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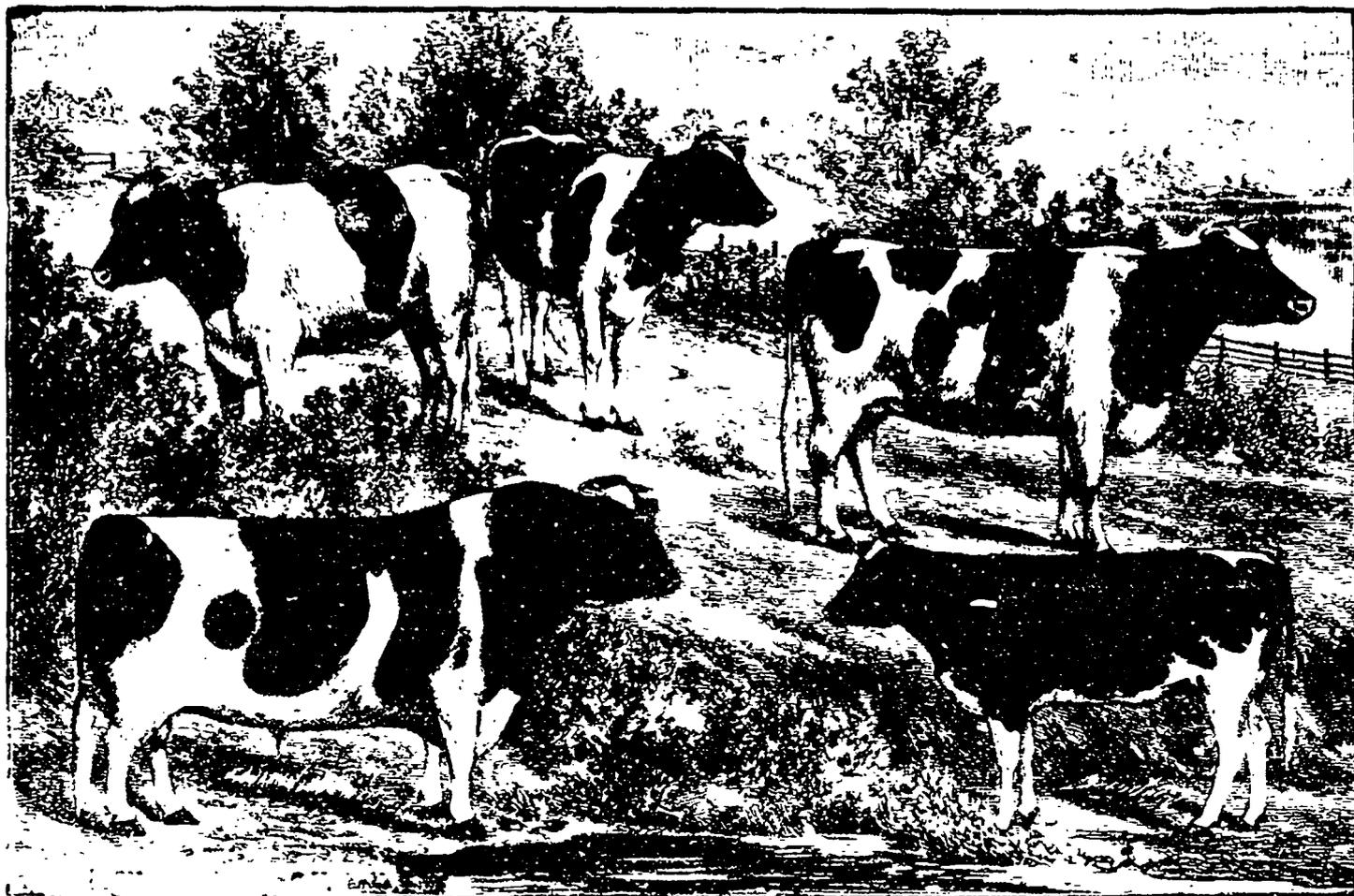
THE CANADIAN LIVE-STOCK AND FARM JOURNAL

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

VOL. IV.

HAMILTON, CANADA, SEPTEMBER, 1887.

No. 47



THE HOLSTEIN BULL PRESTO 380, N. H. B., AND HIS FOUR DAUGHTERS.

Imported from Holland. The property of Mr. John Leys, Toronto, Ont.

Holstein Bull Presto 380, N. H. B.

Our illustration this month is a striking likeness of the celebrated Holstein bull Presto 380 N. H. B., with four of his daughters, Kol iii, Kol ii, Grietje iii, and Alpha. Presto is four years old. He was imported from Holland in 1885, after winning first prize as a two-year old at the great fair at Alhmaar in the Netherlands. He was first prize winner in the three year old class at the Provincial last year, and took first at London in same class, also first as best bull of any age, and was at head of herd winners of the gold medal for best herd of Holstein cattle at that fair. He is the only Holstein bull in the Dominion winner of a first prize at any of the great fairs in Holland. Kol iii, among the group, took first prize as a yearling at the Industrial last year at Toronto, and was pronounced by the judge so perfect in points that she was sure to be a winner wherever shown. Her half-sister Kol ii, and Grietje iii, shared honors with her at London, and took first, second and third prizes. Alpha, the remaining one of the group, is six months old, and is inbred, being by Presto, out of his own half-sister. This calf is a fine specimen of the breed.

The Outlook for Wheat.

The times are so changed in reference to importation that it is not a question of so much moment as formerly as to whether the crop is good or bad in localities, unless it be to the localities themselves. Nor is it of so much moment to them even, for the variation in prices in such a case will be very small indeed. The important matter for the world to know is whether the world's crop is an average. In such a case in times of peace there is not likely to be any material change in the prices. Although the crop in America is below the average, in foreign countries it is better than usual. This holds good in Hungary and Russia, in France and England, and although the crop in India is below that of last year, the freights are likely to be lowered. The prospect, then, is not bright for a large increase in the price of wheat. To many of our farmers with a short supply, this will not be cheering tidings; but we must endeavor, like men, to make the best of circumstances. A most rigid economy will counterbalance the effects of a poor crop, at least in part, during any season, and is always a much preferable course to allowing one's self to sink into despondency. There is no position so hopeless as that.

It is worth while at the same time to consider if sowing a less area of wheat would not be commenda-

ble. The dairymen, either those in the cheese or butter lines, have not fared so badly this past summer, nor need the growers of meat be discouraged. The price is not so high, comparatively, as that of some other live-stock products, but it is far ahead of the returns realized for wheat.

Let those sowing wheat regulate most carefully the area to be sown, have the preparation most thorough, and sow in hope, for as long as the world lasts we shall have seed-time and harvest, and while we enjoy these we will be sustained comfortably, though we may not be enabled to amass wealth.

ACTIVE agents wanted at every township, county and district fair in fact in every locality in the Dominion to take subscriptions for the JOURNAL. Write at once for full particulars to The Stock Journal Company, Hamilton, Ont.

We refer with satisfaction to the superiority of the engravings which have appeared in the JOURNAL the past year—not only a larger number, but superior in character to those appearing in any other paper in Canada. Our artist will be at the leading fairs this fall, where those wishing cuts of their animals (which seems to be a necessity in this competitive age for those who desire to keep to the front) should have them sketched, for engraving. Write for particulars.

Canadian Live-Stock & Farm Journal

PUBLISHED MONTHLY BY

THE STOCK JOURNAL COMPANY,

48 John Street South, Hamilton, Ont.

Terms, \$1.00 per Annum in Advance.

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 for 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 remittances have been received.

All communications to be addressed STOCK JOURNAL CO., 48 John Street South, Hamilton, Ont.

HAMILTON, CANADA, SEPT., 1887.

A STRONG reason in favor of the better education of the farmers' sons is found in the fact that the uneducated farmer is much less able to adapt his methods to the altered conditions of our agriculture. The uneducated man has only the experience of a neighborhood to draw from, while he who is educated and a reader draws from the experience of the world. When the former finds that his system is unremunerative, he can only depend upon hearsay as to what is the next best thing to do, unless some of his neighbors are more fortunate than himself, while the latter can ascertain without any real difficulty the way the current is setting and may adjust the rudder accordingly. All the treasures of the gatherings of the past in the line of agriculture are within the reach of the educated man, while but a few crumbs fall to the share of him who is not an intelligent reader.

THE man who is careless in informing himself as to which is the right road when on a journey is pretty sure to come out wrong in the end, and has often to retrace his steps and journey a much longer distance to get to the place which he is seeking. Careful enquiry and vigilance would save all this. Thus it is with the farmer who is content to follow a certain rut because his father has trodden the same. In these days of rapid changes he will have to retrace his steps unless alive as to his methods. If the price of wheat had always kept good, it might have done to have continued to make its growth a principal object, but it has fallen from 50 to 100 per cent. The farmer, then, who continues to make wheat the principal object of his search by continuance in old time methods of production, will find that he will not reach the goal he is seeking. A few years ago many millions of bushels were exported from Ontario, while now the quantity is dwindling and the price so low that the returns are less than the outlay. A few years ago and not a dollar was received for live-stock exports or for the export of live-stock products. Now the export of these foots up many millions annually. Grain-growing farmers must take more pains to enquire the way.

THOSE whose whole lives have been devoted to the improvement of live stock have been termed speculators, and they have been stigmatized as men laboring to produce a "boom." The results of their labors, it may be, as in the case of the owner of Mary Ann of St. Lamberts, has been to draw favorably the eyes of other nations toward the land in which they labored, and to concentrate the efforts of thousands upon the improvement of the breeds of stock that have been the object of their special concern. Booms, as has been well observed by the *Breeders' Gazette*, are not of long duration, and we may well add that they confer no positive benefits on the community at large. But the so-called live-stock booms in Canada have led to the shipment of hundreds of thousands of creditable steers to other shores for many years past, in addition to the permanent improvement made in the hundreds of thousands sold at home every year for beef. A similar improvement has been effected by this class of men in the improvement of horses, sheep, swine and fowls. The full extent of the material blessing those men have given the country can never be fully known. It is no matter of wonder, then, that others, seeing the good fruits of their labors, are falling in line, so that the corps is constantly increasing. May they continue to increase down to the end of time.

THE capability of every man to improve his farm is usually very great where the desire for this is strong. We, of necessity, need not have a very large proportion of ill-cultivated or untidy farms. Where the ideal is clearly defined in the mind of the owner, and he keeps his eye steadily upon the goal, the object of his ambition is usually attained, though he may have to wait long years for the complete realization. Ambition may be so strongly developed as to make its possessor unhappy, but this is not the case with most of us. On the other hand, the farmer devoid of this will never make his mark. If one has no cherished desire to surpass his neighbor in the race, he will never do so. The possibilities that lie before most of our young men who propose making farming their future life work are surely very pleasing, even though they can only be reached by the winding road that leads around the hills of attainment ever upward in its ascent. A good, well tilled farm, ever increasing in fertility, is within the reach of the coming farmer. It is quite possible for him to make it so neat some day that it will be the envy of his neighborhood. The stock upon it may be of the best in the section, and in addition there may be a bank account which, if not large, is always secure. What a magnificent spectacle our country would present if all our farms were thus tilled, and how happy would our yeomen be!

LIVE STOCK has been frequently compared to the "hub" of the wheel which carries on the farming interest in Britain. The same may be said of it in Canada, though probably, as yet, in a less degree is this truth applicable. The live-stock industry overshadows every other branch of farming in its extent and importance, and the variations are more and more in favor of this interest as time moves on. There cannot then be too much importance attached to the improvement of this line. As it is fast becoming the chief source of revenue to the Canadian farmer in one or other of its forms, it follows that when carried on upon the best known principles it must be more profitable than when done in a slipshod way. The best way of breeding cattle, of feeding them, and of handling their products, should all be objects of careful study on the part of the farmer, nor should any be satisfied

without having so far mastered his particular branch of the business that he could rightfully claim a place in the front rank of his line. The young men of the country who are to lead in these lines must be up and doing. They cannot afford to watch the dancer on the tight rope when judging is going on at the exhibitions, nor will they spend their evenings in idle gossip when so much is to be learned from books and the agricultural press in reference to their future life work.

It is a practice all too common to turn almost any and every form of mare that may have met with a mishap, into a brood mare. It is a fatal mistake. A mare that would not make a profitable brood mare when sound will not prove such when she becomes disabled. There may be instances, however, where mares good enough to breed from, wanted for other purposes, become disabled for the uses to which they have been put, in which case it may, and often is wise to retain them for the purpose of reproducing their kind. When a mare becomes unfit for regular work it does seem unwise not to utilise her as a brood mare, for she may be absolutely useless for any other purpose. But if not suitable for the production of good foals and yet devoted to foal-rearing, the first loss may multiply itself repeatedly, for no inferior horse can be reared to the age of three years any more than an inferior cattle beast, but at a loss. The character of the horses of a country cannot improve rapidly where the majority of the farmers are indifferent as to the character of the mares they breed from. Indeed they require to be more vigilant in the case of mares than of cows, for the latter can be disposed of for beef, but in the case of the former the temptation to get some good out of an inferior mare for breeding, the only use it may be to which she can be put, overcomes the better judgment of the breeder.

THE difference in the ultimate returns of the two systems of grain-growing and stock-keeping is more and more in favor of the latter as time advances. Let one settle upon new lands and his returns from grain-growing and grain-selling will be greater at the first than from stock-keeping, as stock-keeping requires greater outlay to get a start, and some time must elapse before there is much return, but gradually the returns from grain-growing diminish while from stock-keeping they increase, and this process goes on continuously, till in the former case a point would be reached, if nothing were given back to the soil, when there would be no return. The elements of fertility would be so completely extracted that there would be nothing left but a superficies of unproductive soil. This, it may be, never actually takes place in practice, because when a farm becomes impaired in productiveness to the extent that its owner cannot pay his way, it passes into other hands. But such would be the final result if the process were to be continued long enough. With the stock-grower the process would be reversed. What is grown upon the soil would be given back, which, along with the overplus uneaten by cattle, and the stores of nutriment deposited by the rain, and atmosphere, the productive capacity of the farm will continually increase, and therefore the annual return will increase also. Facts corroborate this theory. In hundreds of instances in Ontario farms are to be found getting richer every year by means of stock-keeping, and in thousands of instances others are getting poorer in consequence of continued cropping and removal of the crops. As to which of the two systems has the advantage, our farmers need not take long to determine.

The Provincial Exhibition.

The forty-second Provincial Exhibition will be held in Ottawa, September 19th to 24th. The citizens of Ottawa are making the necessary preparations, and everything thus far indicates that it will be a first-class exhibition. Although the Western Exhibition will be held at the same time, the Provincial comes in just after the Toronto Industrial, the Quebec Exhibition and that of the Eastern Townships at Sherbrooke, so that stock in all the intervening localities, and the very cream of it, will be assembled this year at Ottawa. We hope the townships in the eastern portion of Ontario will do their best to make a good showing. There must now be a large amount of good stock in the aggregate in those townships, and we hope the people down there will make a strong stand to hold their own against those who may come from the west. In the eastern townships of Ontario there is a large amount of good land and plenty of material in the form of good stores and timber to put up good buildings. There is also an abundant water supply. In addition to these the only remaining requisition to successful stock-keeping is energy and enterprise. Possessing the former, we know that our good friends in the east will make it clear that they do not lack the latter, and we trust that not only this year but in succeeding years they will hold their own in competition with the westerns in stock exhibits, as they have done in other years in competitive examinations and in all the lines of professional and mercantile life.

Every young man destined for the farm within 100 miles of Ottawa should go to the Provincial Exhibition this year, and take in a large amount of useful information from the great object lesson to be gathered there at the time already indicated.

A pleasing feature this year will be the introduction of catalogues whereby a visitor obtaining one will be enabled to take in the live-stock exhibit without the assistance of a guide. The directors of all our leading exhibitions must stay their efforts till this system is introduced with success, at least equal to that to which it has attained in England.

The natural scenery around Ottawa, especially in the vicinity of the river, is of so attractive a character, that this alone would repay a long journey to see it.

A Minister of Agriculture for Ontario.

States grow, and with their growth their wants increase. The present Minister of Agriculture, the Hon. A. M. Ross, also holds the office of Provincial Treasurer, of which our readers are aware in all probability. It is the consensus of opinion amongst the farmers, we believe, that Mr. Ross has discharged the duties of each of these offices with commendable fidelity, but they are also of the opinion that the time has come when the individual energies of our Minister should be given to the promotion of agriculture, which in material importance towers high over every other interest in the province.

When the Central Farmers' Institute was organized on the 28th day of last April in Toronto, the following resolution in reference to this subject was passed:

"That in the opinion of this meeting, the appointment of a practical farmer as Commissioner of Agriculture for the Province of Ontario, who could devote his entire time and attention to his department, would be beneficial to the agricultural interests of this province, it being distinctly understood that this resolution does not reflect in any way on the present Minister of Agriculture."

In reference to the views set forth in this motion we do not think there will be any difference of opinion amongst the farmers. The material interest which

they represent amounted to \$989,497,911 in 1886, which surely entitles them to a voice in the Cabinet, and a share in its deliberations, if the material argument is of any value.

There can be no question but that a practical farmer is just the man for such a position, or, to put it differently, that a man possessing the other requisite qualifications and at the same time a practical farmer, has an advantage over one who is not.

In the management of this department we can conceive of questions arising very frequently where a practical knowledge of the details of farming would be of immense service, enabling him to arrive at a safe conclusion at once, when the Minister not so favored would hesitate and be in doubt, although perfectly honest in his endeavor to do the right thing.

So reasonable must this request appear to the Legislature, that they will not think of opposing it when brought up in this form. As to who the Minister who shall first be appointed to fill this position shall be, it is of course for the Government in its wisdom to say, but this is sure, there is no lack of efficient material amongst the farmers. There occurs to our mind at this moment the names of N. Awrey, representing South Wentworth; J. B. Freeman, representing North Norfolk; J. Dryden, member for South Ontario; C. Drury, the member for one of the ridings of Simcoe—any one of whom would doubtless make an efficient Minister in this line, and there is a long list of others, it may be, equally well qualified, whom we do not stay to name.

The Comparative Profits of Stock-keeping.

The prices of all kinds of live-stock, unless it be horses and some famous families of pure-breds, has fallen somewhat in Canada during recent years throughout all her borders. That thus it should be is very natural, and had it been otherwise it would have been an indication only ominous, an evidence of an undue prosperity that could not possibly rest upon a sure foundation. Such numbers would have entered into it that the business would have become so glutted that the end must have been disaster to very many, and disappointment to all. On the principle that misery is fond of company, some are disposed to find comfort in the fact of a less full revenue from the live-stock interest than formerly. They say, "Aha, I told you so!" and wrap more tightly around them the girdle of the self-complacent prophet. But we fail to see wherein there is anything in this state of affairs that should afford satisfaction to any one. The grain grower need not rejoice, for the more stock grown the better the prices for his grain, owing to the amount that shall be fed; nor should the consumer do so, since the depression that sends down the price of meat and dairy products also lessens the capacity to buy these.

With the less full prices that we get for live-stock products, they compare very favorably with the prices realized for other lines of farm produce. Grain growing is unremunerative, more so than was ever known before in the history of the country, and so of fruits and the products of the hive, while there are still gains arising from the judicious growing of live-stock.

If it could be shown that grain-growing was equally profitable to-day with stock-keeping, but not more so, that would afford no argument in favor of the former style of farming, for in such a case every crop would bear away from the land the elements of growth, so that every succeeding crop would be less, while in

stock-keeping every yearly return would or should leave the soil rather more than less fertile.

But there need be no difficulty in perceiving that grain-growing is not a profitable business at the present time. When wheat grown on soils more fertile than those of to-day failed to enrich the average farmer, at one dollar a bushel, there can be no profit in growing it at 80 cts. per bushel. On the other hand meat at 4 and 4½ cts. per pound with the present prices of grain, will yield as good a profit nearly as it did at 5 and 6 cts. per pound years ago, and dairy products are not very much lower than in years gone by.

Of those who look upon the live-stock interest with shadowy eye we may ask, what interest in the line of farming will pay so well to-day? The beef-grower need not lose heart, for if he could make money in the past at the rates then current, he will not lose money now with the low prices for which grain can be bought, and he has the satisfaction of knowing from year to year the productive capacity of his land is increasing, or, in other words, compound interest is being added to the fund invested in landed estate.

The dairymen, too, may live in hope; indeed, their skies are sunnier than those of most classes of farmers. The local prices of butter are far from discouraging, and with the firm establishment of our reputation for making a good class of butter for the foreign market, it is almost certain that this price will increase. While the beef-producers should by no means relax their efforts, dairymen should increase theirs. We see what we believe to be a fine opening for butter dairymen, and we shall fondly hope that our expectation here is not a vain one. The butter dairy is useful in so many ways. There is profit on the butter and profit on the skim-milk, and enrichment to the land. In butter dairying there is food for calves and pigs, and the opportunity of constantly replenishing the herds. A large amount of territory is unoccupied, or, in other words, there is much land that is but half stocked and even less. The butter dairymen should take possession of this as fast as they can, and in this way swell the revenue of the farm.

We believe that with a majority, profits may be made from stock-keeping even now, by close attention to improved methods of management. But the methods must be improved. Green feed must be grown, and better protection provided, and the stock of all kind must be improved by breeding and selection. If under a comparatively reprehensible system of farming, the handlers of the soil made money in prosperous times, under a good system of farming, they are not likely to lose money in less encouraging periods.

But it may be claimed, it is not enough to save oneself: there ought always to be a margin? True, a margin is more satisfactory, but if in times of great depression a body of men pursuing the one calling, can all, or nearly all, get a good living and hold their own, there is room for congratulation. We venture to affirm that this can be said of no other class than farmers in such a time, for in merchandize and in other lines men are, during such visitations, tumbling over like the soldiers of an army in a battlefield, many of them to rise again in business *nevermore*.

Farming may be compared to a highway without many hills or hollows, while other lines of business are filled with these. They need not look usually for making fortunes such as a few business men make, and surely they may well be content with a pace which, though slower, is more comfortable.

There is no reason, then, for chafing with the present dulness. It is always much more laudable to be

up and doing, and thus trying to mend matters. Indeed, this is the most perfect antidote for grumbling that has ever been discovered. Those only who have tried it know how well it works, and if those who have not tried it would only do so once, they would never, like the man whose cart was stuck in the mud, cry to Hercules to come and help them, without first putting their own shoulder to the wheel.

The present wave of depression will not last forever. As surely as the tides rise and fall, so surely do prosperous and adverse times come and go, and if stockmen and dairymen can assure themselves that they are doing better even than those in other lines of agriculture, they have reason to be thankful.

Dominion and Industrial Exhibition.

The Dominion Exhibition for this year will be held in conjunction with the Industrial Exhibition of the city of Toronto, and the managers of the latter institution are putting forth all their energies to make the joint effort a complete success. The grant of \$10,000 which accompanies the Dominion Exhibition has enabled the Industrial Association to largely increase the value of the prizes, especially in the live-stock and agricultural departments, and large additions and improvements, involving an expenditure of \$40,000, are being made to the already commodious buildings. The Secretary, Mr. Hill, states that the entries to hand quite exceed those of any previous year, justifying the confident expectation of the managers that in the merit and completeness of the display of agricultural products of the country the coming exhibition will surpass all its predecessors. Apart from the exhibition proper, a series of novel and amusing attractions has been provided, consisting of displays of fireworks, scientific representations of naval and military engagements, performances with balloons, feats of horsemanship, and other specialties. The Governor-General will formally open the exhibition on Tuesday, 6th of September.

The idea is pretty general throughout the country that the Toronto Industrial Exhibition Association is a joint stock concern, and that the profits derived from the holding of exhibitions go into the pockets of the promoters. Such, however, is not the case. The Association is composed of gentlemen elected each year from various agricultural, horticultural, live stock, poultry and dairymen's associations in the province, and from the Toronto Board of Trade and the City Council. Each of these bodies sends delegates to the annual meeting of the Association, and from these delegates the twenty directors are chosen. The Association holds a charter from the Provincial Government, which charter, among other things, directs that no member of the Association can occupy a position in connection with the Association to which emolument is attached, and that all the profits derivable from the Exhibition must be expended from year to year in improving the grounds and adding to the accommodation. The grounds are the property of the city of Toronto, the Association having a lease of them for two months in each year, for the purpose of holding the Exhibition. Two officers only, the secretary and the treasurer, receive salaries. All the directors give their time to the enterprise gratuitously, and some of them at considerable pecuniary sacrifice. With the exception of two small grants from the Western Dairymen's Association and the Dominion grant of this year of \$10,000, no pecuniary aid by way of grant or bonus has ever been received by the Association from any government or corporation, or from any source whatever except from voluntary subscriptions received from the citizens. The Exhibition has been

run from the first entirely on its merits as an institution for the advancement of agriculture and the industrial arts, and it rests its claims to the support of the public on its proved ability to bring together a complete collection of the best products of the farms, the factories, and the other productive industries of the country, and provide the necessary facilities to induce the public to come and examine, and study, and learn, and be benefited by the teachings of the great object lesson thus afforded. The Exhibition opens on the 5th September, and continues till the 17th. Those who fail to attend it this year will undoubtedly miss an exhibit the extent and value of which has never been surpassed in Canada.

Feeding Swine.

The Ohio Agricultural Experiment Station has been making an experiment in feeding swine with the object,

1. To produce flesh at the least cost
2. To produce greatest weight in the least time, cost not to be considered.
3. To produce best edible lean meat regardless of cost and time.

The first lot were fed corn meal cooked with twice the amount, by weight, of skimmed milk; the second, pea meal cooked with twice the amount, by weight, of skimmed milk; the third, equal parts by weight of corn meal and pea meal, cooked with a quantity of whole milk, equal in weight to the two kinds of meal.

The following are the conclusions of Mr. W. S. Devoil in his report

- (1) That corn meal and skimmed milk is the cheapest of the three rations tried.
- (2) That pea-meal and skimmed milk is the best of the three rations tried for rapidly increasing the weight.
- (3) That the ration consisting of pea-meal, corn-meal and whole milk is least valuable of the three for any purpose for which the experiment was undertaken. For the production of lean meat also the first ration is the most valuable, the second ration next in value, and the third the least valuable.
- (4) That for the production of fat within the body cavity (omentum and leaf fat) the second ration appears to be the best adapted.

In regard, however, to the cost of production the conclusion reached will not be a safe guide for Ontario conditions. The corn-meal was estimated at 80 cents per 100 lbs., and \$1.67 per 100 lbs. for the pea-meal. Here in Ontario we can get peas oftentimes cheaper than corn, under these conditions the ration of pea-meal and skimmed milk would be the most favorable in every way, except in the production of a larger quantity of fat in proportion to the lean.

Our own Ontario Experimental Farm might do good work here. The pork merchants are calling to us for pork with a large proportion of lean to the fat. Will our good college tell us, as the result of experiment, how best to produce this?

The Advantages of Soiling.

BY JOHN I. HOBSON, MOSBOROUGH, ONT.

This very practical paper was read by Mr. Hobson at several of the farmers institutes held last winter. The lesson which our farmers have been taught by the drought of the past season will surely not be unheeded by them in time to come, as soiling crops are especially valuable in such a season.—ED.

As the quantity and quality of crops depend upon the fertility of the soil, so does the condition of our domestic animals depend upon the quantity and quality of the food which the soil produces.

The variations in domestic animals which have tended to produce the best breeds of sheep and cattle, have been largely brought about in two ways—judicious selection of animals to breed from and liberal feeding coupled with careful treatment in other respects. There is but little use in studying up pedigrees and buying high-priced animals unless the farmer at the same time feeds liberally. There is no use at this day of enlarging upon the advantage it is to any farmer to have a correct knowledge of the art of feeding, or to say much about the influence of food in developing the valuable characteristics in the meat-producing and milk giving animals of the farm. The principles of feeding as practised by our best stockmen are no longer of an experimental character, but are based on the correct laws of science. Successful breeders and feeders have not now to learn the importance of keeping their stock warm, and comfortably housed in the winter, and protected during the changeable weather of spring and fall, and that they thrive best when they have a full supply of nutritious food during the whole year.

Now, if what has been stated is correct, it may be well to consider what is the best way of bringing about those desirable results. And my purpose is to try and show in this paper that soiling, when properly carried out, would be an important factor to that end, and would as well in these days of keen competition, by greatly increasing the productiveness of the soil, place us in a better position to hold our own with the competitors of other lands. I may here say that in any papers which I have written for these institute meetings, I have been careful not to advocate any system which I have not in a greater or lesser degree practised myself, or, in other words, I have kept clear of what might be termed mere theory. I have noted carefully during the past seven years in all parts of Ontario the practice and the system followed by the most successful stockmen and farmers whose farms I inspected, and found that whenever a partial system of soiling has been practiced, that in all cases the results were most satisfactory, and in no case did any farmer speak of returning to the old plan of depending solely upon pastures for summer feed. And it is to be borne in mind that the experience of these is in accord with that of many of the most progressive farmers in other countries where agriculture occupies a leading position relatively with other industries. We find that the German and French beef-growers adopt largely a strict soiling system and produce a higher average weight at a given age than people who depend alone on pasture. We find that Stewart, the author of the best work we have on cattle feeding on this side of the Atlantic, states that the English have adopted a system of beef-raising upon a partial pasturage—soiling and grain-feeding combined, and the result is an average much greater than is produced by pasturing alone. In the Eastern States it is very commonly practiced, and with the most satisfactory results. And on all high-priced land, near towns and cities, both on this continent and Great Britain, it is the universal custom to feed the cows which supply these places with milk, on the soiling system. I may still further say that any number of individual cases could be given establishing the position which I have taken, that on the best class of tillable land in Ontario a partial system of soiling can be carried on with the most satisfactory results, and with largely increased profits as compared with pasturing. One or two cases it may be well to mention. Some years ago, when driving through the county of Oxford with Mr. Drury, M. P. for one of the ridings of Simcoe, we called at some of the cheese factories, among others one at Innerkip, and wishing to know a little more about the cheese industry, we called on Mr. Malcolm, a most intelligent farmer living near by. When speaking of the season's returns he informed us that his whole herd of cows yielded an average of \$60 in the season. This being so much higher than the average of even the best herds, we wanted to know how this was brought about. I have never forgotten his reply. He said that, in the first place he selected good cows, and then he was careful in supplying them during the whole milking season with an abundant supply of milk-producing food. Again, near the town of Simcoe we inspected another large herd of cows, kept for supplying the town with milk. From this herd was realized even a much higher average. The same thing again—soiling was the secret of the success. Just one more instance will I mention. Mr. McKellar, on the Richmond road, near Ottawa, who sends in milk to Ottawa of the annual value of from \$8,000 to \$10,000—the average annual returns from

these cows footed up over \$100 per cow. This again being largely owing to following out a judicious system of soiling. These cases which are given could be multiplied to any extent.

Now, while there can be no manner of doubt as regards the advantages and profits under certain conditions, it is a question upon which there is plenty of room for discussion as to what extent it could be carried out with profit on the average of the high-priced and first-class tillable lands of this province. My own opinion is that the time is not very far distant when on these high-priced lands the plan will be a very common one. In dealing with this or any other matter relating to farming many things are to be considered, for it does not by any means follow that a system of farming which is the best that could be followed on high priced tillable land would also be the best on land worth \$15 or \$20 an acre, or on a farm a large part of which might be fit for little else but pasture. But in dealing with the question, I purpose to consider from the standpoint of an Ontario farmer owning a farm of average quality.

Among the advantages to be considered is the saving of land for whether it is carried out as a general or partial system does not in any way affect the argument for or against. If, as is held by those who have given it a full and fair trial, that one acre of soiling crops will produce as much food as three acres (and some good authorities place it at four) in pasture, the saving will just be in proportion to the number of acres sown. My own experience leads me to think the difference quite as great as here stated. If that is correct, it then follows that for every acre used in growing soiling crops, it leaves two acres more that are available for growing the other crops of the farm. Or putting it in another way; the farmer owning a good tillable farm of a hundred acres can, by keeping the same quantity of stock, have at least twenty acres more in grain crop, and the land under the plough be yet kept in as high a state of fertility, owing to the large quantity of summer made manure of the richest quality which, under the pasturing system, would be in a great measure lost.

One of the arguments used in favor of a general system of soiling is, that it does away in a large measure with the necessity of having fences, in this way saving a considerable annual expenditure, doing away at the same time with the propagating ground for foul weeds of all sorts, and adding to the available acreage for crop growing to the extent of the land occupied by fences under the ordinary system. I am not at all clear that it would be wise to adopt the system as a whole, but rather think what should be done on all but very small farms, is to work into it gradually, and even then I am inclined to think that to carry it out partially would be found to be the best. In this way there would be no saving in fences. The experience of many successful breeders leads them to think that the stock is all the better for being turned into a pasture-field at night, especially during the hot months; and certainly there are many things to be said in its favor. Perhaps there is no way in which growing forage plants and feeding it cut, shows to better advantage than in raising calves. These should in all cases be kept in cool and darkened stables during the hot months of summer, and protected as well during the changeable weather of spring and fall. If allowed to run out during the hot weather, the heat and annoyance from flies keep them in a constant state of uneasiness. These evils incident to pasturing are entirely removed when kept in buildings suitable for the purpose. There is no need to speak of the much better shape they appear in at the end of the season, every one who knows anything about stock management has seen for himself.

After having dealt with the question of soiling the ordinary stock of the farm, it may here be profitable to discuss whether a great deal more might not be done in the way of making beef in the summer, and fattening sheep and lambs in the fall. The latter I have done a good deal in for many years, and with good results. A lot of lambs bought last September at prices varying from \$2 50 to \$3 60, making an average of \$3 07, and weighing 116 lbs. when sold, realized on the 11th of December, \$5 80 per head. With the exception of a few days these lambs tasted nothing but rape, with an adjoining grass field to run in. One thing to be said in favor of summer feeding is, that it requires much less food in warm weather to make the same gain as in winter. If it pays to stall feed in the winter and sell in the spring, why will it not pay equally well or better to fatten in summer and sell at Christ-

mas. My own theory is that it would pay a great deal better, for the reason that no extra food is required to counteract the cold, and also for the reason that a larger quantity of cattle food can be grown per acre for summer than for winter feed. Under proper management it can be so arranged that each of the soiling crops shall come in at a time when it is of most value, and even in Ontario, with our comparatively short summers, a good deal can be done in the way of growing two crops during the season. Take rye sown in the fall upon land required for roots or for the later sown soiling crops, and a full cut can be obtained in time to re-sow and have time left to grow a full crop of rape or fodder corn. Although winter rye makes a wholesome soiling crop when fed alone, it is better to be fed with clover; it seems the two make a better balanced ration, the over-succulent clover being modified by the less succulent rye. Clover comes in well after rye, taking a good place between it and oats and peas, or oats and tares. I have frequently heard oats and peas spoken of as a valuable soiling crop. Peers and Stewart, both good authorities, place a high value upon it, the former considering it the most valuable crop grown for summer feeding. My estimate of it, judging from my own experience, and I have tested it pretty fully during the last year or two, is, that it is in no way comparable to tares and oats. The principal objection I take to it is, that when fed uncut—that is, when not passed through the chaff-cutter—unless fed very sparingly, both cattle and horses will leave the peas. If any of the gentlemen present have done much in feeding these crops I would like to know what their experience has been. Another forage crop, very highly spoken of, and which is placed high by the same authorities already alluded to, is Lucerne. This I also found a not very satisfactory crop to grow. It costs a good deal to seed down. In my own experience it winter killed badly, and my stock did not take well to it, horses especially would not eat it. Quite a quantity was cured for hay, and although nicely cured and getting no rain, I found it to be poor stuff. How is it that my own experience has thus led to such different conclusions from the experience of others, who are no doubt good authorities? I wish some one could clear the matter up. I consider the following the best soiling crops. clover, followed with tares and oats sown in equal quantities, say two bushel of the mixture; these to be sown at different times, so as to cover the period until green corn comes in. I have already spoken of rye as a valuable crop for early spring, but I must admit that of my own knowledge I do not know very much about it; but from what I have read and heard regarding it, believe it to be valuable as coming in early before the other crops. My intention is to sow a considerable breadth the coming fall. The value of corn as fall or winter feed is too well understood to require much to be said about it. It should never, however, form the whole ration, but should be fed in combination with other more nitrogenous food. There is still another crop, although perhaps not exactly what may be called a soiling crop, namely, rape, which is very valuable for late fall feeding. The value of this for late fall feed is not sufficiently well understood. One of the reasons why it is not more grown is that it is supposed by many who have tried it, that the risk from bloating is too great to make it safe to turn stock on. This I think is in a great measure a mistake, and arises mainly from mismanagement. When cattle, sheep or lambs are first put on, it should be when they are quite full; gorging themselves on an empty stomach is very likely to cause bloating; but once let either cattle or sheep be put into a field of rape, the best way is to leave them there; in that way they are always full and never do more than nibble a little at a time. When the weather begins to get too frosty to leave them on at nights, always be careful that they have a full supply of food before they are turned on in the morning. I have been feeding it for many years and never lost but one calf, and that was clearly traceable to carelessness. For putting on a lot of flesh in a short time there is nothing that I have ever seen that will in any way compare with it. For cattle that are intended to be stall-fed in the winter it is a very cheap and easy way of putting on a lot of flesh. For lambs, the best way is to turn them on every morning as long as snow will allow them to eat. At no time do they appear to thrive better than when the leaves are pretty well eaten off, and they have to take to the stalks. In growing this crop a very general mistake is made in sowing too thickly. Three-quarters of a pound of seed sown on thirty inch drills

is abundance. With that quantity of seed the chances are that there will be two or three times the bulk of feed that there would be if three or four pounds were sown. Rape, like turnips, is all the better for plenty of horse-hoeing; the more the horse-hoe is used in dry weather the better the crop. It answers well to take the place of a summer fallow. With an application of one to two hundred pounds of gypsum to the acre when the plant is well up, the yield will be often doubled. I would strongly advise any one who has not tried it, to experiment with a small piece for late fall feed. It is a good while since I came to the conclusion that it was a pretty costly way of making meat to tie up cattle in November, and put on all the flesh in the winter months. It is questionable if there is any profit at all, considering the price of stockers in the fall, and the lower price now obtained for beef.

One of the greatest benefits to be derived from soiling is the large increase in the manure supply. By this system all that is made is saved, and can be supplied to the land in the best form, whereas all the droppings on pastures is in a great measure wasted, if from no other cause, by these droppings nearly destroying as much feed as they produce by the additional enrichment. When soiling is practised to any considerable extent, it is safe to say that the extra value of the manure, when quantity and quality are considered, is enough and more than enough to meet all the extra expense of labor, in cutting, hauling and feeding.

Another important consideration is, that soiling will, if properly managed, clear the foulest land of every noxious weed. This may be set down as a very strong point in favor of the system. Tens of thousands of acres of the most fertile land in Ontario are comparatively worthless from no other reason than that the white daisy, mustard, wild oats, thistles, and every noxious weed occupy the soil to such an extent that there is hardly room left to raise a crop sufficiently remunerative to pay for the labor. When a system of soiling is gone about intelligently, weeds are not allowed to mature. Annuals cannot survive a second cutting. Perennials are cut before the seed forms, and as every successive crop is cut green weeds must give way. Even when the soil is full of weed seeds, whenever they come near enough the surface to germinate, the first cutting generally kills them. Fields that are foulest with weeds, if convenient to the homestead, might be used for a few years in growing soiling crops and thus rendered clean. Soiling certainly seems to be the surest and cheapest way of cleaning land when it has become excessively dirty; and unfortunately there are too many farms in this country which may be spoken of in that way, without at all using language too strong.

While a very great deal may be said in favor of soiling, not much can be said against it, except the extra cost of labor. That is a question every one must work out for himself. A common sense way of looking at it is, will that labor yield a profit? There appears to be no reason why any farmer should object to pay for extra labor if it is found that there is a profit in it. It is not often that a man becomes rich from work actually performed with his own hands, but more generally on profits derived from money judiciously expended in labor or otherwise. The observation of years has only confirmed me all the more strongly in the belief that the farmer who succeeds best is generally the one who farms liberally. Labor may often be performed and money expended for what may give no immediate returns. Many a farmer fails through not looking far enough ahead. There is a great deal of work often left undone on a farm which, had it been performed, would, after having paid its cost, have left a large margin for profit. We farmers are a little too apt to confine our operations to that from which we expect immediate returns.

To sum up, it may be claimed in favor of the soiling system, that stock would be more comfortable; that when reared for beef the greatest weight could be secured in the shortest time, this also meaning the greatest profit. That looking at it from the dairyman's standpoint, the gain would even be greater than on a farm where beef and mutton are the chief considerations, greater for the reason that the cow requires less exercise than almost any other domestic animal. In corroboration of the statement that the system is especially adapted where dairying stock is kept, it may be said that the proprietors of some of the most extensive dairy establishments in the neighborhood of Edinburgh and Glasgow claim that the produce of one acre fed to the cows in the stalls will produce as much milk as five acres in pasture.

There would not only be a greater production of meat, milk and batter; on this there can be but one opinion; there would also be a large increase in the quantity and quality of manure, adding greatly to the productiveness of the soil, and as well as an increased acreage for growing grain and hay to the extent of at least two acres added for every one used in growing soiling crops.

As already said, what would appear to be the proper line to follow on the ordinary fair tillable farm would be to carry out a mixed system of pasturing and soiling, whether the lines be breeding, fattening or dairying. There is a richness about the grasses in early summer, continuing on through June, that will produce results which cannot be surpassed by any forage plant grown. And on most farms there are portions which cannot be used to such good advantage in any way but for pasture. But from the time the pasture becomes somewhat dry and scanty, there is at once a noticeable falling off in the flow of milk, a check on the rapid growth of the young animals, and a slower rate at which meat is being laid on by the fattening stock. It is from this time forward until winter sets in that the scanty pastures should be supplemented by a full and liberal supply of meat and milk-producing food.

If a change in this direction was to take place generally all over the province, farmers individually would be enriched, our farms would yield more bountifully, the money-lenders would have to seek other channels for investments, and our national resources would be annually increased to the extent of many millions.

Our Scotch Letter.

THE FLAG OF PLEURO-PNEUMONIA SHOWS IMPROVEMENT OF CLYDESDALES IN THE NORTH

(FROM OUR ABERDEENSHIRE CORRESPONDENT.)

The toying and playing with pleuro-pneumonia which has characterized the action of the chief authorities in this country in dealing with this disease has brought about a pretty mess. The cattle trade is very much hampered thereby, and the loss to breeders of pure bred stock can hardly be estimated. There is some reason to suppose that the agricultural interest has at least managed to get its grievance taken notice of by the Privy Council, and that a determined effort to get rid of the disease will be made, but owing to the prevalence of disease in Scotland our national exhibition of live-stock has had to be held without the cattle, and this has given rise to a considerable amount of indignation at the remissness that has been shown in dealing with the disease. But the question has on this account received so much attention, and the country has been so thoroughly stirred, that there is all the more reason to expect that the authorities will not again be allowed to go to sleep over the matter. Their lordships of the Privy Council have been compelled, seeing the disease rapidly spreading, to warn the local authorities that unless a marked diminution of the disease was apparent in the course of the next two months, they would be compelled to put in force the provisions of section 6 of the contagious diseases (animals) act and make compulsory the slaughter of cattle which in anyway have been exposed to infection. It is not before time that this order has been issued. Last year between 1st January and 4th June there were 98 outbreaks of pleuro in Scotland, while in the corresponding period of this year there have been 186, and 395 cattle attacked. The question came before the Aberdeenshire local authority the other week, and it need scarcely be said that they will accept the most stringent conditions cheerfully if they could get rid of the disease, which has probably entailed heavier losses on this country than on any other country in Scotland. That they will respond willingly to any proposals for stamping out the disease need not be doubted, but they have informed the Privy Council that if slaughter is made compulsory it ought to be applied all around—equally to Ireland as well as to England and Scotland—otherwise the measure will be worthless and will end only in further vexation and loss. Aberdeenshire just now is fortunately all but free of pleuro-pneumonia, and it is expected that in the course of a month the last centre of disease will have disappeared. This is a somewhat important point to some of your readers, who I learn, have been purchasing cattle on the faith that the county would have a clean bill of health in a couple of months. One of these gentlemen I met at the Highland Society's Show at Perth this week, an ex-

cellent judge of our various breeds of Scotch live-stock. I refer to Mr. Johnston, of Greenwood, Ont., who, since he arrived in this country about a month ago, has visited the show of the Royal English Agricultural Society at New Castle, the Royal Northern Agricultural Society's Show at Aberdeen, and besides various herds and sheds throughout the country. I have reason to believe that he has been able to secure a very valuable consignment of Clydesdale horses, Shetland ponies and Shorthorns, with which he will return to Canada. He has bought of Mr. S. Campbell, Kinellar, one of our oldest and most respected breeders, twelve young Shorthorn bulls by the Sittyton or Cruickshank sire Gravesend and a number of heifers by the same bull, and descended from Nonpariel, Cecilia and Rosebud families. From Mr. James Craig, Urquhart Farm, Dunfermline, he purchased two handsome Clydesdales, by the prize horse Un daunted; and from Mr. A. Cruickshank, Sittyton, a yearling colt, by Mr. W. H. Lumsden's (Balmedie) Darnley King. At the Kincardineshire County Show he obtained a very promising one-year old filly, sired by Lucky Boy (3811), and out of Tibby (5443), and which was second in a class of 21 entries. He also bought at the same show and at Aberdeen a lot of Shetland ponies, and in the Dunfermline district two nice bred Clydesdale fillies. The only other transaction by Canadians I heard of was the purchase by Mr. Brodie, Ontario, of Gaudy Girl, a valuable two-year-old brown filly, bred by Mr. John Marr, Cairnbrogie, of the Lord Erskine (1744), one of the best stud horses in this country, and her dam was Gem (3756), by Grand Turk (1148). Gaudy Girl, in a big class of 21 two-year-old fillies at the Highland Society's Show, at Perth, took the third place, and will be a valuable acquisition to any stud.

The show of the Highland and Agricultural Society, which was held this week (opening on the 26th and closing on the 29th) has been shorn of much of its interest by the exclusion of cattle from the exhibition. The directors of the society did not adopt the resolution to hold the show at Perth this year without considerable discussion, in consequence of the existence of pleuro-pneumonia in Perthshire and the neighbouring counties. The civic authorities of Perth, however, induced the directorate to waive their objections to having the show, but immediately on the back of this there was an unfortunate outbreak of the disease near the city, which led to the final abandonment of the show of cattle, and the exhibition had to go on minus a prime centre of attraction. The withdrawal of the cattle caused a great deal of irritation, and the action of the society was freely criticised. A good many thought it would have been better policy to have postponed the show till next year, which would probably have been the opinion of the directors, but for the pressing representations of exhibitors in other departments, who were unwilling to see the show abandoned since they had their stock prepared for it, and besides a large initial expenditure had been incurred before it was seen that it would be necessary to stop the cattle. The end of it all has been that the society will lose a large sum of money over the exhibition, the total drawing for the four days being only £1761, as compared with £3054, which was the amount drawn in 1879, the last time the show visited Perth. This brings out a deficiency of £1293. The show was confined to horses, sheep, pigs and poultry, and there was a very good display of the former: the entries of Clydesdales alone numbered 177. The total number of horses entered was 239, of sheep 530, swine 38, poultry 210, dairy produce 72 and implements 1509, while the prize money amounted to £1552. Our Aberdeenshire breeders came off with a lion's share of the Clydesdale honors. Their successes have been much talked about. In a competition, which is open to the whole of Scotland, the champion prizes for the best Clydesdale stallion, and for the best Clydesdale mare and three of her descendants, were both won by Mr. John Marr, Cairnbrogie, one of the first breeders who introduced the pedigree Clydesdale into Aberdeenshire. I make bold to say, that in the horse world this country will very soon become as celebrated a centre for its stock of Clydesdales as it long has been for its Shorthorn and Polled cattle, and I will, bye and bye, mention my reasons for making this statement. It was about eleven years ago that Mr. John Marr attended the sale of the late Mr. Fleming's stud, at Knockdon, near Maybole, and brought Young Darling (237) home to Cairnbrogie, and a most fortunate investment she has proved herself to be. Young Darling, one of the best mares of her age I have ever seen, is the only living representative on the female

line of the Old Darling family, which produced among other notable animals the famed Prince of Wales, and those who knew the two mares say that Young Darling shows a remarkable resemblance to the dam of the late Mr. Drew's famous horse. It was none other than this grandly bred old mare, whose progeny scored so highly at Perth this week, that headed Mr. Marr's champion family group. To her owner she has been a veritable mine of wealth. Of the male line she has bred the £1200 horse, Cairnbrogie Keir, and the champion Clydesdale horse of the present year, Cairnbrogie Stamp, a three-year old, belonging to Mr. John Marr, which on Thursday last won first honors in his class and the champion Jubilee prize, open to pedigree Clydesdales from all parts of the country. Last year Mr. Marr refused an offer of £1000 for this grand Clydesdale, which, I hear, has been engaged for next season at a very handsome premium by a number of breeders in Aberdeen, Banff, Moray, Inverness and Ross, who have certainly made a good choice of a stud horse. The enterprise which northern Clydesdale breeders are showing in this respect is one of the reasons why I anticipate that in a few years there will be an extraordinary improvement upon the studs in this part of the country. I may also mention in this connection that Mr. P. Crawford's celebrated stud horse Lord Erskine (1744), the sire of Cairnbrogie Stamp and of a host of other prize takers in the north, has again been secured by a number of breeders in Aberdeenshire, so that it will be no fault of theirs, and through no lack of enterprise, if our plucky Aberdeenshire men do not come to the front as breeders of Clydesdales, and that too in a very short time. But, indeed, they can truly enough be said to have taken the front rank already.

To return to Mr. Marr's matron mare, Young Darling, I may mention that her daughters and grand-daughters at Cairnbrogie are remarkably fine specimens of Clydesdales, that have inherited their dam's excellent breeding qualities, and they now number five, making what without fear of contradiction may be called the most truly remarkable family of Clydesdales in this country. Mr. Marr's Knockdon purchases, and his earlier purchases at Keir in 1874, when the first pedigree Clydesdales were brought to Aberdeenshire, set the fashion in this district, and the improvement has been carried on by others. He was almost equally fortunate with his Keir horses. It was two foals that Mr. Marr brought here, the price being upwards of 100 guineas. One of them grew into General (323), a noted Highland Society winner, which was sold at a high price to go to America; and the other into the scarcely less notable Maggie Newstead, which was sold to Col. Holloway at a very long figure. Grand Turk (1148), purchased at the Knockdon sale by Mr. Marr, gave a fillop to Clydesdale breeding in Aberdeenshire; and the Faewells horse, Lord Haddo, an animal with grand feet and pasterns, and strong bone, made his mark in the local sheds, and the improvement was carried on and extended by the introduction of Mr. P. Crawford's valuable stud horse Lord Erskine, which I have already alluded to. Speaking of the characteristics of some of these horses it may be mentioned that Grand Turk was an animal with very stylish carriage, grand flinty bone and perhaps as good fore legs as any horse ever had. Mr. Marr's champion horse Cairnbrogie Stamp is an animal of beautiful proportions, with great Clydesdale character and large scale, a straight cylindrical frame, and well set upon fine legs and feet, while it is important to note also that he has the evenest and sweetest of tempers, and taken all in all he is one of the best horses ever bred in this country.

These remarks have led me away from the Highland Society's exhibition, but they are of some importance to breeders and the digression may therefore be pardoned. The show of aged stallions at Perth was not above an average. Mr. P. Crawford led with a four-year-old brown Prince Lawrence, a horse with the best of feet and legs but short in his ribs. Aberdeenshire bred horses were placed first in each of the classes for three-year-old and two-year old stallions, the three-year-old winner being Mr. Marr's champion, and the first prize two year, belonging to Mr. James Crawford, Brydekirk, Mains, was The Granite City, and both, it may be stated, got by Lord Erskine. Mr. R. F. Campbell, of Craigie, was first for one-year-old stallions with Master Bunnie, to be named here after Prince of Albion, a splendidly bred, promising colt, combining the blood of Prince of Wales (673) and Darnley (222). The celebrities in the female classes included Mr. John Gilmour's unbeaten mare Moss Rose, by Prince Charlie (634), Mr. James

McNab's Lady Macbeth, by Lord Kelburne, the two three-year old fillies Coatbridge Mary and Sunray, both by Prince of Avondale, Mr. Lockhart's two year-old filly Pandora, first winner at Glasgow and by Darnley, and his first prize yearling filly Vanora, by the same horse. The last contest in the horse ring was for collections of five animals, one or two year olds, the progeny of one stallion. The prize lay between the Lord Erskine and Darnley gettings, and the latter group won with general consent, the fillies being an overpowering lot. The Darnley's had also the most fashionable color, but still the Lord Erskines were a very sweet, stylish lot, showing real Clydesdale character, and they were very worthy opponents in deed.

QUIDAM.

Crops, Stock and Tree-planting in Manitoba.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL.

SIR,—This country is now looking at its best. On every side as you drive along you see large fields of splendid grain, of different sorts. Wheat, oats and barley all ripening fast under our genial sun. During July we had a long continuance of rather cool, dark weather with copious rain fall, which alarmed some folk, who thought it would retard the ripening of the grain; however, the result is that we have the grandest harvest we have seen in six years' residence.

Everyone is well into their barley cutting, and several have commenced at the wheat; in fact, by the end of this week we expect to see a binder at work in every field. Stock have done remarkably well, having had abundance of the very best feed. Beef is cheap, as there are any number of grass-fat cattle now to be had. Mutton still keeps high, as people here have not gone so extensively into sheep, owing to the lack of fences. There is no trouble, however, in raising sheep, as both the climate and the country around here seems to agree with them very well. Horses bring a good price; in fact, they are as dear as ever, as farmers are getting in better shape every day, and ploughing up fresh land. Horse breeding will yet be one of the leading features of this country.

Our leading cattlemen here, Messrs. Sharman & Sharman, have just received some fresh pedigree stock from your country, which, together with what they had before, makes about the finest herd of pedigree Shorthorns in the North-West. They expect to sweep everything before them at the fall fairs, and they deserve success, as owing to their good example an impetus has been given to stock raising, and a love of pure bred cattle instilled into the minds of our farmers, the value of which it is impossible to over-estimate. A good deal of attention was given to tree-planting last spring, and with good results, the season being especially favorable. Gardens have done well, consequently vegetables are abundant and cheap; in fact, we hope that Manitoba is going to have a season unequalled in our experience.

R. B. K.

Souris, Plum Creek, Man., Aug. 8, 1887.

Our Nova Scotia Letter.

HAY PRODUCTION—THE TRUE VALUE OF JERSEYS.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL.

SIR,—I have not written for quite a while for me—for I am naturally noisy, and, as a rule, have more to say than many that know a great deal more—if the knowing ones would only come out and say a word now and again for the great cause which so very many of us have chosen as our method of bread-winning, it would be well.

We have had more dry weather so far in this season than was good for our crops. Hay is going to be short commons with us; I think, if anything, behind the yield of last year, and we thought that bad enough. Pictou county imported last year over 3,000 tons of hay, which cost the buyer an average of \$15 for each ton weight. Quite a percentage of the amount bought, I am ashamed to have to say it, was bought by farmers—\$45,000 worth of hay bought by a county that is, or pretends to be, largely agricultural. Of course the mines and other industries throughout the county consume a large quantity of hay with the horses employed about them, and large quantities of straw is also used for packing and other use. Still these consumers should be our—the Pictou county farmers—market, in such rough farm products; from which other counties are debarred in consequence of dis-

ance. But no, instead of our working so that we may avail ourselves of such opportunity, we ourselves buy, I amongst the number. Generally, when a farmer has to buy hay, in our ordinary way of farming, I cannot help thinking that we are paying a premium on our want of thrift.

But I must stop. This is a family matter—or county, any way—and will not be of interest to the general reader, unless there are other farmers who are equally neglectful, perhaps not in the matter of hay, but some other item. It may touch them on the sore spot, and may, I hope, cause them to decide to stop the leakage in farm profit, whatever it may be.

Well, there does not seem to be quite so much talk about who owns the best cow this summer as there used to be. What can be the matter with the people? I think the cows are all as good as ever. The Holstein boom did not reach quite or nearly quite the height of the Jersey cyclone. I tell you what, somebody must have got left badly when the great storm was over, and people began to be sensible again. It was Mickey Free, in Charles O'Malley, that is made to sing—

"Oh what stories I'll tell when my soldiering is o'er.
And the gallant 15th is disbanded;
Of the blood that I spilt, and the Frenchmen I kill,
I'll drive the girls half crazy,
But some cute one will cry, with a wink of her eye,
Mr. Free, now can't ye be aisy."

I handled quite a number of cattle during the boom and sold them to all kinds of people—clergymen, lawyers, deacons, doctors, professing Christians, and public sinners, but it was all the same. As each got one, no matter how highly his word was considered; no matter how truthful he may have been—right after the first churning he was sure to begin, and get worse as he went along, until he would get a 4 lb. cow up to 16 lbs.; then he would pause—to learn the art of feeding, then at it again. An innocent-looking granger told me quietly one day, that judging from his experience (I had sold him a cow a few weeks before, and he said he was in a position to judge from practical test), there had been more lies told to the square inch on the fancy stock producing qualities than had been told through any other undertaking that he had yet heard of, and that he took the JOURNAL and a few other papers besides the *Globe*, so that he was not like a man that did not keep posted. But, jesting aside, there is no use talking, the past booming of the breeds has been overdone. The cows are as good as they ever were. For my own use I would not give the little Jersey for any one of the other breeds. To me she is just as beautiful as she ever was, and I like her just as well as when she was supposed to be worth anywhere from \$100 to \$20,000, and not nearly so anxious about her health as I was when I felt any day a crank might come along and take her from me and leave me \$500 or \$1,000 for her. There is no doubt in the world that the farmer who wishes to improve his butter-producing herd cannot do better than introduce Jersey blood into it, which he can now get at really sensible and fair value for his many prices in this county. Here Jersey males have been used largely in crossing upon our scrub stock. They have given great satisfaction, and we now have scattered throughout the county a class of family cows that will sell readily at prices from \$50 to \$75, that for quantity and quality of milk cannot be improved on much. The Jersey cow has a place in Canada that cannot be taken from her by any of the breeds; and as I before stated, farmers who make butter or a choice article of milk a specialty, cannot go wrong in buying a Jersey bull to head their herd of milking cows. A good Jersey bull can now be bought for \$100 of choice breeding, from 18 months to 2 years old. For such a bull during the boom \$500 or \$1,000 would be asked. A good Jersey heifer can now be bought for from \$100 to \$150 at two years old, and at such price ready markets can be found, and they are paying prices to the farmer, and not too much to the man who wants to buy a Jersey cow, for the choice product she will give him in the shape of butter and milk, that cannot be equalled by any other cow; and not as it used to be, for the money he (the buyer) intended making out of her by the stock to be sold from her breeding. In other words, Jerseys have come back to earth, and now ordinary farmers and those who wish them may buy them at real value, and not inflated, and shall I say, fictitious value. "Mr. Free, now can't you be aisy." I imagine I can hear some fancy price man saying, Farmer John, now can't you be aisy? Well, I am through on that head for the day.

Stock interests are still advancing. All of those hereabouts who have herds of thoroughbreds, whose names I have before given through your columns, are still to the fore, adding to their number and improving their standard. Holsteins, Ayrshires, Jerseys, Durhams, full herds of each are now common where a few years ago single ones of any of the breeds were a rarity. Brookside Farm still carries a full complement of Jerseys, and intends to do so, but in addition have a fine lot of standard-bred trotting mares at work, breeding up a band of youngsters that their owner hopes to see world-renowned some day. One fine youngster was sent west from there not long ago, at quite a fancy figure for one so young. But it is something new for us fishermen farmers to produce anything good enough in breeding and farm products to suit the tastes of the Ontario buyer; yet we have done it, and hope to do so again. We are coming, slow it may be, but coming all the same, to show our stock at your great Ontario annual exhibition, some time, and when we do come, it will be to win. I think just now a herd of Ayrshire cows could be got ready for this fall that would not come back without a red ticket or two.

There, I'll stop now, for I am getting warm, and may say too much, even for

FARMER JOHN.

Holland Cattle Herd Books.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL.

SIR,—With interest I read the article on the "Auxiliary Herd Book" in your July issue, and am pleased to accept your invitation to "come to the rescue with a description of Holstein-Friesian herd books on both sides of the sea."

It is now pretty well understood in America that this breed of cattle originated in and is imported from Holland (the Netherlands), and that the name Holstein-Friesian is solely an American invention, a compromise made in effecting the union of two associations, breeding the same cattle and with the same interests.

European literature refers to this breed generally as Holland cattle, and sometimes as Friesian cattle, Friesian being one of the eleven provinces of the kingdom of the Netherlands (Holland). The usual name, Holland breed, seems most appropriate and comprehensive.

The first herd book in the interest of this breed of cattle was published in the United States, in Boston, in 1872, and was called the *Holstein Herd Book*.

The reason for calling these cattle Holsteins is based on premises vague and obscure, to put it mildly. The main ground for this name is given in a quotation from an article in the *Deutsch-Amerikanische Farmer-Zeitung*, by whom? Mr. ——— nobody knows, as the name is not given, nor any evidence whatsoever proving that what he says is according to the facts. On the contrary we have proof positive that his statement is not correct. It appears as follows, on page 13, Vol. 1 of H. H. B.:

"Yet, although this race of cattle has been most fully developed and attained to the greatest consequence in North Holland, the original stock was by no means bred in Holland, but in Holstein, whence it spread itself over the north of Germany and Holland, even to England, and contributed much to the improvement of the native stock in that country."

For ages Holland has exported cattle, and has imported only in rare instances, after its herds had been diminished by the ravages of disease, and for experiment, within the past twenty-five years, a few Shorthorns have been introduced, but as the cross on the native stock diminished the milk product more than the gain in beef amounted to, it has not met with success.

The first volume of the Holstein Herd Book, published in 1872, probably owes its existence to the enterprise of Mr. Winthrop W. Cheney, who was elected first president of the "Association of Breeders of Thoroughbred Holstein Cattle," as he had made several importations of these cattle from North Holland before and after the year 1860, and saw the necessity of establishing a herd-book, to keep the breed pure.

The present efficient secretary of "The Holstein-Friesian Association," Mr. Thos. B. Wales, jr., with Hon. Wm. A. Russell and Mr. C. C. Walworth, were the first vice-presidents assisting Mr. Cheney in his good work, Mr. Chas. Houghton acting as secretary.

The first herd-book records sixty-one bulls and

sixty-seven cows, in all one hundred and twenty-eight, and contains interesting descriptions and records of the breed, besides cuts of some of Mr. Chenery's stock, which well represent its main characteristics. The bulls and cows are numbered and registered separately in a simple form, as follows:

COWS.

No. 1. AGOO.*

Black and white; calved March 15, 1870; imported in cow Dowager (7)† from West Friesland, by and the property of Gerrit S. Miller, Peterboro, N. Y., 1869.

This first volume was followed by others until the year 1885, when volume eight was issued, in which are registered 1412 bulls, carrying the total to 4100, and 3683 cows, making the total 9205 and grand total of bulls and cows registered, 13,305.

Volume eight (over 1100 pages) contains handsome cuts of some of the best animals in the country, many interesting milk and butter records, the charter, a list of members (190), the by-laws, also records of the annual meeting, the director's meeting and convention at Chicago, besides a list of the officers as follows:

President, Edward A. Powell; Vice-President, W. W. Singery; Treasurer, W. C. Brayton; Directors, L. T. Yeomans, F. C. Stevens, E. M. Washburn, S. S. Mann; Editor to Introductory, Gerrit S. Miller; Secretary, Thos. B. Wales, jr.; Inspector, Dudley Miller.

Nearly three thousand animals were imported, inspected and registered this year—a greater number than ever before within a like period.

The ninth and last volume of the Holstein Herd-Book was published in 1885. In this book are registered 563 bulls, carrying the number to 4664, and 1354 cows, making a total for cows of 10,560 and a grand total of bulls and cows of 15,224 head registered.

The financial standing of the Holstein Friesian Breeders' Association is seen by referring to the secretary's report of March 18th, 1885, in vol. 9. It is seen that the expenses of the former year were \$1,871.47; receipts \$13,893.57, showing a credit balance of \$12,022.10.

In addition to the list of officers and members, the charter and by-laws, this ninth volume contains a record of the annual meeting held March 15, 1885, at Chicago, Ill., also that of the board of directors and the proceedings of the joint committee of the Holstein Breeders' Association of America and the Dutch Friesian Association of America, held April 16, 1885, at Buffalo, and also the report of the proceedings of the meeting of the former, May 26, 1885, both of which were held for the purpose of endeavoring to effect a union of the two associations.

DUDLEY MILLER.

Oswego, New York.

(To be continued.)

A Valuable Stable Disinfectant.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I enclose the following as the best disinfectant that is known to science:

One drachm of nitrate of lead dissolved in two gallons of soft water, one drachm of salt (Liverpool is the best) dissolved in a quart of soft water—mix.

The importance of the above to stock-keepers can scarcely be realized until it has been tried. For a stable, dip a sponge in the liquor, hang it up, and within two or three minutes all offensive odors are destroyed. Last winter the writer lost a very valuable horse; the livery stable keeper lost three good horses; the street railway company of this city lost several. I am now satisfied the animals died from inhaling impure ammoniacal gases, which irritated the mucous membrane of the throat and eventually produced inflammation of the lungs, from which they died; and I am now certain that had this disinfectant been used, the impure gases would have been decomposed and the animals would have been free from disease originating from that source.

Where there is a large number of animals in the building, especially milking cows, it is of the utmost importance that such building should be free from all

impurities, as milk absorbs impurities from the atmosphere readily and rapidly, especially during the summer months, when the cows are milked under cover. Where such conditions occur, this disinfectant used as before explained, will, in the short space of from two to three minutes, absolutely decompose all foul gases and make the air perfectly pure. The expense of the mixture is very trifling; buying the nitrate of lead from a wholesale druggist, a forty gallon barrel can be made for twenty-five cents.

Trusting the above may be useful to your readers,
W. Y. BRUNTON.

London, Ont.

The Clydesdale Horse.

BY D. M'CRAB, GUELPH, ONT.

(Sixth Paper.)

FIRST CANADIAN CLYDES.

Our Clydesdale records in Canada are quite modern. The first volume of the Clydesdale Stud Book of Canada was issued in 1886 by the Clydesdale Horse Association of Canada. The first animals were registered by Henry Wade, Esq., the secretary of the Agricultural and Arts Association of Ontario, in 1882. In this volume are the pedigrees of about twenty animals imported into Canada and foaled previous to 1860. These are but a few of the animals brought to Canada before that time, but the records of others have not been kept with sufficient accuracy to warrant their insertion in the stud-book. There may be some that should be recorded, but those having the necessary documents have disposed of the animals and do not care to take the steps necessary to have them recorded. When the American Clydesdale Stud Book was published, many Canadian breeders availed themselves of its privileges, and had their imported animals entered in that record. Many new Clyde horses brought to Canada are used for a season or two in the country and then find their way over the borders, and these are now very generally recorded in the American book. This has in some instances made it easier to get at the information necessary to enter the earlier imported animals. In the early days there was no public record in Scotland, and while many of the best breeders kept private records, too many others trusted to their memory, and this was not always reliable, and in time failed. Others, again—and they are not all gone yet—considered that the animal was the thing—a good horse did not need a pedigree, he carried it with him. The best horses were the cross-bred ones, and the appearance was the only requisite of a breeding animal. These men, considering pedigrees a humbug, sometimes thought it no sin to manufacture them, and have thereby done much injury to the breed. The first volume of the Clydesdale stud-book, known as the retrospective volume, was collected and compiled by the Earl of Dunmore, the first president of the Clydesdale Horse Society of Great Britain and Ireland. It was issued in November, 1878, and contained the pedigrees of stallions foaled previous to 1875. Any one can understand how difficult it is to get pedigrees and particulars of horses imported thirty years before these dates.

In 1842, Mr. Archibald Ward, of the township of Markham, county of York, imported a horse known as Grey Clyde. He is entered as [170] in the Canadian, and as 78 in the American stud book. It may not be out of place, for the benefit of these who may not be familiar with the marks of the different records, to say that the stud books follow the recognized rules in the cattle herd books, and mark the numbers of the Clydesdale stud book of Great Britain and Ireland, usually called the Scotch Book—with parentheses, thus (20). The same number in the American book

would be put in plain figures, 20, and if in the Canadian book it would be marked by brackets, thus [20]. Pedigree numbers are always so marked to indicate the stud book to which the number refers. Grey Clyde [170] 78, was bred in Cumberland, England, foaled in 1837, and sired by Young Clyde (949). This horse was a great prize-winner, and was bred by James Frame, Bromfield, Lanarkshire. His sire was Lofty (453), and it is on record that Lofty never was beaten in a show-ring but by his son Young Clyde. The dam of Grey Clyde was by Stitcher (831), bred by Sir James Graham, Netherby, Cumberland, and he by Old Stitcher (577), bred by Mr. Muir, Sornfallow, Lanark. Grey Clyde was therefore very well come, and his produce in Canada did credit to his breeding. He is described as weighing about 1,900 lbs.; somewhat small in the body; short ribbed; head, strong; heavy, masculine neck, long, and finely arched; fore and hindquarters broad and massive; good feet; good bone; broad and nicely haired. The mares common in the Markham district at that time were thick-bodied, narrow-quartered and small boned. Mated with Grey Clyde, their produce were splendid animals, showing as much Clydesdale character as some two and three cross animals of the present day. Mr. James Beith, of Bowmanville, who has furnished some of these particulars, says: "Old Grey Clyde was unquestionably the foundation of the Clydesdales of Canada." In 1845 Sovereign [124] 181, was imported by R. Johnson, of Scarboro. He was bred in Aberdeenshire, and was by Sovereign (811), a winner of the first prize at the Highland Agricultural Show in 1826. He by Farmers' Fancy (297), a winner of the Crief premium in 1823, and a son of the celebrated Glancer (335). Sovereign [124] was a brown horse of medium size, compactly built and proved a good stock-getter. He died in Oshawa in 1852.

In 1851 Mr. John Wilson, of Oshawa, imported George Buchanan [227], 181, (329), foaled 1846, bred by Alex. Galbraith, Killearn, Stirlingshire, sire King William (432), a winner of second prize at H. S. show at Glasgow, 1844; dam by Reformer (693). George Buchanan was a large bay horse, rather inclined to be rangy and coarse, but with strong, good bone. Before his purchase for Canada he gained the Kelso premium in 1850, and that for Cupor, Fyfe, in 1851.

One of the very best of the old horses was Young Comet [178] 45, (953). He was a grey, beautifully dappled, with white face and three white legs; bred by Mrs. Russell, Myreside, Elgin; foaled 1860; imported in 1863 by J. Copeland, Cobourg. His sire was Grey Comet (192), who was first at the H. S. show at Inverness in 1856, and who won many other prizes. The Comet family were quite celebrated in Scotland half a century ago, and were descended from Northumberland (571), a very noted horse, bought when a yearling, by Mr. Fulton, Sproulston.

Young Comet [178] was a horse of great merit as a stock-getter. He was one of the best sires that ever came to Canada, and one not sufficiently appreciated till he was gone. He was of medium size, had a wonderful width of chest, finely arched neck, good feet and pasterns and good action. His bone was only medium in size but of good quality. He was rather hollow in the back and not large in body. The start which Markham and the adjacent townships east of Toronto got by the enterprise of such importers has been retained, and to-day that section of Canada contains a large number of good grade Clyde animals and many first-class recorded ones.

* Agoo is the dam of Aegis, 100 lbs. 6 oz. butter in 30 days, and nearly 17,000 lbs. of milk in one year.

† Selected by and brought to America by the writer in 1869 with Fraulein (9) and Crown Princess (6), (the dam and grand dam of the great Echo, 23-7½ lbs., one year), and the bull Hollander (90).

The Best Service that Can Be Rendered.

We are quite sure, from the overwhelming number of letters that we receive, speaking well of the Journal, that every subscriber is a friend and a well-wisher, and would like to see its circulation vastly increased. We would like here to say to our patrons that if each one of them would but send us the name of a new subscriber between now and the end of the year, it would be one of the most effective forms of service that they could render both to us and to the country, as in such a case twice the number of farmers would be repeatedly reminded of the folly of being contented with a low grade of stock-keeping and farming.

Elder Bank.

This 200 acre farm is prettily situated on the western bank of the Grand River, in the township of Dunn, county of Haldimand, and about three miles from Dunnville, which is the P. O. of Mr. Andrew Armour, the proprietor. It was our privilege to make a limited visit to the place on the morning of August 10th, crossing in a row boat from Dunnville the placid waters of the Grand River, here wide as a river lake, while the grey mists of the morning had not all yet ascended. The crops here, as in all the southern counties of Canada west of Toronto, had suffered much in consequence of the dry weather. Mr. Armour's wheat, which good judges while it was growing had put at 40 bushels per acre, only yielded 22 bushels, and this is a much larger yield than the average in the neighborhood, and we may add than the average in very many portions of Canada.

Mr. Armour has made a beginning in Shorthorns, and has shown good judgment in his choice of foundation stock. The pure Shorthorn cow Letty Belle, a red, bred by Mr. F. L. Beck, South Cayuga, by Grand Duke of Gordon, by Rosebud, traces to Lady Jane (281), imported, by Sir Walter (2639). She is a neat, well-shaped cow, a good deal of the triple wedge-shape laid down by Mr. J. W. Robertson, at the Farmers' Institutes last winter as indicative of good milking properties. The bull, Lord Woodbine, a stately two-year old roan, with even, level lines and a smoothness that is pleasing, came from the herd of Mr. Wm. Douglas, Onondaga. It was got by the 19th Duke of Kirklevington, and out of the dam Woodbine, by 5th Earl of Goodness, both Bow Park bulls originally, rich in the blood of the 4th Duke of Clarence.

The horses, generally speaking, were good, but two draught mares with foals particularly attracted our attention, along with a neat, well-built driving mare, bred on the place, and evidently possessing staying powers of no secondary order. The colts, with their large, nicely rounded bodies, and strong, well-shaped limbs, show clearly what may be done by the judicious use of a good sire. The horse used in this case is a pure bred Clyde, Cumdivock, owned by Mr. Michael John, South Cayuga.

The Leicester sheep were a good even lot, the result of careful breeding and selection, which in any case is the highway to success. The ram lambs of last season—the entire lot that remained after what had been taken out for breeding purposes, brought \$6 each at Christmas time, to go to Buffalo in the face of a 20 per cent. duty. For the home market they would not have realized more than \$4.50 each.

We would fain have tarried in the neighborhood to see the progress of those engaged in the good work of improving the stock of the country, but must defer this till some more propitious season.

"A Difference of Opinion."

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—In your last issue appears a letter from the pen of Mr. J. Leys, headed "A Difference of Opinion." The letter is so full of unmanly braggardism and slander that it should not merit an answer. It plainly shows the character of its author. On the other hand it is so full of misstatements that it cannot be passed unnoticed, so permit me to use a small space in your valuable JOURNAL in answering it. In regard to the H. F. B. Association of America I will say that it covers the whole of North America, and is therefore not alone a Yankee affair, as Mr. Leys puts it. The rules prevent no honest citizen of the Dominion from becoming a member, providing he adheres to its rules, which our experience has proved are none too strict.

The rules of the N. H. B., in Holland, even go further. They will not register a cow before she is in milk, and she will then have to be passed by an inspector, who decides whether she is worthy of registration or not, no matter whether both her sire and dam are registered animals. Now, sir, you will see that under these rules the greater part of Mr. Leys' herd is not eligible for registration in any of these herd books, and can therefore only be considered as grades. All breeders of pure bred stock know and admit that a registered pedigree is the only guarantee of purity of the animals, and we are certain that no sane minded man would think of investing a dollar in a pure bred animal of any breed, which was not registered, or eligible to be registered in the recognized herd book of its breed in this country.

Why the rules of the Industrial only require registered pedigrees from one class of purebreds, viz., the Shorthorns, I fail to understand, and I trust that in time the directors will see their error and amend the rules as required, by the unanimous vote of the breeders.

Now, as to registering grades, I will say that a man who permits his cows to be led into the show ring unmilked, and represents them as milked (as Mr. Leys did), to deceive the people and the judge, is just a fit subject to register grades and sell them as purebreds. It is a deed at once disgraceful to the man and unfair to the animal, and should be strongly censured by the agricultural societies. It would be well for Mr. Leys not to throw pebbles while living in a glass house.

His allusion to us personally is very gratifying. It shows that he has not yet forgotten the defeat which he sustained through our herd last fall. If the "offcasts" of an American herd can defeat Mr. Leys' herd in every class in which they entered, what must be the quality of his herd? I will further say that it is more honorable to visit a German friend, than to patronize an institution that fosters fraud for the benefit of one influential member. Thanking you for your space.

H. BOLLERT.

Cassel, Aug. 15th.

Selecting Judges for Exhibitions.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I noticed in the May number, under the above heading, a letter from W. B. Cockburn, Aberfoyle, commenting on judges at exhibitions. He gives a Scotchman as a sample of the class of judges that are appointed from year to year, and further on he says: "After qualified judges have been appointed and got to work" (how he gets qualified judges out of such a sample, I cannot understand), "before they are through with their duties, they had received from some of the directors two or three glasses of whiskey." Again he says: "I have repeatedly seen judges not able to stand right on their feet, and yet were judging stock after they were in this condition." Now, sir, I would ask Mr. Cockburn to state what show it was where he saw such conduct. We know that Mr. Cockburn's experience at shows does not date so far back that it would be any difficult matter to find plenty others who saw the judges as well as he. From my own knowledge, and I have seen a great many more shows than Mr. Cockburn, I never once saw a judge unfit for his duties through drink. I have spoken to a number of men who have always taken an interest in

shows, and been in the habit of attending them since before Mr. Cockburn was born, and they say they never saw anything like what Mr. Cockburn has seen. It does seem strange that so young a man has seen so much in so short a time. I would again respectfully ask him to state what show it was where he saw such directors and judges, and give us a chance to look closer into the matter.

WILLIAM RAE.

Arkell, July 25, 1887.

Re Sex of Foal.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—In answer to your enquiry in reference to the colt referred to in last number of the JOURNAL, I would say that it is doing well, and, in fact, is as perfect and fine a colt as one would see in a day's march (except for the deformity mentioned in my letter). I have now come to the conclusion that it is a horse colt, with the sheath turned in the opposite direction, to what it should be, and as there is no signs of testicles, I presume they are imbedded in the hams. A friend of mine informs me that he knew of a span of horses in the old country just the same. They made excellent tough work horses, but in the season showed all the propensities of stallions, and, of course, were very troublesome.

The colt was bred from a three cross Clyde mare, and from Mr. Cheney's imported horse, Prince Imperial. Accept thanks for the interest you have taken in the matter.

WM. TREDWAY.

Highland Creek, Ont.

Veterinary.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Horse Shoeing.

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

(Continued from August.)

After the wall has been shortened to a proper extent, and in the process of shortening a smooth and even surface has been made to which to apply the shoe, then the form of this appendage should receive attention. Nature has so constructed the horse's hoof that when the wall is of proper length the outer margin of the sole comes in contact with the ground, especially at the toe, and to some extent at the quarters, which indicates that it is intended to bear its share of pressure along with the wall. In order that this may be arranged for without the use of unduly heavy shoes, a shoe with a level upper surface—not a beveled one, such as is commonly used—should be made. When the upper surface is bevelled, in addition to its not exerting pressure on all parts, that are intended by nature to do so, there is the increased disadvantage of a considerable space being left between the sole and the shoe, which serves as a favorable receptacle for stones, gravel, dried mud, etc. With a bevelled foot surface shoe horses are constantly picking up stones that become wedged in between the web of the shoe and the frog, and if their presence is not soon detected, serious bruising may result. Shoes made with a bevelled foot surface are usually made with a flat ground surface, a serious objection to which is the tendency to promote slipping. Nothing could be more favorable to slipping than such a smooth, even surface. A much more rational plan is to have the ground service abruptly bevelled, which leaves a prominent and somewhat narrow ridge on the outside, which is admirably adapted to give grip, especially if aided by the frog coming in contact with the ground.

The lower surface of the wall and outer margin of the sole are broader for pressure bearing surfaces at the toe, and front part of the quarters than the corresponding parts towards the heels, consequently the web of the shoe towards the heels should be somewhat narrower than at the toe.

During the time of year when the roads are icy, it is a matter of necessity to use sharpened calkins and

toe pieces, but it may be laid down as a rule that whenever practicable the simple band of iron or flat shoe, being as slight a departure from the state of nature as possible, in order to protect the hoof from excessive wear and tear, should be used. One great objection to the use of calkins is, that they prevent the frog from coming in contact with the ground, and consequently do not allow it to act as a buffer in breaking concussion. If it comes in contact with the ground at every step, it remains tougher, and better developed, and tends to oppose contraction of the heels. From its tough and rough character the frog is an effective agent in giving grip; in fact on any but an icy surface, it is more effectual than calkins. As evidence of this it is found, that on the asphalt pavements in London the omnibus horses get a better foothold when the frogs are let down than when calkins are used. There is no doubt they have better control of their limbs, and there is less likelihood of the natural bearing of the limb being interfered with when flat shoes are used than when a horse is elevated on calkins, which are very likely to be of uneven length. After the frog has become hard and shrunken from being raised off the ground, a horse will not go so well at first, when the frogs are let down, as he will subsequently, or until the character of the horn becomes improved by proper pressure.

Many horse-owners who have discarded calkins for their horses, that are used for light work, imagine that they are indispensable for draught horses. Certainly a prominent toe piece, from its length, gives increased leverage on a pull, but it does so at the disadvantage of the tendons and ligament behind the limb, and often leads to injury to them. There seems no adequate reason why flat shoes should not be more favorable to the health and comfort of draught horses; and it has been found that where a fair trial of them has been made, even under the most trying conditions, that they have answered well.

There are certainly some horses with poor feet, having flat soles and low, weak heels, that seem to go better with a beveled foot-surface on the web, and with calkins that prevent much frog pressure, but it is merely a case of making the best of a bad job. Bar shoes frequently afford much relief to horses that are tender from corns, quarter-cracks and bruises, which troubles those with weak heels are very subject to.

A large majority of horses are shod with unnecessarily heavy shoes. A shoe only requires to be heavy enough, in order to form a firm stay for the hoof, and to contain enough material to insure its lasting a reasonable time. Every ounce in weight added to the end of a horse's limb necessitates increased expenditure of muscular force in the process of traveling, so that the amount of exhaustion brought about when there are several ounces, even as much as a pound, in some cases, more weight in the shoe than is essential, it leads to much suffering and waste of strength. The ill-effects of heavy shoes are often seen in the shape of windgalls, knuckling, shaky knees, and enlarged joints; but of course other causes are often instrumental in causing or helping to cause these conditions.

Some people assert that heavy shoes lessen concussion, which is evidently a fallacy, for nature has designed the foot with a view to lightness, and the heavier it is, the more forcibly it must come to the ground, and consequently the greater must be the jar. One argument is that with light shoes a horse's action is lower than with heavy ones, which fact is considered by the advocates of this theory to be due to fear on the part of an animal shod lightly to throw his feet out on account of the jarring produced. But take

as an illustration an unshod horse on the softest ground, where there cannot be much concussion, and it will be found that he will not lift his feet any higher than on hard ground, unless they sink in, and he has to make an extra effort in raising them.

There seems little doubt that the reason that horses heavily shod show higher and more forward action than those without so much weight on their feet is because they are forced to make an extra muscular effort in order to get their feet forward. High forward action is very attractive, and large prices are paid for it, particularly in cities, but the legs of high steppers seldom last long, if they are worked hard; so that for steady road work only moderately high action is desirable, and it is not wise under such circumstances to cultivate an artificial manner of going by weighting the feet. In finishing off the operation of shoeing, the smith usually applies the rasp to the outer surface of the wall, and removes the size-like material which is produced at the coronet and spreads over the wall, being nature's provision against undue evaporation, and consequently tending to conserve the natural moisture of the horn, and prevent brittleness. There are many much vaunted applications for horse's hoofs, and those interested in the sale of these compounds often claim that they are a benefit to all hoofs. But a horse with a good, healthy, tough horn is not improved by them, and from their sticky character they cause the accumulation of dirt. Some horse's hoofs are naturally brittle, or have become so from unfavorable conditions, and these are improved to some extent by the use of some greasy application, raw linseed oil rubbed on in small quantities answering as well as anything else. For carriage and saddle horses an application of this sort certainly makes them look neater when led out of the stable, and on this account alone is often used. It is very evident that as little rasping of the wall as possible should be done; in fact it should be confined to making the extreme lower margin even with the shoe. There are many people that attach a great deal of importance to having the shoe fitted on when cool, as they hold that the heat destroys or impairs the quality of the horn for some distance from the part to which it is applied. It has been thoroughly proven, however, that this is a fallacy, and it is held by the best authorities that there is no means by which the shoe can be so evenly adapted to the hoof as when it is fitted at a red heat. Although the rasp leaves a somewhat even surface, still it is impossible to insure that every fibre bears its due share of weight, unless heat is used. Horn is a very slow conductor of heat, and unless the red hot shoe is allowed to remain unnecessarily long in contact with the horn, no harm results.

The Farm.

Those who subscribe now for the "Journal" for 1888 will get it the remainder of this year free.

WE want an active young man at every county and district fair this season to take subscriptions for the CANADIAN LIVE STOCK AND FARM JOURNAL. Write at once for full particulars to STOCK JOURNAL CO., Hamilton, Ont.

SPEAKING of the reduction of laborers' wages in Scotland of late, the *North British Agriculturist* says: "A faithful servant who remains for a few years in one place, gets good wages still. Those irresolute beings, who must, for the sake of nov-

elty more than anything else, have a change every half year or so, are the men who suffer, and rightly so." The problem of permanency of employment in Canada on the part of farm laborers is worthy of the most careful study. It is an ambition worth fostering in this country of cold winters, and in an age when agricultural machinery is cutting short the term of summer labor. The faithful laborer who is truly desirous to do his duty need never require to look for a place in this country, and those who know their own interests best will be slow to change when they enjoy a fairly good situation. Nor should the farmer allow a fairly good hand to leave him for the sake of a few dollars a year. Fidelity in any condition in life is well worthy of reward, and the farm hand who manifests it in looking after his employer's interests is as much entitled to reward on this account as for the performance of the labor which he does.

THE *National Live-Stock Journal* for May has this trite sentence in one of its editorials: "Some men get rich out of the mistakes and follies of others." Many a man we have known that gets rich out of the mistakes of the farmers. The latter brings his wool to market. The middleman buys it; some of the fleeces he throws aside, calling them culls, and deducting one-third from the price. If the middleman has a conscience he really thinks they are culls, in which case there is likely no mistake made, but if he is without one, the chances are that some of them are not culls. They are simply pronounced such by his heartless avarice. For the farmer there it no redress, as in all probability all the wool men in the place have combined to do this thing. So it is in a sense of other lines in the marketing of farm produce. The mistake of the farmer in this case lies here, in submitting to such a thing from generation to generation without an effort to break the yoke. Farmers should make such mistakes no more. We have a medium of deliverance in the Institutes that are being established, whereby fair play for us can easily be secured. Let us not make the great mistake in keeping aloof from it and thus allowing a means of redress to languish from lack of support on the part of those to whose aid it has come.

CLAY lands that are quite heavy are very difficult to manage as every one knows who has farmed them. They are much at the mercy of the vicissitudes of the weather. When wet they cannot be worked at all, and when very dry are too hard to work. Whatever, then, that will tend to render this tillage easier is worthy of the most careful study and practice. Until they can be thoroughly underdrained the owners thereof should give every attention to the speedy removal of the surplus surface water by ploughing them in ridges and keeping the cross furrows carefully shovelled. We are aware that two great evils accompany this system. The first is, that the furrows are an annoyance in harvest time, and the second, a large amount of nutriment in the rain water runs away from the soil and carries along with it more or less of the fatness of the land. Yet this loss, grievous as it is, is less than the loss accruing from the allowing of stagnant water to remain on any part. Of the two evils we must just choose the less. On such soils even in spring time the furrows should be carefully opened, and in autumn neglect here is great folly. Some tillers of light soils feel disposed sometimes to poke fun at the hard worked tillers of the clay in the narrowness of their ridges, but here, too, "wisdom is justified of her children." Experience has taught them that in consequence they get better crops. Although it seems

a pity that nourishment of plant life should be allowed to run away over the surface of the earth when it is so badly needed, yet this is preferable to vegetative death through watery saturation.

EDITORS are often expected to say something occasionally as to the crop prospects and the probabilities as to the markets for the farmers' products. While it is the plain duty of the agricultural editor to attend to the former, it is hazardous, if not unwise, to attempt the latter. If shrewd business men, whose individual attention is concentrated on the purchase and sale of farm produce not unfrequently make a mistake that is simply disastrous to themselves, the editor should be chary indeed about forecasting the markets. There is one advice in this line, however, that is always safe, and we confidently tender it, as its wisdom has been sustained by the experience of all past generations. It is this, *sell farm produce ordinarily as soon as the regular market for it has been established.* Taking it all in all, this is undoubtedly the safe rule, even with the less perishable articles, as wool. Storage room is required, and there is the loss of interest, which in a very few years is equal to half the original principal. In the items of grain and hay there is in addition to the storage room required, a loss in weight, and it may be from various forms of waste. In the case of live-stock, holding on to it long for a higher price, may prove disastrous. The man who keeps his aged bull one season additional while done with his services, in the hope of getting a higher price, might better take half price for him and get him away, and so of all classes of stock that have become ready for the market. When the market has fully opened, the *now* present is the time to sell.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Hints for September.

Have a fine firm seed-bed for the wheat, but do not sow until there is some prospect of rain.

Try some good commercial fertilizer on the wheat, and compare results with barnyard manure.

Be sure the land is well drained; a very good plan is to scrape the main ditch out with a road scraper before sowing, the drill drawing in the soil enough to cover the seed.

Don't you wish you had a good well of water this dry summer? Then drill in the rock at once; do not wait another year.

As soon as the corn has become glazed it should be cut, and when thoroughly dry, housed as soon as possible.

Look well to the flocks and herds all this season of short pasture. A little fodder night and morning will be a material help.

Become a member of and patronize your township show; let your neighbors and the public see what you are doing; keep good stock; raise good grain and roots, and take them to the fair.

If an agricultural fair cannot exist without side-shows and other catch-pennies, let it die. GLANFORD.

Report of the Judges on Prize Farms for 1886.

(Continued from August)

KELVIN GROVE—THE FIRST PRIZE FARM.

The casual observer, in passing Kelvin Grove, owned by Mr. Simpson Rennie, Milliken P. O., township of Scarborough, might easily be oblivious of the fact that on his right and left lay the different compartments of a farm that for some years hence shall be regarded as the most famous in Ontario, and which shall live in the story of Canadian agriculture in all time. This farm, consisting of 102½ acres, lies principally in the 5th concession of Scarborough, extending

from side road to side road, with 22½ acres across the highway on the front of the farm. The country around it is plain and level. There is an almost total absence of the romantic in nature either in the farm or the surroundings, as the running brook, the tree-clad hill, or the shady dell, with its witchery of attractions. The buildings are plain, and so of the fences. There is no attempt at display, and yet there is a perfection of neatness about everything belonging to the place and everything that is done upon it, such as we never saw at any other farm. When the farming that is done at our agricultural colleges equals that of Kelvin Grove, either in its essence or upon its surface, then shall students crowd in from all quarters to get lessons in this first and noblest of the sciences. The senior Mr. Rennie has certainly done his duty to his country in furnishing it with two such farmers as his sons, William and Simpson, have proved themselves, men of whom any country might feel justly proud.

Kelvin Grove consists of two lots of 60 acres each, with 40 acres off the north-east corner and some 24 acres opposite the southerly lot, of which six acres are bush, beech and maple, with a few venerable old pines of stalwart growth, with underwood fresh and vigorous.

As shown in the diagram, the farm could not be better divided into fields. The private road goes just where it is wanted, and not a rod further, and is in every way a model of neatness. It will be noticed that the clearing comprises but eight fields, which arrangement could not easily be improved upon on a farm of the size. No better site could have been chosen for the buildings, and the bush is in the most convenient location. The plan of the yards and the site of the orchard could not be improved upon, so that in all these particulars we assign to Kelvin Grove the full number of marks. The orchard, comprising 2½ acres, is in a flourishing condition, and is surrounded by one of the most perfect Norway spruce hedges to be found anywhere. It resembles a high fortification, sloping inward toward the top, so dense that the blasts of winter cannot penetrate it, and so high that the winds which scale it blow above the tops of the trees within; no limb in all its length protrudes beyond another, and although but some twelve years planted, it is now more than twelve feet high.

It has long been an undecided question as to whether open drains should be tolerated on farms that are under-drained. Open drains are, unless well kept, an eye-sore, and are more or less of a nuisance in cultivation, but from what came under our observation during the tour of inspection, we are not sure if they can be entirely dispensed with. The "Seed Farm" has but one open drain in its clearing, while Kelvin Grove has three, and we cannot but conclude that the former rather lost and the latter gained during the copious rains of spring time by comparative situation in this respect. It is well to reduce this number to the lowest minimum within the realm of prudence, but till the rains consent to come with less of fury we cannot altogether dispense with open ditches. The soil of this farm—a clay loam, blackish in its texture, and resting on a not over retentive subsoil of clay—is most thoroughly under-drained. We have never met with one that, in the management of the drains, suits us better. They are only placed where wanted, as shown in the diagram, and in locating them Mr. Rennie has wisely followed the contour of the land, thus placing them where nature designed them, and this holds true equally of the mains, the sub-mains and the laterals. Observe carefully that the number of outlets is kept low—a very wise provision—as these are generally troublesome from liability to go out of repair. The size of the tile for the mains is 5-inch, 4-inch for the sub-mains, and 2 inch for the laterals, and the number of rods laid is 3,200. The drains are 3 feet deep, but Mr. Rennie informs us that he would lay them deeper if the work were to do over again. The land, too, that is intended for seeding is ridged, the ridges 14 feet wide, gently sloping toward the furrows, and this, experience has taught Mr. Rennie, has proved a gain, by its tendency more speedily to remove the water. This fact is important, demonstrating as it does that in some soils under-draining will not enable us altogether to dispense with open furrows.

The obstacles of cultivation were absolutely lacking; they had all been removed, not a stick or a stone was to be seen disfiguring the garden-like surface of the farm, nor is there a prong of a stump on the plough, nor the plough or disturb the equilibrium of the ploughman.

The cultivation was simply perfect, if perfection is attainable in this line. And this was equally manifest in the meadows as in the grain-fields, and in the grain-fields as in the root crops. A war of extermination is carried on with weeds of every species. Although a few sickly stragglers of some of the different orders put in an appearance occasionally, as they will, even on an experimental plot, battle is at once declared against them, and they receive no quarter. Thistles abound in a part of the lot to the north-east, not in Mr. Rennie's possession—but as soon as one of them rears its head on Kelvin Grove it is at once cut off. In this way the nutriment of the soil is not divided between crops and weeds, and hence the luxuriant growth of the former, no difference where located, or of which species of grain or of forage plants. To show how completely Mr. Rennie has the intruders under his control, we may mention here that it is his practice to go over every part of the farm with a spade several times a year, and that now in a day, two men will get over fully forty acres.

The system of husbandry is *mixed*, though in a modified form. The products of the soil are grain more than anything else, yet, although but little stock is kept upon the place in summer, it is essentially through stock-keeping that the enormous crops are produced in the fields of Kelvin Grove. The only bovines upon the place at the time of our visit were three milch cows, one heifer and a steer, and the only live-stock in addition were two span of horses and one imported mare, and therefore we could not in our estimates give Mr. Rennie credit for what he did not possess, but in lieu of this we did make some allowance for the virtual substitute provided. Cattle are bought in the autumn, usually to the number of 15 or 16 head, and are fattened on the grains—not of Kelvin Grove, for these are sold at high prices for seed, but at least an equal quantity is purchased from other farmers which is fed to the cattle, the handsome margin of difference in the prices going into Mr. Rennie's pocket. We have here the striking picture of one farmer in Scarborough with soil, not differing materially by nature from that of his neighbors, producing a quality of grain which some of these are eager to secure for seed, and yet they are glad to obtain from the same party the ordinary market prices for their products. Can any more striking proof of superior farming be adduced than this? A careful account is kept of the minutest details. The cattle are weighed when bought and sold, and so of the feed given them, and hence the margin of profit or loss is easily obtained.

The manure is left in the yard till the time when it is to be applied, and is then drawn on the fallow land, and on what is to be used in growing roots, which necessitates but one handling, although the system is not an absolutely perfect one.

In the rotation grass is mowed two years and pastured one. It is usually broken in the fall and the following spring sown to peas, which are usually followed by barley, but sometimes by wheat. The next crop is oats, followed by fallow and roots. Barley or spring wheat is then sown and is seeded with timothy and clover, 12½ lbs. to the acre, of which two-thirds in quantity is timothy. The same kind of crop is never grown twice on the same soil in the rotation. This rotation is regularly adhered to. Only twice during Mr. Rennie's experience in farming has he failed in getting a catch of grass which caused him to depart from it, another proof of very superior farming.

During 1886, the amount in hay was 28 acres, pasture, 9 acres; winter wheat, 8 acres; re-sown with oats, as the former was frozen in winter in common with all the wheat of the section), spring wheat, 1 acre; barley, 14 acres; oats, 19 acres; peas, 10½ acres; carrots ¼ acre; mangolds and turnips, 2 acres of each; and potatoes 1 acre. Permanent pastures are not grown for the reason amongst others that they would interfere with the regular rotation.

The crops growing at the time of our visit were simply luxuriant, and this holds true of each variety. The barley was beginning to lodge, the hay was in a tangle, the oats were breast high nearly, though not yet in ear. The roots were perfectly clean although not advanced beyond the first hoeing. The mangold drills were 18 to 24 inches apart, according to variety, and the turnips 29 inches, and the drills were no less straight than the course of an arrow feathered from the "grey goose wing."

The fences were the neatest of the kind that we have ever seen, without any exception. They consist mainly of the straight rail, post, stake and wire; but

the rails are all fitted at the ends and perfectly level on the top and even with the posts, and the stakes were sawn. The posts are sunk four feet in the earth. You might look along the top of a line of this fence the full extent of the length or breadth of the farm, without detecting the slightest variation in its construction.

The buildings were suitable in a sense to the wants of the farm: the house of brick, pre-eminently so, and there was much of convenience in the construction of the barns, but we cannot countenance in this economic age the sustaining of so large an amount of roofing without receiving more accommodation for the keeping of stock, where the cold of winter is never felt. Mr. Rennie has fair accommodation, however, in this line, and cellar-room enough for storing roots, but in our estimate the outbuildings as a whole, though some of them were new and well arranged, are not quite in keeping with the long advance in other respects that Mr. Rennie has made over so many of the farmers of Canada. We may here note, and the conviction grows upon us, that the buildings best adapted to the keeping of stock in Ontario are those which have the ground compartment walled in with stone, where abundant provision has been made for light, and where the feed in the main comes from above rather than from the same plane.

The water supply is from wells, sufficiently numerous, and there was the usual full complement of farm machinery without an excess of the same, which is a most profligate form of waste.

The singular neatness about every detail of this farm was one of its unique features. Even in the most trifling details it was everywhere manifest. In the barn was some oat straw left over from the winter. It was all tied up in bundles to be sold at an abundantly paying rate in Toronto. A pile of unused rails was lying along the edge of the bush, and were piled with one end so square that the rail looked as though part of one huge log. Numbers of farmers would look upon this exactness, which is at the root of all true beauty on a farm, as an unwarranted waste of time, but a glance at Mr. Rennie's balance sheet would soon convince the most skeptical that no time is wasted at Kelvin Grove. The truth is that there is a slovenly and a tidy way of doing everything, and the man who accustoms himself to the latter method from an early day will soon be able to do as much as an other who indulges in the former. If the young men coming on the stage would govern themselves accordingly, our province would become a paradise of rural beauty in our generation.

There are so many strong points on this farm that we would fain dwell upon them, but we have already given the main features. In four particulars only was Kelvin Grove marked below the standard of perfection. A slight deduction was made on account of the dearth of tree planting, in which Mr. Rennie does not believe, on the borders of grain-fields, and in the neighborhood of drains. In the first instance shade is detrimental, and in the second the roots choke the drains. It was not marked quite full in the management of manure, and a considerable deduction was made in the lines of live stock and outbuildings. Had it not been for this—it would have reached the standard of perfection, two hundred full marks.

A word to our young men before we leave the description of this sweepstakes farm. Kelvin Grove has not attained its present proud distinction by accident or as the result of a happy combination of circumstances. In several respects others of the competing farms had by nature a most decided advantage, as in natural beauty, water supply and in other ways. It has been made what it is by the unflinching determination of its owner. The sweepstakes prize for the best farm in Ontario is not the first prize he has won, but the last of a long line, each one of which has been the direct result of personal effort. The mastery in ploughing, shooting, cross-cut sawing, have all been assigned to Mr. Simpson Rennie, the owner of Kelvin Grove, and also in a long line of physical pursuits in bygone years. It has apparently been his aim to seek pre-eminence in whatever he has undertaken, and he has sought it with a determination that would brook no denial.

A few subscribers still in arrears will please renew their subscription at once. Please bear in mind that no names are removed from the subscription list until all arrearages are paid, as prescribed by law.

Couch or Quack Grass.

BY T. RAYNOR, PRINCE EDWARD CO., ONT.

This excellent paper is from the pen of a student of the Ontario Agricultural College. We shall be very pleased to hear frequently from this source.—ED.

TRITICUM REPENS—ORDER GRAMINEÆ.

Couch grass in appearance resembles to some extent the perennial rye grass; in the former the spikelets are arranged crosswise, in the latter edgewise, but it is not so highly valued as a grass. On the contrary, it is looked upon as a most troublesome weed. It is an imported grass, coming from Europe, where in some places it constitutes the meadowland of large districts. In Great Britain it is well known as a very bad weed. In different parts of the country it is known by different names, such as couch, quitch, quack, creeping wheat grass, dog's grass, and quicks. It has a perennial root, consisting of a white jointed creeping rhizome; a smooth culm growing about 2 feet high, with leaves from 4, 8 to 12 inches long, and a spike varying from 2 to 3 inches in length. As a pasture grass it does not thrive very well with other grasses, but alone it will spread over large tracks of land in a wonderfully short time, and is very hardy.

There is also a stronger tendency to mildew in this grass than in most others. Although so aggressive in its nature, as an agricultural grass its quality is excellent, comparing well with timothy. Of nutritive qualities it contains 9.94 per cent. albuminoids or flesh formers, while timothy contains only 8.3 per cent. The proportional nutritive powers of its roots is even greater than that of its herbage. Its bad qualities, however, overbalance its good ones on account of the great difficulty of getting it out of the land when once it obtains a foothold. Of all the perennial grasses it seems to be the most permanent. You have only to injure the root with a plough, hoe or harrow, and a new sprout will immediately start up, and eventually become a distinct plant. This is rapidly hastened by the large amount of starch in the roots, and the result is that very many plants grow in the place of one. Usually branches do not grow from every joint; this occurs only when the roots are injured in some way. It is easily transported from place to place, either by means of seed or roots. For instance, a very common way of its introduction into a new district is by purchasing young trees from some nurseries, where it may occur among the roots. The seeds of this plant may also be present in other grass seeds, but as a rule they may be easily detected.

Its mode of growth, as we have stated, makes it very difficult to exterminate. Some methods, however, have been tried with success. We do not pretend to say that by any of the following methods every plant will be destroyed, but we do say that complete control may be obtained over the worst beds, by patience and perseverance in active work. We have had considerable experience with the weed, and have seen many fields literally thatched by proper efforts made to produce paying crops. In eastern Ontario it is very common. Some of the means to which we resort for its extermination are as follows:

1. Taking an average case for example, we would sometimes plough the piece of land under consideration once in the fall if we had the time. If not, we leave it until the following spring, after seed time, and prepare it for a summer fallow. (a) In this case we should use, after the first ploughing, the gang-plough only, as the roots do not penetrate very deep in the soil. It should be ploughed three or four times during the summer, choosing the warmest and driest times in the season. Weekly, if possible, it should be cultivated and harrowed thoroughly. The new spring tooth cultivators are excellent implements to bring the quack roots to the surface and expose them to the hot sun. Plough deep in the fall, and if there be any roots left, ridge up the piece. (b) It might be prepared for corn or root ground, when thorough cultivating, and hoeing at driest times of the year, prove effectual, and (c) perhaps the most effectual of any is to prepare as for summer fallow, giving it two ploughings in the spring, and sow buckwheat early. Directly it comes in full bloom or a little before, plough it under. It may be knocked down by attaching a chain to the plough-beam and whiffletree. Follow with harrow, etc., and sow the second crop of buckwheat, which may be harvested or ploughed under. The buckwheat seems to smother the quack out by shading the soil, thus preventing the light from reaching it.

It also adds to the fertility of the soil at the same time. We find it is best to kill the quack in the soil, if possible. It is very rich in plant food.

2. However, in extremely bad cases we have to plough, cultivate, harrow; the horse-rake is then applied and the quack is raked into winrows. These may be burned or carted off the field. These operations are required repeatedly through the course of the season, and at dry times, if possible.

3. After removing a spring crop, plough to the depth of three or four inches with gang-plough, cultivate and harrow as before, but in the fall or early winter, after a severe frost, which freezes so that a crust is formed, take the big plough and ridge the field up as for turnip drills. This allows the frost to act more readily upon their roots, and in the spring it will be found that the roots of the plants are heaved out, so that with the cultivator and harrow the most of them are brought to the surface. We have tried this method with good effect.

4. In seeding down a field with quacky patches, over these patches sow the grass seed very thick. This will give a fine short growth of herbage, but will smother the quack.

Robbing the Land.

[This paper was read by the Editor before the Ontario Creamery Association, held in Toronto, 24th February of last winter.]

This grave offence against country and self may be committed in a two-fold way, at once positive and negative. The former consists in taking away from the land its rightful due, and the latter in withholding the same from it, and the effects in either case are baneful. When the elements of plant food are taken away from the soil without being restored in some other form it is robbed, as in continuous cropping and marketing of the grain or fodder; and when the elements of fertility are allowed to waste, as in the leaching of manure, it is also robbed. In no instance has this ever been done since the dawn of creation without some person having to pay a heavy penalty exacted by indignant nature.

Certain elements of plant food, as nitrogen, phosphorus and potash, have been committed to the soil by a beneficent Creator, in most places in a bountiful but not in an unlimited degree. Every crop grown upon a given area is a drain upon this fund, and when the amount of this plant food removed is not given back in equal quantity in some other form, it will surely in time be exhausted, just as surely as a bank fund will come to an end when there are repeated drafts without any fresh deposits, hence, when lands are repeatedly sown with only a scant return made to them, but one result must be looked for eventually, and that is a most hopeless sterility.

The truth of this position is so apparent that it scarcely needs demonstration. A little child knows perfectly that where ten apples are his property and one of them is eaten every day, in ten days they will all be gone, but that if on each successive day he puts back another as good as the one removed, at the end of the ten days he will be just where he started. So, if a given area has plant food just sufficient for ten successive crops, and these are grown one after another, in ten years the supply is gone, but if each year, or indeed at irregular periods, an equal amount were given back, the land at the end of the ten years will just be where it was at the outset, neither richer nor poorer.

To expect exhausted soils to renovate themselves is a vain hope unless it be through the rest of long years, and the accumulations which an increasing vegetation always gathers. The restoration of fertility is never by miracle, for since that eventful day when the sons of the morning looked down from the ancient hills of immortality upon a newborn world, not one material particle has been added to our earth, fully equipped for a voyage through the fields of space, till time shall be no more. So that to expect potash to be replaced without giving nature time to do it, or replacing it in some other way, is a delusive hope.

That lands may be sustained in undiminished fertility is made very clear by the processes of nature. We can readily conceive that American savannas are vastly more fruitful than at the commencement of our era, and simply through the accumulation of plant food grown upon the soil which enabled it more and more liberally to feed itself. The North American forest-tell the same tale. The annual self-enrichment given to themselves and by themselves every autumn, continuously increased the capabilities of the soil, so that

each successive generation of young trees came into existence under conditions more favorable to vigorous growth than the preceding.

But the reckless hand of man appeared upon the scene and soon all was changed. In a single generation many of our farms have been so ruthlessly plundered of the accumulations of long centuries that the soil which would sustain an oak that could defy a thousand tempests, will not now sustain a stalk of wheat in a July breeze, if indeed it produce it. What has been done by the hand of nature unaided, can surely be done by nature with the aid of man, so that when man appears upon the scene, instead of an ever increasing deterioration of the soil, culminating in barrenness, as is so often the case, the process should be reversed, and there should be instead a constant process of enrichment going on.

We are not sure that the past of any country affords an illustration of this, which, instead of dislodging us from the position assumed, brings an awful charge against the prodigality of the race. Britain, perhaps, makes the nearest approach, but we are by no means sure that Britain, under the rule of Queen Victoria, contains a larger store of the elements of fertility than under the rule of Julius Caesar. Yet it need not be so, as Britain, with all her importations of artificial manures, throws vastly more of the elements of plant food into the Atlantic every year than are borne to her shores by the ships of nations, and dug from the bowels of the earth by her miners.

There is nothing, perhaps, of which men are so prodigal as of the elements of fertility. That hideous excrement on the society of the country, the miserly farmer, so penurious it may be that he will not drop a copper into the collection box on Sabbath, allows his manual resources in many instances to have their richness extracted by the winds, washed out by the rains, or devoured by that ravenous self-destroyer, fire-fang, the insatiable appetite of which is only appeased when the elements of plant food are gone. Men who would chafe over the loss of a lamb or a bird will allow streams of fertility to run away without any regard or concern.

Robbing the soil of the elements of her fertility is the greatest physical calamity that can come upon an agricultural country, worse than war, for after the frightful devastation of the battle-field, a patient peasantry in a fruitful country can soon remove every trace of its destructiveness. Worse than pestilence, for other people can build happy homes upon the graves of a decimated population. Worse than the earthquake and the tornado, for the pathway of destruction may soon be re-clothed, even by singing forests rejoicing in the rocking of the breezes. Worse than ignorance brooding over the land as a dark cloud, for aggressive influence from abroad may dispel this; and worse than the most scandalous misgovernment, for, from the death-throes of its latter end, the birth of complete renovation may be realized.

But once rob a country of its fertility and it becomes a desert. The old school definition for a desert ran thus: "A desert is a large tract of land or rock where nothing will grow," but with all due respect to Professor Morse, the compiler of that book, we hold the definition as very incomplete, as a desert need not be large, nor need it of necessity be composed of sand or rock. We think if the old man had said a desert is a piece of country destitute of vegetation, his definition would have been at once more complete and comprehensive. Gauged by this standard it is quite possible to make a desert of ordinary clay, or even of the alluvial deposit of river-beds. Any one who looks upon our language as extravagant has but to visit the wastes of Carolina and others of the Southern States, where hundreds upon hundreds of acres of soil, where the negro once "toiled amid the cotton and the cane," are now completely abandoned, as, through long years of successive robbery, they have become so sterile as to be considered unfit for cultivation.

Once cripple the productiveness of an agricultural country and you strike a severe blow at her prosperity, you tap the fountains of her great strength. The degree of the productiveness of her soil is the great tidal wave which floats the ship or leaves it on the strand. With manufactures it is different, for so long as the mountain torrent turns the wheel and there is an outlet for the goods, it matters not whether the hills contain stone or rock; but when the resources of the soil are the chief sources of strength, it becomes both the statesman and the peasant, each to do his utmost to retain the elements of plant food in the soil.

(To be continued.)

Rambling.

Cornwall, on the St. Lawrence, in the county of Stormont, is a thriving town. One of its two cotton factories is of large proportions, giving employment to about a thousand work hands. The canal, of the revenue tariff period, is a fine arrangement for the promotion of shipping of the larger classes. The town, numbering about 7,000, is pre-eminently one of soft maple shades, but the light soil in several of the streets is an annoyance in dry weather.

Strolling out of the town, we accosted an elderly old lady watering her cows. She said they gave each a pail of milk a day when fresh, but that now they get but little to eat, owing to the dryness. We believed her. Five hundred thousand dairy cows are in the same plight in the province—and why? Because the owners sowed no supplemental feed. This discouraging state of matters cannot be bettered now for this year, but let us live for the future. Many of us can largely profit by the advice given us by Mr. Hobson, in his paper on soiling in this number of the JOURNAL.

MONTREAL TO NEW YORK.

Leaving Cornwall on the evening of the 22d August a short run brought us to Montreal, with its quaint little old station-house, a long way older in its plan than railroads, but which is soon to give way to a better one of grand and imposing dimensions. Then there is the new station-house for the C. P. R., in connection with the new short line of that railroad to Toronto. For a good long distance westward the lines run side by side, the trains of which run rapid races, after the example set them by the mighty corporations of the Dominion. Getting on board the "Concord" 8.30 p. m., by line of railway, like thieves in the night, we entered the land of Uncle Sam. The amount of traffic done on this road, the Vermont Central, must be large. The locomotives did seem to tug so hard at stopping places to get under way, and the shrill whistle of our own locomotive seemed all the while like some fell demon of the night to torture the air and the sleepers in the train.

It is true that first impressions are lasting, and we shall never forget the impression made upon us by the first glimpse of the "Old Granite State." The train was about to cross the Connecticut at Bennet's Falls. The rain was falling fast and the gray mists were slowly lifting from the environments of the hills. Lying down in a land where the iron horse was setting fire to the fences, and the meadows were only brown, and awaking in one where the little rills were holding carnival, was surely a transition, and to us it did seem as though the grass in the river basin and the trees all around that clad the hills, were greener than green. Large mills and manufactories were on the river bank, as American enterprise is careful not to allow a waste of power within her domain.

On went the iron steed up one bank of the river, and ever and anon another marked its course in going down on the other side. The contrast to the Ontario landscape was striking. Fences have almost disappeared here and the prevailing agriculture consists mainly of corn and meadow on the river flats, with pumpkin vines creeping out stealthily like serpents into the bordering meadows. The soil is evidently laboring under disability or naturally weak, as the corn was short and light, and the numerous outcroppings of couch grass and of ragweed spoke of non-vigilance in methods of cultivation. But the farm houses were very chaste in their style, presenting an entire absence of barn-like appearance. On the other hand the barns were too house-like in their dimensions, indicative of leanness in the fields. The river fringes were so pretty—sometimes young butter-

nut, these again giving place to sumach with umbrella heads, and these in turn to locust or slender pines or graceful willows. Brakes and ferns and creeping vines all commingled, like the incorporating influences of the great American commonwealth.

But where were the grand old trees? Like the forest brave who had wooed his dusky mate beneath their boughs—gone—all gone, and though pyramidal shapes dot the landscape, here, there and everywhere, they are of a growth more modern than the settlement of the State. The farms on the farther bank were very pretty, but the jealous mists of the morning half hid the beauties of the mountains in the background. The landscape had quite softened in the direction of Springfield. The corn was nice and rank and strong, the potatoes well cultivated, and on all hands there were tokens of abundance of rain. But the veritable ragweed was as thick as ever in the meadow bottoms alongside the plots of tobacco, which even more obnoxious weed was making luxuriant growth.

Holyoke, the first stop short of Springfield, also on the Connecticut, is a wonderful instance of the business genius of the American people. Taking the advantage of a slight descent in the river bed, they have built a large, strong dam, which has raised the water several feet. It is then led along a system of canals, which enables it to be utilized no less than four times in succession. Here are located paper mills on an enormous scale, and everything seems in keeping in this beautiful town.

Hartford and New Haven, the capitals of Connecticut, are handsome-looking towns. They are connected with New York by the N. Y. N. H. and H. R., which follows the depression in the land so faithfully that the view of the country is much circumscribed. Around Hartford fruit finds a natural home, but on toward New Haven is a stretch of light soil, very light, on which in many parts only wild parsnips seemed to grow, and these appeared to be discouraged in the effort. Toward New Haven and beyond it were vast levels of saturated lands on which grows a coarse kind of marsh hay, with lower levels interspersed, where flags grow, and still lower levels, where the water broods the year round. Every summer the scytheman goes out scythe on shoulder to mow these meadows down, whether the "bobolinks" are there or not. Here is a task for American ingenuity to invent machines for mowing in the marshes where the mower's tread sinks. How the hay is put in stacks we could not learn, but these contain about a load or two each, and rest upon spiles about a foot higher than the ground, with a pole running up through the centre of each. Field after field of this meadow was on either hand, more particularly in the neighborhood of Long Island Sound.

The way from New Haven to New York leads over low stretches part of the way, and through depressions, which prevent our getting a fair view of the landscape. The size and abundance of the shades attest the age of the settlements, as many of them had attained a forest growth. As you advance toward New York the magnificent, the Jerseys in the milch cow line are the order of the day. They feed beneath the weeping willows in the pastures, hedged in by low stone fences not very carefully laid. If scrubs were put in such enclosures they would be quite oblivious of fences, and would be able to roam as in primeval days, over what would be to them a boundless common. "Castoria, for which children cry," in huge, light yellow characters, is the principal adornment of the ends of buildings, and is dispossessing "Suzodont" of its monopoly of the great stones and fences of the country, another evi-

dence that the patent medicine men conclude that fools are not all dead yet.

The magnitude of the task of giving an adequate description of this greatest city of the continent forbids the attempt just now. In a city where the inhabitants travel on roads high in air, and where the merchants are princes in wealth, and where these princes abound numerically, one might describe till wearied without getting over the threshold of description. Staten Island, opposite the city, fifteen miles long and six miles broad, is being fast turned into one vast pleasure ground, chiefly through the efforts of one Canadian, whose wonderful business genius was attracted by that land of opportunities.

The New York Central and Hudson River R. R. is a mammoth instance of what enterprise backed by capital will accomplish. With two tracks for freight and two for passenger trains, accidents are impossible by trains meeting. Like travelers in too much of a hurry for exchanging salutations, the crossing trains do not even whistle when they meet. A seat in a car occupied at 9.50 in the morning and vacated in Buffalo at 8.30 p. m., with only four stops in a distance of nearly 450 miles, is an every day occurrence on that road. What ungrateful beings we are! We are not satisfied when the trains stop often, and we are not when they don't. The very continuance of rapid travel for one day becomes monotonous.

The first run, 140 miles, is up the valley of the Hudson, on the left shore, where the river widens and narrows, as all rivers do in their course. The islands of the river are bold and less winning than those of the St. Lawrence, and the banks are grand and grander in the upward ascent, although our day was unpropitious, for the thoughtless mist persistently hid the beauties of the higher heights.

During that entire distance no trace of farm or farmers is seen, the only thing in the line of agriculture being flowery water meadow, occasionally spangled with purple bloom. Now there is a bolt through a tunnelled ledge of rock, and again by some falling watercourse, singing its endless song.

A short run from Albany brings the Mohawk valley with its wide fields of tasseled broom corn and richer growth than we had as yet seen. At Little Falls the waters tumble down a little, over a succession of low ledges, and in their gambols drive a number of knitting mills. Indeed, every place is a centre of some kind of manufacture. At Palentine Bridge the name of the immortal "Wagner," whose genius has contributed so much to the comfort of travelers, is kept alive by the foliage plants which every season in his sloping lawn form the letters of his name in living characters.

Toward Syracuse hops flourish and products of the nursery, and here in a meadow were herds of Holstein cattle, very suggestive in such a place of the names of Smiths, Powell & Lamb. Sometimes Jerseys and Hoistens were in the same field, without a word of controversy going on between them.

Buffalo is a wonderful city when we place Fort Erie, its equal in age, alongside of it. One cannot help but ask what witchery did the eastern shore of the Niagara possess at that point more than the western to make so great a difference in the two households sprung from the one parent stock.

From what we saw of farming on this journey we concluded that Ontario has no reason to hang her head when comparison is made. The houses as a whole are light, neat, attractive and graceful, mostly of wood and almost invariably painted. Many of our good people here might learn a lesson in tasteful ornamentation of surroundings from our American coun-

tries. With some exceptions the architecture of our houses is woefully monotonous, but in barns we are ahead, and, we are inclined to think, in what we put in them. Our fields are cleaner and our fences better; but we must not feel too self-satisfied, for the field of achievement ahead of us is yet so vast, that the strength of our vision cannot even take it in.

The Great Central Exhibition.

The annual exhibition of the Hamilton Great Central Fair Association takes place on the last week in September, and the energetic directors are busily engaged making provision for the annual event.

The public generally have very little conception of the time and labor expended in carrying out the details of a great agricultural show, and much credit is due to the gentlemen who year after year work unremittingly for the success of what is undoubtedly the great event of the season, as far as Hamilton is concerned, for on no other occasion do we find so many people attracted to the city from all parts of the Dominion as come to witness the unrivalled production of this favored paradise of the agriculturist and horticulturist.

The association have been particularly fortunate in the selection of their grounds, for the beauty of the situation and the character of the soil gives them many advantages over other localities during the showery weather which often prevails at fair time; and we are pleased to notice that the directors have taken into consideration the comfort of their visitors by erecting a substantial grand stand, with seating capacity for 1200—a boon for which the public will be very grateful.

It is difficult to find novelties every year to lend additional attractions to the somewhat stereotyped character of our fairs, but this year the directors of the "Great Central" are adding a few of the more select features of the "Hippodrome" to satisfy what has become an established adjunct to the modern exhibition; although there are some who question the propriety of this innovation. An immense labor demonstration will be one of the features on Wednesday, the "tillers of the soil" will hold the reins on Thursday, and the merry successors of the executive of today, in the shape of the youth from school, will make his presence felt on Friday. Those desirous of seeing everything without being crowded will select Tuesday afternoon.

Report of the Bureau of Industry.

The summer temperature and sunshine records of Ontario this year show considerably higher averages than those of the five years, 1882-6, but the average of rainfall is considerably less. The mean temperature of May was 8° to 10° higher; of June, 1° to 2°; and of July, 6°; while the highest temperature exceeds the highest in the five years by 7¼°, the July record ranging from 90° in Simcoe to 100° in Hamilton. The sunshine for May was 40 hours, and for July 41 hours in excess of the average of the past four years, and for June it was 30 hours less; for the stations from Toronto westward the July average of this year was 321 hours, against 261 hours for the four years. The rainfall of the three months in the west and southwest, centre and east and north-east districts was 4 inches less than the average of the five years, 1882-6, but only 1½ inch less in the north and north-west district. In the latter the fall of July exceeded the average by nearly an inch, being 1¼ inch more than in the eastern district, and 2 inches more than in either of the others. The general effect of the long period of drouth was accentuated by the high temperature and clear sky which prevailed throughout the maturing stage of cereals.

Fall wheat has suffered from a succession of reverses extending all through the growing season. First came the severe night frosts and the cold dry weather of early spring, and then the extreme heat and drouth

of summer, which continued up to the ripening. The effect was to cause the crop to grow thin on the ground, with short heads, and the grain under the usual size. Generally, however, the grain though small is reported to be plump and bright, with the exception of a few localities in central western Ontario, where it was shrunk by rust. In other localities the Hessian fly and the midge did some injury. Where threshing has been reported, the yield runs generally from 10 to 18 bushels per acre, the average being about 16 bushels, or 5 bushels less than the average of the past five years. The general yield will probably not exceed two-thirds of an average crop, the estimate being 14,435,505 bushels, against 20,635,843 for the average. Many correspondents, however, console themselves with the reflection that after all fall wheat has been the best crop of the season, the heat and drouth having so seriously affected all the cereals. Spring wheat is almost a total failure in western Ontario, and only a few districts in the east report even a fair crop; the estimated yield is 4,500,000 less than the average of the five years, 1882-6. The harvest came in unusually early, reaping becoming quite general in the south-western counties during the first week in July, and in the northern and eastern districts about ten days later. The wheat was taken off in most cases without a drop of rain, and was therefore secured in excellent condition. The labor supply was generally ample, owing to good harvest weather and the increasing use of self-binders and other labor saving implements.

Owing to the prolonged heat and drouth, barley was ready for cutting almost as soon as fall wheat. Some barley was cut as early as the 8th of July, and from the middle to the end of the month harvesting was general. This early maturing had its effect on the berry, which is reported as rather small, and likely to prove two or three pounds light in the bushel. Early sown came out best, both in plumpness and quality. The yield runs all the way from a half to a full crop, and the straw was short all over. In the extremes of Bruce in the west and the St. Lawrence counties in the east, cases of rust are reported; but elsewhere it does not appear to have done any harm. The redeeming feature of the crop is the splendid condition in which it was saved; for though lacking in size and weight, the sample is of a remarkably bright color; in fact it is many years since the barley crop of the province was saved so free from discoloration by rain. The estimated total yield is 17,436,322 bushels, being 2,136,000 bushels less than the average of the five years, 1882-6, although the breadth in crop is 50,000 acres more.

Saving a few fields of late grain, the oat-harvest was finished throughout the province by the end of the first week of August. From almost all the counties the reports are well agreed as to the injurious effect of the drouth. In the Lake Erie, Lake Huron and Georgian Bay counties, and in the Northern districts, early sown fields matured fairly well; but elsewhere the general complaint is that the grain ripened too fast, turning white with the extreme heat. As a result, the kernel is shrunk and light, while the yield of grain is small compared with the quantity of straw. In some places rust has injured the crop, and in others complaint is made of the ravages of grasshoppers. The estimated yield of the province is only 30 bushels per acre, whereas the average yield of the past five years was 37 bushels. The total estimate is 3,000,000 less than the yield of last year, and 5,000,000 less than the average.

The rye crop, of which there is but a small area grown, was perhaps not so seriously damaged by the drouth as other crops, from the fact that it was further advanced before the effects of the long continued dry season began to be felt. The grain, however, is more or less shrunk, and the estimated yield does not reach one half the average of the past five years.

Of no crop are more variable reports given than of pease. A vigorous growth appears to have been made up to the forming of the pods, when the drouth began and resulted in their being imperfectly filled, although from many points a good yield is reported. Early sowing was the salvation of the crop. The straw is bright in color and will likely be in great demand for fodder owing to the shortage of the other straws. A few cases of injury by the wire-worm have been mentioned, but the pea-bug is almost unheard of. The estimated yield is nearly the same as the average of the five years, 1882-6, and 3,000,000 bushels less than last year.

Indian corn will be a short crop, with the excep-

tion of a few localities, in moist situations, or where the planting was done unusually early. In many fields no ears have formed at all, and the stalks are stunted and partly dried up. Fodder corn is also very light. Beans are almost everywhere a failure, owing to the excessive heat in the blossoming season.

The prospect of the potato crop can be fairly indicated, but the other roots have arrived at a critical period when everything depends upon rain. The drouth told severely upon potatoes, especially on late planted fields, and the bug appeared in unusually large numbers. As a rule, the yield will be small; there will be few tubers in a hill, and these will doubtless be of smaller size than usual. The fly and the grasshopper injured the turnip in several counties, already thinned by the dry weather at the planting season. Early rains may yet make an average crop of turnips, mangel-wurzels and carrots, but otherwise these roots must be a decided failure.

Though the drouth has reduced the bulk of the hay crop, its effects have not been so serious as might have been expected. The weather during haying was of the most favorable character possible, and except that in some cases the crop may have been a trifle over-ripe, it has been housed in prime condition. As to the aggregate yield, it appears probable that owing to increased acreage the crop will be little below the average. The clover seed crop will prove as nearly as possible a total failure, and much of this year's seeding will amount to nothing. Alsike withstood the spring frosts and summer drouth much better than red clover.

STATISTICS OF FIELD CROPS.

Crops.		Total yield.	
		Bush.	Yield per acre.
Fall wheat	1887	14,435,505	16.2
	1882-6	20,613,843	21.0
Spring wheat	1887	6,040,440	12.4
	1882-6	10,530,031	16.1
Barley	1887	17,436,322	22.7
	1882-6	19,572,730	25.9
Oats	1887	50,604,590	30.1
	1882-6	55,333,393	37.1
Rye	1887	913,518	13.4
	1882-6	2,102,453	16.9
Pease	1887	13,133,665	18.1
	1882-6	13,084,274	21.6
Beans	1887	304,086	15.0
	1882-6	495,148	21.9
Hay	1887	3,093,610	1.36
	1882-6	3,099,535	1.42
-1887—acres—1882-6-			
Corn		163,893	183,970
Buckwheat		64,143	63,248
Pasture (cleared land)		2,528,939
Potatoes		140,283	159,233
Mangel Wurzels		17,974	17,191
Carrots		9,110	10,101
Turnips		105,322	96,537

STATISTICS OF LIVE STOCK.

	1887.		1886.		1885.	
	No.	No.	No.	No.	No.	No.
Horses:						
Working horses	296,504	300,682	311,587			
Breeding mares	111,907	107,000	95,993			
Unbroken horses	166,050	161,967	151,759			
Total	574,461	569,649	559,339			
Cattle:						
Working Oxen	13,763	14,474	15,302			
Milch cows	748,321	746,897	750,005			
Store cattle over 2 years	392,880	418,079	373,856			
Young and other cattle	793,600	838,783	837,317			
Total	1,948,564	2,018,173	2,076,480			
Sheep:						
Coarse-woolled over one year	673,935	790,652	908,762			
Coarse-woolled under 1 year	413,775	476,970	447,952			
Fine-woolled over one year	183,148	206,371	176,248			
Fine-woolled under one year	124,973	136,956	122,643			
Total	1,395,831	1,610,949	1,755,605			
Pigs:						
Over one year	206,444	274,487	225,512			
Under one year	652,873	625,638	596,750			
Total	859,317	900,125	822,262			
Poultry:						
Turkeys	409,596	522,774	438,231			
Geese	428,055	493,756	476,942			
Other fowls	5,600,708	5,952,445	5,431,630			
Total	6,438,361	6,968,975	6,336,805			
Wool:						
Fine	3,705,654	4,480,923	5,161,975			
Coarse	957,595	1,066,944	924,891			
Total clip	4,663,249	5,547,867	6,086,866			

First Prize Essay

ON "THE RELATIONS BETWEEN EMPLOYERS AND EMPLOYED IN CANADA, WITH SPECIAL REFERENCE TO THE FARM, WITH A VIEW TO IMPROVING THESE RELATIONS."

(By the Editor.)

That the subject we now approach is one of exceeding delicacy, is apparent from the little that has been written upon it hitherto. While the pages of our agricultural papers are usually well filled with articles on everything else relating to the farm, one will often search their pages in vain for a line bearing upon the subject of this essay. If the relations between employers and employed in Canada are what they ought to be, this silence is warranted, but if they are not (and we do not think they are), it is ominous, and cannot but arise from indifference on the part of those who conduct those papers to the best wants of their patrons, or from a cowardice, that is as ignoble as it is contemptible.

The war between labor and capital has been waging through almost all the centuries, and seems to be increasing in its intensity as the years roll on. At no period of earth's history, perhaps, have the combatants assumed an attitude so determined, and seemed so little inclined to sound a truce. The arteries of all the channels of trade and manufacture are clogged with the sediment of trades' unions, and the citadels of combination are towering high in every country of the world. The nations of both hemispheres are convulsed with the continuous upheavals of combination, and the angry cloud is advancing which may deluge the unsettled order of things with a downpour of bitterness, after having strewn it in the fury of the tempest that announced its approach.

To investigate the causes that have produced this labor chaos in the general, with a view to its removal, would be a huge task, inasmuch that the twenty-five pages assigned as the outer limit of our effort might be filled to overflowing, without having got far over the threshold of our subject. We shall not attempt it, but confine ourselves solely to the consideration of the relations between employers and employed on the farm, with a view to improving those relations.

Trades unions, through their representatives and manufacturers, by means of conference, are trying, from time to time, to harmonize the unharmonized relations between their respective interests, and although the relations of labor on the farm are not trammelled as yet with the questionable aid, if not the positive curse of combination, they are not in that wholesome condition which would enable them to revolve with but little friction. With our determination to write upon this subject looms up the magnitude of the task. Owing to its extreme delicacy scarcely a line can be penned which will not probe the sore of somebody's defective practice, so that approaching it is like taking a dog by the ears, and since we may search the literature of Canada, through and through, without finding one line that may serve as a watermark, we feel as though we entered a region unexplored. It is as though one launched his bark on an unknown sea, or piloted his vessel through the treacherous reefs and mists of a rock-bound shore, or started on a journey through the tangled under-wood of a forest, never trodden by foot of man, and abounding in pitfalls and snares and wild beasts.

Like the surveyor endeavoring to strike a straight line through the forest, we shall point the needle toward the pole of truth, and every giant tree, or sapling even, of practice, that is not good must come down, and if the words that we shall write give pain to any one, we ask them to bear in mind that we use the lance not from any pleasure that we derive in its use, but because we felt that the exigencies of the case required it. The thought that pain should result to any one, though it be the pain that accompanies the probing of the sore, with a view to healing, casts a long shadow on what would otherwise prove to us a source of unmingled pleasure.

The relations between employers and employed on the farm in Canada are all *awry*. They may be compared to the different vertebrae of a backbone, almost every one of which is out of joint, and the great wonder is that the requirements of the case have not set many skilled anatomists at work long ago to hinge these again. Like the playthings of a wanton child who has got the mastery of his mother, those relations are strewn about in a confusion that is almost hopeless, and were it not that manufacturers are coming nobly to the rescue by the labor-saving machines they

are producing, there is no saying what the end might be. In speaking of the unsatisfactoriness of those relations, no language should be considered too strong, for in reference thereto, "that which is wanting cannot be numbered," as we shall see further on, so that we have grave fears that the very wheels of farm business would stand still were it not for the assistance that the implement manufacturer gives. Why, then, should these interests ever be looked upon as antagonistic to those of the farm, and if any difficulties arise between those two wings of the one great army, why can they not on every occasion be adjusted by amicable conference?

We were minded once to write an article, by request, on the wisdom of men of capital employing a portion of it in carrying on large farms and breeding establishments throughout the country, as in Britain and other lands, but that article has never been penned, for relations between employer and employed, continuing as they are, we are more and more convinced that it would be unwise on their part, to make any such investment, unless prepared to exercise a close supervision of the work, standing on the watch-tower in the day and remaining in ward by night. One of the ablest men in Canada wrote a clever article on "Gentlemen Farmers," which appeared in one of our agricultural monthlies not long ago, and while we agree with the writer perfectly as to the desirability of this class of farmers—men who have money, and who are not afraid to expend it in the line of progression—we have grave fears that the order would soon become extinct in Canada, when we think of the paucity of farm labor and the nature of the amalgam, containing—as it does so large a proportion of the admixture of baser metals. We have frequently been urged by those in high places to use every effort of the pen to induce British capitalists to leave the land, from every part of which at present a universal wail is ascending over the depressed state of agriculture, and to bring with them their flocks and herds to feed beneath the bright skies and in the bracing air of our wide Dominion. But why should we advise them thus, unless we state in an appendix, that to succeed they must bring their cattlemen with them? Success in stock-keeping in Canada is extremely difficult to attain in the meantime, if dependence is solely to be placed on the present class of native farm laborers for conducting it. We have as yet met with but few who can be pronounced successful in the business who did not get their training beyond the sea, unless they were stock-owners themselves; so that before relations will be right here, a new race of farm laborers must grow up who know less about swinging the axe and more about keeping cattle.

We shall view the relations between employers and employed on the farm in Canada in their *social, material and moral* aspects. We build the pillar of our argument upon the pedestal that in any country—human nature being as it is—where there is a superabundance of laborers, there will be a tendency on the part of the employers to *grind* the employed, and where the converse of this is true, there will be a tendency on the part of the laborer to play the *tyrant* with the master. There is a scarcity of the right kind of laborers in the summer season in Canada, throughout all her borders; hence the employed on the farm have matters pretty much in their own hands, and hence in a great measure, arises the unpleasantness and unsatisfactoriness of the relations between this class and the farmers who employ them.

The correctness of our assumption here is shown in the eagerness with which a suitable class of labor is caught up, in the swarms of weeds that foul our fields and choke the growth of our grains, the deplorable loss of crop, the result of sowing it unduly late, and in the large amount of hay that is turned into straw, and of golden grain that is allowed to strew the earth with what, under other circumstances, would be the most sinful prodigality, but which is lost from an insufficiency of harvesters. We behold it in the stiffened bodies and bent shoulders of our yeomen, who, above all men, should have a fine physique and a manly bearing. We see it in the hollow cheek of his patient wife, laboring through all the years of her wedded life beneath the curse of Canaan, and we meet it in the labors that are saddled on the boys of the farm before childhood leaves them, crushing out of them all the spontaneity of that young life that is the peculiar charm of youth. Many boys of the farm have no youth; like the children of the factories, youth is cut out of their course, and there is a half-heartedness and a sickness even in their play.

Why this scarcity of laborers? Ask the wide fields of the prairie west, with her great rich belts of *Humus*, calling out to our laborers to come and partake of its fatness. Ask the farmers who *compel* emigration, by the practice so common of discharging their work hands every year on the approach of a Canadian winter, with the annual visitation of its icy legions from the Hudson's Bay, thus forcing them to live either upon the earnings of summer or to beg or starve, as, like many of the creatures of the wild wood, they cannot have the solace of hibernation. Ask, too, the depraved side of a fallen nature, which so often prefers precarious life in the city, with its endless succession of attractions, sometimes for its benefit, but oftener hastening its ruin. Strange that those who swarm from the country to the city cannot see the inscription on the side-posts of the gates. It runs thus: "Of all who enter here, but one in a thousand shall ever attain to riches. A few may obtain a competency, but with most it is a neck-to-neck life long struggle to keep the wolf from the door." Then there is that constant tendency in the human mind to achieve its independence, or in other words, to become its own master. This, in the days of the past, was within the reach of almost every farm servant, as the price of lands were low, and although it is different now, this motive prompts a considerable number to work away all their days failures on rented farms, who might put their money in the bank every year, if they would but submit to the directions of an employer.

SOCIAL RELATIONS.

In the social relations between the employers and employed on the farm in this country, there is much that is out of joint. In a land where "Jack is as good as his master" is a favorite motto with the employed, it must fare ill with the masters when there is a scarcity of laborers. The temptation is very strong in "Jack" sometimes to tell his master on his return from a journey to put out his own horse, and to say to the mistress when requested to carry a pail of water from the well, to carry it herself, clenching each statement with the rivet that he has done his day's work. If the question were simply one of inherent goodness, "Jack" may be quite right, for the world has long been taught that humanity has many meeting-places where all stand upon the same platform. Men meet thus together in the cradle and at the grave, in the sanctuary and at the Cross, and we suppose at the Last Judgment the great matter will not be—the position that of employer or employed? but how were the duties pertaining to the various relations discharged? While men possess gifts in common, those differ in degree, surely pointing to a difference in sphere in which they should move. If in the spiritual domain there should be gradations, why should not there be in the mundane?—a truth that we are taught in the difference of soils, of nobility of trees of the same species, and in the magnitude of the stars, if the argument of analogy is worth anything. If it be conceded that the officers of an army should possess a freedom, and receive attentions denied to the common soldier, why should the director of farm labor be denied the respect which is due to his position as such?

Long years ago the social relations in the rural home of this country were more satisfactory than they are to-day. There was more of equality in position and in the cultivation of gifts. The owner of land was as much a laborer as the man he employed to help him to clear it, and the latter was usually looking forward to the purchase of land himself. There was nothing incongruous then in the employer in such a case consulting with his assistant at the same table as to what should be done. Nay, this was commendable. But as countries grow older, that community of interest that binds new settlements together widens. Education, acting and re-acting on the diversities of mind, creates diversities of taste, and it is only natural and right that kindred spirit should be allowed to seek its co-kindred spirits with whom to associate, rather than be compelled to associate with those in whose company it finds nothing in common.

Nowhere are these social relations more unhinged than in the farm house. We have known men shoulder the scythe and strike up the homeward march at one o'clock, because they had not been admitted to the table of the employer at noon, though the repast prepared for them was ample. Their argument was, that if they were "good enough to work" for the man referred to, they were "good enough to eat with him."

Why should they desire to eat with a man between whose intellect and good manners and their own, there was, to our knowledge a wide gap? They should surely have felt uncomfortable under the restraint which his very presence would impose upon them, and would have enjoyed the meal in reality much less than when partaking of it quite out of the reach of restraints.

If a farmer choose to admit his hired help to his table, good and well; if he enjoy such a course, it may be all the better for the comfort of their relations; but for usage, or the sanctions of society, or the demands of any class to *compel* him to do so, because they have the power, is *tyrannical and unjust and outrageous* to the sense of the properly constituted mind. Why should the employed demand that he should be admitted to the table of his employer, even on the principle of equity? Would he like to be burdened with the presence of his employer repeatedly at his own table? Would he like his own children to be forced by association to adopt the refinements and many of the ways of his employer, which it may be he affects to despise? Or would he desire the sacred privacy of his own home to be broken in upon at its most enjoyable seasons? Why then should the employer be thus positioned?

(To be continued.)

The Western Fair.

AS IT WAS—AS IT IS.

This worthy institution held its first exhibition in the city of London in 1868—twenty years ago—when the modest sum of \$2,000 was offered in prizes. Its growth and progress up to the present time is something marvelous. This result has been obtained almost wholly by the push and enterprise of its promoters, and the fact that London is the centre of one of the finest agricultural districts in the Dominion. The nominal sum of \$700 is all the association has received annually from the Government. The entries have steadily advanced from less than 2,000 in 1868 to over 10,000, and the prize-list has steadily increased until the sum of \$17,000 has been reached. The directors, while highly gratified with the results secured, have been impressed with the fact that the time had arrived for placing the Fair on a much broader basis, in order that the resources of the Province in agriculture, manufactures and arts should be more successfully developed and encouraged. To this end an act was applied for at the last session of the Ontario Legislature, giving the Agricultural Societies, the Dairymen's Association, the Creameries Association, the Fruit Growers' Association, and some twenty-five other societies, associations and corporations representation on the Western Fair Association, and from their representatives the Board of Management is elected. The Corporation of the city of London have furnished new grounds, known as the Queen's Park, and valued at \$40,000 to \$50,000, as the place for holding the future exhibitions of the Association. The sum of \$60,000 has been granted also for the erection of new buildings. The Association hold a sum of \$10,000 as a guarantee fund against contingencies. With all these advantages and appliances it is predicted that the forthcoming Western Fair and Jubilee Exhibition will far excel all previous efforts. The forthcoming fair will undoubtedly be the great event of the season. Keep the date in mind, September 19th to 24th.

GEO. MCBROOM, Sec'y.

Rust in Wheat.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—When attending our institute last winter, you promised a letter from Prof. Pantan on barberry causing rust on wheat. I hope it will come soon, as we are suffering very much from the effects of rust this year again. There was a field of wheat across the road from a neighbor's barberry hedge in this vicinity that was not worth harvesting. The field was sowed early and is well underdrained, and otherwise in first-class order. Hoping that something of benefit to us will appear soon,

DONALD MCINNIS.

Exeter, Ont.

When Prof. Pantan returns from Europe, which will be some time during this month, we hope to redeem our promise.—ED.

The Dairy.

Good Milk for the Towns.

Formerly miserable frauds were practiced by some who gained a livelihood by furnishing milk for our towns and cities. Through means of inspectors and a system of inspection that had not been invented in years gone by, this is more difficult to practice than formerly. Yet even under present arrangements the quality of the milk supplied is not what it ought to be. Some of those engaged in furnishing milk, like the man who tried to see how near he could drive to the precipice without going over, are trying to see how near they can come to the lower limit assigned to the quality of the milk required without getting caught. Their aim should rather be to see how far from this low standard they can get, and to furnish their customers with a quality of milk of the very first order. When one engages in a business with the deliberate intent to make all he can out of it regardless of the well being of others, he enters an uninviting region, a wilderness country filled with pitfalls and snares, and along with his withered manhood he turns his face away from the sun of all true enjoyment. His aim should rather be to see how much he can make out of it with all due regard to the obligation which binds him to do to his neighbors as he would wish to be done by.

Now no farmer would like a townsman to give him an inferior article at the usual market price, knowing that it was inferior. He would at once set down the citizen as a mean man in his estimation, and his judgment would not be in the least degree harsh. Just apply this, then, to the production and sale of milk. Palming off what is low in quality just because it can be done at the usual market price, is doing a wrong to the buyer, a course that will not be pursued by a mind that is in a moral tone.

It is not easy to afford perfect protection to the citizens by means of legislation, but there is a way in which it can be done. The farmer can afford it. The man who supplies his customers with milk can do it, and he can do it to his own ultimate profit. He can at all times produce a superior article and he will get a better price. And as time rolls on the area of his sales will continually increase if he so desire it, and through all vicissitudes of trade he will hold his custom.

It is a recognized law of business that not only articles of trade, but services of men should command just that price which they are worth. The value, then, that is paid for an article produced by one will sometimes command just twice the amount of the same produced by another, and justly so, owing to a difference in quality. This makes it possible, then, for every man to receive just what his products are worth; but it should be remembered this remuneration is closely associated with reputation, and reputation can no more be developed without time than the cows can which produce the milk.

A prominent citizen of Toronto informed us some time since that the townsmen would, very many of them, gladly pay a higher price than the average if they were sure of getting a good quality of milk, and we verily believe it. So it has proved in other lines, and why should it not in this? Those who regularly supply customers with a good quality of butter get a uniform sum as a rule, the year round, let the prices rule as they may, and so of the butchers who supply their customers with meat of a uniform quality.

Why, then, may not milkmen reap a similar reward. They may, and some of them do, but many of

them do not, because they are content to move in the same plane with the crowd—always an ignoble ambition.

If our business is breeding cattle, let us try and produce the best, and if we succeed we will get the highest prices, with the proviso that time be given for the reputation to develop. The same rule will hold good in any line of business, as we have already said. Why, then, should any one be content with doing even ordinary things in the ordinary way? The aim of every one should be to excel, and when this idea becomes the controlling passion amongst milkmen what a magnificent trade they will do.

Do you feel a little irritated on reading this, and are you just ready to say, I have heard enough of this sort of preaching before? How is that, my friend. Have you never noticed that a person who is trying to excel *never* shows irritation on being exhorted to take an upward step?

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Scarcity of Feed.

BY JAMES CHEESMAN, TORONTO.

As it is rightfully said, that a chain is no stronger than its weakest link, so it may also be said that the agriculture of a country with a climate like the Canadian, is no stronger than its weakest point, when a season like that we have just passed through makes the feeding of dairy cows a matter of almost a life and death struggle. Now we have so little natural shelter from trees on the old settled farms, a more thorough cultivation of the soil for the growth of green crops of all kinds is a necessity if cows are to be carried through the months of July and August. Notwithstanding the costly experience of year after year, and the admonitions of the few successful farmers who, having profited by auxiliaries to their, in most cases, scanty pastures, have come forward at institute meetings and at the market and exhibitions to tell of their improved system of feeding, we are still without anything like a general system of green cropping for what is called soiling. How can we remedy this state of things? When will men learn that there is no wisdom in trusting to what is called "pasture"?

I have often thought that the system of county agricultural societies and clubs giving prizes for field crops of from one to five acres, and for the best kept herds giving the largest yields of milk and butter from the smallest area of land, might be tried with advantage in Canada.

Discussion at institute meetings is good, but unless it is followed by action it will avail but little. The ploughing match, the clean fields, and the heavy crops are usually very intimate associates.

During the fall much weeding must be done amongst the herds if our dairy cattle are to be carried through the winter with anything like a decent maintenance. The sooner the owner makes up his mind what to do, the better for the animals and the profit of the farm.

I am convinced that nothing will stimulate improved cultivation so much as a judicious system of awards to heavy cropping of improved quality, the largest milk and butter yields from the fewest animals and the least number of acres. As a beginning, why could not a prize be offered for the best cultivated dairy farm of not less than ten acres, for the largest amount of produce in milk and butter from smallest area—not less than 20,000 lbs. of milk, not less than 800 lbs. of butter. Surely such a farm could support four cows, two head of young stock, a horse and two or three pigs. The average size of the herd in western Ontario is said to be four

cows. Now if Denmark and Sweden with long winters, can support a cow from an acre and a quarter, can't we manage with one and a half? We must learn to stop spreading cows over areas of from five to ten acres of poor grass, and frittering away our muscle, implements and horse-flesh to gather in a few dollars. We can make more money with cows on small areas if we only try. Another system could be adopted somewhat as follows:

PRIZES FOR HERDS.

For the best herd of not less than three cows for longest milking period, of not less than 300 days, and a butter yield of not less than 500 lbs., or of milk not less than 12,000 lbs.—\$100.

For the best herd of not less than five cows for longest milking period of not less than 300 days, giving not less than 20,000 lbs. of milk or 800 lbs. of butter—\$100.

For the best herd of not less than ten, with a minimum milk yield for 26 consecutive weeks, of 30,000 lbs., or 1,200 lbs. of butter—\$100.

For the best herd of 12 cows, having a minimum milk yield of 24,000 lbs., or of 900 lbs. of butter for 13 consecutive weeks—\$100.

For the herd giving the largest yield of milk and butter from the smallest area in twelve consecutive months, and at lowest cost per gallon, not less than five cows—\$100.

To the last prize might be added a gold medal in addition.

As one journeys through the south Atlantic and Gulf States, nothing is more striking than the extent to which those who formerly skimmed large areas have now resorted to the intensive cultivation of small ones. Deep and thorough tillage, and the planting of such crops as make great demands on the soil with their roots, will be found the best preparation to stand a long and distressing drouth. Small areas are watered much easier than large ones. To draw upon a cubic foot of soil with only a square foot of surface is surely easier and more productive than to use the same quantity of soil with four times the surface. Let a beginning be made and in a year hence we can measure up results.

How to Milk.

The following practical remarks relating to the milking and treatment of the cow are taken from that valuable little work, Lynch's "Scientific Dairy Practice," a careful perusal of which will be found of much profit to those engaged in the dairy interest:

Milk-secretion is a response to a natural pleasurable sensation; similar to that in satisfying the appetite for food. This pleasurable feeling is a provision of nature to ensure the supply for the needs of offspring; and it is by taking advantage of such provision that man has secured for himself a bountiful milk-supply.

It is by a stimulation of the natural power of milk secretion that man has developed the natural power, thus increasing and prolonging the milk flow, to suit his own purpose. The abundant yield of the domestic cow, therefore, is not of a purely natural state, but is an artificial development; it has been artificially induced, and must be artificially kept up.

This is something of practical importance. It is easy to fall into a belief that the milk yield of the cow is something given out of pure natural cow generosity. All careless abuse of a cow by its owner, if the owner be at all careful for profit, must spring from such an impression. It will pay to remember that the comfort of the cow has more than her generosity to do with our milk supply.

It is because of this fact that many things which seem trifling have an effect, either for good or bad, upon both *quantity* and *quality*, not only *immediately* but *remotely*. Frightening or hurrying the cows, harsh treatment, pain, hunger, cold, fear, disappointment (as when failing to get customary mess), or general

discomfort—*any* such disturbing cause will check the milk flow.

The sluggish habit, the timid disposition, and the dependent nature of the cow must be favored, if one would rather encourage a full yield. All her movements must be in natural, quiet and matter-of-course order, so as to be of the least disturbing character. Dog or man must well understand this before either is fit to stand in the presence of this gentle creature.

Especially when her milk is being drawn, the cow should be in a perfect state of repose and contentment. The milk is not all in the teats, nor even in the udder—made to freely run out, as it were, by the opening of a valve. Rather, it is when milking that the stimulation of the very act promotes the greatest secretion of milk, as well as the immediate flow of what has been already secreted. So, while the cow is being milked, nothing sudden or unusual should be allowed to attract her attention. She must not have to wait too long to be milked, and while being milked should enjoy the operation.

Kindness. The milker who would make his service a profitable one must need have in his own breast not a little of the milk of human kindness.

Discomforting ailments. Some of the best cows have habits that are annoying to the milker, and which sometimes provoke ill-temper on the milker's part. Rather than indulge in such ill-temper, to one's own grievous hurt, and to the injury of the cow, one should exercise his best intelligence to find out the *cause of the discomfort*.

Sore teats are a prolific cause of cow discomfort. Doubtless long finger-nails are a frequent cause of sore teats. Finger-nails dig into the tender teats, and cut them. This is especially true when the cow is first milked after calving, and before the teats have toughened.

The remedy: Keep the finger-nails pared short; and endeavor to milk without digging the ends of fingers or nails into the teats. Owing to variations in relative size of hands and teats, and to want of strength in fingers, and hard-milking qualities of cows, one cannot always help digging into the teats with the ends of one's fingers; but where it can be done, it is better to *press the fingers flat against the teats*.

Switching the tail. This habit is naturally a legitimate one of self-protection. It sometimes becomes, however, with some cows, an established habit of pure wantonness. The writer has a cow with such a vexatious habit, and he blushes to remember what exhibitions of unmanliness in temper the exercise of that habit has caused. The results of such manifestations of temper conducted to considerable discomfort of the cow, led to somewhat strained relations between milker and cow, and did not contribute to milk-production by the cow, or equanimity on the part of the owner. Now all is changed. The greatest of harmony exists. The cow is a great pet of the once provoked milker, and the latter appears to be one of the cow's favorite milkers. Space will not admit showing all the advantages of this changed state of affairs, but they are great; and all was brought about in a simple manner:

A stout string was fastened by one end to a post that stood at the left flank of the cow, and by this string was the tail of the cow tied up short, by a single knot, but so securely that it could not get free. At first her ladyship demurred, but now she expects it as a matter of course, and submits with all grace, and is apparently pleased to see the milker, whose now unflinching good temper is quite to her liking.

This instance is given not only as instructive for such particular cases, but as an illustration of what may be done by the exercise of a little ingenuity in the treatment of the cow, having in view the prevention of disturbing causes.

When a cow switches her tail only because she is bothered by flies, it would be cruel to tie up her tail, and allow her to suffer the discomfort of flies. In such case, one may throw a light blanket or net over the cow; or wear a protection over the face, similar to that worn by bee-keepers.

Suitable shelter would be a protection, during milking, both against flies and from severe weather. Milking-sheds have been adopted to the satisfaction of many. A few cows sometimes may be milked when standing loose in open field, or yard, but if there are any risks of the cows annoying each other, or being from any cause fretted or disturbed, it will help to lessen the cost of production to securely attach them in their respective places to be milked.

Poultry.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Poultry Keeping.

BY A. HARRINGTON, RUTHVEN, ONT.

(Continued from August.)

It is as natural for fowls to eat grass as it is for cattle, and "scrimping" here comes hard on the pocket (where most of us live).

During the extremely hot weather a constant supply of clean, fresh water is imperative. An allusion to this matter seems to fall but little short of ridiculousness, as any child ought to know that chicks require water; but we have been amazed at the indifference shown by people in this very important direction. A great many seem to think that filling the trough once a day is sufficient, twice a luxury, forgetting that they themselves drink every hour or so, and that fowls require it much oftener. Have you ever noticed that when an unlimited clean supply is at their disposal how much they relish and make use of it? sometimes taking no more than a couple of swallows, yet it keeps them from becoming irritable or ill at ease, and, as you know, the "contented fowl is the profitable one." For mercy's sake, neglect not in this hot weather to keep their troughs clean, and fresh, pure water constantly before them.

If the pullets are expected to lay at an early age they must be let out into old mother earth as early as they can see to travel. (This advice is superfluous to the majority of farmers, we know, as their poultry usually have all the advantages of the open air at all seasons of the year; but we are speaking more particularly now to those persons who give their fowls care, and who, fearing skunks or other midnight marauders, close the door or slat-door for protection at night, ont letting them out until eight or nine o'clock in the morning.) There is a difference of at least two months in the laying of pullets so treated, and ones that miss the early worm, if indeed the last named ones ever decide to lay; and placing aside the beauty of plumage and hardiness of constitution derived from the benefit of our advice, the difference in profit is a matter of some moment.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Early Development.

BY J. W. BARTLETT, LAMBETH, ONT.

Nothing is more beneficial to a subject than discussion, if carried on in a friendly spirit, but as soon as animosity creeps in, no benefits are to be derived from it. We are very much pleased, if others see differently from us, to have their view of the case laid before us; hence, our thanks are due Mr. Harrington, of Ruthven, for the kindly and gentlemanly manner in which he states his views *re* Wyandottes, in August issue of the JOURNAL. To all such men, we feel like extending the hand of friendship and brotherly love—but to the point at issue. Friend Harrington, you are right about the difference in strains in many things, but we have yet to see a late maturing Wyandotte, comparatively speaking. Neither were our ideas conceived from one strain of them. We saw the first birds brought into Western Ontario, and as poultry is the source from which we derive a goodly portion of our sustenance, have lost no opportunity of keeping posted from that time until the present, not alone on Wyandottes, but especially on them, and as we have had birds in our own yards of four different strains, we feel that we speak advisedly.

Now, friend Harrington, read your own kindly worded article again. You say the Dots and the Plymouth Rock (of the same hatch) are the same-size.

Now, at that rate, the Dots are comparatively ahead in development. The Rocks are about one pound the largest at maturity; and if one man has nine miles to go and another eight, and they kept even, will not the man that has only eight miles to go have some time to work while the other travels the last mile? Just so with the fowls. While the Plymouth Rock is growing her last sixteen ounces, the Dots will be laying eggs. Don't think we are booming the Dotts. Just turn over to our ad, and see we have Plymouth Rocks, too!

Please let us know, if you are in a position to do so, when they begin to lay. We have very early pullets of both breeds, and the Dot pullets bid fair to lay very soon, while the Rocks show no prospect of it.

The Apiary.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Sundry Items.

BY R. F. HOLTERMANN, BRANTFORD, ONT.

Generally the honey season will be over; some may still secure honey from buckwheat and fall flowers, such as golden rod, boneset and astor. Buckwheat frequently yields a good surplus; other fall flowers rarely do. There are many varieties of golden rod. Those found upon high and dry land rarely if ever yield honey. The variety found in low swampy land yields more or less, depending on the season. I have found that boneset yields honey more freely than golden rod. Sweet clover is also a good honey plant at this season. There are many honey plants beekeepers are recommended to plant, but if I except the latest, "The Chapman Honey Plant," I doubt if any of them will yield honey in sufficient quantities to pay to occupy ground fit for cultivation for the ordinary farmer. I mean by this, such plants as are of no value except as honey producers, do not pay as such alone. Honey at this season, even if gathered from second growth of clover, is not first-class. The cool nights and often dry atmosphere retards the secretion of nectar in abundance, and often prevents it altogether. Honey secured in just sufficient quantities to keep the bees from drawing on their stores and prevent robbing is perhaps all we want during the latter part of August and September.

There are many places where sweet clover can be sown, and the plant will not interfere with anything but weeds, such as stony places, railway tracks and swamps. Sweet clover is not a dangerous weed, and the blossom lasts until frost. The honey plant referred to is named after Mr. Chapman, who first brought it before American beekeepers. The plant promised to be of such value that the North American Beekeepers' Association appointed a committee of three to visit Mr. Chapman, and there examine the flower whilst in blossom. The flower was examined and a most favorable report given; it has also been tested in various localities, every report being most favorable. I myself saw it in blossom last year and was very favorably impressed with its honey secreting powers. This plant comes into blossom just about the close of linden, or as it is commonly called, basswood. The honey is of the very best quality, color, flavor and texture being excellent. It is reported as not being a noxious weed; it is as large as a Scotch thistle; the seed is heavy and cannot be blown about; it does not sprout at the root. The seed is, however, very oily, and would remain vital for many years no doubt. Mr. Chapman ignorantly mentions when advertising the seed that it is very oily, and thence important that everyone should secure the seed fresh from him. The plant will not blossom the same year it is sown. Seed

should therefore be procured this fall and sown, to be of use in 1888.

Why I do not care about honey flows late in the season, or stimulative feeding during the latter part of August and September, is because I want to get the brood chamber in shape for wintering and the bees fully developed and ready for winter quarters. Should the queen lay her last egg upon August 15th, the last young bees will gnaw their way from the cell September 6th or thereabouts, and many of our best bee-keepers want few bees to go into winter quarters born after that date. They claim they are more restless than older, and when in winter quarters transmit that unrest to their fellow, and more aged brethren—or sisters more properly. We all know that unrest in a colony during winter means weakening, debility, and if prolonged, death. Then, too, a colony consumes honey in breeding; their numbers are increased with no advantage, as a medium colony will winter as well if not better than a very strong. As long as there is a large quantity of brood in the hive it cannot be prepared for winter either by feeding stores or by replacing combs in the lower storey with combs of sealed stores. I like to have the brood chamber ready for winter by September 15th. If I can have no honey flow after linden flow I remove the supers just as soon as I can crowd the bees into the lower story. If I am in a buckwheat locality I leave them on until it is over. If I expect at best but a light yield from buckwheat, and require some full combs of honey, I remove part of the combs in the upper story, compelling the bees to store all the surplus in a few combs instead of scattering a little in each comb. This can also be done to prevent having to extract from so many combs at a season when robbing is so dangerous, and it is so unpleasant to handle bees.

There is no doubt that much has to be learned in bee-keeping. In reading the *The Alsatian Lot-rungische Bienen-Zuchter*, we find a report from a bee-keeper who has buried his bees over winter. The fact that he has buried his bees is in itself nothing strange. A number in Canada do this. In Russia they have regular pits dug, like wells, where bees are placed one above another, and all covered with earth for the winter. But the report given is an accurate one:

November 11th, 1886. With many doubts and fears as to the success of his enterprise he buried six colonies. They remained entirely undisturbed until the 4th of April following, when he unearthed them. They were so strong and active they attempted to fly out in numbers, the apiarist having to close the entrances until the work was completed. He had weighed them carefully before burying them, and weighed them now after unearthing. The colonies had their respective number, as every colony in the apiary had. No. 3 consumed 1 2-5 lbs.; No. 7, 1 4-5 lbs.; No. 9, 2 2-5 lbs.; No. 10, 1 2-5 lbs.; No. 12, 1 2-5 lbs.; No. 16, 1 2-5 lbs. They had therefore consumed on an average less than 2 lbs. each. There was very little mould, no more than if they had been wintered in the open. For their clearing flight they voided but very little excrement. Five colonies had very few dead bees, scarcely thirty per colony. Only No. 9, which was the weakest in the fall, had about a handful of dead bees, and this colony had consumed the most.

There can scarcely be any doubt that the report is correct. From time to time we have had very good results reported, but when lacking dates and figures such reports lose their value. If bees can be wintered thus successfully and advantageously in Germany, there is no good reason why we in Canada

should not winter in the same method. I have written to Germany for particulars as to method employed in burying, if with or without ventilation, and other particulars, and shall experiment with a number of colonies this winter if word reaches me in time, and also give method in the JOURNAL.

Canada will be honored by the visit of two bee-keepers of distinction, and widely known to bee-keepers throughout the world, being Mr. Thomas Wm. Cowan, of England, and Mr. Ivas S. Young, of Christiansa, Norway. The former gentleman is editor of the *British Bee Journal*, a Fellow of the Royal Microscopical society, an F. M. S., chairman of the British Bee-keepers' Association, a society of over 10,000 bee-keepers, and author of several works upon bee-keeping, one work exceedingly popular. Mr. Cowan has traveled over the greater part of Europe, and knows how bee keeping is conducted in these lands. He is now visiting Canada, and every bee-keeper will no doubt be pleased to assist Mr. Cowan to see as much as possible about bee-keeping in our country.

Mr. Young, I believe, has been sent over from Norway to see bee-keeping as it is conducted in America. The object largely is to bring home information as to how to improve their methods of bee-keeping. Mr. Young is also an author, and publishes a bee-paper in the Norwegian language.

Bee-keeping in Norway is carried on very extensively; but that their appliances—hives, honey, extractors, etc., are as good or their methods of using them as advanced as our own, is, however, doubtful. The flora of Norway is, however, so varied and peculiar, that honey from that country must be entirely different from our own, and only appreciable by those who favor foods with a very distinct and spicy flavor.

Before me is at the present moment some California honey in the comb. It was laid down in Toronto at 8 cents per lb; duty alone is 3 cents per lb. We need, however, not fear it as a rival; it has been gathered from a sage, a source from which most of the California honey is secured, and its flavor is markedly strong and minty. The color, slightly amber, but not so much so as some of our fall honeys.

Horticultural.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Our Apple Orchard.

BY E. D. SMITH, WINONA, ONT.

Many people became greatly discouraged over the unprofitableness of their apple orchards during the past five years. But it seems to me the orchard pays best yet if properly cared for and on suitable soil, if compared to grain or stock farming. It is a poor orchard that will not yield a dollar per tree when full grown, and keep that up for at least thirty years, and with everything right, double this average should be obtained. Why, then, do we hear so much about cutting down orchards, as being unprofitable?

First, because many are planted on soil not having sufficient lime and other constituents essential to tree growth.

Second, very many are planted on soil not properly drained, with cold wet subsoil. Trees on such land die young and never pay.

Third, land is often too poor. Apple trees require considerable nourishment, especially where subsoil is tenacious.

Fourth, crops are generally grown among trees, which in a dry season so exhausts the moisture that there is not enough left to make the tree grow properly, and mature its crop, no matter how rich the soil may be. I have a striking illustration of this on my

own place. Trees planted at same time in the vineyard as in the apple orchard are much larger, very much healthier, and have a fine crop this year, whilst the latter has a very light one. The orchard has been partially given up to grain and hay for a few years, although being well supplied with manure as mulch, as well as crops of clover ploughed under occasionally, and good cultivation around the tree. Those trees in the vineyard have had constant cultivation, and no cropping, and the difference in crop of apples this year would about make up for all the profit on grain and hay grown in the orchard for the past five years. My orchard will grow no more grain or hay crops.

I have heard people talk of orchards growing too fast. I have no faith in any such reason for barrenness. I should say the soil lacked lime, or possibly some other essential element of apples. Another reason for making trees grow quickly, besides getting them into bearing as soon as possible, is that a tree not healthy and vigorous is much more liable to injury by frost, as I have had very strikingly exemplified in my orchard, where I grew at one time a crop of strawberries in one part, which so enfeebled the trees that they have scarcely recovered in five years, and the severe winter two years ago killed about a dozen trees among these enfeebled ones, and injured most of the greenings. Other thrifty greenings were injured, but not seriously. I found greenings the only ones injured.

Again, an unthrifty tree falls a prey to lice, aphids and other injurious insects, whilst the thrifty tree is unmolested or else outgrows its enemies. If I were planting another orchard I should select a field lying tolerably high, and would prefer here a northern or eastern exposure. I would underdrain three, or better still, four feet deep between each row. I would want the soil as deep as possible—a foot at least, and of limestone formation. I should then grow amongst the trees crops of corn, potatoes, roots or other hoe crops, always leaving a large margin near the tree, for five or six years, only using half the ground the last year or two. After this I would cultivate thoroughly every year as long as the orchard lived. If trees grew very fast, and did not bear well, I would test a variety of mineral fertilizers, phosphates and common lime first. Under such management I believe apple orchards would pay well. Of course orchards should be properly pruned—no trees skinned by whiffletrees or mice; injurious insects kept in check by applying remedies now well known for almost all the enemies of this, the king of fruits, which is fast becoming one of our staple crops.

Then, again, the variety of apples is a large factor in the profit and loss account. It pays well on extra early land to grow extra early kinds, but nowhere else. For the general average of locations, Baldwins, Greenings, and Northern Spies pay best, and only one tree each of a few other kinds should be planted for home use. All over this is loss, as they are not worth marketing in small quantities. For home use I would suggest 1 Duchess of Oldenburg, 1 Red Astrachan, 1 Fall Pippin, 1 Snow, 1 Seek-no-Further, and a few Spitzenburgs.

Growers have been alarmed at the spread of the scab on the fruit, but this year it has disappeared, showing it to have been the result of a succession of cold and wet seasons, which may not occur again for a long time. Even Flemish Beauty pears and snow apples are clean this year.

"I am satisfied that if the farmers would take your paper for a year, and follow its precepts and advice, they would save more than would pay for fifty papers."—J. M. Jamieson, Blake, Man.

The Home.

THE favorable season is upon us for forming clubs for the next year. A little effort at the fairs, farmers' clubs and institutes, and the work is done. The JOURNAL will be sent in clubs of five for \$4.00, and in clubs of ten for \$7.50. The names may belong to different post offices. Those subscribing now for 1888 will get the JOURNAL the rest of this year free.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Canada at the Colonial.

(Concluded.)

Although somewhat foreign to the subject under consideration, I would add a few words regarding the schools of England and Scotland. I spent an afternoon in an Highland school and was intensely interested. The regulation for teachers' certificates and the system of classification being uniform throughout Scotland and England, and I think the Protestant schools of Ireland, I could get an idea of the general working of the board schools, which correspond to our public schools. All the school-houses I saw were substantial stone buildings with teachers' dwelling-house attached, as in our private seminaries and ladies' college. In the school I visited there were about eighty children, who were in a room smaller than our ordinary country schools, seated for about fifty. The children sat on long benches—seven or eight occupying one bench—in much the same style as that in vogue in our earliest schooldays. The teacher was assisted by two of his pupils, who are termed pupil-teachers. They come at nine in the morning, and he teaches them until ten, when the rest of the scholars come and then they assist him. There was a class-room off the school-room proper, where the younger children went to recite. There was no bell of any description—the teacher whistled right shrilly to call school, while I sat wondering how on earth I would call them if I had to do it. Prompt to obey the summons, those eighty young Highlanders came rushing in. The noise was appalling to me; the disorder seemed dreadful. Once seated, however, I could not but admire the many fine, frank, intelligent faces, and bright eyes which looked wonderingly at the stranger. Some still wore the kilt, and in both boys and girls the national lineaments were strongly marked, while in reading, the Gaelic accent was very marked. In learning their lessons the children buzzed with a distinctness that would drive me distracted, but it didn't seem to annoy their own teacher. Two gads of formidable length, sufficient to make the bravest-hearted offender quake, stood in a corner, but I think they were more for a warning than for practical use. The erring ones were reproved with a directness of language which Sam Jones would call "Truth straight from the shoulder." "Donald Drummond, hold your tongue." "Ah, ye stupid, your heid's made of turnips, sir." "Now get your sums, will ye; ye'll be cornered if ye don't," and similar expressions amused me, and didn't seem to hurt the offenders in the least. Toward four o'clock a very precise lady came in and taught sewing to a class of girls; it was ordinary plain sewing, and the pupils seemed much interested. Though the order of the school seemed faulty the discipline was good; prompt obedience characterized the school. Though the teacher would shout in a gentle tone of voice, he was very kind to his pupils, and they all seemed to like him. A most marked feature of the school was the advancement of the pupils at an early age, and the advancement of the subjects taught. Boys who, according to appearance, would be in our second and third readers in Canada,

could read with ease and intelligence in advanced classes. Latin, French, trigonometry, Euclid and algebra, were taught in addition to all ordinary English subjects. I understood why Scotland stands famous the world over for the intelligence of her masses, and why Edinburgh stands unsurpassed in her halls of learning. A good thorough education can be obtained without leaving the public school. Their schools are not as ours, to a great extent mere sources of supply for the higher schools. In the midst of such seeming confusion I understood how the children learned so well—girls of thirteen proficient in French, and boys of eleven in Latin declensions, and I solved the problem in the following way, whether correct or not, I must leave for others to judge. There is very little changing of teachers; the teacher of the school in question had been there ten years. I was in another school where the teacher had taught forty years, and he, too, had good Latin scholars. The children thus lose no time in adopting new ways and methods, but from term to term pass the required examinations, for the promotion examinations are a part of the system, and the government inspectors have to oversee the work of promoting from one standard to another. This solution involves another problem—How is it that the teachers change so little? I believe the strongest reason is that there are inducements to stay in the profession. If a teacher engages for a school he knows there is a home for him, a comfortable home, too. The houses are neatly built of stone, and have pretty gardens attached. In Ontario, if a teacher marries, in nine cases out of ten he finds a difficulty in procuring a house to live in, and if unmarried, he must run the risk of getting comfortable lodgings, and some of us know what a risk that is. There, whether married or single, the house goes with the school, and as long as a teacher does his work as he ought to, he has a comfortable home. The salaries, I think, are about the same as in Ontario. I could write much more about Highland schools, but fearing to impose on good natured listeners, I forbear. Ere leaving the subject of education I would just say that I was more deeply impressed than ever with the responsibilities and possibilities of our work as teachers, both in the mental and moral aspect, but particularly in the latter. If noble aims are to be implanted, if worthy desires are to be cherished, if life is to be made "one grand, sweet song," the seeds must be dropped in the young mind. Contact with the busy world benumbs the sensibilities, and renders the mind unimpressible. In Highland glen or on lovely loch, in old historical castle or busy centre, the children I now daily teach were with me; in them I saw, as I never saw before, the men and women of the future—not merely minds to be expanded, but young immortals to start fairly on the ocean of life. Why is it we do not "magnify our office"?

After visiting the Canadian court, I must say that I came away proud that I was a Canadian. The exhibit was by common consent a splendid one—conceded by all to be the best of the colonies—on every hand I heard visitors expressing their admiration. Canada has, like Byron, awakened to find her: *If famous. We trust others are awakened also.* In both England and Scotland Canada has hitherto been considered a mere cypher. We are called *Yankees and Americans—rarely Canadians.* When visiting in Perth, Scotland, two little boys, hearing that a Canadian was "ben the room," ventured near enough to ascertain whether I was red or black, and withdrew greatly disappointed to find I was only brownish-white. Even in going down to New York, a fellow-traveler, whom I met—by no means an illiterate man—stoutly

contended that Canada had only two provinces. We smile at and deplore his ignorance, but he may safely be taken as a representative of a large class of people. I can scarcely wonder at the ignorance in Scotland and England. In the Glasgow general post-office the tablet on which the hours of arrival and departures of mails are placarded, is strikingly misleading. The public are informed that on such a day and at such an hour mails will leave for Prince Edward, New Brunswick, Nova Scotia and Canada—indeed, I am not sure but it was *the Canadas*. Nearly twenty years since confederation, and yet Canadians have to brook such insults. I felt like giving vent to my indignation in some of the Glasgow dailies, but my own "weeness" in the midst of a great city frightened me.

My visit to the Canadian court of the Colonial Exhibition enabled me to realize, as never before, what a magnificent country we have. I went away a half-hearted, independent Canadian; I returned, I trust, a thoroughly loyal one. We have all the advantages of a monarchical government without its corresponding disadvantages. We have the advantages of democratic government—government for the people by the people, without its disadvantages, and with a Governor-General who has sense enough to leave his aristocratic tendencies on the *other side of the Atlantic*, and who will enter heartily into the spirit of Canadian enterprise, we have, in my humble opinion, a form of government unsurpassed on the earth. So long as three oceans wash the shores of our glorious Dominion, so long as her luxuriant forests, fertile fields, beautiful hills and dales, rolling prairies and cloud-capped mountains stretch between the blue Atlantic and the broad Pacific—so long as her inland lakes pour their wealth of waters into the capacious Gulf which bears them ocean-ward—so long as the maple reigns queen of the forest beauties, so long may each loyal heart say, *God bless Canada.*

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL

Wild Flowers.

BY J. C., NIAGARA, ONT.

How many of the readers of the JOURNAL have seen Mrs. Trail's book, recently published, describing the wild flowers, ferns and trees of Canada? For those who have not, there is a pleasure still in store. The photograph of the writer, an old lady of eighty four, is the frontispiece, and many beautiful colored illustrations are given, drawn by Mrs. Chamberlain, of Ottawa, a niece of Mrs. Trail. The work, names and describes the flowers, etc., actually seen and examined by the writer since coming to Canada many years ago. This talented family have given to us several works illustrative of Canadian life, as from the pen of the sisters, Mrs. Moodie and Mrs. Trail, we have had "Roughing It in the Bush," and "Back-wood Life in Canada." The still more distinguished sister, Agnes Strickland, has written "Lives of the Queens of England," and also, "Lives of the Queens of Scotland." It is interesting to trace out the different characteristics given to the Stuarts by Macaulay and Miss Strickland. Scarcely would we recognize them as the same personages, and the Mary Stuart of the historian and much abused publisher of dead men's letters, ycleped Froude, and that of Agnes Strickland, are very different beings. This may teach us to study history with a good deal of allowance for the prejudice and bias of the individual historian. But this is an aside from flowers.

How frequently we hear people say, "It is only a weed," while at the same time anxious to make the acquaintance of some new house or garden flower,

and altogether neglecting the plants we tread under our feet. The attention of the writer was lately attracted to the study of Botany, and she would recommend it to others. The page of Nature is always a pleasing one, diversified day by day, variety and uniformity at once. What is there so soothing and calming as to spend a few hours away from the toil and turmoil of life alone with nature, leaving the selfishness and pettiness and annoyances of life far behind! When the heart is torn with anguish, and all seems dark, is there anything which so calms and soothes the mind as the sight of the trees and flowers, the green grass even? "If God so clothe the grass of the field, which to-day is, and to-morrow is cast into the oven, shall he not much more clothe you, oh ye of little faith?" If so much has been done to make the world so beautiful, and if all through the year we see the regular changes, as the hard, dry seed bursts into life, gains foliage, flower, fruit, shall He not take the same care of His weak, erring children? The word Nature means something more than to the evolutionist, with his ingeniously reasoned out theories.

"Nature is but a name for an effect, whose cause is God." And if these feelings are caused by a cursory glance at the book of Nature, much more are they called forth by a closer study of the page. If any one who has little knowledge of wild flowers or common weeds will take the trouble to count up the number of plants met with every day of which he does not know the name, he will be astonished. In collecting, one will very likely be looked upon as eccentric, at least, but do not mind that. The bouquet of two persons going through the woods will be very different; one has a large bunch of brilliant, showy flowers, but with little variety; the other has a miscellaneous collection of odd flowers, leaves, roots, rejecting, perhaps, many beautiful flowers because already known, but eagerly pouncing on a strange plant or trudging mile, after some long-sought specimen. Friends, seeing this new craze, will offer bouquets of trim garden flowers, but these are not what we want. Let the object be to find out the name and be able to describe every common flower met with in the woods or by the roadside. "Botany" says one, "oh, how can you take so much trouble! I can never remember the names; there are so many orders, and they are so nearly alike." But furnished with Gray's "How Plants Grow," or Spotten's "Wild Flowers of Canada," a magnifying glass and material for pressing and preserving flowers, many a happy hour may be spent.

Indeed, much may be done in the time otherwise often wasted. If the terms dicacious, monacious, monadelphous, epigynous frighten the novice in examining the structure of the flower, commence, if you please, with a collection of leaves. The immense and endless variety will astonish and delight, and the different names used to describe the modifications of leaf structure will be easily learned, if you have the leaf before you—the feathery, delicate fern, on the glossy red maple, the eighty-one leaflets of the Meadow-rue or the shield-shaped leaf of the May-apple, the straight-veined Solomon's seal, or the perfoliate Bellwort. Or turn to the flowers themselves. How many know by name the Meadow-anemone or the Hepatica, the common Shepherd's Purse, or the modest little Bluets found almost everywhere? Everyone knows the Golden Rod, but how many know by name the blue-eyed Speedwell or the poisonous Henbane with its seed contained in a little cup with a lid fitting, ah, how exactly! the Anemone Meadow-rue, with its star-like flower resting on so slender a stem that it seems to remain suspended and float in air without any support? What an odd flower is the Indian Turnip, and how

beautiful the large white Trillium, as also the purple brownones; the Dogwood, too, has a striking flower; how different are the Spring Beauty and the Stramonium. While some say of wildflowers, there is no beauty, they fade so soon; to others this fault is far more than made up by the wild grace and delicate, ethereal beauty, fleeting though it be. We have all seen the beautiful, decorative effect produced by pressed fern and maple leaves, at Christmas time, on wall and curtain, while Bittersweet and Cat-tails lend their effectual aid. Why is it that in artificial flowers the blossom of the maple or the curious samara, with its beautiful blending of tints from light green to brown, is no more used?

It may be easier to study, directed by some one who will explain and name all the varieties, smoothing away all difficulties, but thereby we lose much pleasure and profit, for there is perfect enjoyment in trying for days to identify some difficult specimen, and then all at once by some little peculiarity hitherto unnoticed, being able to place it in its proper order, genus, species, all without any help. An amusing experience last year may be recalled: a single plant, tall and stately, was found in an unfrequented road, bearing a beautiful white flower curiously resembling a moth. After some delay it was found to be Moth Mullen, but so unlike the common Mullen that few would think that they both belong to the order Scrophulariaceae. Thinking it very rare, in the gloaming, with a spade and a basket, the plant was carefully removed to be placed in the limits of the garden. While digging it up, when any passer-by was seen, an air of unconsciousness was assumed; standing so as to hide my spade lest my sanity might be doubted; the plant grew and flourished, admired by many; but what was my disgust to find shortly after, in another unfrequented road, scores of the same plant which I had thought so rare.

The story of Eyes and no Eyes well exemplifies the added pleasure gained by close observation, but the eye must be trained and the intellect enlightened, or we lose much enjoyment. How different the Maiden-hair fern from the Polypod or Common Brake! How many have noticed the four-sided needle-shaped leaf of the Black Spruce and the flat leaves of the Hemlock Spruce, or that the leaves of the Pine occur in groups of from two to five? Can anything be more graceful than the Larch with its feathery, tremulous movement? How much would our landscape lose if deprived of the drooping, graceful Elm? If the thick carpet of green grass did not cover the earth, think what would be lost, both in a material and æsthetic sense. If a few of the hours devoted to the trashy novel, silly trifling, or gossip, nay, even to solid, heavy reading, were given to the book of Nature, how much more pleasant would be the walk taken, when we recognize peeping from under our feet an old friend, in the flower we would otherwise have passed by with indifference. And all this must tend to give us higher and better views of the Maker of so much beauty and grace, who so decks the fields that even Solomon in all his glory was not arrayed like one of these. Yes, the study of Botany will amply repay any one engaging in it. Try the experiment.

FARMERS' INSTITUTES.

The Secretary, President, or any member of any Farmers' Institute 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 institute in Canada. Clubs of five for \$4.00, and clubs of ten for \$7.50. Those subscribing now for 1888 will get the Journal for the rest of this year free.

Jottings.

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

Notice.—Those who subscribe now for the JOURNAL for 1888 will get it the remainder of this year free.

Points in Lincoln Sheep.—A subscriber from Kerwood, Ont., asks, what are the leading points in a Lincoln sheep? Will some of our subscribers answer, we have no registry for this breed in Canada.

Anent the Shorthorn Herd Book.—I consider your JOURNAL a little one-sided on the herd book question, as I consider the new herd book was got up more in the interests of the rich than of the poor.—Geo. S. Armstrong, Fergus.

Agents Wanted.—In every locality in Canada to canvass for the CANADIAN LIVE-STOCK AND FARM JOURNAL. Good salary to good men. Sample copies free. Write for particulars to the STOCK JOURNAL Co., Hamilton, Ont.

Holstein Register.—EDITOR JOURNAL: Sir,—Please let me know if there is a Holstein register in Canada and where, as I have an animal that I would like to get registered. What will be the cost? S. R. Billinger, Stevensville, Ont.

The Color Prejudice.—The foolishness of the color prejudice does not cross the Atlantic. In Lord Bective's sale, Sept. 7th, at Underley, by Mr. John Thornton, the only bull on which a reserve price was placed in the catalogue is pure white.

Important Notice.—No subscriber's name is removed from our subscription list until all arrears are paid in full, as prescribed by law. Any readers in arrears will please forward the amount of their indebtedness to the STOCK JOURNAL Co., 48 John Street South, Hamilton, Ont.

Temporary Offer.—We are pleased to notice our readers have already begun to take advantage of our temporary offer sent out last month. Offer No. 6 should have read "\$5.00 and twenty new subscribers," and No. 7 "\$6.00 and twenty-four new subscribers." During fairs, picnics, farmers' clubs and institute meetings is the time to make it pay.

Cleveland Bays and Hambletonians.—Mr. John S. Torbert, of Chester Hill, Ohio, U. S., wishes to get information in reference to Cleveland Bays and Hambletonian stallions, the prices of stallions good and sound, 4 to 5 years old, and weighing from 1300 to 1400 pounds. Parties interested can govern themselves accordingly.

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.

Books.—The demand for the books, "Feeding Animals," by Stewart, "Allan's Shorthorn History," "Horse Breeding" and "The Breeds of Live-Stock," by Sanders, being so great early in the season, our supply became exhausted, but we have recently replenished our stock, and are now prepared to forward any of these by return mail. For further particulars see advertising pages.

Lorne Agricultural Society Exhibition.—The fourth annual exhibition of this society will be held at Prince Albert, N. W. T., on Sept. 29, 1887. The prize list which has reached us is a very creditable one, and very comprehensive for a country so new. The classes for live stock and grain are prominent. Alex. H. Clark, of Prince Albert, is the Secretary-Treasurer.

Business Cards.—Even if a breeder has nothing to sell, the publication of his "card" is of use to him. It keeps the name of his herd and his own name before the public. It is virtually an invitation to any one interested to call and examine the breeding stock, and when he has stock to dispose of he will find that they are not strangers to the trying public.—*The Guernsey Breeder.*

Clubbing Rates.—The favorable season is upon us for forming clubs for the next year. A little effort at the fairs, farmers' clubs and institutes, and other autumnal gatherings on the part of our friends and the work is done. The JOURNAL will be sent in clubs of five for \$4.00, and in clubs of ten for \$7.50. The names may belong to different post offices. Those subscribing now for 1888 will get the JOURNAL the rest of this year free.

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 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.

The Holstein Difficulty.—We have received a letter from Mr. M. Cook, Aultsville, saying that over thirty Holstein breeders have already signed the agreement not to exhibit at the Toronto exhibition this year. This includes nearly all the leading breeders of this class of cattle in the Province. A meeting of the breeders is called for the second week of the exhibition at Toronto, when matters affecting the future standing of the breed will be taken into consideration. Every Holstein breeder in Canada should attend. Further notice of exact date will be given.

Fanning Mills.—Mr. M. Campbell, Chatham, Ont., has again sent us his advertisement of Fanning Mills, and adds: "I have added a good improvement this year to take timothy seed from fall wheat, not blowing it out into the chaff as has been done generally; I also bring the cockle and other foul seeds into a box by themselves, so they can be destroyed and not mix up with the chaff and go out into the land again. I am making 2000 this season, having sold that number last year; have filled my third order for mills from London, England; have now an order for car load from St. John, N. B." (See adv't.)

Indiana State Fair.—This exhibition will be held at Indianapolis, Sept. 19th to 24th. It is now recognized as a great centre of the great breeding grounds of improved stock in the west. Herds of improved cattle were shown at the last fair from nine different states. Eighteen states and the Canadas were represented. With an able President in the person of W. B. Seward, and Secretary, in A. Heron, both of Indianapolis, and so wide a country to draw from, this exhibition cannot fail to prove a great success. Our thanks are tendered to the association for their kind invitation to attend, which we regret we are unable to do at this time.

The Corbin Disk Harrow.—This harrow, introduced by the St. Lawrence Manufacturing Company, Prescott, Ont., is proving itself a very valuable implement on the farm. In clay sections where peas are grown and wheat sown on the stubble without ploughing, they are invaluable, both for cutting up the ground and making a fine seed-bed, and also for partially filling the furrows between the ridges. Just at this season we have difficulty in keeping our own at home, our neighbors have become so well convinced of its value, and we are glad that they have. An agent will please mark the spot, and make a thorough canvass next spring.

Barn Building.—Mr. Harold Sorby, of Alton Hall, Gourlock, has just erected a new barn in room of the buildings burned last summer. It is 100 x 90 ft., and 31 feet posts. Mr. J. C. Snell, Edmonton, is building one 120 x 60 ft., on the end drive principle. Messrs. Hay & Patton, of New Lowell, Ont., are building one of enormous dimensions. Mr. Davies, of Mongolia (near Markham), is building one very much like our own, and many other good ones are in the course of erection. All this is a token for good, as without good barns, it is difficult to keep stock of the first order. Ontario is pre-eminently the Province of good barns, but still there is vast room for improvement.

Lotteries.—We are in receipt of the announcement of a lottery with headquarters in Montreal, offering the sale of tickets for \$1.00 each. This lottery is advertised as under the patronage of a Reverend Father, and for the benefit of the Diocesan Societies of Colonization of the Province of Quebec. Amongst the articles to be drawn are real estates said to be worth \$500 and \$1000 in Montreal, and a number of pianos at \$400 each. Such work is a disgrace to our civilization. Unless bestowed in the form of a gift, it is wrong to get property without giving an equivalent in one form or another. Those who are successful in drawing large prizes at lotteries do so at the sacrifice of their moral well-being. Those only can be called fortunate whose cards draw blanks.

Ayrshire Literature.—Mr. James Simpson, Brockville, Ont., has written to say that the pamphlet on Ayrshire cattle referred to on page 566 of the August number of the JOURNAL was prepared by the Ayrshire Breeders' Association of the United States, in which Ayrshire cattle are traced back in Scotland for 120 years. It tells how they were crossed and bred with other cattle, and dwells upon the milking qualities of the Ayrshire cattle. This pamphlet is for sale by J. D. W. French,

price, 50 cts., Andover, Mass., U. S.; but he is not the author of the work as stated in last issue. Vol. 1 of the Ayrshire Herd Book of Scotland (price, 3s. 6d.) may be had from the Hon. G. R. Vernon, Auchans House, Kilmarnock, Scotland.

Exhibition Prize Lists.—Ours was the only paper in 1886 which published the prize lists of the Toronto and Industrial Exhibitions, and give them to the farmers free of charge. It is our intention to do the same this year again. Will those of our patrons who approve of this action call the attention of their friends who may not be subscribers to the same? By doing so they will render us a material service, for which they will receive our warmest thanks.

Agricultural Societies.—For years past, several agricultural societies have given a year's subscription to the JOURNAL as a premium, thinking this would do more real good than the small cash prize usually offered. This plan has proved so satisfactory that in some societies the number has been increased to fifty copies, which has been the means of increasing the demand for a better class of stock. Few men will read the JOURNAL for a year who will not be convinced but that it is to their advantage to make live stock raising and the dairy interests prominent factors of their farming operations; or, if they have already given some attention to these matters, must desire to improve the stock they have. It is now the season when premium lists for fall fairs are made up. Will not our friends in those societies where the plan has not already been adopted use their influence to have the JOURNAL included among their premiums? Special rates will be given where a number of JOURNALS are offered in this way.

The Customs Difficulty re Galbraith Bros. Cleveland Bay Importation.—The Customs duties lifted on the 10th July, by the American collector of Customs at Detroit on the 10 Cleveland Bay stallions imported by Galbraith Bros., Janesville, Wis., has been refunded by order of the Department at Washington. The Department rightly argued that it was sufficient to pass them free if they were specially imported for breeding purposes, not solely as had been held by the collector. It has also decided that "animals valuable mainly for their breeding qualities are not excluded from free entry merely because intended for sale, nor because they are too young to be qualified for breeding when imported." To decide otherwise would be calamitous to the improvement of the live-stock in the U. S. The Galbraith Bros. alone have brought enough good stock into the country to entitle them to the thanks of the Government rather than incurring its opposition.

Ontario Agricultural College.—This college opens on Oct. 1st, when all intending students should be on hand, as lectures begin on the 5th of the same. Candidates must be not less than 16 years of age, and must produce satisfactory certificates as to moral character, physical health and to their intention to follow agriculture or horticulture as an occupation. They must pass the matriculation examination in the subjects defined, pay the tuition fee of \$20 for residents who are farmers' sons, or those who have put in one year on the farm, \$30 for other residents, \$50 for non-residents who have served the one year's apprenticeship and \$100 for those who have not. Each county and territorial district is entitled to send one student, for whom no tuition fee will be charged. The charge for board, lodging and light is \$2.50 per week. Full particulars may be got by applying to the President, James Mills, Guelph. Young men who are anxious to get an insight into the deeper aspects of their future life work on the farm, will try and take the regular course of lectures at this college. No one with ordinary sense can get any harm by going, and to those who are seeking it, the information imparted will be of service during all coming time. Young men of the farm, more is expected of you than of your fathers.

"Please continue for another year to send our society, through me, five copies of your extremely instructive Journal. Our members have derived much profitable knowledge from its columns since it came among us."—A. G. McDonald, Sec'y Agr. Soc., Antigonish, N. S.

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Advertising Rates.

The rate for single insertion is 18c per line. Nonpareil (24 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, not more than five lines each, \$1.50 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.

ANDREW EASTON, Bright P. O., Ont., importer and breeder of Shropshire sheep. A few splendid rams for sale. sep-4

FOR SALE—A SUFFOLK PUNCH STALLION, 4 years old. Address, JUDSON ROSEBROUGH, Brantford, Ont. jne-6

FOR SALE. Two litters, Poland China Pigs, farrowed May 18 and 26. Pedigrees eligible for A.P.C.R. guaranteed; g. dam, Beauty, one of A. C. Moore & Sons', Illinois, best. Also Tecumseh, sire of above, farrowed July 24, 1884. Write for prices. jv-3 **JOHN MORRISON & SON,** Mandaamin, Ont.

BERKSHIRE PIGS.

Your choice of 40 BERKSHIRE Boars and Sows of different ages. Good pedigrees and individual excellence, at reasonable prices. **J. E. BRETHER,** Burford, Ont.

FOR SALE.

A few good SHORTHORN females, some of them show animals and prize winners, in calf to an imported bull; can furnish a splendid young herd. Michigan parties can visit me cheaply and quickly, just eight miles from river St. Clair; reasonable figures. Address or see **D. ALEXANDER,** Bridgen, Ont.

DORSET HORNED SHEEP.

Dorset Horned Sheep, the most prolific, producing lambs twice within the year, the most hardy, and the earliest to attain maturity. Full particulars of **DUKE & SON,** Dorchester, England. my-if or, **STANFORD & ROLPH,** Markham, Ont.

SHORTHORNS FOR SALE

SEVEN BULLS—From ten to seventeen months old, and a number of **COWS AND HEIFERS,** all registered in D. S. H. H. Book Address, **J. & W. B. WATT,** SALEM, ONT.

Shorthorns for Sale—Young Bulls, Cows and Heifers. Several of the bulls by Imp. Waterloo Warden (47222)—one of them 18 mos. old and a neat, smooth animal. Also from 30 to 40 head of high-grade Shorthorn cows and heifers, all young and some soon to come in. **THOS. SHAW,** Woodburn P.O., Co. Wentworth, Ont.

IMPORTED COTSWOLD SHEEP

We have recently imported 15 head, selected from the flocks of the leading breeders in England. Most of them were prize winners at the Royal and other shows. The importation consists of lambs and shearlings, and are without exception a very superior lot; will be on exhibition at the Toronto and other leading shows. **LAILAW & JACKSON,** Wilton Grove, Ont.

FOR SALE—A herd of Shorthorns, one male and five females, registered in the D. S. H. B. Cheap for cash. **JOHN FLACK,** Banda P. O., Simcoe Co. Sept-1
Glencairn, N. & N. W. R.

FOR SALE

20 HEAD OF SHORTHORNS
Being my entire herd under three years old, with a few cows, all registered, and to head with just one drop of native, some dozen generations back, but a good lot. I have been using **CAMPBELL** or **SHERIFF HUTTON** bulls for years, and for the last ten years my stock bulls have taken 30 firsts and one second prize, showing in York, Cardwell and Simcoe.

ALSO 50 SOUTHDOWN SHEEP,

Seven good strong shearling rams, descended from importations from Walsingham, Webb and Colman flocks. I have taken over 100 first prizes with Southdowns in the last 3 years. Also Berkshire pigs, April and June litters (registered). sep-2 **EDWARD JEFFS,** Bond Head, Ont.

BROOKSIDE FARM

New Glasgow, Pictou Co., N. S.,

STANDARD-BRED TROTTERS

American Cattle-Club Jerseys.

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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. No stock notes can be inserted that do not reach the office by the 23d of the month preceding the issue for which they are intended.

Horses.

PERCHERON HORSES AT INDUSTRIAL FAIR.—Savage & Farnum, of Island Home Stock Farm, Grosse Ile, Wayne Co., Mich., importers and breeders of Percheron horses, have entered 37 head of registered Percheron stallions and mares. These 37 are the choicest of their entire stud, and will, no doubt, be an attractive card at the coming exhibition. This is the largest entry of horses ever made in Canada by a single firm, and the largest number ever made in the United States or Canada, except at the fair, at which out of 52 exhibitors, Savage & Farnum showed one-tenth of all the horses that were entered, and were awarded 22 per cent. of all the prizes. Admirers of this famous breed of horses, and those who contemplate purchasing, should not fail to inspect this large number. Both Mr. Savage and Mr. Farnum will be at the fair with their horses during the exhibition, and will have comfortable quarters fitted up in which to meet and entertain their friends, and will be glad to make the acquaintance of visitors to the fair with whom they have been corresponding.

Messrs. F. E. Page & Sons, of La Planche Stock Farm, Amherst, Nova Scotia, are, we are pleased to notice, actively pushing forward in the line of stock improvement. Under date of Aug. 4th they write: "We have purchased four Percheron fillies from France, which were landed from the S. S. Nestorian last week at Quebec, after a successful passage (not one of the 120 horses on board having been injured). They were all purchased from M. Ernest Perrot, of Cheueliere Nogent le Rotron, Eure-et-Loir, the most celebrated breeder of Percherons in France, having bred and owned such horses as Coco and (714). Brilliant (727) (755). Brilliant 1809 (751). Voltaire 3540 (443). and others equally noted, the blood of which trace through different lines directly to the famous Jean le Blanc, and through him possessing the blood of the great Arab Gallipoli. The fillies consist of three yearlings and one two-year-old. The former weigh 1000-1050 lbs., the latter 1300 lbs., and was served by one of the best stallions in France. All of these are smooth and active, with a good loin, good flat leg and the best of feet. Three of them have Brilliant 1271 (755), for grand sire, and the other Favosi 1, and all trace direct to Coco and (714), Jean le Blanc, etc., on the dam's side. Hence we believe that without a doubt they are as well bred a lot of colts as stand in America to-day. Mr. F. H. Black, of this town, also imported with us two yearlings and one two-year-old filly, equally as well bred and of a heavier type, the yearlings weighing 1100-1200 lbs., and the two-year-old 1400 lbs., which is in foal to Brilliant 1271 (755). This is the first importation of Percheron mares to Nova Scotia, and we believe the largest east of Montreal. Our herd of Holstein-Friesians are doing fine. It now consists of ten females and a two-year-old bull. The nucleus of our herd was formed by a purchase of the bull Sinclairville, and the cow Jacoba, from Messrs. M. Cook & Sons, of Aultsville, Ont., in 1884, both of which have given grand satisfaction. Sinclairville is pronounced by judges who have visited the Western Fairs as good as Canada can produce. He is solid and compact in build, has a soft, mellow skin, and silken, glossy hair. We also purchased four heifers in calf of B. B. Lord & Son, from the Quebec quarantine, in the fall of 1884. The demand for this stock is all that could be wished. The Holstein grades are giving grand satisfaction as general purpose cattle. A grade veal calf was killed here last week, which at five weeks old dressed 134 pounds."

GREAT SALE

At CHESTERFIELD, 2½ miles from Bright Station

ON THURSDAY, OCTOBER 6th, 1887

Grandly bred Bates Shorthorn bulls, High Grade Cows and Heifers, Canadian bred Mares and Colts, Oxford Down sheep of both sexes, and a few choice Berkshire pigs.

The bulls are a choice lot, of good symmetry, grand quality, and thick fleshed animals. The grade cows are large, handsome, good feeders and excellent milkers. The Oxford Down sheep are either imported or bred from stock imported from the best flocks in England.

The subscriber being over-stocked will sell the above by public auction. E. A. M. GIBSON, ESQ., Delaware, Auctioneer.

Catalogues by September 15th.

WM. MURRAY, Chesterfield, Ont.

SALE BY PUBLIC AUCTION.

Pure bred Shorthorn and Grade cattle, Cotswold and Oxford Down sheep, Berkshire pigs and a few horses.

—TO BE SOLD—

On Wednesday, October 12th, 1887,

At FARNHAM FARM, Arkell P. O., Guelph station, Ont. Commencing at 12 o'clock sharp.

The following stock, consisting of about 15 Shorthorns, two bulls and the balance females; about 50 pure bred Cotswold and Oxford Down sheep, rams and ewes; about 20 Berkshire pigs, boars and sows. The Shorthorns are registered in the Dominion Shorthorn herd book.

The sheep are either imported or bred from imported stock, and are eligible for registration in either the American Cotswold or Oxford Down record.

The Berkshires are eligible to register in Canada Berkshire record.

My sale will be conducted on the same terms as the last one, in 1884. There will be no reserve.

TERMS OF SALE:

Twelve months credit on approved joint notes, with eight per cent. discount for cash. All sums of \$20 and under, cash.

HENRY ARKELL,
Arkell, P.O., Ont.

IMPORTANT SALE

SHORTHORNS

AT DELAWARE

(12 miles from London, 3 miles from Komoka Station, G. T. R.)

ON THURSDAY, 13th OCT.

When the entire Belvoir herd will be sold. The proprietor knowing the suspicion with which draft sales are held, and the poor prices so often realized, has reluctantly concluded to offer the ENTIRE BELVOIR HERD. Nothing marketable will be retained. This will be an opportunity to obtain the best BATES blood seldom offered to the Canadian breeders, and the proprietor confidently looks for that support from them which heretofore has been so generously given by breeders in the United States. Catalogues in due time.

RICHARD GIBSON.

DELAWARE, ONT.

For Sale or Exchange.

FOR A WELL BRED HEAVY DRAUGHT STALLION OR Standard bred Trotting Brood Mares or Fillies in foal.

A fine herd of registered Ayrshire cows and heifers, consisting of ten cows in milk, ten heifers and one 2-year-old bull.

These are choicely bred and great milkers; will be sold cheap & make room for trotting stock. Three fine high grade young Hereford bulls, also a number of fine grade

Hereford, Angus, Holstein, and Jersey

Heifers. About 25 head of Shropshire Down ewes and lambs; Canadian bred Clydesdale colts and fillies, and 2 year old. A very fine Morgan Stallion, 8 years old, stylish and a good traveller. Grand-daughters of Rysdyk's Hambletonian (10), and Volanteer, in foal to standard sires. Registered Berkshire pigs all ages.

FOR CASH. A few very choice A. C. C. H. R. Jersey females. Solid colors.

Address,

E. PHELPS BALL,
Vt. Surgeon,

"Lee Farm," Rock Island, P. Q.

Shorthorns.

Mr. A. H. Clark, Prince Albert, N. W. T., reports the safe arrival in June of 11 head of cattle for the ranch of Mr. R. I. Pritchard—Shorthorn bull, The Duke of York, five Shorthorn cows and five calves, all purchased near London. Mr. P. has already 100 head on his ranch.

The stock at the Maple Lodge Stock Farm, Maple Lodge, Ont., owned by Mr. Jas. S. Smith, are coming through the dry season in very fair condition. He has this season what he considers the most promising lot of young bulls he ever raised, several of them sired by the young stock bull Duke of Colonus.

Mr. J. S. Williams, of Knowlton, P. Q., writes, Aug. 20th: "My cattle and hogs are looking well, and I expect to make a good show this year. We have had a hot, dry summer, but with occasional rains, so that our crops with the exception of wheat are good; the hay crop extra good, but lots of it late cut owing to scarcity of help."

We call the attention of our readers to the sale of Shorthorns at "Beechwood," near Chatham, Ont. They are the property of C. G. Charteris & Son, and embrace specimens of both sexes, very well bred and good individually. Those who wish to purchase a young bull for purposes of improvement, or to lay the foundation of a herd, should make an effort to attend.

John Isaac, Kinellar Lodge, Markham, Ont., reports the following sales of Shorthorns within the last two months: "To Wm. MacIntosh, Burgoyne, one bull calf; to Hugh Thompson, St. Marys, two two-year-old heifers, one imported, bred by S. Campbell, Kinellar, Aberdeen; and one imported three-year-old heifer, to Bow Park, also bred by S. Campbell."

Mr. Henry Arkell, Arkell P. O., near Guelph, offers by public auction, on Oct. 12 next, about 15 head of Shorthorns, 50 pure bred Cotswold and Oxford Down sheep, 20 Berkshire pigs and a few horses. The cattle, pigs and sheep are all either registered or eligible for registration; and Mr. Arkell tells us they are all good animals. (See advt.)

Mr. Edward Jeffs, Bondhead, Ont., offers for sale his entire herd of Shorthorns under three years old, with a few cows, all registered and descended from Campbell or Sheriff Hutton bulls. He also offers for sale fifty Southdown sheep, descended from importations from Walsingham, Webb and Colman flocks, also some Berkshire pigs. See advertisement.

Mr. Wm. Murray, of Chesterfield, Ont. (near Bright Station), offers by auction a very choice lot of Bates Shorthorn bulls, grade cows and heifers, Canadian bred mares and colts, Oxford Down sheep and Berkshire pigs, on Thursday, October 6. Mr. Murray has for years devoted himself to the careful breeding of choice stock, and has at present time in his herds some of the choicest strains of blood to be found in Canada. (See advt.)

Mr. Hugh Thomson, importer and breeder of Shorthorn cattle and Clydesdale horses, St. Marys, Ont., has purchased from W. J. Biggins, Elmhurst Farm, Clinton, the 4-year-old cow Isabella 10th, sired by Crown Prince of Strathallan; dam, Isabella 4th, by Young Mayflower; g. d., imp. Isabella, by Dipthong 3rd, etc. Also the one-year-old Matchless of Elmhurst 9th, sired by Favorite; dam, Matchless of Elmhurst 6th, by British Statesman 2d; g. d., Matchless 19th, by imp. Statesman, etc. They are both fine show animals. Mr. Biggins has an exceptionally fine lot of calves this year, and his herd generally are looking well.

Sheep.

We are pleased to notice the Cotswold sheep still have strong friends and admirers, and that Messrs. Laidlaw & Jackson, of Wilton Grove, Ont., have recently imported fifteen choice head of lambs and shearlings from the best flocks in England, many of them prize-winners at the Royal.

Mr. John Jackson, Woodside, Abingdon, Ont., has just added to his flock of Southdowns a lot from across the water. They consist of ewes and rams, shearlings and lambs, and include the first prize winners at the Royal Show of England. Mr. J. is determined to spare neither pains nor expense in keeping this flock to the front. The lambs of this year's breeding are a good and uniform lot.

Mr. John Dryden, Brooklin, Ont., reports his imported sheep all landed at Maple Shade, on Thursday, 18th inst., in good condition after their journey, and adds, "They did well at the English shows after I purchased them. One lot of five, bred by J. E. Farmer, won 1st at the Royal, and 1st at Wrexham, the Shropshire County Show. Another lot also won 1st in another class at Wrexham, and still another lot was placed fourth. Among the rams I have 2d and 3d prizes. Our pastures are completely dried up for want of rain; and the sheep, if they could speak, would pronounce this a hard country indeed." See Mr. Dryden's change of ad. in another column.

Swine.

Mr. Joseph Magill, Janetville, Ont., reports the following sales of pure-bred Berkshires: "To G. Kerr, Lifford, Ont., 2 sows; J. H. Wilson, Lifford, 1 sow; D. D. Magill, Janetville, 1 sow; R. Armstrong, 1 boar; J. Brady, Ops, 1 sow; J. Hobden, Bushking, Ont., 1 boar and bull calf; J. Pritchard, Stanhope, 1 sow."

ARTHUR TOPHAM,

78 Wood Street, Bold Street, Liverpool.

Exporter of every description of English pedigree Horses, Cattle, and Sheep. Buyers visiting England offered every assistance. Lowest rates for freight.

We have a large assortment of large and small cuts, suitable for posters, letter heads, billheads, envelopes, etc., engraved in a superior manner. Send for specimen sheet. Cash must always accompany order.

Address the STOCK JOURNAL CO., HAMILTON, ONT.

For Sale—Holstein-Friesian Bull

Four years old. A good animal. Very quiet. ELIAS PANNAECKER, Hespeler, Ont.

Shropshire Ram Lambs for sale. Average weight of lot, Aug. 20th, 100 lbs. Bred from imported sire and dam. Prices moderate. THOS. SHAW, Woodburn P.O., Co. Wentworth, Ont.

For Sale—A Thoroughbred Holstein Bull

Two years old. Apply to JAS. HOLTSON, Innerkip, Ont.

THE SECOND ANNUAL SALE

Shorthorn and High-Grade Cattle

BEECHWOOD STOCK FARM, CHATHAM, ONT.

Will be held on the premises,

On THURSDAY, 20th OCTOBER, '87.

Cows and Heifers of both classes will be sold, and a number of young bull calves, sired by Crown Prince.

BEECHWOOD is two miles from Chatham, G. T. R., where parties arriving to the sale will be met.

Catalogues on application.

C. G. CHARTERIS & SON, Proprietors.

WYTON

Stock-Breeders' Association

BREEDING OF PURE

HOLSTEIN AND FRIESIAN CATTLE

A SPECIALTY.

We have the only pure breed of Aaggie Stock in the Dominion, the head of our herd being Sir James of Aaggie, No. 1452, H. H. B., Vol. 6. Also Aaggie Ida, No. 2600, H. H. B., Vol. 6. This family is noted for its exceptionally fine milk producers.

The largest herd of Holstein cattle in Canada, from which we are prepared to sell bulls and heifers. If you are in want, come and see us. Prices reasonable. Correspondence solicited.

Address

WM. B. SOATOSHERD,
Secretary, Wyton, Ont.

ONTARIO AGRICULTURAL COLLEGE

—WILL RE-OPEN—

On the 1st October, 1887.

Full courses of lectures on AGRICULTURE, LIVE STOCK, DAIRYING, CHEMISTRY, BOTANY, VETERINARY SCIENCE, Etc., and a good practical training in English and the elementary mathematics.

For circular giving terms of admission, course of study, cost, etc., apply to

JAS. MILLS, M. A., President.

Guelph, August, 1887. Sept-1

Berkshire Pigs for sale—Boars and sows, April litters—12 crosses pure. 1 boar of last November, a beauty. THOMAS SHAW, Woodburn P.O., Co. Wentworth, Ont.

BACK VOLUMES OF THE JOURNAL.

WE HAVE A FEW BOUND AND UNBOUND VOLUMES OF THE JOURNAL for the years 1884 and 1885. Price per volume, unbound, \$1; bound, \$1.60, post-paid.

Address

STOCK JOURNAL CO.,

Hamilton, Ont.



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(Messrs. Sorby have one of the largest Clydesdale establishments in Canada, and only last month, Aug., 1887, ordered 200 lbs. of Food, also Mr. J. Hunter, of Alma, has same month purchased 100 lbs.)

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Yours truly,
J. & W. WATT.

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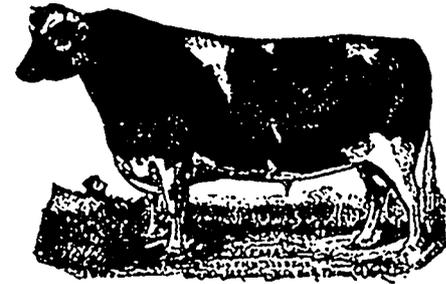
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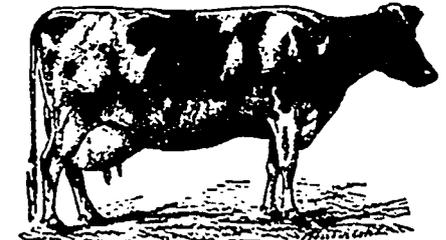
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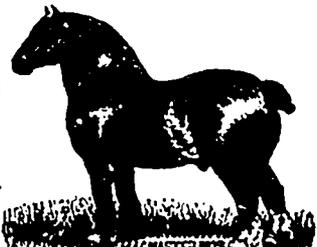
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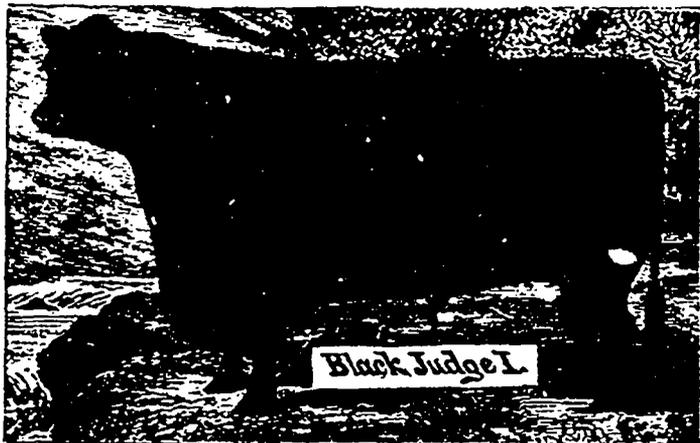
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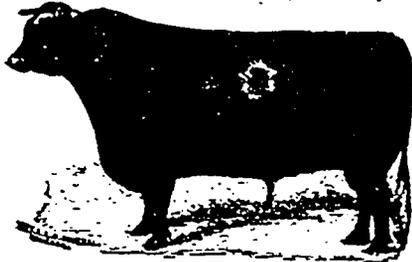
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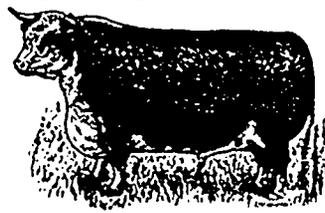
All eligible for or already entered in the "American Hereford Record." Amongst the sires of my herd are Auctioneer, Careful, Hayden Grove, Downton Boy, King Pippin, and Cassio. Also a fine lot of imported

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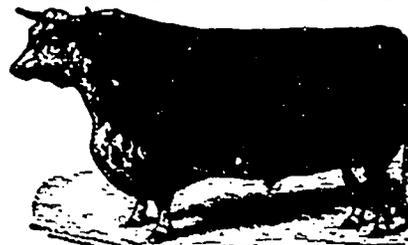


THIS herd, grounded on selections from the best blood in England, is remarkable for the number and uniformity of the good calves that it has produced during the three years of its existence, owing in a great measure to the excellence of the stock bull Tushingham (8127), by Charity 3rd (6350), by The Grove 3rd (5051). Several young bulls of his get are held for sale.

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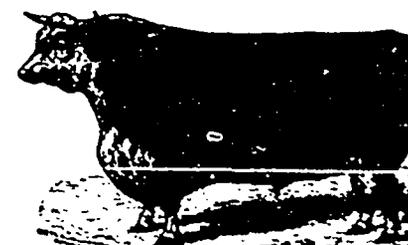
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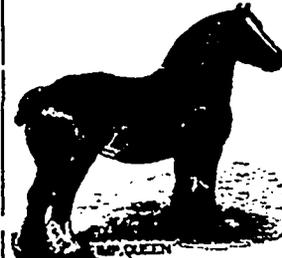
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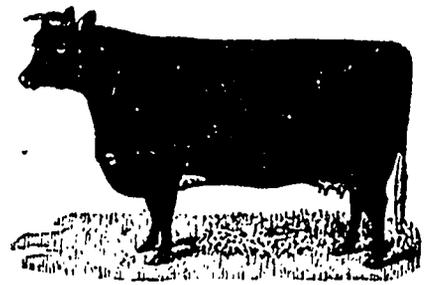
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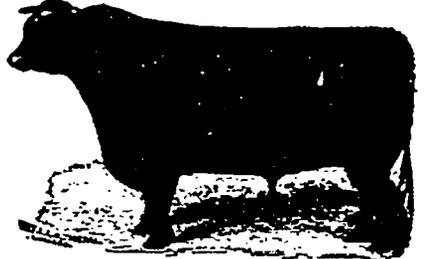
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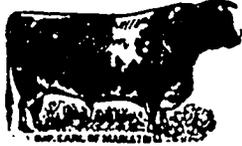


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Visitors met at station.

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Shorthorn Cattle

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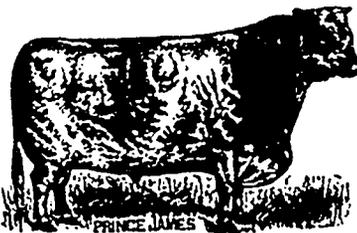
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CATTLE

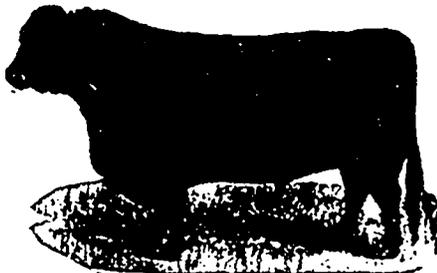


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The herd numbers 65 head, and for three years in succession has won Provincial or Dominion prize as best milkers. The imported bull PROMOTION (3212) at head of herd.

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for sale. fe-1y

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H. Sorby, Proprietor



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GALLOWAY CATTLE
AND PLYMOUTH ROCK FOWLS.

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(All registered in the American Jersey Cattle Club
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By A. J. MURRAY, M. R. C., V. S.,

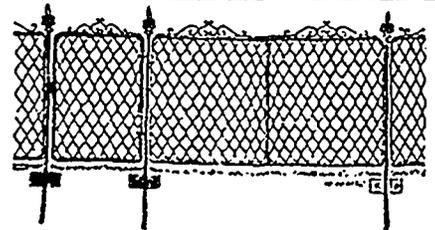
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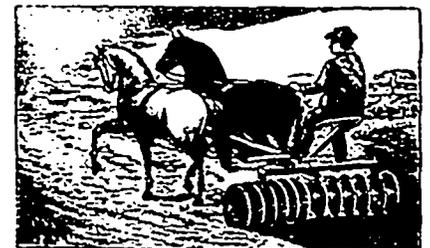
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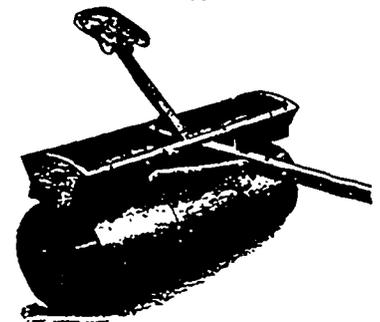


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