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THE NOVA SCOTIAN
JOURNAL OF AGRICULTURE

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THE GREAT HALIFAX FAIR.

Arrangements are progressing rapidly in connection with the great Provincial Exhibition to be held in October. The Prize List has aroused the energies of our farmers and manufacturers, and we hear from various parts of the country of efforts now in progress for the effective representation of our Industries.

The Committee have secured, for exhibition purposes, the Drill Building and the Governor's Field, and arrangements are in progress for securing other necessary premises. Several gentlemen of the Committee have carefully surveyed the proposed fields and buildings, and at next meeting plans will be submitted of the proposed erections, and a general scheme of arrangements for carrying out the Exhibition.

THE PROVINCIAL EXHIBITION.

Office of A. G. M.
HALIFAX, 1st April, 1868.

SIR,—I have the honor to state for the information of the Commissioners of the Provincial Exhibition, that the Hon. the Minister of Militia sees no objection to the use of the Halifax Drill Shed, and the adjoining premises, as applied for by your letter of the 14th March, 1868, provided arrangements can be made that the shed will not be wanted during the period mentioned.

As September and October are the months when the Drill Building is least required, there will be no difficulty on this point.

I have the honor to be, &c.,
R. B. SINCLAR,
Adjutant General, N.S.M.

To Prof. G. LAWSON, LL.D.,
Sec'y Com. Industrial Exhibition, Halifax.

AGRICULTURE IN N. YORK STATE.

The Legislature of New York State annually votes $10,000 to the Agricultural Societies in the State. Besides doing this the State pays an annual salary of $1,250 to Dr. Asa Fitch, the State Entomologist, in order that the insect enemies of the farmer may be well looked to. These sums are quite independent of special appropriations. A sum of $2,000 was also voted a few years ago to encourage the improvement of flax machinery. A sum of $1,000 was given to encourage citizens of the State to send products to the Hamburg International Exhibition. In 1865, a sum of $5,000 was voted to enable the State Society to hold a trial of Agricultural implements. In 1866 $1,000, and in 1867 $5,000, were voted to meet the expense of a thorough investigation into the scourge of the dairy counties, abortion in cows.

THE POTATO DISEASE.

BY W. BUSTIN.

[*Concluded.*]

That something of this sort does actually take place, is certain, from the fact of this process having been employed, but not on scientific principles, on a varied and large scale, by potato-growers at Scotby, in the neighbourhood of Carlisle, in Cumberland. The people there were, many years ago, and perhaps still are, in the habit of rearing early potatoes on a red sandy soil, for the supply of the neighbouring markets; and the successful issue of this crop was one of their main-stays. In some seasons, they have had all their hopes of success cut down, as it were, in a single night, by what they popularly

called "a frost;" it was not a clear cold state of the air, but a chilling vapoury fog, dragging over the face of the country;[6] a state of the atmosphere in which Saussure as well as Crosse found that the electricity of the atmosphere is strongest, appearing usually at the end of May or beginning of June, and shewing itself before sunrise; and Saussure observed, electricity began to appear at sunrise. At the time spoken of, it was the custom for some one or other of the villagers to watch for the appearance of this visitation; and when it occurred, as it was graphically described by an intelligent inhabitant, the whole population instantly were alarmed by the watcher, and young and old rose from their beds. Some covered up their little patches with straw, or any thing they could interpose over their potatoes, and some even used part of their bedding. But those who had large portions, and could not, of course, resort to this method of security,—these, therefore, resorted to the very expedient already named; and by judiciously lighting small fires of straw, wood, or any rubbish, at proper intervals from the plots, threw off to leeward sufficiently large rolling volumes of smoke, which, dragging also over the surface of the potatoes along with the fog, neutralized it, so to say, and almost always, if applied in time, saved the crop.

Now, that the calamity befalling the potatoes grown at that time at Scotby, was not owing to the mere negative article of cold, (see note [3],) *ex sese*, in itself, is very probable from the following fact: The very respectable gentleman who communicated these facts, long since in his grave, mentioned the plan he pursued in his own garden to save his own crop, and which, besides being effectual, had the advantage of being always interposed and ready; and that was, old fishing-nets stretched horizontally just over the tops of his potato crop, secured to low, upright stakes, placed in proper situations; and it may be that the netting was also supported by ropes or rails, placed here and there, on which the netting reposed, and thus did not come in contact with the potato tops.

Now, it is evident, that the matter of cold air, and even the vapour, could easily and readily, and did in fact, circulate through the meshes of the netting; but the netting was invariably found *a perfect protection;* and this may be readily conceived, because the netting acted as a conductor to the electric particles,[7] agreeably to Beccaria's experiments, they settling with the vapoury particles upon the netting, in preference to settling in any prejudicial quantity on the potato tops.[8]

Of these facts, as here ralated, there can be no doubt. They were communicated in such a way, and from such parties, as to preclude any mistake. The inferences, however, are matter for discussion, and might suggest similar experiments, applicable to the morbid influence for so many seasons affecting the potato crop.

That there is some reason to expect that electricity, in some such way as here described, or, for instance, more intelligibly, by the development of heat on the delicate leaves after the adhesion of the vapoury particles, is connected with the destruction of the potato crop, seems very probable from the known extreme susceptibility of the leaves of the potato plant to the morbid influence of peculiar cold; and that what we term frost, in all its various phases and effects, snow and hail, even that sensation which we term frosty air, or the peculiar sensation produced by the north-east wind,[9] is no other than some peculiar action or modification of the electric fluid during certain states of the earth and atmosphere.

It may be objected, that the potato disease is altogether different from any effect produced by ordinary frost; that potatoes have recovered in former years when the tops have been cut down by frost in a similar way to that already described. There is some force in this, but it is more apparent than real. The effects produced by frost, and by the potato disease, as considered distinct from frost, it is granted, may not be always to the same extent; one day or night of frost differs from another in intensity, so will the effects be different. Again, frost united to vapour is different from a dry frost; so must also the result be different. Besides it must not be forgotten, that the potato seed itself is not always equally vigorous; neither is the growing crop produced even from the same seed alike healthy at all stages and under all circumstances; so also is it then less capable of resisting any morbid influence. This is also not unfrequently the case with man and beast; and they are said then to be predisposed to disease. Add to this, that a poison introduced into the system, may be arrested by a speedy antidote. A morbid influence is sometimes only fatal to life when applied in large doses. Opium is a poison; arsenic is a poison; but judiciously applied they are healing remedies in the animal economy. So also in the vegetable economy, the small doses of ammonia, conveyed to the roots of plants with the genial rain, produce active and healthy vegetation; while a soot heap, however wet, for a time banishes all vegetation whatever. Again heat, dry or moist, immoderately applied, is injurious. Thus it is with electricity. No doubt it performs a wonderful part in the growth of vegetables, —exciting the action of the fluids in the capillary tubes of plants,[10] assisting in promoting fermentation, and in the dissolution of manure introduced into the soil.[11]

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[6] At Geneva, the fogs are a pretty certain sign of good weather. They often do not rise to a great height above the surface of the earth: and when the low grounds are completely obscured, the sky is clear on the mountains. In these cases the fogs conduct to the earth the electricity of the serene air which reigns above them.—*Saussure.* But the most recent experiments on the electricity of the atmosphere have been made by Andrew Crosse, Esq., of Broomfield, near Taunton. His was a very extensive atmospheric conductor, consisting of an insulated copper wire, 1-10 of an inch thick, extending between two vertical masts from 100 to 110 feet high. It was no less than a mile and a quarter in length, afterwards shortened to 1800 feet. It is remarkable that Mr C could not in any way preserve the insulation during a dense fog or a driving snow. Fogs, rain, snow, and sleet produce changes in the electrical state of the wire. The electricity is negative when they first appear. It frequently changes to positive, gradually increasing, and then decreasing and changing from positive to negative every three or four minutes. These phenomena have been so constantly observed, that whenever the wire appears negative, it is considered as a certain indication that either rain, snow, hail, mist, or a thunder cloud, is in the neighbourhood.

[7] By insulating strings, extended in the open air, Beccari observed they acquired a degree of electricity which increased with the length. Having extended across the river Po a cord 1000 Paris feet in length, he found it as strongly electrified during a shower unattended with thunder, as a rod of metal had been during a thunder storm.

[8] Such phenomena, from some such cause, are not unusual in summer. The phenomena of blight attended with frost, is not unusual in some districts in New Brunswick in the summer season, as well as in this country. Something analogous, as to the existence of frost, even in the tropical climate of India, is a well known fact. "When ice is produced in temperatures above the freezing point, a plentiful deposition of dew is always going on, which seems to be altogether inconsistent with the idea (of evaporation being at the bottom of the process of congelation.) of air being in a state capable of receiving fresh accessions of moisture On one occasion, while Mr. Scott, in India, was repeating some of Dr. Well's experiments, a turban being suspended across the pit, three feet above the pans, it, as it always does, prevented the formation of ice in those immediately under it; and in several which it only partially covered, ice was formed on the half of the water out of the perpendicular line, while that under the turban was fluid. Two strings crossing each other, and placed at a less height above a pan, will also divide the ice into four quarters: but it is obvious that these results will not always be obtained; for if the temperature be rather lower than would be necessary to freeze the water, supposing no impediment to exist, the whole may be frozen, although partially covered; and on the other hand, if just sufficient to freeze the water under the most favorable circumstances, the contents of a vessel not freely exposed to the influence of the sky may remain fluid throughout."—(*British India*, Edin. Cab. Lib, vol. iii., pp. 232-3.)

[9] Mr. Crosse ascertained the states of the air in which electricity appears; among them he mentions a fall of snow, or a brisk hail storm, clear frosty weather, a peculiar state of the atmosphere which occurs during north-east winds considered peculiarly unhealthy, and producing a sense of dryness and extreme cold, which is not indicated by a depression of the thermometer.

[10] M. Boze having informed the Abbé Nollet that capillary tubes, which discharged water only by drops, afforded a constant stream when electrified, he made numerous experiments on that subject.—He found that the stream of water was never sensibly accelerated or retarded when the bore was above a line in diameter; when it was a line in diameter the fluid experienced a small acceleration; and when it was capillary the electrified jet not only became a continued stream, and divided into several streams, but was also considerably accelerated, and this in proportion to the smallness of the bore.

[11] Archard, of Berlin, made several experiments on the effects of electricity in the fermentation of vegetables. He took a small quantity of rye, in which the process of fermentation had been commenced for the purpose of distillation, and electrified

These are a very few instances of its beneficial results, and, no doubt, many other equally important, are brought about by the agency of electricity. Independent, however, of all other results, it seems by no means alien to the usual course of nature to believe, that the agency of electricity may be made alike destructive in the far-spread, though silent and searching, scourge of a potato disease, as in the short, but overwhelming terrors of a thunder storm.

The simple practical protection, then, proposed for general adoption by growers of potatoes, based on electrical science and successful experiment during the season of 1846, when the disease raged so fatally, is this:—

In the centre of each field of growing potatoes, if of moderate dimensions, erect a pole, at a right angle, of sufficient height to form an inclination to the extremities of the plot of from 20 to 40 degrees.—From the top of this pole[12] suspend from 4 to 8 or more lengths of copper bell-wire, diverging around, to the outside of the head rigs, to as many upright stakes placed there, of not less than three feet from the surface of the ground, and which must be driven a sufficient depth into the earth to be perfectly stable. To each of these stakes one of the wires must be firmly secured, the ends of the wires being inserted into the ground. It will be seen from electrical facts already stated, independent of experiments alluded to, that *these wires will unfailingly protect the crop* from the prejudicial effects of superabundant electricity at any time existing in the atmosphere. The apparatus may be erected with comparatively little trouble and at trifling expense; and the wires, at the end of each season, being carefully rolled up for future use, will last for years.

one-half; after a lapse of five hours the vinous fermentation was over in the electrified half, while in the unelectrified half, it did not cease till after eight hours. He always found that fermentation was accelerated by electricity. The effects of electricity on the corruption of dead animals, has been remarked by him, and he concludes from his experiments, that putrefaction is accelerated by electricity.

[12] The easiest and best way of securing the wires to the centre pole, is by having the top of it shod with a metal rim or ferrule, having as many holes or rings as there are wires intended to be used. An end of each wire can thus be easily and effectually secured to the top of the pole before raising it. It is not necessary or desirable that the wires should be drawn tight to the stakes. They can be secured to the top of each stake by a small staple or two, and by twisting the wire round each one till it enters the ground. When the fields are of large dimensions, two or more similar apparatus may be erected.

NOVA SCOTIA HERD BOOK.

LADY LUCY.

A thorough bred Short Horn Durham. Roan. Calved April 14, 1867. Got by the Yeoman, (bred by Frederick W. Stone, Esq., Moreton Lodge, Guelph, Canada West), whose Sire was Twelfth Duke of Northumberland, 4711.

Dam, Beauty, by Kossuth, 619 or 1753 of vol. 3.

g.d. Snowdrop, by Durham, 1488.

g.g.d. Flora, by Wellington, 183.

g.g.g.d. Victoria, by Agricola, *alias* Sir Walter, (1614).

g.g.g.g.d. Beauty, by Snowball, (2647).

g.g.g.g.g.d. by Lawnsleeves, (365).

g.g.g.g.g.g.d. by Mr. Mason's Charles, (127).

CLIPPER MOWING AND REAPING MACHINE.

Nova Scotia being a great Hay country, we have frequent enquiries respecting Mowing Machines, and therefore reprint the following description of the Clipper Mowing and Reaping Machines of Messrs. R. H. Allen & Co. of New York, from a circular just received from the-e manufacturers:—

This machine was introduced by us into this market in 1863. Although it at once took the first place among this class of machines, it has since been modified from year to year, as each successive season's experience in the field showed any point susceptible of improvement, and it now ranks among harvesting machines as our modern light steel tools, plows, etc., do in comparison with the old-fashioned and heavy implements of the past generation.

To avoid bulk and secure durability, iron has been substituted for wood; to avoid weight and secure strength, wrought and malleable iron have been largely substituted for cast iron, and steel for wrought iron; and to secure simplicity, the pieces or parts, of the machine have been reduced to about one-half the number generally used, without sacrificing either its utility, convenience or durability. The machine is, in fact, so simple and with so few parts, that but twenty-seven bolts, and these of only two sizes, are required to put it together.

The parts of all machines of the same size are interchangeable; this is a feature peculiar to the Clipper Machine.

The frame is entirely of iron, and so made by a combination of parts, that if either is injured, only that part need be replaced. The material of which it is made renders it indestructible, except by ill usage, while it cannot be warped or injured in any way by exposure to the weather, as is the case with wood frame machines.

The drive-wheels have ten wrought-iron spokes, each bracing the two adjoining ones, instead of six of cast iron, which is the number generally used. The rim is thus supported at ten different points, and the wheels are lighter, and at the same time much stronger, than the ordinary cast iron wheels. Though they are independent of each other, each will drive. Both are in gear while advancing, and out of gear while backing. The inside wheel runs in the track of the shoe and does not press down the cut grass.

The fast running gearing and shafts are entirely cased, thus excluding dust, dirt, and the grass, and preventing any injury to the clothes or person of the driver; and as the journal-boxes are formed within this casing and sleeve, the shafts and gearing can not be thrown out of line by the warping or twisting of the frame. The crank-wheel is also entirely protected from dirt and the grass by a hinged fender.

The casing, together with the perfection of the gearing, and the mechanical arrangement of the several parts, renders this machine almost noiseless in its operation.

The whiffle trees are underneath the pole and attached to the front bar by a short draught-rod. The draught is thus applied as low and as near the finger-bar as possible, so that when it meets an obstruction, the strain is not transmitted through the machine, but is taken off very near the point at which it was received. When the draught is by the pole, and the machine strikes an obstruction, the strain is transmitted through its whole framework, and, not infrequently, the shafts and gear are thrown out of line, causing the machine to run hard and stiff without any apparent reason. The draught being applied to the front end of the machine below the pole, the tendency is to lift the shoe and make it pass lightly over the ground. The power required to draw the machine is thus considerably lessened, as the weight, which otherwise would rest on the shoe, is transferred to the wheels. A small wheel, fastened either directly to the shoe or at the front end of the frame, is often resorted to to accomplish this object, but by adding weight it increases the evil which the diminished friction from the use of the wheel was intended to prevent, and necessitates lifting the inside shoe when turning corners. The method of drawing from the front end of the frame below the pole gives a true centre draught, thus avoiding all weight on the horses necks and side draught. In the Clipper the bar is drawn instead of being pushed, as is done in other machines, cutting in front, when drawn by the pole. This secures uniform and very light draught.

By means of a lever convenient to the right hand of the driver, the points of the guards and knives can instantly be raised or lowered while the machine is in motion, thus varying the angle of cut and adapting it to lodged grass or rough boggy ground. This may be regarded, in connection with our self-adjusting knife-head,

as one of the most important and distinctive features of the machine.

The finger-bar is made of cast steel, with the front edge rolled or turned up, thus greatly strengthening it and answering the purpose of a cross-bar in front of the knife-bar.

The guards are of forged cast steel, with tempered cutting faces and points, and of such shape that they will not clog. Although light, they are so strong that they can hardly be broken, even by the roughest usage.

The rolled bar and steel guards of the Clipper are as much in advance of the usual style of flat bar and malleable guards, and the latter are in advance of the old wood bars and cast iron guards.

The shifting-lever is convenient to the left foot of the driver, with which he can instantly throw the machine either in or out of gear, without using his hands.

The lifting-lever is convenient to the driver's right hand. The machine being so nearly balanced, he can easily raise the outer end of the bar two feet, and the inner end eight inches from the ground. The bar can be readily folded without the necessity of the driver leaving his seat.

In its general appearance, the absence of the heavy, cumbersome, wooden frame, the fine and well-adjusted proportions and tasteful design of the machine, make the Clipper Mower one of the most attractive of all the implements used on a farm; while from its costly material and workmanship, it is cheaper at its price than any other in market, and can be sold at the list price only because we use the most expensive and elaborate machinery expressly built for its manufacture.

The Clipper is built of four sizes, as follows:—

No.	Length of Cut.	Diameter of Wheel.	Power.	Weight.	Price.
1,	3½ feet,	30 inches,	1 horse,	480 lbs.	$110
2,	4 "	30 "	2 horses, (light)	510 "	120
3,	4½ "	32 "	2 "	620 "	130
4,	4½ "	36 "	2 "	680 "	140
4,	5 "	36 "	2 "	690 "	145

Nos. 4 and 5 can be readily fitted for Reaping machines, and, when so fitted, weigh nine hundred and fifty pounds.

The One Horse Mower, is as light for one horse as the Two-Horse machine is for two horses. It will cut from three quarters of an acre to an acre of grass an hour, and is, in fact, the only practical one-horse machine in market.

The Clipper Machines are warranted to be well built; of good material; to be strong and durable; of light draft, and easily managed; and to do their work equal to the best that can be done with a Mowing Machine, or a Hand Scythe.

If any part proves defective, on account of imperfect material or workmanship, it will be made good FREE OF COST to the purchaser.

R. H. ALLEN & Co.,
189 *and* 191 *Water Street, New York.*

Communications.

LIME.

The use of lime is justly esteemed as one of the best means we possess for improving certain kinds of soils. On many soils the addition of lime is followed by increased fertility, and in numerous cases the improvement effected in this manner is so striking that we cannot wonder at liming being at present ranked amongst the standard operations of agriculture.

Lime is required for the growth of all cultivated plants, and consequently is an indispensable constituent of all cultivated soils. Lime is invariably present in soils that admit of cultivation, but the quantity of lime naturally contained in them is often too small for the vigorous growth of certain crops; the addition of lime to these soils must obviously increase the fertility. On soils of this kind the most striking effects of lime are displayed, especially when a soil contains in abundance, all the materials required for the growth of plants, with the exception of lime. The addition of lime in these cases is all that is required to transform a comparative barren to a fruitful soil. To a less extent the use of lime on ordinary soils is generally attended with good results,—it not only acts as a direct manure by increasing the supply of a material necessary for the growth of all plants, but it supplies us with one of the best means of altering the condition of substances already present in the soil, either by destroying or modifying substances that are objectionable and noxious, or by the conversion of indifferent bodies into useful fertilizing materials.

Lime, like all alkaline or caustic substances, possesses the property of rotting and destroying organic matter of every sort—hence, on its addition to soils it quickly diminishes the quantity of insoluble vegetable remains. A soil whose fertility is impaired by an excessive quantity of vegetable matter, as a peaty or boggy soil, is relieved of this encumbrance by a copious dose of lime. It is a well known fact that vegetable remains, under peculiar circumstances, refuse to decay, and accumulate to an injurious extent,—this is often found in undrained or imperfectly drained land; to remove this, lime is generally employed, which, by acting upon the insoluble matter hastens its decay and tends to "sweeten" the land. Lime thus converts a noxious ingredient into a source of fertility. When soils are infested with insects a dose of lime is the least troublesome and most effective remedy. When applied in large quantities to clay lands it opens and loosens the dense masses of clay and imparts a certain amount of porosity and mellowness, and by so doing opens the way to further improvement, by exposing a larger extent of suface to the action of the atmosphere. Whenever practicable it is advisable to apply lime in the state of hydrate, or as slaked lime. In using, the lime is generally brought to the field in a caustic or hot state, and put up in small heaps loosely covered with earth. In the course of two or three weeks the lime is completely slaked and falls to powder, which can be easily spread over the land. The quantity of lime applied to the land will of course vary with the purpose it is intended to serve; if employed to remove the excess of organic matter a copious dose will be necessary, but where it is required to act as a dried manure a much smaller quantity will suffice. Difference of opinion exists amongst practical men as to the best system of liming the land. While some recommend a large dose at long intervals, others think it better to use a smaller quantity more frequently. From my own experience I would recommend the latter as the best system for obtaining the fullest effect of the lime—as it is well known that everything applied to the land exhibits a tendency to sink into the ground and bury itself beyond the reach of the plant.

In using lime as a manure it must not be supposed that other manures can be dispensed with. Lime is a special manure, and performs in the soil an office of its own sufficiently important to entitle it to a high place amongst manures, at the same time it ought not to be used in the place of farm-yard manure. It is true that the addition of lime on certain soils is all that is necessary to insure abundant crops; and from this fact we might naturally infer that lime is a substitute for other manures, but such is not the case. Lime by its stimulating effect upon the soil, will for a time replace manure, by exciting the soil; but this is effected at the expense of the soil—"it is drawing upon its capital," and must sooner or later feel the effects of this undue exhaustion. Lime ought never to be employed at the same time as other manures; it is advisable to put off the application of other manures as long as possible to land that has been recently limed. This is necessary in the case of manures that contain combinations of ammonia, as lime liberates ammonia with the greatest ease from all its combinations, hence the loss of considerable fertilizing material. Four to five bushels of lime per acre is sufficient where the land contains much organic matter previously,—on stiff clay soils two to three hundred bushels may be applied. Refuse lime from gas works mixed with ten times its bulk of earth, and laid together twelve months, becomes "gypsum," or much of that nature, and makes an excellent top-dressing for grass lands.

Yours respectfully,

ALFRED SAUNDERS,
Seedsman, 168 *Argyle Street.*

THE CROPS AT WEYMOUTH.

The crops in this section of the country are very good with the exception of potatoes. The tops were very promising until taken by the blight, which has come on much earlier than usual, consequently the yield is light; and if the rot should take them, of which there are some cases already, the crop will be a failure.

The fruit crop, though not very promising, was much better than last year, until the recent gale, which destroyed a large quantity.

Wm. H. S. Dahlgren.

Reports of Agri. Societies.

BARRINGTON AGRICULTURAL SOCIETY.

The annual meeting of this Society was held on the third of December, in accordance with the requirements of the Agricultural Act. The directors presented a report of their proceedings and the financial state of the Society for the past year, as follows:—

The directors of the Barrington Agricultural Society beg to report that in conformity with suggestions made at the last annual meeting, a quantity of various kinds of seeds for sowing, and a number of root-grafted apple and plum trees were obtained early last spring and distributed among the members; some improved farming tools were purchased and sold in the Society at cost.

Considerable difficulty was experienced in getting a bull. The directors were unable to get a pure bred Ayrshire, and finally decided to purchase one highly recommended, and stated to be three-fourths Alderney; so far he has given good satisfaction.

It was not considered advisable to make any purchase of stock at the late sale in Halifax, owing to the expense of getting them here and of keeping during the winter. The Cotswold sheep purchased by the Society last year have not proved so vigorous and productive of wool as was expected; but it is believed they are an improvement on the old native stock.

The Harrison potatoes generally yielded favorable returns, in some cases a bushel and a half from eleven potatoes. The rot, however, proved destructive in many instances, and it is feared they are no more exempt from this malady than the kinds in general use among us. It would be advisable for members to give them a fair trial another year, as their productiveness recommends them.

The directors are pleased to witness the interest evinced in horticulture, and can report favourably of the products of many gardens within the sphere of their observation. They also see in the many apple, pear and plum trees, that have been set out during the past season, the prospect of extensive orchards, and a great improvement in the pomology of the place. Even grape vines have been grown with success.

There are at present sixty members, and it is believed all have reaped decided benefit by their connection with the Society. Receipts and expenditures for the past year:

Cash on hand last year	$84.21
Provincial Grant	120.00
Subscriptions of members	60.00
Sale of Hoes	24.20
	$288.41

120 Apple trees	$33 60
60 Plum trees	30 00
Freight	3.30
Seeds from Halifax	21.75
Hoes and Seeds from Boston	36.82½
One Alderney Bull	30.00
Expenses to June 1, 1868	27.00
Agricultural papers	2.62½
Incidental expenses	4.24
Secretary's service	4.00
Cash to balance	95.07
	$288.41

The above report having been adopted, the following persons were chosen officers for the ensuing year, viz.:—*Pres.*, A. C. A. Doane; *Vice Pres.*, O. W. Homer; *Sec'y*, R. H. Crowell; *Treas.*, Francis Homer; *Directors*, Philip Crowell, Alexander Watson, Josiah Coffin, Samuel Westwood and Israel L. Crowell.

On motion, the directors were requested to purchase for use of the members early in the spring, seed wheat and other grasses, garden seeds, fruit trees, implements, and an Ayrshire bull,—during the summer a number of Cotswold or Leicester ewes and a ram. It was also suggested that awards be offered to members for the largest crop of potatoes, turnips, oats, barley, wheat, Indian corn, peas, beans, &c., for the largest number of grafted apple and plum trees; also the best essay on the most suitable method of agriculture for this section of the country.

R. H. Crowell, *Sec'y.*

BRIDGEWATER AGRICULTURAL SOCIETY.

Report of the Officers and Directors of the Bridgewater Agricultural Society to annual meeting of said Society, Dec. 3rd, 1867.

At the last annual meeting of the Society, December 8, 1866, it was resolved that an exhibition of stock, farm, garden, and orchard produce, should be held in Bridgewater, during the then ensuing autumn. The following persons were appointed a committee to prepare for and manage the exhibition, viz., the Officers of the Society, with power to add to their number. Of said committee, Mr. Thos. T. Keefler was appointed chairman.

The next meeting of the Society was held on June 7, 1867, when it was, on motion, resolved, that the Exhibition be postponed until the Autumn of 1868, and be held shortly before the Provincial Exhibition at Halifax.

The Secretary read a letter from George Lawson, Esq., Secretary of the Provincial Board of Agriculture, asking for the assistance of this Society in aid of the funds for the Provincial Exhibition. Whereupon it was resolved that the sum of twenty dollars be retained for that purpose out of the Society's Grant for 1868; and that this Society would give additional assistance, if in their power, and stimulate the people to prepare articles for competition.

We beg to recommend that earnest efforts be used to secure a creditable district Exhibition in the coming autumn, and trust that it may lead to a satisfactory representation of the productions of the County at Halifax, shortly afterwards.

We are glad to be able to report an improvement in young stock, resulting from the purchase of the bull mentioned in the last annual report It has been deemed advisable to sell the animal, and in the following spring to purchase two bulls, one for each side of the river.

We annex hereto a statement of receipts and expenditures during the past year:—

Balance from last year	$4.90
Provincial Grant	73.00
Received from A. Cook on account of bull	7.00
Forty subscribers at $1 each	40.00
	$124.90

Paid J. Durland for room	$0.50
Postage, &c	0.40
Joshua Cook on account of bull	16.35
Simeon Hebb, do	11.00
Emmanuel Hebb, do., for wintering	28.00
	56.25
	$68.65

Abraham Hebb, *Pres.*
M. B. Desbrisay, *Sec'y.*

N. E. MARGAREE AGRICULTURAL SOCIETY.

The Officers and Directors beg leave to submit their report as follows:—During the year just past we have to state that not so much improvement has been accomplished in the way of agriculture as might be desired. The Society find much difficulty in increasing the number of subscribers, which makes it a matter of regret. Even many of such subscribers as are procured give trouble in coming forward to support the Society, until the time has nearly expired for preparing the annual certificate to the honourable Board to entitle the Society to the bounty.

The funds in hand are not available without the bounty to support the cattle. The property is the Durham bull, Lot No. 2, from Canada, purchased at the Richmond sale in November, 1866; also a Cotswold ram, and two Leicester rams, all of the pure breed, and purchased at

Richmond. The prices paid for this stock, with the expenses incurred in their transmission from Halifax to Margaree, have exhausted all our available funds for the cost of keep, payable in money; particularly the necessary attention paid to the bull, who has become a valuable animal notwithstanding that he is "White." Many demur at his huge dimensions, and that he is too heavy for our common breed of cows. The rams are equally in good keeping, and scattered in the charge of careful persons for the winter.

The crops during the past year were as follows,—Hay, a good crop, above the ordinary average. Oats, an average crop Barley, a full average crop. Wheat, a good crop in most localities, but sparingly sowed. Potatoes, an ordinary crop; farmers are improving in the cultivation of this root crop. Beets, Carrots and Mangold Wurtzel are not raised to any extent by our farmers, except in small patches in gardens. Turnips—farmers improving in raising this crop.

The following are the officers for the ensuing year,—*Pres.*, Thomas Ethridge; *Vice Pres.*, John Burton; *Sec'y*, John Munro; *Treas.*, Joseph A. Ingraham; *Committee*, David Ross, Mark Crowdis, Moses Murphy, John McLeod, Mark Ingraham.

THOMAS ETHRIDGE, *Pres.*
JOHN MUNRO, *Sec'y.*

ST. ANN'S AGRICULTURAL SOCIETY.

The annual meeting of the St. Ann's Agricultural Society was held, in terms of the Act, on the 3rd Dec. The officers elect are as follows,—*Pres.*, Luther McLeod; *Vice Pres.*, Kenneth Buchanan; *Treas. and Sec'y*, John Morrison; *Directors*, Duncan Morrison, Roderick McLeod, Norman McLeod, D. Macaskill, Hector Carmichael.

Abstract state of receipts and disbursements up to December, 1867:

1866.	Cr.	
Dec. 4	To balance due to date	$161.25
	" Provincial Grant for 1866	59.00
	" Proceeds of Forks sold by Sec'y.	33.18
	" Do. Hay seed do.	7.00
	" Do. Clover seed do.	6.60
	" Subscriptions for 1867-8	40.00
		$306.95

	Dr.	
By Hay seed		$9.07
" Clover seed		9.75
" Manure and Hay Forks		46 50
" Freights and Trackage		2.00
" Paid Secretary		10.00
		77 32
Balance to date		$229.63

Respecting the crops, the result is now so generally known that it is scarcely necessary to make any remarks. On upland the hay crop was very indifferent, but on lowlands and intervales it was a good average. The grain crops through the most of Cape Breton, with the exception of wheat, failed to a certain extent. The few patches of wheat put down proved tolerably well. The potato crop also has not been so productive as it had been for the last three years; but although visited by the blight very early in the season, still held out against the rot pretty well. Hay and all the grain crops were harvested in an excellent condition.

LUTHER MCLEOD, *Pres.*
JOHN MORRISON, *Sec'y.*

NORTH SHORE ST. ANN'S AGRICULTURAL SOCIETY.

My absence from home during the last month prevented me from replying to yours before now. I informed you before that we purchased 14 ram lambs from a gentleman in Cornwallis for the use of our Society, which was all our funds then would admit of; and the fine lambs, which were the result of that purchase, show a decided improvement in shape, size and wool. At our last annual meeting it was decided to appropriate the funds on hand to the purchase of Leicester and Cotswolds next May, when I shall be able to transmit to the Board a statement of such. I do not approve of allowing ram lambs to accompany the ewes, as I have observed that they do not thrive so well as they would do by keeping them separate until they are eighteen months old.

I procured a small quantity of Chinese oats for one of our members; I forgot to inquire what the returns were. This man never sows any oats without first soaking them in strong brine for twenty-four hours, and then drying them by mixing with slacked lime, which process saves them from smut and imparts a rich taste to the meal, which I have not observed any where else in this County.

Hay fell far short of last year's crop. Oats suffered much from rust, which rendered the quantity less and the quality inferior. Barley suffered likewise from the same cause in a proportionate degree. Potatoes yielded a fair return in some localities, while the yield in other districts was only double the quantity planted. No root crops are raised within the limits of our district to any extent; where as by a judicious rotation, such could be turned to advantage here. One small field of wheat was all I noticed last season on our shore, but the results I have not yet ascertained. At an annual meeting the former office-bearers were re-appointed without any opposition.

ANGUS MCKAY.

CHESTER AGRICULTURAL SOC'Y.

At the annual meeting of the Chester Agricultural Society, the following officers were chosen for the current year:—*Pres.*, Edward Heckman; *Vice Pres.*, Robert Smith; *Sec'y.*, H. B. Mitchell; *Treas.*, David Whitford; *Directors*, John Webber, William Duncan, Thomas Whitford, Stephen Corkum.

As the law requires the Secretary to forward a copy of the report of the officers, the names of the paid up members, &c., I subjoin the following information:

At the annual meeting it was agreed that the threshing machine, owned by the Society, be sold at auction on the third Saturday of February, 1867. The sum of $6 was voted as an annual payment to the Secretary. Fifty young apple trees were ordered from Mr. Harris' Nursery, through his agent, Mr. Mason. It was voted to subscribe for the *Journal of Agriculture*, *Canada Farmer* and *American Agriculturist* for the year 1867; and that such papers be kept on file by the Secretary in lots at each meeting.

The receipts and expenditure of the Society during the year, were as follows:

1866.	Cr.	
By Cash in hand		$121.44
52 members at $1 each		52 00
Oats and grass seeds sold		33.31½
2 young Berkshire pigs sold		3 60
3 " Suffolk "		5.30
Service of bull outside the Society		10.50
Provincial Grant		56.00
		$282.15½

1866.	Dr.	
Jan.	To 2 Cotswold rams	$30 00
	2 Berkshire pigs	10.00
	Expenses of procuring the above.	9.00
	3 Suffolk pigs with expenses	12.00
Feb.	100 printed notices of meetings	2.00
	Postages of Secretary for 1865	0.50
	1 Alderney bull, and expenses	44.00
May.	Oats and grass seed, and freight	42 35
	1 bushel Riga flax seed	6.00
	Coach freight on do.	0.75
Dec.	R. Smith, Esq, bal. on bull bought of him in 1856	5.00
	R. Smith, Esq., keep of present bull 46 weeks	46.00
	54 premiums awarded at exhibition	47.25
		$254 85
	Cash on hand	27.30½
		$282.15½

Last March an Alderney bull was bought in Windsor, at a cost of $44 to the Society, which is still kept in the service of the Society; and it is thought that the stock raised from him will prove beneficial to our breed of cattle, especially with regard to the dairy,—the Alderney being considered about the most valuable breed for milking qualities on soils like ours. It remains with the members to-day to decide whether said bull shall be disposed of, or still kept for the use of the Society.

The two Cotswold rams, purchased last January, were of course too late for use at that time, and being the two last remaining on hand, were evidently the culls of the flock; yet we hope that the effects of the cross upon our native breeds will tend to the increase of weight both of the fleece and carcase.

The Berkshire hogs introduced were beautiful specimens of their breed, and showed clearly their vast superiority over

the shark-nosed, long-legged varieties too common with us, both in quality and quantity of meat, and in economical feeding. It is to be regretted that on account of the sow proving barren, she was slaughtered in the autumn, producing some 380 lbs. of pork, at an age of but 10 months. Several litters from crosses of the boar have been had, but we trust another sow will be procured, so as to preserve and increase the breed in its purity, which we feel confident will prove very valuable. The Suffolk pigs have done well, and we would recommend them as a valuable breed to raise to slaughter at an early age; the excellent quality of the meat, and extreme smallness of bone, being profitable qualities.

Seed oats and grass seeds, to the value of $41.80 (including expenses) were purchased by the Society last spring, and sold at auction among the members, realizing $33.31½; and a bushel of Riga flax seed was also purchased, but it not reaching us in the sowing season, the greater part of it remains on hand for another year. One sample of it was sown with flattering results, its growth far exceeding the article grown here hitherto.

At our agricultural show, held in October, the display of cattle was highly creditable, many of the animals exhibited being a credit to their owners, and such as would not have disgraced shows of greater pretensions. The samples of grain, roots, &c., were comparatively few, and not very choice, the general remark being, "had I known this, I could have brought much better from home." But a good feeling was induced, and a spirit of emulation and improvement fostered which will be manifested in the much better samples and more numerous parcels of seeds, &c., shewn at our next exhibition, though we fear our funds will scarcely allow of another being held during the ensuing season.

Owing to the number of Societies in the County having increased, our allotment of the Provincial Grant has only been about one-half the amount obtained the year previous, nor is it likely to again increase.

The past season has not been a very profitable one for our farmers, the hay and grain crops both proving light, and potatoes rotted badly. Fruit, however, was good, and the prices of the produce of the dairy and fowl-yard very remunerative.

Our Society now numbers 52 members, and this number could be easily increased to 100, were each one of our present members to exert a little for this purpose, and ask his neighbour also to become a member. Let us all arouse ourselves and endeavour to stir up our friends, and especially the farmers, and have them flock in and swell the list of members; which will not only add to the funds of the Society, and increase the amount drawn from the Province, but also awaken a spirit of enquiry and a desire for progression, which must eventuate for good.

H. B. Mitchell, *Sec'y.*

BRIDGETOWN AGRICULTURAL SOCIETY.

The Bridgetown Agricultural Society report their proceedings for the past year as follows:—

The chief matter which has occupied the attention of the Society during the past year was the maturing of the necessary arrangements for the successful carraying out of a public exhibition of fruit, vegetables, dairy produce and grain.

The exhibition was held at Bent's building, Bellisle, on the 19th October last, and was, on the whole, of a very satisfactory character. The members competed for the prizes offered with considerable zeal; and the weather being fine, a goodly number of visitors were attracted to the scene.

The samples of apples brought forward were considered, as to variety, size, and quality, superior to those produced at any previous exhibition. The vegetable department was also very fine, as also the dairy produce, and we think quite equal to anything of the kind previously witnessed in the county.

The proceedings of the day were closed by a public dinner, attended by a considerable number of the members and a few other gentlemen; and all separated with a right good will toward each other, and expressing high opinions of the dignity and manly independence which attach to the agricultural profession.

The past season was one of general productiveness; all the crops cultivated in the county produced a good average yield, except the potato crop, which was materially injured by the blight.

We are glad to report the continued efficient operations of our Society, and only require an increased membership to add materially to our success in the general improvement within the sphere of our operations.

The following are the officers for the ensuing year:—*Pres.*, George T. Bingay; *V. Pres.*, Oliver Foster; *Treas.*, W. Y. Foster; *Sec'y*, Eugene P. Troop; *Asst. Sec'y*, Chas. Whitman; *Directors*, Dr. L. Harris, Abner T. Bath, Chas. Whitman, Bernard Calneck, Dimock Whitman.

Expenditure for year 1867	$63.67½
Cash in hand, Dec. 3rd	59.57½
	$123.25
Cash received by Treas. to date	$123.25

Eugene P. Troop, *Sec'y.*

The committee beg leave to report that the exhibition of 1867 was one of the most successful the Society has known. The low state of the funds obliged us to restrict the exhibition to shows of fruit, roots, dairy produce, and textile fabrics. Our county has no reason to be ashamed of the articles offered for competition, more particularly when it is remembered that they were drawn from a very limited portion of Granville and Annapolis townships only.

The number of members this year is 48, the number of entries upwards of 400, showing an average of nearly ten entries to each member.

The committee have experienced some practical difficulties in conducting this and former exhibitions, and suggest that in order that they may, in some degree at least, be avoided in future, the following or some other such alterations and additions be made to our general rules:

First, That as many of the articles for exhibition as possible, be brought and placed ready for view by the judges, the day before the one fixed upon for the exhibition.

Secondly, That a small entrance fee be charged.

Thirdly, That the members who accept office as Committee men should, at the time of their appointment, either at once refuse to act, that others may be put in their place, or else be more active in performing their duties, and not leave to the President and Secretary the whole burden and heat of the day.

The efforts of the Society to increase the growth and manufacture of flax were well responded to—the entries of linen goods being large and the quality of the articles very good. Indeed the ladies were second only to nature herself in the successful endeavour to make the show attractive.—[A gallant compliment, Ed.]

Mr. Eugene and C. Troop have imported a very fine Leicester ram, and have received the grant of ten dollars set aside by the Society for that purpose.

One very pleasant incident of the exhibition was the presence of a deputation from the Weymouth Agricultural Society, who kindly consented to act in concert with the Society's judges and join us at dinner.

George T. Bingay, *Pres.*
Eugene P. Troop, *Sec'y.*

A correspondent of the *New England Homestead*, says vermin may be driven from hen houses by the following plan: 1st, give the hen-house a thorough white washing, nests, boxes, roots, and everything about the premises. 2nd, sprinkle sulphur in the nest boxes three or four times during the year. 3rd, keep the floor constantly covered with sand or gravel, and clean out at least once a month. 4th, rub lard under the wings of the hens.

GREAT

Provincial Agricultural & Industrial EXHIBITION OF 1868.

LIST OF SUBSCRIPTIONS

By County & District Agricultural Societies, towards the Provincial Exhibition of 1868

Western Halifax Agricultural Soc'y, half of grants for two years	$100 00
Antigonish Agricultural Society	100 00
Windsor Agricultural Society	100 00
Yarmouth County Agri. Society	100 00
Egerton Agricultural Soc'y, E. R., Pictou, the Society's annual grant for '68, about	60 00
Dartmouth Agricultural Society	50 00
North Sydney Agricultural Society	40 00
Pictou Agricultural Society	40 00
Parrsborough Agricultural Society	40 00
Union Society of East Cornwallis	40 00
Sydney Agricultural Society	40 00
Newport Agricultural Society	40 00
Lower Musquodoboit Agricultural Society	30 00
Upper Musquodoboit Agricultural Society	30 00
Baddeck Agricultural Society	30 00
Middle River of Victoria Agri. Society	30 00
Boularderie Agricultural Society	30 00
Mabou and Port Hood Agri. Society	30 00
Shubenacadie Agricultural Society	30 00
West Cornwallis Agricultural Society	24 00
St. Ann's Agricultural Society, South Gut	20 00
Minudie Agricultural Society	20 00
Broad Cove Agricultural Society	20 00
Fenwick Agricultural Society of Noel and Maitland	20 00
Bridgewater Agricultural Society	20 00
Bridgetown Agricultural Society	20 00
Mahone Bay Agricultural Society	20 00
Weymouth Agricultural Society	20 00
Paradise Agricultural Society	20 00
Upper Stewiacke Agricultural Society	20 00
Merigomish Agricultural Society	20 00
Hardwoodland Agricultural Society, Nine Mile River	20 00
Chester Agricultural Society	20 00
Maxwelton Agri. Soc'y, Co. of Pictou	20 00
Onslow Agricultural Society	20 00
King's County Agricultural Soc'y, Horton	16 00
Digby Agricultural Society	15 00
Red Islands Agricultural Society	12 00
North East Margaree Agricultural Society	8 00
North Shore St Ann's Agricultural Soc'y	6 00
South West Margaree Agricultural Soc'y	4 00
Stirling Agricultural Society	
Upper Londonderry Agricultural Society	
Amherst Agricultural Society	
Wallace Agricultural Society	
Clare Agricultural Society	
Eastern Annapolis Agricultural Society	
Lower Stewiacke Agricultural Society	
River Philip Agricultural Society	
Glenelg Agricultural Society, Guysboro'	
Milford Haven Agricultural Society, Co. Guysborough	
Aylesford Agricultural Society	
Lunenburg Agricultural Society	
River John Agricultural Society	
Caledonia and Kempt Agricultural Soc'y, Co. Queens	
Barrington Agri. Society, Co. Shelburne	
Yarmouth Township Agri. Society	
Pubnico Agri. Society, Co. Yarmouth	
	$1345.00

Intimations of additional Subscriptions by Societies should be sent to PROF. LAWSON, the Secretary, without delay.

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