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JOURNAL OF AGRICULTURE

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

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

VOL. IV.

HALIFAX, N. S., MARCH, 1880.

No. 3.

STATEMENT of Grants to Agricultural Societies for 1879, as authorized by Executive Committee of Central Board of Agriculture, February, 1880, under Act for Encouragement of Agriculture:

ANAPOLIS COUNTY.

Port Lorne Ag. Soc.....	\$ 44 38
Clarenco Ag. Soc.....	55 48
Laurie Ag. Soc.....	44 38
Bridgetown Ag. Soc.....	54 38
Clements Ag. Soc.....	58 25
Paradise Ag. Soc.....	44 38
Annapolis Royal Ag. Soc.....	98 75

\$400 00

ANTIGONISH COUNTY.

Bayfield Ag. Soc.....	\$ 60 99
St. Andrew's Ag. Soc.....	112 06
Antigonish Ag. Soc.....	226 95

\$400 00

CAPE BRETON COUNTY.

North Sydney Ag. Soc.....	\$ 63 33
Boularderie Ag. Soc.....	62 63
Sydney Mines & Little Bras d'Or Ag. Soc.....	81 13
Sydney Ag. Soc.....	79 72
Christmas Island Ag. Soc.....	108 19

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COLCHESTER COUNTY.

London Derry Ag. Soc.....	\$ 52 04
Kartown Ag. Soc.....	48 02
Onslow Ag. Soc.....	55 82
Tatamagouche Ag. Soc.....	39 74
Lower Stewiacke Ag. Soc.....	38 79
Waugh's River Ag. Soc.....	37 85
Brookfield Ag. Soc.....	37 85
Stirling Ag. Soc.....	49 20
Baas River Ag. Soc.....	40 63

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CUMBERLAND COUNTY.

Scotia Ag. Soc., Fox Harbour.....	\$ 42 24
Middleboro' Ag. Soc., Wentworth.....	106 35
Malagash Ag. Soc.....	40 23
Parrsborough Ag. Soc.....	113 64
Amlherst Ag. Soc.....	56 31
River Philip Ag. Soc.....	41 23

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DIGBY COUNTY.

Digby Central Ag. Soc.....	\$178 00
Hillsborough Ag. Soc., Bear River.....	112 00
Weymouth Ag. Soc.....	90 00

\$380 00

GUYSFORD COUNTY.

Guy'sborough Ag. Soc.....	\$156 00
Milford Haven Ag. Soc.....	100 00
Argylo Ag. Soc.....	102 00

\$358 00

HALIFAX COUNTY.

Halifax County Ag. Soc.....	\$146 00
Lower Musquodoboit Ag. Soc.....	82 00
Upper Musquodoboit Ag. Soc.....	84 00

\$312 00

HANTS COUNTY.

Progress Ag. Soc., Elmedale.....	\$ 56 54
Windcor Ag. Soc.....	56 54
Falmouth Ag. Soc.....	57 95
Enfield Ag. Soc.....	56 54
Newport Ag. Soc.....	113 07
Union Ag. Soc. of Maitland.....	59 36

\$190 00

INVERNESS COUNTY.

North East Margaree Ag. Soc.....	\$ 66 95
Mabou and Port Hood Ag. Soc.....	97 06
River Dennis Ag. Soc.....	66 95
Strait of Canso Ag. Soc.....	102 00
Broad Cove Intervale Ag. Soc.....	66 95

\$190 00

KING'S COUNTY.

Union Ag. Soc. of East Cornwallis.....	\$124 83
King's County Central Ag. Soc.....	24 31
Farmers' Ag. Soc. of Cornwallis.....	75 50
King's County Ag. Soc.....	60 06
West Cornwallis Ag. Soc.....	36 03
Aylesford Ag. Soc.....	69 27

\$400 00

LUNENBURG COUNTY.

Mahone Bay Ag. Soc.....	\$ 75 77
Centreville Ag. Soc.....	58 29
New Roas Ag. Soc.....	61 20
Bridgewater Ag. Soc.....	123 86
Lunenburg Ag. Soc.....	80 88

\$400 00

PICTOU COUNTY.

Pictou Ag. Soc.....	\$102 12
Little Harbour Ag. Soc.....	69 79
Lorne Ag. Soc.....	71 49
Millbrook Ag. Soc.....	69 79
Pine Tree Ag. Soc.....	86 81

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QUEEN'S COUNTY.

Liverpool Ag. Soc.....	\$174 00
Mutual Benefit Ag. Soc. of Brookfield and Pleasant River.....	86 00
Kempt Ag. Soc.....	80 00

\$340 00

RICHMOND COUNTY.

Isle Madame Ag. Soc.....	\$158 00
Richmond Ag. Soc., River Bourgoise.....	82 00

\$240 00

SHELBURN COUNTY.

Barrington Head Ag. Soc.....	\$ 80 00
Clyde River Ag. Soc.....	82 00
	\$162 00

\$346 00

VICTORIA COUNTY.

Middle River of Victoria Ag. Soc.....	\$120 00
Baideck Ag. Soc.....	66 00
St. Ann's Ag. Soc.....	140 00

\$150 00

YARMOUTH COUNTY.

Yarmouth County Ag. Soc.....	\$250 00
Yarmouth Township Ag. Soc.....	150 00

\$100 00

SYMPHYTUM PEREGRINUM.

"It is a hopeful sign of a country when the country papers begin to advocate the cause of agriculture."—*Select.*

Dear Sir,— I observe that the plant Comfrey is gaining notoriety through the medium of the local or country papers. I am growing this plant, not as an experiment, but as a field crop. I propose now to give you a limited detail of my experience in dealing with this novelty the past season, and also to forward a sample of the hay, cut first of August, for your inspection, either superficially, analytically or alimentally, optional. I make no pretensions to originality in the manner of cultivation, but, as an act of common justice, I must acknowledge my indebtedness to kind friends for information on that head, especially to Major DeBallinhard, of Digby, who furnished me with plants and mode of propagation; also, to J. B. Bowser, of Grand Pre, Sec'y of King's Co. Agricultural Society, for a liberal supply of roots.

The ground allotted to my plantation, at present a quarter of an acre, is in close proximity with the manure pit, an arrangement that saves labour in supplying the animals with forage, and fertilizing the soil. The manure pit located at one end of the stable is virtually a tank with cemented floor, and all surrounding liquids flow into it, together with the water from the root. A liberal supply is generally at command for irrigation, as occasion may require, which, in a dry time, is of frequent occurrence. This diluting process may be at variance with theory, but practically it works well.

I commenced to propagate my plants the 25th of March, under glass, using a cold frame. The ground was prepared, when dry enough to work, by trenching in manure, a ton to four square rods, and plants set three feet apart each way. The interstices on a part of the ground, was set to lettuce, at the same time, of the Hanson variety, two plants occupying the intervening spaces. Comfrey, in manner of growth, is similar to horse-radish, and, like that plant, may be propagated by division of crowns, root-cutting, and rootlets. If it is the intention to give this plant high cultivation, I am much of the opinion that, from its great yield, four feet by four, would be little enough space between the plants. The intervening spaces could be, at the same time, set with an early variety of cabbage or cauliflower, at the usual distance, 24 inches apart, and lettuce at 12 inches. This arrangement would occupy the whole surface the first part of the season; also, a saving of fifty-three dollars would be effected in the purchasing of plants for an acre at the price agents are advertising to supply by the hundred. By the middle of June the lettuce would be disposed of,

and in July the cabbage would be going into the market or into the cows, which ever way considered most profitable.

In the summer management of cows in milk, I consider house-fed on cut grass, under any circumstances, preferable to pasture-fed, they soon take to a variety of forage. I fed one cow 25 pounds of lettuce, solid heads, as a noon feed for eight days in succession, and it held its own against the best of mixed fodder. When 30 pounds of Comfrey was substituted, a slight increase was noticed in the quantity of milk.

At present I am not prepared to pronounce Comfrey superior to clover in the production of milk, taking clover in its purity. I think it may be fed with less risk, and the yield per acre is much in excess. Clover don't usually get a fair "shako," it is left too long uncut, and one-third of the crop is often a meagre, musty mat. If Comfrey is required for hay, it should be cut at stated periods, any neglect would involve a serious loss, as going to seed for instance. Major DeBallinhard recommends an interval of two months. I am disposed to agree with him. That arrangement would allow of three cuttings, terminating the season about the 25th of September, and afford time for the plants to recuperate under a good winter's coat. Mr. Bowser cut his Comfrey the 24th of May, the last cutting the 22nd of October, making five cuttings; the product from one plant was 31 pounds; the area of ground by measurement five square feet, the yield per acre, 232 tons of 20 cwt. This statement may appear to be "painted," but it must be borne in mind that Mr. Bowser's farm is in the centre of what is called the garden of the Province, and it will be difficult to find a district with soil that can compare with the land of Evangeline.

I am a little curious to know what a man is to do who finds himself suddenly possessed of such a quantity of green fodder. If converted into hay, at the lowest estimate, it would be 25 tons. I find that the rate is seven to one, dried by external atmosphere, and, by artificial heat, eight to one. What I send to you is made out (of) doors, not barn doors, (so correct.) I have no doubt that it will be an acquisition to winter fodder. It does not appear to be liable to any kind of disease, nor injured by frost. Neither does any of the insect tribe trouble it as yet. Grasshoppers light on it, but don't stop, the spines tickle their feet, so they leave for more comfortable quarters.

Comfrey should have a special allotment, and be planted in some place not easily accessible to ordinary culture; like artichokes, once introduced on good ground, it would be very likely to hold its own

I remain, yours, &c.,
W. H. O. HALIBURTON.
Wolfville, Jan. 6, 1880.

The specimen of Comfrey sent by Mr. Haliburton shows very well how rank a plant it is, and may be seen by anyone at the Provincial Museum. We possess botanical specimens of the true plant dried by Mr. French thirty years ago in England, where it had already become established as a wild plant.

THOUGHTS FOR THE HOUR.

A paper read by Sister Mrs. W. E. Starratt, before the Annapolis Division Grange No. 49, N. S., at the Quarterly Meeting, 1879.

"Tis the last night of the old year, the holy midnight hour, and silence, like a gentle spirit, now is brooding o'er the still and quiet world; the earth is wrapped in his snowy covering; the moon rides as serenely, and the merry twinkling stars shone as brightly, as when o'er Eden's fair landscape they cast their friendly light. Within, every sound is hushed, save the ticking of the clock against the wall, for sleep, balmy sleep, has long since fettered the limbs and chained the eyelids alike of the strong man, the impulsive youth, and the helpless babe. It is a time for reflection; and busy memory, faithful to her trust, asserts her authority, and from within the deep still chambers of the heart come voices from the vista of other years, whose tones echo of the long ago, and bring to mind visions bright and beautiful, sad and tearful; and so faithfully does she portray those scenes that in imagination we live over events with vivid reality. Joys long since departed, sorrows we fancied long buried, come before us; sweet forms we loved and early passed to the better land mingle with us as in former days:

"The ghosts of forgotten actions come floating before my sight,
And things that I thought were dead things are alive with terrible might."

As I sit alone in my reverie the taper has wasted, and from the smouldering remains of the fire, "imagination bodies forth the forms of things unknown, turns them to shapes and gives to airy nothingness a habitation and a name." In my imagination figures grand and knightly, weird and ludicrous, leap in blue and yellow light before my gaze; but in all this worthy throng one personage conspicuous for age and infirmity seems most to interest me.

In that bent form, that hoary hair, I recognize one who has long fought the battle of life, and from whose shoulders the burden is about to fall, I cannot mistake. It is the old, the dying year! In one hand he holds a staff, and in the other an hour-glass from which the sands of time have nearly run. With one eloquent with age and wisdom, I much

wished to speak, if perchance my curiosity might be gratified in regard to what the mysterious future had in store for me, but from my midnight visitor came no sign. Eagerly I scanned the closely-written scroll at his feet, but no revelation save that of the past was recorded on that once fair page. And can it be said that eighteen hundred and seventy-nine is so soon to be numbered with the past? It seems but yesterday we welcomed his advent into our world, with joyful songs and happy hearts, and yet the seasons have rolled their rounds. Young hopeful Spring, with springing grass and bursting buds, gurgling streams and laughing winds; Summer, bright and beautiful with full-blown rose and perfected beauty; Autumn with solemn form, bearing in his train the mellow fruit and ripened harvest; and Winter, wild with chilly blasts, frost and snow.

Time, swift merciless Time, is ever on the wing. On, still on, he presses, and for ever. No chain can bind his rushing pinion, and, for him, the weight of sleep or weariness is never known. Exultingly he mocks the pride of man, who while idly dreaming of glory, honor and illustrious deeds, wakens to the solemn lesson: "Time must conquer." The year has gone, and with it many a throng of unrealized dreams. How many plans frustrated, how many airy castles demolished, how many sweet blossoms scattered, by the fury of the whirlwind!

"The bowers we hoped to decorate with beauty
and with bloom,
Are shrouded, dark and desolate, by festoons of
the tomb."

But while castles lie crumbling in dust, and hearts are saddened by disappointed hope, there is much to cheer and brighten our pathway. Old time brings not all of sorrow, all of shade, but, in the tide of years, as in impulsive youth, they come with tardy feet, or, in the swiftly passing years of age, we may ever find bright gleams of sunshine to gladden our hearts. In all the changes that come to us, the sweet legacy of love, pure gentle love, is still unmarked by time's corroding strain.

"Love lifts us to a loftier clime,
For love is still untouched by time."

This heaven-born principle implanted in the heart can never wither or decay.

The poet Southey says:

"They sin who tell us love can die,
With life all other Passions fly,
But love is indestructible,
Tho' oft deceived and oft oppressed,
It hath in heaven its perfect rest."

Love comes to us in many ways, but none so true, so abiding, as that a mother bears her child. In his guileless infancy she holds him to her bosom in a fondness and devotion only known to a mother's heart, and, though in later years he may yield to the tempter, and seem to forget the sweet influences of her love, yet she

never wears in efforts to restore him, for is he not her own loved boy whose waywardness perchance has only served to strengthen her affection? I need not hesitate for proof that a mother's love outlives ambition, avarice, and every other consideration, as innumerable instances present themselves. See bending o'er the coffin of her only son the Empress Eugenie, she weeps until exhausted nature succumbs and the grief-stricken mother sleeps. Would you recognize in that blanched face and silvery hair the beautiful the admired Eugenie of a few short years? Time has roughly traced his lineaments on her lovely cheek, and destroyed the golden sheen of her fair hair, but what needs she? for sorrow has made her indifferent to trifling cares; but love for her princely boy, "whose life was so barbarously sacrificed by the cruel hand of the Zulu," can never, never die. Not for her loved France, from whom she is now an exile, the return of her lost wealth or prestige does she now pray, but for the repose of the soul of him who sleeps, "that sleep that knows no waking." Tis a dainty story, but 'tis said 'twas love, not like that of a mother, but a softer, tenderer emotion that prompted this fair scion of a noble house to encounter the perils of a battle-field—even love for the fair daughter of our illustrious Queen.

Nature, also has been most lavish in spreading before us an inexhaustible source of enjoyment in her beautiful and varied works. In looking over our nature, we discover amongst its most admirable endowments a lively perception of beauty, and it only remains for us to cultivate this germ, and we shall find ourselves surrounded on every side with new objects for admiration and research, for nature is of unlimited extent, and the history of the smallest plant far exceeds our highest powers. Where shall we find, among the geographers, the botanists, the naturalists, one who can unveil to us the mysteries of nature? Much indeed has been done by the earnestness with which many have applied themselves to the analysis of this delightful and fascinating study, the enjoyments of which are so refined and pure, the beauty so congenial to our noblest feelings, and, which, above all other considerations, links us so unmistakeably to the grand and interesting attributes of the soul, that it is painful to think of the multitude surrounded by Nature's loveliness who live unmindful of the charms which she has provided for their gratification, while many who live in the bustle and confusion of the city, and move where the crowd is great, are wearying for the sweet influence of nature, the sunshine and the flowers, the fields and the woods.

Wherever we turn our eyes, beauty is an all-pervading presence—in the heavens

above us, in the rising and setting sun, in the flowers by the wayside, or the tiny shell washed on the shore by the restless billow.

There is beauty, too, in the grand old sea; and who can gaze upon its heaving bosom, or its giant waves dashing upon the rocks, without emotion? for doth not our Father hold the waters in the hollow of his hand? and are they not obedient to his command,—"Thus far shalt thou come and not further." To the world of literature we are also largely indebted for pleasure, as well as information and culture. We should, however, be very careful in the selection, always remembering that the best books have the most beauty.

History we consider not only a most improving, but a most agreeable part of knowledge, making us familiar with the rise, progress or declension of the most flourishing empires of the world, whereas, without this medium, we might have remained ignorant in regard to many most interesting and important facts. History is also replete with many moral lessons. The instability of man, his tyranny over his brethren, and that the great of this world are not always the good, mark most undeniably the annals of historic lore.

In Biography we also find a most attractive form of literature, and so rich is it in pleasant or profound thoughts, so valuable in revelation of character, so abundant in material to elevate and enlighten, that it is not wonderful it should be read with avidity.

Poetry, we presume, is admired by most classes, and we would heartily recommend its study, as it not only conveys instruction, but also refines the sensibility.

Music seems to have existed in all countries at a very early date. It has been advancing through the centuries, until to-day it has been presented to us as a new art, and is not only an accomplishment appreciated in polished society, but is the means of much enjoyment in the family of the cottager.

Having noticed some of the facilities for improvement and pleasure within our reach, let us, in bidding the sweet old year a sad farewell, banish all useless repining, and, entering on the new, cultivate a spirit of cheerfulness, which may extend, not only into our homes, but let its influence be felt in the Grange.—*Bridgetown Monitor.*

A CORRESPONDENT adds the following postscript to a business letter, 27th February, 1880:—"I have just weighed a short-horn heifer calf this morning, three months old, weight 314 lbs." Not bad for a short-horn.

To the Editor of the N.S. Journal of Agriculture:

In answer to Col. Laurie's invitation to farmers to answer Mr. Boyd's questions in reference to wheat growing, I beg to offer a few observations.

Being located in a section of Cape Breton which has always grown wheat largely, and for the most part successfully, and which is in many ways analogous to the district from which Mr. Boyd writes, I feel that my experience should be of value.

I do not intend to confine my observations to personal experience, which has been fairly large, but shall base them partly on facts gleaned from the experience of the most successful wheat-growers of Mahon and vicinity, numbers of whom have the past season harvested from eighty to two hundred bushels, in some cases reaping twenty-fold or forty bushels per acre.

Where my observations conflict with Col. Laurie's advice to Mr. Boyd, the discrepancy may be accounted for on the ground of difference of climate, soil, &c. I shall endeavor to answer Mr. Boyd's questions in the order in which they are put.

1st. "What is the proper time in spring to sow wheat?"—While there was danger from weevil we always deemed it best to sow wheat either very early, say the latter part of April, or late, say from 1st to 10th of June, imagining by this ruse to escape the ravages of that destructive little insect, which was supposed to be confined to certain limits, as to time, in which to commence its depredations, and which required wheat to be in a certain stage of development to insure its success. But, now that all danger from weevil seems to have vanished, the impression obtains that the seed should not be put in until the spring has advanced sufficiently to have warmed and dried the ground, rendering it in good condition for the plough and harrow.

The objections to early sowing are, that the cold and wet to which we are subject in the early spring destroy a great deal of the seed, necessitating much heavier seeding, and it is even supposed that the vitality of that which does succeed in withstanding the deleterious effects of the prolonged north-easters to which we are liable is impaired. These, however, are objections subject to amelioration under certain circumstances, such as warm dry soil, comparative absence of cold winds, &c.

2nd. "Is ground planted with potatoes for the past two years suitable for wheat?"—It is not a common practice with us to plant potatoes two consecutive years in the one piece of ground. But I should not apprehend any difficulty in growing wheat after such usage, provided a sufficient amount of manure is applied

as top dressing, well harrowed in, say enough to insure a good crop of timothy and clover, after having yielded a crop of wheat.

3rd. "Can a good crop of wheat be grown where fog prevails in spring?"—Although not much subject to spring fog, I think we have enough to warrant me in saying that no danger need be anticipated from that quarter. I would be more afraid of fog during the ripening process as causing a liability to rust. Even this danger, I think, can be reduced to a minimum by securing that seed least liable to rust.

4th. "How should the ground be prepared?"—There are so many different kinds of soil, requiring as many different kinds of treatment, that it would be difficult to do this question justice in the limited space for which I would care to trespass upon you, so I shall merely speak of such ground as is already in such condition as will yield a good crop of hay, and has the constituents, aside from barn yard manure, necessary to produce wheat.

Many plough the lea land, or sod, in the spring, top dress with barn yard manure, rich compost would be better, sow the wheat and harrow in, and have a fine yield. In fact where the soil is loose and friable this is all the treatment necessary. A better crop, however, is secured from the second ploughing of sod land. That is by taking a crop of some other kind of grain off the first year, and the second year ploughing the stubble under, and top dressing liberally.

The third course is,—a crop of oats, then a root crop, and then a crop of wheat, to be succeeded by a crop of hay. This last used to be considered the only orthodox way of preparing for wheat, but of late years the stubble land has supplanted it in favor.

There is a decided preference for spring ploughing in all cases, some even laying stress upon the advantage of sowing as soon after ploughing as possible. A great deal, I think, depends on having the ground well ploughed, and in that condition when sowed that it will harrow nicely.

With everything else favorable, we may yet be disappointed in our wheat crop if we have not the right kind of seed, that which does well in one locality often proving a complete failure in another. At present in this district the "Lost Nation" bears the palm, being a strong feeder, with little or no liability to rust. The "Golden Drop," when not affected by rust, has yielded well. The "Rio Grande," introduced here last spring, promises to be a good wheat. The "Lost Nation" requires to be sown as early as the ground can be prepared for it, as it takes about a fortnight longer to mature than most other kinds.

In writing as I have done on wheat culture, my desire has been to show that no fancy cultivation is necessary to secure a good wheat crop, in some instances a fancy crop; and that it is within the reach of every farmer, able to handle a plough and spread manure, to raise his own bread. What may be obtained by fancy cultivation, I won't undertake to say. Sufficient for the present is that method which is within the reach of every practical farmer.

In reply to the fifth question, "What work on agriculture would you recommend?" I would in addition to Col. Laurie's recommendation of "Waring's Book of the Farm," and "Dr. Dawson's Agriculture," recommend "The Farmer's Advocate," a monthly magazine published in London, Ontario, price \$1.00. A want is supplied by a periodical of this kind which no published work on agriculture can fill.

JOHN McKEEN.

Mabou, C. B., March 6th, 1880.

In an article in the *International Review* Hon. Professor Lyon Playfair advocates technical education as the logical and necessary supplement both to Free Trade and to Protection. He expressed essentially the same view as that presented some time ago in an address to the Technological Institute of Halifax, that the real basis of progress in a country is not its natural resources, nor learning, nor even political institutions alone, but the *suitable* education of its people. The working men of the country are not to be treated and spoken of as so many "hands," but as "heads." This is an old notion in Germany and in Scotland, where John Knox insisted that a portion of the education should be directed to "those studies which the people intend chiefly to pursue for the profit of the commonwealth." Scotland and Scotchmen have reaped and are now reaping great practical benefits from what John Knox insisted upon, and the most advanced educationists in every civilized country at least see the necessity of suiting education, like everything else, to the different kinds of work which it is expected to perform. Fifty years hence people will wonder how the world could move when farmers, doctors, sailors, statesmen, miners, lawyers, builders, artists, soldiers, clergy, distillers, fishermen, bakers, iron workers, were all run through the same educational mould.

THE Ellesmers Pig from Lucyfield Farm, that took first prize at the Provincial Exhibition, and also Alderman Fraser's Condiment Prize, was sold to Mr. Burratt, Mount Uniacke, and yielded, when dressed, 650 lbs. of excellent pork.

THE following admirable account of the German system of Agriculture as it exists at the present time has appeared in *The Times* from the pen of the Rev. Barham Zincke, and is pregnant with lessons to our Nova Scotia farmers:—

I have now for some weeks been looking into the agriculture of the district around Dresden—on the west as far as Leipsic, and the north as far as Berlin—with the thought of seeing whether it be capable of throwing any light on the present condition of English agriculture. The facts I have observed, and the conclusions at which I have arrived, may perhaps at the present time interest some of your readers.

To understand the agricultural position here we must go back a little. Thirty years ago no part of the world was prepared for the abolition of our corn laws; our near neighbours, therefore, were naturally the first to avail themselves of the new opening and to profit by the change. One effect of those laws, with our limited agricultural area and dense population, had been to make our prices higher than those ruling elsewhere, and our neighbours, not having at the time any considerable surplus for supplying our wants, our demand, acting on their limited means of supply, greatly raised the price of agricultural produce in this part of the world, for even in districts that had no immediate dealings with us, prices went up to the new level. This, of course, raised the value of land. The wages, too, of labour were in consequence of these changes greatly enhanced. Everybody, therefore, connected with the land—that is to say, far the greater part of the population—came to have a great deal more money to spend than they had ever had before, and this gave to manufactures and trade an impulse they had never felt before. Every town began to expand, and the new houses were invariably and in a very conspicuous degree superior to those in the older part of the towns with which the predecessors of the newly enriched generation had been content. This recent outgrowth and improvement of the towns is not more noticeable here in Dresden than it is in Leipsic, Hanover, and almost everywhere else. This rise of continental prices having been raised to the English level, less the cost of the transport of the commodities.

In the meanwhile, however, the greater world beyond the oceans, the United States—their selves as large as Europe—Canada, India, and even parts of Australia, were preparing to take part in the lucrative business of supplying the English market with the staff of life. Time was requisite for enabling them to do this. The wilderness had to be subdued; agricultural implements and machinery, suitable to the new requirements, to be

invented and supplied; and means of transport to be created. All this has now been effected, and American wheat can now be sold in Europe at 20 shillings a sack. This is a heavy blow to European agriculture. We are all sensible of the degree to which it is depressing English agriculture; and the questions I have been looking into lately are, How have the new conditions affected the agriculture of this part of Germany? and, Does the state of things here help us at all in understanding the state of things at home?

I find that, though the price of wheat is here reduced by the command America has obtained over the wheat markets of the world, agriculture is not in the suffering condition to which it has been reduced in England. The reasons of this are what it would be useful for us to know. My observations and inquiries have brought me to believe that the simplest expression of these reasons is that the land here is for the most part cultivated in farms of about 50 acres by their owners. I will endeavour to point out some of the most obvious and noteworthy consequences of these two facts. (1.) As the farmer and his family generally work on the farm there are about 1,000,000 land owners in Prussia (there is comparatively little expended in hired labour. To understand how this acts we must suppose farms in England averaging about 50 acres, and that on these 50-acre farms the owner and his family in most cases take the lead in work. On any thousand acres, then, there might be twenty families working with the will of owners, not for wages, but supported by what they could themselves produce. (2.) What hired labour is required is more efficient than hired labour is with us, because the labourer works with, generally lives with, and feels that he belongs to the same class as the farmer, and not to quite a different class made one in sentiment by the consciousness of all its members that they are all alike without property, all practically incapable of attaining to property, and that they all alike have nothing to fall back upon but the poor rate. (3.) The land is, I might almost say beyond comparison, kept cleaner here than it is in England. There are no hedges or ditches acting as nurseries for weeds and giving harbour to vermin. The heart of the owner is in his land, and every weed that appears upon the land is felt to be growing at the cost of the owner and of his family. (4.) The farmer has no rent to pay; that was paid once for all when the land was purchased, generally by some ancestor of the present owner. This, besides now annually securing to the farmer a higher reward for his labour, saves him in bad times from the anxieties and entanglements of having to borrow; advances, too, not being so

readily obtainable here as they are with us. (5.) I will only mention one more cause, and I regard it as a very effective one, of the strength of the agricultural system that obtains in this part of the Continent—I might, indeed, say over the greater part of the Continent. The land being held in small farms, a far greater variety of produce is extracted from it than is possible under our system. Potatoes are produced to an extent that surprises even non-agricultural Englishmen. The same may be said of fruit, vegetables, poultry, milk and butter. It would be interesting to know, if it could be ascertained, how many hundred—I might, indeed, say how many thousand—miles of fruit-trees decorative, and turn to good account, without the slightest protection, the margins of the roads and paths in this part of Germany. That this can be done is indicative of a very satisfactory trait in the character of the people, not only of this district, but of the Continent generally. Of course, it is easily explained by the general diffusion of property. In these small farms absolutely no space is wasted. In places where the surface appears to be pure sand and no agricultural plant could live, I have everywhere found plantations of Scotch fir and of birch, the only trees that could maintain themselves in such starving barrenness. It was necessary at first to set the young trees in deep furrows, that they might not be blown out of the ground, and that the rain that fell might be conducted to their roots. In all the plantations of this kind I saw, I noticed that every individual tree was carefully forested, and that no briars nor nettles or undergrowth of any kind were allowed to spring up on the decaying leaves, and so rob the plantation. On land not yet good enough for producing grain, though somewhat better than that appropriated to Scotch fir and birch, the yellow lupine is grown for forage.

What, then, I have seen here disposes me to think that in English agriculture grass will not take the place of tillage, the course that is now very generally recommended. On the contrary, with our limited area for supplying the wants of so large a population, it will be the plough, well used, and thoroughly preparing the land for a great variety of produce, and not the unbroken sward of nature, that will triumph eventually. With our more numerous and better markets, our incomparably better soil (I never saw a poorer soil under cultivation than a greater part of that between Dresden and Berlin,) our moister climate—though this year, perhaps, that ought not to be insisted on—and our more widely diffused means of transport, there would, under the agricultural system of this part of Germany, be little or no agricultural suffering or depression in England. In these gloomy

times, when so many things seem uncertain, we may comfort ourselves, at all events, with one certainty—that the agriculture of the sandy plains of Prussia is a demonstration that the land of England will never go out of cultivation. This, however, does not at all mean either that we are on the right tack already, or that nothing need be done towards bringing us on the right tack. We did well to accept the competition of the world. The recent developments of commerce make it necessary for us to accept the competition now imposed upon us.

I have not been looking here for facts and arguments in favour of peasant proprietorship, such as I described last year in the *Fortnightly Review* in two papers on the peasants of Limagne. By peasant proprietors is generally understood—though this falls very far short of describing the class—owners of three or four acres, who cultivate these small estates with the spade. What I have been inquiring into here is the work, the manner of life, and the position of the team-owning proprietors of about 50 acres. I this morning saw in the *Times* of the 18th inst., an interesting account of the extent and produce of some of the wheat farms in the Red River Valley. Much as the extent of these New World farms will astonish some of your readers, I doubt not but that they will be more astonished at hearing that in this time-out-of-mind settled and not sparsely-peopled district of the Old World there are farms not dissimilar in extent, and that require more capital, and that are not unprofitably worked. Mr. G. G. Richardson, in his work on the *Corn and Cuttle Producing Districts of France*, tells us that at Salzmunde Mr. Zimmerman cultivates 12,500 acres, and that near Oehersleben Messrs. Strauss cultivate 17,500 acres, and that each of these concerns employs a capital of not less than £40,000. And Mr. Jas. Howard, the well-known agricultural implement maker of Bedford, of which place he was a representative in the last Parliament, in his book on *Continental Farming*, describes his visit to a farm near Cologne of the extent of 2700 acres. Eight years ago I expressed the opinion that this is one of the forms the agriculture of the future will assume. In these days, when capital and labour can be commanded to any extent that may be required, and the means of transport have been thoroughly organized, it has become easy and profitable to carry on manufactures and trade upon a large scale, and one can see no reason why the same should not be done in agriculture.

What I am really desirous of suggesting is, that the success of the French peasant, of the Prussian team owning farmer, and of the monster agricultural establishments to which I have referred,

and not only the success, but even the existence of all of them alike, depend on perfect freedom in dealing with the land. That alone it is which enables those who combine energy, knowledge and capital freely to acquire the land they need for their respective purposes, and to improve it up to its highest powers of production. All these methods, too, of cultivating the land are cheaper than the one method English land laws have imposed on English agriculture. This freedom, which is so highly beneficial to other countries, England alone does not possess. We may, however, I think, believe that the effective competition of the world which has at last overtaken us will soon enable us to see that the only way of meeting free trade in the productions of the soil from every part of the world is freedom in dealing with and employing our own soil.

The publication in a sumptuous style of "The Gentle Shepherd, a Pastoral Comedy, by Allan Ramsay," has called attention to the whole subject of pastoral poetry. The *Athenaeum* contends that it was not Ramsay but Gay, who, in his "Shepherd's Week," (1714) set the true fashion, and recalled Englishmen to the beauty and simplicity of Nature. Gay saw what Virgil scarcely saw, and what the Italians and their English followers did not attempt to see, that the true field of a pastoral poet was the unadorned country life of his own native land. In the preface to "The Shepherd's Week," these notable words occur:—

"Thou wilt not find my shepherdess idly piping on oaten reeds, but milking the kine, tying up the sheaves, or, if the hogs are astray, driving them to their sties. My shepherd gathereth none other nosegays but what are the growth of his own fields; he sleepeth not under myrtle shades, but under a hedge, nor doth he vigilantly defend his flock from wolves, because there are none."

The reader of to-day may, perhaps, without impertinence, be recommended to the study of the six eclogues of "The Shepherd's Week."

A LARGE ANIMAL.—I occassionally see in the columns of the "Sun," accounts of large oxen, cows, steers, &c. from different parts of the country and province, which are interesting to farmers and stock raisers. Happening to call at the barn of J. B. Flemming of Folly Village, a few days ago, I saw a steer calf thirteen months old of the following dimensions:—Girth, 5 feet 2 inches; height, 3 feet 10 inches; length, 5 feet 10 inches; color, red. The animal is a mixture of Short-horn and Ayrshire.—*Correspondent of the Sun.*

The following is from the *Amherst Gazette*:—It has gratified us to be able to refer several times, during the last few years, to the increased attention given in this section of the country to the breeding of horses. A laudable enterprise has been exhibited on the part of a few individuals in aiding the country to produce a race of horses which we hope will, ere many years, entirely take the place of the many ill-bred, coarsely shaped and slow-gaited animals which, while they give little satisfaction to the owner, and command a small price when he wishes to dispose of them, require the same care and outlay for maintenance as a handsome, well-bred and valuable animal.

In addition to the popular and promising stallions previously owned in this county, we are glad to notice a newcomer in the beautiful bay horse "Beacon," lately purchased by Mr. J. B. Lamy, at a high figure, to stand at Amherst, and perhaps in Westmoreland County.

"Beacon," who has been viewed with admiration by many judges since his arrival, is 16 hands high, of fine symmetry and action, and weighs 1130 pounds. He is a fast trotter, and a close descendant of some of the most favorite trotting stock in the United States, as will be seen by the following pedigree:—Beacon, got by Volunteer, dam Faith, by a son of American Star, out of a Long Island Black Hawk mare; grand dam, a trotting mare of unknown pedigree. Volunteer, foaled in 1854, still vigorous, and weighing 1200 lbs., was by Ryslyk's Hambletonian; dam, Lady Patriot, by Young Patriot; grand dam, a trotting and running mare.

Fox Harbour, Dec. 6, 1879.

I TAKE the liberty of sending you a note of the death of a most prolific cow, owned by Mr. Alex Fraser, of Fox Harbour, found dead in the pasture, supposed to have eaten poisonous mushrooms. She was seven years old, and had raised ten calves, five pairs of twins, and all of them have done well. Do you not think that hard to beat? Thinking you might take a note of above for *Journal of Agriculture*, I remain, Sir, yours truly,

C. J. McFARLANE.

It appears from a careful investigation by Sir Joseph Hooker, of the Royal Gardens, Kew, that the Prickly Comfrey is not *Symplyrum aspernum*, but an allied species, whose proper name is *Symplyrum peregrinum*. Botanical rule requires that we should discontinue the use of the name *S. aspernum*, and we hope writers on the subject will drop their asperities as well. Let us welcome the stranger and give him a fair trial, keeping in mind that a deep rich soil is necessary to give good results.

SACKVILLE, N. B., Feb. 12th, 1880.

Dear Sir,—At a recent meeting of the Farmers' Association, held in Sussex, I was appointed chairman of a committee to wait on our Local Government to ask them to establish a Model Farm and School of Agriculture. It occurred to me since then it would be desirable for Nova Scotia to join in the enterprise. Will it be too much to ask you to agitate the matter in your Province if you think the project desirable? I am convinced myself that the education of the farmers has been and is very defective, also, the opportunities for educating them are very few and defective, causing a great number of our young men to leave our country dissatisfied with our resources and advantages, which, if properly understood, would be more highly prized. The kind of institution contemplated is very similar to the one now in operation at Guelph, Ontario. I feel confident that if Nova Scotia would unite with our Province, such an institution would be practical as well as useful, for we are compelled to compete now with Great Britain to find a market for our produce. None will pretend to deny the fact that we are very far behind them in knowledge of our calling, which I am sure would be remedied by establishing an institution of the kind before mentioned. I will esteem it a favor if you let me know your views of the scheme at an early day.

I remain, yours &c.,
H. HUMPHREY.

THE WHEAT HARVEST OF 1879.—The wheat crop of the whole world for 1879 shows a deficiency of over 375,000,000 bushels, nearly 200,000,000 bushels of the deficiency falling to Europe. The following table, compiled from the *Bulletin des Halles et Marchés*, shows the yield for each large wheat raising country compared with the average yield:

	Average yield.	Yield for 1879.
	Bushels.	Bushels.
United States.....	337,500,000	337,500,000
France.....	230,172,000	172,125,000
Russia.....	180,000,000	137,500,000
Germany.....	99,000,000	90,000,000
Spain.....	94,500,000	78,750,000
Italy.....	87,550,000	67,500,000
Austria Hungary	76,500,000	63,000,000
Great Britain.....	83,500,000	47,500,000
Turkey	34,500,000	29,500,000
Roumania.....	27,000,000	22,500,000
Belgium.....	19,180,000	14,650,000
Portugal	6,759,000	5,657,000
Algeria.....	20,500,000	16,875,000
Canada.....	13,500,000	13,500,000
Australia.....	13,500,000	14,650,000
Egypt.....	13,500,000	11,500,000
Netherlands.....	4,615,000	3,375,000
Greece.....	3,500,000	3,375,000
Serbia.....	3,375,000	2,812,000
Denmark.....	2,250,000	2,250,000

FARM ORNAMENTS.—We must protest emphatically against the practice of expending all the taste, time and labor in the adornment of a front yard. The outlook

from the rear windows of a home should be as gratifying as from the front. We want the inside of the platter as clean as the outside. And let the same harmonious system extend to every field on the farm. Vines should clamber over out-houses, old stumps, and all uncouth objects that cannot be removed, even though the vines be nothing but hop or woodbine. Groups of evergreens or deciduous trees or shrubs should screen or exclude the indisputable appurtenances of the farm, which are, in themselves, only necessities. Groups of trees in every field are not only profitable—albeit they do shade the grain somewhat—but break up monotony, and relieve the eye and the heart of the husbandman, as well as afford animals protection from the sun and storm.

NEW HAVEN, Conn., Jan. 10th, 1879.

S. B. HOWARD:

Sir,—The sample of Palm Nut Meal received from you gives on analysis the following result:

Water.....	7.34
Fat.....	17.80
Albuminoids(flesh-formers).....	14.75
Carbohydrates.....	40.09
Cellulose(fiber).....	16.24
Ash.....	3.78
	100.00

The above figures correspond very closely with those found by Dr. Voelcker, Chemist to the Royal Agricultural Society of England, as well as with the average of twenty-five analyses reported during recent years from the German Agricultural Experiment Station.

The composition of Palm Nut Meal places it in the class of Concentrated Foods, whose use is to add to the coarser fodder, which must always form the staple of cattle food, a portion of highly digestible fat and albuminoids, in which the usual rations are relatively deficient, thereby promoting the health of the animals, economizing the coarse fodder to the fullest degree, and realizing higher results in feeding, especially for flesh and fat, or for milk.

The results of the extensive use of Palm Nut Meal in Great Britain and Germany accord it a high mark in this class of feeding stuffs.

In the very exact experiments made at Moehern, in Germany, the Palm Nut Meal proved to be considerably more digestible than linseed or colesseed cake, and it was the single feeding material by whose use the proportion of butter in the milk was increased.

It is not indeed fully demonstrated by these experiments that Palm Nut Meal is under all circumstances superior to all other feeding stuffs in respect to digestibility and effect on quality of milk, but these facts recommend it most favorably to the notice of American farmers.

Having been somewhat familiar with the published experience of English Cattlemen Feeders since the first introduction of this material into their markets, I am prepared to endorse the statements of Dr. Voelcker and Professor Coleman, quoted in the pamphlet of Messrs. Alexander Smith & Co., and I doubt not that the use of Palm Nut Meal in this country, if guided by the directions they furnish, will be found highly satisfactory.

I remain, very truly yours, &c.

S. W. JOHNSON.

ALFRED SHORTT,
Agent for the Maritime Provinces.

166 Hollis Street.

mch 1

MAMMOTH BRONZE TURKEYS

A FEW very fine birds for sale, at reasonable prices.

W. H. BLANCHARD.

Windsor, Oct. 15th, 1879.

nov 1

FOR SALE.

THE subscriber offers for sale the following thorough-bred animals at a bargain:—

AYRSHIRES:

1st. "Talbot 3rd," No. 333. Two years old March 10th. Girth 6 ft. 2 in. He is large and handsome.

2nd. "Keelman," No. 420. One year old 28th February. Took first prize at Halifax, in 1870.

3rd. "Zulu." Dropped November 5th, 1878. Took second prize at Halifax. For size and beauty cannot be surpassed.

4th. "Nicholas," No. 421. One year old March 24th, 1880.

DURHAMS:

1st. "Snowball," No. 382. Two years old December 7th, 1879.

2nd. "Peter Grant." Dropped May 27, 1870. Also, — One Cow "Miss Maud," No. 136. Five years old. Due to calve June 24th.

JOHN W. MARGESON,

Cornwallis,
King's Co.

FOR SALE.

THE Thorough-bred DURHAM BULL "RICHMOND," N. S. Stock Register CCCLXXI. Colour red-and-roan. Calved March 14th, 1878. Sire "Lord York" CLXXXIII. Dam "Lily" CX.

EDWIN CHASE,
Port Williams,
Cornwallis.

BONES! BONES!

PURE GROUND BONES.

THE Subscriber is now prepared to furnish the farmers of Nova Scotia with this valuable manure, at the following prices, delivered at the Railway Station:

Half in. Bones.....\$23.00 per ton.

" " 1.75 " cwt.

Fine Ground Bones.....35.00 " ton.

" " 2.00 " cwt.

The half inch bones are very suitable for mixing with sulphuric acid and making pure and reliable superphosphate.

As the supply of the raw material is very limited, farmers desirous of obtaining a supply of concentrated manure for their Spring seeding should make early application to

THE MANAGER,
Wellington Tannery,
Oakfield, N. S.

CHOICE FLOWER AND GARDEN SEEDS, STRAWBERRIES, PEACHES, &c.

New Sorts, by Mail.

PLANTS of the newest and finest improved sorts, carefully packed and prepaid by mail. My collection of Strawberries took the first premium for the best collection at the great show of the Massachusetts Horticultural Society, in Boston. I grow over 100 varieties, the most complete collection in the country, including all the new, large American and imported kinds. Priced descriptive Catalogues, gratis by mail. Also, Bulbs, Fruit Trees, Roses, Evergreens, Choice Flower, Garden, Tree, Evergreen, Herb or Fruit Seeds, 25 packets of either for \$1 by mail.

C. C. The True Cape Cod Cranberry. C. best sort for Upland, Lowland, or Garden, by mail, prepaid, \$1 per 1000, \$5 per 1,000. Wholesale Catalogue to the Trade. Agents wanted.

B. M. WATSON,
Old Colony Nurseries and Seed Warehouse,
Plymouth, Mass. Established 1842.

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Importer and Grower of FIELD, GARDEN and FLOWER SEEDS. Every requisite for Field and Garden.

Catalogues on application.

Your orders respectfully solicited, and personal care and attention paid to the speedy execution. Agricultural Societies liberally dealt with.

FOR SALE.

A BOUT fifty bushels of surplus seed of the "CATTLE FEEDER," a coarse Potato employed extensively in Scotland for feeding Stock, and now preferred to Turnips for that purpose. Price \$2.50 per bushel, or \$0.25 per barrel.

mch PROFESSOR L. WSON,
Lucyfield Farm, Bedford.

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FERTILIZERS!**

"CERES" SUPERPHOSPHATE, manufactured by the Etivian Phosphate Company, analyzed by Professor Lawson;

ALSO,

PURE BONE MEAL.

NITRATE OF POTASH.

GERMAN POTASH SALTS.

SULPHURIC ACID.

SUPERPHOSPHATE DISTRIBUTORS.

At lowest Market Rates, for sale by

W. M. JACK,
General Agent Etivian Phosphate Co.,
Office Pickford & Black's Wharf,
Box 365.

feb 1

FOR SALE.

THE Laurie Agricultural Society offer for sale the thorough-bred Short-Horn Bull ROLLO, registered pedigree, Nova Scotia Registry. This Bull is pronounced by competent judges a very fine animal. For further information, price, &c., apply to—

THEODORE MARSHALL,
President, Wilmot Springs,
Annapolis County.

RAW GROUND GYPSUM.

THE subscriber is prepared to supply farmers with this important article—it is invaluable for preserving the ammonia, the richest part of the manure. It should either be scattered in stables or mixed in the compost heaps. Can be delivered at Truro Station; price by single barrel, 70 cents.

Address— WALTER MARSHALL,
Clifton, Colchester Co.

FOR SALE.

THE pure bred Jersey Bull ROUND ROBIN. Took First Prize in his class at the Provincial Exhibitions of 1876 and 1877. Has not been exhibited since. Aged four years. This Bull has proved a sure stock getter, is of good size, form and colour, and is descended from noted prize takers at the Jersey Royal Agricultural Show in 1870, on both the sire and dam's side.

For price, terms, &c., apply to
GEORGE D. MCKENZIE,
Malagash, Cumberland Co.

nov 1-3m

AYRSHIRES.

THE subscriber offers for sale a few choice young Bulls and Heifers, bred from the best stock obtainable in Scotland and Canada.

C. P. BLANCHARD,
Hillside Farm, Truro.

PEKIN DUCKS.

WE have raised some extra fine birds from our celebrated prize strain of Pekin Ducks, which we offer at low prices, if applied for at once.

Also, a few extra Black Red Game Chickens.
MACKINLAY, RIOHEY & CO.,
Lock Box 50, Halifax, N. S.

W. E. STARRATT,

MAPLE GROVE,
Paradise, Annapolis County.

BREEDER of thorough-bred AYRSHIRE CATTLE from Imported Stock. Some extra young Bulls for sale.

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AT THE

Nova Scotia Poultry Association,
Held March 9th, 1880. Eggs for sale from my Prize winning game,

Per 13, \$2.00

Will have a number of Longshan Chicks, (the new breed,) for sale in the fall.

Address:

M. H. RICHEY, Jr.,
mch Halifax, N. S.

FOR SALE.

THE splendid yearling thorough-bred Short-Horn Durham Bull

Lord Lorne of Lucyfield, 397,

New N. S. Register; roan, red and white; calved Sept. 19, 1878. Bred by Prof. Lawson, Lucyfield Farm, Co. Halifax. Sire, St. Nicholas of Lucyfield, 266, out of imported Cawood Rose by imported Viscount Oxford. Dam, White Rose of Lucyfield, 126, out of Cawood Rose by Trengunter, 28136 Eng., &c., &c.

This is believed to be the finest bull of his age in the Province; he took 1st prize at Halifax Provincial Exhibition; is of good make, robust, and has proved so far, without a single exception, to be a sure stock getter. To ensure a sale he is offered at the low price of \$200.

Apply at Lucyfield Farm, or by letter to Prof. Lawson, Halifax.

feb

J. B. FRASER,
Shubenacadie, Colchester County,

BREEDER OF

Short Horn Durham Cattle, Shropshire Down Sheep and Ellesmere Pigs.

FOR SALE.—One Short Horn Bull, two years old; two Short Horn Bulls, one year old; two Short Horn Bulls, seven months old. All good animals, and of first class pedigree, and on reasonable terms.

Shubenacadie, Oct. 29th, 1879.

nov 1

FOR SALE.

THE pure-bred Jersey Bull PRINCE IMPERIAL, No. 175, N. S. Register; calved June 17th, 1879, color, squirrel gray and white; large and handsome. His dam took first prize in her class, also first prize for largest quantity of butter at late Provincial Exhibition. Price and terms very reasonable. Apply to—

G. W. BOGGS,
Or to— Bedford, N. S.

PROFESSOR LAWSON,
Halifax, N. S.

Bedford, N. S., Dec. 20th, 1879.

BROOKSIDE STOCK FARM.

AYRSHIRE CATTLE FOR SALE.

TWO very fine Ayrshire Bulls, fifteen and seventeen months old. Two Heifer Calves, five months old. All from imported stock, and registered in the Nova Scotia Stock Register.

Terms made to suit. Apply to
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Unslow, Colchester Co.

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