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NOVA

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HALIFAX, 1ST MAY, 1875.

In compliance with the request of a Correspondent, whose communication was published in the April number, we shall now give a brief explanation of the nature and mode of the action of Gypsum or Plaster, so far as these are known.

It is necessary to premise that Manures act beneficially in various ways, according to their chemical and physical characters. (1) some directly supply food to the plant, (2) some act upon the soil so as to render available the plant food which already exists in an insoluble and unavailable form; (3) some act in exactly the opposite way, by fixing and preventing the waste of volatile or soluble matter that would, in their absence, evaporate into the air and be washed away in drainage; (4) some have the capacity of absorbing moisture from the air, and thus aid the plant by supplying water in periods of drought. Now, if the reader will turn up any Treatise on Agricultural Chemistry that may be within his reach, he will probably find that the beneficial effects of

Gypsum are attributed to one or two or all three of the first three modes of action, and, if the Treatise happens to be an American one, the fourth will possibly be referred to as the proper explanation. The fact is that Gypsum will act beneficially on crops in different ways under different circumstances, and what we wish to explain here is its probable action on the fields of Nova Scotia farms. Let us do so, for convenience, under the heads enumerated:—

1. Can this substance act beneficially by supplying food directly to the plant? Yes, under certain circumstances, which are these:—In soils from which sulphur compounds are absent, it will supply sulphur, but, as a rule, we have more sulphur compounds already in our soils than can possibly be beneficial to the crops grown. In soils that are deficient in lime, it will also supply that ingredient, so necessary for potatoes and other green crops, beans, &c. It may be stated, as a rule, that in all districts in Nova Scotia where limestone rock does not crop out, the surface soil is deficient in lime, and that even soils overlying limestone are liable to be deficient in it, (the explanation need not be entered upon here). Gypsum may therefore be expected to act beneficially on potatoes, &c., by yielding lime to their tissues. Where plaster is used, lime itself is unnecessary.

2. It is believed by some chemists that although the action may be slow, yet the lime and sulphuric acid of which the gypsum consists may act effectively in decomposing the silicates, of which clay and loamy soils largely consist, and thus set free silica, potash, alumina, &c., in forms available for absorption by the plant. In this way, then, plaster may

act upon loamy and clayey soils, and increase their fertility.

3. It is known that gypsum, by virtue of the sulphuric acid which it contains, has the power of fixing ammonia, one of the most valuable of fertilizers; it probably acts in the same way upon urea and similar organic compounds known or presumed to be sources of nitrogen to plants: hence the use of gypsum on stable floors and as an ingredient in compost heaps. It prevents volatilization; if the mode of its action is still matter of doubt with some, the fact is none the less certain on that account.

4. Gypsum, in the state of "soft plaster" and unburnt or unboiled, is sparingly soluble in water, and absorbs moisture from the air even in the driest weather. For this reason, if not for others, it is extensively used in the Southern and Western States, Ontario, and other countries having hot, arid, intra-continental climates. It is applied to the surface of the soil, thinly scattered over the field during the growing season, when excessive heat and drought are coming on, and the effects are generally observed by farmers as very marked. As the gypsum is on the surface, and the effects are noticed without any rains to wash it down to the roots, the only explanation that appears reasonable is that it prevents evaporation, absorbs moisture from the air, and thus supplies the crop with water at a time when the excessive heat causes it to grow with great rapidity.

We have now furnished our Correspondent, and other readers, with materials from which a judgment may be formed as to the probably efficacy of gypsum. We should not hesitate to apply it to potatoes particularly, either sprinkling it

over the drills after the first harrowing or hoeing, which is the American method, or dusting it into the drills before covering the seed. We should likewise certainly expect beneficial results from its application to grass lands, say in the month of May, especially if there is much clover, and the season should happen to be a dry one.

There are still a few points that we should perhaps specially notice, although involved in the preceding explanation, as we observe by referring to our Correspondent's communication that his enquiries are particular regarding them:—

1. The Gypsum should be ground mechanically into a fine powder, not burnt nor boiled in any way. Boiled plaster, if scattered on the soil, will harden into lumps on the first shower of rain.

2. The common or "soft" plaster should be used wherever the fertilizer is expected to act in absorbing moisture.

3. Gypsum is almost always scattered on the surface, in countries where its use is best known.

4. The quantity per acre will depend upon the capacity of the workman. Cover as large a surface as you can with the smallest amount of plaster, leaving enough to be seen as a sprinkling all over the field; not less than a barrel per acre.

5. To loamy and clayey soils it is beneficial in slowly increasing their fertility. To dry, hot, sandy soils it is beneficial immediately in keeping them moist; in the latter case it must be kept on the surface, and applied on approach of the hot season.

6. It is not usual to mix plaster on a farm. The manure merchants mix it with superphosphates, and, being a cheap material, it is profitable to them; to the farmer it is useful in compost heaps.

7. One difficulty is, where is it to be got? We have been told that there is a plaster mill somewhere about Windsor, but we could never find its exact position or owner's name. If he will send his card, with price per barrel, we shall be glad to give a free insertion in our advertising columns.

8. What is the best way of distributing plaster? When a small area is to be plastered, it may be done by hand, like seed-sowing. It is a dirty job, and requires a suit of old clothes. When the area is large, the old method may be adopted of taking the plaster in a cart, the distributor standing with his back to the horse, and to the wind, scattering it by hand over the tail-board. Should the field be uneven, persons passing along will look round to see how often the plasterer scatters himself over the tail-board, or suddenly sits down in the plaster, and rises up again like a miller. The proper method is to use a Plaster Machine, which is a simple modification

of the Horse Seed Sower; this scatters the plaster very evenly, taking a breadth of some ten feet, and moves over the ground as fast as the horse can walk, the man having nothing to do but guide the horse from his sulky seat. In this way there is no spoiling of clothing or annoyance of any kind. As a farmer does not want to use a plaster machine more than one or two or three days in the year, it would be a good arrangement for an Agricultural Society to get a machine that would serve all its members.

As some of the statements we have made are at variance with what has been published by others, we may mention that the account of Plaster in Professor Johnston's great and valuable work on Agricultural Chemistry, is, with some exceptions, a tissue of mistakes.

THE "Saffron Walden" of Halifax, will be found on the sunny side of South Street, where there is now in full bloom, during sunshine, the finest display of brilliant blue and white and golden crocuses that has ever been seen in this city.

Messrs. CHASE, of Church Street, Cornwallis, have furnished the following particulars:—Noticing the weights of some cattle in the April *Journal*, we send you the weight of one Ox, calved in Spring of 1870. He weighed on 1st July 1874, 1980 lbs.; January 12, 1875, he weighed 2360 lbs.; March 17, 2510 lbs.; thus gaining 530 lbs. in 8½ months. Also, a pair of Steers, one year old, that weighed, January 12, 1875, one of them 810 lbs., the other 730 lbs. These cattle are Short Horn Durham Stock.

MR. B. W. KILLAM, of Berwick, informs us that the Short Horn Bull advertised by him last month has been purchased by the Mahone Bay Agricultural Society, County of Lunenburg.

THE thirty-first annual competition of the Scottish Pansy Society will take place in the Music Hall, Edinburgh, on 18th June.—A Potato Exhibition is to be held in London in the autumn. The single prizes vary in amount from eight pounds sterling, \$40, to ten shillings, \$2.50.—Mr. Hind, an English florist at Naples, has been murdered; by order, it is believed, of the Secret Society of Market Gardeners there, because he was so successful a cultivator that he could undersell them.—The hundredth Annual Exhibition of the Royal Flora Society of Brussels is to be an International Exhibition of great magnitude, held from 26th April to 4th May; there is likewise to be a Botanical-Horticultural Congress. This intelligence is received in England, as well as in the Netherland, with "consternation and regret," Amsterdam having

priority from long previous notice.—The London Hyacinth Show was held in the Western Arcade in March, and although the Hyacinths were not so good as usual, the display of palms and foliage plants was very fine; fruit limited to grapes, apples and pears, which last were poor. The only vegetables appear to have been mushrooms and sea-kale.—The Manchester Botanical and Horticultural Society's Show, held in the Town Hall on 16th March, is described as magnificent, the principal features being orchids, hyacinths, and cyclamens. Like the lady in Spenser's *Faery Queen*, these beauties "made a sunshine in the shady place."—The Dundee Horticultural Society's Grand Floral Fête will be held in the High School Grounds, Euclid Crescent, Dundee, on 26th, 27th and 28th August. Prizes to the extent of one thousand pounds, \$5000, will be awarded for Plants and Flowers.—We commend to the notice of our enterprising horticulturists the "stra Plant," *Yucca longifolia*, which is surely worth going to Western Texas for. It is an herb, with long sword like leaves, and grows to the height of twenty or twenty-five feet, crowned with a pale yellow flower of "magnificent richness" and "of the dimensions of a flour barrel." Two Texans, being in London, paid fifty cents each to see a wonderful "Century Plant," and to their disgust found it was merely a miserable dwarf of their native Petra.

WE reprint, from the "International Review," a paper by a German Chemist, under the title "Baron Liebig." It is really a concise and most complete and accurate history of the Use of Chemical Manures. We had intended to publish the whole article this month, but our printer has had to stop, for want of space, at that period in the history when Liebig's theory became enveloped in a cloud of most hopeless gloom. Next month we shall give the remainder,—the silver-lining, the clearing away, the full blaze of sunshine.

WITH respect to the anticipated introduction of the Colorado beetle into England, and the scare now in existence on that account, the *Nova Scotia Journal of Agriculture* thinks that the fears are groundless. Our contemporary speaks positively that it knows of Colorado beetles having gone to England in produce, and yet they have not succeeded in establishing themselves; and in Nova Scotia, a great potato growing country, with facilities for importing the insect in produce as freely as Germany or England, no Colorado beetle has ever been seen. This it ascribes to the coolness of the climate. The warmer and drier parts of Europe may suit the 10-line beetle, but, our contemporary conjectures, England will not.—*Canada Farmer*.

THE disappearance of snow and ice suggests an inspection of gardens, and especially of trees and bushes, with a view to repairing damage done during the winter. A seasonable communication on Pruning will be found in another column, from a correspondent who remarks in a private letter accompanying his communication:—"There appears to be an increasing interest about Fruit Growing in some Counties of the Province, and much valuable information might be sent abroad by means of the *Journal of Agriculture*." We are most anxious to send abroad throughout the whole Province all the valuable information we can, and the communication of E. C. will, we hope, show our young farmers how much more valuable the information is that is furnished by themselves, knowing, as they do, our soils and climate and circumstances, than anything that can possibly be obtained from writers, however learned and experienced they may be, who know only the peculiarities and wants of other countries and other climes. We hope that E. C. will continue his communications, and extend them to other branches of a subject with which he is obviously so familiar, and it is not unreasonable to hope that others will give us the opportunity to present our readers with the results of their observations and experiments.

It is a good sign to see the newspapers of a country devoting some portion of their space to the discussion of agricultural improvements. It shows that there is a demand for agricultural information, and that agriculturists in general are moving in the direction of enquiry. Ten years ago an agricultural article in a Nova Scotian newspaper was a rarity, and the circumstance we thought a remarkable one, especially when we reflected upon the wide-spread interest in agricultural subjects that had been excited at a former time by the classical letters of Agricola, in which the soundest practical wisdom was couched in the most chaste and elegant language. It was possible, indeed, that the hopelessness of successfully imitating Agricola had had some effect in bringing about the subsequent dearth in Agricultural literature. But a change has taken place, and now an agricultural article or communication seems to be quite at home in a newspaper. Within the last few months we have been tempted to quote several such from the *Truro Sun*, the *North Sydney Herald*, and the *Amherst Gazette*, not to speak of the city papers, the energy of which in reporting the Provincial Agricultural Exhibition of 1874 was beyond all praise. We have been led into these remarks by the publication of a letter in the *Christian Messenger*, addressed by "A Friend of the Farmer" to the "Farmers of Nova

Scotia," which we take the liberty to transfer to our columns, believing that its suggestions may be profitable to some of our readers:—

By permission of the Editor of the *Christian Messenger*, who, I have observed, exhibits much zeal in promoting your interests, by publishing weekly a very choice and valuable selection of items gleaned elsewhere, I propose to offer a few suggestions intended to benefit you especially as a class, and indirectly our common country.

In earlier life, I was trained to agricultural pursuits. My father was a farmer, and a good deal more. But he was a farmer, and stood at the head of his profession, for such I treat it, and was looked up to as a skilful practical tiller of the ground by all who knew him. His advice was often sought, and cheerfully given to all who had applied, for his farm and fields were the envy and admiration of all who visited the neighbourhood.

His example and influence, it is not too much to say, changed the face and complexion of a large portion of the country side where he dwelt, and that all within a very few years. Dyke lands, sunken and sour, were drained, ploughed, and cropped, and the finest wheat the climate was ever known to produce, rewarded his labor and skill. From two, to two hundred and fifty bushels of clean yellow wheat, 60 lbs. to the bushel, I have known him reap in a single season.

The wild heather, with its blue blossoms, he plucked up acre after acre, and converted these wild sheepwalks into wealth producing grain fields and meadows. So much for a revered parent, now no more. A successful practical farmer however.

We had no mowing machines, no raking machines, no pitching machines, no thrashing machines, it was all manual labour of the simplest, hardest kind. The scythe, the sickle, the spade, the flail and the plough were our agricultural instruments; and by the sweat of the brow early and late, we toiled, a large family of us, and the earth in return responded bountifully.

Arriving at manhood, I left for other pursuits, but not until I was master of the Art. I, though I say it, can and could trace a furrow, with any of the ploughmen of the village. I could chop, could mow, reap, and perform every kind of labour required on a farm. I am therefore no mere amateur farmer. From one to two hundred tons of hay were no unusual crop to make and cure and house. But my ambition took another turn, and I aspired to other pursuits, whether successfully or unsuccessfully, wisely or not, is another matter.

Recently my present avocation has given me an opportunity of visiting many of the country portions of the Province, indeed I might say the whole of it—and perhaps owing to the early training I had, I have always taken a decided interest in the success of farmers. I make it a practice, whenever opportunity offers, to inquire into the success they are having, and their prospects.

But there is one subject, and after so long a preface to it, to which I invite particular attention. There is one subject, upon which I have for the last two years found the best class of farmers in all parts of the Province, bearing uniform testimony; and it is this:—They say, the wheat crops have become as safe and certain again as ever they were in former times. That the weevil or fly, or

whatever the destructive insect is, that committed such havoc has disappeared, and many of the best of them are preparing to lay down larger fields this coming season for wheat.

Every one of us knows what an enormous amount of money leaves the country annually for flour. And how the farmer is put to it, to pay for his bread, and largely, because for years past he could not, and he is still under the impression that he cannot, raise it. But it appears to be a mistake. I know and can name quite a number of farmers in different parts of Nova Scotia who last summer raised all their bread and have wheat to spare.

Winter wheat too, is proving a success in many localities and is likely to come into much larger use than heretofore. But farmers every one of you, put in a few bushels of wheat this spring. Give it a fair trial. See if you can't raise your own bread and save the enormous drainage of gold required to pay for it. Times are going to be hard. Money is very scarce and interest high. If it indeed be the case that the wheat producing qualities of the country are now, what they were forty years ago, and the measures for raising it, are prosecuted, Nova Scotia will presently become the first Province in this Confederation. Fish, hay, beef, pork, oats, lumber, timber, cordwood, coal, freestone,—everything necessary to secure prosperity already abounds. Try farmers and give us our wheat-flour for 1875-6 and we shall say—"It is enough." Ours is the best Province in the group. Get good seed. Wash it clean—lime it freely. Sow early, having selected the drier and the newer portions of your farms, well drained, and where the silex required for good healthy straw abounds.

Suppose the farmers can only bread the country portions, leaving the city to buy from abroad, what a relief our finances would experience!

Fifteen from one, was no unusual return last year, and twenty bushels from the sowing of one. I know in several instances were secured.

Ontario itself does not beat that. But if every farmer will only determine to put one or two acres or more, under wheat, some hundreds of thousands of dollars, may I not say, would remain in the country next season, which will otherwise inevitably go abroad. Shipping is depressed, and exchange from abroad as many know, is all but dried up for the present. Cease ship-building for a little, good folk, and cultivate your broad acres freely, and thus bread your own families at least.

THE following appears as a communication from Mr. N. W. Blackmore, North River, Onslow, in a recent issue of the *Truro Sun*:—

I notice in a late number of the *Sun* an editorial on the proposed Exhibition Building, and in it some very striking remarks showing the importance of Agriculture and the bearing it has upon business of every kind. But, on noticing the doings of many of our farmers, especially in the back parts of our county, one is led to suppose that farming is considered by them as a mere irksome task, to be hurried through and got over in some kind of a way, without much regard to beauty or profit.

Lumbering seems to be the pet job of too many of our farmers, much to the hindrance of successful farming in nearly every case. How many of these farmer lumbermen hurry

to the woods at the earliest possible chance, for the purpose of wringing money out of some branch of the lumber trade? at the same time leaving a valuable stock of cattle to be poorly attended by children, or some inferior hand, forgetting that the loss consequent upon such poor attention is in a large majority of cases much more than the profits derived from the lumber trade.

One of the secrets of successful farming is to prevent waste: waste of food material; waste of implements; waste of manure, etc. To prevent this waste it is very necessary that farm and farm stock be attended by some steady and regular hand. Many seem to think that the winter is a workless time for the farmer, and turn to lumbering, peddling, and such like, to make money as they term it, forgetting that their profits should not come in as the price of logs, ship timber or lumbermen's wages, but as the proceeds of Easter Bees and fat Porkers. The farmer who spends his winter days attending his stock and preparing for spring work will find himself able to meet such work and perform his spring operation in a thorough manner, while the farmer-lumberer, will find nothing ready, and the spring is half over before the most necessary operations have well begun.

The sooner the farmers of Colchester make themselves believe that farming can be made profitable, the better for the success of the business, as the faithless farmer, like the faithless follower of anything else, will be sure to fail.

At the present time when wheat culture is exciting interest among some of our farmers, the following communication to the *Canada Farmer*, from Erin, Ont., may be read with advantage:

At the present time, when farmers devote a good deal of anxious consideration to the question of "What can we grow with the greatest amount of profit?" and, as hitherto, spring wheat has been a leading cereal, and must still continue to be extensively cultivated, I append a few ideas in reference to our experience in this locality. We have tried several varieties of spring wheat in this township, and each variety has its admirers, owing to the different soils, so that where one kind of wheat might flourish another might entirely fail.

The Ohio is considered about the best variety, and on high and dry land gives perhaps the best yield of any, but, when sown on low or damp soil, it is very liable to be injured by rust or blight. It delights in a rich mellow soil.

The Fyfe ranks next in order, and, for general cultivation is safer than any other. It yields well, and is generally preferred by millers. The straw is stiff and does not rust.

The Red Chaff seems to be gaining friends, and, with the same cultivation, gives the best yield. The grain is coarser than either the Ohio or Fyfe, but it seems to improve every year, so that, in a year or two, it may be equal to the others. The straw is not as stiff as that of the

Fyfe, but it stands well, and does not rust, and is well suited to low or swampy land. But in a few years it may lose its productiveness, so that by the time it is acclimated we may want another change, which brings the suggestion that it is the land that is run out and not the wheat.

If we were to return to the soil what is required to produce wheat, we would not need to change our seed so often; and where turnips are raised to a considerable extent (unless artificial fertilizers are used), it is impossible to raise a first-class crop of wheat. We want more and better manure; to raise more clover and not sell it; cleaner cultivation and mixed farming—not, when one crop is high, discard all others for that one. Wheat is low at present, too low to pay the expenses of production. Still it will not pay to give it up.

Instead of going to extremes, we should sow only where we are sure the soil is in proper order for an extra crop. Get it in in the best possible manner, and raise a part of everything that the land will produce to advantage. We shall then have more time to attend to them properly, will be less affected by rise or fall, and, by a proper rotation, keep up the fertility of the soil.

THROUGH the kindness of an old acquaintance, J. H. Kreelege, Chairman of the General Association for the Cultivation of Bulbs at Haarlem, we have received "Bulletin No. 1" of the INTERNATIONAL HORTICULTURAL EXHIBITION, which is being held this month (April) at Amsterdam. It may be useful to quote some of its paragraphs:

"Since the first International Horticultural Exhibition in Netherland, held in 1865 in the Palace of Industry at Amsterdam, with the co-operation of many Horticultural Societies of the Country,—ordinary Horticultural Exhibitions and Flower-shows have been held almost annually in the same building, by the managers of that establishment. These Exhibitions have been largely patronized both by Botanists and Horticulturists, and by the public in general. Stimulated by such marks of encouragement, the said Board was desirous of adapting these Exhibitions to the increasing requirements of such Horticultural displays, resulting from the great improvements going on in the Department of Horticulture.

"For this purpose, the above mentioned Board sent invitations, in the month of November, 1872, to various generally acknowledged specialists to form a Commission, which should take upon itself the conduct of the ordinary Horticultural Exhibitions, in order thereby to invest them with the great significance which they are capable of receiving, and especially—if it were deemed feasible and expedient—to call into being a Grand International Exhibition. Saving a few exceptions, all the gentlemen appealed to accepted appointments as Members of this Commission, so that by the latter end of 1872 it was constituted."

The List begins with Jonkheer Mr. C. J. A. den Tex, Burgomaster of Amsterdam. Honorary President, whose name is followed by the Dutch names and titles of thirty-four other gentlemen, who are distinguished no doubt in their various departments, but the spellings are so odd that it would make our compositor's head swim if he were to try to set them up.

"No sooner was this Commission met than the question was propounded, whether the period had arrived for repeating the experiment of holding an International Exhibition. This the Commission opined to be the case, and in order to secure the countenance and co-operation of the talent and learning in the Kingdom, the Commission passed a resolution, that before entering upon any details in connection with the proposed International Exhibition, all the Horticultural Societies, etc., of this country should be invited to appoint Delegates, who should attend their meetings and assist in regulating the whole affair; the Commission being of opinion that this is the only way in which the intended Exhibition can assume a universal character—an indispensable requisite for attaining the desired success."

To this invitation, "which was received with the utmost complaisance," twenty-one corporations sent in their assent, including Societies Agricultural, Industrial, Cattle Breeding, Botanical, Zoological, Bulb-Growing, Pomological, Entomological, Academic, and some with titles so thoroughly Dutch that we don't know, with any very great exactness, what they mean.

The Commission for the International Exhibition held its first meeting on the 17th of June, 1873, the Birthday of H. M. the Queen of the Netherland. As a mark of homage, a Telegram was dispatched to Her Majesty, stating that the Commission was constituted on that auspicious day, which intelligence was received with gracious interest by Her Majesty. [This method of celebrating great days is an improvement upon the fire cracker practice.]

The subsequent labours of the Commission were limited to the appointment of an Organizing Committee of seven members, consisting of Messrs. Jhr. Mr. W. M. DE BRAUW, C. GLIJM, J. H. KREELAGE, Prof. Dr. C. A. J. A. OUDEMANS, C. J. VAN DER OUDERMEULEN, Dr. G. F. WESTERMAN and H. GROENEWEGEN, charged with the framing of a general plan. This Committee elected a general Chairman, Jhr. Mr. DE BRAUW, and as Secretary, Mr. GROENEWEGEN. In the course of their labours, after having attended one of the meetings, Mr. DE BRAUW was lost to them by death. In his stead Mr. KREELAGE was elected Chairman.

Since then, for various reasons, the following gentlemen have seceded from the General Commission, viz., Messrs. C. W. A. VAN RINSUM, Jhr. Dr. J. P. SIX and J. HORA ADEMA.

On a motion of the Organizing Committee in the meeting of 17th March, 1874, the following resolutions were passed by the Commission and Delegates of the union :

1. That the Exhibition be held in the spring of 1876, about the month of April, on a much vaster scale than was taken as the basis for the previous Exhibition in 1865.

2. That besides the usual horticultural productions and appliances, an exhibition of Colonial vegetables be added, which would greatly enhance the importance of the Display, especially to foreigners.

3. For the adequate realization of this idea, to call in the energetic aid of Government to bring together such a collection, and to endeavour to gain the assistance of scientific men, to secure for the collection the intended completeness and importance.

4. To invite foreign Governments to send in, on their own account, similar collections from their respective colonies.

5. To arrange the Display in such a manner as, by combining the Floras of various countries, to offer as clear a view as possible of the vegetation of the whole globe.

6. To give, as accurately as possible, a full survey of the species of plants, and of the varieties proceeding therefrom, as also the modifications to be observed in these varieties, in order to illustrate the progress of Horticulture.

7. To hold a Congress simultaneously with the Exhibition.

8. Moreover the relations were determined between the Exhibition-Commission and the Palace of Industry Company.

9. The financial concerns were regulated, and

10. A provisional plan was projected for erecting extensive supplementary buildings to the Palace of Industry, and for preparing the adjacent grounds.

The Managing Committee was further charged with all the necessary preliminaries for the Exhibition, especially with the drawing up of a Provisional Programme or Prospectus, and also with the care of issuing Bulletins in the Dutch, French, German and English languages, and distributing the same as widely as possible, in order to give the greatest possible publicity to the cause of the Exhibition.

It has been further determined, that the articles to be exhibited shall be distributed under the following Heads, not exceeding ten in number, comprising: Cotton, Madder, Indigo, Gutta-Percha and India Rubber (Caoutchouc), Aetherial Oils, Fatty Oils and Fats, Material for Paper Manufactures, Dutch Cereals, Tobacco and Peruvian-bark.

The Committee opines that the limited number of these articles will conduce to the completeness and perfection of the Display; while not only a number of sorts, probably from various regions, might be required, but that, moreover, the sending of plants of the objects, as also of drawings, tools or implements, books, etc., relating to the articles displayed, might be insisted on.

In this way a collection may be

brought together well worthy the attention of professional men, offering an opportunity of exchanging opinions and diffusing the results of their debates.

Besides the Exhibition of such chief articles, secondary ones might be added such as: Vegetable wax, Cachou, Sarsaparilla, Resins, Copal, Vanilla, Grass-plaiting, (Marrum Grasses), etc., which, though of minor importance, might be made of considerable interest.

THE NEW CHURN.—Our readers will remember the flattering references which we were enabled to make last fall in reference to the United Canada Churn. We are pleased to learn that the number sold in this section of the country has given universal satisfaction, and that the proprietors are now engaged in manufacturing several thousand, for sale in the maritime provinces. The factory of Messrs. Christie Bro's. of this place is now engaged almost entirely in their manufacture and they will shortly be put into the market. The testimonials as to the qualities of this churn are such as to satisfy all of their superiority, and we have no doubt that the sales during the coming season will be very large. Agents will visit the various parts of the provinces shortly, to take orders.—*Amherst Gazette.*

ANNUAL REPORT OF THE CENTRAL BOARD OF AGRICULTURE, FOR THE YEAR 1874.

HALIFAX, 6th April, 1875.

TO THE HON. P. CARTERET HILL, *Provincial Secretary.*

SIR,—

The Central Board of Agriculture have the honor to submit, for the information of the Government and the Legislature, the Annual Report of their operations for the past year, together with the accounts of income and expenditure, and relative vouchers.

The County and District Agricultural Societies in active operation, and qualified to participate in the Legislative Grant for the year 1874, were 64 in number; paying members 3971; total amount of subscriptions actually paid (as shown by the attested Returns), \$4495.00; total amount of Grants in aid \$5880.00. These numbers of Societies and Members and the amount of subscriptions are larger than in any former year, and, although there is still very much room for improvement, yet an examination of the Reports of societies shows that the agricultural organization is now upon the whole, in a more efficient state than it has ever been before. Since the Returns were made up, at the end of March, additional societies have been formed, or are in course of formation, in the Counties of Cumberland, Col-

chester, Lunenburg and Halifax, and recent correspondence with unrepresented districts in other counties indicates that the increase is likely to continue. This state of things is matter of great satisfaction to the Board, as they feel that the success of their efforts to introduce and encourage improved stock, and more profitable modes of culture, must necessarily depend to a large extent upon the successful working of the local and district societies.

Since the organization of the Board in the year 1864, there has been a steady increase in the number and strength of Agricultural Societies, with the exception of an apparent check in the years 1868-9 and 70, which arose from circumstances that the Board could not be expected to control. The statistical history of our Agricultural Societies is shown in the following statement:—

YEAR.	Number of Societies.	Number of Members.	Amount of Subscrip-tions.	Grants in aid.
1st year 1864	37	1744	\$1859 00	\$3010 00
2nd " 1865	48	2107	2384 00	3314 00
3rd " 1866	52	2543	2850 00	3506 00
4th " 1867	53	2333	3051 50	3444 50
5th " 1868	45	2248	2510 75	3232 50
6th " 1869	43	2200	2540 50	3001 00
7th " 1870	49	2742	3046 00	3972 00
8th " 1871	57	3245	3672 80	3543 00
9th " 1872	66	3597	4004 50	3304 00
10th " 1873	61	3586	3929 00	5785 00
11th " 1874	64	3971	4495 00	5880 00

The number and strength of societies in each County of the Province at the close of 1874, are shown in the following tabular statement, which embraces only those societies whose returns were duly attested before the apportionment of the Legislative Grant for the year 1874:—

COUNTIES.	Number of Societies.	Number of Members.	Amount of Annual Subscrip-tions.	Amount of Grants in aid.	Amount of Subscrip-tions to Prov. Ex-hibition
Annapolis	5	302	\$302 00	2400 00	\$140 00
Antigonish	3	168	249 00	400 00	62 00
Cape Breton	3	155	155 00	310 00	76 00
Colchester	6	447	450 00	400 00	183 95
Cumberland	3	305	397 00	400 00	139 95
Digby	4	302	317 00	400 00	45 00
Guysborough	3	153	153 00	306 00	49 50
Halifax	3	222	250 50	400 00	250 00
Hants	7	353	680 00	400 00	160 00
Inverness	2	90	80 00	160 00	33 00
King's	5	323	443 00	400 00	136 00
Lunenburg	1	66	66 00	132 00	26 00
Pictou	5	278	289 50	400 00	65 00
Queen's	3	128	134 00	268 00	70 00
Richmond	1	1	1 00	400 00	55 00
Shelburne	4	27	207 00	258 00	60 00
Victoria	2	129	129 00	258 00	60 00
Yarmouth	2	233	333 00	306 00	65 00
Totals	64	3971	\$4495 00	\$5880 00	\$1609 41

In accordance with the arrangements detailed in last year's Annual Report of the Board, a Provincial Agricultural Exhibition was held in Halifax, during the first week of October, 1874. The Exhibition was largely attended by farmers and others from nearly all parts of the Province, the competition in Live Stock and in Fruit was larger than was anticipated, and, although the untoward season caused a marked deficiency in Roots and Vegetables, yet the Exhibition was generally regarded as, upon the whole, a decided success.

The Drill Shed in Spring Garden Road, and General's and Governor's Fields in rear, had been granted respectively by the Hon. Minister of Militia, His Excellency the Lieut. General and His Honor the Lieut. Governor, for use during the Exhibition. Convenient buildings for the shelter of the horses, cattle, sheep and pigs were erected by the Board in the Governor's and General's fields, poultry pens in the Drill Yard, and the requisite fittings in the Drill Building for the effective display of the grain and field seeds, dairy produce, woollen manufactures, roots and vegetables, agricultural implements, fruits, and ornamental plants and flowers.

The Cattle Sheds and Drill Building were ready for Exhibitors to commence their work of arrangement on Monday morning, 5th October. The public opening of the Exhibition to spectators took place on Tuesday the 6th, when on invitation of Sir William Young, on behalf of the Board, the Opening Address was delivered by His Honor Lieut. Governor Archibald. The grounds and buildings were kept open during the following Wednesday, Thursday and Friday, and were visited by upwards of eighteen thousand persons. The perfect decorum of this vast assemblage, both in the grounds and throughout the city, was the subject of general remark, and lessened much the anxiety and labour of those who were charged with carrying out the arrangements. The Exhibition was finally closed on Friday afternoon, 9th October, on which occasion His Honor Lieut. Governor Tilley, of New Brunswick, delivered a Closing Address.

To enumerate the names of those who gratuitously rendered signal service in the course of the Exhibition arrangements, would extend this Report beyond its proper limits; but the Board feel that public mention should be made of the fact that of the hundreds of official and private persons, both in the city and throughout the various counties, who were applied to, to act in various official capacities or otherwise render assistance, every one who could do so readily and cheerfully complied with the requests of the Board, and all cordially united in promoting the success of the undertaking.

The financial results of the Exhibition were satisfactory. Originally the Legislature had voted \$4000 as a prize fund, in the belief that the entry fees of spectators would cover all the other expenses. But when the Board proceeded, in 1873, to draw up a Prize List, they found that a satisfactory Prize List could not be framed without exceeding that sum. They were accordingly authorized by the Government to extend the Prize List as far as they thought could be safely done, so as to keep the ultimate deficiency down to \$2000.00. The Board accordingly,

after careful calculation, offered prizes, which, with subsequent supplements, ultimately extended to a sum total of upwards of \$7000.00. The offering of this apparently large sum was based upon a calculation that, as in the case of the Exhibition of 1868, at least ten per cent. of the prizes offered would not be awarded. The sum actually paid for prizes, as shown by the accounts herewith submitted, amounts to \$5736.50; this does not include some few unclaimed prizes and others that were not finally adjusted until the recent annual meeting of the Board, which are, however, quite trifling in amount. The erection of cattle sheds in the Governor's field, work in the Drill Shed, &c., cost \$2110.91. All other expenses, including the preparatory expenditure of printing and circulating Prize List, &c., during 1873, amounted to \$2920.99. These expenses, together with prizes, amounting to \$10,768.40, are met from the following sources, viz.: 1. Legislative grant of \$4000.00; 2. Subscriptions by Agricultural Societies \$1609.41; 3. Prize Fund for Plants and Flowers raised by Horticulturists of Halifax \$348.00; 4. Fruit Growers' Associations \$200.00; 5. Mr. Fraser's contribution for Condiment Prizes \$100; 6. Amount collected at gate for admission of spectators \$3536.50; 7. Proceeds of sales of Fruit \$66.08. Total \$9859.99. The total amount of deficiency to be made up by the Government, instead of being \$2000.00 as was estimated, amounts to only \$908.41.

The Board, after very careful consideration at successive meetings, have resolved to make the following recommendations to the Hon. the House of Assembly:—

1. In view of the general demand, all over the Province, for an importation of thorough-bred stock, viz.: Horses, Cattle, Sheep and Pigs, of a higher character than any previously imported, it is recommended that the Board be authorized to make an importation during the coming season; that for this purpose they be authorized, as formerly, to use the Stock Fund of \$8000.00 (originally granted towards the establishment of a Stock Farm) for the purchase of animals, on the condition that the proceeds of sales shall be used to replace the Stock Fund to its original amount, and that any contingent loss be met by a Legislative Grant not to exceed \$5000.00,—only such portion of the grant to be drawn as shall be necessary to cover the actual loss on the importation and sale, and expenses connected therewith.

2. That in addition to the sum annually voted for agricultural purposes, a further sum of \$4000.00 be annually given as a Prize Fund for a Provincial Agricultural and Industrial Exhibition, to be held under direction of the Government and

Board of Agriculture in any County, selected by the Board, in which an Agricultural Society, or other responsible body, shall be prepared to furnish suitable Exhibition grounds and buildings, and shall be willing to undertake the necessary expense attending the management of such Exhibition,—the managers to collect a small entrance fee from visitors, and from each exhibitor, to go towards defraying the general expenses. That the first Annual Exhibition be held in the autumn of 1875.

3. That a further sum of \$600.00 be voted to enable the Board to offer a bonus, for one year only, to encourage the erection of a Bone Mill by parties willing to undertake to supply farmers with Bone Dust at reasonable rates, in accordance with arrangements entered into during the last Session.

4. That as soon as the Legislature shall think it expedient, an annual sum of \$400.00 be voted to furnish prizes for the best managed farms in each of the six districts into which the Province is divided for the purposes of the Agricultural Act.

5. The following Resolution was passed by the Board on 21st October, 1874:—“Feeling very sensible that the present salary of the Secretary is not at all commensurate with the work to be performed, which work has largely increased since the amount of salary was fixed, and, considering the heavy financial responsibility now attached to the office, and the very valuable assistance rendered to Agriculture by the present incumbent, Professor Lawson,—the Board respectfully, but most strongly, recommend to the Government that the salary of the Secretary be now raised to \$1200, to commence from 1st January, 1875.” The increased salary can still be paid out of the ordinary Legislative grant to the Board, as the other working expenses of the Board have been considerably reduced by the last amendment to the Agricultural Act. The increase of the Secretary's salary will not, therefore, require any increase on the Legislative grant, but merely a change in the Act, which at present limits the salary to \$600.

6. Some years ago the Board established a monthly Agricultural Journal, for the publication of the Reports of County and District Societies, and for the diffusion of useful information in regard to improved modes of culture and stock raising. The Reports of Societies have latterly increased to such an extent that it has not been found practicable to give more than brief extracts of many of them in the Journal, and, even with this reduction, and the occasional issue of double numbers, the ordinary reading matter of the Journal has been very much curtailed. The Board propose that, in future, the Journal be used only for the publication

of articles on subjects of practical and scientific agriculture, adapted to the wants of the Province; that the Reports of Societies be added as an Appendix to the Annual Report of the Board; and that the whole be printed in pamphlet form in time for the meeting of the Legislative Assembly. It is believed that such a Report, carefully prepared, would present to the Members of the Legislature a representation of the actual condition and working of the Agricultural organization throughout the various Counties of the Province that could not fail to prove of interest and use. It is hoped, therefore, that the proposal will meet with the approval of the Legislature, and that the Government will authorise the necessary printing, as in the case of Departmental Reports.

By order of the Central Board of Agriculture,

J. WIMBURN LAURIE, *President*,
GEORGE LAWSON, *Secretary*.

THE finest oxen we know of in this county are a pair owned by Mr. W. L. Pipes, Nappau. They are six years old, very finely formed and evenly mated, girth eight feet, and weighed, at the middle of March, 3930 lbs.—the larger one 2040 lbs.—*Amlerst Gazette*.

A BILL ENTITLED AN ACT FOR REVISING AND CONSOLIDATING THE GENERAL STATUTES OF NOVA SCOTIA.

CHAPTER "OF THE ENCOURAGEMENT OF AGRICULTURE."

1. The Governor in Council shall annually appoint a Central Board of Agriculture, consisting of seven persons, of whom one shall be selected from among the Members of the Executive Government of the Province, and the remaining six shall be selected from the six districts mentioned in Schedule B., in the manner hereinafter provided. Five of such Board shall be a quorum, and they shall be a body corporate under the name of the Central Board of Agriculture.

2. It shall be the duty of the Officers of every Agricultural Society, immediately after their election at the Annual Meeting in December, to nominate a person suitable for appointment to the Central Board, and the Secretary of every Society shall forthwith transmit to the Secretary of the Central Board the name and address of the person so nominated.

3. The Governor in Council shall select six from among the persons so nominated to be Members of the Central Board, one being chosen from each of the districts specified in Schedule B., and the preference being given, for each district, to the person nominated by the greatest number of Societies. In case of an equality of votes for any number of the persons so nominated for any district, the Governor in Council shall determine who of the number shall be the member.

4. In case the Officers of the Agricultural

Societies for any district shall neglect or refuse to nominate any person for appointment to the Central Board, or if the Secretaries of the Societies shall transmit no such name and address, the Governor in Council shall appoint a member of such Central Board for such district.

5. All members of the Board shall retire annually on the thirty-first day of January, but shall be eligible for re-appointment.

6. When vacancies occur in the Board from other causes than the annual retirement of Members on the thirty-first day of January, the Governor in Council may at once appoint new members without reference to nominations by Societies.

7. The first meeting of the Board shall be held at such time and place as the Governor in Council shall direct, when they shall elect a President, Vice-President, Secretary and Treasurer.

8. There shall be held in each year at least one general meeting of the Board, which will take place at Halifax, in the month of March, during the sitting of the Legislature, and of which at least ten days notice shall be given. Special meetings may be called by the Secretary, at the instance of the President, or upon the written request of three members, and may be held at such times and places as the President or such three members shall determine.

9. The Board shall not pay or allow any sum to a member thereof, for acting as such member, except the amount of his actual hotel expenses, and necessary travelling expenses, in attending such meetings, which shall not in any case exceed six cents a mile for the distance actually travelled in going to and returning from such meetings.

10. It shall be the duty of the Board,—
(I.) To take measures for the formation of County or District Societies, and for infusing new vigour and efficiency into those already in existence.

(II.) To receive the accounts and reports of such societies, and, before granting the certificates hereinafter mentioned to entitle them to participate in the Provincial grant, to see that they have complied with the provisions of this chapter.

(III.) To publish a monthly journal for the diffusion of agricultural and horticultural information adapted to the condition and circumstances of the country, and to cause the same to be distributed as generally as possible.

(IV.) To take measures to obtain from other countries animals of new or improved breeds, new varieties of grains, seeds, vegetables, for general and equitable distribution throughout the several counties, and to adopt every measure in their power generally to promote improvement in the agriculture and horticulture of the Province.

(V.) To hold every third year, or oftener, if the Board should deem it advisable, in some central and suitable locality, a general provincial exhibition of agricultural and horticultural products, animals and domestic manufactures, and to fix the time, articles of competition, and list of prizes to be awarded, and the regulations under which such exhibitions shall be held, of which due notice shall be given at least twelve months before the same shall take place; and, in holding the same, due regard shall be had to the just claims of the several counties.

11. The Board may at any time appoint a person to inspect the books and accounts of

any Society in the Province receiving Government aid in connection with agriculture, and all officers of every such Society, whenever required to do so, shall submit its books and accounts to such inspection, and truly to the best of their knowledge answer all questions put to them in relation thereto, or to the funds of the society.

12. For the purposes of this Act the Board shall be entitled to draw from the Provincial Treasury annually such sum not exceeding eight thousand dollars, as the Governor and Council may authorize, out of which they may expend a sum not exceeding six hundred dollars for the salaries of their officers and a further sum not exceeding one hundred dollars for stationery and other incidental expenses, and they shall exhibit to the Government, for the information of the Legislature, every year, an account of the expenditure of the same, with proper vouchers, and a full report of their proceedings.

13. Agricultural Societies may be organized in each of the counties wherever forty persons or more shall have become members thereof, by signing a declaration in the form of Schedule A to this Act, and paying each not less than one dollar annually to the funds thereof, and a true copy of the said declaration shall, within one month after the money has been so paid, be transmitted to the Secretary of the Central Board.

14. When any society shall be so organized, such society shall be entitled to draw annually from the Board, by warrant in favor of its president, and on the certificate of the secretary of the Central Board, not more than double the amount of the subscriptions so raised and paid; the payment of such subscriptions to be certified upon oath by the secretary or treasurer of the society, but no county society shall be entitled to draw more than two hundred and fifty dollars in any one year.

15. In counties where more than one agricultural society exist, the government allowance shall be given on the principle in section fourteen, not exceeding for any county the sum of four hundred dollars in any one year; and the same shall be apportioned among such societies by the Central Board in a rateable proportion to the amount of the subscriptions raised and paid by each society for the year in which such allowance shall be claimed, but no society shall draw more than two hundred and fifty dollars.

16. In case of any difficulties arising as to the boundaries of any such societies, the Central Board shall define the same.

17. The object of such agricultural societies shall be to encourage and promote the introduction of improved stock, seeds, fruit, 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. The funds of such societies, derived from the subscriptions of members or the public grant, shall not be expended for any object inconsistent with those above mentioned.

18. The annual meetings of the societies shall be held on the first Tuesday of December in each year, when they shall elect a President, Vice President, Secretary and Treasurer, and not more than five directors.

19. The officers appointed at the formation of such societies shall, until the election of

their successors at the annual meeting, exercise all the powers vested in the society by this Act.

20. They shall hold special meetings pursuant to adjournment, or on written notice from the secretary, which shall be given one week before the day appointed for such meeting, and at such meetings five shall be a quorum.

21. The said officers and directors may at any such meetings make, alter, and repeal bye-laws and rules for the management of such society, copies of which shall within one month thereafter be forwarded to the secretary of the Central Board for its approval.

22. The said officers and directors shall, in addition to the ordinary duties of management, present at the annual meeting in December a report of the proceedings of the society during the year, in which shall be stated the names of all the members of the society, the amount paid by each, the names of all persons to whom premiums were awarded, with the name of the animal, article or thing in respect of which the same was granted, together with such remarks upon the agriculture of the county as they may be enabled to offer, and a statement of the receipts and disbursements of the society during the year, which report and statement, if approved by the meeting, shall be entered in the journal of the society, and a true copy thereof certified by the president and secretary to be correct, shall be sent to the Central Board within one month thereafter.

23. If any society shall neglect to render such accounts and report, it shall forfeit its claims to the provincial grant for the year next succeeding.

24. The county society, where but one exists in a county, and the several societies, where more than one is established therein, shall be requested to hold an annual show for the exhibition of agricultural and horticultural produce, farm stock, and articles of domestic manufactures, at which prizes shall be granted for the best specimens produced of farm culture, and such shows shall be held at such times and place, and under such regulations, as the majority of the officers and directors of the several county societies may determine.

25. If the officers and directors of the agricultural society of any county, or part of a county, consider that any other system might advantageously be substituted for that of shows, and that the sum allotted to such societies might be better applied in the importation of stock, or to any other purpose for the improvement of agriculture,—in such case they may apply the said sum, provided notice thereof has been given to the Board of Agriculture, and its approval of such appropriation obtained.

26. The provisions of this chapter shall extend to all agricultural societies at present in existence.

SCHEDULES.

A.

Who 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," to be named the Agricultural Society, in the County of _____; and we severally agree to pay to the treasurer of said society towards the funds thereof annu-

ally the sums set opposite our respective names.

Names of Subscribers.		Sums Subscribed.
A	B	\$
C	D	

B.

The City and County of Halifax shall comprise District No. 1.

District No. 2 shall include the Counties of Kings, Annapolis and Digby.

District No. 3 shall include the Counties of Lunenburg, Queens, Shelburne, and Yarmouth.

District No. 4 shall include the Counties of Hants, Colchester and Cumberland.

District No. 5 shall include the Counties of Pictou, Antigonish, and Guysborough.

District No 6. shall include the Counties of Cape Breton, Richmond, Inverness and Victoria.

CENTRAL BOARD OF AGRICULTURE.

HALIFAX, 23rd March, 1875.

The annual statutory meeting of the Central Board of Agriculture was held to-day in the Committee Room, adjoining the Provincial Library.

Present—Hon. D. McDonald, Atty. General, Colonel Laurie, Oakfield, Colonel W. E. Starratt, Parudise, David Matheson, Esq., Mayor of Pictou, Israel Longworth, Esq., Truro, John Ross, Esq., Boularderie, Professor Lawson.

David Matheson, Esq., of Pictou, having been moved into the chair, it was resolved, on motion of Mr. Longworth, he be elected President of the Board. Whereupon, Colonel Laurie, as President, took the chair, and thanked the Board for their courtesy in electing him.

Moved by Mr. Matheson, seconded by Mr. Ross, and resolved, that Israel Longworth, Esq., Truro, be elected Vice-President.

On motion of Mr. Matheson, seconded by Colonel Starratt, Professor Lawson was elected Secretary and Treasurer.

Mr. Longworth moved a resolution expressive of the sense of the Board of the loss which the Province had sustained by the death of the late President, Hon. R. A. McHefey, a copy of which was directed to be sent to his widow:—

Resolved,—“That the Board of Agriculture take the earliest opportunity to express their profound regret for the death of their late lamented President—the Honorable Richard A. McHefey, and to record their sense of the loss which the Province at large has sustained by being deprived of his services in the cause of Agriculture, as well as in other departments of public usefulness. Mr. McHefey's admirable qualities as a man and a citizen, and the invaluable services which he rendered to the Agricul-

ture of Nova Scotia, were well known to every member of the Board, and cannot be too highly estimated. The Board feel that in him they have lost a wise counsellor, as well as a highly valued friend, whose memory they will always cherish, and whose place cannot easily be filled.”

It was arranged to invite the Standing Committee on Agriculture of the House of Assembly to meet in conference with the Board on Thursday, 25th inst., at half-past eleven o'clock, and the Secretary was instructed to communicate with the Chairman of the Committee accordingly.

A motion in reference to the proposed importation of seed wheat was allowed to lie over for further inquiry.

The Members of the Board spent the remainder of the forenoon in discussing the propriety of making an importation from Ontario of horses, cattle, sheep and pigs, and in planning a system of Annual Provincial Exhibitions, but no definite resolution was passed.

The Board adjourned at 1 o'clock, to meet again at 3 p. m.

3 O'CLOCK, P. M.

The Board re-assembled. Present—Col. Laurie, President; Israel Longworth, Esq., Vice-President; David Matheson, Esq.; John Ross, Esq.; Col. Starratt; Prof. Lawson, Secretary.

The afternoon was chiefly occupied in detailed business connected with Agricultural Societies, including the formation of a new society in Halifax Co.

The Board adjourned, to meet again on Wednesday morning at 10 o'clock.

COMMITTEE ROOM,
OLD PROVINCE BUILDING,
March 23rd, 1875.

Present—Col. Laurie, President; Israel Longworth, Esq., Vice-President; Hon. D. McDonald, Attorney General; David Matheson, Esq.; W. E. Starratt, Esq.; John Ross, Esq.; Prof. Lawson, Secretary.

Moved by Mr. Matheson, seconded by Mr. Ross,—

Whereas, A sum of \$103.70 was reserved out of the grant for Pictou County in 1873 for the purpose of paying the New Gairloch Society its proportion in the event of qualifying therefor;

And whereas, The New Gairloch Society has not complied with the resolution of the Board of 25th June, 1874, requiring the Society's original accounts and vouchers, with items of income and expenditure in detail;

Therefore resolved, That the said amount of \$103.70 be distributed rateably among the Societies in Pictou County that were duly qualified in 1873.

The resolution was put to the meeting and passed unaniously.

A letter was read by the Secretary from the Rev. Edward Ansell, Beaver Harbor Parsonage, with minutes of meeting, held on 25th December, for the purpose of organizing a Society to be named the "Salmon River, Beaver Harbor, Agricultural Society," in the County of

Halifax. The Society embraces forty-two members.

Moved by Mr. Matheson, seconded by Mr. Starratt, and resolved, that the now Society be recognized as organized under the Act for Encouragement of Agriculture.

Correspondence in reference to several business matters arising out of the Provincial Exhibition, was laid before the meeting, and dealt with in detail.

Messrs. Longworth, Starratt and Ross were named as a Finance Committee to audit the Treasurer's accounts for the past year.

The Board adjourned till Wednesday morning at ten o'clock.

COMMITTEE ROOM,
PROVINCIAL LIBRARY,
24th March, 1875.

The Central Board of Agriculture resumed business this morning at 10 a. m.

Present—Col. Laurie, President; Israel Longworth, Esq., Vice-President; Attorney General McDonald; David Matheson, Esq.; W. E. Starratt, Esq.; John Ross, Esq.; Prof. Lawson, Secretary.

A telegram was read from George S. Brown, Esq., Yarmouth, announcing that it was inconvenient for him to attend the meeting.

The minutes of yesterday's meetings were read and approved of.

The annual returns of societies for the year 1874 were laid on the table by the Secretary, and the Board proceeded to examine them. It was felt to be a matter of very great importance that the funds raised by societies in their respective localities, as well as the Legislative grants assigned to them, should be used in the very best possible way to promote agricultural improvement in the district. C. E. Brown, Esq., of Yarmouth had called attention to this subject by a communication to the Secretary of the Board.

On motion of Mr. Longworth, seconded by Mr. Starratt—

Resolved, That in future the Board withhold the Provincial grant from Agricultural Societies that do not furnish with their annual reports a clear and full account of their receipts and disbursements, that the Board may be able to judge that in their operations the provisions of the Agricultural Act have been complied with, and that the Societies are thereby entitled to participate in the grant, which, in case of societies making imperfect or unsatisfactory returns, cannot well be done,—and that the Societies have notice of this resolution.

The Secretary was directed to prepare a blank form of schedule for the Annual Returns of Societies, in order to secure uniformity and ensure perfect accuracy, Societies to participate in the Legislative grant only on condition that their Returns are perfect and in the hands of the Secretary of the Board not later than 31st December,—Societies delaying, or sending imperfect Returns, to be excluded.

Colonel Laurie, the hon. Atty. General

and Mr. Longworth were named as an Executive Committee to act during the recess in dealing with contingent business that might arise and require adjustment prior to the general meeting.

Mr. Longworth read a communication from the Onslow Agricultural Society recommending the importation of live stock, as much required by Societies and farmers generally.

The Board then adjourned, to meet again on Thursday morning at 10 o'clock.

COMMITTEE ROOM, PROVINCE LIBRARY, OLD
PROVINCE BUILDING, March 25, 1875.

Present—Colonel Laurie, President; Israel Longworth, Esq., V. P.; Hon. D. McDonald, Atty. General; David Matheson, Esq., Mayor of Pictou; W. E. Starratt, Esq.; John Ross, Esq.; Prof. Lawson, Secretary.

The Auditing Committee presented their report upon the Treasurer's accounts, and the annual returns of Agricultural Societies were discussed.

The following resolutions were tabled for consideration at the next meeting of the Board:—

1st resolution to be moved by Mr. Starratt, seconded by Mr. Matheson, viz:

Whereas, In other Provinces of the Dominion as well as in the colony of Prince Edward Island the Local Governments have made provision for Annual Provincial Agricultural and Industrial Exhibitions,

And Whereas, The great interest manifested by the people of this Province in the success of our late Provincial Exhibition indicates that it is in accordance with the views of the general public that such an Exhibition should be held in Nova Scotia annually.

And Whereas, The Board of Agriculture are of opinion that a yearly Provincial Exhibition would not only meet with much favor, but prove a great stimulus to the agricultural and other industries of the Province,

Therefore Resolved, That the Board bring this important matter to the notice of the Agricultural Committee of the House of Assembly, so that the views entertained by the Board upon the subject may be laid before the Legislature. The Board would earnestly recommend that, in addition to the sum of money provided yearly for Agricultural purposes, an additional amount of five thousand dollars be given as a Prize fund for a Provincial Exhibition to be held under the direction of the Government and Board of Agriculture in any County, selected by the Board, that may be prepared to furnish suitable Exhibition grounds and buildings, and that may be willing to be at the necessary expense attending the management of the Exhibition, the County in which any such Exhibition may be held to collect a small entrance fee from the visitors and each Exhibitor, to go towards defraying expenses.

The second resolution, tabled by the President, provides that in each agricultural district (as defined by Statute) first and second prizes, of the respective values of \$50 and \$25, be offered annually for the best managed and best worked farms, the judges, in making their returns, to give at length their reasons for awarding the prizes, and to furnish details of the system of crops followed, the breed of cattle kept, and their suitability to the

locality, and generally of any points in the management that are noteworthy; likewise to make special reports on, and furnish full particulars regarding, any points of excellence that may come under their notice on farms other than those recommended for the prizes. By such means the methods in use by, and the practical experience of, our most enterprising farmers, will be brought to the knowledge of all, whilst the best farmers will themselves be put on their mettle to excel, and the spirit of emulation, thus aroused, will be found, as in the case of exhibitions, to re-act on the whole agricultural community.

At half-past 11 o'clock, the following gentlemen, members of the Standing Committee on Agriculture of the House of Assembly, attended the meeting of the Board by invitation:—

Donald Archibald, Esq., M. P. P.
Avarid Longley, Esq., M. P. P.
J. B. North, Esq., M. P. P.
Hiram Black, Esq., M. P. P.
J. N. Mack, Esq., M. P. P.
Alfred Gayton, Esq., M. P. P.

Colonel Laurie explained the measures proposed by the Board for the ensuing season, and stated that the Board were desirous of ascertaining how far the Committee and Legislature would be disposed to concur with them.

Mr. Archibald referred to the varied industrial interests of the Province, and expressed his desire that the Committee should support the Agricultural interest, as far as consistent with due regard to shipbuilding, fishing and commerce.

Mr. Longworth entered into a detailed explanation of the work of the Board, and proposed that their views should be embodied in a concise shape, and communicated, in writing, to the Chairman, for consideration of the Agricultural Committee.

Mr. Ross advocated a grant of \$5000 for importation of Stock, even if the Exhibition scheme should not at once be carried out.

Mr. Black approved of the recent action of the Board, and referred with gratification to the choice that had been made of an energetic President. The intention to restrict societies in the application of their funds was a wise measure. Money was required by the Board to carry out their plans, and as the Hon. Atty. General was a member, the Board had only to apply to him for the necessary means. The Legislature would approve of any judicious expenditure. Mr. B. was much pleased with the proposal to import Stock, but there might be a feeling against an importation and an Exhibition both in the same year. He was glad to hear that the Railway Tariff had been amended, so as to render the establishment of a Bone Mill possible.

He wished the Board every success, and would render every assistance.

Mr. Mack said he represented a County largely interested in lumbering, but felt that improvement in stock told upon every other branch of industry, and he would, therefore, support the Board in their labours. It was a loss to the country at large to have poor breeds of cattle and sheep.

Mr. North presumed he would be thought to represent the shipping interest. It was certainly the most heavily taxed of Nova Scotian industries, but the sum asked for Agriculture was so insignificant that it could not possibly affect the shipping interest. His sympathies, he said, were all with the Agriculturists, and too much encouragement could not be given to stock raising and fruit growing.

Mr. Longley spoke warmly in favor of the various schemes of the Board, and thought that, if the Chairman of the Agricultural Committee were not too faint-hearted, they could be carried out with success, and with benefit to the Province. To refuse to respond to the claims of the Board would be to acknowledge that we were behind the times. The branching out of railways east and west may lead to the limit of our Provincial funds, but that should not damp our ardour in maintaining a branch of industry upon which the welfare of the whole Province, and the comfort of the people were so thoroughly dependent.

The meeting was addressed in similar terms by Mr. Matheson, Mr. Starratt, and Mr. Gayton.

The Board continued its meetings on Tuesday and Wednesday, 30th and 31st March. Present—Colonel Laurie, President; Israel Longworth, Esq., V. P.; Hon. D. McDonald, Atty. General; D. Matheson, Esq., Pictou; W. E. Starratt, Esq., Paradise, John Ross, Esq., Boularderie; Professor Lawson, Secretary.

A letter was read from Cyprian Ballard, Esq., Middleboro', county of Cumberland, proposing the formation of an Agricultural Society in that district, which the Board entertained favorably.

In order to relieve the Journal of Agriculture of the Annual Reports of Societies, which have latterly become very bulky, it was resolved, in future, to embody these in the Annual Report of the Board to the Legislature, and to have the same printed at the opening of the Legislative session.

The following gentlemen of the Agricultural Committee of the House of Assembly met with the Board, viz.:—Donald Archibald, Esq., M. P. P., Chairman; J. McKinnon, Esq., M. P. P., Hiram Black, Esq., M. P. P., J. B.

North, Esq., M. P. P., J. N. Mack, Esq., M. P. P.

Mr. Archibald, the chairman, stated that the Committee had considered the various recommendations of the Board, as fully as the limited time and engagements on other committees had allowed, and were favorably impressed with the contemplated measures. They were prepared to recommend the House of Assembly to vote the sum required, with the exception of the prizes for farms, which, in view of the grants needed for other purposes, might be deferred for the present.

The subject of agricultural labor engaged attention, and elicited remarks from Hon. Mr. McDonald, Mr. Black, Mr. McKinnon, and Col. Laurie. Mr. McKinnon instanced the complete exhaustion of farms on the North Western Shore of Cape Breton, which he attributed not so much to want of labor or unwillingness to work, but to ignorance of agricultural principles. He hoped that some day we should have an Agricultural College to teach our young men how to farm.

Mr. Longworth presented the Auditing Committee's Report upon the Treasurer's accounts, which had been found correct and properly vouched, and were ordered to be communicated to the Hon. Provincial Secretary for presentation to the Legislature in the usual manner.

A letter from Mr. Blair, Secretary of the Onslow Agricultural Society, in reference to the contemplated Exhibition buildings at Truro, was referred to the Executive Committee of the Board with power to act.

A large amount of detail business was transacted and committees appointed to forward the preliminary work of some of the schemes proposed for the present year.

On Saturday several members of the Agricultural Committee, and of the Board, visited Oakfield, by invitation of Colonel Laurie, the President, to inspect his Herd of thorough-bred Devons.

Correspondence.

LONDONDERRY, March 24, 1875.

To the Editor of the Journal of Agriculture:

SIR,—I bought a No. 5 Blanchard Churn some months ago, and not without some misgivings as so many patent churns have turned out a failure. But the Blanchard Churn is in my opinion a complete success, and well worthy of all the praise your correspondent "L. L." has given it. It is so simple a child of twelve years of age can churn with it.

Yours truly,
BURTON COOK.

TATAMAGOUCHE, March 20, 1875.

To the Editor of the Journal of Agriculture:

SIR,—Last season I did my churning with one of the Blanchard Churns, and find it superior in every respect. It brings the butter in less time, and with a great deal less labor than any other churn I ever used. It works the butter free from the butter-milk in the churn without any change of dasher, and works in the salt in the same way quicker and better than it can be done by hand.

Yours truly,
MRS. JAMES CLARK.

Messrs. Dickson and Jamieson send the following for publication:—

TRURO, March 25th, 1875.

Messrs. Dickson and Jamieson:

GENTLEMEN,—In reply to your letter of to-day's date, requesting my opinion of the "Blanchard Churn," I have no hesitation in saying that it is far superior to anything of the kind that has ever been used in my family, and fully possesses every characteristic claimed for it by the makers.

Gentlemen, yours very truly,
W. R. MULHOLLAND.

A FEW WORDS ABOUT PRUNING THE APPLE TREE.

To prune: a branch of fruit culture very important in the production of good fruit.

Let us begin at the first start of the tree. The scion of the future tree generally has three buds, from all of which shoots are liable to grow. As but one is wanted, it is now the pruning begins. Choose the straightest and strongest shoot as the embryo of the future tree, remove the remaining shoots with a sharp knife, being careful not to disturb the scion, do not strip off the leaves from the young tree (as some do), for they are very important to the perfect growth of the tree, as the leaf performs for the tree duties similar to those which the lungs perform for the animal. The second year, side branches will grow from the tree; some of these may be cut out, leaving some to shade the stem of the tree; the branches left should be kept headed in and entirely cut away when the tree attains the size of one inch in diameter. When the tree has reached the required height for branching out to form a top, such of the side branches as are needed to form the top may be left to grow. It is not good to have more than one branch growing from the same point on the tree; if more, they will be sure to split down when the tree is bearing fruit, if not before. The height of forming a top varies with some of the different kinds of apples. While

the branches of the tree bearing the Pomme Gris variety are always extending upward, the branches of the well known Bishop Pippin are ever inclined to the ground, and those of the Noupereil grow in a horizontal direction.

The prevailing winds of a country have the effect of leaning the unsheltered tree; for instance the prevailing winds of King's County are from the West, causing the young tree to incline to the East. We can help to preserve the balance by cutting away most branches from the East side, leaving the West side of the tree the heaviest while young.

As the tree continues to grow, cut out all interfering or cross branches, all dead or diseased branches, and others as the pruner may deem necessary.

It is a very important item of pruning to know on which part of the tree apples will grow the best, whether on the outside, as the Bishop Pippin, all through the tree, as the Baldwin, on the south side, as the Emperor, or any peculiar place which a variety may have, that we may give the bearing wood the most favourable position.

The best time for pruning is an unsettled question. Good authority says that young shoots or small branches may be cut as early in the spring as the sap begins to flow, and larger branches in the summer. Whatever implement is used a smooth cut should be left on the tree.

The apple may be considered as one of the choicest gifts of a Beneficent Creator. When used in its perfect state, it is pleasing to the taste and conducive to health, its natural productiveness giving to all a means of sharing the blessing.

E. C.

King's County, March 25th, 1875.

(From the Amherst Gazette.)

FRUIT-GROWING.

BY T. D., PARRSBORO.

MR. EDITOR,—Sir: I was much pleased with the editorial in your paper of the 5th ult., reminding farmers in this county of the formation of an Eastern Fruit Growers' Association, and explaining the importance of raising fruit. It occurred to me, when reading the article, that if you were to collect the statistics of what is actually done in this way in this county and publish them the farmers would plainly see in them a sufficient guarantee for making further efforts in this direction. To aid you in obtaining such statistics I subjoin a few items of the orchards in this place and their annual production.

At Halfway River, Mr. Daniel Holmes owns an orchard that has been profitable to the family. I have heard it said that the farm was paid for by selling the

apples. They are excellent for eating or cooking and always sell readily in the fall for from three to four shillings per bushel. The production has been probably from fifty to one hundred and fifty bushels yearly. The orchard is now about eighty years old, but not so large as it has been, the trees that died not being replaced by new ones. It is still, however, productive and valuable. Other persons in Halfway River, viz.:—John Hannah, Gaius Lewis, Jos. Jeffers, James O'Regan, Robert Harrison, James P. Fullerton, and Alexander Cook, have small orchards producing from ten to fifty bushels yearly. Some of the trees in these are quite old, having been set out by the old settlers, and notwithstanding they receive but little care, they are healthy and productive.

At Westbrook, Stephen Ruscoe, Wm. Cannon, David Atkinson, Sam'l Holmes, Francis Holmes, Edgar Scott, David Dickenson, Esq., and Caleb Lewis, 1st, have orchards of about thirty trees each, that produce, annually, from twenty to fifty bushels for each owner. The trees are not old and not grafted; but the fruit is good, and each family has an abundant supply for itself, with more or less to sell each year.

On the New Canaan Mountain, David Gilbert, Sr., has an orchard of about fifty trees, from which he obtains fifty bushels or more each year. This orchard is about forty years old. At the foot of the mountain Thomas Brown has a small orchard that yields him from ten to twenty bushels yearly. In the New Canaan Settlement, John Gilbert, Sr., James Brown, and Mrs. Patrick Quinn, have each an orchard of about twenty trees each that each produces from ten to thirty bushels yearly.

At the Cross Roads, Thomas Leake and Charles Leake have each a new orchard; Mr. Leake's is quite young, set out by himself, well cared for, and produces from ten to thirty bushels yearly, partly of grafted fruit. Mr. Charles Leake's is older and larger, set out by his grandfather, the late John Lockart; it produces fifty bushels yearly.

At Pleasant Valley, John and Robert Smith's orchard yields from thirty to sixty bushels annually; it is about eighty years old, and well sheltered from the north and north-east winds by Kirk's Hill; one tree in it sometimes bears from five to fifteen bushels in a year. Further down on the Back Road the following persons have small orchards of about a dozen trees each, which yield their owners an abundant supply for their own use, viz.: Isaac Newcomb, William Smith, Jr., Robert Ward, Esq., Elijah Fowler, John A. Graham, William Smith, Sr., and Alexander Fullerton; most of these are very old trees, having been set out by former proprietors now no more. Isaac Newcomb's is a thrifty young orchard set

out by himself, well sheltered by his buildings and a high hill, and not more than fifteen years old. Four or five miles back from the Back Road the Welton orchard, of fifty or more trees, produces from fifty to one hundred bushels yearly; they are marketed in the adjoining settlements.

At Port Greville, William Wilkison, Joseph Parsons, Charles Hatfield, James A. Hatfield, and Isaac Cannon have young orchards, set out fifteen or twenty years ago, that bear abundance of fruit for themselves, and at the same place John Harnings and the Pritchard orchards of about thirty trees each bear yearly from twenty to sixty bushels each, all very fair fruit for home use.—The old orchard at Grant's, Fraserville, still bears well, and John Fraser's and the Knowlton young orchards are quite productive, each of three from ten to fifteen trees each, bearing each yearly from ten to twenty bushels. Walter Barteau, at Horse Shoe Cove, Cape D'Or, has an orchard, set out by himself about twenty years ago; it consists of about forty trees, some of them grafted, it is on good soil, well sheltered, and bears very well, probably from thirty to fifty bushels annually.

At Advocate Harbor, Edmund Reid has a small orchard of about fifteen trees, set out about twenty-five years ago, that affords quite an abundant supply of apples for himself.

The late Colonel Edward Cole, one of the Loyalists, by whom Parrsborough was settled in 1785, set out on his place at that time a small orchard for himself, and another for the colored people who were his slaves or servants in the United States, then British colonies. They consist of ten to twelve trees each, and, although now ninety years old, are thrifty and bear together from four to ten bushels annually, all of them quite good for ordinary home use, and save the present owner, T. D. Dickson, the necessity of buying imported apples. At Partridge Island and White Hall a few trees are left of orchards that were formerly quite valuable; there are three of them and they bear from five to ten bushels each yearly. George Newcomb, near Mill Village, has a young orchard, some of them grafted trees, which bear from ten to twenty bushels annually. The Berry Orchard, at Two Islands, of about twenty trees, bears from ten to thirty bushels yearly. On the east side of Partridge Island River only a few trees are left of the once flourishing Dickenson orchard; forty years ago it consisted of about thirty trees, that yielded about fifty bushels of apples yearly, for which a ready home market was always found. Since then the place has changed owners several times, and sometimes been occupied by tenants, and the orchard consequently neglected; not more than five bushels are now got

from it yearly.—Daniel McAloney has here a flourishing young orchard of about forty trees set out by himself; they are now only beginning to be of some size and to bear, he gets from them now about ten bushels yearly. Mrs. Cyprian Davison and James McKay have, in this village, each a small orchard of old trees, from which they each gather ten bushels or more yearly.

(Conclusion in our next.)

BARON LIEBIG.

Since the much-lamented death of the celebrated German chemist, the details of his life have been treated in a great number of essays and articles published in the most influential organs of the press, both of Europe and America, by well-informed and competent authors. Therefore, a somewhat closer consideration of Liebig's influence on agriculture and physiology will perhaps command a larger and broader interest than the repetition of mere biographical notes. One point ought never to be forgotten, whenever Liebig's efforts and achievements are being judged—the difficulties he had to overcome, when preparing himself for his later brilliant career, were by far more serious than is now generally believed. Only in consequence of his patient and persevering investigations, and that of other distinguished scholars, the science of nature and the instruction therein have been raised to their present high standard, and made easily accessible; while forty or fifty years ago, young men of high genius and noble aspirations were literally depressed and crushed by the insufficiency of physical and chemical instruction. Liebig himself had to suffer greatly, and often spoke with bitterness of his youth and youthful shortcomings.

In the year 1840, Justus von Liebig first began to investigate the secrets of vegetable and animal life. Fortunately for the result of his researches, he had then already attained high fame as a scientific author and university teacher; nay, even at that time, as far as the science of chemistry is concerned, he already outshone all others, except the widely celebrated Berzelius.

The school for chemistry and the chemical laboratory founded by him in Giessen had carried his reputation to every civilized country, and eager pupils, among them a great many young Americans, were continually streaming to it from all parts of the globe. So his voice could not easily remain unheard, and the new doctrines concerning agricultural chemistry which he proclaimed, quickly spread throughout the learned world, as well as the public in general. The same discoveries made by a young and unknown

professor, might perhaps, in spite of their intrinsic value, have been lost in oblivion, or at least have made their way more slowly, and thus been by far less beneficial to humanity.

The essence of Liebig's researches on vegetable life may be characterized in a few words: he was the first to discover the intrinsic connection between the plants and the mineral ingredients of the soil, and to work out this discovery into a clear and scientific system. It is true, many years before Liebig, even in very remote ages, certain minerals, as gypsum, calcined bones, etc., were employed for manures. But this was a more empirical operation, and no one ever thought of proclaiming the theoretical and scientific necessity of restoring the mineral ingredients carried off in the crops from the soil. The people merely placed gypsum, ashes, or bones on their fields because they had seen good results; but, as to the real cause of their favorable influences upon the fertility of the soil, this was a perfect mystery, and remained thus, so long as the chemists and physiologists of the period inclined to consider the minerals, and the small percentage of ashes contained in the majority of plants, as a fortuitous combination, and thought them the nearer to ideal perfection the smaller their percentage of ashes was found to be.

Previous to Liebig's discoveries, the word "ashes" designated a mere elementary conception; every thing which is left after the burning of wood, coals, or any vegetable matter, was called ashes, and any residue of the kind was considered to be alike in substance and composition.

That all these "ashes" are totally different from each other, and nearly as different as the plants themselves from which they are derived, was first discovered and proved by Justus von Liebig, and this discovery, to which he was led by a series of most ingenious, but also most laborious, experiments, became the chief source of his fame and glory.

Under Liebig's direction, a patient and vigorous staff of assistants made countless experiments in nearly every accessible part of the globe, and analyzed, with the utmost care, the ashes of many thousand different plants. The unanimous result of their investigations proved, to a certainty, the natural coherence between vegetable life and inorganic matter; they showed that every plant of the same kind, whatever may be the substance and the composition of its soil, receives the same mineral ingredients into its frame, and cannot live and grow in a place which is entirely devoid of the minerals necessary to its existence. To cite but one example, the tobacco plant chiefly withdraws lime from the earth, under every zone and in every climate; its cultivation, in a soil absolutely deprived of that mineral, is simply impossible, however liberally

the other conditions of its existence may be provided for.

These results, plainly showing the error which former ages had committed when neglecting and denying the importance of mineral ingredients in vegetable substances, naturally led to a division of plants into several classes, each of which received the name of its principal mineral ingredient; regardless of botanical denominations, they were divided into a few simple classes, according to their predominant contents of lime, kali, silicious earth, etc.

Thus Liebig's doctrine concerning the influence of mineral matter upon vegetable life was firmly established, and nothing seemed easier than to carry it into practical execution. It was no longer unknown what mineral ingredients every plant draws from the soil; nothing else seemed necessary than to convey them in sufficient quantity to the fields, in order to obtain a boundless and never-ceasing fertility. Here we touch upon a fatal moment in the great chemist's life.

Perhaps it would have been better if Liebig simply had offered his priceless discovery to the practical agriculturists, and had allowed the farmers to put his theory into practice themselves, instead of devoting his own exertions to that task. Probably his doctrine would then have made its way sooner and more easily, and, at any rate, a long series of troubles, delusions, vexations, and hostile attacks of all kinds would have been spared to the discoverer.

But the vivacity of his genius allowed him not to restrain himself to mere theoretical investigations; on the contrary he devoted himself, with all the energy of his powerful mind, to the task of popularizing and of carrying them into practical execution.

The opposition and resistance he had to encounter were extraordinary.

It is no agreeable task to speak of the causes of this strange fact; for it must be confessed that both parties, the enthusiastic preachers of the new doctrine as well as agriculturists, had their parts in it. First of all, the deficient instruction of the latter, their ignorance and absolute want of any thing like physical or chemical science, were great obstacles; they did not, and could not understand the technical language in which the new doctrine was preached to them. And then, on the other side, the immoderate zeal of the innovators did much harm; their violent abuse of the farmers' and land-owners' ignorance, narrow-mindedness, and obtuseness produced ill-feeling among the latter, and increased their prejudices. Liebig himself was less guilty than any other of such deplorable rashness, but his disciples often passed the proper limits in the excess of their benevolent zeal; the

author himself, having been one of Liebig's first and most convinced pupils, confesses to have done so.

But all these obstacles—the ignorance of the public, and the occasional mistakes on the part of Liebig's adherents—cannot suffice to explain the persevering opposition which the new agricultural system encountered for so many years, and which even now has not yet completely subsided. The chief obstacle to its speedy and universal adoption lay in its striking, and quite unexpected, practical inefficiency.

Contrary to the discoverer's fond hopes, the artificial manure composed by his orders, and tried on the grandest scale upon every variety of soil and climate, had none, or scarcely any, influence upon the produce of the fields; at any rate, if such an influence could be perceived at all, it was infinitesimal, and too slow to be of any practical value.

Now, the unsuccessful chemist had to undergo a long and dreary period of discouragement, ill-will, and malicious derision. Let us hear his own words about it:

"A real, lasting, and, not to be mitigated, sorrow, was caused to me by the fact that I was unable to see and discover the cause of my artificial manure's inefficiency. In thousands of cases I perceived each of its ingredients operating exactly in the way indicated by my theoretical researches and discoveries; yet, when united, and brought into the shape of artificial manure, they seemed to be worth less."

Sincerely convinced of his doctrine's correctness, the perplexed discoverer was helpless before its practical failure. And yet, a decisively favorable and convincing result was absolutely necessary to keep it afloat, as the opposition to innovating doctrines is nowhere stronger and more tenacious than among farmers and land-owners, to whom the inclination toward routine and the following of old courses is even more natural than to the rest of mankind.

From the beginning, they had scoffed at the idea of preparing manure by artificial means; they had declared aloud that animal action was necessary for its production, and that, as a frequently used phrase somewhat peremptorily said, "The work of nature could never be replaced by the product of a chemist's melting pots!"

The failure of Liebig's artificial manure caused indescribable jubilation in the ranks of the farmers and land-owners; strange to say, they loudly rejoiced to see that efforts which had been made exclusively toward their own good, and toward the raising of their condition and welfare, had been unsuccessful!

(To be continued.)

With pleasure we notice the importation of a Stock Horse, from Maine, into Maitland, Hants. The animal is from the celebrated breeds of Knox and Messinger, he stands 16 $\frac{3}{4}$ hands high and weighs 1250 lbs. and is beautifully proportioned and of a rich brown colour. Although only five years old and untrained to trot, he shows an extraordinary rate of speed. This horse was imported solely by private enterprise at a cost of \$1300.—*Truro Sun.*

Reports of Agri. Societies.

THE ANNUAL REPORT OF KING'S COUNTY AGRICULTURAL SOCIETY FOR 1874.

The officers of King's County Society for promoting Agriculture, in compliance with the Provincial Act of the encouragement of Agriculture, respectfully submit the following report for the year 1874.

In reviewing the transactions of the past year, the Directors feel conscious that it would be a remission of duty did they omit to congratulate the Society on its advanced position, on the interest displayed by members, and the agricultural class generally in this important branch of industry, so peculiar, so essential to their present demands and future comfort. The fixed purpose of this Society, for some years past, has been the improvement of stock for beef, and it is pleasing to note that, locally there is a marked progress in that department, and the gratification would be more enhanced could the remark be more extensively applied. The introduction of improved breeds necessitate a deviation from fixed grooves. Stock of high character is the component of high farming, and, unless the connection is maintained, good results are precarious, therefore we are not unmindful of the fact that progress has not been co-extensive with the expense incurred. If superior animals are an acquisition, extra means should be taken to maintain and keep them up to that standard of excellence which they have acquired, and for which they are conspicuous.

Domestic animals readily adapt themselves to surrounding conditions—farm Stock in particular, and in their good or bad appearance is usually reflected the thrift of the farmer. To attain that standard of excellence, it will be requisite to adopt a course of treatment opposite to that now in practice. In the choice of breeds for a particular locality, and for a specific purpose, regard should be had to the influence that soil and climate would exercise in developing the animal system, also to the too common practice of mixing different breeds on the same farm as incompatible and injurious; amidst such

confusion it is impossible to establish a family type or carry out a desired purpose.

We are conscious of the obstacles to be surmounted in carrying out a systematic course of breeding. Some of the requisites are time, patience and skill; when these have been expended, local prejudice may step in and play an ugly part. If we had breeds in this country adapted to particular purposes we should not go abroad for them, but we shall have to rely upon other countries for a supply as long as this consequent practice exists, a situation that does not redound to the credit of the garden of Nova Scotia. Though the variety of breeds of cattle in England are very great, we have ventured to import only a few of such as are considered the most popular, viz.: the Durham, the Ayrshire and Devon; these having their origin in particular localities shew that climate, situation and capacity of the soil to feed, have co-operated in establishing their peculiar qualities. To the agriculturist Nova Scotia presents many natural inducements yet undeveloped, to the employment of labour and capital. We have extensive dyked marshes that could be made to yield an abundance of the best fodder, rich intervals and hill-side pastures; also sandy plains and stony ridges, each requiring a race of animals especially adapted to it. The climate, with its varied temperature, offers no impediment to raising vegetable products as food fit for man and beast, and, if our brag is worth anything, we can feed to repletion.

MILK COWS.

In submitting a few remarks on this subject we feel conscious of our inability to present any new or original suggestions. It is satisfactory to notice that the dairy is beginning to attract attention; heretofore this important branch of husbandry has been overlooked by our agricultural societies. Milk has special attractions as an article of food, and is indispensable in our nutritive economy. The profits accruing from the dairy attest its importance, and the quantity of milk used in the manufacture of butter and cheese in the Dominion of Canada for exportation is creating a demand in the home market, more especially for the latter article.

The consumption of cheese has largely increased within the last few years, and is becoming a staple article of food more than a luxury. In the products of the dairy Nova Scotia has always sustained a reputation for excellence, and the indications are that it will soon be a leading agricultural interest.

The milk cow is a machine for converting herbage into money, and the more nutritious food she gets the more profit is realized. Good cows are in demand and prices steadily advancing. Latterly

many products of the farm have increased in value beyond their original fixed rates. For butter, which formerly sold at 15 cents, 30 is demanded, and cheese of first quality, at 10 cents, is freely selling at 20 cents, and very few of our farmers are in a position to avail themselves of these extreme market prices. If they are, the articles are not forthcoming in quantity sufficient to meet the local demand. The sudden rise of the dairy interests from comparative nothingness to commercial importance is claiming your attention. Farmers in other localities are uniting and organizing associations for the purpose of advancing the dairy interest, and improve the art of manufacturing through a better knowledge of the properties of milk, and a more extensive acquaintance with the qualities required to constitute a good cow. Such an advance in prices should stimulate you to increased exertion with full faith in the business, having regard to the selection of stock, the quality and properties of the food, as these are the first principles of success in the dairy.

Among our native cows are many that excel as butter producers, yielding on grass an abundant flow of rich milk. These so-called natives, being a mixture of various breeds imported formerly at different periods and suffered to cross and re-cross indiscriminately, have no fixed character except the one very desirable trait of hardiness—roughing it. In breeding from them we have this difficulty to contend against, the great uncertainty of the progeny being as good as the dam, a knowledge of selection possibly would, to some extent, remedy this defect, and, were a determinate course of breeding adopted, employing thorough-bred males, an improvement would be made, and animals reared suited to the various districts of the Province that would rank high not only as dairy stock but combine other desirable qualities. There are a variety of points requisite in a good cow, viz.: the quantity and richness of the milk, the duration of the flow after calving, gentleness and disposition to fatten when dry. Your aim should be to select from your own stock the 'best,' give an abundance of food, good care, and regular attendance. If you have no best, and should hear of a cow that will average a pound of butter a day for six months on a stretch, 'go for' that cow, and don't haggle about the price.

SHEEP.

In this department we have little to present favourable to the production of wool or mutton; although the interest taken by our farmers in this business has not abated, yet there are many obstacles to be surmounted, some of which suddenly arise and fearfully curtail the profits, before this branch of industry can be sustained as a paying investment. The primary object appears to be the produc-

tion of meat, lamb being in the ascendant. Wool is comparatively neglected, as it is not produced in sufficient quantity to make it an article of commercial importance.

Our sheep-husbandry, to be successful, will require to be modified by the application of a more thorough knowledge of the principles of the art. Different breeds of sheep like cattle vary in constitution, habit, and quality of wool. In England, the nursery of high breeding, are found sheep adapted to the various localities of the country; attempts are made with periodical importations of such as are most approved, to perpetuate the breeds in this Province—we are not informed of an instance where it has been successfully carried out. Superior animals of the most popular breeds, viz.: the Cotswold, Southdown, Lincoln and Leicester have been introduced, and, without regard to their characteristics, allowed to roam at large, taking their chance with the sheep of the district. For a limited period the two former will hold out against climate and rough usage, but the latter soon disappear, unless sustained by good care and liberal feeding. The facilities which the country affords to keep and maintain the various improved breeds should make sheep-husbandry a prominent feature in our agriculture. One successful attempt would be speedily followed by another, and a general enthusiasm awakened which would radiate in every direction through the community. The spirit of improvement attending all new and profitable enterprise would lead to increased activity in other departments, to the necessity of applying skilled labour in their management, to a more extensive knowledge of the culture of roots, and a greater use of green crops, better cultivation of the soil, which would induce a more abundant supply of manure, and the greatest care in its application, with the aid of the most approved farm implements. These varied industries in connection, working for the benefit of all, would help to re-suscitate some of the many undeveloped resources of the country. The great obstacle in the way of successful rearing of sheep, and one most difficult to guard against, is the sudden onslaught of dogs; the loss inflicted by their attacks is much greater than the profit derived from the flock. The loss throughout the country annually amounts to a very large sum, and few farmers in the vicinity of towns and villages are willing to risk a flock however small. As consumers of meat we are all interested in having good lamb and mutton cheap and abundant, and, on the question of rates we are all very sensitive. Now here comes indirectly a tax the magnitude of which we have no adequate conception of. On the farmer it falls in many instances with ruinous ef-

fect, and deters him from pursuing what would be a profitable business. No man is willing to invest money in thoroughbred animals at a cost of thirty to fifty dollars apiece and run the risk of having them destroyed or maimed by dogs. Thirty years ago the bears, in their attacks, were not a circumstance to the present generation of curs. The havoc made the past year by *Canis major* and *minor*, is unprecedented; reports have come to hand from different quarters of losses sustained, different individuals report two, three, six and nine, all choice animals, lying round in promiscuous mortality. The difficulty of knowing 'whose dog' leaves the evil without redress. Farmers should take hold of this matter in earnest, and insist on having the tax on dogs made imperative, otherwise sheep husbandry will continue to make slow progress. If the owners of dogs on the rampage were compelled once to pay the cost price of a heavy Lincoln or Leicester it would give them a prominent idea of the value of mutton, and would serve as a gentle hint, on the score of economy, to dispense with the useless services of their prowling "automata" suddenly.

SWINE.

In this class we have little to notice; all of you appear to rest so well satisfied with the pigs that we should like to congratulate you on your felicitous repose. The rise on two cents on the pound no doubt will stimulate you to look sharper after the sty, and give more attention to the selection of the male you desire to breed from. The catalogue is as long as an auctioneer's list, and embraces a variety of breeds from the large Yorkshire down to a Porcupine; you have pigs with the hide of a Rhinoceros and the wool of a Southdown—no doubt they would be profitable if you could manage to shear them. You have long haired pigs, short haired pigs, and pigs without wool or hair, the latter sporting a skin as thin as a wafer, and as bright as polished parchment. If you fail to make a judicious selection the farrow will be a squealing witness against your science in pork; so don't trust to luck, and when too late find you have had the wrong pig by the ear.

Many persons object to high grade pigs with thin skin and little hair, the climate being too cold for them; they are certainly more sensitive to cold than the coarser breeds, and if not properly cared for will consume a great amount of food, but in pens so constructed as to exclude drafts of cold air, and supplied with plenty of dry litter, the whole economy is reversed, a change is at once perceptible, the animals being satisfied with half the quantity of food, and luxuriating in a good bed of straw, a large amount of valuable manure is made in the course of the year, which

may be shunted into corn or onion ground with nitrogenous effect; the animal, instead of being a noisy ravenous hog, assumes the dignity of a well-bred pig, and will winter as well in our climate as any other of the improved breeds; all he wants is calm repose.

FIELD CROPS.

With a few exceptions, we can report favourably of crops throughout the various districts. Our hay crop has been large, and generally secured in good condition; this will enable farmers to carry their stock through with greater freedom of feeding, particularly young cattle, which, under a false impression of economy, are often compelled to subsist on the coarsest fodder. Some contend that such treatment is the best way to rear good milkers, as it tends to enlarge the capacity for food. It may increase the size of the stomach but two out of five usually cave in before grass comes, being "too poor to carry the load," and the tanner receives an addition to his stock. If capacity for food is an indication of good milking properties, it is certainly desirable to have capacity, but we shall most certainly hesitate before endorsing such practice in order to procure it. With the Ayrshire, and its reputed good qualities as a dairy cow, you are familiar; she possesses the external marks of a good milker; prominent among them are the large udder and capacious stomach, these are what the Ayrshire man admires; in breeding these are the first points for consideration. But we must not assume that the genuine Ayrshire cow has been reared on inferior fodder, rather the effect of continued care through a series of years on the part of eminent breeders, men who possessed a knowledge that enabled them to shape the animal and bring in the desired parts. There are some things you know and a power of things you do not know, and the sooner you begin to inquire into some of the many hidden facts or mysteries in connection with the farm the sooner you will start clear of much of that hap-hazard work now in practice; you know it is wrong to sell down the hay bay, and put the stock on short allowance in the spring of the year, but you do not know what you lose in the long run by so doing, by the diminished manure heap, the slender amount of roots, and the decreased value of the farm in its lessened fertility; however with plenty of good hay we shall expect you to turn out stock something more than ordinary. We should like to extend our remarks on this subject if we had time, as we feel satisfied that it would be more economical to dispose of the hay in the shape of beef, young stock, or dairy produce, than shunt it on to the rail.

WHEAT.

Of this cereal it may be observed that

for a long period it has occupied but a small area in our agriculture, the general impression being that it is subject to casualties over which we have no control. From recent enquiries we are induced to believe that the rejection of this grain from our vocation putakes more the character of a superstition than strength of will. Of late years, and the past season in particular, the results are most satisfactory. Although the breadth sown was small in comparison with other crops, yet we are not without examples to show that in the hands of painstaking men it can be successfully grown. Like other products of the soil it is subject to atmospheric influences, but not more so than some other conspicuous crops, if more attention were given to the selection of seed, especially the early ripening varieties, the proper adaptation of soil to the crop, a liberal application of manure, well composted and thoroughly incorporated with the land, an essential point to be observed in the production of grain, in fact seed of all kinds, with extra care in the cultivation, for thorough culture not only promotes the growth of plants, but acts like a charm on weeds, often preventing the ravages of insects which in some instances are equally as injurious. With a little attention to the foregoing principles we shall indulge the hope that the weak credulity in the fallibility of this cereal will be rooted out before the advent of the next harvest-moon.

BARLEY.

In this grain a falling off from last year is generally noticed, both in quantity and quality. As this is not a very interesting theme, and, if further information is required, we refer you to the miller who does your grinding; he will readily respond to your inquiries, and be likely to say more than your suffering organs care about bearing. If you are let off without extra toll for the labour of cleansing the grist from foul seed and other unpalatable and indigestible adulterations, express your gratitude.

OATS.

Oats are generally reported a fair crop, especially on uplands. The estimated yield, in comparison with the three preceding years, may be taken above medium. Usually this cereal is sown in early spring on recently turned lee. In connection with this practice is the uncertainty of reaping a full harvest. Unfavourable weather at that period may retard the work; unless the braird is forward and firmly established by the end of June, the high temperature of midsummer will be a serious drawback both to the quantity and quality of the kernel. This method savours of the "old rut" practice of former years, when a crop of oats was considered necessary to disintegrate the sod preparatory to the reception

of some other product the following season. With the modern improved farm implements it is doubtful whether a continuation of this usage is to be recommended for a deteriorated soil, unless in special cases. With regard to the quantity of seed requisite to sow an acre we have nothing definite. The inferences drawn by men whose knowledge rarely extends beyond their own practice involves the system, if it may be so styled, in mist. One man considers three bushels a fair allowance, another that four are about the thing, and some assert that six are none too much. Such conflicting statements tend to the conclusion that this old time practice is not the most rational, and is more alied to chance than to science. We venture to suggest (to members) some carefully conducted experiments with specimens of improved seed on well prepared ground, although it should be of small area, and report the results with attending circumstances. If you look to the land as a means of support, give the land a chance to show what it can do; "turn about is fair play."

MAIZE.

The quantity of Indian Corn raised during the past season is not equal to that of previous years. On light loamy soils, having a level surface, the yield was satisfactory; the same may be said of slaty ground, but on clay loams it was much retarded in the early stage of its growth, by the atmospheric depression that prevailed throughout the month of June; and the absence of that congenial warmth usual to the months of August and September was a further drawback to its maturation. The importance and value of Indian Corn are well known to every practical farmer, and, to judge from the quantity annually imported, also to such of them as are not merely speculative; some are of the opinion that, with the present state of the labour market, it is cheaper to buy corn than to raise it. This may be good economy for those situated near a market, who dispose of their products instead of feeding out their crops to stock upon the farm. But the majority of farmers are not so favourably situated, and many have long distances to travel to a depot, or shipping port, over roads which, in the spring and fall months, are promiscuously pasty. In their case it is better to raise corn than to buy it. This crop possesses some advantages over most other grains. The seed costs but little, and it requires little attention in haying time; it ripens at a period when other cereals are garnered, taxing the labour of the farm when there would be naturally a slack time. It is also comparatively sure, being subject to few casualties. Protracted wet weather and early frosts are occasional drawbacks, but even these do not prevent the careful farmer from having good returns. For cattle, swine

and poultry, as a fat producing element, it has no equal, and in the household economy we know how to appreciate it. The most common mode of culture is to plant in hills three to four feet apart; good results have been obtained where the drill system was applied. In either case it is now generally understood that it should not be hilled up as was the custom of former years. Further allusion as to the mode of production is not necessary; as practical farmers you are already familiar with these from experience. Therefore we suggest that you put your experience to the test, extend the area of your corn patch, and endeavour to improve the quality of the grain, selecting the largest, earliest, and most perfect ears for planting. You will please walk into that corn.

(Conclusion next month.)

ARISAIG AGRIC. SOCIETY, ANTIGONISH CO.

The annual general meeting of the Arisaig Agricultural Society was held at Arisaig, on Wednesday, the 1st Dec., 1874. The President in the Chair.

An Auditing Committee was appointed to audit the Treasurer's account, when all was found correct.

On looking over the list of members in the Treasurer's hands, it was found that it contained 43 paid up members.

The following were then elected officers for the ensuing year:—*Pres.*—H. McAdam; *Sec'y.*—Donald McDonald; *Treas.*—H. McAdam. *Directors.*—Joseph McDonald, John A. McGillivray, Dougald Grant, Stephen Gillis and M. McDonald.

John Cummings, Esq., of Upper South River, in this county, was appointed representative for District No. 5, to the Central Board.

The Treasurer's account is as follows:

Arisaig Agri. Society, in account with Hugh McAdam, Treas.

Dr.	
To bal. from 1873.....	\$ 3 43
Paid G. P. Henry, for Bull.....	44 89
Alex. McEachren, feeding do.....	13 25
John A. McGillivray, trip to purchase bulls.....	4 00
D. McDonald, two trips to Antigonish.....	3 88
Stephen Gillis, feeding Bull.....	10 88
M. McDonald, trip to purchase Bull, and keeping do.....	5 60
Dougald Grant, feeding Bull.....	5 00
Bull Calf, purchased.....	23 06
Driving same from Cape.....	25
30 feet chain.....	3 00
Stationery.....	75
Wintering Bull Calf.....	20 00
" ".....	16 00
" ".....	18 00
	\$170 51
Cr.	
By Government grant.....	\$102 00
Sub. of members (43).....	53 00
Proceeds Bull sold.....	18 00
	\$173 00
By bal.....	\$ 2 48
HUGH MCADAM, Treas.	

The sheep imported last year from P. E. I. turned out well.

The Society, in addition to the sheep, have three grade bulls, one Devon, one Short Horn Durham, and a calf got by Mara Duke. The latter, from appearances just now, bids fair to be good stock.

The Society failed to procure some good Black Seed Oats this spring, but they intend making another attempt next spring. Crops of all kinds have been fair. Hay abundant.

HUGH MCADAM, *Pres.*
D. McDONALD, *Secy.*

Advertisements.

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One Hundred Roses, small, assorted, named 6.00
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