get up a good Agricultural Exhibition. When it was announced that they had set to work in earnest to make an ingathering at Buffalo of the great herds of the Western plains, it was expected that there would be more than a mouse there. And so there was. In fact the Exhibition was in several respects a very creditable

and satisfactory one. But some of our friends who had travelled from Halifax to Buffalo, on purpose to see it, came back with the impression that the animals and vegetables, and fruits and flowers of Nova Scotia, were not to be despised after all. Let us bear in mind that at our Exhibition next year, our neighbours of the States and the other Provinces will come to see what sort of stuff *our* country is made of. Whether we send them back to their homes with a beggarly account of the nakedness of the land, or a glowing description of its riches, will depend entirely upon the efforts which our farmers and miners, and manufactures may make, to shew them the right side of the picture. The official account of the Buffalo Fair contains some useful hints:

"The Executive Committee would acknowledge their grateful thanks to all the contributors who aided in making this exhibition worthy of our State. Never has it been equalled. The weather was, upon the whole, satisfactory; and the throng present on Wednesday and Thursday indicated the deep interest which the people of Buffalo, and the counties adjoining, took in the exhibition."

The representative of one of the Chicago papers—*The Western Union*—gives a very interesting account of the entire exhibition. We give a few extracts from the same:

"The Twenty-seventh Annual Exhibition of the New York State Agricultural Society, held at Buffalo, October 1-4, was, in many respects, a highly successful one. The weather was, in the main, favorable, and the attendance very large—larger than usual. The receipts were about \$22,000—making the Fair, financially, a decided success. We suppose it impossible to manage such a Fair to the satisfaction of all parties, so it is not surprising that complaints should be made as to this one. The buildings were very roughly constructed, and the grounds were not as suitable as could have been desired. The grounds selected were the best offered. We do not know who was responsible for these things, and take it for granted that the Society did the best possible under the circumstances.

"There are some features of the exhibitions of this Society that are worthy of consideration, and some of them of adoption by other Societies. A noticeable feature is the absence of 'tests of speed,' either of running or trotting horses, hurdle races, 'female equestrianism,' and other popular features. All shows, swings, &c., are kept from the enclosure. The convenience of visitors is consulted

in the arrangement of the ticket office, which is so built that three sides are open to the public, so that, if necessary, a dozen clerks can be employed in furnishing tickets. The plan of having an office for the General Superintendent, and for the Superintendent of each Department, is one that seems a decidedly good one. The stalls for cattle were built so as to give a full side view of the animals, the advantage of which arrangement will be appreciated by those who have attempted to carefully examine cattle in the ordinary narrow stalls. The pens for sheep and swine were arranged on the same plan.

"Visitors to most Fairs have noticed the difficulty almost always found in getting an opportunity to examine the horses, unless more time be given than many persons can spare from other departments. It is not, of course, either safe or desirable to have horses 'handled' by a crowd—as this 'handling' would generally consist in 'making 'em stand round' by means of a smart cut with a whip or cane; but there should certainly be some provision by which the horses could be seen in their stalls.

"Representatives of the press were most courteously treated. A comfortable office, with all needed conveniences, was provided for their use, and the different daily papers made all the arrangements so satisfactory to the press who were present from abroad.

"The display of Agricultural Implements and Machinery has, probably, never been surpassed in the United States. The show of Reaping and Mowing Machines was particularly large and good. Almost every variety of farm machinery was represented, and there was a large number of recent improvements and inventions—some of them of much apparent value.

"Mechanics' Hall was well filled with an immense variety of articles, many of them designed especially for farmers. The same may be said of the building in which Domestic Manufactures and Machinery were shown.

"The show of Vegetables, Grain, and of Dairy Products was not large, nor particularly good.

"Of Flowers but a very small display was made. Fruits were fairly represented, although the display was not what might be expected. Among the principal exhibitors were Ellwanger and Barry, Sylvester, Zimmermann, Crane, Moore, Dickerson, Hoag, McCulloch, &c. The display of Grapes was the best in this department.

"The number of Horses shown was smaller than is usual at exhibitions of this Society, nor, so far as we could learn, were they of superior character. In some classes the show was very meagre. The young stock shown was generally better than the old. There were some very good mules on the ground.

"All the leading breeds of Cattle were represented, and generally by good specimens; but in point of numbers, the show fell short of our expectations. Hon. E. Cornell, of Ithaca, was the leading exhibitor of Short Horns—taking off a number of the principal premiums.

"The leading exhibitors of Ayrshires were Wolcott, Campbell & Co., and their cattle were remarkably fine. O. Howland, Auburn, and E. Harvey and J. F. Converse also showed Ayrshires.

"The display of Alderneys was unusually good, both in quantity and quality. W. B. Dinsmore, Staatsburgh, showed some twenty head. E. Corning, jr., Albany, also showed some very good specimens.

"W. Cole, Batavia, showed twelve Devons of very good quality—dividing the premiums with Geo. Rudd, Guelph, Canada.

"E. Corning, jr., and F. W. Stone were the principal exhibitors of Herefords. Some of the animals shown were the best we have seen of this breed.

"The show of Sheep was really very good, and worthy of extended notice.

"The show of Swine was large and good. Yorkshires, Cheshires, Suffolks, and Berkshires were represented—in name at least. Most of the stock was from Jefferson county, N. Y. Messrs. Brodie, Huffstater, Cavanaugh, Converse, and Dinsmore were the leading exhibitors.

"Poultry was fairly represented."

Ex-President Fillmore was present, and other distinguished gentlemen, and delegates from the Agricultural Societies of Canada.

The immense labors of the clerks and assistants are appreciated by the Executive Board, and they return them their most cordial thanks for the manner in which their duties were discharged.

The discussions in the evening were very interesting. The address of Major H. T. Brooks, of Wyoming county, on apples and their culture in New York was very ably enforced.

The discussion the second evening on Cutting and Cooking Food for Cattle, was opened by E. W. Stewart, of North Evans—giving the result of his experiments. He was followed by Lewis F. Allen, H. T. Brooks, George Geddes, and G. A. Moore.

Following this discussion, Mr. Hawley, of Onondaga, opened the discussion on the Manufacture of Butter, and the kinds of salt used. The superiority of our own salt was established.

On the third evening, the eulogy on the late John A. King, Ex-President of the Society, by Ex-President Gould, was one of great interest.

To all who aided in giving success to this exhibition, the Executive Committee returns their most cordial thanks."

B. P. JOHNSON, Secretary.

SALE OF STOCK IMPORTED BY THE BOARD OF AGRICULTURE.

We had not room in last issue of the *Journal* for a list of the purchasers, at the auction, of the live stock recently imported by the Board of Agriculture. The very low prices realized show that the importation of last year had supplied the wants of most of our enterprising farmers and Agricultural Societies, so that it will not be necessary to make another importation of cattle next year. It will be seen from the list of purchasers that the animals have been well scattered over the Province, which is the great object of these importations. It is gratifying to observe that a taste for Ayrshires is springing up in Halifax, all the cows and heifers of that class having been retained in the city, and others imported this season direct from Scotland, through the enterprise of Messrs. Esson and Anderson. H. Davenport, Esq., who has taken so much pains to encourage good stock in Cape Breton, takes down with him on this occasion, as formerly, a very judicious selection of animals.

SHORT-HORNED DURHAMS.

Cows and Heifers.

Agnes—Dr C. C. Hamilton, Canard, Kings Co.....	\$41.00
Western Princess (calf of Agnes)—Col. Laurie, Oakfield.....	15.00
Kentucky Lass—Alex. Anderson, Halifax.....	21.00

AYRSHIRES.

Bulls.

Sir William Wallace—J. W. Smith, Amherst	75 00
Robert Burns—H. Davenport, Sydney, C.B.	60 00
Moss Trooper—Merigonish Agricultural So.	70 00
Ayrshire Ploughman—Stewart Burns, River John.....	16.00
General Grant—Gilbt. Seaman, Minudie.....	51.00

Cows and Heifers.

Young Duchess—C. Thompson, Halifax.....	33.00
Miss Cuthbert—Joseph Northup, Halifax.....	35.00
Naney—William Esson, Halifax.....	54.00

SHEEP.

Improved Leicesters.

Shearling Leicester Ram—John Ferguson, Nine Mile River Society.....	15 00
Do. Thomson Bell, Lower Musquodohit.....	18.00
Do. Sterling Agricultural Society.....	19 00
Do. North Sydney Society.....	20.00
Do. Gilbert Seaman, Minudie.....	8 00
Do. H. Davenport, Sydney.....	22.00
Do. W. Ferguson, Noel and Maitland So.....	21 00
Do. Stewart Burns, River John So.....	20.00
Do. do. do.....	21.00
Do. W. Ferguson, Noel and Maitland So.....	27.00
Do. Alexander Anderson, Halifax.....	29 00
Do. H. Davenport, Sydney.....	28.00
Do. Stewart Burns, River John Society.....	22.00
Two year old Leicester Ram—Thomson Bell, Lower Musquodohit.....	33 00
Leicester Ram—J. W. Smith, Amherst.....	14.00
Do. do. do.....	13.00
Do. Gilbert Seaman, Minudie.....	10.60

South Downs.

Shearling South Down Ram—Gilbert Seaman, Minudie.....	13.00
Do. Sterling Agricultural Society.....	19.00
Do. H. Davenport, Sydney.....	14.00
Do. do. do.....	30.00
Do. Judson Armstrong, Aylesford So.....	21 00

Shropshire and Hampshire Downs.

Shropshire Down Ram—Judson Armstrong, Aylesford.....	26.00
Do. (Shearling)—Francis Parker, Shubenacadie.....	38.00

Shropshire Ram Lamb—W. Ferguson, Noel and Maitland Society.....	23.00
Hampshire Ram Lamb—E. P. Banks, Lower Stewiacke.....	25.00
Shearling Hampshire Down—North Sydney Society.....	18.00

Pigs.

White Chesters.

White Chester Boar—W. H. Harris.....	22.00
Do. Stewart Burns, River John Society.....	30.00
Do. E. P. Banks, Lower Stewiacke.....	31.00
Do. W. Ferguson, Noel and Maitland So.....	16 00
Do. William Blair.....	10.00
Do. D. McKay, Nine Mile River.....	10.00
Do. Alexander Anderson, Halifax.....	12 00
Do. Gilbert Seaman, Minudie.....	14.00

Berkshires.

Berkshire Boar—A. C. Thomas, Windsor.....	15.00
Berkshire Sow—do. do.....	6.00
Do. Col. Laurie, Oakfield.....	5 00
Do. Alex. Anderson, Halifax.....	5 00
Do. William Esson, Halifax.....	5.00

Yorkshires.

Yorkshire Boar—W. H. Harris.....	3.00
Do. Col. Laurie, Oakfield.....	2.50
Do. Gilbert Seaman, Minudie.....	4 00
Do. North Sydney Society.....	3.50
Yorkshire Sow—W. J. Veith, Halifax.....	3.50
Do. North Sydney Society.....	3 50
Do. Mr Spence.....	2.50

SUGAR FROM BEET.

We observe that there is an enormous increase in the importation of Beet Root Sugar in the Clyde, and the question naturally comes up whether other countries besides France and Germany,—the Dominion of Canada for example,—might not enter profitably into the production of that article. The obvious objection is the amount of labour required; but this objection was quite as formidable against the culture of hops, which are now raised profitably to a large extent in Western Canada.

The following remarks on the proposal to introduce Sugar Beet culture to England will be read with interest. They are from the *Agricultural Gazette* :—

“The low price of Wheat, relatively to that of meat, renders the cultivation and use of root crops of interesting importance. It is not incumbent on us to sift the question whether Beet-root might not now be profitably grown in England for the production of sugar, as it has been found in France that cattle fatten on the pulp after the sugar has been extracted. In some “arrondissements” of that country the horned cattle have increased tenfold in number, and the Wheat has been doubled in quantity, principally from the larger supply of manure thus obtained, and partly, no doubt, from the tillage of roots taking the place of wretched fallows. Through my friend, Mr. B. Hunt, of the Government School of Mines, I have obtained from Paris a statement as to the produce per acre, estimated at 8 tons of Beet-root, from which 8 cwt. of raw sugar are made, yielding 86 per cent. of re-

fined, and 14 of molasses. It is as rich in saccharine matter as cane sugar. The pulp is apportioned among the farmers according to the quantity of roots severally delivered by them; they receive cash for the roots and pay for the pulp. The manufacture of sugar costs about 10s. per cwt. in labour, fuel, lighting, &c. A profit equal to the value of the molasses and pulp, satisfies the manufacturer; some of them grow their Beet-roots. In the Pas de Calais there are manufactories producing five tons of raw sugar in 24 hours, and employing 150 to 200 people of both sexes. France consumes annually about 400,000 tons of Beet-root sugar, and about 40,000 tons of cane sugar, although home-grown sugar pays 42 francs per 100 kilogrammes, equal to 16s. 10d. per cwt., and French Colonial 3s. 4d. less; and yet the number of manufactories has increased in the last year from 364 to 398. Might we not partly calculate on a produce of 12 to 15 tons per acre in England instead of 8 tons as in France, from our better cultivation and more abundant manure? Sugar does not take nitrogen, phosphorus, or sulphur from the soil; carbon, hydrogen, and oxygen, its component parts abound everywhere; the growth of canes may impoverish a soil, for they restore so little to it in the shape of manure. Raw cane sugar, during its transit from the colonies, wastes largely by leakage. The English revenue receives about the same amount from sugar as from malt; could any increased production of a grain crop, like barley (were the duty on malt abolished,) be compared with the benefit that the farmer might derive from the largely increased demand for Beet-root sugar which would arise if the duty on it were removed?”

DUTCH AND FRENCH FARMING AT THE PARIS EXHIBITION.

Among the more interesting items of the agricultural exhibition in the Champ de Mars, there are one or two to which there was nothing whatever corresponding in the British section. We refer to the Dutch dairy homestead and the French farm-yard. The former with its dwelling apartments for summer and for winter—its working-rooms properly furnished with all necessary dairy arrangements and machinery; its cow-house, calves' stage, piggery, and stable—contained a number of particulars deserving English attention. The dairy implements need not be copied, nor perhaps the arrangements either for holding the cow's head or tying up her tail; the width (length) of lair, too, allotted for the cow indicates a smaller animal than our own Shorthorns; but the small troughs, a mere indent in the floor, which serve as feeding places on each side of a roomy gangway between two rows, point to a

lesson of feeding in small quantities, fresh and fresh, which is important; and the size and depth of the gutter behind for the reception of manure, is another important thing, indicating the need of attending carefully to the preservation of other valuable produce of the cow besides her milk.

The French farm-yard, too, with its barn and dwelling-house, its circular cow-house, with 14 cows tied to a common circular trough, and thence radiating out to a greater interval, where there is ordinarily a risk of treading on one another or on the calves, with a central store or stage for provender, and all under a cheap circular roof; the shed for sheep, 12 yards long and about 4 deep, sufficient for three dozen merino sheep; the poultry-house on wheels, furnished with laying boxes and roosting poles, capable of being carried from field to field, and thus, as the placard told us, helping the work of destroying grubs in the fallows, as well as of picking up waste corn in the stubbles; all these items possessed considerable interest for English eyes—though very probably, amid the almost interminable collection of what possessed more general interest, comparatively few English eyes may have looked upon them.

The farm-yards and farm-houses with their inhabitants, quadruped and biped, are being transplanted, doubtless now with implements and machinery equally out of place, for use, to more proper homes; and we now can only hope that the lessons, sown so wonderfully broadcast as theirs this year have been, carried through the eye and mind to a thousand homes and farms all over the civilized world, may ultimately bear some of the fruit to be expected from such useful seed.—*Agricultural Gazette.*

EXTREMES OF THE DOMINION.

It would appear that we live in a Dominion where the sun shines every day, baking the soil into a universal brick, while at the same time the rain seldom ceases to descend. In the Lower Provinces we have been deluged with wet all summer and autumn, whilst in Ontario every scrap of herbage has been burnt up. Even so late as 22d November, the *Globe* writes thus:—

“The Kingston *News* says farmers are complaining of the continued absence of rain. There are many localities in which it was impossible to finish up the fall ploughing from this cause, and the drawback still continues. The water in many of the wells in various parts of the country had fallen very low, and in some instances the supply had ceased altogether.

DIFFERENT BREEDS OF SWINE.

Without dwelling on the management of swine, or making a long preamble to the direct discussion of the subject, I will commence at once to point out some of the points of the different breeds of these animals.

The *Berkshires* will first be brought on the “carpet.” These swine are black, which color seems to be objectionable with many, although not a serious fault. They mature early, fatten well on limited quantities of food and are excellent breeders. It is claimed that they are less liable to disease than any other breed, and that their flesh is the most delicate pork, while the live animal is the most hardy. They have grown to an immense size, and are a good breed for crossing with others.

Next we will call up the *Suffolks*.—These were imported from England by James Stickney, of Boston. In their “native land” they are considered the most profitable breed. They possess most of the good qualities of the *Berkshires*, are not black like them, and if well kept and taken care of, they will make the best selling pork. Until lately they were probably the leading breed of this country.

The *Chester County White* seems to be the most popular breed at the present time. They originated in Chester county, Pennsylvania, and disseminated quicker than any other breed. The following are some of their “good points.” They are pure white, have hair enough to stand a Northern winter, “fatten well at any age, are quiet and not inclined to roam, and fatten well in good clover pasture.” “They will make more pork in a given time with a given quantity of food than any other breed.”

The *Essex* is another breed of black, or black and white swine, and is as yet but little known in this country. They are much admired in England more for the delicacy of their flesh than the size they attain, which is not as great as many other breeds.

The *Chinese hogs* are rather small, and are valuable chiefly for crossing with large coarse-fleshed breeds. The fine quality of their flesh renders them especially valuable for this, while their small size condemns them for universal adoption as pork making animals.

There is a breed in the West known as *Irish Graziers* which are described as being “as long as a rail,” but are said to make an excellent cross with the *Berkshire* or other large breeds.

The *Bedford* or *Woburn* is an English breed not generally introduced in this country and therefore of minor importance. Not being acquainted with them, I won't describe them.

There are many, in fact, the chief part

of the swine raised that belong to no particular breed, but are called by various names in different sections of the country. In one district they may be called *Land-pikes*, in another *Alligators*, *Elm Peelers*, *Prairie Rooters*, *Subsoilers*, *Potato Diggers*, and a host of other names equally appropriate. Their characteristics are long legs, ensuring great speed when pursued; long noses, capable of stirring the soil thoroughly; long ears, like leather aprons; and long bodies. They are a long breed throughout, require long feeding, and have been the universal stock for a long time, All of which is submitted by one who would rather grow pork than eat it.—*American Stock Journal.*

Communications.

To the Editor of the Journal of Agriculture.

CABBAGES AS A FIELD CROP.

Sir,—Perhaps some of the readers of the *Journal of Agriculture* might like to know how I, this season, raised a fine crop of cabbage. The land, a piece of sandy loam, suffering from wet in spring and fall, so much so that the sown grasses had been killed, and the coarse herbage was not worth leaving for hay; in fact it would not pay for cutting. After I had done all my other cropping, I concluded to break up this piece and work it as a summer or bare fallow, not having manure for it. After this I found I could buy a few loads of manure, so I resolved to try cabbages on it, as from former experience with this vegetable I thought that there was a fair prospect of a profitable crop. I had the land ploughed deep, and with a flat furrow; it was well harrowed, and made as fine as possible on the surface, as the circumstances would permit. I then made shallow drills three feet apart and put the manure in small hills, a fork full to each, at a distance of three feet apart in the rows, and after sowing 50 lbs. of guano broadcast, covered the hills with the hoc; the drills being made on the inverted sod it was impossible to cover with the plough. On the 22d of June I planted all the cabbage plants I could get, which were only 550. I had ground ready for 2000. I did not water or puddle the plants, but I took care to set them out well; not merely pressing the earth round the stem of the plant, but gently settling and pressing the earth round the roots. It had been very dry for some time before this, and continued so for nearly two weeks after planting. Many of my neighbours ridiculed the idea of the plants living, let alone my raising a crop from them. I never water any plant just set out when I can avoid it; if well and carefully set out, there is no necessity for it. When the plants were just beginning to make heads, I applied 40 lbs. superphosphate of lime to the piece, putting a

little round each plant. The crop was hoed three times. Among the plants there were twenty-five cauliflowers, which did equally as well as the cabbages.

I have used the cauliflowers, which were considered very fine; I valued them, if at market, at 12½ cents each. The piece of cabbages (just 550 yards, or about one-eighth of an acre) has been valued by several persons at \$22. I think that by marketing them they will bring from 5 to 15 cents per head. The loose leaves, as fodder, will nearly pay for marketing the heads. I used four loads of rather inferior old manure on the piece, 50 lbs. of guano and 40 lbs. of superphosphate of lime. For the previous state of the land, the quality and value of the crop, with the quantity of manures used, I can refer to the former owner of the land, and several gentlemen and neighbours.

Yours respectfully,

W. BUSTIN.

Carlton, Yarmouth Co., Oct. 1st, 1867.

PROVINCIAL EXHIBITION OF 1868.

Middle River, Oct. 1st, 1867.

DEAR SIR,—I shall use every possible effort in forwarding the interest of the coming Exhibition, and try what can be done in obtaining contributions towards such a desirable object. The like Exhibitions have been the means, in other countries, of stimulating the energy of the people to an improved system of Agriculture; and I make no doubt but it may tend to the same result in Nova Scotia.

I am, &c.,

JOHN McLENNAN.

Reports of Agri. Societies.

WESTERN HALIFAX AGRICULTURAL SOCIETY.

The Annual General Meeting of this Society was held in the Rooms of the Christian Association on Tuesday, 3rd December, in terms of the Act for encouragement of Agriculture.—Among those present were W. C. Silver, Esq.; Charles Hamilton, Esq., J.P., Sackville; Joseph J. Northup, Esq., M. Doran, Esq., Alexander Anderson, Esq., John E. Parker, Esq., Windsor Road; James Stanford, Esq., W. J. Veith, Esq., A. Downs Esq., Cathcart Thomson, Esq., Nathan Ellis, Esq., Sackville; Alfred Saunders, Esq., Seedsman; P. Monaghan, Esq., Henry Starr, Esq., Charles Hessler, Esq., Sackville; Professor Lawson, &c.

In consequence of the unavoidable absence of the Hon. the Chief Justice, the chair was taken by Charles Hamilton, Esq., Vice President.

The Annual Report of the Directors was read,—from which it appeared that

the Society numbered 57 members, and that the amount of subscriptions collected during the year was \$100. The Treasurer's Accounts showed a balance in hand of \$217.15. After detailing their operations during the year, the Directors recommended the Members to assign one half of the Society's grant for this year and one half of next year's grant, amounting altogether to about \$100, to the Fund now being raised to carry out the Great Provincial Exhibition of 1868. This was cordially agreed to.

On motion of Mr. Stanford, the name of John Kelly, Esq., Dutch Village, was added to the List of Members.

Various arrangements were made respecting the valuable animals belonging to the Society. It was agreed that the Durham Bull "Lobo Lad" should be advertised for sale, or for exchange for an Ayrshire, and Messrs. Northup, Anderson, and the Secretary were authorised to carry this resolution into effect.

It was resolved to apply to the Board of Agriculture for a quantity of the Spring Fife Wheat, imported by the Board from Ontario.

In reference to the Provincial Exhibition, various suggestions were offered by Mr. Silver and others, as to the crops best adapted for the Halifax Peninsula, and of which the members might be able to produce good specimens in competition. It is believed, that with proper care and culture, Root Crops, such as turnips, mangold wurtzel and parsnips, may be raised in Halifax County, of a quality equal to any that have ever been produced in the province.

On motion of Mr. Northup, seconded by Mr. Silver, the Hon. Chief Justice Young was nominated to represent the Society at the Central Board of Agriculture.

Office Bearers were elected for the ensuing year, as follows:—*President*, Hon. Chief Justice Young; *Vice-President*, C. Hamilton, Esq.; *Treasurer*, W. C. Silver, Esq.; *Auditor*, J. Hunter Duvar, Esq.; *Secretary*, Professor Lawson; *Directors*, Alex. Anderson, Esq., Cathcart Thomson, Esq., Charles Hessler, Esq., Henry T. Wright, Esq., Francis Webber, Esq., Joseph J. Northup, Esq.

LOWER STEWIACKE AGRICULTURAL SOCIETY.

On the 29th day of October, in the year of our Lord 1866, a Public Meeting of the inhabitants of Lower Stewiacke was held for the purpose of forming themselves into an Agricultural Society.

The meeting called to order, Mr. John Tays in the chair, Mr. Ezekiel C. Banks, Secretary, the following rules were received and adopted as the Constitution of the Society.

1. This Society shall be called the Lower Stewiacke Agricultural Society.

2. The object of this Society shall be the general improvement of Agriculture.

3. Every person paying annually one dollar into the funds of this Society shall be a member.

4. The office-bearers of this Society shall consist of President, Vice-President, Secretary and Treasurer, and five Directors.

5. The officers of this Society shall be elected annually, and shall be eligible for three years in succession, but no longer.

6. No money to be drawn from the Treasurer without an order from the Secretary, signed by the President.

In compliance with the above, the following declaration was subscribed to, and a large amount of the money paid in.

We whose names are hereunto subscribed, agree to form ourselves into a Society under the provisions of the chapter of the Revised Statutes. "Of the Encouragement of Agriculture," said Society to be called the "Lower Stewiacke Agricultural Society," in the county of Colchester; and we severally agree to pay to the Treasurer of said Society towards the funds thereof, annually, the sums set opposite our respective names. [61 names are appended, at \$1 each.]

Officers were then appointed, *pro tem.*, till first Tuesday in December: accordingly the following persons were appointed to office:—*Pres.*, R. J. Pollock; *Vice Pres.*, John Tays; *Sec'y and Treasurer*, Ezek. C. Banks; *Directors*, A. B. Woodworth, Alex. W. Stevens, James E. Ellis, Joseph Fulton, Wm. Hogge. The meeting adjourned until the first Tuesday in December, at which time the monies subscribed were all requested to be paid in without delay.

December 4th, Society met according to appointment, and after the monies were paid in the officers for the ensuing year were appointed as follows:—*Pres.*, R. J. Pollock; *Vice Pres.*, John Tays; *Sec'y and Treas.*, Ezekiel C. Banks; *Directors*, David Withrow, Geo. Ambrose Ingram Banks, Charles Ryan, Henry Sibley.

It was then resolved that the voice of the meeting decide how the funds of the Society be expended, and that this be adopted as a rule of the Society. Whereupon it was resolved, that good bulls be the object to which the funds be devoted in the ensuing year.

EZEKIEL C. BANKS, *Sec'y.*
Lower Stewiacke, Jan. 2nd, 1867.

N. B.—We fully expect to participate in the Provincial grant the ensuing year, and we shall be most happy to answer any inquiries which you may think proper to make at any time; and we shall likewise be very thankful for any information you may feel disposed to give.

RIVER JOHN AGRICULTURAL SOCIETY, COUNTY OF PICTOU.

BYE-LAWS.

Art. 1.—*Name.* This Society shall be called the "River John Agricultural Society."

Art. 2.—*Object.* The object of this Society shall be the encouragement and promotion of the introduction of improved stock, seeds, fruit, roots, implements, methods of culture, drainage, orchard cultivation, and improvement in farm buildings and domestic manufactures, to hold shows and exhibitions, to award premiums for excellence, and to diffuse information concerning agriculture and horticulture.

Art. 3.—*Membership.* Any person shall become a member of this Society by subscribing to the declaration and bye-laws and paying annually the sum of 1 dollar.

Art. 4.—*Officers.* The Officers of this Society shall be a President, Secretary, Treasurer, and five Directors, all of whom shall be elected at the annual meeting in December, any five of whom shall form a quorum.

Art. 5.—*Duty of Officers.* 1. It shall be the duty of the President, or, in his absence, of the Vice-President, or, in the absence of both, of a chairman elected by the Society, to preside at the meetings of the Society. 2. It shall be the duty of the Secretary to keep a fair and complete record of the transactions of the Society, give notice of meetings, and act as the organ of the Society in all its correspondence. 3. It shall be the duty of the Treasurer to receive all moneys of the Society, and pay the same under the direction of the Officers and Directors, and report when required so to do, and always at the annual meetings. 4. It shall be the duty of the Directors, together with the Officers, to manage all the affairs of the Society, consistently with chap. 96 of the Revised Statutes, or its amendments.

Art. 6.—*Meetings.* The Annual Meeting shall be held on the first Tuesday of December, when the Officers shall present a report of the state and operations of the Society; and the Society shall elect its Officers and nominate a person as member of the Central Board. Special meetings shall be called only at the request of at least three Officers.

Art. 7.—*Amendment of Bye-Laws.* Any repeats or amendments of these Bye-Laws must receive the consent of a majority of the members present at a general meeting.

MILFORD HAVEN AGRICULTURAL SOCIETY.

BYE-LAWS.

Rule 1.—That the persons who have made up the amount of forty dollars and upwards, required by law, by subscribing and paying the sum of one dollar each,

be considered as having formed an Agricultural Society for the district of Guysborough,—to be called the "Milford Haven Agricultural Society." That in future any individual wishing to join such Society, on payment of the said sum of one dollar to the Society, shall be admitted a member thereof.

Rule 2.—The Society shall be governed by a President, Vice-President, Secretary and Treasurer, and five Directors. The said officers shall be a committee to manage the business of the Society for the time-being—a majority of whom shall form a quorum. The said officers to be elected or re-elected annually, by a majority of the votes present at the annual meeting in December.

Rule 3.—Each member shall pay into the hands of the Treasurer the sum of one dollar on or before the first day of October, annually; and all members whose subscriptions shall be in arrear beyond that period, shall forfeit all claim or benefit from the said Society during that year.

Rule 4.—It shall be the duty of the President, or in his absence of the Vice-President, to preside at all meetings of the Society, to propose and explain the business, to preserve order and regularity in the proceedings, to collect the votes and give a casting vote in all matters determined by a majority, where the votes happen to be equal.

Rule 5.—It shall be the duty of the Secretary to record the proceedings of the Society and the Managing Committee in a book to be kept by him for that purpose,—the record of each meeting to be signed by the presiding Officer and Secretary. He shall conduct the general correspondence, and receive, communicate and file all letters or other papers addressed to himself or the Society. As this Officer will have onerous duties to perform, he shall be allowed by the Society, at the annual meetings, such remuneration as may be considered adequate for such services.

Rule 6.—It shall be the duty of the Treasurer to receive and grant receipts for all contributions, or other monies given for the use of the Society, and enter the same in a book to be kept for that purpose. He shall account at all times, when called upon by the Society or the Managing Committee, for the funds in his hands. He shall exhibit a correct statement of his accounts, and produce all books and vouchers at the general meetings, when they shall be audited by the Society, or a Committee appointed for that purpose, and signed by the President by order of the general meeting; and such signature shall be to the Treasurer a sufficient acquittance. It shall not be competent for the Treasurer to make any payments from the society's funds, to any person or for any purpose whatsoever,

otherwise than in virtue of a written order signed by the President, or in his absence the Vice-President.

Rule 7.—There shall be a General Meeting of the Society on the first Tuesday of the months of April and December, annually. Special meetings may be called at any time by the Secretary under a written order from a quorum of the Managing Committee. At these ordinary or special meetings any case may be decided, not provided for by the present Rules and Regulations. The meetings of the society as well as those of the managing committee, shall be held as near the centre of the society as a building can be obtained for that purpose—such place to be named in the notice for said meeting.

Rule 8.—The Managing Committee shall open, and at all times preserve a friendly correspondence with the Central Board of Agriculture at Halifax, with a view to the general improvement of Agriculture, and the prosperity of the Province, which important objects are only to be obtained by zealous co-operation and unabating perseverance on the part of local societies.

Rule 9.—It shall be competent for the society by a vote of a majority of the members present at a general meeting, to revise, alter or amend these Rules and Regulations so as to make them better adapted to the objects of the society; but the alterations or amendments proposed to be made, shall be delivered to the Secretary in writing at least one month before such General Meeting, to be held by him copied into each notice of the Annual General Meeting next succeeding.

ANNUAL REPORT OF THE ONSLOW AGRICULTURAL SOCIETY.

The Officers of the Society in making their report, are happy to state that the affairs of the Society are in a sound and prosperous condition. Many of the difficulties anticipated at the commencement have been successfully met and overcome. From being an enterprise in which many had little or no faith—regarded by others with entire indifference—and looked upon by most as destined to a short-lived existence, like its predecessors in the neighbourhood, it has come to be considered a useful institution, permanently established, and calculated to be beneficial in its results. The membership has increased, although some of the first ones have dropped off, and now numbers one hundred and one; and the prospect is favourable for the future. Something too has been gained by way of experience in management. The first year's stock was purchased and persons paid for keeping and attending them for the use of the Society, and the directors collected the fees for service. But this being found a very expensive system, and one involving much trouble and loss, a different plan has been adopted this year. The animals were given to keepers for a year at their own risk—the directors merely assigning a district and fix-

ing the tariff. And there has been much less trouble, and no loss—as the animals are thus self-sustaining.

The four Durham bulls of the Society have done good service the past year, and are here to day to be exchanged. Arrangements have been made for the next year similar to the past, and each keeper will take home with him the bull which may be assigned to his section to-day. Several of the calves got by the Society's bulls have been brought to this meeting by their owners for comparison; and for symmetry of form, as well as larger growth, must convince the most skeptical of the superior advantages of good breeding.

The boar purchased in Halifax, last fall was kept for service for the season; and in March was sold, on condition that he should be kept for the service of the society for another year at the same charge.

The directors did not consider it prudent in view of the debt upon the Society to purchase sheep last fall—but the Cotswold breed has notwithstanding been introduced, through the enterprise of the President and a few others, who purchased on private account at the sale last fall at Richmond, two shearling Rams of this improved stock. The White Chester breed of pigs has also been introduced by another member of this Society, who bought one of these animals at the sale in Halifax this fall.

We note with pleasure the increasing circulation among the members of the *Canada Farmer*; and would strongly recommend every member to become a subscriber to that, or some other good agricultural paper.

A proposal will be submitted to-day for the establishment of an annual Fair and Cattle Show, under the patronage and management of the Society—to which it is hoped you will give that consideration which its importance demands.

The Society being yet comparatively young, and no accumulated funds, and another bull to be bought next season, it has been felt that we were not in a position to make any contribution to the Exhibition fund at Halifax.

The returns were duly certified, and sent to the Secretary of the Central Board, as required by law.

DISBURSEMENTS.

Balance due from Society last year.....	\$95 55
Cost of bull bought December, 1866.....	33 16
Cost of boar do.....	23 00
Loss in collecting for services of bulls last yr.	15 95
E. Fitch, keeping bull from 18th Oct.....	8 00
Six copies Agricultural Journal.....	3 00

\$183 66

RECEIPTS.

Annual subscriptions for 1867.....	101 00
Balance.....	82 66
To meet which we have the Provincial grant yet undrawn, say.....	40 00

Leaving balance..... \$42 66

which will be covered by the annual subscriptions now due, and leave a surplus.

JOHN B. DICKIE, *President*.
GEORGE F. CROWE, *Sec'y*.

Officers elected for the next year are:—*Pres.*, John B. Dickie; *Vice Pres.*, Adam Dunlap; *Sec'y*, Win. Blair; *Treasurer*, Isaac Barnhill; *Directors*, Robert Putnam, Edwin Fitch, Charles Crowe, Donald Murray, and Murdoch McKay.

The recommendation to establish an annual Fair and Cattle Show was adopted by the meeting, and several new members joined the Society. G. F. C.

Miscellaneous.

PLASTER—GYPSUM AND ANHYDRITE, AND THE BORATES AND OTHER MINERALS WHICH THEY CONTAIN.

By DR. HOW OF KING'S COLLEGE.

Read before the Nova Scotia Institute of Natural Science, by Professor Lawson, in the unavoidable absence of Dr. How.

The subject matter was of much interest, both from the commercial and agricultural importance of the minerals, their use in the arts, and for various other economic purposes. The Paper stated that both gypsum and anhydrite are found in Nova Scotia, in quantity, exclusively in the carboniferous rocks, in close association with the sedimentary limestones. Gypsum has also been found in small amount in the fibrous form, in the trap rocks of Blomidon, and as selenite, imbedded in the same rocks, at Two Islands. The local term for gypsum is soft plaster—for anhydrite hard plaster. The former is sulphate of lime with water—the latter sulphate of lime without water.

Tables were read showing the number of tons of plaster shipped from the Province, and the countries to which it was exported, for a series of years. The totals were stated as follows,—1864—52,625; 1865—55,312; 1866—54,478. The years of the American war, and those immediately following, were seasons of great depression in the gypsum trade—but lately it had resumed its activity. From January 1st, 1866 to December 31st, 55,751 tons were cleared from Windsor, valued at \$50,256—but in the first 9 months of 1867, 48,285 tons were exported, which manifests a great increase. The price of gypsum at Windsor is from 90 cts. to \$1 per ton,—the price on the Grand River, Western Canada, the only locality in Canada (Ontario and Quebec) where workable deposits occur, is about \$2 a ton. The deposits there are quite insignificant compared with those of Nova Scotia.

The county of Hants is the chief gypsum raising county in Nova Scotia, and Windsor the principal port of shipment. Operations have been carried on at the Clifton quarry at Windsor about 40 years. The principal rock is gypsum, the anhydrite, a hard plaster being found in lenticular masses from two to ten feet thick in the centre, and sometimes fifty feet long, imbedded in the soft plaster.

The various and numerous uses to which plaster is applied in its manufactured state were commented on, and the mode explained by which it is made, and the aspects and degrees of hardness it presents in combination with other substances. One peculiar property of gypsum was quoted from Miller's Chemistry II. p. 801. "If gypsum be mixed with a

certain amount of water and soaked in a bath of hot pitch, it parts with water and takes up pitch, and then forms a substance so hard and susceptible of polish, that it could be employed in making a variety of useful and ornamental articles."

Gypsum is exported as blue and white gypsum, the former is the kind chiefly used for agricultural purposes, and before the recent civil war in America, was being thought of as a manure for cotton. The white gypsum is burned or boiled, by which the water is expelled, and plaster is made by the addition of water. The composition of pure gypsum was stated to be:

Lime.....	32.55
Sulph. Acid.....	46.51
Water.....	20.94
	100.00

A compact opaque white gypsum, called (locally) alabaster, occurs in Antigonish, and has lately been found about 3 miles from Windsor. Selenite, which is the finest kind of gypsum, is abundant in the quarries at Windsor; other varieties differ in composition from the admixture of oxide of iron, and carbonate of lime and magnesia. Analyses were given of plaster exposed to the weather, which did not vary from that of pure gypsum, or of black gypsum, and of hard gypsum (not anhydrite). The composition of anhydrite was stated to be:

Lime.....	41.18
Sulph. Acid.....	58.82
	100.00

True anhydrite can give no water. It makes a very good substitute for marble in indoor work; does not admit of being made into plaster by burning, but is equally good if not more valuable than gypsum for agricultural purposes.

With reference to the minerals contained in gypsum and anhydrite, no considerable amount have been met with. Some of them would be really valuable if found in abundance. Sulphate of soda and common salt appear in small quantities. The most important minerals are certain borates, which Dr. How discovered about ten years ago, and of which he has just discovered a third altogether a new mineral, and is about publishing an account under the name of Silicoborocalcite, in the *Philosophical Magazine*. These borates were described and analyses given. A communication was read from George Outram, Esq., Stoke-upon-Trent, Staffordshire potteries, making enquiry about the borates described, and detailing their value. This was in Sept. 1857. Since then the discovery of borax in California had lessened their value. Another letter from Mr. Outram stated that the borate (matroborocalcite) found in Nova Scotia was valuable as a glaze and as good as any he had seen of the same mineral. A specimen of the pottery

thus glazed was produced, and also specimens of the various minerals found in the gypsum viz:—natroborocalcite, cryptomorphite, and silicoborocalcite, which last was met with in the anhydrite from Mr. Black's quarry at Brookville, and in gypsum from Newport.

No deposit of rock salt of any importance has been found with the gypsum, but the brines of the gypsiferous districts have furnished excellent salt at River Philip, and Springhill, Cumberland, and a company is conducting operations in salt making in Antigonish.

The following analysis was given of the silicoborocalcite.

Water.....	11.62
Lime.....	23.04
Sulph. Acid.....	.08
Magnesia.....	trace.
Silicia.....	15.44
Bor. Acid.....	44.10
Loss.....	.72
	100.00

The Paper, of which the foregoing is an imperfect abstract, is one of the most interesting ever read at the Institute—and, treating as it does of a mineral which occurs so extensively in various parts of Nova Scotia, is so full of information, that it will doubtless lead, to more speculation and research in our gypseous formations than have ever yet taken place. An interesting conversation followed the reading.

[We should like to see a careful investigation of the properties of gypsum and anhydrite, as manurial substances. Both are used indiscriminately and very extensively in the United States, and the Lake Province of Canada. The plaster is applied to the growing crop in a powdered state after the hot weather has set in. European chemists regard gypsum as a powerful fixer of ammonia; but this alone will not explain its beneficial action. In practice it would seem to be chiefly used on account of its hygroscopic property, its power of absorbing moisture from the atmosphere, for it is used most freely in hot dry climates, and its advantages are most obvious in dry seasons. If it acts beneficially, only or chiefly, as an absorbent of moisture, then it is probable that hydrated gypsum being more hygroscopic is more valuable than anhydrite.—*Ed. J. A.*]

FEEDING HORSES IN NORWAY.

The horses in Norway have a very sensible manner of taking their food. Instead of swilling themselves like ours with a pailful of water at a draught—no doubt from the fear of not getting it soon again—and then over-gorging themselves with dry food, for the same reason, they have a bucket of water put down by their allowance of hay. It is amusing to see with what a relish they take a sip of the

one and a mouthful of the other alternately, sometimes only moistening their mouths as a rational being would do while eating a dinner of such dry food. A broken-winded horse is scarcely ever seen in Norway, nor have I met with one in the slightest degree so affected. The animal is not forced to overload its stomach, and distend the vessels with unnecessary quantities of water or hay at one time. Broken-wind is understood to be a rupture of the vessels connected with the lungs, and to be brought on by over-feeding, or over-exertion with a full stomach. In a field, when left to himself, the horse is perpetually eating. He does not fill himself at once like a cow. By giving two or three feeds only in the day, he fills himself too rapidly, and without sufficient mastication. Probably many of the diseases of our horses arise from this unnatural custom. The horse probably knows better than the groom when he should eat and drink, and would be more free from diseases if left to his own discretion.—*Laing's Tour in Norway.*

A CANDID CRITICISM.

The *American Agriculturist*, which is the leading farmer's paper in the States, notices the Prize List of the forthcoming Nova Scotia Exhibition, in terms of commendation that must be gratifying to the Committee who spent so much time in its preparation:—

“NATIVE WOODS.—In the prize list of the Nova Scotia Agricultural and Industrial Exhibition, we find several unusual and very sensible premiums offered. Among others is one for the best collection of native woods, prepared to show the bark, as well as longitudinal and transverse sections, polished and plain. But very few are familiar with the appearance of our native woods, other than the few kinds that have a commercial value. Such a collection at any fair would be far more instructive than many things for which prizes are given.”

THE AMERICAN DROUGHT.

The drought still continues in this section, and fears are entertained that winter may set in before we have rain enough to start the springs. Should such be the case, we shall surely be troubled to get water for the stock. Many farmers now have to drive their cattle to the canal or to the nearest stream, and water for the hogs has to be carried in barrels. It has been vain to think of fall plowing. Heavy soil is as dry and as hard as a rock—and it is this kind of land, rather than the sandy loams, that is most benefited by fall plowing. Wheat has come up very unevenly. Where the ground is loose and moist, the wheat is too rank; while

on the dry, lumpy “clay spots,” much of it is barely out of the ground. It has been splendid weather for doing fall work—digging potatoes, husking corn, etc. But the stalks are so dry and brittle, that it is almost impossible to tie up the bundles. Pigs that are well fed grow rapidly this mild weather, but corn is so high that farmers are selling them before they are half or quarter fat. Buyers are picking them up at about 5 cents per pound. One of my neighbors was selling cider the other day, and was asked if he had put any water in it. “Water,” said he, “no, sir; not this year. Water is a good deal scarcer than cider.”—*American Agriculturist.*

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The Journal of Agriculture

—is published monthly by—

A. & W. MACKINLAY,
No. 10, GRANVILLE STREET,
HALIFAX, NOVA SCOTIA.

TERMS OF SUBSCRIPTION:—

Fifty Cents per annum—payable in advance.
A limited number of Advertisements in connection with Agriculture will be inserted on application to the Publishers.