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THE CANADIAN LIVE-STOCK AND FARM JOURNAL

DEVOTED TO THE INTERESTS OF THE STOCK-RAISERS AND FARMERS OF CANADA.

VOL. IV.

HAMILTON, CANADA, JANUARY, 1887.

No. 1



PRIZE-WINNING HEREFORDS.

The property of R. J. Mackie, Oshawa, Ont.

Cecil and Velvet.

Our sketch this month shows the imported stock bull Cecil and the two-year heifer Velvet, two representative animals of the numerous and prosperous herd of well-kept Herefords, owned by Mr. R. J. Mackie, of Springdale farm, Oshawa, Ont. This herd is now the second largest of the breed in Ontario, and produced last year the sweepstakes Hereford herd at the Toronto Industrial, and also the first prize herd of calves at the same exhibition. The herd is more fully described on an inner page.

Cecil (8385), 18469, imported by Mr. Mackie in 1884, was bred by Mr. Aaron Rogers, of The Rodd, Herefordshire, England. He was calved April 6th, 1883. His pedigree is princely. He was sired by Charity 3d (6350) by The Grove 3d (5051), and out of the dam Curly by Broadcloth (4376), of Mr. Rogers' family of the Curlys to the eighth generation. This bull is a first-class sire, judged by his progeny, that unerring test, and is a good individual judged by the show-ring test, also pretty sure, though sometimes it errs. Though not large he fills the eye well, being level, deep-chested and smooth. He is a good handler and stylish, and

has a tranquilly noble look of nobility about him. His head and horns are about perfect, being broad between the eyes, with an intelligent expression. He was first shown at the Provincial, London, 1885, when he was placed second, and third at Toronto the same year, and in 1886 took first at Toronto and first and silver medal at the Provincial at Guelph.

Velvet, from the dam Victoria 2d, out of Victoria 1st, of silver medal Centennial prize-winning fame, and by the sire Duke of Argyle, bred by Her Majesty the Queen, was bred at Springdale. She is a pretty neat heifer with clean-cut limbs, the usual Hereford deep front and broad back, is uncommonly well packed behind the shoulder, and has that handling that makes one long to be the owner of many such. As a calf she was first at Toronto and at Ottawa Dominion Provincial in 1884, and at other fairs. In 1885 first at Toronto and second at London; and in 1886 was also a prize-winner, but was displaced at Toronto by her companion and close rival Silk, of the same age. Silk was bred at the Rodd out of Speck of the Spot family of Mr. Rogers, and by Cosino by Osman Pacha (5489), the grandson of Horace (3877), which of the two will retain the first place time alone will tell.

The Springdale herd is noted for its numbers, the good average excellence of the individuals comprising it, and for the splendid breeding habits of the herd.

Not Neighborly.

In the *Nor.-West Farmer* for December is an illustration of the Messrs. Watts' Barmpton Hero, which appeared in the *JOURNAL* of January, 1884. This is all right, of course, as the engraving speaks for itself as to its origin, and we are pleased to see cuts engraved originally for the *JOURNAL* used by our contemporaries rather than otherwise; but the first half of the descriptive matter is ours also, word for word, and yet it is not credited to us—and this is all wrong. It is our desire to live on good terms with all our neighbors, but this cannot be without the rights of neighborhood are observed. One cannot highly respect a neighbor who steals from him, and the most contemptible of all thieves is one who takes without any necessity. This is not the first time the *Nor.-West Farmer* has used us thus, or we had held our peace. We have admired the spirit shown in the management of this paper in many ways, and wish it abundant success; but who can admire the feature we have just referred to?

W. R.

Canadian Live-Stock & Farm Journal

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THOMAS SHAW, RIVERSIDE FARM, EDITOR.

To Subscribers.—Subscription price, \$1.00 per annum in advance. Single copies, 10 cents each; sample copies free. No names will be removed from our subscription list when in arrears and without we receive instructions to that effect. Those in arrears will be charged \$1.25.

Clubs.—Any person is at liberty to form clubs. Clubs of five copies to any address, for one year, \$4.00. Clubs of ten copies to any address, \$7.50.

To Advertisers.—Advertisements of an appropriate nature will be inserted in the JOURNAL at the following rates: For a single insertion, 18c. per line, nonpareil (12 lines makes one inch), for three months, 15 cents per line each insertion; for six months, 13c. per line each insertion; for one year, 10c. per line each insertion. Cards in Breeders' Directory, not exceeding five lines \$1.50 per line per annum. Copy of advertisements should reach us not later than the 25th of each month (earlier, if possible). If later, it may be in time for insertion, but often too late for proper classification. Transient advertisements payable in advance. No advertisement inserted less than 75c.

To Correspondents.—All communications intended for publication in the JOURNAL should reach us by the 20th of each month—sooner, if possible. We do not hold ourselves responsible for the opinions of correspondents.

Remittances may be made in registered letter at our risk. The receipt of the JOURNAL will be sufficient evidence to subscribers that their remittance has been received.

All communications to be addressed STOCK JOURNAL CO., 48 John street south, Hamilton, Ont.

HAMILTON, CANADA, JANUARY, 1887.

Please examine your address tag. If it reads, Dec., '86, or any month of '86, your subscription expired with that issue, and we will be obliged if readers in arrears will renew at once.

We ask of all our friends who think that the JOURNAL is doing a good work and deserving of support to show it to their neighbors, and to send us at least one new subscriber along with their own renewal. Officers and members of farmers' clubs can also render material service in this direction. Sample copies sent free to those wishing to aid in the work.

It is the practice of a certain class of farmers during winter to try and look up some kind of work for their horses during this period, as teaming on the road by the day, or buying wood and drawing it, or something of that sort. In some instances this may be wise, but oftener it is not. A rest of two to four months in the year tends to renovate working horses if kept on a diet not too high. When brought back to their ordinary work allowance they bring with them a fresh, keen appetite, and a rested body. We believe they will live longer than those which get no periods of rest, and that they will do more during the period of hard work than they could otherwise endure. The practice of working out during winter usually militates against good farming; there is so much that can be done at home during the winter, if things are only managed well. Then there is the wear and tear connected with teaming, which is no light bill.

A WRITER in the *Mark Lane Express*, recently, says a good many sensible things in reference to the necessity for suitable shelter for sheep and cattle in the winter season. If this is an advantage in England, how much more in this colder Canada! We would like to know the amount of food saved in keeping cattle warm in winter, a process that could all be accomplished by the proper use of wood and stone. It is the most extravagant mode of keeping stock warm that can be devised. Indeed, where it can be

avoided, and generally it can, it is a most shameful waste. It is most refreshing in inspecting the stock on the farm to find it all comfortably housed in winter and suffering no manner of privation. Those who have not suitable buildings should think of this now, as the winter is the time to draw the material for next summer's improvements.

PARTIES who are keeping breeding sows in close pens and feeding them high are making a great mistake. We know of no place where they will get along so well as in the barnyard in the winter, giving them a protected corner with plenty of straw to lie in, and a protected place in which to eat their food. This latter should consist of wheat middlings and bran, with sometimes a change of peas or corn, or ground oats. In very cold days dry peas and enough of drink is good for them, but in warmer weather the bulk of their feed should not be strong. One seldom hears of an autumn litter being lost, although it is a common occurrence to lose the young pigs in the spring. Why is this? Because in summer the food and exercise the sow gets is adapted to her condition, while in winter it is not so. It is just wonderful how a brood sow will get along in a yard where cattle abound without taking any injury.

THE presence of a good herd of pure-bred cattle is a great boon to any neighborhood. If it possesses true merit and is rightly handled it cannot but work a revolution in time in stock improvement. Oftentimes the individual possessing it has to toil on unweariedly for a long time before the harvest day comes, but come it will. On driving through certain sections one will often notice the fine appearance of the stock, and on making inquiry as to the cause, it is almost invariably found to consist in the existence of a good useful herd of pure-bred cattle in the neighborhood, the bulls of which have been used in up-grading by the neighbors. Such a result is very gratifying. It not only constitutes the owner of the herd a benefactor of his own generation and the next, but it places his bank account upon a satisfactory basis, for those who patronize good males for a time are, after awhile, only content with ownership, and are ready to purchase from the herd that has been the means of doing them so much good.

THE following paragraph is intended for the young men of the farm. It has been stated of Mr. John Handley, the son of Mr. Wm. Handley, a tenant farmer of Greenhead, near Kendal, Westmoreland, that at the age of twenty he declared his determination to become the champion exhibitor of cattle in the United Kingdom. Eight years have passed since then and we know the results. Sir Arthur Ingram, Royal Hovingham, Ingram's Chief, Royal Ingram, and Ingram's Fame, are a few of the mighty conquerors that have come forth from Greenhead, the fame of which is amongst all nations interested in the production of cattle. One of the best milking herds of Shorthorns under the sun feed upon its pastures. Although the farm consists of but 200 acres, and most of the feed is raised on the farm, no less than 100 cattle are kept, and from 200 to 300 sheep. We venture the statement that Mr. John Handley has not done all this with his hands in his pockets, or by following a pack of hounds. He has never attended many races. He doesn't know where the corner grocery is, and his evenings are not spent in a bar.

ECONOMY in feeding is a great consideration. There cannot be due economy exercised in this line when the constructions in the feeding arrangements admit of large waste. Most persons are inclined to feed too

much, especially in feeding hay to horses. They seem to think they have not done their duty to the horse unless hay is continually before him. It is a great mistake. When the fodder is good it should be eaten up, every particle of it, and when not first-class, the residue should be removed before feeding again on every occasion. When animals are fed just enough, they come to their food with a relish and a heartiness that betokens thrift. When food always lies before them it produces loathing. Feeding a great art, and not very many proportionately masters of it in all its details. The food fed on farms well stocked of from 100 to 300 acres varies in value (say) from \$1,500 to \$5,000 per year, according to the object sought. Now, it is quite easy to waste one-fourth of this without making much of a show of waste either, which is certainly a very serious item; just a trifle of waste at every feed and the thing is done, and yet the feeder may not charge himself with any lack of economy.

It seems to be a law pervading all forms of domestic animal life, that to obtain the best specimens of the species it is necessary to keep them pushing well ahead from the first. A period of stagnation during the first weeks or months does not simply mean delay, but *hindrance*—a barrier in the way of perfection. When the animal is matured, or nearly so, it may pass through alternations of full flesh and less full, and when it is desired be made to regain its full bloom and vigor, but if there is neglect during the first year this cannot be accomplished, and the nearer the time of birth the more serious will be the results arising from such neglect. Although raising calves on skim-milk will one day become a matter of great importance in Canada, at present the industry is in a lamentable condition. The poor creatures often suffer from irregularity in quantity and quality of their feed, and by no after attention can they be made to look like thrift. Colts, too, the first winter, are much neglected as a rule, although this is the most critical winter with them that they shall see. They should be well fed from the day of weaning until the grass comes the following spring, have comfortable shelter, not too warm, and ample opportunity of exercise.

The Shorthorn Herd Book Agitation.

In the December number of the JOURNAL the following announcement occurred in its advertising columns as well as in those of other papers in Ontario:

"A meeting of the Shorthorn breeders will be held at the City Hall, Guelph, on Wednesday, Dec. 8th, at 8 p.m., to discuss the action of the Dominion Shorthorn Herd Book Association in excluding a large number of pure-bred Shorthorns from registration, and to consider what action should be taken under the circumstances. (Signed) W. B. Watt, John Fothergill, W. G. Pettit, J. & R. McQueen, D. Talbot, committee."

This meeting was well attended, a large number of Shorthorn breeders from different parts of Canada being present, so that it may justly be looked upon as a representative meeting. Mr. John I. Hobson was called to the chair and then discussion most full and free was allowed. A good deal was said regarding the impropriety of allowing short pedigreed cattle to be recorded because imported, and of excluding cattle not tracing to an imported foundation, however long the pedigree. Mr. John Hope, of Bow Park, being called upon to address the meeting, stated that in many parts of England the unregistered Shorthorns were better individually than many of the best of our pedigreed animals here, and that breeders were not likely to import inferior animals with pedigrees either long or short. Professor Brown, James Laidlaw, M. P. P. and others favored the registering of Canadian

cattle with pedigree sufficiently long to ensure a respectable beast. The discussion culminated in the following resolution, which was moved by Prof. Brown:

"That in view of the immense importance to the Dominion of Canada of the registration of many of her Shorthorn herds, Messrs. W. G. Pettit, Robert McQueen, Daniel Talbot, Thos. Waters, Wm. Donaldson, Jas. Laidlaw, M.P.P., and James Wright, be a committee to represent this meeting at the next annual convention of the Dominion Shorthorn Herd Book Association, for the purpose of discussing the conditions that regulate the entry of animals into that herd book, and in view to obtain modified conditions."

A meeting of this committee was called at the New Western Hotel, Guelph, at 1 p.m., on the 9th Dec. Present, W. G. Pettit, James Laidlaw, M.P.P., R. McQueen and J. G. Wright. The following motion moved by Mr. Pettit and seconded by Mr. Wright was passed unanimously: "That the Dominion Shorthorn breeders be hereby requested by this committee so to modify the present standard of the Association, as to read thus:

"The animal must trace on the side of the sire and dam to recorded imported English Shorthorns, or to pedigrees not false or spurious already of record in the British American Herd Book."

It was then moved by Mr. Pettit and seconded by Mr. Wright, that a copy of this resolution be sent forthwith to Mr. Wade, the Secretary of the above Association.

We may here remark that we counselled the calling of that meeting, and that we favored the appointment of the committee during its session, and that we are in sympathy with the decision of this committee at its sitting on the following day to request of the Dominion Shorthorn Breeders' Association some mitigation in the standard, and yet paradoxical as it may seem, with our present light, *we are very decidedly opposed to any change of the said standard*, although we hold ourselves open to a change of view if sufficient evidence can be adduced to justify such a change. Our course here may seem a little strange, but if we choose to step aside from the beaten track leading to a certain point, to sympathize with a neighbor in trouble, who shall blame us, providing we reach that point in good time?

We favored the calling of the first meeting for two reasons. First, we sympathize with those whose valuable cattle have been thrown out of the book, and more especially with such as have lost their entire herds, and have, as it were, to commence again at the beginning. They feel aggrieved and very naturally so, and if there is any way of mitigating their losses without inflicting greater losses on any other portion of the community, either in retrospect or prospect, it should be adopted. Second, they have a right to be heard in the press of the day, and they can demand as a matter of justice that their claims be considered by the Dominion Shorthorn Breeders' Association, for the troubles brought upon them are in a sense not of their own making. We may here remark that one outcome of this meeting was the exoneration of the revising committee from blame, though not by a formal motion.

We favored the appointment of the committee at the Guelph meeting, that the difficulty might be brought before the association, and there receive a full and free discussion, that the true merits of the case might be laid before every Shorthorn breeder in the Dominion as one result, and, that the sufferers if they had been unjustly dealt with by the association, might have a fair opportunity of showing this, and of thus having the same meted out to them. The work of any association bearing upon the material interests of

the nation and of those composing it, cannot suffer by exposure to the clearest light of discussion, if its course has been straightforward and just.

We favored the action of the committee in asking a mitigation of the standard in the direction indicated, that it might be made apparent to every one, as we believe it will be at the annual meeting, that the standard, especially in its American retrospective side, could not have been better drawn, nor perhaps even in the retrospective British aspect of it.

We are opposed in the meantime to any change of standard at present, under the conviction that drawing the line elsewhere would react injuriously on a greater number of breeders. Those who do not think so will please show us where the line would be drawn with better results, and let us have it discussed. In the second place we oppose it, since it would necessitate a revision of a good deal of the work done. This already has been something enormous, and the delay now in the non-appearance of the volumes is trying the patience of many, although we believe the revising committee are doing their best. We oppose it in the third place because many of the ejected animals have been sold, and those which are not will not be eagerly sought for were they admitted to-morrow, by purchasers who are desirous of starting new herds or of replenishing old ones.

We oppose it in the fourth place because of the changeable nature of the Shorthorn *measure* in recent years. At one time it was a yard, then a foot, then a yard, and now a yard and a quarter. The action of the breeders may be compared to that of men walking on springy ground seeking for solid footing. We believe they have got that now to the loss of some, including ourselves, and if they shift again into the springy ground, there cannot fail to be a great desertion from the ranks. Even now numbers are looking on, waiting for a complete calming of the disturbed waters before they invest, and if there is change again the Shorthorn ship cannot fail to drift away on to the icy polar seas, there to await the genial suns of an unborn generation to thaw it out of its icy surroundings. "Where is truth?" asked the ancients of the Augustan age with all its brilliancy. "Where is certainty in the Shorthorn standard?" the Shorthorn breeders of to-day are asking, and if the standard is again shifted, we shall certainly move in the direction of Mr. McQueen's idea, to tie it with a Government chain.

The meeting of the Shorthorn Association will be held in Toronto in February; the time will be duly announced in our advertising columns. The question of the softening of the standard will be discussed then. We trust, therefore, that every member who favors adherence to the present standard will be there and say so, both with voice and vote, and that every member in the Dominion who is in favor of the proposed change or of any other change, will come and do likewise. It should be remembered at the same time that in all such matters the will of the majority must rule, and those who may be in a minority will be expected to govern themselves accordingly. As expressed by Mr. Hope at Guelph, the Shorthorn breeders of Canada cannot afford to be divided.

One thing, however, that we favor in this connection, is sure to meet with opposition, but we favor it all the same. We believe that it is the duty of the Shorthorn Breeders' Association to do all in its power that is reasonable, to assist the owners of ejected cattle to trace out pedigrees that will qualify them, when there is any reasonable hope of this. Many take the view that this should rest solely with the owners of such, but we do not think so. The cattle

have been ejected through no fault of the owners, and by the association, which now represents the former associations which took them in, and which is therefore in a degree responsible in virtue of that succession. We speak not of responsibility in the legal sense, but simply in that which is *moral*.

The Canadian Cattle Trade with Glasgow.

We learn from old country exchanges that the new wharves at Yorkhill and Shieldhall, Glasgow, for the reception of Canadian cattle, sent to Britain to be fed there for a few months and then sold as "home fed Canadians," have been completed. Twenty thousand head of these cattle are being exported to Britain annually. At the dinner held in commemoration of the event it was stated that Canadians were devoting less attention to the fattening of cattle because they could not compete with the United States, and ship-owners were finding it to their advantage to fit up ships specially for the trade.

Now, all this sounds ominously enough to us, however others may regard it. A trade in store cattle between Canada, east of Lake Superior and the seaboard, with Britain, will never prove a desideratum to this country. It costs too much to raise that sort of cattle for the price, and those who do it will make both their pockets and their lands lean. We should fatten the cattle that we send to Britain and get the price that is always paid for a prime article. Who is responsible, we ask, for the statement that Canadians cannot compete with the people of the United States in fattening cattle, and that, therefore, they are betaking themselves to the rearing of stores? We may not be able to compete with them in turning off grass finished cattle, but why, we ask, can we not compete with them in the grain finished class? No country on the earth can raise materials as we can for stall feeding cattle, unless it be Great Britain herself. Why, then, can we not compete with the United States in producing grain fed cattle?

It is a matter of wonder to us that notwithstanding the large number of old country people that visit Canada annually to post themselves as to its capabilities, they are so long in opening the eyes of the masses of the nation as to the true merits of our country.

We have again and again written in opposition to our Canadian farmers (unless it be in the far west), selling cattle for stores to any country. It seems to us the matter is as clear as the letters of the alphabet; that if Britons who buy our stores can make it pay to finish them, much more can we, where materials are cheaper for fattening than in Britain.

The Fortification that Must Crumble.

One of the most ancient fortifications in Canada is that behind which the grain-growers and keepers of common cattle have entrenched themselves. It is older than Fort Catarqui, or even the breastworks of Louisburg, but, like these, it is destined to crumble, and before many decades come and go, it will besought for—a huge mound buried deep beneath the improved practice, which, like the soul of old John Brown, though his body lies mouldering in the grave, it is bravely "marching on."

We cannot but regret that any class of men should try and shield themselves for pursuing a course which is to their own loss. Although this is only natural, yet it is one of the unfortunate outgoings of a perverted human nature.

It is partially accounted for, as we have said before in other leaders, by custom, lack of capital, ig-

norance, prejudice and the like, but though the old fortification has been built up in this way, it has been strengthened in a far different one, that is, by failures, either wholly or in part, which have followed those who have attempted to introduce improvement.

Some men expect to become successful keepers of improved stock, as raw young farmers too often expect to become successful merchants. Like the dolphins in their play, the latter leap into notice for a moment and sink down again into the great deep of shoreless failure. The former expect to reap where they have not sown, to succeed from the first in a business in which they have taken no lessons, to stand in the front rank with men who, in the stock business, have been men of war from their youth.

It is no matter for wonder then, that when these men come to look for figs on their young tree of recent practice they find none, and instead thereof they often detect symptoms of premature decay.

The lesson is obvious; no advance step should be taken in stock-keeping without having first carefully obtained a knowledge of the proper methods of advance. For instance, the man who wishes to invest in a good pure-bred bull should first inform himself as to what are the true characteristics of such an animal; and he who is about to invest in pure breeds should first gain all the information that he possibly can as to the form, characteristics, value and methods of keep peculiar to this class, and should also provide for them suitable accommodation and provision.

The money invested is too much to incur the risk of failure. If a common beast die it is drawn to the bush, and is not so much missed. The crows make a joyful feast—only a little scant. But when an ordinary farmer comes home from the burial of a pure-bred on which he expected to ground a herd, we should not blame him much for looking grave and talking but little at dinner. He cannot but feel discouraged, and in spite of himself he will sometimes think there is something in the popular prejudice to the introduction of pure-bred stock.

It is therefore a mistake to suppose that good stock may be introduced and the introduction made a success without regard to adaptability, methods, care, and a great many other things. It is sometimes argued that improved stock require more care than common animals to keep them in right condition. Another way of putting it is that the latter will stand more hardship under exposure, and "rough" it better. This kind of reasoning rests on a sandy foundation, which must wash away when the tide of true reasoning flows over it.

If the great object in keeping stock, now used for meat and milk, was to try and render them tough, or in other words to bring them to that stage wherein they will keep death at bay under the lash of ill-treatment, or when pining from neglect, we don't want any of the imported breeds, nor any imported methods of breeding. The most thoughtless and slovenly of our farmers will succeed the best, and are certainly deserving of the gold medal for their skillful management of the scrubs. But when beef and milk, the most in quantity and the best in quality, are the true objects of the stockman's effort, it follows that the only true methods are those which are most likely to secure this end. It is meat that is wanted, which will cut well upon the block and that will prove juicy, tender and nutritious upon the platter, not simply a little scant muscle that will, under a close-fitting, tough hide, stand a cold blast well, but which the teeth of a hyena can not easily masticate.

When farmers are convinced that meat and milk of the kinds above stated are the true objects of the

stockman's search, not *ability to stand ill-treatment*, then the old fortification of common cattle must be abandoned, to crumble into a melancholy ruin.

Nor can it be very long until men with naturally good reasoning powers, such as farmers are usually endowed with, must see the unwisdom of past practices in reference to the keeping of common cattle in so common a way, and abandon forever that which must appear a stupendous monument of folly in practice to those who shall live after.

As to grain-growing, it is not with that we have a quarrel, but with methods of disposing of it when it is grown. Stock-keeping, when properly conducted, is always conducive to the growing of more grain, but it is on a less acreage. The idea that lands will continue to produce which are fleeced from year to year, is a most delusive one, and it does seem strange, that after nearly sixty centuries of teaching, the agricultural world has so imperfectly learned the lesson that land which is not fed must ultimately starve, and in turn repay the man who is starving it in his own coin. It was only at creation's dawn that matter was evolved out of nothing. Since that time everything material in its nature is simply the re-arrangement and re-combining of materials previously existing, so that without the materials for plant food previously existing in the soil, either the gift of a bountiful nature in the past or the bestowment of man, the re-arrangement of matter in the form of grain is an impossibility.

Nature has been very bountiful to this country in the centuries gone by. Left to herself nature not only takes care of her re-productive resources, but also increases them. And this is certainly a matter for thankfulness that it is so, which is a guarantee to us that so long as man does his duty nature will provide for the wants of all her children in every succeeding generation.

But man too seldom knows the wisdom of nature in this respect. He is prodigal of her gifts, and in too many instances if he does not become a land-grabber he becomes a *land robber*, which is infinitely worse. His avarice in this respect is very short-sighted, and it is certainly amazing that the exhibition of it has become so universal in this country. The red Indians in their innocence were in their practices the conservators of fertility, while their successors, the whites, are the destroyers thereof.

The lesson of the little school-boy is very plain, that if two are taken away from four, two will remain; and if two are again subtracted from two, nothing will be left; but that if, on the other hand, two were added before each subtraction, that problem would remain precisely as at the first. So the lesson to the grain-grower should be equally plain that if 20 bushels of wheat are taken in one season from the soil, and no plant food put back, and fifteen more the next year, and so on for a term of years, that ultimately the product *nothing* will be reaped; but that if on the other hand, an equal quantity of plant food be put back from year to year, the productive power of the land must remain the same. The school-boy so stupid as not to drink in the lesson of the former product, would very likely have it made plain to him by the use of the rattan; but alas! there is no such way for the editor to reach that numerous class of farmers who by their malpractices in grain-growing and grain-selling are earning for themselves the deserved epithet of being robbers of the land. But what the editor cannot do in this connexion will assuredly be done by the hand of outraged nature. Lands wronged punish the perpetrators of the wrong by sullenly withholding the accustomed supplies, so that when the days arrive (and they are near at hand) when the systematic rob-

bers of the soil, who, when they had done their work in one place moved away with their spoils to another, necessity will force men to study this problem, understand aright its teachings, and to profit by the result.

In this young country there is no way so effective of renovating lands shorn of their fertility and of keeping up a fair standard of productiveness as by the use of barn-yard manure, which implies stock-keeping, without which a supply of this cannot be obtained.

The old fortification of the grain-growers, then, must crumble. Every increased hoof upon the farm is an attack upon it, and every improved specimen introduced that will give better results for a given outlay, throws down another stone. One by one these must be displaced, till by and by we shall hope that the story of this strange infatuation shall only be known to the students of the history of a forgotten age.

The Late Henry Parker.

The most of men lie down and die and are buried, and but a very limited circle know anything of the event, and in a few short years it is not even known of them that "there lived a man." It may be well that it is so, for every generation is pretty well freighted with sorrows of its own, without having to carry those of other centuries. A few, however, like the strong trees of the forest, make an opening where they fall that it takes years of steady growth to fill. So was it, we believe, as regards the late Mr. Henry Parker, of Woodstock, who died a few weeks gone by. His natural constitution impelled him to keep busy, and it is not improbable that those activities hastened his end.

Although Mr. Parker was not engaged in farming in his later years, he took a very great interest in everything appertaining to Canadian agriculture, and the public showed its appreciation by electing him to a seat in the council of the Agricultural and Arts Association of Ontario, and one in the directorate of the Western Dairyman's Association. Our readers will remember that Mr. Parker filled the office of president of the Provincial board during 1886, and that his address at the annual meeting of delegates appeared in our issue of last October.

His business capacity was more than average, which always made him a most useful member of any organization, and the earnest way in which he plied his talent in the direction of what was true and good enhanced that usefulness.

His independence of thought and fidelity to his own views led him to clash sometimes with his colleagues in office, so that we are glad we cannot soil the memory of our friend by ranking him with those amiable nobodies who "never had an enemy," but his most persistent opponent will agree with us, we are sure, when we say that when Henry Parker died, Canada lost and Woodstock buried one of her most liberal-minded and patriotic citizens.

Scrub Cattle vs. Grades.

The *Dublin Farmer's Gazette* has estimated that if all the one-year cattle in Ireland had been sired by well-bred bulls, the value would be increased by £2 per head, which a practical Irish farmer of large experience said should be put at £4 instead of £2.

The Department of Agriculture at Washington not long ago addressed a series of questions bearing on the subject to various farmers' clubs throughout the union, and the replies are given in no uncertain tone. The Nelson Farmers' Club, Ohio, places the value of one-year native cattle at \$10; two-year-olds, \$16;

three-year-olds, \$22, and the average value of cattle of the Ayrshire, Holstein, Jersey and Shorthorn grades—half-blood—matured, at \$45; three-quarter bloods, at \$50, and high-graded, at \$60. The same club set down the cost of producing scrub beef, per one hundred pounds at \$5, and of grade-beef of the beef breeds at about half the sum.

The answer to the question, "What is the cost per gallon of milk from scrubs and grades respectively," was, "fifty per cent. in favor of grades."

What an abundance of material there is for reflection in the above statements—the race of cattle that still substantially has possession of the land costing twice as much for the returns as would a better class of cattle, bred from pure-bred sires. Here and there we find one and another who has taken the matter to heart, and like patriotic citizens are trying to introduce a better state of things, but the overwhelming majority is against them, for the bulk of the farmers "will not consider." Far sadder than the "might have been" of the impressive and touching poem, Maude Muller, is the *might have been* in the line of stock improvement.

Let him who reads come out from such company, if he is still in the environments of scrub practice on the farm. Wisdom is against the keeping of scrub stock, prudence is against it, wasted feed cries out against it, so do shrunken returns. The show-rings are all against it. Intelligence is against it; so is science; so is that acquisition more valuable than any of these, common sense. With such an array of witnesses against it the practice must sicken and die, and be buried some day far deeper than Herculaneum or Pompeii, never again to be disinterred.

A commission was asked for to enquire into the causes of our North-West rebellion in one of our recent parliaments, and many thought the gravity of the situation justified the request, but far more important, as it appears to us, would be the appointment of a commission to enquire as to how much we lose annually through the keeping of scrub stock. *More, we believe, in one year than the Rebellion cost us.*

Amongst Our Friends.

"I think every farmer should take your valuable JOURNAL. I would not like to do without it."—T. S. Smith, Tilsonburg.

"Am well pleased with the JOURNAL and would not like to be without it."—Alba Woodward, West Montrose, Ont.

"I have taken your JOURNAL for the past year, and think it the best stock paper we have. I could not get along without it."—E. S. Smith, Duart, Ont.

"I feel proud of your JOURNAL. It was good at the beginning and still keeps improving. God bless your noble undertaking in raising the standard of this great Dominion."—John Lennox, Caledonia Farm, Churchill, Ont.

"I am doing all that I can for the JOURNAL and I intend to do so, as I consider it the best publication of the kind I ever saw."—T. H. Beeve, Oxenden, Ont.

"I think the JOURNAL the best publication of the kind printed in this country. I only wish it came weekly."—Ed. Bletcher, Cumnock, Ont.

"Am highly pleased with the JOURNAL; it is a dollar, well spent."—W. E. Lyons, Dundas, Ont.

"I am very much pleased with the JOURNAL, and will do all I can to further its circulation."—E. E. Martin, Canning, Ont.

"Your paper is a most welcome monthly visitor. I would not be without the JOURNAL for five times its price. It fills a necessary place in every stockman's home. If all who read were filled with the spirit of its writings, they would not fail to succeed."—J. B. MacKay, Stellarton, Nova Scotia.

"I would not like to be without the JOURNAL. I think it would pay every farmer to have it in his house."—John Flack, Banda.

Suffolk Sheep.

This useful breed of sheep is, so far as we are aware, not known in Canada at all. It has for years been a favorite in Britain amongst the butchers, owing to the very superior quality of the mutton, which is relished by some as equal to venison. The *London Live-Stock Journal* has some interesting notes on the breed in one of its November issues, and, in the hope that our readers may be interested, we give some of the facts therein narrated.

The old Norfolk ewes with long horns, long legs, narrow, and with short close wool, often with grey spots and long tails, form the groundwork of the breed, which accounts, no doubt, in a measure, for their hardihood. They were generally bare-bellied, and so active in habit that it took four years to get the produce fit for the table. They are wonderful milkers, giving, it is claimed, nearly as much as a Jersey cow, and often bred three lambs at a birth. It is said that by a due exercise of judgment in crossing and subsequent inter-breeding, although the lambs are now ready for the butcher at nine to ten months, the good qualities of the old Norfolk sheep have been retained, viz., a splendid quality of mutton, activity, hardihood, close wool and bright full eye. They were crossed at first with Southdown rams, and afterwards with Hampshires, and were given the name of Suffolks about the year 1859.

The interests of the Suffolk sheep are represented now by a society, which has of late commenced to register the rams only. The following scale of points has been adopted by the society:

Head—hornless; face black and long, and muzzle moderately fine, especially in ewes (a small quantity of clean white wool on the forehead not objected to); ears, a medium length, black and fine texture; eyes bright and full.....	25
Neck—moderate length, and well set (in rams stronger with a good crest).....	5
Shoulder—broad and oblique.....	5
Chest—deep and wide.....	5
Back and Loin—long, level, and well covered with meat and muscle; tail, broad and well set up; the ribs long and well sprung, with a full flank.....	20
Legs and feet—straight and black, with fine and flat bone, woolled knees and hocks, clean below; fore-legs set well apart; hind legs well filled with mutton.....	20
Belly—well covered with wool (also scrotum of rams).....	5
Fleece—moderately short, close, fine lustrous fibre, without tendency to mat or felt together, and well defined, i. e., not shading off into dark wool or hair.....	10
Skin—fair, soft, and pink color.....	5
Total.....	100

At the Smithfield in 1885 lambs of 314 days old averaged 209 lbs., and shearlings 667 days, 261 lbs.; and at the Newmarket and Ipswich lamb sales they average (the ram lambs) from £5 to £7 per head.

The Marquis of Bristol is president of the society, and the Earl of Ellesmere has recently become a member.

From what we have written it will readily be seen that this breed of sheep is possessed of no small degree of merit. There may not be the same reasons for breeding them in Canada as in England, as the mutton might not be so eagerly sought for here as there, in preference to that of other sheep, but we cannot but think that they are a hardy breed that would suit admirably a hilly country. Why would not this breed flourish on the hills and sides of the mountains of our sister provinces down by the sea? At any rate we have room enough to experiment with them here. Who will be the patriotic citizen to bring over the first contingent?

The Herefords of Springdale.

The advance of the different breeds remind us of the action of the tidal waves. There is first a flow and then an ebb, to be succeeded by another flow, and the history of the Herefords has proved no exception. There is this difference, however, that while the tidal waves rise to high water mark, beyond this they cannot pass, while in the ebb and flow of the breeds there is no tide-water mark. The one set up by the famous Mr. Tompkins in his day has long ago been swept away, and the great swell of 1884, culminating in the famous Lord Wilton sale, was an overflow such as had never been seen in the annals of Hereford history. Where the next flow will land the breed it would be impossible to forecast but the traces of the last swell are found in many parts of Canada, resulting as it did in the formation of a goodly number of herds both in the east and in the west. And these herds have not been cast up on the Canadian strand, like the ships of the ancient Grecian explorer on the shores of India, to fill the owners with dismay on the receding of the tide. They have been planted in a fertile soil to remain with us, and will doubtless aid in swelling the valuation list of Canada's live-stock in all coming years.

The establishment of the Springdale Farm herd of Mr. R. J. Mackie, of Oshawa, was not the outcome of the flow of 1884, although this added materially to the numbers and value of the herd. This herd is not a thing of yesterday: it was established as far back as 1873, and is therefore the second oldest herd in Canada. It is also the second largest at the present time in Ontario, numbering 75 head, of which 12 are bulls—9 head of these being about and under one year. Then there is a large contingent of cows and heifers to come in from time to time as the season advances.

The first purchase was from the herd of F. W. Stone, Guelph, and comprised the cow Bonnie Lass 5th, got by Sailor (2200), and a young bull called Tom Thumb. This cow produced two bulls, and then unfortunately died, which, along with their sire, were sold to go to Colorado in 1877. Mr. Mackie then bought the same year two cows and two heifers from Geo. Hood, Guelph. One of these, Victoria, calved May 24th, 1870, by Sir Charles (3434), 543, a bull with an immense front and a good rear, said to be one of the best that Mr. Stone ever owned, and which afterward rendered good service in the herd of Mr. T. L. Miller, of Beecher, Ia. Her dam was Verbena (imp.) by Carlisle (923). This cow has certainly proved herself one of the most valuable Herefords that ever fed in Canadian pastures. Her owner remarked to us nearly two years ago that if at the time of her purchase he had borrowed the money and paid ten thousand dollars for her, he could then repay it with her produce. Her heifer calf came with her, sired by Hero, 1802. Mr. Mackie had the wisdom to retain in the herd the female progeny of Victoria, and until recently both she and her descendants have bred females almost exclusively, so that at the present time there are in the herd of her own daughters, six representatives, and twenty-four of the family, of which four are bulls under one year; and it is worthy of note that nine out of the herd of seventeen head shown by Mr. Mackie this year at the leading shows were Victorias. The old cow won the silver medal at the Philadelphia Centennial, 1876, and her heifer calf, referred to above, the first-prize at the Provincial, 1877. Lottie Lee, a half sister of Victoria, and a one-year heifer of the former, came to Springdale along with her.

The same year the young bull Duke of Argyle, bred by Her Majesty the Queen, was bought at the Exper-

imental Farm, and put in a term of six years of very useful service at Springdale before he was sold to J. Sharman & Sons, Stratford, Ont. Calved December 29th, 1876, he was sired by the Duke of Connaught (4528), dam Princess Mary 2d, by Prince George Frederick (4051), and running back to Carlisle (923).

In 1882 the heifers Gentle Lady and Graceful Lady, of Mr. Stone's Gentle and Graceful families respectively, sired by Bonnie Lad 2d (5764), 12296, also of Mr. Stone's breeding, were purchased from M. Boyd & Co., Bobcaygeon, Ont. The former of these heifers had produced four calves at four years, of which two were twins. In the autumn of the same year two heifers were bought at the Ontario Experimental Farm sale, but these are not now in the herd.

A strong accession was made to the herd in 1884, when Mr Mackie along with Mr L. G. Drew, also of Oshawa, visited herds long since famous in England, and selected therefrom no less than forty-three head, of which about one half went to Mr. Mackie. Most of those going to Springdale came from the herd of Mr. Aaron Rogers, of the Rodd, whose fame alone had been enduring had he never bred another Hereford than the famous show bull Archibald, although there were representatives from the herds of Mr. Thomas Rogers, Mr. Morris, of Stapleton Castle, and Mr. Griffiths, of Brierly, all in Herefordshire, and Mr. J. Hill, of Felhampton Court, Church Stretton. The show-cow Cinnamon 2d, the Ontario Provincial silver medal bull Cecil, and the prize-winning heifer Silk, the two former to be further described below, all came from The Rodd. In this importation were such families as the get of Lord Wilton (4740), and his descendants, of The Grove 3d (5051), and Grateful (4622), and a number trace back to the same ancestry as produced Lord Wilton and Horace (3877), the sire of The Grove 3d. Cecil (8385), 18469, whose sketch appears on the first page of this issue along with that of the imported heifer Silk at the head of the Springdale Herefords has been a great acquisition to the herd, being equally good as a sire as he is a show-bull. Indeed, it is the fine breeding qualities of Mr. Mackie's two stock bulls, the Duke of Argyle and Cecil, the only two stock bulls he has ever retained, which, along with general good management, have made his venture in the breeding of Herefords so decided a success. Read this again and again and again, ye breeders who will not give a good price for a good male.

We surveyed the Springdale herd on the 26th October last, on a day when the wind was raw, and when cattle, unhoused at that period are apt to look their worst, something like men with extra mufflings on, getting uneasy as they stand around a show-ring on a raw day, and yet we were pleased indeed with the general appearance of the herd. Most of them were only in breeding condition, and what is better, without any exception, so far as we could learn, they breed, the great desideratum with beginners especially, who are starting herds.

To dwell upon all the good individuals that we saw would take too long. We notice but a few. Here is imported Cinnamon 2d, from The Rodd, the close rival of Mr. Fleming's wonderful Miss Brody, a cow of grand size, substance and smoothness, and was sired by the never beaten Grateful, of similar breeding with Lord Wilton; her dam Cinnamon, is by Stanway 2d (4154). Her one year heifer was first as a calf at all the leading fairs, and in 1886 first at Toronto and 2d at Provincial, Guelph; and her heifer calf of 1886 by Cecil, promises to rival her older sister. Victoria 6th, out of old Victoria, is a pretty, curly, blocky beast, and a prize-winner. Yonder is old Victoria

herself, showing signs of age, but yet hale and strong, and carrying her fifteenth calf for the Springdale herd, although but 16 years old, and her daughter, Victoria 2d, promises to rival her in this respect, having produced 8 calves though but nine years old.

The calves are both numerous and well done by, and are mostly from Cecil, although some are by the famous Conqueror, of the Experimental Farm, which Her Majesty's manager would like to get back again across the sea.

Mr. Mackie only came out in the show-rings in 1884, with two calves, winning with them, and in 1885 came back to Toronto and went to London with 7 head, taking as many prizes at each place, including the herd prize on calves at London Provincial. In 1886 he captured a large share of the prizes on Herefords, both at the Toronto Industrial and at the Provincial, Guelph, including the herd prize at the former, and also the herd prize on calves.

In this paper we have dwelt almost altogether on the purchases and the breeding therefrom at Springdale, but its history has another side. In conjunction with Mr. Drew, his neighbor, Mr. Mackie has made Oshawa a centre of Herefords in central Ontario, as there are now in the vicinity more than half a dozen growing herds of this fine, fleshing breed, and the animals composing them have all or nearly all come from the herds of these gentlemen.

Springdale is situated but two miles east from Oshawa on the main line of the G. T. R., thirty miles east of Toronto and 300 miles west of Montreal. The farm consists of near 200 acres of good rich soil, such as characterizes that section, and capable of producing sustenance for the very large herd which is kept upon it, a herd which it has given us much real pleasure to put on record its performances, both in its breeding and show capacity, but more especially the former.

A Great Desideratum.

It is a matter of pretty common belief that it is impossible to combine in a high degree great milking and beefing qualities in the one animal. To such an extent, practically, has this belief been imbibed by Shorthorn breeders that as a rule, to-day, they are only seeking to perpetuate and to increase the beef-producing qualities of the breed. It is quite possible that it is time to beat a halt here. The Shorthorns were noted as milkers in the days of long ago, and it may be that they will be equally noted in the days that are at hand.

To Mr. Handley, of Greenhead, five miles from the town of Kendal, in Westmoreland, belongs the honor of demonstrating a splendid possibility in this line. When his herd was selected the possession of milking qualities in a high degree was made a first requisite; yet he endeavored to combine with this, symmetry of shape and good beefing qualities generally. The cattle selected were mostly of the Booth types, whom so many look upon as poor milkers.

While this herd not only retains and transmits its milking qualities, as to its beefing tendencies we have but to refer to the show-yard career of its bulls. Sir Arthur Ingram, Master Harbinger, Royal Hovingham, Alfred the Great, County Member, and Royal Victor have all gone forth from this herd, conquering and to conquer. A writer in the *North British Agriculturist* of Nov. 10th, '86, who visited the herd, says of them: "There are thirty milch cattle, dams descended from excellent pedigreed Booth families, and we never, on one farm, saw so many together showing such excellent milking and beef qualities." Here are Ingram's Glory, from Flower Girl; Derwent Queen

2d, mother of Royal Hovingham; Hawthorne Blossom, dam of the Bow Park's Ingram's Chief, and Princess Flora, mother of three bull calves, including the celebrated Gold Finder, all of them Royal and Highland winners.

We are just pleased beyond measure that the outbreeding of good milking qualities in the Shorthorns may come to an end. The standard that Mr. Handley has so bravely unfurled in Westmoreland, who will rear it in Canada? To do it well requires means on the start, and what worthier material object, we ask, could engage the attention of our monied men? More attention will be paid to the perpetuation of milking qualities in Shorthorns by the rank and file breeders when they become sufficiently numerous to justify selection in most herds for the continuance of the race. That day is fast approaching, and in the line of males it is just at hand. There need be no denying it, that very soon a goodly number of our Shorthorn males must be steered, and the sooner the ordeal is commenced, the better will it be for the well-being and honor of the race.

The Council of the Agricultural and Arts Association of Ontario.

ELECTION OF OFFICERS.

As the mode of electing these is but imperfectly understood by a majority of our farmers we subjoin the clauses bearing upon this, taken from the Act of last session to consolidate and amend the Agriculture and Arts Act.

Chap. 2, Sec. 19, reads thus:

The Council of the Agriculture and Arts Association shall be composed of thirteen members, elected as hereinafter provided.

Sec. 20. Ontario shall be divided into thirteen agricultural divisions, designated by numbers, and comprising the electoral districts enumerated in Schedule A, annexed to this Act; and each division shall be represented by one member in the Council of the Association.

Schedule A groups the divisions as follows:

- 1, Stormont, Dundas, Glengarry, Prescott and Cornwall.
- 2, Lanark North, Lanark South, Renfrew North, Renfrew South, Carleton, Russell and the city of Ottawa.
- 3, Frontenac, city of Kingston, Leeds and Grenville North, Leeds South, Grenville South and Brockville.
- 4, Hastings East, Hastings North, Hastings West, Addington, Lennox and Prince Edward.
- 5, Durham East, Durham West, Northumberland East, Northumberland West, Peterborough East, Peterborough West, Victoria North (including Haliburton) and Victoria South.
- 6, York East, York North, York West, Ontario North, Ontario South, Peel, Cardwell and city of Toronto.
- 7, Wellington Center, Wellington South, Wellington West, Waterloo North, Waterloo South, Wentworth North, Wentworth South, Dufferin, Halton and city of Hamilton.
- 8, Lincoln, Niagara, Welland, Haldimand and Monck.
- 9, Elgin East, Elgin West, Brant North, Brant South, Oxford North, Oxford South, Norfolk North and Norfolk South.
- 10, Huron East, Huron South, Huron West, Bruce North, Bruce South, Grey East, Grey North and Grey South.
- 11, Perth North, Perth South, Middlesex East, Middlesex North, Middlesex West and city of London.
- 12, Essex North, Essex South, Kent East, Kent West, Lambton East and Lambton West.
- 13, Algoma East, Algoma West, Simcoe East, Simcoe South, Simcoe West, Muskoka and Parry Sound.

Sec. 21. (1) Four (or five, as the case may be), members of the Council shall retire annually, in the order in which such members have been elected for the respective divisions, each seat being vacated every third year; and the Secretary of the Association shall

send a list of the names of the retiring members to the Secretary of each electoral district society, on or before the 1st day of September in each year.

(2) The retiring members (who are eligible for re-election), may continue to exercise all their functions until their successors have been duly elected.

Sec. 22. The nomination of the candidate, or candidates, to represent an agricultural division in the Council shall be made in writing by ten or more members of some electoral district society in such division, and forwarded to the Commissioner of Agriculture on or before the 15th day of December preceding the election; and the Commissioner shall, on or before the 26th day of December next ensuing, mail to the Secretaries of the several district societies in such division the names of all persons so nominated.

Sec. 23. (1) The members of the district societies in each division shall at their several annual meetings provided by Section 39 of this Act, elect from the persons nominated therefor, one to represent their division in the Council, each district society having one vote; and the person receiving the largest number of votes of such district societies shall be the member of the Council to represent such division.

(2) In case the vote for such member results in a tie, then the district society amongst those societies voting for one or other of the persons in respect of whom the tie occurs, which has the largest number of members, as appears by the report for the last calendar year, shall have the casting vote.

(3) Vacancies in the Council through death, resignation, or otherwise, shall be filled by the Commissioner.

Before this shall reach our readers the names of the candidates for election or re-election this year shall have been filed, and of course others cannot be named after the time fixed upon. Elections take place this year in groups 9, 10, 11, 12 and 13, and we hope that in making choice of their men the electors will have respect only to the fitness of the candidates for the office which they seek, or for which they have been brought forward. Whatever qualifications they may lack they should not be capacity, integrity, an ample knowledge of practical agriculture and a large amount of business tact and experience.

The Beef Breeds of Cattle.

BY R. C. AULD, DRXTER, MICH.

(Copyrighted.)

(Continued from November.)

These are the three leading beef breeds, but there are others that require, as they deserve, notice. At the head of these I would place the

SUSSEX.

Though hardly known yet in America this breed is an intrinsically valuable race; more, I believe, than any others to be yet noticed for purposes required on this side.

The breed is red, a sort of dry clay red, different from other reds. It is wide, open-horned—not its most desirable feature, certainly. The body is lengthy and rangy. They are very useful cattle. Its habitat has been in the weald of Sussex, a district which from its impenetrable woods remained an isolated region for ages. This region was denized, even then, by the native ox, and from him the modern breed doubtless descends as pure as any other local race that has been brought up to modern requirements.

We are told in the General View of the County of Sussex, drawn up for the Board of Agriculture in 1808, that Lord Suffield, an eminent Sussex farmer of that time, considered there were two kinds of Sussex cattle: (1) a coarser kind, resembling the Herefords, but without the white color; (2) a lighter breed, like that of North Devon. At that time oxen were almost exclusively used for farm work, and his lordship preferred the latter sort, being best adapted

for that purpose. For working purposes they were superior to any other. They had more action than the Herefords, and much more strength than the Devons, and in both the points mentioned were they superior to the Long-horns.

In Culley's "Live Stock," published in 1794 (a work that must be remarkably rare in America), Mr. Ellman, a famous man, sent him this description of the breed:

"Color red, fine hair, and very thick skin, neck and head clean, horns neither long nor short, rather turning up at the points; in general well made in the hind quarters, wide across the hips, rump, and sirloin, but narrow on the chine; tolerably straight along the back, ribs or sides laying too flat, thin in the thigh, and bone not large. An ox six years old when fat, will weigh from 60 to 100 stone (14 lbs. to the stone), fore quarters generally the heaviest. The oxen are mostly worked from three to six years old, sometimes seven, when they are turned off for feeding. The calves run with the cows till they are eleven or twelve weeks old, when they are weaned and turned to grass. A good cow, after the calf is taken from her (if well kept), will produce from 6 lbs. to 8 lbs. of butter a week for three or four months after taking off the calf, and double that quantity of skimmed milk cheese. They do not give so large a quantity of milk as the Suffolk cattle, but it is much richer in quality."

Lord Egremont had a pair of oxen in their eleventh year which for seven years had done as much ploughing and carting as any two horses in the county; and then, with half a summer's grass after they were taken from the collar, and an autumn's run in the rowens, without corn, they were sold at Smithfield for £80.

The average weight of the Sussex at Smithfield, is about 120 stones; an ox of Mr. Ellman weighed 214 stones, and Mr. Edgard, of Fettesworth, had one that exceeded that by two stones (the Smithfield stone is 8 lbs., the Scotch 14 lbs.). One fattened many years ago at Benton Park was a huge animal: his height was 5 feet 6 inches; length from back of horns to the tail, 8 feet; width from hip-bone to hip-bone, 2 feet 8 inches; depth of shoulder, 4 feet 7 inches; girth behind the shoulder, 10 feet, and his weight 237 stone 4 lbs. "This animal was of course a wonder, but he had an immense quantity of bone, and he was generally coarse and uneven, not in any sense a profitable butcher's beast."

The one-year-olds at Smithfield show in 1830 weighed 11, 12, and 13 cwt. (cwt., 112 lbs.); the two year olds weighed 17, 19, and 16 cwt. The heaviest Sussex steer in the show was over 21 cwt.

They are good butter cows: A cow at Glynde yielded 10 lbs. of butter and 12 lbs. of skim milk cheese per week, yet gave only 3 gallons of milk per day; the next year she gave 9½ lbs per week for several weeks, then for the rest of the summer 8 lbs. and 8½ lbs. per week, and until the hard frost set in 7 lbs. and 4 lbs. per week during the frost. Mr. Youat says, however, they do not answer for the dairy.

They have been improved by careful selection from one generation of breeders to another. Fifty years ago Youat described the round, deep barrel, straight back, big belly, wide loins, and spread out hip bones. They were well ribbed up, and had fine thin tail set on rather lower than the Devon. Since then much pains have been taken to improve the quality by breeding from individuals with the smallest bone and the greatest amount of excellence of flesh. And now their hardy and robust habit, maturing and feeding qualities, are among their most valuable characteristics. They are attracting attention at the English shows as a breed that is capable of coming more to the front than it has yet done. The huge, ungainly proportions of the old Wealden race have been reduced, the coarse shoulders and hare hard points of the "working" members have been refined, and al-

together is now more of a shape that the showyard system has induced.

The oldest and best known breeders are the Messrs. E. & A. Stanford, who were the only exponents of the breed at the Paris Exhibition in 1878, and are the leading exhibitors at the English shows. The following is from an account of their herd:

"On the ground of antiquity of origin also a second claim might be very reasonably urged, although the exact dates of the beginning of a herd, and of its rise from ordinary or average to superior merit, are not always easily ascertained. The origin of Messrs. Stanford's herd is lost in the misty distance of the last century; its acknowledged position in the front rank is due mainly to the judgment of the present proprietors, who are not veterans, but men in the prime of life. They farm together about 1,100 acres, and breed, rear, buy, sell, and feed cattle, treating the pure Sussex as plain faring and rent-making stock.

"The grandfather of the present owners of the herd came to Eatons in 1779, bringing with him from beyond Horsham, pure-bred Sussex cattle, ancestors of some families of the present herd. He soon afterward bought Ledford Farm, where also pure Sussex cattle were bred. During his time and during the lifetime of his son, the father of Messrs. E. & A. Stanford, no systematic record of the breeding of the stock seems to have been kept. The offspring of the cows brought over in 1779 were known as the 'old sort,' from generation to generation, so that their descent from the foundation stock was kept in remembrance by tradition. The cattle did all that was expected of them for the dairy and the plough, and eventually fell under the butcher's axe, heavy carcasses of beef. As ploughing with oxen became a less common practice, proportionately more attention was paid to the beef points, until we have in the massive and symmetrical Sussex cattle of the Royal Agricultural Society of England, the Smithfield Club, and the Bath and West of England Society, the result of continuously repeated selection, extending over many generations. The breed, as it is now, its breeders maintain, is the old breed of last century, and of time immemorial, improved up to grazers' standard—improved as any breed may be improved, by skillful breeding and good management within its own limits. It was always a breed of hardy, active animals, kindly feeders, and only wanted a little care to translate the form from that of the draught ox to the butcher's model, and encouragement of the fattening propensity to cover the improved frame with prime beef in the most valuable parts. These desiderata have been supplied.

"Messrs. E. & A. Stanford's father while keeping on the line here indicated, did not, as already stated, leave any record of his work, as step by step, link by link, it was continued from his father's time. He used pure bred bulls, avoiding near relationship in animals paired; but their names and order of succession are not known. One remarkable sire, however, is remembered. In the year 1839, when the first meeting of the Royal Agricultural Society of England was held at Oxford, Mr. Putland, of Fittle, near Lewes, sent his 'Brown Bull,' who walked all the way to Oxford, and carried off the first prize. Brown Bull in advanced age was purchased by Messrs. Stanford's father, and used in his herd."

Mr. Burleigh, of Maine, has imported some last fall. The Stanfords, I think, have started a branch establishment near Markham, Ont. Overton Lea exhibited the first Sussex steer at a fat stock show in America last winter at Chicago. This steer was only a yearling and carried first prize in carcass class for beef. He was fed in England. He effected wonders for the new comer, and won many friends for the breed, "the rising rival of the Shorthorn and Hereford," so is heralded by the great live-stock agents, Messrs. Robertson & Co., of Woking, Surrey, England.

The great Illinois feeder, Mr. Gillette, seems to have been captivated by the young Sussex Chicago steer, and has determined to make an importation. "In accomplishing this it has done much for the breed."

We have been led to go rather fully into the consideration of this breed, as from what we know of it,

especially of E. & A. Stanford's cattle, as shown at Paris in 1878, and last year in England, we are convinced but for one thing—the superior length of horn—they will make many deserved friends on this side.

DEVONS.

The only other two English breeds that remain to be particularly noticed are the Devons and Norfolks, these being in certain special ways as famous in the dairy as for beef, and may thus be classed together.

They are a small breed. Youat says, "There are few things more remarkable about the Devonshire cattle than the comparative smallness of the cow. The bull is a great deal less than the ox, and the cow almost as much smaller than the bull." They are still small, the North Devon particularly. The Devon ox shown by Mr. Sam Kidner that took champion honors at Birmingham and Smithfield some years ago, was particularly small, but very meaty. Their native habitat is hilly and they are well adapted to the country—hardy. Though small it is remarkable that they were reckoned as the best working breed in England, for the plough and carriage on the road. Their dark red ruby color, their wide upturning horns, make them noteworthy objects. At Smithfield the place of honor in the catalogue is given to them, which indicates that they are one of the oldest improved English breeds. Youat says: "From the earliest records the breed has remained the same": they belong to a region that has long remained undisturbed. The Devons are undoubtedly as near the original general type (that has variations in the Sussex and Norfolk) that exist—the modern Shorthorn and Hereford not being general types. As beef-makers they rank high—the beef being of excellent quality, compact, sweet and juicy.

They are not celebrated for giving large quantities of milk, but it is very rich in quality, and Devonshire counties' cream is one of those mysterious at original productions not to be obtained outside the county. In 1767 they were fed up to 17½ to over 19 cwt. (112 lbs. to cwt.) L. F. Allen gives the following weights: 5 years 11 months, net dead weight 1,593 lbs.; 3 years 7 months, do., 1,316 lbs.; 4 years old, from 1,000 to 1,400 lbs.

There is no doubt that of the improved races of cattle imported into this country, among the first were Devons and Norfolks. They seem to have been brought over with the "household gods." They are well disseminated and are increasing in numbers without any effort being made by the breeders to add to them by new importations.

The most noted breeders in England have been the Davy Bros., Messrs. Quartley, Merson, Childs, Turner, the Duke of Bedford, while Lord Somerville, in particular, and Western, were among the earliest improvers.

Their use in this country would seem to be for small farmers with small keep, not requiring great consumers, or great quantities of milk, or heavy carcass.

Science in Farming.

Those who are disposed to make light of anything that savors of science in its application to farming, would do well to ponder the work that has been accomplished by means of the dairy associations of western and eastern Ontario. The time was when butter and cheese were made without the conscious aid of scientific principles. Every farmer made his own butter and cheese, and what was the result? Why, some of it was fairly good, and the major portion very indifferent or very bad, so that no market at all could be opened for it abroad.

Then it was that the dairy associations were organized, and calling in the aid of science to the knowledge already possessed of the art, a mighty march of progress was inaugurated, such as our fathers never imagined. Scientific dairying found our country without a cheese market. Virtually it has brought to us through this means alone sums almost fabulous, and has produced a uniformity of make such as never would have been brought about without a diffusion of the scientific principles that govern the art.

It is not a surfeit of scientific knowledge that impairs the healthful progress of agriculture, but the dearth of it. The condition of farming is that of kine, lean and ill-formed, compare with what it might be, and more than anything else because so many of our farmers will not avail themselves of the advantages that science is daily placing within their reach.

Why should not other branches of farming profit by the systematic organized diffusion of scientific knowledge as well as the dairy interest? Of the hundreds who are daily engaged in feeding stock, how many are there who feed alike? The foods used in Ontario are very similar, not so the methods of feeding. Now some methods are better than others, just as some modes of making cheese are better than others. Yet while most cheese-makers in Canada adopt a uniform plan, nearly every fatterer of cattle has some plan of his own.

Too many farmers look upon science in relation to their vocation in the light of a scare-crow; they imagine that it will do them harm, and therefore, like the deluded crows, keep at a distance from it, not perceiving that it is through the application of the principles of science that their grain is threshed and their harvests reaped.

The power of science to aid the farmer has by no means been exhausted. New discoveries and new methods which will lessen manual labor are still at hand, and it is the students of science who will first discover and apply these. The farmers in the next decade who will leave their fellows furthest behind are those who practice most closely the principles of true science, and those who will not accept of her proffered help must suffer a corresponding loss.

The Ayrshires of Mr. Thomas Brown.

On a large farm of some 300 acres not more than 1½ miles from Montreal, on the Petite Cote road, Mr. Thos. Brown (Petite Cote P. O.) located more than eight years ago. The rental paid for this farm would frighten farmers in most localities, yet proximity to the city with its splendid market, a heavy crop of potatoes, for which the soil is very well adapted, and the product of a splendid herd of pure and high grade Ayrshire cattle, and other products, which the high class of farming adopted by Mr. Brown enable him to force up from a not unwilling soil, more than meet these demands.

Forty acres of potatoes are grown annually, and usually the product is 200 bushels to the acre, although this year the crop was not so good, owing to dry weather in the growing season. A crop of sweet corn netted \$108, from four acres, for canning purposes, while the stalks remaining were worth considerable for feeding.

Like so many of his countrymen, Mr. Brown is a great lover of good stock, and as a matter of course his preferences run in the lines which his country produces in such perfection—Clyde horses and Ayrshire cattle, but more especially the latter.

The stallion Freedom (4383), three years old, imported by Mr. Brown in the summer of 1886, is the stock horse at present. He was bred by Mr. James

Lindsay, Eastfield, from the sire Earl of March (2089) Vol. v, and the dam Susan by Blaze 3d (74). He has the usual Clyde makings, is well ribbed, not high off the ground, and in consonance with his name has freedom of action, and should prove a useful stock horse. Of the brood mares we may mention Mal II., of Muncraig (3547), a five-year-old, and Maggie, both of which are imported. The former bred by W. Gray, Kircudbright, is by Bonnie Scotland (1076) Vol. II., and the dam Mal by Lofty (456). She is a fine-looking mare with a girth of 7 ft. 2 in.; won five firsts in the old country and is carrying foal to Macgregor (1487). The pedigree of the latter traces back 102 years. Her filly foal is out of Earl Grey, imported by Mr. Henderson, a neighbor. Her sire was Osman Pacha (1777), tracing back through such sires as Broomfield Champion (95), Glancer (335), to Blaze, the winner of first prize at Edinburgh, 1784.

The Ayrshires owned by Mr. Brown are a representative herd. They have not the size of Mr. Drummond's, but there is fidelity to type in many of them that is very pleasing, and the Ayrshire grades resemble the Ayrshires so closely that an unskilled eye might be deceived and take them for pure-breds.

Mr. Brown has been breeding them pure for about ten years, and his herd was grounded at first upon those of his neighbors, James Drummond and Thomas Irvine, and on that of W. Rodden, of Plantagenet, Ont., but in 1882 he imported four head himself, Lady Gladstone, Topsy, Dossy, and Maggie, and again in 1886, another contingent, including the two-year heifer Saiah, the first prize in pair at Ayr last summer, and also first at Sorn and Ochiltree. Mr. Montgomery, the breeder of this heifer, is noted in Ayrshire annals, coming out second at the Carp milking test, with cow—66¼ lbs., and first with three-year heifer, 42 lbs.

Dossy has nice Ayrshire points. An old imported cow 16 years old, gives 1,100 gallons in the season, so that we need scarcely add she shows abundant milk capacity. But Lucerne calved at sea, by the sire a son of Daystar, which sold to the Duke of Buccleugh for £100, and the dam Maggie, is the plum of the herd at home, the last contingent being still in Queenstown at the time of our visit. She won in the milking test as stated in November JOURNAL, scoring 94.09 in a possible hundred, and the two-year old stock bull was placed first at the same show.

Two one-year bull calves, one from the noted Lucerne and the sire imported Spittal, impressed us favorably. They would make capital sires to head an Ayrshire herd.

Mr. Brown's herd, which numbers more than 50 head, of which more than one-half are pure, has been tested in a very practical way, and the results of the test have been very satisfactory indeed. As we said before, he has a very heavy rental to pay, and his main reliance is on Ayrshire cows, and in no instance thus far has he had reason to feel disappointed with the reliance of his hope. This is a very reliable kind of test, and as long as Ayrshires respond to its requirements, and give the owner a fair margin, as they do at Petite Cote, they will not cease to be sought for in the dairy.

Agents wanted in every locality in Canada to canvass for the "Canadian Live-Stock Journal." Good salary to good men. Sample copies free. Write for particulars, giving former employment, to the Stock Journal Co., Hamilton, Ont.

The Experimental Farm Outbuildings.

These, although barely completed yet, are now occupied, and will, in the main, we believe, answer the purpose well. In this brief notice we shall not refer to the commendable features—these are so many—but will confine our remarks to the weaknesses. One of these is in the floor of the cattle stables. We do not refer so much to the defective character of the work as to a defect in the plan, which leaves the cattle stanchions without a drop. In our own stables there is a sharp drop over a flagstone of some six or seven inches, the cement floor in the rear of which gradually slants to this drop. It is working charmingly, while in the case of the college barn, the cattle will not be easily kept out of their own filth. In the arrangement of the stalls for cows suckling calves, we have again a most decided advantage. In ours the calves are kept apart in pairs by sliding bars when being suckled. No provision has been made for this in the college stables, and it cannot well be done now, owing to the nature of the general plan.

In the horse stable floor we believe that it would be an advantage to have the floor of the stalls elevated a little more, and in the sheep-house larger paddocks at the rear of the building than in front, but it may be this is yet contemplated.

The buildings as a whole form a handsome group, and one from which many of our farmers can glean useful hints.

English Swine Standards.

The *London Live-Stock Journal* furnishes us with the following scale of points adopted by the National Pig Breeders' Association, as applicable to most of the improved breeds of pigs:

	Points.
Head—wide and deep, lower jaw sprung	10
Neck—muscular and rather long	5
Shoulders—wide but not open	10
Fore-legs—straight and well placed outside the body	7
Ribs—well sprung and deep	12
Loin—wide—not slack	8
Flanks—deep and full	13
Quarters—long and straight from tip to tail	7
Hams—wide, with meat down to the hocks	10
Hind-legs—Placed well outside and not too much under the body	5
Bone—flat and not coarse	6
Hair—long and silky, but without mane or bristles along the neck and shoulders	7
Total	100

To the foregoing general standard the following distinctive characteristics are added:

BERKSHIRES.

Color—black, except feet and tip of tail, which should be white, and white blaze or mark down the face.

Hair—a fair quantity and of fine quality.

BLACKS.

Color—black.

Head and Body—slightly longer than in small whites, other points similar.

LARGE WHITES.

Color—white, occasionally with blue spots on the skin, but without black hair.

Head—rather long, wide between the ears, which should be inclined forward.

Size—if accompanied by quality, of great importance.

MIDDLE WHITES.

Color—same as in the large whites.

Head—shorter, and ears pricked.

Body—generally more compact, on shorter legs.

Hair—abundant and silky.

SMALL WHITES.

Color—white, without blue spots.

Head—short, jaws heavy, ears pricked.

Body—short, thick, wide, and close to the ground.

Tall—fine.

Hair—abundant, silky and long, not curly.

Skin—thin and free from scurf.

TAMWORTHS.

Color—Red with dark spots on the skin, other points as near as possible approaching the general standard.

Our Scotch Letter.

(From our Aberdeenshire Correspondent.)

THE BIRMINGHAM FAT STOCK SHOW.

The great annual exhibition of fat stock held at Bingley Hall, Birmingham, was opened to-day (Saturday, 27th November), and as a few notes thereon would be interesting to your readers, I shall briefly touch on some of the principal features of the show. In point of numbers the exhibition was behind that of last year, the total entries being 182 cattle, 74 sheep and 71 pigs, or 327 in all. While well pleased with much that I saw, the turnout on the whole was certainly not the best I have witnessed here. It strikes me particularly that within the past few years, Shorthorns are not equal to what they were seven or eight years ago, but the "rank and file" as well. There is something wrong, methinks, that when the championship comes to be decided, the "red, white and roans" are simply out of the running, as they were to-day. Not for the first time the Elkington Challenge trophy, valued at 100 guineas, or what is called the "blue ribbon," was awarded to a Polled Aberdeen-Angus cross-bred steer. He was after a Shorthorn sire, was bred in the north of Scotland, and was a splendid specimen of what can be produced in combination by these two potent breeds. Aged 2 years, 9 months, 2 weeks and 6 days, owned by Mr. Owen C. Wallis, Bradley Hall, Northumberland, he scales not less than 19 cwt., 1 qr. and 20 lbs., being probably the heaviest animal, age considered, in the hall. He is a wonderfully straight, symmetrical bullock, with all the evenness, quality and wealth of flesh that have made the reputation of the Polled Aberdeen crosses in the fat stock show-yard. He has been several times beaten this season by animals that were in competition with him to-day, but the Birmingham decision is undoubtedly right. His strongest opponent was a 3 years and 8 months old Hereford heifer, owned by Mr. Arthur P. Turner, The Leen, Pembroke, and got by a bull named The Grove III (5051), which was first in the breeding class at the Royal English show at Norwich this year. She weighed 17 cwt., 2 qrs. and 1 lb., so that in respect of weight for age, the cross-bred steer had a most decided advantage over her; but she is a remarkably handsome heifer with marvellous loins and cover about her. I am not sure, however, that the Hereford men had not a better card for the championship in a very handsome 3 years and 6 months old steer, the property of Mr. Frederick Platt, Barnby Manor, Newark, got by the sire, San Julian (6165), but in the competition for the best Hereford animal in the hall, the judges gave preference to the heifer, and consequently the steer was shut out from the final competition. He gives a very good account of his feeding, weighing exactly 21 cwt., and I have never seen a more perfectly fleshed Hereford in my life, being beautifully covered on his most valuable parts, and he was probably the most complete animal round the heart in Bingley Hall. I think, had he come into competition with the cross-bred steer, there would have been very little to have been said if he had beaten the Scotch bred beast. There were some very fine specimens among the Hereford classes, and in the ring they looked very formidable, but when I visited them in their stalls, they rather disappointed me, especially in the young class, which as a whole were bare in their flesh along the back—a most undesirable weakness which the Polled breeders have shown how to redeem. Her Majesty the Queen owns the champion Shorthorn, a 3 years and 7 months old roan steer, bred by Mr. Joseph Stratton after a bull named Alton (45856), which scales 20 cwt., 2 qrs., and 17 lbs. He is an ox with admirable middle piece, but is neither perfect in front or behind, though he is very well covered. A full brother of this ox, also from the Royal herd at Windsor, leads in the yearling class, and a particularly good one he is, though on the small side, rather.

Our Scotch Polled Aberdeen-Angus breed did not succeed in quite maintaining the position they won last year, through the extraordinary success of Mr. C. Stephenson's celebrated pure bred heifer *Luxury*, both

at Birmingham and London, though, as I have stated, that indirectly they furnished the champion of the showyard, and in fact all through the classes for cross-bred cattle, the Aberdeen crosses carried everything before them; for instance, in the section for steers between three and four years old, the Queen comes to the top with a dark gray, weighing 22 cwt., 1 qr. and 6 lbs. In the class for steers between 2 years and 3 years, Mr. Wallis's champion appears, and in a very strong competition open to cows and heifers, a polled cross by a Polled Aberdeen bull had the distinction of receiving the premier honors for Mr. Shand, Banff.

The show of pure-bred Aberdeen-Angus is not quite as large as might have been expected, the total entry being about half a score, but the female class in this section was unquestionably the best feature of the exhibition; and the "plum" of the lot, I was glad to find, was owned by the veteran breeder, Mr. Wm. McCombie, of Easter Skene, who, though in his eighty-fifth year, is as keen intellectually as the best of us, and takes a deep interest in his old and valuable herd. This animal is three years and eleven months old, is of Ballindalloch descent through her sire Blackmore (1980), and on her dam's side, Scots Lassie (4891), she traces back to a famous strain known as the Grizzles, which, if I mistake not, was drawn upon by the late Mr. McCombie, of Tillyfour, to furnish him with some of his "crack" winners at former Christmas exhibitions in England. Though she was not by any means an animal of very great substance, her live weight being 16 cwt, 3 qrs, 5 lbs, yet she carried her meat so evenly laid on, was so finely fleshed along the back, straight in frame and excellent in symmetry, in a word, was so valuable to "cut up," and light in her offal, that the judges could not get away from her and she was not only awarded 1st prize in her class, but also a special prize of £30 as the best Scot, which included Aberdeen steers and Highland steers and heifers. She was also in the running for the championship, and had she shown more pounds for her age I may safely say that she would have walked off with the blue ribbon. An English breeder, Mr. Arthur Eglington, South Ella, Hull, headed a small class of three Polled steers with a very sweet, evenly fleshed, two years and seven months old ox, 17 cwt, 3 qrs, 10 lbs, live weight, while two Alyn-bred oxen, now in the possession of Mr. Baker, Wisbeach, followed. The Earl of Strathmore, Glamis Castle, with a heifer named *Melody*, bred at Rothiemay, after Royal Victor (1780), weighing 18 cwt, 1 qr, for two years and eleven months, was second to Mr. McCombie's champion Scot, and Mr. C. Stephenson, Newcastle, claimed the next two honors for very well matured heifers of his own breeding.

A good many of the Birmingham exhibits will appear at London next week, and it is quite probable that even the decision in regard to the champion 100 guinea prize may be overturned, not to speak of smaller changes in the position of the animals in other classes; but on the whole, the decisions given to-day struck me as being carefully given and generally satisfactory.

QUIDAM.

Birmingham, Nov. 27.

Mr. Lowell's Herd of Shorthorns.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Having been invited to visit the herd of Mr. Francis Lowell, of this town, I take the liberty of writing up his herd, which I hope will prove interesting to the readers of your valuable STOCK JOURNAL. The farm is in Waterloo county, near the village of Montrose, and contains two hundred acres of rich clay loam, on the Grand River. Mr. Lowell has been breeding Shorthorns for some twenty-five years, and has now, I believe, one of the finest herds in Canada, numbering some 25 head, males and females. Among his first purchases were Red Rose 7th, bred by J. M. Sherwood, Auburn, N. Y.; got by the 3rd Duke of Cambridge 1034 (5941); dam, Red Rose 2nd; also Young Velvet, imported, bred by the late Jonas Webb, Cambridgeshire, England; got by the Marquis of Bute (11788); dam, Miss Layfield, also purchased; Sanspariel 4th, got by Windsor [811], 4484, dam, Sanspariel 2nd; Sanspariel 11th, got by Windsor [811], 4484, and Isabella 9th, got by the same, dam, Isabella 3rd. The last three were bred by F. W. Stone, Moreton Lodge, Guelph. Mr. Lowell has, therefore, four distinct families—Velvets, Duchesses, Sanspariels and Isabellas. During the day spent at

their farm, I was surprised to see such large massive cows, free from all disease and looking the picture of good health.

Mr. Wm. Lowell, who lives on the farm and manages the stock, is bound to make his mark among the Shorthorn breeders of Canada with the strong foundation his father has laid for him. At the head of the herd stands the son of the Pride of Bow Park, Waterloo Duke 12th, by the fourth Duke of Clarence (33597); dam, Waterloo 42nd, a big, fine, massive bull, deep red in color, and purchased from Mr. J. Hope, of Bow Park, last summer. He was in service there when bought. This bull was not in high condition. He would be a hard bull to beat in showing if he carried much flesh, but his service to his owner is of more importance than getting him in condition to show. He handles nicely, having that mellowness of touch so much admired amongst Shorthorn breeders. The next bull led out was Silver King, a rich roan, about 16 months old; bred by Mr. Lowell; sired by Seraph 15th, bred by F. W. Stone, and has been used by Mr. Lowell. This is really a fine calf, his dam being a Sanspariel, sold to go to Montreal. This bull is lengthy and stylish, and from his breeding and appearance, should become a sire of sires. Of the cows and heifers, Seraphina 19th is a large red cow, by Count Bismark [1154], dam, Sanspariel 17th; and Seraphina 20th, of similar breeding, is a beauty, and one of Mr. Lowell's best cows. The next, Seraphina 21st, red roan, a fine large cow, and Seraphina 22nd, a handsome deep red, both sired by Count Bismark [1154], and from the dam, Sanspariel 18th. The latter is Suckling a red roan bull calf, by Seraph 15 and named Silver King 2nd. We now turned our attention to the young stock. Four three-year-olds were led out for inspection, the first, a fine roan, and one of the best, by Grand Duke [3320]; dam, Seraphina 20th; the second, a handsome red, by the same; dam, Sanspariel 17th; the third, a rich roan, and the fourth, a red, are by Grand Duke [3320], the former, from the dam, Velvet Duchess 4th, belonging to the Young Velvet family, and the latter, out of Isabella 10th, belonging to the Isabellas. Of the yearlings, two fine roan heifers and a red one, we admired much for their rich silvly coats of hair. They are all by Seraph 15th, and belong to that family of Sanspariels, from which Mr. Lowell sold four heifers, to the late Stewart Bros., of Lobo township, both since called away. Two of these heifers were afterwards bought at a sale of Shorthorns in Toronto, one for \$3,000 and the other for \$1,600, one to go to Kentucky, the other to the Eastern States. The dams of the above yearlings were Seraphina 20th, Seraphina 21st and Seraphina 22nd. They are good ones. After reviewing many other cattle in the farm, the flock of Southdowns came in turn. The ewes, some forty in number, were imported, and bought from the flocks of Samuel Thorne, of York State. At their head is a ram, purchased from F. W. Stone, Moreton Lodge, Guelph. They are as good a lot of sheep as one could well find; all the stock were in fine condition, and the owner does not show, as he finds ready sale for all that comes into the market.

THOS. SMITH, Galt.

Ergot and Abortion.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I notice in the London, England, *Live-Stock Journal*, a discussion going on about ergot on grasses, being the cause of abortion, etc. As a breeder of Shorthorns, and having seen a great number of cattle abort, it has led me to look closely into the matter, and from my observations for the past 25 years, I have come to the conclusion that there are more cattle abort and refuse to breed from eating ergot in this country and England than most people are aware of. About the last of June or the first of July, the ergot commences to develop on the grass; generally in rather low, wet places on the farm, and immediately after the cows refuse to get in calf or abort.

I see one gentleman recommends keeping goats with breeding cows and heifers when out on grass, as they are very fond of ergot, and will eat all they can find, consequently the cattle will get in calf and are not liable to abort.

This is a vital question for farmers in this country to consider; as at the present time, there are not more than half the cows in this section of country that are in calf, I mean the common and grade cattle. I have, this season, had a couple of goats running with my breeding cows, and I am so far inclined to the

belief that it is going to have the desired effect. Will some other breeders give us their experience in this matter?

WM. LINTON.

Aurora, Ont., Dec. 4th, 1886.

[The above is a vital matter, and we hope that any person having a scrap of experience on the subject will forward it for publication for the general good. —Ed.]

The Ontario Fat Stock Show.

The fourth annual Ontario Fat Stock Show, held under the auspices of the Agricultural and Arts Association and the Guelph Fat Stock Club, was held in the city of Guelph, on the 8th, 9th and 10th December, under the most favorable circumstances, as regards weather. The exhibit of cattle was perhaps numerically less than on some former occasions, owing to the absence of car lots, and there was this perceptible difference to visitors who had attended former exhibitions—that as a whole, there was less of age and size in the animals that appeared in the ring. This is as it should be, for of all items of waste on the farm, there is none less excusable than the feeding of a matured beast for a whole year, which can make but little advance in flesh. It is not a little wonderful that old earth has swung through space for nearly sixty centuries with men and bovines upon it during all those years, and yet till but a very few years hence the former had not learned that the latter should be slaughtered for beef purposes rather under than over three years. The nice even lots that came into the ring with their full development according to age spoke very clearly to the thoughtful mind of the decay of the age of fogysim in cattle feeding.

There were no grades or crosses of the Aberdeen-Angus, Hereford or Devons there, as was very properly remarked by Prof. Brown in one of the evening speeches. If the owners of these breeds expect them to become numerous in this country as butcher's meat, as beasts for shipping, they must do more at our fat stock shows. If they could not make a good fight in the way indicated, we would be content, but see what the Herefords have done this year. In both continents they have swept the board at the leading fat stock shows, and the Angus Doddies have won great laurels as well, both this year and in the past.

The Messrs. H. & I. Groff, Elmira, Ont., were the largest exhibitors of cattle, having 12 head of Shorthorns and Shorthorn grades on exhibition, and of high quality.

Below we give the prize list:

CLASS 1.—THOROUGHBRED CATTLE OF ANY BREED.

Steer, 3 and under 4 years, 1st, H. & I. Groff, Elmira Boy, weight 2080 lbs., age 1353 days, average gain per day, 1.53 lbs.

Steer, 2 and under 3 years, 1st, H. & I. Groff, Tralton, 1575 lbs., age 962 days, daily gain 1.63 lbs.; 2d, Adam Mohr, Tavistock, Barney, 1850 lbs., age 998, daily gain 1.85 lbs.; 3d, H. & I. Groff, Elmira Champion, 1960 lbs., age 912 days, daily gain 2.14 lbs.

Steer, 1 and under 2 years, 1st, H. & I. Groff, White King, 1365 lbs., age 722 days, daily gain 1.90 lbs.; 2d, H. & I. Groff, Baron, 1270 lbs., age 691 days, daily gain 1.84 lbs.

Cow, 3 years and over, 1st, H. & I. Groff, Fame, 1700 lbs., age 1434 days, daily gain 1.18 lbs.; 2d, T. Nelson & Son, Brantford, Hilpa Duchess, 1845 lbs.; 3d, H. & I. Groff, Elmira Girl, 1470 lbs., age 1078 days, daily gain 1.35 lbs.

CLASS 2.—GRADES OR CROSSES OF ANY BREED.

Steer, 3 and under 4 years, 1st, John Russell, Brougham, Duke, 2150 lbs., age 1363 days, daily gain 1.58 lbs.

Steer, 2 and under 3 years, 1st, John Kelly, jr., Shakespeare, Little Davie, 1660 lbs., age 765 days, daily gain 2.16 lbs.; 2d, J. E. Brethour, Burford, Cherry Bounce, 1970 lbs., age 1050 days, daily gain 1.90 lbs.; 3d, W. West, Guelph, Duke, 2100 lbs.

Steer, 1 and under 2 years, 1st, Geo. Keith, Elora, Captain, 1365 lbs., age 677 days, daily gain 2.01; 2d, H. & I. Groff, Roan Boy, 1400 lbs., age 577 days, daily gain 2.42 lbs.; 3d, John Cook, jr., Shakespeare, Little Jack, 1330 lbs., age 655 days, daily gain 1.98.

Heifer, under 3 years, 1st, Geo. Keith, Elora, Daisy, 1215 lbs., age 681 days, daily gain 1.81 lbs.; 2d, F. W. Lockhart, Alma, Alma Mater, 1360 lbs., age 809 days, daily gain 1.68; 3d, W. West, Star, 1355 lbs., age 1004 days, daily gain 1.35.

Cow, 3 years and over, 1st, H. & I. Groff, Daisy, 1800 lbs., age 1735 days, daily gain 1.60; 2d, Wm. Young, Guelph, Daisy, 1735 lbs.; 3d, W. S. Armstrong, Speedside, Fairy, 1660 lbs., age 1431 days, gain 1.16.

CLASS 3.—SWEPESTAKES FOR CATTLE.

The prizes here went to the Messrs. Groff's Elmira Champion, and to their cow Daisy, for best male and female respectively. The steer Elmira Champion, the winner of this prize, is a pure Shorthorn, aged 912 days, with a daily average gain of 2.14 lbs. He was sired by Lord Montrath, and is a steer of fine quality, one of the prettiest and best developed steers that this firm have ever shown.

CLASS 5.—SPECIALS.

For this prize, a handsome silver cup, value \$100, offered by Mr. W. D. Shattock, of the Northwestern Hotel, Guelph, for the best fat animal of any age, bred and fed by the exhibitor, to be won twice by the same person with different animals, there were seven competitors. These were Mr. John Russel's ponderous Duke (Brougham), age 1363 days and daily gain 1.58 lbs., a massive and finished looking steer, which well kept up the honor of the eastern section; the Messrs. Groff's Elmira Boy and Elmira Champion, two Shorthorn reds; Mr. J. E. Brethour's (Burford) handsome cherry Bounce, 1050 days old, weighs 1970 lbs., with a daily gain of 1.90 lbs., a great prize winner during the season and now going to grace the shambles of Mr. Dingle, Hamilton; Mr. Kelly's (Shakespeare) Little Davie, age 765 days and weight 1660 lbs., daily gain 2.16 pounds; a four year steer shown by J. Jestin of Everton, 1750 days and weighing 2400 lbs., which carried himself well in such company, and Mr. Keith's (Elora) prize-winning little Captain. The honors went to Mr. Kelly's Little Davie. This pretty red beast is a son of the Messrs. Nicholson's (Sylvan) Prince Albert, 2d at the Provincial this year, and a grandson of the Messrs. Watt's Bampton Hero. He is a smooth and fine handler, but not so finished as Mr. Kelly's John Cook of last year.

The gold medal, value \$30, offered by Mr. Christopher Reinhart, of the Commercial Hotel, Guelph, for the best pair of fat animals, under two years, not exhibited previous to 1886, bred and fed by the exhibitor, was won this year and also last by Mr. George Keith, Elora. The animals taking it were Shorthorn grader—Captain, by Abbotsburn, age 667 days, weight 1365 lbs., daily gain 2.01 lbs., and Daisy, by Barmpton Hero, age 681 days, weight 1215 lbs., daily gain 1.81 lbs. The latter was an exceptionally pretty beast, short-legged, long, low and level, but a little high at the tail head, and possessing a finished look.

For the prize offered by the Puslinch Farmers' Club, for best fat animal, over 2 and under 4 years, competition open to the townships of Guelph, Puslinch and Eramosa, 1st, Walter West, Duke, age 540 days; 2d prize by Jas. Anderson, Guelph, Wm. Young, Guelph; 3d, Walter West, Star, age 1004 days, weight 1355 lbs., average gain 1.35 lbs. per day.

CLASS 6.—SHEEP—LONG-WOOLLED, LINCOLNS, LEICESTERS, COTSWOLDS AND THEIR CROSSES.

Best wether, 2 and under 3 years, 1st, J. Rutherford, Roseville, John A., 320 lbs.; 2d, W. Walker, Ilderton, George, 270 lbs.; 3d, J. Rutherford, Starlight, 230 lbs.

Best wether, 1 and under 2 years, 1st, J. Rutherford, Smith, 274 lbs.; 2d, J. Rutherford, Jerry D., 246 lbs.; 3d, J. Rutherford, Canadian Boy, 254 lbs.

Best wether, under 1 year, 1st, J. Rutherford, Ned, 122 lbs.; 2d, Jas. Laidlaw, M.P.P., Guelph, Lamb, 140 lbs.; 3d, Jas. Laidlaw, Mutton, 133 lbs.

Best ewe, 2 years and over, 1st, Wm. Walker, Fanny, 350 lbs.; 2d, R. Rennell, Galt, Lizzie, 277 lbs.; 3d, J. Rutherford, Beauty, 288 lbs.

Best ewe, 1 and under 2 years, 1st, James Main, Boyne, Caper, 275 lbs.; 2d, Wm. Walker, Peggy, 250 lbs.; 3d, J. Kelly, jr., Fanny, 240 lbs.

Best ewe, under 1 year, 1st, J. Kelly, jr., Jessie.

190 lbs.; 2d, W. Walker, Clara, 154 lbs.; 3d, J. Kelly, Bella, 153 lbs.

CLASS 7—MIDDLE WOOLLED SHEEP, DOWNS AND THEIR CROSSES.

Best wether, 2 and under 3 years, J. Rutherford, 1st, 2d and 3d.

Best wether, 1 and under 2 years, 1st, John Rutherford; 2d, John Rutherford; 3d, E. A. Stanford, Markham.

Wether, under 1 year, John Rutherford, 1st, 2d and 3d.

Ewe, 2 years and over, James P. Phin, Hespeler, 1st and 2d; 3d, Wm. H. Beattie.

Ewe, 1 and under 2 years, 1st, Wm. H. Beattie.

Ewe, under 1 year, 1st, John Rutherford; E. A. Stanford, 2d and 3d.

CLASS 8—SWEEPSTAKES FOR SHEEP.

Wether of any age or breed, John Rutherford.

Ewe, of any age or breed, Wm. Walker.

The exhibit of sheep was exceptionally good, both in number and quality. The "invincibles" of Mr. Rutherford added much to this feature of the show, and Mr. Walker's sweepstakes ewe was a monster of her kind—a Cotswold.

CLASS 9—HOGS, ANY BREED.

Barrow, 1 and under 2 years, J. F. Wilson, Woodstock, Lord Bacon, 700 lbs.; 2d, R. Dorsey & Son, Summerville, Proof, 514 lbs.

Barrow, under 1 year, James Main, Puggy, 385 lbs.; 2d, J. Rutherford, Prince, 425 lbs.; 3d, W. Laing, Darby, 180 lbs.

Sow, 1 and under 2 years, L. O. Barker, Black Bess, 520 lbs.; 2d, John Phin, Pride of Waterloo, 400 lbs.; 3d, R. Dorsey & Son.

Sow, under 1 year, R. Dorsey & Son, Kate, 336 lbs.; 2d, Jane, 361 lbs.; 3d, L. O. Barber.

CLASS 10—SWEEPSTAKES FOR HOGS.

Hog of any age, breed or sex, J. F. Wilson, Lord Bacon, 700 lbs.

This was a remarkable specimen of the swine race. A Berkshire in breed, and but 16 months old, he was 180 lbs. heavier than any other hog in the show. The gain per day would thus be 1.46 pounds.

The show of poultry was excellent, making one long for the holiday season, as he beheld it. A large portion of it was bought up by Mr. John Holderness, the popular proprietor of the Albion Hotel, Toronto.

After the judging was completed, short addresses were made by James Innis, M. P.; James Laidlaw, M. P. P.; Profs. Brown and Grenside, of the O. A. C., and others. The Shattock Cup was presented to Mr. Kelly by Mr. Innis, and the Reinhart gold medal to Mr. Keith by Mr. Shaw.

Thus much for the success of the show, and now for its shadow. The exhibit, as stated already, was excellent, the management of the Provincial Board did what they could, the president of the Guelph Fat Stock Club, Mr. J. P. Phin, of Hespeler; the vice-president, Mr. James Anderson, of Guelph, and the secretary, Mr. Adam Armstrong, of Speedside, and the other officers did their utmost to make visitors feel at home; and yet, must we say it, the attendance was but slim. This will not do, young men of the farm. Ye can never grow prize-winning fat beasts without a little enthusiasm in the matter, and this cannot be possessed in large degree by those who will not go to the Provincial fat stock show when it is within reasonable distance.

FARMERS' CLUBS.

The Secretary, President or any member of any Farmers' Club is hereby invited to send for copies of the Journal, (which will be mailed free), to distribute amongst its members with the view of forming clubs for the Journal—a list of ten subscribers, at least, could be got at every club in Canada. Clubs of five for \$4.00, and clubs of ten for \$7.50. Many secretaries of Farmers' Clubs have sent us long lists from members of their clubs; many have sent for sample copies to get up clubs; those who have not are respectfully asked to do so. Sample copies sent free for this purpose.

Inquiries and Answers.

BOOKS FOR STOCKMEN.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR: I should be greatly obliged if you would recommend to me some farm books on live stock, especially cattle and sheep, and on other subjects included in general farming. Do you know of any pamphlet on Norfolk and Suffolk Red Polls, and how, may I ask, are they progressing in Canada?—as I believe there are a few breeders this side of the water. I should like to see that breed coming to the front, as I am a native of Norfolk, and think highly of them.

A. G. GOODACRE.

Bay View Farm, Antigonish Harbor, N.S.

Allen's American Cattle; Stewart's Shepherd's Manual; Feeding Animals, by E. W. Stewart; Harris on the Pig, and Horse Breeding, by J. H. Sanders, are excellent books on stock, each in its line. We can supply them at this office. We have as yet been able to receive no books of any note on the Red Polls. We are inclined to think they are not as yet bred in this country. We do not know of any herds in Canada. If there are any herds of them in the country, the owners of them will oblige us and themselves as well, it may be, by sending us a few notes regarding them, and if they have any to dispose of, by using the medium we furnish for making it known.—ED.

Veterinary.

Precautionary Hints to Stockowners.

BY F. C. GRENSIDE, V. S., GUELPH.

(Continued from December.)

We cannot expect colts, at the ages of three and four, or during the process of active dentition, to masticate uncrushed grain thoroughly, for the gums are more or less sore, and the teeth to some extent undeveloped, so that they are not such effective instruments of mastication as at a more mature age. In addition to this inevitable difficulty in youth, there is frequently increased trouble, both in young cattle and horses, from the irregular shedding of the crowns of the milk teeth, caused by these bodies becoming wedged in between other teeth, and besides inflicting injury to the soft structures of the mouth, prove a mechanical impediment to grinding. Many a young beast is allowed to fall away to a shadow from this cause, when a manual examination would readily lead to a detection of the source of trouble, which can in most cases be removed by the fingers, but if resisting, by a pair of forceps.

To sum up, it should be considered imperative to always examine an animal's mouth if there is any difficulty in grinding shown, or in fact in any case that a sufficient quantity of food is not properly consumed, if there is not some apparent constitutional disturbance to account for impaired appetite. Also, if the condition is not what it should be in proportion to the food given, and particularly if there is any uncrushed grain in the feces. It must be remembered, however, that imperfect mastication results from another frequently operating cause, and that is greediness on the part of horses, causing them to quickly and ravenously consume their grain and consequently bolt a portion of it unground. Many horse-feeders recognize this as a cause of waste and seek to overcome this difficulty by feeding some dry bran with the grain. Certainly any dry aliment, such as bran, causes an animal to retain his food longer in his mouth in order to thoroughly moisten it, and thus facilitate swallowing. In this way whole grain stands a chance of being more per-

fectly ground, but this plan is not found thoroughly effectual in insuring perfect grinding. My experience is, that dry bran is not a suitable or valuable addition to a horse's grain ration. Although it is rich in nutritious matter, still it is decidedly indigestible; consequently a considerable portion of its nourishing ability is lost. Now, oats have sufficient woody fibre or indigestible matter of themselves to subserve the process of digestion in the stomach, in the way of keeping a consumed mass open or porous in that organ, and thus allowing the gastric juice to permeate and break up nearly all particles of the digestible portion of the grain and produce their solution, which is a process that grain, lacking this coarseness of hull, does not admit of being carried through; hence the indigestibility of peas, corn and wheat, when consumed without other substances to compensate for this deficient coarseness.

I have noticed in horses a decided unthriftiness, the result of a chronic form of indigestion, from the continued eating of dry bran. We can often trace eruptive and itchy skin complaints to this cause, which proved refractory to medicinal treatment until the bran was discontinued. This practice of bran feeding stands deeply in the affections of many, but I cannot lose this opportunity of expressing my convictions on the course and giving my reasons for condemning it. It is recommended in some quarters to have all oats fed to horses ground. Now, the expense and trouble which this course involves, though considerable, would be worth incurring if there was no other means of getting horses to thoroughly grind their grain. Certainly during the process of teething, or when any defect exists in the organs of mastication that cannot be repaired, or is a temporary obstacle to the efficient carrying out of that process, then crushed grain is decidedly necessary. But under ordinary circumstances when the teeth are developed and in a normal condition, there is no occasion for crushing the oats; but whether oats are crushed or uncrushed, and particularly if a horse bolts his grain, there is much benefit derivable from mixing a small quantity of chopped hay or chaff with them. This plan causes more time to be occupied in consuming the grain, necessitating its longer retention in the mouth, bringing about its thorough admixture with the saliva and insuring its perfect mastication. In addition it enters the stomach more slowly, consequently allowing that organ more time to deal with it, and preventing any tendency to sudden engorgement with its harmful consequences.

This system has had a thorough trial on a very large scale in many street car and omnibus stables, and it has been the subject of comparative observation with the plan of allowing the grain by itself. The results have been so marked in favor of the mixing method that this is now pretty generally adopted. The same plan should be adopted in feeding meal to cattle, for a couple of gallons of cut hay thoroughly mixed up with the meal will enable them to mouth it more easily, prevent clogging in the mouth, cause them to mix it more thoroughly with saliva, thus preventing the bolting of pellets moistened on the outside and dry within. It is found that such ground grain as peas and corn are more easily eaten by cattle with equal parts of crushed oats mixed with them, the hulls of the oats to some extent answering the purpose of the coarseness of the hay. But chaff is a valuable addition even to chopped oats for cattle.

This course will be found to prevent to a considerable extent those frequent and oft recurring attacks of hoven that are so troublesome and in some cases fatal. Fattening cattle are often put back a couple of weeks by one or two attacks of hoven, leading their

owners to change materially the diet to one not calculated to fatten rapidly, for fear of the recurrence of indigestion. Now, although the course here indicated will not prove preventive of all such attacks, as for instance, when a change to a rich diet has been too suddenly made, yet I am confident it will do much in that direction.

Enquiries and Answers.

WEAK STOMACH IN A COW.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR: I have a cow that last spring, while she was dry and before turned to pasture, threw up her food into the manger, consisting of dry hay, and while this was noticed she passed but little excrement. I gave several messes of cut potatoes, with a good deal of salt sprinkled on them. This did her good and the trouble passed off, and she went to pasture in very good condition. She calved in June, and did well but within the last week I have observed her again throwing her food, as it came from the first stomach, into her manger, and again passing but little excrement. On Saturday, while in the yard, she threw up her food, which I noticed where she stood, and yesterday morning before feeding her I observed considerable food in her manger and little excrement behind her. I am feeding a pail of shorts twice a day, and she is giving a good mess of milk. She takes her drink as heartily as the other cows, and eats her hay pretty well and seems lively enough. Have given her nothing but a little more salt in her drink. Have thought of using some of the condition powders advertised. What is the trouble and what had I better give her?

S. S. HALL.

St. John, N.B., Nov. 21, 1886.

ANSWER BY F. C. GRENSIDE, V.S., GUELPH.

This cow's stomach is evidently a weak organ, and readily susceptible to the effects of irritation or overloading, and indigestible food. I do not think from the description of the case that there is any actual disease of the stomach other than somewhat abnormal weakness, so that a little care in regulating the diet should be followed by a remission of the symptoms. There could be no diet more calculated to bring about the trouble described than the giving of a pail of shorts twice a day as mentioned.

I would recommend as a ration for her, a gallon of chopped oats mixed with the same quantity of cut hay, to be given three times a day; thirty pounds of finely cut or pulped turnips, divided into three meals, and also mixed with cut hay, of which she might receive about ten pounds a day. Salt, unmixed with the food, should be before her constantly. If the stomach is too irritable to stand solid aliment, she may be supported by linseed tea, made so that she can drink it, and given instead of water until the irritability passes off. The following medicinal agents will also aid in restoring the disordered function: One drachm of nuxvomica, four drachms of gentian—both powdered—and two drachms of bicarbonate of soda mixed, and given in a quart of linseed tea three times a day for a week.

The Farm.

WHILE every effort should be made to push on work that is practicable in winter, it should be remembered that it is a very easy matter indeed to labor with so little profit that rest might be preferable. Some have argued that underdraining may be done in winter. Well, it might, but not with profit. In the first place the cutting through the frost is so laborious a work that it will not pay. In the next place it is too much labor to put coarse litter in the drain and take it out again, as has been recommended, to facilitate the finishing of the bottom of the drain. It may sound very well to make drains on paper in the winter, but let the pickaxe and shovel be tried, and it appears very different. There are many kinds of work that may be done in winter, as drawing manure fertilizers, building and fence material, the securing of seed-grain, repairing implements, and any kind of

tinkering requiring the use of tools, that may be done inside. Concentrate attention upon work of this class and when the spring comes take up the work of the farm with all possible despatch.

"IF one wishes to get his land rich he should never 'graze closely.'" So said one of our foremost cattlemen when in conversation with us not very long ago. There is a good deal of sound philosophy in the statement, although we did not see it just in that way at first. Close grazing has a tendency to reduce very materially the product of the pasture, and what is not produced cannot of course be returned again to the land. If, therefore, a given quantity of pasture land, not closely grazed, will produce one-half more than when pastured bare from the first, and we believe that it will, then it follows that one-half more in quantity of enriching materials will go back again to the land. And in another way will additional enrichment be afforded. The additional strength of top requires increased root power, and all this goes back again to the soil. Then, too, the advantages to the stock are very great; they have plenty of food at all times, but more especially at seasons when the stock of those who adopt the close grazing system are on short allowance. The remark of our friend is the converse of what is generally believed, as most persons look upon uneven grasses that are not cropped close as a waste which results in much loss.

THERE is a farmers' club in one of the New England States that has been in existence for twelve years, and is now as well attended as at the first. It is limited in its membership to a definite number, and no member is taken in who will not promise to try and attend all or nearly all the meetings. It has done, and is still doing, a good work, as every farmers' club cannot fail to do which is well attended. While we do not believe that an exaction of this kind would answer the purpose in a farmers' club or institute open to the community, the members should exact as much of themselves. These meetings are designed to promote the welfare of the farmer. It is for his benefit that they have been organized, and this will be the unflinching result where they are regularly attended. But the farmer who only attends now and then will no more improve by them than the pupil who only goes a day now and then to school. He will become more indifferent as he grows lax in his attendance, and in time learns even to despise this privilege of his birthright, throwing it away for even half a mess of pottage. Farmers who improve themselves by rubbing mind against mind in assemblages of farmers will rise above their fellows, and the same will hold good of communities.

"WE farmers should travel more." So writes John M. Stahl in the *Country Gentleman* of November 25, 1886. That is a valuable sentence, if not necessarily profound. Farmers in Canada should travel more as well as those in the United States. They should travel to learn methods and to see modes, the adoption of which might be of great service to them. They should travel to enlarge their ideas, and in this way get an inkling of the comparative insignificance of their own little world, and they should travel for the purpose of saving money, paradoxical as this may seem. We shall try and explain. A man works away a large part of a lifetime in the erection of a group of buildings. They are the best in the neighborhood, and very justly he is proud of them. But yet many things about them are far from perfect. One week spent in traveling in the examination of barns would have enabled him to hit upon a better plan than he has otherwise studied

out during the major portion of a lifetime. Life to-day will tolerate no such old-time ways. We must learn from each other. As telegraphs and railroads have sorely wounded all monopolies in holding produce, so the printing press and observation, the result of travel, will break down all such foggy ways. Let every farmer, then, look upon it as his duty once in a while to go abroad and see what his neighbors are doing. Time spent in this way may be far more valuably spent than that employed in digging a drain or in building a fence, however valuable these things may be in themselves.

Work of the Machine Order.

The man walked down the pathway through his garden. Some apples had blown off the trees with a high wind that had rocked them the day before. He did not tread on them, but with a quick yet careful movement of his foot swept them to one side. We concluded that man was a master, and our surmise proved true. Although some masters—too many of them—are very slovenly in their ways, yet generally speaking they may be known by their greater tidiness in the performance of the work which they do. While untidiness may sometimes be condoned in the employed for various reasons, as having an over-amount of work to do, we cannot excuse employers for setting this example, as they have the ordering of their own work so largely in their own hands.

Many of the employed on farms do their work much after the fashion of a machine. They go the rounds of manual labor in the order of the horse in the treadmill, doing the work of the day much after the fashion of yesterday, and it may be of ten years before. They move because movement is necessary in order to obtain wages; but while sometimes it is movement directed by intelligence, and impelled by an energy that refuses to slumber, it is perhaps oftener that movement which is somewhat in a circle, and without much positive advance. It is very unfortunate for the employer that so much of the labor of to-day on the farms is of the machine order—that is, what is performed by the living machine—and it is much more unfortunate for the employed. It is unfortunate for the first, in that it sours him in his relations to the employed, hampers progress in the execution of the work of the farm, and gives him a great deal of needless worry; and unfortunate for the latter, in that it tends to hinder re-engagement, with an advance of wages, and so confirms the workman in an imperfect way of doing things, that it becomes to him a fixed habit, which holds him with an iron chain that time strengthens rather than weakens.

It is frequently remarked that as people grow older time passes much more rapidly than with the young. Indeed, it is usually believed that time is only tedious to the young; but there is another class to whom it must be very tedious indeed, that class of workmen whose soul is not in their work—time-servers—men who are watching for the progress of the sun in the heavens, rather than for the furtherance of that which has come to their hands. When time hangs heavily no occupation is pleasant, and therefore those who try to keep their hands and their heart both out of their work, render themselves proportionately miserable. Every place in this life has its compensations if we only allow ourselves to act so as to secure them; and every place has its retributive penalties which will surely overtake us if we tamper with the privileges that surround us, and more especially with those that are inseparably identified with the work that we have in hand.

The retributive penalties that fall upon the ma-

chine-working farm hand are very grievous in the end. When the busy season is over, he is sent adrift, and has to trudge to parts where he is not known, to get further employ. If he is tethered to a family, this means to them removing, and often in that season when removing is unpleasant—late in autumn. It means a hard winter, and only the most menial kind of work, if indeed work at all, and many a weary trudge to get a more prominent job when preparations should be made for planting a garden. The evil consequences to the negligent young man are none the less severe, as the habits which he thus deliberately chooses or allows to grow, bind him with fetters that hand him over to the fate of him who has added the misery of a household to his own.

The employed on the farm commit a most egregious blunder when they allow themselves to get into this mode of performing their work. They thus preclude the possibility, as it were, of advancing their position.

In some branches of manual labor it may be that there is but little hope of bettering one's condition, but it is not so with the farm laborer who wishes to rise. Even the old man who is going down the westward side of life may make himself so useful that his employer cannot afford to do without him so long as he can labor, and when he is not able for this he will afford him a comfortable asylum the rest of his days. To young men on the farm the opportunities are very many, if they will only conduct themselves aright. There is no young man who conducts himself properly, that cannot lay by something of his annual wages; and this is what is not usually done by young men in the towns. And if proper attention is always given to the performance of his work, his wages will increase as time rolls on.

Workmen too readily conclude that labor, more than will prevent positive dissatisfaction is thrown away. It is not thrown away either to themselves or to their employers. It is true that now and then a farmer may be found so avaricious as to take all that may be given without even a thank you, but if he fail to recognize and fittingly reward fidelity, his neighbors will not, and therefore the faithful workman will be sure of a good place without needing to look for one.

But we have only treated of the subject in the form of a material gain to either party. This is taking but a low view of it. Work-hands should do their best to advance the interests of the employer, because it is right. When one is employed as a farm hand, though it may not be so stated in words, it is certainly understood that he is not simply to labor machine-like with his hands, but that he is to direct this labor with intelligence; and surely the degree of this intelligence is all that can be applied short of positive discomfort. When men try to do their work well because it is right so to do, they become invaluable in any line of life, and will assuredly reap a two-fold reward, one in time and the other in eternity.

Let not the work-hand of the farm who may chance to read these lines, suppose they were written by an enemy, for such is not true. They are written by a friend, one who seeks the best interests of the class concerning whom he is writing. Those who tell working-men they are fools for taking an extra step on the farm, or doing something not in their direct line, or for showing concern for the advancement of their employer's interests, are their enemies, if they could only see it.

The evils to which farmers are subject because of this machine-like service are very great. Indeed, it renders non-resident farming almost an impossibility. Now this is not so to the same extent in other lands,

nor need it be so of necessity, for in conducting the business of others, men would find ample scope for acquiring that experience which would render them very successful in afterwards managing farms of their own, when they had acquired them, either by rental or purchase.

There is something so ignoble in using one's physical powers like the parts of an inanimate machine, and there is always something so elevating in trying to do one's best, that it does seem incomprehensible that such is not the endeavor of all, and in every line of life, and the nobility of the thing is all the greater when the heroic effort is made in some lowly sphere. Heroes in little things are in a sense the grandest heroes.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.
Agriculture in Britain,

BY A CANADIAN FARMER WHO VISITS BRITAIN, HIS NATIVE LAND, AFTER AN ABSENCE OF THIRTY YEARS.

(Second Paper.)

In both Scotland and England the condition of the agricultural laborer is very much improved. Not only are the wages considerably increased, but the "bothy" system is now almost extinct. That it prevailed so long was the shame of Scotland. Farm servants must have been the most forbearing class of people on the face of the earth, for it is certain no other people were so poorly provided for. No other people were required to do so much work, with so little comfort. The chief argument in favor of such treatment used to be that it was healthful; and this no one could gainsay. Dyspepsia was an unknown complaint among farm laborers. Like the hunting horses and the fox hounds, they were allowed very little variety of food, consequently there was seldom any derangement in their digestive organs. One rejoices to know that the ploughmen are now supplied with a variety of wholesome food and comfortable lodgings, while they are none the less healthy; so that it is now their own fault if they do not enjoy a portion of the pleasures of this life. If Joseph Arch had been born a century sooner, what an amount of misery might have been obviated. Doubtless the many facilities for emigrating enabled the working man to be more independent; but the enlightenment of the people has been the chief cause in bringing about this much needed reform.

I was somewhat surprised at seeing the large number of women still regularly employed at out-door labor on the farm. Such employment is doubtless more healthful than that of the factory, and in haying and harvest perhaps more enjoyable, but such work as loading and spreading manure should be done by men only. It destroys all the fine feminine feelings, and tends to make women coarse and ugly. It seems to be a relic of barbarism.

In the south of England, where the fuschia is a common out-door shrub, and the myrtle, sweet-bay and oleander winter out doors without protection uninjured, it is very evident the climate is mild. But farming in the south is not carried on so scientifically as in the northern counties. It would seem as if the finer the climate, the less energetic the people. Indeed we know that in North America the farther south we go, the more indolent do we find the country people. It is perhaps because there is less winter to provide for. In Canada and the northern States the people must, like the honey-bee and the ant, store up in summer what they are to live on in winter, while in the Southern States, where there is no winter to provide for, agricultural industries make but very slow progress.

The state of agricultural affairs in the south of England was not what I expected to find it. In traveling through Surrey and Sussex in July I passed occasional fields of which it would be impossible for a stranger to say whether the crop was intended for scarlet poppies or some kind of grain. In some instances the poppies were not so high as the grain, while in others the poppy had the ascendancy. In any case the display of flowers was gorgeous. Fellow-travelers from America who had never seen such a crop before, wondered what on earth it might be that looked so pretty. This poppy, which produces seed more than one thousand fold, thrives best on a poorish soil, while on rich land it is to a great extent smothered by the grain crop. So these painted fields betoken a lack of energy, for it cannot be a want of knowledge. It would require many years of more thorough cultivation to rid the country of this beautiful scarlet nuisance.

In the north of France, also, it seems to have got the better of a poor class of farmers. As seen from the railways through the valleys, the mountain-sides with their irregularly shaped fields, with almost every shade of green and yellow interspersed with scarlet poppy and blue flax, reminds one of the crazy quilts to be seen at Canada exhibitions.

Here, too, the absence of fences forcibly strikes the Canada farmer, as being in pleasing contrast with the numerous ugly-looking, zig-zag rail fences of his country. There may be said to be no fences here, except along the lines of railroad. The cattle are herded on the flats, chiefly in communities. Pure-bred cattle are not so common here as in Britain. I was surprised to see so many donkeys and mules pasturing along with the cattle, but when my courier in Paris showed me two shops licensed for the sale of ass, mule, and horseflesh exclusively, I at once understood the object. In these shops every quarter of meat must be labeled with a large brass label marked according to kind, anne, 1st class; anne, 2d class; mulet, 1st class, mulet, 2d class; or horse, do., do. I asked one of the happy-faced old ladies who was cutting up and selling the meat, what was the difference between first and second class, as it appeared to me much the same. She replied, first-class was young donkey, second-class old donkey; and when I came to think that a donkey was not considered old until he is over eighty, I did not wonder at the difference in price, for I presume an eighty-year old worn-out ass or mule would be toughish. I was credibly informed that horses are not fatted for the meat market until they are too old for work, but quite frequently accident renders necessary the killing of young horses, and that this brings the chief supply of horse-meat.

In France, as in the south of England, comparatively few field roots are raised. Large fields of carrots are to be seen near the cities, but they are more intended for the city markets than for stock-raising. Wherever I have traveled I have noticed that large, well-cultivated fields of turnips is a sure indication of superior farming, and that, with the exception of hunting-horses, the best live-stock of all kinds is generally to be found where turnips are extensively raised.

While traveling in Europe one sees many things to admire, but they also frequently meet with unpleasantnesses. As the train enters Boulogne it is approached by a swarm of half-naked, half-starved looking boys, performing all sorts of manoeuvres to attract the attention of the passengers, who toss coppers out at car windows, partly for the fun of seeing the scramble at catching. One little urchin in a bundle of rags tied round his waist with a tow string, seemed to

elicit more commiseration than the others; every time he would turn cartwheels, the rags would tumble down around his head, leaving, of course, all the other part of his body exposed. The whole lot, with uncombed bare heads, dirty faces and feet, and the sad, haggard, beseeching expression of their countenances, showed a lamentable state of wretchedness and misery.

Crossing the English channel on a stormy day has a sort of terror for the tourist. The wind almost invariably blows either up or down, seldom across the channel, and with a strong side wind the small-sized steamboats roll excessively. Much sea-sickness is generally the result. Having heard so much about it and seeing a heavy swell on the sea, although I had never been sea-sick, I thought, surely I will be laid out now. But the prospect became still more alarming, when, before leaving the pier, the waiter boys commenced placing a basin in front of each woman and delicate-looking man. The bulwarks of these vessels are very high, and only tall persons can avail themselves of the cleanest way of casting off that which the stomach refused to retain.

Although it is only about two hours sailing, one sees more sea-sickness on an occasion of this kind than he would probably see in crossing the Atlantic several times in a large vessel.

Report of the Judges on Prize Farms for 1886.

TO THE COUNCIL OF THE AGRICULTURAL AND ARTS ASSOCIATION OF ONTARIO.

GENTLEMEN,—The judges of your appointment in this department of your useful work commenced their duties on Monday, the 21st June, just at that season when most farmers (including the judges) are getting very fidgety over hay cutting, making it a question as to whether the judging of farms in Canada might not commence with advantage seven days earlier. We undertook the work with, we trust, a full sense of its responsibilities, being fully aware that this being the contest between the champions of other years, or as it has been fitly termed already by the press, "The battle of the giants," that the contention would be unusually keen and close.

It may not be amiss to state here that we found not only this year, but on former years, many of the contestants themselves were not aware of the nature of the rules laid down some years ago by your association for the guidance of the judges. How much more likely is it, then, that the general public are at sea as to the nature of those rules! We have thought it meet, therefore, to preface this report with their republication, in justice to ourselves as well as for the information of the community at large. They read as follows:

In addition to any other points that may be thought desirable by the judges, the following shall be taken into consideration in estimating what is the best managed farm;

1. The competing farm to be not less than 100 acres, two-thirds of which must be under cultivation.
2. The nature of the farming, whether mixed, dairy or any other mode, to be the most suitable under conditions affected by local circumstances.
3. The proper position of the buildings in their relation to the whole farm.
4. The attention paid to the preservation of timber, and shelter by planting trees.
5. The condition of any private roads.
6. The character, sufficiency and condition of fences, and the manner in which the farm is subdivided into fields.
7. Improvements by removal of obstacles to cultivation, including drainage.
8. General condition of buildings, including dwelling house, and their adaptability to the wants of the farm and family.
9. The management, character, suitability, condition, and number of the live-stock kept.
10. The number, condition, and suitability of implements and machinery.
11. State of the garden and orchard.

12. Management of farm-yard manure.
13. The cultivation of crops, to embrace manuring, cleaning, produce per acre in relation to management, and character of soil and climate.
14. General order, economy, and water supply.
15. Cost of production and relative profits.

At the outset we drew up a scale in the absence of anything of the kind, affixing a certain number of marks as the maximum attainable on each of the above items to be considered, making 200 the standard denoting perfection. The highest number of marks were assigned to the requisites included under the headings 7, 8, 9, 13, 14, and 15, in the rules of guidance, in which the number of possible marks were made equal, a number not so high under rules 12, 10 and 5, descending in the order named, and under those of 3, 4, 11, and 2, still lower numbers in the order named, except that 3 and 4 were made equal. By this standard every farm was most carefully measured, so that if any mistakes were made in the judging, it was through some imperfection in the framing of the measure, rather than in any lack of fidelity in applying it.

The number of entries made this year was eighteen, which are given below.

James Fisher, Hyde Park P. O., Middlesex Co., lot 22, 4th con., London township.

Wm. Donaldson, South Zorra P. O., Oxford Co., part lots 13 and 14, 11th con., East Zorra township.

Alexander Dolson, Chatham P. O., Kent Co., lot 21, 1st con., Raleigh township.

Christopher Barker, Paris station P. O., Brant Co., lots 34 and 35, 1st con., South Dumfries township.

Wm. Robinson, Stayner P. O., Simcoe Co., lots 4 and 5, 11th con., Sunnydale, township.

Walter Sorby, Guelph P. O., Wellington Co., part lots 8, 9, and 10, 5th con., Puslinch township, and part lot 6, 2d con., Guelph township.

Simpson Rennie, Milliken P. O., York Co., lot 30, 5th con., Scarborough township.

Wm. Rennie, Markham or Toronto P. O., York Co., lot 14, 2d con., Markham township.

John B. Carpenter, Simcoe P. O., Norfolk Co., lots 1 and 2, 13th and 14th cons. Town and township.

John Airth, Renfrew P. O., Renfrew Co., lot 9, 4th con., Horton township.

Wm. Graham, Bell's Corners P. O., Carleton Co., lots 17 and 18, 2d con., Nepean township.

John Wilmut, Kingston P. O., Frontenac Co., part lots 4 and 5, Kingston township.

John Campbell, jr., Woodville P. O., Victoria Co., lot 10, 14th and 15th cons., Mariposa township.

James Dickson, Seaforth P. O., Huron Co., lot 15, 2d and 3d con., Tuckersmith township.

David Smellie, Concord P. O., York Co., 3d con., Vaughan township.

John Fothergill, Burlington P. O., Halton Co., lot 17, 3d con., Nelson township.

Thomas Graham, Bell's Corners P. O., Carleton Co., lot 12, 2d con., Nepean township.

Andrew Waechter, Walkerton P. O., Bruce Co., lots 1 and 2, 8th con., Brant township.

These included all the gold medal farms of previous years, nearly all the silver medalists and a number of the bronze medalists; and the wisdom of offering those sweepstakes awards this year is manifest, in the fact that the order of other years was in a manner reversed, some of the former gold medal winners getting no place, and in one instance, that of a bronze medalist coming in for a prize, showing their position relatively in relation to the whole province.

Your judges met at Harrisburg on the date named above, on the meeting of the morning trains, found Mr. Christopher Barker in waiting at Paris station, and proceeded at once to

HILLCREST FARM,

containing 200 acres, about one mile n. n. w. from Paris station on the G. T. R., fronting on the 1st con. of South Dumfries, and surrounded by a country bearing many tokens of agricultural prosperity, as in the appearance of good barns and fine dwelling houses. The farm, made up of two one hundred acre farms, separated by a narrow road, extends southward over the G. T. R., and contains 16 fields regularly laid out eight on each side of this road, and on the southeast corner suddenly descending into a charming ravine containing eight acres of bush, mostly dense cedar, across the corner of which steals Smith's Creek, a constant feeder of the Grand River, and a constant waterer of Mr. Barker's cattle, feeding in the rear of the farm. Across the opposite corner, steals a lesser brook, perennial in its flow, so that Hillcrest has the

advantage of being well watered. The soil is a sandy loam, not made over fat by nature, but evidently well fed by its owner, and testing on a subsoil so porous that underdraining is not required. The farm is substantially fenced with cedar rails (not straight laid), and the front has board fence.

Amongst the strong points in the management of this farm are the buildings, especially the dwelling house, the barns being in a state of transition at the time of our visit; the state of the garden and orchard and the perfect order that pervaded every movement in conducting the work of the farm. When one rides up to Hillcrest it needs no second glance to convince him that that deplorable lack of order which, like a daub that disfigures a beautiful painting, otherwise possessing real merit, finds no place there. Everything was in its place. There was good taste in the arrangement of all details; and this was manifest away back in the remote places as well as around the dwelling. Think of it! a horse-rake which we saw had been used 14 years without any outlay, and a Maxwell reaper no night exposed since its first use on the farm. To get a lesson in this item alone thousands of our farmers would be well repaid by making a visit to Mr. Barker's farm—some of them should make it annually. The dwelling, a white brick cottage, 40 by 28 ft. in rear, and 20 ft. woodshed, all two storey, is a model of convenience, and the cellar is no exception, one compartment being for roots and one for dairy products. The drawingroom, conservatory, with its full quota of flowers and singing birds, sitting and dining-rooms, library, sewing-room; bed rooms, each with its-clothes-room; bath-room, reservoir, servants'-rooms, ice-house, pantry, laundry, —all were here, and faultlessly kept. It would be a shame for any young man to leave a home such as this without the best of reasons. And then the beautiful lawn in front, not over-done nor under-done in its shrubs and flower products. Two neat little cottages to the left of the dwelling, for hired men, separated by an iron rod fence, and the neat paling enclosure, gave the home an air of unwonted attractions. The barns are older buildings, remodelled, and when completed will form three sides of a triangle, with abundant basement rooms.

The system of farming is mixed husbandry, wheat and barley only being usually sold in the line of grain, and beef cattle are fed to a considerable extent in the winter. Usually about 22 acres of wheat are sown, 14 of barley, 13 of oats and eight of peas. Wheat usually follows peas and clover, which is sown to timothy and clover. This is mowed one year or two, and pastured, but not long. The portion of wheat ground not seeded is sown to oats, which in the autumn following is manured and ploughed for turnips. The overplus of the manure (which is all piled in the spring), is applied to the ground intended for oats. Three teams do the work of the farm and they are good ones. The herd of Bates Shorthorns was select, but small, as was that of Southdown sheep. Not much had been done by way of tree planting for protection, and although the tillage was clean, that of some of the other farms was cleaner, so that although Mr. Barker did not mark very low in any one particular, we did not feel justified in giving him a place in the list of winners.

(To be continued.)

Agricultural College; Bulletin VI.

MARL.

C. C. JAMES, M. A., PROFESSOR OF CHEMISTRY AT THE ONTARIO AGRICULTURAL COLLEGE.

Marl is plentiful in Ontario, but from enquiries lately made as to its nature and value, a few facts concerning it may be serviceable to farmers and others.

It is frequently found below deposits of muck or humus, in swamps and low land, sometimes quite near to the surface. It is then of a slate or bluish white color, wet and spongy, darkened a little on top from the overlying dark soil. Upon exposure to the air it dries to a white crumbly mass, light in weight, and showing its origin in the shells of various sizes with which it is filled. Of such a nature is No. 4 of the table below, which was dug up on the Experimental Farm, Guelph.

In some localities the marl bed is found exposed, high and dry, ready for immediate application to land. When found lying low and soaked with water, it should be dug out and exposed to the weather. The fall is the best time for excavating. Let it lie in heaps,

in the spring it will be found thoroughly pulverized by the winter's frosts.

To distinguish marl from clay, pour upon it a small quantity of any acid, and if it be marl it will effervesce. To test its value quickly, place a small lump in an earthen dish and pour upon it a little hydrochloric acid; the less residue undissolved the better the sample of marl. The effervescence is caused by the setting free of carbonic acid gas from the carbonate of lime, of which marl is principally composed. The carbonate of lime or calcium is the most valuable ingredient. In addition will be found small quantities of sand, silica, oxides of iron and aluminum, and occasionally small quantities of phosphate of lime. Marl, however, is a lime fertilizer, and is used as such.

The results of analyses are given in the following table, in which some of the percentages are wanting, though the important ones are given. The first seven were analyzed lately at the laboratory of the Ontario Agricultural College by myself. Nos. 1, 2 and 3 came from north-eastern Ontario; No. 4 is from the Experimental Farm, direct from a low-lying bed; No. 5 is a weathered sample, locality unknown; No. 6 is from near Toronto; No. 7 is from Quebec; No. 8 is an Ontario marl, analyzed by the Connecticut Station; Nos. 9, 10, 11 and 12 are Michigan marls, analyzed at Lansing College; Nos. 13 and 14 are from North Carolina:

No.	Water.	Sand and Silica-insoluble matter.	Oxide of Iron and A. Aluminum	Magnesium Carbonate	Line or Calcium Carbonate.
1	2.52	1.13	1.84	1.29	92.92
2	11.10	2.48	1.37	1.27	83.78
3	20.64	1.09	0.52	0.98	76.37
4	53.90	2.42	0.52	1.18	42.98
5	7.25	5.51	1.16	1.84	89.24
6	1.56	1.54	1.59	0.72	94.29
7	2.41	0.83	0.75	0.60	96.00
8	2.51	0.41	0.39	2.10	94.69
9	1.43	13.00	1.43	4.54	79.60
10	.....	36.79	1.05	6.00	56.16
11	.....	5.50	.....	2.20	90.00
12	.....	16.00	.....	2.50	80.00
13	.....	74.85	.....	.....	10.57
14	.....	0.48	.....	.....	94.00

According as the lime, clay or sand predominates, the marl is classed as calcareous, clayey or sandy. The Ontario samples are calcareous; the 13th, a sandy marl.

As before noticed, marl is a lime fertilizer. Phosphoric acid, when present, adds to its value slightly. Its effects are either physical or chemical. Physically, it seems to give lightness and looseness to soils, and thus render them more workable. Chemically, it serves either as a direct food to the plant, as in the case of grasses, or indirectly, by its action in rendering available the organic compounds in decaying vegetation—humus, for instance.

The nitrogen of swamp muck is unavailable in its usual condition. Thoroughly drain the land and apply 60 to 75 bushels of marl per acre. On light soils apply about 25 bushels per acre, sufficient to help the decomposition of organic matter and supply lime to the crops. For grasses, add about two bushels of salt per acre and apply as surface dressing. For clay lands, apply by the wagon load; hardly too much can be added. Use muck also, if available. Farmers having marl deposits will do well to test their value in different lands. Small plots in a couple of fields will be sufficient. Those not having them should examine their swamps and marshy lands, and dig a few feet beneath black soils.

Lime, in the form of marl or carbonate, should not be used with manures. In the changes resulting, ammonium carbonate is formed; this is a volatile compound. Lime, in the form of sulphate, *i.e.*, gypsum or land-plaster, is best; it produces ammonium sulphate, a stable compound—in other words, it fixes the ammonia.

There is no market for marl at present established in Canada. Its value depends upon its situation and the nature of the surrounding land. The commercial value for lime in fertilizers is sometimes placed at \$5 per ton. At that rate, Ontario dried marls are worth from \$2 to \$3 per ton. Rich marls are sometimes utilized for burnt lime.

We have recently been asked to supply copies of the JOURNAL from the beginning of its publication. We will be glad if any readers who do not file their JOURNALS will send us copies of January, February, March, April and December, 1884.

Permanent Pastures.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Were Professor Arnold nobody in experience and in having a good head, I would not deem it necessary to say anything about his views of permanent pastures, but having a very high opinion of every bit of him, I cannot allow the recent article on this subject in an agricultural paper of Western Ontario, to go uncorrected.

He evidently handles the whole subject from a natural meadow experience, as he makes no reference whatever to a mixture of improved grasses, or of their systematic first-class management in connection with arable. Take the following quotations in proof of this: "Land that is not arable—more land than they can cultivate properly—too lazy or shiftless to cultivate—land that is too stony, too steep, too woody, or too wet to plow or mow or may be kept in permanent pasture and get what ever it can yield." This is such a terrible letting alone and admission of want of principle that no comment whatever is necessary so near the end of this century.

Professor Arnold then sketches several features of his meadow pastures—permanent enough of its kind, no doubt—every piece of which is undoubtedly perfectly correct when taken in connection with the foregoing premises; the one follows as truly as that we shall have summer after this winter, and so then I cannot condescend to a single argument.

He then says some things in favor of the pasture—his pasture, remember, whatever it may be exactly; but when he calls it—"slow growth—scanty and precarious in its returns—and of small yield and sensitiveness to drought," we have again very distinct indications of the "natural meadow or stones or wetness," or of something "good enough for growing timber."

Surely Professor Arnold has had no acquaintance with the cultivated permanent pasture of England and of what is being done in Ontario; his closing paragraph is multiplied evidence of this, where reference to men and places, and unsatisfactory results tell of the "scanty pasturage."

Will our old Canadian friend, who has done so much for us in other things, favor us by telling why he has not yet tasted of the many wealthy things to be met with in properly managed cultivated permanent pasture, that can only be got through a mixture of many grasses and clovers?

WM. BROWN.

Guelph, 27th Nov., 1886.

Inquiries and Answers.

GAS LIME—GAS LIQUORS—BREWER'S GRAINS.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Will you have the kindness to report through your JOURNAL what you think of gas works spent lime, also gas works ammoniacal liquors, as land fertilizers, and in what quantities should they be applied? Is it safe to apply either of them without adulterating? Which is the best season of the year to apply them, etc.? I would also like to know what value malt sprouts are as a feed for cows in a butter dairy.

Barrie, Ont.

S. DYMENT.

Mr. H. H. Hurd, of this city, has experimented with gas lime, or more properly the spent lime of gas works. His method was to apply not more than 50 bushels to the acre in autumn and plough in the spring, so that the lime would be below the seed. The results were very satisfactory, the stronger growth of the corn and the deeper color enabling the observer to trace most readily where it had been applied. Applying directly by simply top dressing is the simplest mode of application, but for all purposes we are of opinion that if composted with earth, or earth and barnyard manure, the results would be satisfactory; but the item of labor should be always carefully weighed in this country.

Of the value and mode of applying the liquor, some of our correspondents may be able to answer.

It is a matter of regret that thousands of tons of the spent lime are allowed to go to waste year after year in our towns and cities. Those who may attempt experimenting with it as a fertilizer should exercise due caution. It will not do to apply it as a dressing to grass lands in its crude state.

The quality of brewer's grains varies very much, and the opinion of dairymen varies as to their value. Prof. Long condemns their use, while other good authorities speak highly of them. The following analysis by Dr. J. A. Voelcker is from the *London Live-Stock Journal*:

SAMPLES OF BREWER'S GRAINS.

	Dried 1886.	Dried 1886.	Wet 1884.
Moisture	12.72	9.50	70.06
Oil	6.96	5.87	2.35
Albuminous Compounds	15.18	15.73	5.81
Digestible fibre, etc.	47.05	52.30	15.17
Woody fibre	14.60	13.20	4.82
Mineral matter (ash)	3.49	3.40	1.79
	100.00	100.00	100.00
Containing Nitrogen	2.43	2.51	.93

If fed with cut feed and used as a part of a food ration, they do not taint dairy products, and their feeding value chemically is higher than that of ensilage.

LUCERNE.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

Sir:—Would you be kind enough to answer the following questions through the columns of the JOURNAL:

- 1st. What is Lucerne?
- 2d. Is it an annual or perennial seed?
- 3d. What time in the year should it be sown?
- 4th. How much should be sown to the acre?
- 5th. What kind of land is best adapted for growing it?
- 6th. What would be an average crop per acre?
- 7th. What kind of stock is it the most suitable feed for?
- 8th. What is it worth a bushel?

DR. GEO. BRERETON.

Bethany, 13th Dec. 1886.

Lucerne is a forage plant, grown principally for the number and the abundance of its crops. It is perennial in its habits, retaining its hold on the ground for eight or ten years. It should be sown in spring when other grasses are sown, and at the rate of 15 lbs. per acre when sown broadcast alone, and of 3 to 4 lbs. to the acre, when in conjunction with other clovers. It prefers a light soil with a very dry subsoil, owing to the depth to which its roots penetrate. The amount of crop per acre will depend some on the number of times cut in each season, but where it once gets a good stand it produces very largely. It is best adapted to feeding horses, but cattle are fond of it also. Mr. John A. Bruce, of this city, furnishes the seed at 15 cts. per lb.

This plant is not particularly well adapted to our soil and climate. It is perfectly at home in some sections of France, and does well in some of the southwestern states and in the dry regions of Australia. In France it is often sown in drills 15 to 18 inches apart and kept clean the first year by hoeing and weeding. It does not yield a crop the first year, and not an abundant one the second, but afterwards will produce several heavy crops in one year. In this country much of it is apt to give way the first winter, so that it is not likely soon to become a popular forage plant in Canada.

CATTLE FOOD.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

Would you be kind enough to send me the very best recipe you know of for a condition powder for cattle? We feed quite a few every year for the European market, and own some very good thoroughbred stock (Durhams). I believe stock, when they are put up to feed, are much benefited by a little medicine occasionally.

JAMES HAMMOND.

Hammond, Ont.

[The very best food that we know of for this purpose is Thorley's Improved Horse and Cattle Food, manufactured in this city, corner John and Jackson streets, and advertised in this paper. We have tested

this food ourselves for several years past on our own stock, and with satisfactory results. It is sold at a price below what any farmer could buy the ingredients for, retail, and mix them himself. Write the firm for price list.

The Dairy.

The Dairy Outlook.

It never was more cheering, if we can read aright the signs of the times. Through some ontoward circumstances which neither the Government nor the Dairymen's Associations could foresee, our exhibit of dairy produce intended for the Indian and Intercolonial Exhibition did not arrive till late in the season. The mistake has, however, been more than atoned for in the steps taken by those authorities later in the season, when such an exhibit, both of cheese and butter, was placed upon the scene as has drawn forth the admiration and astonishment of Englishmen, and indeed of visitors from many lands.

The samples of our dairy products sent over arrived in good condition, and kept so while on exhibition, and the quality of these products has so charmed our English friends that the agricultural papers from John o' Groat's house to Land's End have been loud in their commendations.

This result is due, in the first place, to the intrinsic merit of the articles sent over, and in the second to the excellent supervision of our Ontario Agricultural College Dairy professor, Mr. Jas. W. Robertson, who went in charge of it. This gentleman has been most untiring in his efforts to put our dairy products before the British public in a proper light. It seems that our friends across the sea are very prone to designate everything from this side of the water as *American*, thereby conveying the impression that it has come from the United States. Our cheese industry has suffered in this way, and sellers have often sold our cheese as the best English varieties. And when the reputation of our Canadian cheese has been established, much that comes from the United States is sold as Canadian. The magnitude of the cheese industry has now been brought before the British public in a way as never before; and the product will henceforth be sought for in a more intelligent way.

But it is in the butter dairy interest that Prof. Robertson has achieved even a greater success, owing to the favorable impression made on our transatlantic friends in reference to the quality of the butter turned out by our creameries. The *Morning Post* of October 19th, speaks thus regarding it: "That which was tried was two months old, and had been for ten days in the exhibition, and these were ten days of heat. It was not at all salt, the natural texture was well preserved; it was well and solidly worked, and of fine meaty flavor. It was equal to our best butter, and this, it is said, can be placed on the English market at 1s. a lb. There was none better at the London dairy show. The Canadians are trying hard to meet the markets of this country, and this butter will be imported fresh in 5 lb. tins, which can be obtained regularly by the household."

The professor has further created in the English press a favorable impression by describing certain features of the Canadian method of manufacture, which place our butter ahead of that even of Brittany. At one time we find he was busy answering all manner of interviewers, and at another, especially toward the close of the exhibition, lecturing on our dairy interest, insomuch that the good done must bear fruit in the near future:

The dairy tree of Canada, which heretofore was a one-sided tree, will henceforth become more symmetrical. The cheese side heretofore contained nearly all the branches, but now the butter side is putting out vigorous young shoots. We see no reason why our cheese market cannot be retained and even improved upon, while the butter industry hitherto so sadly neglected, may become one of the towering industries of the land.

The Cheese and Dairy Conventions.

That these have wrought a wonderful work none can deny, and that in their line, viewed in this light, they have been a splendid success. Yet with them as with everything else in this world of imperfections, it seems to us they fail in one part of their mission, that is, in catching the ear of the great bulk of the dairy farmers. Not that the fault lies so much in the manner in which these are conducted as in the slowness of the rank and file dairyman to take advantage of the opportunities which they afford him to gain a more perfect knowledge of the work in hand.

Yet, as we have listened to the papers read during recent years, the thought has repeatedly occurred to us, that it would be better on the whole to have more of them bear upon the farmers' part of the work. During the past the major portion of them treat of the duties of the maker, and the methods of manufacture. Now, although it is better if the farmer understand well the methods of manufacture in all their details, yet he can perform his part of the work fairly well without any such knowledge.

Cheese-dairying, and indeed all dairying, is, in a manner, conducted by two distinct classes of individuals, the providers of the milk and those who manufacture the same, between whose relations, however, there is a close inter-dependence. Which of these is the most important is not for us to say, but assuming that they are of equal importance, we cannot but conclude that the conventions of late years have not held this view, as but few of the papers have borne so directly upon the farmer's portion of the work.

This may be one reason why there is not a larger attendance of this class. Men do not care to sit and listen to what does not so particularly concern themselves. It is not the only reason for the sparse attendance (comparatively speaking), however. It lies more, perhaps in the isolated position of farmers and a constitutional slowness to perceive the value of privileges that may be brought within their reach.

The part of cheese dairying that relates to its manufacture has been brought to a great state of perfection; but the same can not be said of that part which relates to the duties of the farmers. The dairy cow, on which the whole superstructure rests, viewed in the light of the profits, is not yet up to half the capacity. The pasture-fields of the farmers which should be growing several varieties of mixed grasses, are still covered with June grass, or largely interspersed with those coarse in texture and not so well adapted to the production of milk. Many of the cows wade ankle deep in wet places where the soil is most fertile, but where the saturation of unwelcome waters confines the growth of plant food to the coarsest varieties.

Dairy cows are housed in stables that are inconvenient and not at all adapted to their purpose, and many other things are yet out of joint in the management of the dairy farmer. Would it not be well, then, for dairy conventions specially to direct the power of their engine to the improvement of these defects? There is no doubt but that the difficulty will be partly met by the recent decision of the last convention of

the western dairymen to hold meetings—sub-conventions, as it were—amongst the farmers themselves, where the latter will naturally be desirous of being more fully informed as to their own part of the work, when brought face to face with those whose methods may be in advance of his own. Yet it is very desirable that the annual conventions be largely attended, and that the rank and file dairymen, above all others, be fully represented there, as they are the class who, more than others, require posting in regard to the progressive features of their work.

While the directors, then, still continue to seek and to gather light on what relates directly to the manufacture of cheese, we trust that they will diligently seek to have the lagging portion of the dairymen's work brought up even with the standard of that which is so far in advance of the other.

The Dairy Interest in Nova Scotia.

The Dairymen's Association of Nova Scotia was organized on April 25th, 1884, very largely through the instrumentality of the Rev. A. C. McDonald, of Bayfield, Antigonish. He it is who coined that magnificent sentence already noticed in the *JOURNAL*, *there is no resting place for the progressive farmer*, and he was appointed the first President of the Association, with J. B. Calkin, Truro, as the first Sec.-Treas.

In 1885, Col. W. E. Starratt, Paradise, was appointed President, and P. C. Black, an energetic ex-student of the Ontario Agricultural College, Sec.-Treas., which offices the above named gentlemen retain.

At these conventions, instruction papers have been read on matters appertaining to the dairy, by Rev. A. C. McDonald, Prof. E. D. Barnard, P. C. Black, John Donaldson, Hon. A. C. Bell, C. H. Black, H. W. Smith and W. H. Lynch, and as a result, a great impetus is being given to the dairy interest in the Province.

Through the kindness of the Secretary, the report has reached us for 1884, '85 and '86, and we learn therefrom that the next meeting will be held at Amherst, but it is not stated when.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Winter Feeding of Dairy Stock.

BY M. S. SCHELL, WOODSTOCK.

In our changeable and sometimes severe climate, warm stables are absolutely essential, so that a warm and somewhat even temperature can be maintained; otherwise the feed that should go to build up the system will be spent in keeping up the normal heat.

The system of turning cows out to drink ice-cold water from a pond or creek and then leaving them standing on the shady side of a fence or some other exposed place for two or three hours each day, is most emphatically to be condemned. Even their drinking a large quantity of cold water each day would necessitate a great waste of animal heat to bring it to the natural warmth of the body.

Kind treatment all the time is very important. Dogs should not be used, winter or summer, unless properly trained, and care should be taken not to worry or excite them.

We should seek at all times to adopt that system that will naturally give the largest quantity of milk, from the smallest outlay. We think quality should receive our first consideration, as a fine product of any kind always commands a fair price, even when a second rate quality can scarcely find a market.

In the feeding of stock our aim should be to adapt the food to the wants of the animal, that it may be utilized to the best advantage, with a view to both the milk and manurial products.

To attain this end it is necessary (1) to know the composition, digestibility and nutritive values of feeding stuffs; (2) to carefully save the various kinds of coarse foods produced on the farm, and to utilize them, and (3) to use a greater variety of feeding stuffs and in proper mixtures, such as bran, pea-meal, oat-chop, and other feeds rich in fat and milk-producing properties. By so doing a larger number of cows can be kept on the same farm, and at a much lower cost proportionately, while the manure produced will be much more valuable. Straw of various kinds, cornstalks, poor hay, etc., should not be allowed to go to waste, but utilized as food by supplying what they lack with other kinds of food.

From a careful study of the subject we conclude that 20 lbs. wheat straw, 10 lbs. hay, and 3 lbs. each of oat-chops and wheat-bran, will furnish just about the quantities of digestible albuminoids, carbohydrates and fats, as the standard per day for the cow of 1,000 lbs. live weight—previous to the time of lactation. With those, foods rich in albuminoids, such as pea-meal or wheat bran, should be increased, to keep up the highest possible flow of milk.

Roots are in themselves a perfect food—we mean by that the ingredients comprising them are all digestible and of a proper nutritive ratio, so that whether fed or not, it would not be necessary to change the mixture of the other food. When fed in large quantities they will in a measure take the place of other food, but to obtain the best results we would recommend that but a moderate quantity be fed, say from half a bushel to three pecks per day. Turnips may be fed during the winter in moderate quantities, and when the milking period comes, carrots, sugar-beets and mangolds may be fed.

As the time approaches for calving, due care should be exercised to prevent too high feeding with concentrated food. When the food is bulky and laxative there is less liability of a disturbance of the system occurring.

When roots are fed they should be cut or pulped, and not fed till after the cows have had a good feed of hay or mixed fodder. Roots should be fed generously after the calving season, and also a liberal supply of foods rich in albuminoids and fats, such as pea-meal, bran and oats. It is very essential to keep up a good flow of milk all the time.

Calves should not be allowed to suck their dams more than three or four days unless the udder is hard, when this period may be extended. Early weaning is important lest the cows should contract the habit of not giving down their milk. Care should be exercised in turning the cows out to pasture in the spring, gradually accustoming them to the change of feed, by allowing them to remain out but a short time, until the weather is sufficiently warm.

The Possibilities of the Dairyman.

THIS PAPER WAS READ BY THE EDITOR AT THE ANNUAL MEETING OF THE WESTERN DAIRYMAN'S ASSOCIATION, HELD IN WOODSTOCK, IN JANUARY, 1886.

(Continued from October.)

(3). It is possible for the dairyman to permeate every detail of his practice with the *most scrupulous honesty*. This is the grandest attainment in all dairying. Where the qualifications of the successful dairyman are treated in the order of rank, this one must get the chief place. When a monarch is sought worthily to rule over and regulate these, this is the cedar of Lebanon which alone can reign. Unless honesty is in the feed box, and in the milk can, and in the water of the well where the can is placed, and in the rennets, and in milk vats, in the milk stirrer and in the curd mill, and in the hand that turns it, the whole business of

one entire factory becomes tainted with dishonor, and every member therefore suffers.

It is not for us to solve the dark enigma as to why the innocent shall suffer with the guilty. We shall be content if we learn that in the world of the hereafter, but it is for us to say that it need not be so of necessity in cheese-making. There need be no suffering about it. In a world where men are in the free exercise of volition, there is no relentness hand forcing them to deeds of dishonesty against their will and better judgment.

Many forms of dishonesty have crept in amongst dairymen which we almost blush to name, and which it seems strange that men should so far forget themselves as to practice. Amongst these then is the dishonesty of *avarice*. This is found in the feed box, and it consists in the giving of food that will produce quantity only, without quality. Then there is the dishonesty of *laziness*. It is found in the milk cans improperly cleaned, and imperfectly cared for. The dishonesty of *wickedness* is found in the well from which the milk is watered; that of *greediness*, infinitesimally small, in the cream skimmed from the cans. The dishonesty of *souless indifference* is found in ill-ventilated stables, and sticking to dirty udders. That of a short-sighted *stinginess* permeates every timber of an inadequately constructed cheese house, and the dishonesty of a *heartlessness* that is simply cruel, the hands of the maker who is remiss in the discharge of his duty.

A drop of some impure liquid falls into a vessel of water, and owing to its diffusiveness it flecks the whole with impurity. A small quantity of impure air is admitted into a room, and owing to its expansiveness it taints all the air in the room. So one dishonest patron admitted into the brotherhood of a cheese-factory, by his dishonest practices, tarnishes the good name of every person connected with that factory, in the eyes at least, of buyers, an act as cruel as it is heartless, and as base as it is cruel.

In some forms of dishonesty a man only sins against his own soul. In other forms of it he dishonors his family with himself; but in dishonesty practiced by the patrons of cheese-factories in any of its forms, we believe that every member of the factory suffers in degree, especially when carried on on the joint stock principle.

There is a *meanness* connected with dishonest practices amongst cheese patrons that is woefully contemptible. Its blackest element consists in the wrong which it inflicts on an unoffending community. A little cream is removed from the milk can to be used with the porridge at the breakfast. That cream has been *stolen* from every member of that factory, under certain conditions—that is, when quantity affects the whole. A little cream taken for the morning meal—a little crime, one would say, and yet in its essence a crime—a theft committed against every one of the two hundred patrons who may be sending milk to that factory. A can improperly cleaned is sent to the factory with its quota of milk, with the result that every cheese made that day is below the standard in quality—possibly the reputation of the factory stained, and indeed the reputation of a Province affected, it may be, in the best market in the world.

Dishonesty amidst the patrons of a dairy is peculiarly hateful, and it is because of its effects upon the unoffending that it is so hideous. Oh thou blackest of the crimes that dishonor dairy practice! We arraign thee at the bar of justice chargeable with an awful weight of guilt. We impeach thee with having fostered an indifference to the rights of others as heartless as it is needless. Thou hast trampled charity in the dust, the fairest of all the virtues. Thou hast buried deep the golden rule in the grave of thy living practice. Thou hast smeared the stainless garments of men with the semblance of dishonor, through no fault of theirs. Thou hast taken bread away from households to which thou hadst no right, and thou hast jeopardized the future of one of the most gigantic of the countries industries, and all for the sake of a few accursed pence—accursed by God and man.

No dairyman has ever lived who cannot be honest in every detail of practice. No grim monster forces the hand to do the wrong, by some resistless law of physical necessity; and therefore where the dairyman departs even a hair's-breadth from the law of rectitude, the responsibility lies at his own door. It is possible for every dairyman in Canada to feed his cows nutritious food, to keep the stables ventilated and pure, to take due care as regards cleanliness in milking and handling the milk, and to leave all the milk in the

can that rightfully belongs to it, and shall not every one worthy of the honourable name of dairyman, rise to the level of these golden possibilities.

(4). It is possible for every dairyman to adopt the *highest standard of practice* in his work that has yet been discovered. This is not possible where it is not known, but why is it not known, as dairying, we have already said, has no secrets. We speak not now so much of methods in detail as the principles that govern them.

For the farmer with broad fields to swing away with the scythe in these most modern days—would be a crime of which the court might well nigh take cognizance. His neglecting to purchase a binder may be even questionable wisdom. So for the dairyman of to-day to work away from the fittings of twenty years ago is most short-sighted policy.

With those who manufacture cheese fittings, it is much the same as with those who give us farm implements—the battle rages loud and long—and of course, every manufacturer has the best. The safe rule is to buy cautiously what is untried, as time will soon determine what shall survive the blind mistakes of first love. When measured by the unerring rule of practice that which is wanting will meet with that rejection of which it is deserving.

Clinging to old-time practices will not avail in the age in which we live, when the very air is restless, and when all the rivulets of past discovery are fast converging to form a mighty river, which shall flow on with ever-increasing volume into the twentieth century; whosoever will not prepare his bark and go out with the tide, will be left by it high up on the strand. In these latter days when the very sea of the undiscovered is fast receding from its shores, and the landmarks of the known, venerable with age, are being removed toward the receding waters, when the very foundations of old methods are made to reel with the disturbing forces of progressive upheaval, when the very moles are constrained to leave their hybernating burrows or perish in them, no one can afford to sit still in his tent, and say this way will do for me, for it was practiced by them of old time. Nor will it do to wait till the sound of the forward march comes thundering past our doors. Lo! it is past them long ago; we must bestir ourselves, and run to overtake the advance or soon we cannot do it.

To expect to do work in quality, to say nothing of quantity, with a defective machine equal to that performed by the aid of all the latest improvements, is a forlorn hope, and therefore it is no difference how well intentioned the cheese maker may be, working at such a disadvantage, he cannot keep abreast of his fellows.

The standard of practice, to which we have referred, covers a good deal of ground. It may refer to the management of the milk at home, to the fittings of the factory, and to the supervision of the same, and of the factory. To one aspect of home management the moral—we have already referred, but there is another—the physical—and while the former greatly qualifies the latter, it does not atone for sins of ignorance. Honesty of intention may not remove impure odors from the stable, nor will it always keep the cows properly littered. It will not always milk them at a given time, nor will it always keep the cows clean, nor keep the milk at a proper temperature. In the case of the cleaning of the cows, water is wanted and plenty of it, and at the proper time and so of all the rest.

We were surprised, and yet not surprised, to learn that the most glaring defects of practice are found in the oldest dairying sections. The people have got into certain ruts of movement, and cannot be got out of them, and thus it is, as we have said in other words, that dairymen must diligently join the forward tramp, and keep up with it, or fall hopelessly behind. The kinds of feed, the methods of feeding, the constructing of stables and many other details come under the head of which we treat, and in every one of these it is possible soon, if not at once, for the average dairyman to come to the front if he is only so disposed.

As to the fittings of the factory, they should be the best of the latest that practice has stamped with its approval. Which these are may be determined by observing the factories that do the best and most effective work, or by advising with those who have a right to know—not the inventors or their agents however—but practical men who have proved their good qualities by actual test.

In the supervision of the work at factories we believe the most egregious mistakes have been made. With

the intention of economizing, incompetent workmen have been employed, whose principal recommendation was the dangerous one that they would work for low wages, while the event proved as it usually does, in such a case, that these sank money for their employers every day. In every branch of farm work this same mistake is being made, and a very fatal one it is. The present loss is not the only nor the principal one. Supplanting competent workhands by those less competent tends to draw the former out of the country, or into other lines of labor, and therefore the standard of skilled labor is kept far too low. Men must be taught that there is a difference between the value of competent and incompetent work, and there is no more effective way of teaching them this, than by paying skilled labor what it is worth, and allowing the unskilled to be employed only in a subordinate sphere, and with the pay of a subordinate.

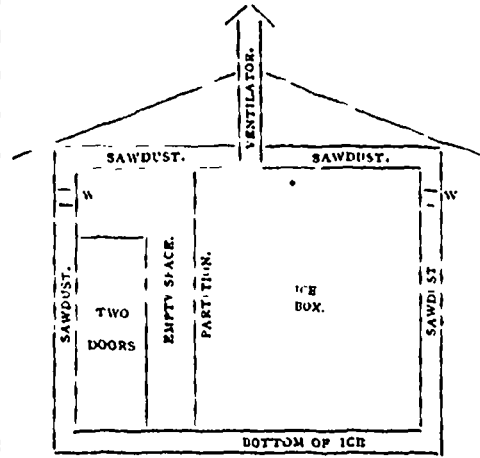
If an industry will give returns at all, it will give best returns from competent management. Hence it is that no cheese factory can afford to employ an incompetent workman, because cheap. Indeed so much is dependent upon the good management of a cheese maker, the materials from which his final product are evolved are so susceptible of taint, that they must be handled at every step with the most scrupulous fidelity. Like a delicate child their every want must receive prompt attention, and just at the right time, or they resent the neglect by self-inflicted contamination, which no after attention can remove. And this taint extends to the whole mass, to every cheese made for the day; like brothers of the same family they make common cause in resenting the inattention shewn them.

(To be continued.)

Improved Refrigerator Ice House.

The advantages of a goodly supply of pure ice to any farmer in any part of the country are so apparent that we need not enlarge upon them here. To the dairyman it is simply indispensable. There will be more difference of opinion, however, as to the sort of ice house to build. Of the many plans that we have examined none pleases us so well for the cost as that furnished us by Mr. D. L. McPherson, of Lancaster, at our request, and which we now present to our readers. The description of plan along with the sketch will, we hope, enable any one to understand it perfectly:

It consists of two square compartments, one inside of the other, with a space of 22 to 24 inches between the inside and outside, this space being filled with sawdust, and permanently remains there; has two doors, one on each compartment, well fitted and double. There are two small box windows on top of the inside compartment or ice house, say 12 inches square, having two glass lights in each box, one inside and one outside; this is to give light to ice house. The inside of ice house has a partition of say four feet, with door on one side, and it is the better of being movable so that it can be laid back to side of room when filling in the ice. This four feet space is for the purpose of storing any perishable article in hot weather. The ice is packed in the balance of this inside compartment close up to sides all around, and all spaces between cakes of ice and sides are to be filled with snow, also a quantity of clean snow filled on top of ice. The bottom of this ice house and chamber is to be air-tight but well drained. Round poles (cedar), two to three inches in diameter, laid on the ground close to each other, and then some straw or hay laid over the poles; then four inches of sawdust. The poles act as an underdrain; the hay or straw keeps the sawdust from filling the spaces to prevent a perfect drain. The building on the outside should be well banked, with an under-drain for all water to pass off. There should be a ventilator of 6 x 6 inch pipe, passing up from inside ice compartment to outside, to carry off the moisture and damp air from the ice. There are also two feet of sawdust on top of the ice box. The advantages of this plan of ice house are clean for use, convenient space for preserving perishable articles in hot weather, convenience of cutting pieces of ice for use, and the convenience of the sawdust being permanent and the ice house ready to be filled at any time during winter; no sawdust to be removed or handled after once filled. The ice keeps fairly well in the hottest weather.



REFRIGERATOR. ICE HOUSE.

Note—In plan w signifies window.

Size of building suitable for farmers and families:
 Outside—12 x 16 ft. sq., 10 ft. high on side.
 Inside—8 x 12 x 8 ft.; ice compartment 8 x 8 x 8 ft.; store room, 4 x 8 x 8 ft.
 Cost—about \$40.

Poultry.

Eggs in Winter.

One egg in winter is worth at least three in summer, hence it is of vast importance to the producers of poultry, that they be able to obtain a free and full supply of eggs during the winter months.

In order to do so, a few simple requisites are necessary to be observed, and the end is attained.

1. There are some breeds that lay better than others, just as there are some breeds of cattle that produce more milk than others. Obtain these. Although several of the breeds are good, we may mention Plymouth Rocks as being very well able to fill the bill.

2. Give them comfortable quarters, not too small nor too dark. They need not be expensively fitted up. They want as much sunlight as can be got into them, and should have access to clean water every day, and when there is but little snow with advantage be allowed to roam a while each day. When there is deep snow they must have a good supply of sand and gravel.

3. Their diet may be substantially *wheat*. It seems to produce a larger supply of eggs than any other grain. For this purpose farmers might grow two or three acres just for the hens. We grow the *wild goose* variety ourselves, for the reason that we get several more bushels to the acre. Other varieties in some localities may do quite as well; if so, grow them. It is a mistaken idea that wheat is too expensive to grow for hen feed. Wheat at 75 cents per bushel is well sold, which produces eggs abundantly at 25c. per dozen.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Low Prices.

The season of buying and selling fowls is now upon us. During this month hundreds of fowls will change hands, and those who buy can not be too careful to whom they send their hard cash for birds. It is customary to pay cash in advance for fowls, and in most cases the buyer has not seen the bird until he has sent his money and possibly paid express charges as well. We have ourselves been sorely disappointed in this way. Sometimes no doubt, the buyer expects too much and he sees in time that he has got all he paid for. At other times he has not, and very often vows he will not buy another bird that he has not seen, if he never

gets one. No doubt in a majority of cases the deal is mutually satisfactory, and any honest dealer will not sell a bird at a price for which he can not send a reasonably good one, but again the buyer often wants a bird at a price that no man can raise good stock for. For instance, it is a pretty hard matter to pay four or five dollars each for a breeding pen of fowls, and sell birds raised from them for one dollar each. A writer in the *American Poultry Journal* says: "While a high price is not proof positive of good stock, a low price is proof positive of inferior stock," and we think he is correct. We have never yet seen a deal satisfactory in cheap John goods of any kind.

J. W. BARTLETT.

Lambeth, Ont.

[The writer of the above drove the nail well home when he wrote thus. Superior stock of any breed or any strain should not be expected at a low price, for stock of this description, which is always scarce, cannot be furnished at a low rate. On the other hand when one pays a fair price, he should always get a fair animal, and a good price, a good one. The sender is morally bound to forward this and in case of dissatisfaction to meet the purchaser halfway.—ED.]

How to Raise Turkeys.

To begin with, restrain your desire to count young turkeys, and let them alone for the first twenty-four hours after they get into this "cold and unfeeling" world. At the expiration of that time they will be quite strong and decidedly hungry; remove them to a clean, airy, roomy coop, and give them their first meal—only it must be meal at all, but boiled eggs, stale wheat bread crumbs just moistened with milk or water, "Dutch" cheese, or a mixture of all these.

For the first two weeks feed entirely with the eggs, bread, curds, cooked rice and cooked oatmeal. About the third week, commence feeding cooked oatmeal; and from that on they may be given any cooked food that would be suitable for chickens of the same age. Season all food slightly with salt and pepper, and twice a week add a level tablespoonful of bone meal to a pint of feed. Never feed any sour or sloppy food of any kind, except sour milk, and never feed any uncooked food of any kind until after they have thrown out the red on their heads. Feed often, five or six times a day, until they are three months old; then, if insects are numerous, you may gradually reduce the number of meals per day to three or even two.

After they are three months old, they may be given wheat, cracked corn, etc., but no whole corn until they are some five months old. Keep the coops dry and clean, and the turkeys out of the dew and rains until they are fully feathered, and have thrown out the red. Dampness and filth will kill young turkeys as surely as a dose of poison. For the first few days confine the poults to the limits of the coop and safety run; then, if all appear strong and well, give the mother hen and all her brood liberty on pleasant days after the dew is off.

If they get caught out in a pleasant shower, get them to shelter as soon as possible; and if they are chilled take them to the house and thoroughly dry and warm them. See that the little turkeys come home every night. A hen mother will come home at nightfall, but the turkey mother must, for the first few nights, be hunted up and driven home. After they are three months old, turkeys are quite hardy, and may be allowed to range at all times. If turkeys that are well cared for, and have always seemed all right, show signs of drooping when about six weeks or two months old, give Douglass mixture in the drink or food, and add a little cooked meal to the feed once a day.—*Maine Farmer*.

Getting Ready for Spring.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—The year 1887, with all its successes and failures, lies before us. We are told that it is wise to take time by the forelock, yet the majority of us would prefer that he show his head in this climate some other time beside January and February, when our efforts are directed mainly to keeping the stove warm, but time waiteth for no man, and if we desire to in-

scribe success on our banner at the end of the season, we must take hold firmly, when we have the chance.

No live-stock on our farms is neglected so much as the poultry, and no stock is capable of giving larger returns for money and care expended. Usually the farmer is so rushed when spring comes, that had he the inclination, he could not fit up as he ought, and the matter is left to run itself.

Use a few of the hours that hang so heavily now, in repairing or making a few coops. Hunt around the store-room or pantry for the empty tin fruit cans you laid away so carefully last summer, and having found them, cut them off about two inches from the bottom, when you will have seed and water dishes for young chicks, that can not be excelled. Prepare a few warm nests (placing them on the ground) for the early sitters. Save only the best of your hens, mating them with vigorous, full breasted males. Do not scrimp the wheat and oats in their rations, and you will have made a start, that, our word for it, will be surprising in its results.

ARTHUR HARRINGTON.

Ruthven, 15th Dec., 1886.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Poultry on a Large Scale.

BY J. W. BARTLETT.

(Continued from November Journal.)

THE HOUSE.

Before taking up the subject of breeds as mentioned in our last, we wish to say a word more as to the house. It will be remembered we recommended building brick beneath the ground when the soil was suitable. When the soil is not porous enough to be self-drained, and perfectly dry at that, or when it is desirable to commence in a small way and extend afterwards, we would recommend building above ground entirely, and making the house of one inch boards, battened outside and lined with tarred paper inside. Our own is constructed thus and we find it sufficiently warm for breeding purposes, but if eggs were the only object, should prefer it banked up with earth, three feet outside. The building of boards above ground has this advantage, that it can be built in sections, as desired, adding 12, 16 or as many feet at a time as may be desirable only. Do not fail to keep the hall four feet wide, and the doors the same. It is as well to make double doors, one on each side, two ft. wide, and have them not less than six feet, three inches high, thus saving the tiresome necessity of stooping, which we have been obliged to do in every hen house we ever entered except our own, with one exception. Again, it will be found decidedly beneficial to have a window in the hall, every 12 or 16 feet, of say six lights of 8 x 10 glass. Now just here allow an explanation. The idea seems to exist to a great extent that we have a house of the dimensions and style we have been describing. Now our house is on the principle laid down, and will be in time, if we are spared, the full size, 200 feet, but is not so at present, being built above ground, of boards as herewith described, and the internal arrangements same as described in this series of papers, and we find it in every way, very satisfactory. All who have seen it seem pleased with it, especially the facilities for feeding and gathering the eggs from the hall way, and the room allowed for moving about and cleaning out, and this will be much better attended to, than if there was not room enough to do it conveniently.

Westminster Poultry Farm, Lambeth, Ont.

"I consider your JOURNAL the best value, to a farmer, of any paper in the Dominion, and those two articles on management of the pig, in Oct. and Nov. issues, should be in every pig raiser's hands in Nova Scotia."—L. W. Travis, Halifax, N. S.

"I like the JOURNAL. I think it the best stock paper in Canada."—Harvey Plumb, Port Perry, Ont.

Horticultural.

Fruit Culture in Canada.

We clip the following from the *North British Agriculturist*:

"The desire for progress in us is not less intense than in our Canadian cousins, but we lack organization and the practical machinery which they have developed to aid each other in focussing the results of individual and general observation, so that they may quickly become the possession of all. We cannot hope to compete with the Canadians in the cultivation of the apple—our climate being less favorable—but we may at least emulate them in the practical and thorough way in which they help each other from one end of their wide Dominion to the other, and thus improve our sorts of apples, which undeniably need improvement."

This is only a portion of the compliment paid our land as a fruit-growing country in the same article, which dwells upon the excellency of our exhibit at the Edinburgh show. Let our fruit-growers take fresh heart from these words. If Canada in years that are not very favorable can produce so excellent a showing of fruit, how much better will that exhibit be when everything is congenial to its growth. In connection with our associations many are ready to say that they are of doubtful utility, that we hear from year to year the same tale, and that about all has been learned that can be learned. This will never be in the present order of things, as in no line has the human race here ever attained perfection.

New varieties of each kind of the fruit that we now possess are yet to be introduced during every passing year. New enemies in the form of insects will have to be fought, new avenues of disposal sought out, and those who will not attend our fruit conventions or profit by the reading of their reports must fall behind in the race of fruit culture. While we should be profoundly thankful for the heritage we have been given in the form of a fine fruit-growing country, we should arise and take possession of it to the fullest extent.

Red Raspberries.

BY E. D. SMITH.

Perhaps some of the readers of the JOURNAL may think they have heard enough of red raspberries, an article on that subject having appeared in the October number, presumably from the pen of the editor. But as the writer advocates a system somewhat at variance with the custom of experienced growers, and much more at variance with their theory, I crave their indulgence for a short review of the ideas contained in the article referred to.

With regard to berries doing well in shade, a partial shade may be little or no objection, but they will bear nothing in a dense shade, such as the north side of a barn. They are not found growing in the woods except in old slashings, where there is almost no shade, and as soon as a second growth of timber reaches the height of ten or twelve feet the red raspberries die out, partly caused by the shade, partly by the sod and partly by the poverty of the soil, which cannot grow both trees and berry bushes. It is all right to plant red raspberries along a row of young apple trees if there is sufficient manure applied to keep up the fertility, but I would not advise planting among grown up trees, on account of shade, improper nourishment and inconvenience in gathering apples.

With regard to thick planting, where plants are cheap it would perhaps pay to place one plant every foot or eighteen inches in the row, if the matted row system is to be followed, which would be the best, for a single row or two, but not more than an average of one cane

each six inches should be allowed to grow; probably less canes would produce more fruit.

A red raspberry patch should not run out at least for ten years, if the canes are kept reduced to this number. And let us not forget that this number will produce more fruit and fruit of fine size and quality, and so more cheaply gathered than a mass of canes growing thick along the row. Each of the canes intended for next season's fruit should be nipped off when two feet high the first year, and two-and-half after that. Remember, not allowed to grow until fall and then cut back, but nipped off when they have reached a little over the height mentioned. The consequence of this is a profusion of laterals that interlace and support each other; and all other young sprouts should be kept cut off with hoe or flat-tooth cultivator, as soon as, or before, they appear above ground, and that is very early in the spring. This throws all the strength of the wide-spreading roots into the young canes intended for next season, and the canes bearing the present season's crop, which would otherwise be shrunken in size and vigor in proportion to the number of canes allowed to grow, that are not needed. This is the theory of good growers, but is not always their practice, I am sorry to say. But I do think a small row in the garden might be attended properly. It will take such a very short time and will yield such a magnificent return. There is no fruit more sure. In fact I can think of none at all that yields such large returns so regularly and with so little labor as red raspberries. Besides the thinning referred to, all the trimming is simply cutting out the wood that has borne a crop as soon as the crop is gathered.

It pays well, of course, to thoroughly cultivate red raspberries as well as any fruit, especially during a drouth; and it is a good practice to manure with well rotted manure in the latter part of May or after a thorough cultivation. This acts as a mulch and preserves the moisture in case of drouth. Sod will soon ruin red raspberries, so it is advisable, nay, almost essential to have the ground well cleaned before planting, and kept so, and no fresh manure full of seeds placed among them. A word to the wise is sufficient.

These facts have often been dearly bought by experience. Red raspberries will not thrive upon wet land. In fact no fruit that we grow here will do so, but red raspberries especially delight in dry soil. But after all, there is more in the variety than anything else, important though the facts be that are heretofore mentioned.

The earliest berry that is of good size, productive, hardy, and moderately vigorous, with which I am acquainted, is the Marlboro'. This berry is all that has been claimed for it, except with regard to vigor. It was said to grow ten to twelve feet high, a claim altogether too absurd for belief, and which tended to raise a suspicion that all was not right about the berry in other respects; but so far I have been exceedingly well pleased, the berries being so very large, firm and fine, of good color and quality, and withal so early that I received 12 cts. per box for the first three pickings, the Cuthberts, though equally fine, only sold at 7 to 8c. when at the highest, and other smaller kinds sold at 5c. to 6c.

The canes, so far, have proved very hardy, and are very thick and stout, and so stand up well whilst other kinds alongside fall over. At present I consider this the best red raspberry in cultivation. Possibly a longer experience may cause me to change this good opinion.

Heretofore the Highland Hardy has been our best early berry, being hardy, moderately productive, and good in other respects, except vigor, which can be

remedied by manuring, and size of berry, which is too small. The smaller varieties cost half a cent per box more to pick than the larger ones, and when prices are cut so fine and the margin of profit so small, to the large growers a half cent per box is a good deal, especially when the large berries also sell for about a cent per box more.

Hansell is about the earliest berry, but is too small to give satisfaction also. Later than these, we have the old and reliable Turner, very hardy and vigorous, and the fruit of extra good flavor, to my taste, but too small where other kinds can be grown successfully that are large and fine, its chief merit being hardness and vigor. Immediately after Turner comes Clarke, a fine large berry, and productive, but not so large as Marlboro' or Cuthbert, and somewhat tender in the cane, in the colder parts of the country, also very susceptible to the drouth; in fact, the canes frequently die before the crop matures, and this is my chief objection to the Clarke.

Philadelphia is perhaps the most productive berry we have, and is the most satisfactory to grow as regards its habits of growth, especially if grown in hills, as it does not sucker so freely, and has a tendency to keep in hills. Unfortunately the berries are rather small, and in dry seasons crumble to pieces, and are, withal, too dark in color to sell well at present, but for home use would still be a good berry to plant, though one of the oldest berries. Resembling this very much except in size of berry, which is larger, is Shaffers Colossal. The last is propagated from tips like black caps. For canning purposes this is a profitable berry to plant. There are numberless other varieties each having claims of its own. Some, like Superb, being extra large, but too dark. Crimson Beauty, very hardy, and having a bright, large berry, but crumbling when gathered. Thwack, a very good berry except as to quality, which is wretched. The Niagara, a new berry introduced by Mr. Smith of St. Catharines, is an acquisition, being very large and fine. But, after all, for the market-gardener or fruit-grower, for a medium and late berry, the Cuthbert beats them all, being vigorous in cane and moderately hardy, but only moderately so; very productive of large, bright, firm berries, that sell for the highest price during their season. For either home use or market in the warmer parts I would decidedly recommend Marlboro' and Cuthbert, and in the colder sections Turner and perhaps Crimson Beauty.

At the present prices of red raspberries, everything has to be conducted properly to give a profit commensurate with the expense involved. This includes proper soil and fertilizers, cultivation and selection of markets, and prompt gathering and marketing of the crop.

Winona, Dec. 8, 1886.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

In your September JOURNAL I note an article on pruning from which I have gained some splendid ideas. As we are all interested in fruit raising, an article from some of your staff of writers on the time to plow an orchard, fall or spring, would be very acceptable to us, as this is an open question with the farmers here. Some are of the opinion that opening up the soil by ploughing in the autumn allows the frost to go down into the ground and destroy the small fibres. We who have had the privilege of reading your journal like it very much, and will do all in our power to introduce it into our agricultural society.

A. A. FORD,

Wilmot, N. S. Sec., Lawrie Ag'l Society.

As to whether ploughing an orchard in the fall tends to expose the roots to the action of the frost adversely, much depends on the nature of the climate. In localities that are much exposed to cold, sweeping

winds in winter, some injury may follow, but usually we do not think the trees suffer. An orchard should not be ploughed so deep as to seriously disturb the roots or even rootlets. It is much better for the trees to plough only shallow, in which case they will be but little disturbed, and therefore the action of the frost will not be injurious. There is a time, however, when ploughing in the autumn may injure the trees in another way, and very seriously—that is, just when the summer's growth has nearly ceased in the trees. Ploughing at such a time is apt to induce continued growth late in the season, and the wood not properly ripened in the tops is apt to be frozen. If the orchard is well drained, we would prefer spring ploughing on the whole, as then there can be no hazard; but if wet and lying in a flat condition it would be better to plough in the fall, so as to leave the trees on or near the center of the ridge. They will not flourish in a watery domain, however suitable otherwise the soil may be.

The Apiary.

ONLY twelve years ago the British Bee-Keepers' Association numbered 150 members, while now, with its affiliated associations, it numbers upwards of 10,000 members. This is certainly remarkable progress. Great Britain is capable of producing very large quantities of honey, owing in part to the abundance of its clovers and lindens. Yet the enterprise of our Canadian bee-keepers has opened a market in that food-consuming country, and with the prospect of remunerative prices.

THE annual meeting of the Ontario Bee-Keepers' convention has been postponed until Jan. 5th and 6th, 1887. We learn from the *Canada Bee Journal* that an important item on the programme for discussion will be the re-modelling of the association under the rules laid down in the "Agriculture and Arts Act," and also another, the question of "Legislation on Foul Brood." The case of McIntosh vs. Harrison—the former bringing an action against the latter for keeping bees so near as to prove a source of annoyance to the former (not yet finally decided), will also, it is probable, lead to the establishment of a "bee-keepers' union" in the near future.

The McIntosh-Harrison Case.

We clip the following sensible letter, as we regard it, on the above subject, to which matter reference has already been made in this issue, from the *Canadian Bee Journal*:

"The first thing to do in the McIntosh vs. Harrison case is to find out the cause of disturbance. I can very readily see how bee-keeping at the very door of a neighbor could be a very great annoyance. Some folks have a great dread of bees and cannot get reconciled to the buzzing around, even if they are told dozens of times that they will not sting. Some folks are terribly afraid of a dog when he runs out and barks, though the owner may say, 'He won't bite, don't be afraid.' A man may purchase a vacant lot close to a previously established blacksmith shop, put his bees so close to said shop as to actually drive away customers. No sane man would tie a span of restive horses close to an apiary of 80 colonies of bees, for they will attack under certain circumstances, both men and animals, but in no case when out on duty. Therefore, as the country is large, and bees do just as well and better when isolated, every man can easily get a suitable place to keep his bees without putting them close to any man's house. Almost any business may become intolerant to a neighbor when placed at his door, any kind of machine-shop, for instance, or even a common school or private musical academy under the window of another person who was previously established. That is one reason why school-

houses and shops are placed on back streets, just where bees ought to be placed, or better still, a little way out in the country.

Bee-keeping is not a nuisance, but certainly every man should use proper judgment in where he places his apiary; if he did so, I am sure there would be little or no cause for complaint. I do not understand the circumstances, but let us find out; then, if Harrison is to blame, let him paddle his own canoe; if not, let us help him to the end.

JOHN YODER.

Springfield, Ont., Dec. 3, 1886.

The editor of the *Bee Journal* takes some exception to some of the above statements, without assigning very sound reasons for doing so. Amongst other things he says, "The case has begun and the judgment will, if adverse to the defendant, materially interfere with the future interests of bee-keepers. It matters not whether there was a feeling of animosity between the participants in this case or not, we must defend the principle." What principle it is that must be defended is left for readers to conjecture. If it is the principle that bee-keepers can place their bees just where they like because on their own property, we do not agree with it, for, with Mr. Yoder, we believe that there are some places where bees should not be put, even on one's own land. Though the court should decide tomorrow that Mr. McIntosh was wrong, and that a man may put bees anywhere that he may choose, because on his own property, we believe that if bees are dangerous to man or beast under any circumstances, that a higher law than the law of Canada binds the owner to put them where they are least likely to annoy either our own species or that of the lower orders of animals. We conclude, then, that the bee-keepers of Ontario would do well to define very narrowly what that thing is which they call principle in this case. Indeed, we think our brother editor cuts down the tree of his own argument as he proceeds. He says, speaking of the grounds of his opposition to union, "bee-keepers who have ill-feelings towards their neighbors have a good chance to vent it. They join the union and call on their neighbors to come on, feeling that the union will assist them and their cost will be light." This is admitting a great deal. If the language implies anything, it implies that bees can be made a means of annoyance to their neighbors by those who keep them, and that is just about what the judge seemed to think who sat upon the case.

In such a case we believe that bee-keepers who are so readily volunteering to defend Mr. Harrison, should first carefully weigh what they are going to defend.

The whole matter, speaking in the general, hinges on this: Are bees, under some circumstances, an annoyance, not to use the harsher term, nuisance, to others than the owners? This is what Mr. Yoder claims, and what the editor of the well conducted *Canada Bee Journal* has admitted without intending it. Then, though our statute law were to affirm ever so strongly that bees were not thus an annoyance, the law of heaven and the law of right would say in some instances they were.

Correspondents of the *Bee Journal* have written, citing cases where bees have been kept near blacksmith shops without harm following, which is just about equivalent to saying that bulls are not dangerous, because generally they don't kill people, while every now and then our newspapers have to chronicle the sad end of some one slain by his bull. Mr. Yoder says, that bees will attack under certain circumstances both man and beast. Bee-keepers, is not that true?

Mr. Yoder, that letter of yours is just a splendid one. We have looked in vain for a weak point in it,

and the rifle shots aimed at it by the editor of the *Bee Journal* have not displaced the first stone.

In reference to the special matter in hand we say with you, "If Harrison is to blame, let him paddle his own canoe. . . . If not, help him to the end."

Bees and Honey.

The reports from the apiarists of the Province are extremely contradictory as to the success of their industry during the past season. Some correspondents state that the honey yield has been an unusually large one, that bees have swarmed well and are in fine condition for winter, while others in the same township complain that the very opposite condition of things prevails. Taking the Province as a whole, however, the favorable reports are in a decided majority, and the yield of honey may be described as from fair to good. Bees generally came out of winter quarters in better condition than for several years back, though a few apiarists lost a large portion of their stocks, owing to the severity of the weather. The early part of the season was generally favorable to the production of honey, owing to the abundance of bloom of one kind and another, and even in many places where the subsequent drought almost put an end to honey gathering, so much had been stored in the time of plenty, that both the bees and their owners will have a fairly good supply. Other apiarists, however, whose swarms were dependent on buckwheat and other special blooms, which completely failed in many places, were not so fortunate, and with them the supply will be deficient. Bees swarmed fairly well in the early season, and are now reported in good condition. The area of apiculture appears to be extending in the Province, notwithstanding that some old apiarists have given up the industry, owing to the fatality of recent winters, and the fact that the low price of honey—8 to 10 cents per pound is a figure frequently quoted—is very generally complained of.—ONTARIO BUREAU OF INDUSTRIES, Nov. 1886.

The Home.

After Harvest.

The days of the harvest are past again :
We have cut the corn and bound the sheaves,
And gathered the apples green and gold,
Mid the brown and crimson orchard leaves
With a flowery promise the springtime came,
With the building birds and blossoms sweet :
But oh, the honey, and fruit, and wine !
And oh, the joy of the corn and wheat !
What was the bloom to the apple's gold,
And what the flower to the honeycomb ?
What was the song that sped the plough,
To the joyful song of Harvest Home ?

So sweet, so fair, are the days of youth ;
So full of promise, so gay with song ;
To the lilt of joy and the dream of love
Right merrily go the hours along.
But yet in the harvest time of life
We never wish for its spring again.
We have tried our strength and proved our heart ;
Our hands have gathered their golden grain ;
We have eaten with sorrow her bitter bread,
And love has fed us with honeycomb.
Sweet youth, we can never weep for thee,
When life has come to its Harvest Home.

When the apples are red on the topmost bough,
We do not think of their blossoming hour ;
When the vine hangs low with its purple fruit,
We do not long for its pale green flower.
So then, when hopes of our spring at last
Are found in fruit of the busy brain,
In the heart's sweet love, in the hands' brave toil,
We shall not wish for our youth again.
Ah no ! We shall say with a glad content :
"After years of our hard unrest,
Thank God for our ripened hopes and toil !
Thank God, the Harvest of Life is best !"

—Independent.

For Ambitious Boys.

"A boy is something like a piece of iron, which, in its rough state, isn't worth much, nor is it of very much use ; but the more processes it is put through the more valuable it becomes. A bar of iron that is only worth \$5 in its natural state is worth \$12 when it is made into horse-shoes ; and after it goes through the different processes by which it is made into needles its value is increased to \$350. Made into pen-knife blades it would be worth \$3,000, and into balance springs for watches, \$250,000. Just think of that, boys, a piece of iron that is comparatively worthless can be developed into such valuable material !

But the iron has to go through a great deal of hammering and beating, and rolling and pounding, and polishing ; and if you are to become useful and educated men, you must go through a long course of study and training. The more time you spend in hard study the better material you will make. The iron doesn't have to go through half as much to be made into horse-shoes as it does to be converted into delicate watch-springs, but think how much less valuable it is. Which would you rather be, horse-shoes or watch-springs ? It depends on yourselves. You can become whichever you will. This is your time for preparation for manhood.

Don't think that I would have you settle down to read hard study all the time without any intervals of fun. Not a bit of it. I like to see boys have a good time, and I should be very sorry to have you grow old before your time ; but you have ample opportunity for study and play, too, and I don't want you to neglect the former for the sake of the latter.—*Christian at Work.*

Personal.

The father of Mr. R. R. Sangster, Lancaster, Ont., died on the 28th Nov., aged 73 years. One by one the aged pioneer farmers are passing away.

Mr. H. B. Sharman, a graduate of the Ontario Agricultural College of former years, is now taking a third year course at the same, a privilege recently brought within the reach of all who may desire it.

Jottings.

Agent Wanted.—An active club agent wanted at every post office. Send for sample copies, etc.

Notice.—Please examine your address tag. If it reads Dec '86, or any month of '86, your subscription expired with that issue, and we will be obliged if readers in arrears will renew at once.

Cuts For Sale.—We have a large supply of stock cuts for sale, engraved in a superior manner, of different sizes, for use on posters, letter heads, cards, etc., and represent the various breeds of stock. Send for a specimen sheet.

Ontario Bee-keepers' Convention.—This convention (annual) will meet in Toronto, at the City Hall, on Wednesday, 5th and 6th January, when the Commissioners of the Association will make a report of their trip to England.

Back Numbers Wanted.—We have recently been asked to supply copies of the *JOURNAL* from the beginning of its publication. We will be glad if any readers who do not file their *JOURNALS* will send us copies of January, February, March, April and December, 1884.

Preserving Eggs.—The first prize lot at the London Dairy Show were kept in sweet bran with the small end downward ; the second had been rubbed with a mixture of olive oil and bees-wax, and packed in coarse salt, and the third prize lot had been rubbed with mutton dripping, and then put away in dry lime, powdered.

The Sunnyside Herd.—The fame of this herd, owned by James Hunter, Alma, Ont., has penetrated to far away Dakota. We see a reference to its brilliant array of prizes on Shorthorns at our exhibitions this year, in the *Carrington News*. This is as it should be, as Mr. Hunter has spared neither money nor pains in the building up of this herd.

The Country Gentleman.—The poster of this splendid agricultural, which we always welcome as an exchange, is to hand. Along with a good many other cheering things it says that the contributors occasional and otherwise number nearly one thousand. It is published at Albany, U. S. A., by Luther Tucker & Son, and is only \$2.50 per year.

Canvasser Wanted.—If any of our readers, not having time themselves, know any person in their neighborhood likely to devote a little time in getting us a few subscribers or even in forming a club for next year, we shall esteem it a favor if they will kindly send us his name and address, when we will send them sample copies, etc., for the purpose.

Tranquility Farm.—This is one of the largest and best managed stock establishments in New Jersey. It is owned by Mr. Stuyvesant, and is managed by Mr. Telfer, for several years at the head of one of the largest stock-raising farms in Eng-

land. Guernsey cows and Percheron horses are main features of this establishment ; and its barns are the largest in New Jersey.

Ormonde.—The record of this famous race horse, bred by the Duke of Westminster, has never been beaten. He has won already, £24,598 10s., on the race course. His three victories as a two-year-old were worth £3,008. Ormonde was sired by Bend Or, winner of the Derby in 1880, and is out of the dam, Lily Agnes. His half-sister Farewell, a daughter of Doncaster, won the one thousand guineas in the spring of last year.

Guernsey Grades.—Mr. L. F. Allen, of Buffalo, N. Y., formerly the editor of the American Shorthorn Herd Book, is breeding cows for producing butter. The Guernsey grades are great favorites with him. Writing in the *Guernsey Breeder*, he says, "My own experience with half and three quarter-bred Guernsey cows from grade Shorthorn cows has been satisfactory for four or five years past." He looks upon the Guernseys as superior to the Jerseys.

Shetland and Iceland Ponies.—The Messrs. Powell Bros., Shadeland, Springboro, Pa., have recently imported 102 head of Shetland and Iceland ponies, the largest shipment, it is stated, ever brought at one time to America, and these are only a portion of the collection of these pretty little creatures that form so great an attraction for the young folks, now kept in Shadeland stables. All the movements of this world, renowned firm seem planned on a cyclopean scale.

Feeding Sheep.—Professor Stewart, in speaking of feeding sheep for fattening purposes, says : "All the hay or other fodder given to sheep should be cut short, moistened and the ground grain mixed with it the same as in the best feeding of cattle." In a test carried on by him some years ago, it was found that while in 120 days, the gain was 30 lbs. per head when the hay and grain were fed separately, when chaffed and ground and fed in conjunction, the gain was 45 pounds.

Breeders' Directory.—There are scores of stockmen in various districts who we believe would find it would pay them well to have a card of two or three lines in the *BREEDERS' DIRECTORY*. Oftentimes their stock is superior, but being known only to their immediate neighbors, they have little chance of getting its full value when placed in the market ; whereas a card would bring it to the notice of thousands of readers throughout Canada and the United States. The cost is only \$1.50 per line per annum.

Size of Guernseys.—The *Guernsey Breeder* puts the weight of an average Guernsey cow at from 800 to 900 lbs. In speaking further of the question of size, it says : "It may be a question whether a large or a small breed of cows gives the most butter or profit determined in any way. Were careful tests made, we have little doubt that the small breeds would prove to be the most economical. The little breeds are all rich milkers, and goats give more and richer milk than cows in proportion to their weight."

Wheat Culture in Britain.—The low prices of wheat in Britain has rendered the cultivation of it unremunerative to the farmer, and a good deal of agitation as to what shall be done is the result. If old country farmers can raise something that pays them better, why should they take this state of affairs so much to heart ? For if other countries can raise wheat so cheaply as to undersell them in their own markets, it is useless to prolong the contest. Foreigners cannot undersell them in all products of the farm, and if they can grow something else that has more money in it than growing wheat, why should they not do it ?

The Canadian Horticulturist.—This spicy little journal, published by the Fruit Growers' Association of Ontario, and edited by L. Woolverton, Grimsby, Ont., offers the publication for 1887 for the usual subscription price, \$1.00, and one of the following premiums : 1, tree of Vladimir Cherry ; 2, Dahlia ; 3, two plants, Hilborn Raspberry ; 4, a one-year-old Niagara Grape Vine ; 5, a new single-flowered Geanium ; 6, three packages of flower seeds.—*Primula Cashmeriana*, and in addition the report of the meeting of Fruit Growers' Association of Ontario. A good dollar's worth, truly.

A Very Useful Test.—Professor Sanborn, of the Missouri Agricultural College, proposes to test the feeding properties of ten steers of each of the three leading beef breeds, having them selected by the associations of breeders when about four months old. It is proposed to feed them similar kinds of food and keep a record of the results. In this way it can be ascertained exactly the relative cost of producing a pound of beef from each of the three breeds. The breeders, we understand, are acceding to the proposal.

Feeding Value of Bran.—Professor E. W. Stewart gives the following deliverance as to the comparative value of bran by the roller process...

Comparative Prices of Beef.—The following from the Farmer and Chamber of Agriculture Journal shows the comparative prices of meat per 8 lbs. in the London market since 1881.

Table with columns: Present Price, 1886, 1885, 1884, 1883, 1882, 1881. Rows: Beef inferior, Beef Prime, Mutton Midding, Mutton Prime, Pork large.

The Price of Wool.—This has advanced in Britain several cents on the pound, as compared with prices of last spring. We must not conclude, however that there is going to be a great advance because there has been some advance.

Dorset Horned Sheep.—Mr. V. E. Fuller, of Jersey fame, of this city, has purchased all the Dorset Horned sheep in Canada, and is now breeding them at the Oaklands.

The Blankney Stud of Thoroughbred Horses.—This stud, which has produced two Derby winners, is owned by the Right Hon. Henry Chaplin, M.P.

The Value of Food.—Dr. John Voelcker has demonstrated by test that in feeding sheep the value of the foods used were in the following order, considered as food only.

Agricultural Returns in Britain for 1886.—The area in wheat and barley has decreased by 934,500 acres, but there is an increase in the acreage of oats.

Government Returns on Agriculture.—Some of our farmers are utterly indifferent as to filling up the agricultural returns for the bureau of industries, we refer more especially to Ontario.

The Holker Herd of Shorthorns.—This herd, owned by the Duke of Devonshire, Holker Hall, has been under the management of Mr. Drewry for the long term of nearly 40 years.

Inoculation vs. Slaughtering for Pleuro-pneumonia.—C. Cunningham, M. R. C. V. S., in the North British Agriculturist of Nov. 10th, argues vigorously in favor of the former in preference to the latter.

Table of Contents. STOCK DEPARTMENT: A Great Desideratum, Amongst our Friends, Cecil and Velvet, Editorial Notes, English Swine Standards, Ergot and Abortion, Farmers' Clubs, Inquiries and Answers, Mr. Lowell's Herd of Shorthorns, Not Neighborly, Our Scotch Letter, Science in Farming, Scrub Cattle vs. Grades, Stock Notes, Suffolk Sheep, The Ayrshires of Mr. Thos. Brown, The Beef Breeds of Cattle, The Canadian Cattle Trade with Glasgow, The Council of the Agricultural and Arts Association, The Experimental Farm Buildings, The Fortification that Must Crumble, The Herefords of Springdale, The late Henry Parker, The Ontario Fat Stock Show, The Shorthorn Herd Book Agitation. VETERINARY DEPARTMENT: Precautionary Hints to Stockowners, II, Weak Stomach in a cow. FARM DEPARTMENT: Agriculture in Britain, Agricultural College, Bulletin VI, Editorial Notes, Inquiries and Answers, Permanent Pastures, Report of the Judges on Prize Farms for 1886, Work of the Machine Order. DAIRY DEPARTMENT: Improved Refrigerator Ice House, The Cheese and Dairy Conventions, The Dairy Interest in Nova Scotia, The Dairy Outlook, The Possibilities of the Dairyman—continued, Winter Feeding of Dairy Stock.

POULTRY DEPARTMENT: Eggs in Winter, Getting Ready for Spring, How to Raise Turkeys, Low Prices, Poultry on a Large Scale. APIARY DEPARTMENT: Bees and Honey, Editorial Notes, The McIntosh-Harrison Case. HORTICULTURAL DEPARTMENT: Fruit Culture in Canada, Orchard Pruning, Red Raspberries. HOME DEPARTMENT: For Ambitious Boys, After Harvest. MISCELLANEOUS: Advertisements, Jottings.

Stock Notes.

Parties forwarding stock notes for publication will please condense as much as possible. If written separate from other matter, it will save much labor in the office.

Horses.

The pure Clydesdale stallions, Golden Crown and Borthwick, are owned by Mr. Philip G. Button, and kept at the Ontario House, Ringwood, Ont.

Messrs N. J. & A. Campbell, of Mississauga, Ont., have just lately purchased the popular Clear Grit stallion, Brant, from Alfred Morrison, of Mississauga.

Shorthorns.

The recent sale of Mr. J. S. Hart, Woodstock, Ont. (Shorthorns) went fairly well. All the animals offered were sold.

The Messrs. J. & W. Watt, Salem, Ont., are offering a goodly number of Shorthorn bulls, advertised in another column.

Mr. John Cook, Jr., of Amulree, Ont., has ten Shorthorns after the numerous sales of recent years.

Mr. H. S. Greene, East Bolton, P. Q., reports the sale to E. J. Patch, Bolton, Que., of the Shorthorn bull, Punch of Rugby.

Mr. Joseph Gilmour, Arthur, Ont., has commenced a Shorthorn herd, and on a good foundation.

Messrs. C. G. Charteris & Son, Chatham, report their Shorthorn cow, Lady Iantha, has dropped a fine bull calf.

We call the attention of our readers to the sale of Mr. Hugh Thompson, of St. Marys, in another column.

Mr. John B. Conboy, Belfountain, Ont., intends holding a dispersion sale of his Shorthorns, about the middle of February next.

Messrs. Cowan of Clochmohr, Galt, and T. C. Patteson, of Eastwood, have decided to hold a combination sale of Shorthorn cattle at Galt, about the 23d March next.

not put up at all. Full particulars will appear in our next issue, "but depend upon it," (writes Mr. P.) "provision will be made this time for holding the sale under cover, if the elements should again prove inauspicious for an out door sale."

Mr. J. C. Snell, Edmonton, has purchased from Mr. James I. Davidson, of Halsam, the imported roan two-year-old bull, Count of the Empire (51037), bred by Amos Cruikshank, Siltitton, Aberdeenshire; got by Chancellor (47688) dam, Cinderella, by Roan Gauntlet (35284). Count of the Empire is described as a short-legged, thick-fleshed bull of fine quality, with a neat head and horns, smooth form, a great wealth of mossy hair and fine feeding qualities. Mr. Snell adds, that observation has satisfied him that the Cruikshank bulls cross admirably on cows of the Kinellar herd of Mr. Campbell, and that animals so bred have made a high mark in the showing in this country, and as Mr. Snell has in his herd seven imported Kinellar cows, he thinks he has secured the right bull for the place.

The following is from Mr. Richard Gibson, of Delaware, Ont.: "Have lately sold to Messrs. Graham Bros., Alisa Craig, a young Princess Bull, Roan Princess Gilt. He is well bred, by a good bull and out of a good cow, and should make a valuable sire. I do not often report any sales, but I do so in this case, as I think you can 'point a moral' in the history of the Messrs. Graham. Inheriting from their father (a Scotch shepherd) a great fondness for stock, as well as industrious habits and sound common sense, though without a great amount of 'gear,' each boy of a large family has commenced by renting land and by keeping good stock, and has gradually become possessed of a fine farm. The point is this—can a tenant on a rented farm afford to keep good stock and feed most of the produce grown on the farm? If you can answer this satisfactorily, then you can solve a question of the greatest importance to Canada. How many men of wealth are there in Canada who would not prefer to invest in land rather than stocks, providing the former could be managed without giving much care and anxiety, and knowing that it was not deteriorating in value? The ordinary renter is a parasite, growing grain and taking everything of the farm, while returning nothing (I speak of this western section); commences without capital, and at the end of twenty years remains the same. His patrons, the owners, ditto, with this exception, that they have a worn out farm, no fences, buildings an eyesore, and house uninhabitable. What a picture! Reverse it, and see a man or men like the Grahams, by keeping good stock, feeding them well; not afraid of a thoroughbred, but abhorring a scrub; making themselves a comfortable home, and surrounded by a happy, prosperous family, a credit to themselves, a benefit to their country, and leaving the property they have rented of more value than when they went on. This by way of introducing what I had in mind when I commenced. The Agricultural and Arts Association have been giving prizes to owners of the best cultivated farms, many of the winners being wealthy men, engaged in other business besides farming, with whom the ordinary farmer could not compete successfully. Now I suggest they give a series of prizes for tenant farmers."

[The above came too late to get a better position in this issue, of which it is so well deserving. The writer has made a point on which we may enlarge in the near future. We may here add that of the four bulls sold by Mr. Gibson to Mr. Graham, the lowest price received for any one of them was \$225.—Ed.]

Herefords.

We are in receipt of the catalogue of the famous Hereford herd of Mr. John Hill, Felhampton Court, Church Stretton, Eng. This herd was taken in hand by the present owner in 1867. A specimen pedigree and present number of each family is given. Amongst the different families, we may mention the Polyanthus, Rarity, Bright Lady, Cronkhill Lady, Barbara, Silver Cronkhill Rebecca, Polly, Turner, Fairmaid, Daisy, Moreton, Urvic, Monaghty, Horace, Marlow, Sherlowe and Benthall. These are all by such sires as Merry Monarch (5466), The Grove 3d (5051), Hopeful 2d (3876) and Scipio (4940). The sires now in service are Merry Monarch (5466), Cronkhill Monarch (6885), Royal Monarch (10574), Felhampton Grove (9929) and Highland Laird (7015). Felhampton Court is 18 miles from Shrewsbury, on the Shrewsbury and Hereford Railway, 1 1/2 miles from Marsh Brook; 3 miles from Craven Arms, and 5 from Church Stretton.

Aberdeen-Angus.

At the Chicago Fat Stock Show, the Aberdeen-Angus steer, Mineralist, bred and shown by the Hon. M. H. Cochrane, Hillhurst, P. Q., was awarded the sweepstakes in the dressed carcass class for yearlings. He was 641 days old and weighed 350 pounds, making a gain of 2.19 lbs. per day, the third best daily gain of any animal slaughtered at the show. The grade Angus, Dominionist, also shown by Mr. Cochrane, weighed 1125 lbs. at 559 days, making a daily gain of 2.15 lbs.

Jerseys.

Mr. Arthur C. Fairweather, of Rothsay, New Brunswick, sold a few weeks ago, to Thomas Goudge, of Halifax, N. S., the Jersey cow, Cedar 2nd, A. J. C. C. This cow has always been celebrated as an excellent milker—giving a large percentage of cream—and, although never tested for butter, would no doubt render a good account of herself in that respect—if required to do so. Cedar was bred by Fred R. Starr, of the "Echo" Farm, Litchfield, Conn., U. S. A.; her sire is Litchfield 674, first prize, Centennial Exhibition, and gold medal; her dam, Cedar 1886. She is of a very light fawn solid color, with black tongue and switch, and is now in calf, by Barry's Eddington and son of Barry's Eddington, recently sold in New York for \$5,500, where he is highly prized and much esteemed by his American owner. The Jersey interest in Halifax and vicinity is fast assuming a formidable position. As many as 50 head of A. J. C. C. cattle have been introduced into Halifax Co. during the last two years. But as a rule, "Jerseys" cannot be disposed of to much advantage in Nova Scotia, owing to the old womanish opinion which still prevails to a large extent, that a scrub is just as good as a thoroughbred. Many and many a fine Jersey bull calf goes to the butcher's block; because our parsimonious farmers and milk producers persist in raising grade males instead of the real genuine article for service on their farms.

Advertising Rates.

The rate for single insertion is 18c. per line, Nonpareil (12 lines make one inch); for three insertions, 15c. per line each insertion; for six insertions, 12c. per line each insertion; for one year, 10c. per line each insertion. Cards in Breeders' Directory, got more than five lines, \$1 30 per line per annum. No advertisement inserted for less than 75 cents.

Copy for advertisement should reach us before the 25th of each month (earlier if possible). If later, it may be in time for insertion, but often too late for proper classification. Advertisers not known at office will remit cash in advance. Further information will be given if desired.

STOCK FOR SALE.

JOSEPH MAGILL, Janetville P. O., Ont., breeder of Short-horn cattle, Oxford Down sheep and Berkshire Pigs.

HEBER RAWLINGS, Ravenswood P. O., Ont., Forest Station, breeder of Shorthorn cattle, Shropes and Cotswold sheep. Stock for sale.

FOR SALE—Registered Berkshire Boars, ready for service at \$10 each. A nearly pure bred Toulouse Gander, \$1.50. R. A. BROWN, Cherry Grove, Ont. ja-1

FOR SALE Five choice DEVON BULLS and two COWS, and also recorded Berkshire Pigs of both sexes. W. J. RUDD, Arkell P. O., near Guelph, Ont. ja-2

FOR SALE SHORTHORN BULL CALF, ten months old; color, dark roan, registered in Dominion Herd Book. Price reasonable. dec-1 JAMES GIBB, Brookdale P. O., Ont.

12 CHOICE Shorthorn Bulls and 20 Cows and Heifers for sale, all registered in D. S. H. Book. Price reasonable. Address, PETER ARKELL, Teeswater, Ont.

Shorthorn Bull Calf For Sale.

A first class animal. THOMAS SHAW, Woodburn, Ont., Co. Wentworth.

Two Choice Bulls For Sale Very Cheap

Sired by Prince James (95); one 23 mos. old, weight about 1500 lbs., not registered, the other eight mos. old, registered in B.A. Herd Book. J. S. FREEMAN, Freeman P. O. jan-3

FOR SALE.

6 YOUNG SHORTHORN BULLS, from 10 up to 20 months old, sired by Prince James, all registered in Dominion Shorthorn Herd Book. THOMAS ALTON, Appleby P. O., Ont. ja-2

FOR SALE.

The Shorthorn Bull Nobleman, No. 201, N. S. H. B.; sire, Jock, 169, N. S. H. B.; dam, Molly 21, N. S. H. B.; is three years old, a good animal, and sure stock getter. Will be sold cheap. Apply to DUNCAN MUNROE, Bay View, Pictou Co., N. S. dec-2

Two Shorthorn Bulls For Sale.

One 21 months old, got by Starlight Duke and; dam, English Lady 6th, etc. The other 10 months old (weight, 900 lbs.), got by Butterfly Duke—233—; dam, Mysic of Kinellar 3rd, etc. The latter is a cherry red, with little white on legs, and is a low-set and thick-fleshed calf. Also TWO BERKSHIRE BOARS, 4 months old. Apply to ADAM A. ARMSTRONG, SPEEDSIDE, dec-2

FOR SALE.

SHORTHORN COWS, HEIFERS and BULL CALVES, mostly of the imp. Sym and Mars strains, the latter from the herd of the late R. A. Alexander, of Kentucky, all registered in the new Dominion Herd-book. Southdown sheep and lambs also for sale from stock imported from the flock of Henry Webb, Esq. JOHN MILLER, Markham P. O., Ont. Markham Station, on the Midland R.R. and Green River on the C.P.R. sep-6

CLEVELAND BAY STALLION

FOR SALE

KING FAIRFIELD, three years old, sound, gentle and sure; took first prize at the Industrial last year, and at this and all local shows sire and dam were each awarded the diploma at the Industrial, at the age of three years. This is a rare opportunity to buy both style and breeding. W. C. BROWN, breeder of Cleveland Bays, Meadowvale P. O., Ont. Farm, 1/2 mile from Meadowvale station, on C. P. R. ja-3

CLYDESDALES and SHORTHORNS

TEN superior young bulls for sale, from nine to fourteen mos., the get of Farm 'on Hero and (imp.) Lord Lansdowne. Also the three-year-old imported stallions Lord Aberdeen and Bravery, and the Canadian-bred yearling, Rory O'More. ja-3

J. & W. B. WATT, Sailem, Ont.

FOR SALE—JERSEY BULL, calved April 16th, '84, bred by John Carroll, St. Catharines, got by his celebrated bull Governor Lorne, dam Gipsy by Cash Boy, bred by W. Porter, of Conn., U. S. A. This will be an opportunity for any person wishing to improve their stock, as the bull must be sold for the first reasonable offer, having no place to keep him. Address, W. S. FOSTER, 529 Ontario St., Toronto. ja-1

Holsteins.

The Bollett Bros., of the "Maple Grove," Cassel, Ont., write that they have sold their pure bred imported Holstein-Friesian heifer, to Mr. John... of Stratford, for Christmas beef. She was three years old on the 17th of April last, and weighed 186 lbs. She was only fed four months, and the last 63 days she made an average gain of 4 lbs. per day. This is not a bad showing for this grand general purpose breed.

Shoop and Pigs.

Mr. Louis N. Thibadeau, of Little Current, had the enterprise some time ago to buy a Shrop ram of Mr. H. H. Hurd, Hamilton. He writes us that the result is very satisfactory—quite beyond his expectation.

The Messrs. J. G. Snell & Bro., Edmonton, Ont., carried at Chicago Fat Stock Show, a number of prizes on sheep. These were, first on the Shropshire, Banker, a finely developed sheep, large in loin and very small in bone, and in shoulder and well fleshed; second on Cotswold wether lamb, "of remarkably fine development," and the award on the lamb carcass went to their pure-bred Cotswold, Prince.

Mr. P. C. Black, of Maple Lawn Farm, Falmouth, Hants Co., N. S., an ex-student of the Ontario Experimental Farm, is now cultivating a farm of his own, and young as he is, has been appointed Sec.-Treas. of the Dairyman's Association, of the Maritime provinces. Mr. Black took down some Shrop sheep with him from Ontario and says they are doing well. We are glad to learn from him that there is latterly a very decided improvement in the Province, in stock of all kinds.

Mr. John Young, Abingdon, Ont., reports the following sales: To John Jackson, Woodside, Abingdon, one pair shearing Southdown ewes; James Neil, Collingwood, the balance of my Southdown ewes—21 of them and one ram lamb; Robert May, Collingwood, one ram lamb, Leicester; Geo. Felker, Smithville, three ewes; Thos. Edmonson, Thorold, one ram lamb; George Nichols, Abingdon, one aged ram; Peter Millar, Hall's Corners, one ram lamb; Francis Truesdale, Elfrida, one aged ram; W. Farrar, Oak Hall, Hamilton, one ewe lamb, and Ishmael Bartlett, Fulton, one Berkshire sow.

Mr. G. E. Rozzel, of Smithville, Ont., reports the following sales of Berkshires: 1 boar and sow each to I. Bartlett, Filton, Ont.; 1 sow to G. Felker, Caistor, Tp.; 1 sow to E. Wilcox, Beamsville; 1 boar and 2 sows to G. Henderson, Wainfleet, and 1 boar to W. Haynes, St. Catharines. At the exhibitions Mr. Rozzel won a good share of prizes, winning high honors at Hamilton and several county fairs, open to the Dominion. The imported sow, Lady Derby, was first at all these shows, and got a place both at Toronto and Guelph Provincial. Mr. Rozzel is also commencing a herd of Chester Whites, headed by a boar from the herd of Mr. Nankin, Merivale, Ont.

Mr. Robt. Hannah, Bethany, writes as below: "My Shropshires have done well this year, and it has been a good fall for selling. There has been a good demand for Shrops at the fairs this fall. I sold seven head at Peterboro show at fair prices. I sold one shearing ram and one ewe to Lewis Sullivan, South Douro; 3 ewe lambs to T. Brown, North Monaghan, Springville P. O.; one ram lamb and one ewe to James Fee, Millbrook P. O.; with some enquiries that I had not stock to fill. Berkshires—I made the following sales: One boar to Wm. Lows, Cavan township; one boar to John Gillespie, Millbrook; one boar to Gilbert Kincaid, Bethany P. O.; one boar to Ed. Gillogely, Ops. Raybow P. O.; one boar to Albert A. Preston, Bethany P. O. The Berkshires are bred from the herd of J. G. Snell & Bro., Edmonton, Ont."

Messrs. E. & A. Stanford, Steyning, Sussex, Eng., and Markham, Ont., Canada, carried the following prizes on sheep of their own importing at the Chicago Fat Stock Show: Second on Southdowns, over two years; 1st and 3d on one-year wethers, and 1st and 2d on wethers under one year. Those gentlemen, who exhibited only Southdowns, carried the pen prize—three wethers on this breed, and also the sweepstakes pen for the same. In the dressed carcass class, Messrs. Stanford's pure Southdown, Challenger, two years, carried the award. The *Breeder's Gazette*, in speaking of the sweepstakes pen of Southdowns, says they were "the most solid fed sheep, a little more square in ham and heavier hind quarters in proportion to fore-quarters."

Mr. Henry Arkell, Arkell, Ont., has made the following sales during the last part of the season: Sheep—One imp. ram, one imp. ewe, yearling ewe, two ewes and one ram lamb, and two yearling (Oxford Down) rams, to C. B. Hill, Union, Oregon, U. S. A.; Andrew Gilmore, Huntington, P. Q., two imp. ewes and one yearling (Oxford Down) ram; W. Leslie, one yearling ram; W. D. Shantz, Petersburg, Ont., one yearling ram; Jas. Neilson, Lyn, one yearling ram; J. Talb, Goderich, one yearling ram; Jas. Kennedy, Eramosa, one yearling ram; J. L. Campbell, two ewes (Oxford Down), and W. Woods, Sarnia, one ram lamb. Pigs—One registered sow and ten pigs, to H. George & Sons, Brampton, Ont.; sow to Geo. Hampson, Eden Mills; boar to Hugh McCann, Eramosa. These are all registered Berkshires.

Mr. John Rutherford, of Willow Grove, Roseville, Ont., deserves well at the hands of his country. At the Chicago Fat Stock Show, Nov. 1886, he won for Canada the following prizes: Southdowns, 3d on Little Jumbo, two years old; Hampshire, 2d and 3d prizes on Dandy and Joe, two years old; Hampshire, 1st on Victor, two years old, bred by Prof. Brown, of the Ontario Experimental Farm; 2d on Rob Roy, one year old, and 2d on Sam, under one year. Victor was said by many to be the finest sheep in the show; Oxford, 3d on two-year-old wether, Jack, and 2d on the one-year-old, Smut; Cotswolds, 1st on the one-year, Professor, and 1st on Frank, under one year; Leicesters, wethers, Blake and King, two years, 1st and 2d, and wethers one year, Smith and Starlight, 1st and 2d, and on wethers under one year, 1st and 3d on Perry and Moses Oats; Lincolns, 2d and 3d on two-year-olds, John A. and Prince; 1st and 3d on Geo. Hood and Canadian Boy, one-year-olds, and 1st and 3d on Ben and Snowball, under one year; grades and crosses, 1st on Samson, over two years, 3d on Charles, under two years and 3d on Henry, under one year. Mr. Rutherford also

captured the prize for heaviest and fattest sheep, with the huge Sandie, and the prize for greatest gain per day, on Sam. Through a slight omission in entering, Mr. Rutherford was not allowed to compete in the pen prizes, otherwise he is confident that he would have captured them in the long wools and in Hampshire. The prize money was \$500. The following prizes were won by Mr. Rutherford's sheep, at our own fat stock show, Guelph: Long wools, wethers, two years old, 1st and 3d on John A. and Starlight, under two years, 1st, 2d and 3d on Smith, Jerry and Canadian lks., under one year, 1st on Snowball—ewe, two years old, 3d on Beauty, middle wools, 2 years, 1st, 2d and 3d on Victor Jack and Beauty under two years, 1st and 2d on Samson and Henry, under one year, 1st, 2d and 3d on George, Dan and Dick, ewe, under one year, 1st on Jennie. The Hampshire, Victor, took the sweepstakes. He weighed 320 lbs. Mr. Rutherford says this sheep and the two year Victor carried first in Toronto and at Guelph Provincial, first at Chicago and first again at Guelph Fat Stock Show, winning over imported sheep. The *Breeder's Gazette*, in commenting on Mr. Rutherford's one-year Cotswold, Professor, says in comparing him with his competitors that "He was much the best developed sheep, best in hind quarters, best in breast and small in bone," and of the lamb, "By far the best lamb in the ring, large in loin and hind quarters, good in shoulder, good leg, and said by one of the judges to be the best lamb, for his looks, he ever handled."

IMPORTANT

AUCTION SALE

—OF—

Shorthorn Cattle

Having leased my farm for a term of years, I will sell on

WEDNESDAY, MARCH 16th, 1887

35 head of Cows, Heifers and Bulls. Certificates of registration in the Dominion Herd Book will be given on day of sale.

TERMS OF SALE—Ten months credit on approved notes. Lunch at 12 o'clock. Sale promptly at 1 o'clock. Catalogues after 1st Feb., 1887.

For further particulars, address,

JNO. D. PETTIT, Paris, Ont.

Important Unreserved

AUCTION SALE

—OF—

Shorthorn Cattle

ON THURSDAY, JAN. 20th, 1887,

AT HILLSIDE

(2 MILES SOUTH OF PARIS)

20 Head of Cows, Heifers and young Bulls. 20 All registered in the Dominion Herd Book.

Sale to commence at one o'clock.

TERMS—NINE MONTHS' CREDIT.

For further particulars and catalogue, address,

JAMES GEDDIE,

LUNCH AT NOON. Paris, Ont.

UNRESERVED AUCTION SALE

OF 25 HEAD OF

SHORTHORN CATTLE

To be held on

MARCH 8, 1887,

On Lot 13, Con. 17, West Williams, Co. Middlesex, 4 1/2 miles South-west of Parkhill Station, consisting of Bull Calves, Cows and Heifers. The calves and heifers are the get of the celebrated prize bull Prince Albert, whose stock has taken more prizes at the Provincial and other leading shows than the stock of any other bull in the Province the last 20 years. He (Prince Albert) will also be sold. The cows are also in calf to him. They are all registered in D. S. 11. B. They are a grand heavy fleshed lot of cattle. Every animal offered will be sold to the highest bidder. TERMS, \$30 and under, cash; over that amount, 9 months credit. Catalogues sent on application.

THOS. NICHOLSON & SON, Sylvan P. O., Ont.

Ayrshire Breeders' Association.

A meeting of the Ayrshire Breeders of Ontario will be held in

—TORONTO—

at the WALKER HOUSE, on FRIDAY, the 14th day of January next, at 7 p.m., for important business

ja 1

D. NICOL, Provisional Pres't

FOR SALE

The Imported Cruickshank Shorthorn Bull,

DUKE OF LAVENDER

He is well filled in front, broad, deep and low, broad in the back, a good handler and easily kept, also



FIVE BULL CALVES

of his get and all will be sold very reasonable. The dam of one of these young bulls, Crimson Flower 3rd, is the dam of a bull shown by A. Johnston, Greenwood, at the Industrial Exhibition, Toronto, winning first prize, and afterwards sold to a United States breeder for \$500.

For further particulars come and see or write to

DAVID BIRRELL,

Greenwood, Ont.

Thorley Improved Cattle Food



FOR HORSES, CATTLE, SHEEP AND SWINE.

15 per cent. Better than Oil Cake.

PROF. BROWN, of Ontario Experimental Farm, writes March, 1883:

"In the cattle feeding experiments at the Ontario Experimental Farm, begun on 27th October, 1883, and ended meantime on 1st March, there are several very interesting indications. The system followed is that by which every set of animals is put upon each kind of food in rotation, thus securing the most thorough test. In all the competition during the 125 days with 24 cattle in sets of three, it is of very practical importance to know that Thorley Food pitted against oil cake as a condiment, or even as a direct fattener, in association with exactly the like kinds and quantities of grain, gave no less than 15 per cent. greater increase."

The results of this test should forever set at rest any lingering doubts in the minds of farmers as to the unquestionable value of our Food as an aid in fattening live stock.

It only remains now for farmers to make certain that they are getting our Food when they purchase. Purchase no food as the Thorley Improved unless the words HAMILTON, ONT., and IMPROVED are on the bag.

Price, \$4.50 Per Cwt. Special Quotations for large lots.

If not for sale in your town or village, write for particulars to

Thorley Horse and Cattle Food Co.

HAMILTON, ONT.

12 Young Bulls, 12

FOR SALE.



We are offering perhaps the best lot of young bulls we ever had, several now fit for service.

Amongst the number are some choice show bulls. All are of good color, well grown, on straight legs, and carry a lot of natural flesh.

PRICES

TO SUIT ALL.

Parties meaning business will find no difficulty in making a purchase.

A few YOUNG COWS also to spare.

RICHARD GIBSON,

Belvoir Farm, Delaware, Ont.

FOR SALE, TWO SHORTHORN BULLS, one and two years old, first class animals with good pedigree.

ja 2

JAMES MILNE, White P.O., Ont.

A FEW PEKIN DUCKS and LIGHT BRAHMAS to be sold CHEAP if taken this month.

ja 1

S. G. RUSSELL,

THORNBUCKY, Ont.

THE BARTON POULTRY YARDS,

A. G. H. LUXTON, Hamilton, Ont.

Has a choice lot of young thoroughbred poultry for sale, including Light Brahmas, Plymouth Rocks, Black Spanish, Houdans, and B. B. Red Games, from \$1 each, up. Won 12 firsts and 14 second prizes at the leading shows last fall. \$3.50 will buy the pair of B. B. Red Games that won second prize at Hamilton show, 1885. Cock can reach 32 inches. \$1.50 will buy the second prize pair of Guinea Fowls at Guelph last fall. All birds warranted pure. Eggs in season, \$2 per setting.

MAPLE LODGE STOCK FARM

Stables one mile west of Lucan Crossing, of London, Huron and Bruce and Grand Trunk Railways.

We breed and have for sale first-class

SHORTHORNS, LEICESTERS and BERKSHIRES

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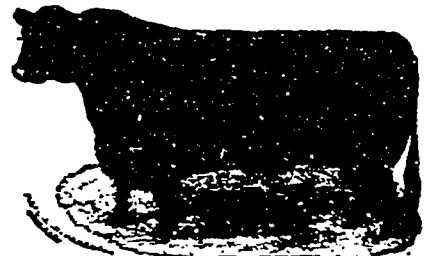
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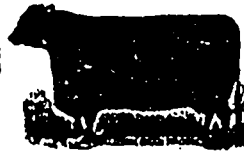
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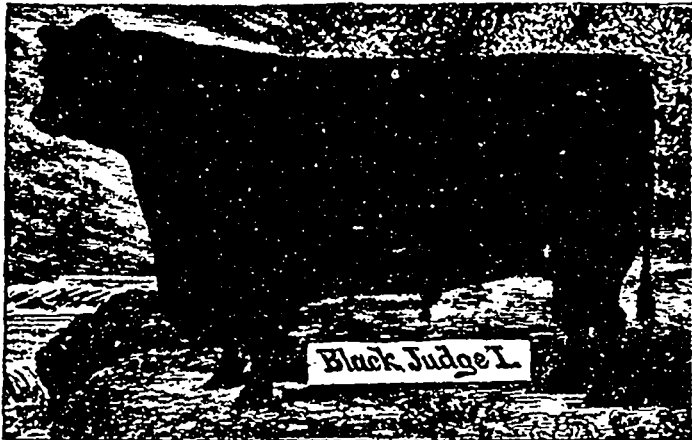
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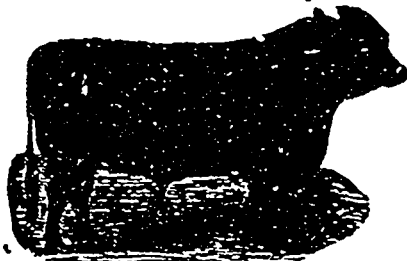
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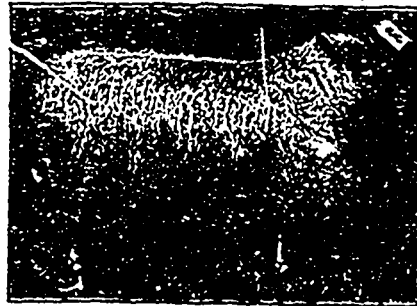


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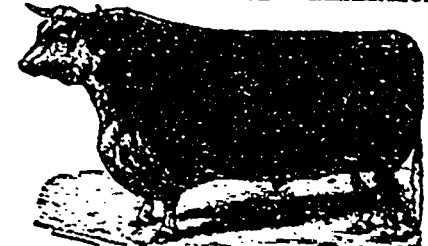
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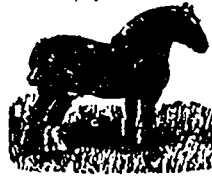


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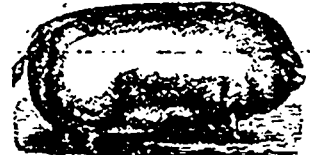
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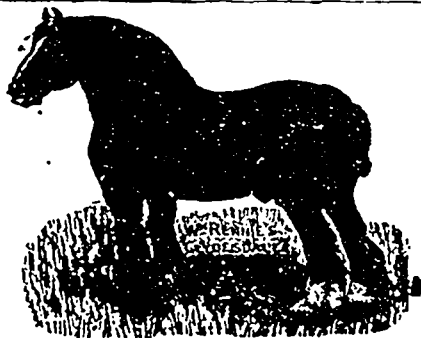
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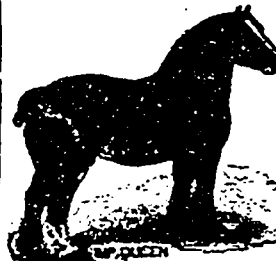
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