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

VOL. IV.

HALIFAX, N. S., FEBRUARY, 1884.

No. 42.

CENTRAL BOARD OF AGRICULTURE, 1884.

Government Member.—Hon. A. Gayton, Commissioner of Works and Mines.

Member for District No. 1, including the Counties of Halifax and Lunenburg:—Major-General Laurie, Oakfield.

Member for District No. 2, including the Counties of Kings, Annapolis and Queens.—Colonel W. E. Starratt, Paradise.

Member for District No. 3, including the Counties of Digby, Shelburne and Yarmouth.—Charles E. Brown, Yarmouth.

Member for District No. 4, including the Counties of Hants, Colchester and Cumberland.—Israel Longworth, Truro.

Member for District No. 5, including the Counties of Pictou, Antigonish and Guysborough.—David Matheson, Pictou.

Member for District No. 6, including the Counties of Cape Breton, Richmond, Inverness and Victoria.—John McKeen, Mabou.

President.—Major-General Laurie, Oakfield.

Vice-President—Israel Longworth, Truro.

Secretary and Treasurer.—Dr. George Lawson, Halifax.

Executive Committee.—Colonel W. E. Starratt, Paradise; Israel Longworth, Truro; the Government Member, and the President of the Board.

We regret that owing to press of matter, a number of papers and communications that we were anxious to publish at once have to be carried over to next number; which, however, is already partly in type and will be published without delay.

At a meeting of the "NATIONAL PIG-BREEDERS," held at the Inns of Court Hotel, London, on the 5th February, Lord Moreton, M. P., presiding,—H. R. H. the Prince of Wales was invited to become patron. The Editing Committee was to be elected on the 27th February and the first volume of the Herd Book was to be proceeded with at once. Separate Committees, consisting of Knights, Military Captains, and Noble Lords, have been appointed for the several breeds. It is evident that porkers are socially on the rise.

I AM pleased to inform the readers of the JOURNAL that the Messrs. CHASE have made an IMPORTATION OF LIVE STOCK this winter from Ontario, consisting of a Short Horn Bull and Cow, an Oxford Down Ram and six Ewes. The stock was personally selected by Mr. Oscar Chase. He informs me they are from the well-known and far-famed herd of G. and W. Watt, Salem. The bull is grandson of their stock bull, Brampton Hero, the cow is half sister of the same bull. The bull Brampton Hero has stood at the head of Messrs. Watt's herd for five years, proving himself famous as a stock getter and prize winner in Ontario.

We wish the Messrs. Chase every success, and trust their importation will give a new impetus to the breeding of Short Horns in Cornwallis.

Respectfully submitted,
T. B. JACQUES.
Cornwallis, March 4th, 1884.

W. JAKEMAN, *Provincial Veterinary Surgeon*, will visit the several Agricultural Districts of Nova Scotia, under arrangements made by the Central Board of Agriculture, of which notice will be given from time to time, and he will be prepared to treat cases of Domestic Animals suffering from Disease or Accident, or requiring operations performed.

Scale of Fees (modified under arrangement with Board):

Visits, advice and prescription, \$1 for first and 50 cents for each succeeding visit. Medicines extra at reasonable rates.

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

When called specially to a distance at places or times not advertised, the charge will be \$5 per full day, and actual necessary travelling expenses.

Information as to the arrangements for Mr. Jakeman's visits to the several Districts of the Province may be obtained at all times on application to the Member of the Board for the District.

THE Jersey Bull *Litchfield 15th*, presented to the province by F. Hatchford Starr, Esq., of Litchfield, Connecticut, after being quarantined at Dartmouth,

was allowed to remain there during the greater part of the season of 1883. On 31st July, 1883, he was sent to Truro, and kept there until the beginning of February, 1884, when he was transported to River John. The bull did not retain his popularity in Truro, having caused the Jersey breeders there several disappointments. He has been in careful hands ever since his arrival in the Province, and the Board hope that he will prove useful among the Jersey herds at River John.

During 1883, the Potato Beetle appeared in several Counties of the Province. The Board at once mailed Circulars to persons in the infected districts giving full instructions how to deal with the enemy. It is believed that vigilance on the part of potato growers in carrying out the instructions given will effectually prevent the spread of this pest to any serious extent in this Province. Copies of the Potato Beetle Circular may be obtained on application to Members of the Board in the several Districts, or to the Secretary of the Board, at any time, in quantities sufficient for distribution in any localities in which the Beetle may appear.

The Pictou Agricultural Society exerted praiseworthy vigilance in dealing with the intruder, as appears from the Society's Report:—"In the last annual report reference is made to the great danger of the spread, and consequent mischief of the Potato Beetle. A Committee was appointed by the Society last Fall (1882) for the purpose of taking steps to prevent the spread of this insect, and circulating information regarding the best way of exterminating it. The said Committee gave the matter very earnest and faithful attention, and had a circular issued containing the best information obtainable as to its migration, food, general history, and particularly the best remedies for destroying it. These circulars were distributed in all districts of this side the county, and it may be here stated that Professor Lawson, having received one of them, was so highly pleased with them that he ordered a large number of them to be printed and sent to him for distribution in other portions of the Province. Your Directors have very great pleasure in stating that the dreaded results of this pest have not been nearly so great as was feared, and they firmly believe that this resulted entirely from precautions taken through the information derived from the circulars issued by the Committee, and they would suggest that the Society record their high appreciation of the efficient manner in which the Committee performed their work."

The Board suggest to other Societies throughout the Province the propriety of

watching with care for the advent of the Potato Beetle in their districts, and of adopting with alacrity the proper remedies.

LIST OF GRANTS TO AGRICULTURAL SOCIETIES FOR 1883.

<i>Antigonish County.</i>	
Paradise Agri. Society.....	\$ 47 18
Clements do.....	50 28
Annapolis do.....	43 08
Laurie do.....	41 02
Nictaux do.....	41 02
Eastern Annap. do.....	62 57
Clarence do.....	73 85
Bridgetown do.....	41 02
	<u>\$400 00</u>
<i>Annapolis County.</i>	
North Grant Agri. Society.....	\$100 85
Antigonish do.....	138 13
St. Andrews do.....	73 79
Bayfield do.....	67 23
	<u>\$400 00</u>
<i>Cape Breton County.</i>	
Christmas Island Agri. Society.....	57 49
Sydney Minec & Little Bras d'or Soc.	63 61
Sydney Forks Agri. Society.....	55 05
Boulardarie do.....	50 15
North Sydney do.....	64 16
East Bay do.....	56 27
Sydney do.....	58 27
	<u>\$400 00</u>
<i>Colchester County.</i>	
Londonderry Agri. Society.....	\$ 50 76
Waugh'r River do.....	41 63
Earltown do.....	57 87
Stirling do.....	40 61
Brookfield do.....	42 64
Shubenacadie do.....	13 20
Bass River do.....	42 63
Low. Stewiacke Agri. Society.....	61 93
Onslow do.....	48 73
	<u>\$400 00</u>
<i>Cumberland County.</i>	
Parrsborough Agri. Society.....	\$ 41 03
Amherst do.....	42 05
Middleboro' do.....	80 00
Minudie and Barronsfield Agri. Soc.	42 05
District Three do.....	71 78
Mapleton do.....	41 03
Athol do.....	41 03
Malagash do.....	41 03
	<u>\$400 00</u>
<i>Digby County.</i>	
Digby Northern Agri. Society.....	\$ 85 00
Weymouth do.....	70 00
Hillsboro do.....	175 00
Digby Central do.....	70 00
	<u>\$400 00</u>
<i>Guyssborough County.</i>	
Argyle Agri. Society.....	\$ 88 00
Guyssboro do.....	82 00
Milford Haven do.....	80 00
	<u>\$248 00</u>

<i>Halifax County.</i>	
Lower Musquodoboit Agri. Society...	\$ 77 30
Upper do do.....	83 00
Halifax Co. Agri. Society.....	77 30
Dartmouth do.....	162 31
	<u>\$400 00</u>
<i>Hants County.</i>	
Maitland Agri. Society.....	\$ 70 65
Elmsdale do.....	51 75
Newport do.....	90 53
Windsor do.....	119 41
Falmouth do.....	39 80
Shubenacadie do.....	27 80
	<u>\$400 00</u>
<i>Inverness County.</i>	
Whycocomagh Agri. Society.....	\$ 58 51
Canso do.....	44 68
Lemoine do.....	54 25
R. Dennis do.....	42 55
Strathlorne do.....	93 03
N. E. Margaree do.....	42 55
Mabou and Port Hood Agri. Society	63 83
	<u>\$400 00</u>
<i>Kings' County.</i>	
Canning Agri. Society.....	\$ 62 54
Tremont do.....	29 97
Kentville do.....	65 15
Somerset do.....	75 57
Grand Pre do.....	28 66
Aylesford do.....	56 68
Port Williams do.....	81 43
	<u>\$400 00</u>
<i>Lunenburg County.</i>	
Centreville Agri. Society.....	\$ 80 56
Mahone Bay do.....	114 49
Lunenburg do.....	130 04
Bridgewater do.....	74 91
	<u>\$400 00</u>
<i>Pictou County.</i>	
Pictou Agri. Society.....	\$ 76 65
Millbrook do.....	59 04
New Glasgow do.....	126 87
River John do.....	44 93
Lorne do.....	37 88
Pine Tree do.....	54 63
	<u>\$400 00</u>
<i>Queen's County.</i>	
Caledonia Agri. Society.....	\$ 82 00
Liverpool do.....	192 00
Brookfield do.....	82 00
	<u>\$356 00</u>
<i>Richmond County.</i>	
Lennox Agri. Society.....	\$100 00
Richmond do.....	82 00
Isle Madame do.....	162 00
	<u>\$344 00</u>
<i>Shelburne County.</i>	
Shelburne Agri. Society.....	\$ 93 00
Barrington W. P. Agri. Society.....	108 00
	<u>\$206 00</u>

Victoria County.

Middle River Agri. Society.....	\$140 00
St. Ann's do	90 00
Baldock do	82 00
Christmas Island Agri. Society.....	20 00
	<u>\$344 00</u>

Yarmouth County.

Yarmouth County Agri. Society.....	\$250 00
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In view of the small amount of grant which it has been in the power of the Board to assign to Societies in several of the counties where a large number have been established, the Board have renewed the recommendation, contained in their Report for 1882, viz.: That the County Grant to Agricultural Societies should be increased, with a view to their greater efficiency, and that the number of Societies in a county should be limited, for the reasons set forth in that Report (page xxxi.) In reference to this matter the Clements Agricultural Society, in Annapolis County, reports as follows:—"We sincerely hope that the recommendation of the Central Board to the Legislature to increase the county grant to Societies, with a view to their greater efficiency, may meet with the consideration it deserves. That the multiplication of Societies in counties be in some way restricted, is greatly desirable. Annapolis has now seven Agricultural Societies, and the small amount received by each from the grant is quite insufficient to materially conserve the interests of Agriculture in our County."

At last meeting of the Board Mr. Brown called attention to the small proportion of grant available under the present terms of the Act for large County Societies. Thus, whilst in several counties the grant amounts to about two dollars for every dollar subscribed, so that the four Societies in Halifax County subscribe a total sum of \$207 and obtain grants to the amount of \$400, yet in Yarmouth County, where the County Society subscribes \$425, more than twice that of Halifax, and annually carries on an extensive County Exhibition, the grant amounts only to \$250, or little more than half that of Halifax County.

To the Editor Journal of Agriculture :

WINDSOR, N. S., Feb. 12, 1884.

DEAR SIR,—I have not written for your Journal for some time, but I hope you have still room for an old correspondent. I intended to have applied to the House of Assembly for a small grant to enable me to present two or three farmers of standing, as evinces before the Committee on Agriculture on the Drainage Question; also at the same time to have read a paper in furtherance of the same object; but circumstances have

altered my plans, and I must rest content with my present action. I assume this work myself only on account of the position I have held as a writer on the subject, and from the practical experience that I have had in the work itself; the advocacy of it has ceased to be to me by any means a labor of love, not on account of any defect in its usefulness or desirability that experience has shown; the reverse in fact, as my main object in producing impartial evidence was not to show that it (the drainage results) had exceeded my most sanguine expectations, but because the continued opposition, or worse, apathetic indifference, shown by those whose intelligence, education, and position should make them its greatest advocates, had disheartened me. To bring this article within the compass of your Journal it will be necessary for me to condense as much as possible, and, as I have to cover a considerable extent of ground theoretically, this is a somewhat difficult operation, to accomplish which it will be necessary for me to confine myself to statements made entirely on my own practice and experience, at the risk of egotism and the annoyance of making ones own affairs somewhat public; but I confess that I feel extremely loth to abandon a scheme that I have taken so prominent a part in advocating, (I mean the passage of a Drainage Act), and which every year convinces me more and more of its desirability. It is necessary for the instruction of my readers that I should show concisely what my farming position was about ten years ago, after having completely drained and subdued my own little farm of sixty acres, as I thought that I could work to advantage by largely increasing my area, even at the risk of borrowing money for working capital; this I failed to accomplish, as I was fairly told by the Halifax capitalists that I was ahead of the times, although no doubt right in my ideas. I was then of course involved in numerous difficulties, and only my little farm left in my hands, without stock, capital, implements or anything to work with, and, to make the matter worse, a large portion of the best part of the farm was in fallow, that is, ready for grain and grass seeds.

The farm was advertised for sale to cover any pecuniary liabilities, about the first of July, and, as there were certain reasons which made it doubtful whether a sale could be effected, I requested the parties who had advertised it to postpone the sale for about two months, to give me an opportunity of seeding the land with grass and grain. This very reasonable request was refused, and the result was exactly what I anticipated, the rich drained land became immense thistle beds, the object of censure to every

passerby as the final result of the so called English farming, and, owing to the extremely disadvantageous position in which I was placed, where I had not the control of the farm myself, although seven or eight years have transpired I have only now come to the last of these fields in rotation, so that you may easily imagine, sir, what the loss has been to me for want of the few facilities that are given in every so called civilized country. I wish your readers to fully understand that I imply censure to nobody, certainly not to private individuals or companies of any kind, for I believe that the disadvantages that I have labored under are what every one must expect who takes an advanced position in any thing, and it is only by these personal, although unwilling sacrifices, followed by judicious and intelligent legislation that the benefits of civilization are extended to the multitude. I have a great horror of the man that is never appreciated, or thinks that he is not, so that should any of you feel inclined to drop the paper from a lack of interest in my doings, I can assure you that I shall only refer to them as necessary testimony to the advantages to be gained by following a like system, avoiding what was evil and improving on that which was good.

I will not enter into details as to how the farm has been managed for the last seven or eight years, or since the time before referred to; of course things were not satisfactory to me, there was neither sufficient capital nor skill to do such a farm justice, however I managed to exist and keep up a tolerably good rotation, which is everything—and the thorough drainage did the rest, or in fact I should almost say everything, as even the rotation could not have been kept up without it. The way I managed may be useful and amusing, as it was certainly not accomplished by any royal road, as the farm was let on the halves. I had nothing but my share of the crop for expenses, and, to save any deterioration of the property, I annually provided artificial manures in sufficient abundance to complete the root crop, about four acres; this, if it did not procure the heaviest yield, at least ensured a certain portion of the farm being cleaned and worked every year, the great secret of success on a farm. Sometimes losses occurred from downright bad farming, and often from want of pluck, but that the main object was gained, that is the keeping up of the actual, not imaginary, value of the property, I will proceed to show from incontrovertible testimony. One little episode in connection with my farm experience, and which is worthy of notice, occurred last March, my half-worker, or partner I suppose you call it, gave me about a week's notice to quit,

and worse still, taking all the manure away. Now I don't wish to remark any further on this than that it appears to be getting to be a common custom, and certainly does not tend to induce that feeling of respect and confidence which the farming community should have for one another. To many in my position the harm done might have been very serious, as, having been hitherto unsuccessful, those interested pecuniarily in my operations would hardly be inclined to allow me much latitude; however, fortunately, on account of the reputation that the farm had acquired, entirely on account of the draining, I had immediate applications and selected a partner having at least as much working capital and skill as one could expect. Of course we worked under disadvantages. Our barn yard manure was limited, and I had no time to take the depth of my new manure, but I still determined to stick to the old test and maintain the fertility of the soil at any sacrifice, so the barn-yard manure was supplemented with an increase of artificial manure to keep up the rotation, and a seven acre mowing field was thrown out to pasture to be only half stocked. And in the fall a good swarth of grass could have been cut on any part of this field. I dwell somewhat on the operations of this year, as the value of the farm is made by applying the annual return to capital, this year being taken as the standard, as I know that by this method I cannot be deceived in the future but can always calculate on an increase. The crops were all light and prices realized small, and I am confident that by more careful farming from fifty to seventy per cent. could be easily added to the total yield with but small increase of working expense. Still the whole farm having been worked one time or another, every acre contributed its share, and the total result was sufficient to yield me, clear of expense, a return of nearly six per cent. on double the sum that I originally paid for the farm, which, being in a settled locality was pretty high. Now I can either lease or rent the farm to good marshes at any time, reserving the house and a certain quantity of land for myself, so that in spite of the opinions of outsiders, the farm is worth to me, as long as I reside on it, at least three times the original cost, counting nothing for embellishment, &c., in the way of ornamental trees, and which the passerby can easily imagine has been a large item. Of course I shall not be foolish enough to give a lease, based on such farming as last year's. Our failures last year were partly unavoidable, partly the result of the penny-wise, pound-foolish system. The season was too dry for superphosphate, and great loss occurred by not attending to the roots in time. My new

partner rather opened his eyes to the benefits of machinery when he found us running out our superphosphate at the rate of one ton per diem, and without any handling, for which I am indebted to your recommendation to Messrs. Gowor & Co. So much for the so called English system that I hear so much about, but really do not know what people mean when they say you can never make English farming pay! never make our people take up English ideas, and so on. My endeavor has been to grow crops in the most economical and practical way, I don't care whether the ideas are borrowed from the English, Americans or Chinese for that matter, I certainly gave the Nova Scotian system so much in vogue at that time, (marsh mudding and other methods), a fair trial, with the result that my capital was nearly all sunk before I had laid a single drain or accomplished anything that could be said to add to the permanent value of the farm, and yet I find on reference to my books that in 1863, when the working expenses of the farm were far greater than those of last year, the cash returns were only one-fifth. I hope your readers will not for a moment imagine that I am attempting to show that farming can be made profitable in Nova Scotia, that mine or any certain style of farming should be adopted to the exclusion of all others. No business or enterprise can be called a success unless the operator can show a clear dividend of at least six per cent., and also command his original capital in toto at a short notice. This I certainly cannot do. There are also many farmers to whom I must tender the palm, at least for making money on a farm, if not by what would legitimately be called farming, as they have commenced without any capital. My object has been to put a plain statement of facts before the public, so as to remove if possible many deep rooted and existing prejudices, which I believe to be inimical to all progression, not only in farming but in everything.

The reader cannot fail to observe, after a careful perusal of the foregoing, that draining might be made to play a very important part in the farming career of any intelligent farmer, but unfortunately there is the reverse or dark side of the picture, which can only be removed by legislation, to accomplish which has been the object of the writer in this and previous papers, also in his little pamphlet (English and American Farming). Although on extremely wet land, where the fertility is completely locked up, drainage by itself sometimes accomplishes wonders, it is unwise to trust to anything more than the mechanical effect produced on the soil, and, as the operation is an expensive one, the advanced farmer may in the present backward state of our

farming institutions, find himself in the same position that the cats were after drawing the chestnuts from the hot ashes. This is the more unfortunate, as, although this evil might not occur, still the knowledge that it is not without the range of possibility is enough to damp the courage and enthusiasm of the veriest glutton of farming. The cost of drainage is not so great but that its benefits may be brought within the range of almost anyone, provided always that the payment be arranged for, as is done in Ontario, by annual instalments up to twenty years.

February 24th. I find by your postal card that I must conclude at once, this I am sorry for as I feel that I have not done the subject half justice. My object has been to show that the improving farmer, that is, he who makes two blades grow where only one did formerly, is entirely unsupported, while mere producers receive every encouragement; this is the more unfortunate, as it is not the case in the adjoining Provinces of old Canada, the real welfare of farming is, I am convinced, dependent more on good legislation, taken in the right direction, than anything else. The establishment of schools and farms may be advisable, but no amount of education will make a man a good farmer without experience, it is a dangerous matter learning your drill before the enemy. The mere growing of large crops I found to be a simple matter under my system, in fact too much so, as it tempted me beyond my depth. The passage of a good Drainage Act would, I believe, in a great measure more than supply the want of model farms, as, in all probability, some leading intelligent farmer would set an example which his neighbors would be only too glad to follow, so that every locality might have almost a model farm at their own door.

My operations have certainly revolutionized the ideas of many farmers in this district, and it was for this reason that I wished to present them personally before the Legislature. I have no reason to alter my ideas in the slightest degree as to what means should be taken to make farming a pecuniary success. And I still stick to the old doctrine, as expressed in my little pamphlet and endorsed by the best authorities, avoid locking up your capital as much as possible in permanent investments, such as drainage, buildings, &c. All the skill and knowledge in the world will not prevent the Ontario farmer from working at from 50 to 70 per cent. discount directly he enters the Maritime Provinces. These obstructions can only be removed by legislation.

Your obedt. servant,

ALFRED C. THOMAS.

Please excuse the last part as it was written in a great hurry.

To the Editor of the Journal of Agriculture :

SIR,—I have just finished hauling in my last heap of turnips from the field where they have been stored, and find that as usual they have kept badly. They had sprouted badly—some of the sprouts being five or six inches in length,—and yet they had frozen considerably, especially on the top and along the north side, showing that they had felt the extremes of heat and cold. This is the second winter that I have tried storing in the field, and I am far from being satisfied with the results. My manner of storing was this: I dug a trench about a foot in depth, six feet wide, and long enough to hold 260 bushels when piled up for covering, perhaps twenty feet. I made three ventilators one inch by four inside, with slats placed one end on the ground, and piled the turnips around them, they running about a foot above the top of the heap.

The turnips were dug the last week in October and first week in November, covered immediately with a thin layer of straw and about two inches of dirt. On the 29th November they were covered with a layer of fine spruce boughs and about eight inches more dirt. Last year I covered them with a much heavier coat of dirt, but as they heat so badly I concluded to give them less covering this time. I have tried storing in the house cellar right from the field but they almost invariably heat and rot. I have tried putting them in a building for a week or two and then storing in the cellar, with much better results, but where one is raising them in large quantities this cannot well be done.

I have been thus particular in describing my method, hoping that some of your readers who are more experienced will show me through the "Journal" wherein I have missed it, and point out a remedy.

I have learned to grow turnips without difficulty but have yet to learn how to keep them. I have also learned that they are profitable feed for all kinds of stock, and that with good straw they will make good beef, and am fully convinced that we ought to grow more of them to feed on the farm, and grow ^{less} potatoes for export.

H.

Cornwallis, Feb. 7, 1884.

[We hope some of our readers will give H. and others the benefit of their experience in the storing of turnips. —Ed. J. A.]

CORROD seed meal, such as is not fit for feeding, is being sold and used as a fertilizer. About 300 lbs. per acre is the average quantity recommended. This meal has been used extensively in Connecticut and Massachusetts during the past two years by tobacco growers, with, it is said, satisfactory results.

WE reprint a portion of the Directors' Report of the King's County Agricultural Society, as we think it is deserving of a wider circulation among Agriculturists than it can attain in the Journals of the House of Assembly:—

The past season, notwithstanding the partial failure of the potato crop, owing to an unusually wet spring, has been a fairly prosperous one for the farmers within our district. The soil in Lower Horton, for the most part, contains a large proportion of clay, and many farms are insufficiently drained, and during a rainy spring such land dries very slowly, and seed-time is greatly delayed. This was the case last spring, and sowing and planting, hoeing and haying, were crowded so closely together that the farmer could scarcely overtake them, and in some cases potatoes were planted too late to be hoed more than once, and the blight killed the growing tops, and the crop was dug green, and was light in consequence, and more or less diseased. The average would probably not exceed one hundred bushels per acre, and the market is dull at 25 cents. The potato crop in this locality is largely relied upon for ready money to meet current expenses, and this shrinkage will be injuriously felt. Other crops have yielded fair returns, however, and every other article of produce which the farmer has to sell is commanding a good price, and there is every reason to return thanks to the Giver of all Good Gifts for the health and prosperity with which we have been blessed during the past year. We will now consider the Grain crop. A much smaller area of Wheat was sown than in the past two or three years, owing to a return of the weevil and the uncertainty of the crop. With some farmers this crop was a total failure, while others harvested a fair return. But a small quantity of Barley, Rye and Buckwheat is raised here, the great staple grain crop being Oats. This Grain will come up to the average, some acres on the Grand Fré yielding fifty bushels, and the bushel weighing over the standard. The bulk of the Grain crop has been threshed and garnered (Dec. 4), three two-horse machines in this neighbourhood having threshed about 12,000 bushels, the proportion of all other varieties to Oats being about one-fifth, and the larger part of this fifth Wheat. The total Grain crop within the bounds of the Society would probably reach 25,000 bushels, and, deducting a fifth, we have 20,000 bushels of Oats, the product of a strip of the Township some twelve miles in length by four in breadth. Now, applying this yield in a somewhat reduced ratio to the whole County, and the neighbouring Counties of Annapolis and Hants, we have a large quantity of Oats, and considering their superior quality, and the nutritive properties of Oatmeal

as an article of diet, it is a little singular that there is not one mill in the three counties for the manufacture of Oatmeal. As far as your Directors know, Pictou and Colchester are the only two counties in the Province where it is manufactured. It may be that it pays the farmer here better to sell his Oats for 45 or 50 cents a bushel, and buy his meal in Ontario or the United States, at 4 or 5 cents a pound. We would call the attention of the Society to this matter. The Oat crop is sure and abundant, and can be cultivated and harvested with less expense and labor than almost any other crop raised, and we think oatmeal could be as profitably manufactured at home as wheat flour. Many are ignorant of the value of Oatmeal as a food, and the way to cook it to make it palatable. The meal should be coarse, and a large quantity of water used, and after the first stirring it should be left undisturbed, and boiled quietly nearly two hours. The great secret is to cook it *thoroughly*. Many labouring men think the day's work cannot be well begun without a breakfast of fish or meat, and potatoes and bread; but Oatmeal contains a larger proportion of albumen or nutritive matter, fat, starch and salts than wheat flour, and excels every other vegetable substance in uniting a large quantity of the four alimentary groups. Peas and beans are a little richer in albumen, wheat in starch, and corn a fat; but in producing muscle, which is the same thing as producing strength or labor-power, it surpasses all other articles of food, and at a less cost. A table has been prepared which shows that one pound of labor-power from potatoes costs 94 cents; fine flour 54 cents; unbolted 44 cents; corn 17 cents; beans 15 cents; while from oats it only costs 13 cents. It is, therefore, the laboring man's diet, *par excellence*, and, as it is easily digested, it is also excellent food for children, and it should be a regular article of diet on every breakfast table. The Scotchman's oatmeal has become proverbial, and where can we find a more hardy race, or one endowed with more shrewd common-sense and brain-power? The Scotch both eat and drink it; and, indeed, during the heat of summer there is no drink equal to oatmeal and water for quenching the thirst, and cooling and refreshing the tired laborer. It is no wonder the horse thrives on oats; but we think a part of their nutriment is lost by not grinding them. We now come to the Hay crop, the most important crop grown in this valley; for the farmer depends chiefly upon hay to winter his stock, and upon his stock to make fertilizers for his land. In a few years ensilage will probably be made to largely supplement the dried grass of our dyke land; but at present there are only two silos in the county. It

was feared early in the season that the Hay crop would be a failure, but those fears proved groundless, and the barns are well filled with Hay and Straw. The crop was below the average, however, good dyke cutting one and a half tons to the acre, and poorer quality not more than a ton. During the latter part of November the high tides broke the dyke in several places, and flooded the outskirts, but the gaps were promptly stopped and very little damage done. In view of the unusually high tides of the past few years and the frequency of breaks in the dyke, would it not be wise to give the whole dyke a thorough inspection next spring, and make all the weak places strong?

We next come to the Orchard, which is rapidly growing in extent and importance, and Fruit is becoming a large source of income to the farmers of this valley. Cherries are not counted here; Plums were a light crop and the price high; Apples, the fruit of the Annapolis Valley, and the crop above all others in the near future, were far below the average yield, but they were large, well-coloured, and very uniform in size, and there was a ready sale for them at figures which fully compensated for the shortage. The early, soft varieties, including the Gravenstein, sold in the Boston market at three and four dollars per barrel; the long-keeping varieties have been largely held for the London market, and have already been shipped, (or soon will,) so that they may reach the Christmas market. Orcharding is becoming more and more popular, not only with farmers, but also with professional men and men of wealth in our cities, who have an eye to a good investment, and can also appreciate the pure, cool, health-restoring atmosphere of our garden valley in the summer months, filled, as it is with the beauty and perfume of the pink and white blossoms in the flowery month of June, and later all aglow with the red-cheeked and golden apples among the green leaves. There is not a spot of earth on the globe better adapted by soil and climate to the cultivation of the various kinds of Apples than this valley, and every acre of it, from the Annapolis Basin on the west to the Avon River on the east, might be profitably planted with trees. There is no doubt that money invested in this way would pay as large profits as orange groves in Florida, and be subject to none of the risks of stock in Mexican silver mines. There is now a permanent market across the water for all the surplus Apples we can raise, fruit steamers afford safe and rapid transit, with reasonable freight charges, and the facilities for storage and shipment at both ends of the Windsor and Annapolis Railway, are now first-class. Our Apples cannot be surpassed

in size, color and quality the world over. This was proved by the reception with which C. R. H. Starr's collection was met at the Horticultural Exhibition lately held in England, and the notice it received from the Press. There is every prospect, therefore, that fruit-raising is destined to become the leading industry in King's and Annapolis Counties. There is very little change in the varieties planted. The Gravenstein deservedly holds its place in the front rank; but there is a tendency to plant more of the long-keeping varieties, and not so many varieties in one orchard. The Ben Davis has become quite popular within the last year on account of this quality. It will keep sound with ordinary care the year round, and is bright and of good flavor a year from the time of gathering. Next to the Apple comes the Pear, which is a most delicious table fruit, and would repay a much larger cultivation than it has at present. The crop was abundant, and sold readily. The Bartlett is hardy and prolific, and usually brings five dollars a barrel in our own market.

VICK'S FLORAL GUIDE.—We have received a copy of "Vick's Floral Guide," and, as the firm adds five dollars worth of flower seeds to every editor, it is but meet that every editor, as supreme guardian of the public interest, should look the gift Guide in the mouth. We do not wish to be singular in this respect, nor ungrateful, and therefore commend Vick's Floral Guide, and Vick's vegetable and flower seeds to the attention of our readers. We might have some qualms of conscience in doing this were it not that the Guide is one of the most tastefully got up Annuals issued by any seed establishment in America or Europe, and the seeds sent out by Vick, which we have purchased and grown for many years, besides receiving occasionally as an editorial sop, are always fresh and of first rate quality. We have never heard any one grumble about Vick's seeds, which is the highest compliment we can pay them. The kind hearted old gentleman has gone to his long home, and we are glad to see that his sons are doing honor to his memory by maintaining the honor of the house.

We ought to add that the book contains three beautiful colored plates, full of illustrations, printed on the best of paper, and is filed with just such information as is required by the gardener, the farmer, those growing plants, and every one needing seeds or plants. The price, only ten cents, can be deducted from the first order sent for goods. All parties any way interested in this subject should send at once to James Vick, Rochester, N. Y., for the Floral Guide.

SHEEP require care; more in fact than we generally bestow on them; so much in fact that the mere purchasing of a flock of thorough-breds does not warrant the ordinary farmer in dubbing himself a full-fledged breeder of thorough-breds. The writer has had some experience in pure bred sheep; and has discovered how difficult it is to obtain anything near that point of excellence, in physique, and general development of frame and wool productiveness, of the imported sire and dam. There are, no doubt, many causes for the degeneracy; but our climate and country have nothing to do with it. One great cause is, want of management, and our not understanding the laws of watering sufficiently, to improve or keep pace with our point of departure—the imported parents. Neither is it quite reasonable to suppose that we should. There are things that cannot be learnt in a day, week, month or year, no matter how clearly the system may be explained to us, and the art of watering animals, with a view to improve in both sire and dam, is one of the things; but no matter how clear the law may have been to us, it requires years of continued experience—experience to learn something in connection with the whole, and nothing but that experience can give. This can be applied to lots of other things, outside of the successful raising of thorough-bred sheep. When we hear of sheep weighing from 300 to 400 pounds weight, (alive) as we often do in Leicesters, Cotswolds, South Downs, and particularly the Hampshire, the weight is not attained by the ordinary means of feed and care, but from the day of lambing to the day it carries off a red ticket in the show ring, with it has been a continual feast of all the good things lambs and sheep fall heir to; so that when we see an exhibition pen of broad backed, heavy fleeced four hundred pounders, we may be sure that they have been got up for the occasion; and woe be to the amateur breeder who buys from the lot to start his flock from, and great will be his disappointment if he expected when buying them, with his care, he would be able to raise up a flock like these he bought to commence with.

The above experience is my own, bought and paid for; so that up to date I am a failure as a breeder of thorough-bred sheep. Still, I intend keeping on; and in time hope to learn that little something, that I mentioned before, that is so hard to get; and then I hope to be as successful as others have been before me, under similar circumstances; and that some day I hope to be able in truth to call myself a breeder of pure blooded sheep.

Although it is such a difficult task to

keep your flock of thorough-breds up in the race of yearly competition, it is not such a difficult task to improve upon our natives, and bring them up to an astonishing point of excellence in a very short time. It is with pleasure that I have it to say that great improvement in sheep has been effected within the circumference of the New Glasgow Agricultural Society during the past few years. For instance, the flock of Mr. Alex. McKay, (Squire's son) is worthy of notice. They are undoubtedly good. I am satisfied he can show fifteen to twenty ewes, one to two years old, that will clip to-day, if put to the test, from twelve to fourteen pounds of unwashed wool; and I am safe in saying that five years ago, it would have troubled him to have produced one to clip eight pounds. Last summer he sold lambs that at four months old dressed thirty-five to forty pounds of meat. I myself saw a flock of one hundred sheep last season, and I have good reason to know there was not a solitary one in the lot that would produce as much meat as Sandy's lambs, and some of them were as many years old as the lambs were months, I have taken Mr. McKay's flock as a sample. There are others the same; and, although not in sufficiently large numbers, yet enough to prove to us that by using thorough-bred rams with our native stock, we can produce that class of sheep, so much sought after by the buyers for the markets of the old world.

The above is a fact I would like to bring before the notice of our County Councillors, fearing that in making their award to the District Exhibition Fund they overlooked it.

Now to finish. There are, say, 5000 farms in the County. Let us say there are seven sheep on each farm just for argument's sake; that would give us a total of sheep, of 35,000. Let us suppose we have 35,000 lambs next spring, old stock; that of the lambs we kill 10,000, the remaining 25,000 we allow for yearlings. We will make up a statement in their behalf. Supposing them to be natives, it would be about as follows: 25,000 yearling ewes, sheared, average clip of unwashed wool each, six pounds, 150,000 pounds, at 18 cents per pound: \$27,000; 10,000 lambs killed, weighing each 30 pounds, dressed meat: \$18,000; 10,000 lamb-skins, washed, 30 cents each: \$3,000. This would give us for the year \$38,000. Now, let us take 35,000 improved grades bred from the first cross, and divided into wool and mutton. 25,000 fleeces of wool, such as Mr. McKay's sheep yield, or a little less, say, ten pounds of unwashed wool to the fleece: \$45,000; 10,000 lambs weighing 35 pounds dressed meat: \$21,000; 10,000 lamb-skins, 50 cents: \$5,000.

In the second year, from improved breeds, it would be to our credit: \$71,000; by the old system it would be: \$38,000; adding to our yearly income as farmers: \$33,000. If I am right in my calculations, and I think I am, it would be well for the gentlemen, who gave such an adverse opinion in the County Council, on exhibitions and there being a benefit to the farmer, to study them up, and the causes of the improvements that have been made so far in our flocks.

The above is possible, and would be a probable fact in the near future, if we would only bestir ourselves, and work sharply. It would be well for us to inform our representatives in the County Council, that, while we admire retrenchment and care in not allowing us to be drawn into financial difficulty, we would like them to exercise their retrenchment on some things of less vital importance to their constituents than the cent and a fraction award made to the District Exhibition. At the first blush of thought, Short Line Railways and land damages may seem of more importance to waste time on, than does the slow but sure and true methods of exhibitions to improve the first and lasting industry of a country; and from the present appearance of things—full factories and no markets—agriculture is the only sure source of labor to look to for a few years, until our glutted markets of manufactured goods are emptied.—FARMER JOHN in *Eastern Chronicle*.

On 22nd January Dr. Fowles, Cairnes Lodge, Cupar, Scotland, opened his silo, or, to speak more correctly, displayed his silo and ensilage, as practically it has been opened for several weeks past. A large number (nearly 100) of the principal farmers of the district and some proprietors assembled, on Mr. Fowles' invitation. Previous to inspecting the silo they met in the house, where the Doctor read a very able paper on ensilage in general, and gave a description of his silo in particular. We note the following particulars regarding the silo. The Cairnes Lodge silo is of the most simple and inexpensive character, and is simply dug out in a bank close by the steading. One end is flush with the ground, and the other end made up to the level, the soil excavated being used for that purpose, and the made-up portions being lined with a few battens. This is the only outside expense incurred, the excavating being done by the farm hands during slack time in summer. The soil being of dry firm clay, no building or cement was used, though we believe it is the Doctor's intention to brick a part of the silo before next season. A drain 18 inches

deep was laid below the floor, and 3 feet deep on each side to catch surface water. The silo is 14 feet long, 9 feet wide, and 7 feet deep.

Clover aftermath was the substance used, and the silo contains twenty-three heaped cartloads, estimated to weigh a ton each. The silo was filled at three separate fillings, with a week's interval each time. Eight cartloads of dry grass were first put in, and when this had sunk sufficiently seven loads of soaking wet grass, and then six loads nearly dry; and latterly other two were added. It is stated that in all 14 feet of firmly trampled grass were put into the silo, and now, as a result of the great pressure and fermentation, this has sunk to 5 feet of firm ensilage. The grass was not chaffed, but put in as it came from the field, spread in thin layers and well trampled, eight people being employed, and also a horse when near the top; 1 ton of railway sleepers, 1 ton of pig iron, and 15 inches of earth were then put on, and the silo allowed to settle. After three months it was opened, on January 2nd, and the dairy cows have used it since. The cows are very fond of it, and to-day, when feeding on it in the open paddock, they were offered whole turnips, the bunches were placed on the top of the ensilage; but they put them all out and stuck to the ensilage. The yield of milk has increased about 15 per cent., and the cows are in nice bloom. The quality of the butter is most excellent, equalling, if not surpassing the very best summer make; being rich in color, soft in texture, and very pleasant tasted. When a portion of the silo was uncovered to-day, there was but the very faintest trace of mould, and the whole had a dark brown color and a rich, malty flavor. It was stated that the portion put in wet was hardly so good, but there was little apparent difference.

Much interest was evinced by those present, and although doubts were expressed as to its general use here, where turnips are so successfully grown, still everyone seemed to regard the present experiment as a very successful one; and everyone appreciated the tea and scones, with the excellent butter, the produce of ensilage, with which the Doctor entertained his visitors.—W. MORTON in *Agricultural Gazette*.

If the question, what is milk? were put to the first hundred decently-dressed people whom one chanced to meet in a street the probability is that they would answer in some such fashion as this: "milk is a white liquid, which is produced by cows and other animals, and which is used for mixing with tea and coffee, making puddings, feeding babies, and other domestic purposes." And underlying this sufficiently practical definition we should probably find, if we pursued the inquiry further, the impression that milk

as it comes from the cow, is a liquid of pretty uniform composition, which the owner of that accommodating animal obtains from her in much the same way as we obtain water from a pump, with the somewhat important difference that purchasing and maintaining the cow is considerably greater than that of making and keeping a pump. But in both cases the fundamental idea would probably be that milk percolates through the cow as water does through the pump, by some mysterious process of nature, and without any special intervention on the part of the proprietor of the animal, except where, as is sometimes the case, he confuses, no doubt in a fit of temporary abstraction, the produce of the cow with the iron tail with that of the more costly quadruped, and thereby produces a result of which, unfortunately for him the law is apt to take disagreeable cognizance. The hundredth person to whom the above query was put might probably reply in some such manner as this:—"Milk is an oleo albuminous liquid of organic origin and variable composition, which is valuable for nutritive purposes in consequence of its containing all the elements of a perfect diet in an easily digestible form, and in proportion to the amount of these elements which it contains; it is manufactured by farmers and others with the aid of machines, which are called cows, out of grass, oil cake, roots, and other forms of vegetable raw material, and the consumer generally receives what the trader manufactures for him in the same happy ignorance as to whether he is getting value for his money that the farmer himself often exhibits in regard to the cost at which he produces the milk." Such at any rate would be the sort of definition of milk which would be given by anyone who appreciated the precise nature and origin of this most ancient of dietetic necessities, and the very close analogy which it bears, in regard to its production, to bread, cheese, cotton, cloth, and other articles of daily use, the quality and value of which is known to vary largely according to the way in which they are manufactured.

Let us commence, then, with the consumer. Let us refresh our memories with a brief survey of the composition and character of milk, so that we may see what are our requirements in regard to these points, and how we may assure ourselves that we are obtaining what we want.

In the first place it is well to note that, taking milk of average quality, 870 parts out of a 1000 (i.e. nearly 90 per cent.) are water; or, to put it in another way, a pint of milk will contain only about 2 oz. of water-free nutritive material, or 1 lb. avoirdupois of such material per gallon; which, at the ordinary prices paid by the consumer—viz., 4d. per quart, gives 10d. per lb. as the cost of the water-free constituents of milk, and enables us to compare it in this respect with meat. Now assuming 10d. per lb. as the price of an ordinary joint, such as a leg of mutton, and all wing 20 per cent. for bone, skin, and other constituents which are practically worthless for nutritive purposes, and then taking into account the fact that even where the whole of the nutritive matter is retained in the process of cooking, nearly 75 per cent. of what is left to us is mere water, we shall find that the cost of such meat, when it comes to be applied as suitable material for the purpose of alimentation in our bodies is something over 2s. per lb. of

water-dry constituents. Regarded from this point of view, milk comes out very favorably in comparison with meat, but, of course, the value of this estimate requires to be checked by an examination of what these water-free constituents in each case are. Of the 23 parts of water-dry materials which are contained in every 100 by weight of ordinary cows' milk, a little more than four consist of fat (butter), about the same quantity of albuminoid substances (chiefly casein), nearly five parts are sugar, and but half a part is composed of various salts; or, to put it in an easily-remembered form, the saccharine, albuminoid, and fatty constituents are present in about equal proportions, the sugar being a little in excess of the cheesy element, and the latter a little in excess of the butter. So that, putting the salts—whose actual cost, if purchased in another form, would be very trifling—out of the question, if we were to mix dry cheese, white sugar, and fat (such as beef dripping or lard) together in equal proportions, we should have a compound whose nutritive value would pretty nearly equal that of the water-dry constituents of milk at 16d. per lb. Now cheese contains a little more than one-third its weight of water, so that we may take it when deprived of this element to be worth 1s. per lb.; and assuming 4d. as the price per pound for sugar, and 8d. for that of beef dripping or lard, we find that the total cost of our milk substitute would be 2s. per pound. Hence it is clear that we have in milk a much cheaper food compound of that composition than we can obtain in any other way. But in discussing the nutritive value of milk, and especially in comparing it with meat, it is necessary to bear in mind that however well suited it may be, from the large relative proportion of fat and sugar which it contains, for the nutriment of young animals in which these elements are required to supply the demands of growth, it is not so well adapted for that of adults, especially where the conditions of the struggle for existence involve the necessity for constant repair of the waste which takes place in the albuminoid or muscular elements of the body. To supply 23 oz. of water-free food, which is, according to Parker, one day's allowance for an adult, about 11 pints of milk would have to be consumed, which would represent not only an excessive amount of water to swallow, but far more fat than could be usefully employed by the system.

When we turn to our pound of water-dry meat-stuff, we find that instead of its containing 33 per cent. of fat, there is only about 20 per cent., though this will, of course, vary with the amount of fat that may be accidentally combined with the meat, and that nearly the whole of the residue is albuminoid matter, the amount of saline material being a little in excess of that of milk. It follows, therefore, that taking these points into consideration, milk, looked at as an exclusive food stuff for an adult animal, is very little, if any cheaper, than meat at 10d. per lb. But when we recollect that by supplementing the deficiency of albuminoid material in milk by corresponding material derived from the vegetable world, as we do, for instance, by combining bread with it, we can easily see how, at a comparatively small additional cost, we can so modify milk as to make it the basis of a diet which is far cheaper than animal food and equally nutritious.—*Agricultural Gazette.*

Advertisements.

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

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

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