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THE CANADIAN LIVE-STOCK AND FARM JOURNAL

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

VOL. V.

HAMILTON, CANADA, JANUARY, 1888.

No. 51



GROUP OF ABERDEEN-ANGUS POLLS.

The Property of Messrs. Hay & Paton, Kinnoull Park Stock Farm, New Lwellyn, Ont.

Kinnoull Park.

We doubt very much if Mr. Bridgen, with all his experience, ever made a drawing with more fidelity to nature than that displayed in the grouping and pose of the animals specially chosen for the above cut, to represent the Kinnoull Park herd, in this New Year's number of your admirable JOURNAL. The champion bull Chivalry and his invincible daughter, Emma of K. P., appear in the cut exactly as any one can see them in their own stables at Kinnoull Park, and those who have seen the massive proportions of that grand "queen mother" cow Morlich Isabel, could hardly fail to recognize her in the capital portrait given above. Emma's Darling is just herself and nothing more. They are all drawn with the appearance of life about them, and here is where the majority of live-stock artists miss the mark. They make beautiful pictures to look at, and they square and shade off the inevitable shortcomings of the animals, to make them perfect as far as pen and pencil go, but the experienced and trained eye can see at a glance that they are dead, and that the originals of such fancy pictures never existed nor ever will. The magnificent newly erected stables at Kinnoull Park, which Mr. Bridgen has so artistically introduced as a background to the above cut, are without doubt second to none on

the American continent. They are built on most substantial stone foundations with ten feet of solid brick wall on top, and surmounted with 14 feet of frame work, making the height of walls all round over 25 feet. They are built in the square form with two additions to the north side, each large enough for the ordinary stable. The sides of the square alone measure 215 feet, and the additions above mentioned make the east side of the building no less than 300 feet in length. They are roofed entirely with metallic shingles, supplied by the Metallic Company of Toronto. The work of pumping, chaff-cutting, and paiping turnips, is done by means of a large windmill with 22 feet wheel, supplied with all fixings and piping by the Ontario Pump Company. The water supply is obtained from an artificial pond in rear of the buildings. There is ample accommodation for 100 head of cattle and 10 teams of horses, besides a number of loose boxes for young animals. The pigery is a very large building, and can easily accommodate 150 pigs. There are also two very commodious root houses at each end of the cattle stable.

The water is conveyed by means of pipes from large tanks inside the buildings to the manger of each individual animal, the main pipe being underground, and is supplied with stop cocks, with bore for leak

age, opposite each couple of stalls, so that there is no standing water in the upright pipe conveying the water from main pipe to manger, and no tap required, just a J on top and two shoulders on the end of J to turn flow of water into manger or saturate feed-boxes. The stables are so large and airy that this precaution was taken for fear of frost if water was left standing in exposed pipes.

It might interest some of your numerous readers to know something of the foundation and show-yard success of the Kinnoull Park herd of Aberdeen-Angus Polls, more especially as you have most kindly given them the place of honor in this month's JOURNAL.

In the summer of 1882 Messrs. Hay & Paton had their attention drawn to the many good qualities of the Aberdeen-Angus Polls, and acting on the impulse of the moment, they decided on importing a small herd for their immediate purpose of comparing them with the Shorthorns which they had already for some years successfully handled. This importation consisted of the bull Chivalry (1762), of the favorite Balledalloch "Sybil" family, and sired by the grand Pride bull Challenger (1260). As far as his breeding was concerned no better selection could have been seen. The great herd of Doddies belonging to Mr. Walker, Waterside of Forbes, has been headed for some time

by Waterside Sir (2408), a grand bull of the same family as Chivalry, which we have just heard has been sent to the butcher on account of some defective derangement. It will be seen by this that the breeding of Chivalry is tip-top, and as to his appearance, it may truthfully be said of him that he is every inch a show bull.

The females imported with Chivalry were The Flower of Knockiemill (5875), 6602, [1]; Mary 2d of Knockiemill (5877) 6599, [2]; Nannie 2d (5853) [4], and Meavis 2d (5851) 2784. Of the Flower of Knockiemill it may be said that she is without doubt the most valuable breeding animal that ever crossed the Atlantic. Her first calf, which she carried across the sea, to save the freight, was the uncomparable Black Judge 6612 [1], a bull that has taken every first prize and medal open to him since his first appearance in 1883, and who finished last year at Ottawa by taking first and Provincial jubilee medal over such a superb bull as the Hon. Mr. Cochrane's Lord Hillhurst 3990 and 3961. Her second calf, the beautiful Emma of Kinnoul Park, is now the "banner cow" of the renowned Park herd. She is the first prizewinner of 1884, 1885, 1886, and 1887, and at the last Ottawa Provincial she gained the special diploma for best Follied female in the show, beating for the first time in Canada the great champion cow Mary 2d of Knockiemill. Her third calf, Miss Charcoal, was a heifer of the greatest promise. She took first prize as a calf at the Toronto Industrial in 1885, beating that lovely calf Pride of Big Island 2d. She was sold shortly after to T. C. Pattison, Esq., and went over the line. Black Judge 2d, her last year's calf, was sold in the summer as the first of the season's batch, and she has one at foot just now, Black Judge 3d, which already shows the points that distinguished the others, and he will remain in the herd.

It is needless to say much concerning the grand cow Mary 2d of Knockiemill. Everyone attending our great exhibitions during the past four years has been familiar with the appearance of this superb cow. She has now, along with the great champion Black Judge, gone to grace the beautiful Big Island Stock Farm, and we heartily wish the popular and esteemed owner the best of good luck and many great victories with this incomparable pair.

Messrs. Hay & Paton have been increasing their herd of late by purchases, principally from Messrs. M. Boyd & Co., Bobcaygeon, and they intend to still further enlarge their operations in this direction. When the stables are completed they will have every facility for turning out the best of everything in the live-stock way, and they do not by any means propose to confine themselves to any one particular breed, although their invincible herd of Doddies shall always occupy the place of honor in their stables. The contract for building the stables was carried out in a most excellent manner by that experienced hand, Mr. Warden, of Manchester, Mr. Pearson, of the same place, doing the brick and stone work in grand style.

In conclusion it is not certainly too much to say Sunnidale and Simcoe have the greatest reason to be proud of the public spirit and energy displayed by the Messrs. Hay & Paton in the erection of such magnificent buildings in their midst. Mr. Hay, notwithstanding his years, has devoted his whole time and attention during the past summer to have the stables as perfect as possible. Indeed he was the architect to all intents and purposes, and his popular nephew and partner, Mr. Robert Paton, has been from the first superintendent of every department of the work, and the result of their labor and outlay can hardly fail to give them the greatest satisfaction.

We most cordially wish Mr. Hay many years yet of his wonderful health and strength to enjoy what we may almost call the great work of his life.

STRATHAVEN.

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THOMAS SHAW, RIVERSIDE FARM, EDITOR.

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

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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, JAN., 1888.

OUR old country letter, containing a description of the Smithfield fat stock show of 1887, will appear in next issue.

PLEASE examine your address tag. If it reads Dec. '87, your subscription expired with that issue, and we will be obliged if our readers will renew at once.

SPECIAL OFFER.—Any person at present a subscriber can have his JOURNAL renewed another year by sending two new subscribers and \$2.25—that is, he gets his own JOURNAL one year for only 25c. Let every friend and well-wisher of the JOURNAL send two new subscribers along with his renewal.

SOMETIMES those engaged in the work of breeding the better classes of stock feel some alarm at the amount of the same that is being bred in the country. These fears are groundless, for never yet has really good stock been produced which would not bring a reasonable price. The more good stock we have in the country the more is the attention both of home and foreign buyers directed to it, and we presume that to-day if the times were equally good, it would be no more difficult to sell a Shorthorn bull to the average farmer for purposes of improvement in his herd, than when Shorthorns were relatively less than one to ten of present numbers. It may be that more of the culls will have to be slaughtered, which, instead of being a general evil, would be a general blessing. It is an unworthy desire to flourish through the production and sale of pure-bred animals unfit for herd purposes, and should be altogether beneath the aspirations of an average Canadian farmer.

While other branches of agriculture have been shrinking largely in values of late, it is undeniable that the stockman has fared better than any other section of the agricultural portion of the community. No difference how superior the sample of wheat, it has fallen fully one-fourth within the past

few years in price. Beef, it is true, has fallen, but not so largely in proportion for good samples. Butter, on the other hand, was never perhaps so high in this province for so long a period as during the last six months, and the price of milk and cheese have both been very good. We must add to this the stores of fertility which the stockman has been adding to his lands as compared with the grain-grower, who has assuredly been drawing upon his supply of this rather than adding to it. All this points in the direction of growing better stock, and giving increased attention to the production of suitable supplies, for it holds true of most kinds of food that it can be grown more cheaply than purchased. Viewed in this light it may be that the present depression in the prices of cereals may prove a blessing to the country, which it certainly will, if it but tend to rivet the attention of the farmers more firmly on the wisdom of keeping more, and especially better stock.

OUR Aberdeenshire correspondent refers in his last letter to the trade that has recently sprung up in stockers shipped direct from Canada to Aberdeen, there to be finished for the market. He speaks of it as being as yet an unsolved problem whether it will succeed or not. While we do not wish any harm to the farmers of Aberdeenshire, who are most interested, we are not anxious that it should become a success. Our farmers can get best results from finishing their own cattle here, and then allowing them to go to the markets of consumption. English writers are agreed that it does not pay their farmers to raise cattle for others to finish them. The best authorities in the United States speak in the same strain, and this has been our mind all along, as stated frequently in the columns of this paper, and we have had no reason to alter our opinion. There was a time when those who got four cents a pound for stockers at two years may have saved themselves, but they cannot do it now since the price has dropped to between three and a half and three cents. There seems no justification for the disposal of young stock in this way, on the part of those who do, but dire necessity, and the chances are that the necessity will continue where the practice is indulged in.

THERE need be no hesitation whatever as to whether the farmer of the future, in the older provinces at least, is to flourish by growing grain or stock in one or other of its forms. Grain at present prices most assuredly will not pay, nor is there any prospect of a very great rise in the near future. Vast tracts in both the eastern and western continents that in a manner lay waste, are now being put under cultivation, and the rapid means of transit tend to equalize the markets more and more in every country. While the prospect is against the rise of cereals in price, it rather favors the advance of live stock products. While the people of India and the farmers of our own North-west may greatly increase the growth of wheat they cannot so easily affect our butter market, owing both to less favorable conditions of manufacture and the difficulties of transit. The cities of this continent are filling up and the increasing population will more and more demand a supply of meat and dairy products. On the other hand the limits of ranch extension are well nigh reached, so that ere so very many years pass by America may want all her own stock products. No more opportune time than the present can well be found for laying the foundation of stock improvement, as the values of these have certainly touched bottom, hence the wisdom of those who are minded to change the current of their practice, to make a beginning now.

PROFESSOR J. W. Robertson is again placed in charge of the dairy department of the Ontario Agricultural College, Guelph. We have not the shadow of a doubt but that this appointment will be hailed with much satisfaction by the entire farming community. The force of the leverage which a man so competent can bring to bear at such a place upon the elevation of the dairy industry it is difficult to estimate. The acceptance of the appointment may not be for the pecuniary benefit of the professor, but it is to the material advantage of Canada. Surely the natural gifts of Professor Robertson as a dairyman were never bestowed for the sole purposes of buying and selling cheese, something which hundreds of other men may do very well. The new professor will spend the winter in attending the institutes, lecturing upon the themes he loves so well. Our readers may expect a contribution from his pen during every month of the present year.

WHILE farming in Canada is not so prosperous as in other years, we have much to be thankful for, notwithstanding. In other countries the agricultural wall is far louder than in this. The condition of the agriculturist in Britain is becoming a desperate one, judging by the statements of the agricultural papers. The state of matters in France and Spain is not much better. Italy is seeking the causes of her agricultural depression, and the state of this interest in Turkey is lamentable in the extreme. If our farmers are not making money they are as a rule making a livelihood, and that is what many of those in the countries referred to are not doing. The resource to most as a means of relief is stock-keeping, in one or other of its varied forms, and the wisdom of this is apparent. The world produces more wheat just now than is wanted, but it has at no time in its history produced an over supply of dairy products. We could conceive such a state of matters possible, but not very probable for many years ahead. Let our farmers use reasonable economy (not parsimony) in every line, pay close attention to their business, adopt all modern improvements with a judicious haste, give increased attention to the breeding of live-stock and live-stock products, and the good ship will in time get off the strand.

MEN who breed good pure bred stock, do it honestly and sell it fairly, are without a doubt benefactors of their country. We know that many look upon their difficult task as one of supererogation, and even editors sometimes call them "manipulators," but the fact remains, recognized or unrecognized, that they are the benefactors of their country. Long ago the breeders of Shorthorns in Canada imported largely and bred from these importations. They were called by numbers in the meantime "speculators" in the stigmatizing sense of the term, but the work went on in the various lines of stock-keeping with the result (1) that the average value of the heavy draught horse is nearly doubled; (2) that about 60,000 head of fine cattle are now sent yearly across the sea; (3) that the character of the highway sheep even has vastly improved, and (4) the standard of the dairy cow is continually tending upward. These and other benefits have all been brought about directly or indirectly through the agency of the breeders of good stock. The marvel is that in the face of these facts so large a number of our farmers do not avail themselves of the advantages thus brought within their reach. We read that the Indians of the Bermudas vastly preferred the trinkets given them by Columbus to things that were of more value, because they knew no better. Can we plead this excuse for the farmers of the Province who do not try to improve their studs, flocks or herds, for surely they

must know better? Let those engaged in the good work take courage and persevere, for their efforts are more and more appreciated from day to day. Though the majority may yet be on the other side, their cause is sure to win in the end.

The Points of a Model Clydesdale.

A correspondent has asked us to give a description of a model Clydesdale horse, which is a somewhat delicate task where there is so much difference of opinion upon the subject.

The first impression made upon the mind of the on-looker when a properly built draught horse passes under review is that he possesses power, to give which he must have good muscular development. This development must be rightly placed, otherwise he will appear ungainly. If his bone is more than medium, and his muscular development meagre, he appears coarse. This muscular development must be well-proportioned and rightly adjusted, or it will spoil his shapes. It should be strong in the shoulder, the arm and the quarter, and the coupling should be medium and well rounded. A flat-ribbed Clyde, like any other animal so constituted, will prove a hard keeper.

Still, viewing him at some distance off, you will observe that he stands on legs somewhat short but strong, and that when he lifts them he does so easily and without effort, and that when they are brought to the ground it is with a firmness that indicates a consciousness of strength. There is not that agility of motion that is seen in the carriage horse, whose limbs scarcely seem to touch the ground, nor yet that dragging motion that denotes a laggard. A free, firm, easy use of the feet is of much value in a Clyde horse.

He should possess plenty of life, but it should not be the life of the kitten, that is always indulging in foolish actions. We do not expect of a heavy man that rapidity of movement that characterizes a small, spare man; the combination would appear unseemly, yet he should have sufficient life to give him ease and naturalness of movement, and an appearance of readiness of action for anything required.

When the legs of a draught horse are short, his body heavy, and the ribs well rounded and the flank deep, you may be sure his digestive powers are good, but when you find them the converse of this in each of the particulars named, you may be sure he is a hard-keeper.

It is supposed in every case that the horse is perfectly sound, and free from every form of hereditary taint. One way of testing this is by the locomotion of the horse; another is by careful handling.

In a sense, the feet and legs of every horse are of primary importance, for if these are not right, it matters not what the body may be, the horse will never be so useful. The hoof should not be too flat nor too high, but deep and sound. The pasterns should be set at an angle of about 40°. The bone in the leg should be clean, and broad and flat, from the pastern joint to the knee; the bones in the foreleg should taper slightly from the pastern upward, and in the hind leg from the hock down; the hock joint should be broad and thin at the back, and the points well defined. The hind legs should not be too straight, for this militates against the ability to endure when travelling. The shoulders should be deep, and sloping well back, and the chest broad and prominent. The neck in the stallion should be strong, not thick and chubby, and well arched, supporting a head not too fine, straight in the face, broad between the eyes, the eyes prominent and sparkling with intelligent life, wide apart jowls, broad expansive nostrils, and medium ears, well set up on the head, and pointed. The packing should be well

put in behind the shoulder, the back fairly short and straight, the loin broad and coming well forward, the quarter long, the croup with some slope, and the tail set well up. When the hocks incline towards each other, the horse being at rest, and toes slightly outward, it gives better and freer action in the stifle.

The color of the Clydesdale horse, like that of the Shorthorn, is a matter about which there is not a consensus of opinion. Bay is the favorite color, with a rai in the face, and the white markings in the legs, below the knee.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Is the Decision a Just One?

Mr. Giffard's letter is of importance as it shows the necessity of care in the making of rules and prize lists of shows, the neglect of which is liable to create dissatisfaction, which a little thought would have obviated. At the meeting of Directors the whole attention is usually expended in apportioning the prizes, and the conditions and rules are too often hurriedly passed over. At the North Riding of Oxford Show, the judges of light horses, in the harness classes, threw out all colts, and I was informed by them that they had done the same at other shows. It seemed hard on the exhibitors, the more so as in the case of the Howard Branch Agricultural Society, there was no regulation prohibiting it, but such being the case, it is a matter entirely for the judges to decide. The argument in favor of throwing out colts from the harness classes is that there are special classes for colts, up to and inclusive of three-year-olds, and that by exhibiting them in the harness classes, they are reducing the chances of aged horses, which are supposed to have been at steady work all the year, and which only have the harness classes open to them; also that colts are not able to stand the amount of work which should be performed by harness horses. Another rather interesting point arose in the brood mare class at the same show; prior to exhibiting, an exhibitor very honestly informed the Directors that his mare's colt had died, but that she had suckled another colt, which he intended exhibiting with his mare; in the prize list there is a note to the effect that "Brood mares must have a colt at foot, or will not be allowed to compete." How would the judges be justified in awarding a prize in such a case, granting, of course, that the mare and colt were otherwise worthy of it? The note was, I believe, intended to prevent any dry mares being exhibited, the presumption being that the colts would be their own, such a contingency as a mare raising a foster colt not having been thought of. At first sight it appears reasonable enough that a mare with her foster colt should be allowed to compete, but it is also open to some objections; a mare might have never been able to raise her own colt, although she might have suckled a foster colt, but such a mare would certainly not be a valuable brood mare; or a mare, although a grand animal herself, might have a very poor colt, which offers the inducement to put a good colt on her, and thus materially increase her chance of winning.

Referring to the Provincial Prize List, I find no regulation beyond that the prize is offered for "brood mare with foal by her side," so that the same question might also arise there.

W.

Farmers' Sons.

Now is the time for wide-awake farmers' sons to make money—getting subscribers for the JOURNAL. Write for particulars at once. Many farmers' sons are now doing well at this work.

Permanent Pastures.

BY THE EDITOR.

This paper was read at several of the meetings of the Farmer's Institutes of Ontario, held during 1887.

The term, permanent pastures, though a very comprehensive one, is often used in a very loose sense. The most simple definition that we can give of it is to say that it denotes a piece of land that is grazed for a long term of years. It may be hill or hollow, table-land or depression, sparse growing forest, even, or watery marsh, where only coarse uninviting grasses grow. It may be composed of only one individual species, or of a combination of grasses, and it may last but a limited number of years or for a long time, although in its strict sense the term denotes lengthened duration.

In this country it is often confounded with the term *mixed grasses*, although they are by no means synonymous terms. Nay, so different are they that in a country where the latter will flourish, there may be no place for the former, unless it be in that form of grass which is indigenous to all countries that will sustain the grazing of domesticated animals. A mixed meadow or pasture field may become a permanent pasture, but a permanent pasture does not necessarily contain mixed grasses.

A permanent pasture, in the popular sense of the term in Ontario, denotes the growth of a larger or smaller number of grasses in conjunction, and for a number of successive years, with the view of obtaining a greater variety and regularity of pasture during the season, and also a larger amount of nutriment to the acre. This view of them implies that some come early in the season, and that others come later, that while one variety has given of its sweetness, another generously provides a toothsome bite while the former is resting, so that, whatever may be the season, there is always something both inviting and satisfying for the herds and flocks that may graze upon it.

Britain has long sustained pastures of this character, indeed, they are at once the pride and mainstay of her agriculture, and the deeper her periods of distress, the more is she disposed to find solace in the relief which they bring to her in the production of increasing quantities of beef, milk, butter and cheese. But, will Canada ever sustain such pastures as these? We have grave doubts. In two particulars Britain has an overwhelming advantage—in a greater degree of moisture in summer, and a much higher temperature in winter. So long as we have scorching suns in July and August to parch our pastures, and so long as the ice-burges hug so fondly the shores of Hudson's Bay and Labrador, we can never have permanent pastures that will be so abiding, or that will exactly subserve the purpose of those of the motherland. In making the tour of the eastern counties of Ontario last summer, we found whole townships where the timothy, one of the hardiest of our native grasses, was so worsted in the conflict with the cold of the previous winter, that it was able to maintain but a feeble growth, notwithstanding the abundance of the genial showers of spring-time. If, then, one of our veteran grasses is now and then so sadly worsted in the conflict with the elements of an inauspicious climate, how shall it not fare with those that are more tender, as is the case with most of the grasses usually sown here in the production of permanent pastures?

Every country where grass will grow has some form or other of permanent pasture indigenous to it, and Ontario is no exception. It we mistake not, our permanent pastures consist of June grass and white clover. Nature never makes a mistake in the suitability of the flora which she chooses for any country, and we do well to recognize this fact in all the operations of husbandry and tillage.

When our forests are removed, even though not a blade of grass be sown, after a year or two of rioting in the production of weeds, like the big boy, sometimes, in the transition state between boyhood and manhood, the entire surface of the earth that is not covered with water for a long term, becomes coated with a thick mass of June grass and white clover, but more particularly the former, the intertwining rootlets of which become so matted that every square foot of the soil contains several pounds of them.

In this we have the simplest form of permanent pasture that we can ever have, and it is certainly the most abiding. Our cattle place more store upon it than it may be their owners do, and here, we may add, Nature makes no mistakes in her teachings. The very fact that our cattle prefer June grass, with

its freshness and greenness, to any other form of grass is significant in itself, and should lead us to enquire if it is not just possible that it will be found to be the most profitable form of permanent pasture that the country will sustain. It will be found particularly so when favored with plenty of shade, or where the surface is so broken that it cannot be easily got at with the plough.

The objection most frequently urged against June grass as a pasture, is that it flourishes during so short a period of the year, and this is too true, but in the autumn when it has not been pastured too closely during the summer, it will produce a large amount of pasture. And in the spring-time it affords a nice juicy bite before the other grasses have waked at all, so that, with the exception of it may be orchard grass and some forms of clover, it provides pasture on the whole for a longer term than most other kinds of grass.

But we must not make too much of what nature has done for any country in providing for it a flora. Timothy is not an indigenous grass, and yet it is one that, to a Canadian farmer, is absolutely indispensable. The same may be said of our three leading clovers, the red, the large red and alsike. The alsike, although the most recently introduced, has accommodated itself to the conditions of our soil and climate with a readiness that is wonderful, and has without the shadow of a doubt, so far as we can judge, a bright career before it in this land of trying winters. It may be found in coming years that other foreign grasses will do equally well, and after a time we may have permanent pastures containing a variety of grasses of much longer duration than we can have them to-day.

Permanent pastures, such as Britain possesses, we cannot have just now, for we have not the grasses that will endure the contest of our winters, as we have already said. June grass being indigenous, and white clover, will always form important factors in our permanent pastures. Next to these come Kentucky blue grass, orchard grass and timothy, in the order named, because of their duration. Beyond these, we are very doubtful indeed, if we can go further at present, though it may be different in the future.

We conclude that it is not wise to go to heavy expense and sow a large number of grasses in the hope of getting permanent pasture from them, when they cannot endure the fight of our winters for more than one season, or two at the longest. We are quite aware that it is popular to-day to say a good deal in favor of permanent pastures, partly because the subject is comparatively speaking a new one, and partly because we desire that the practicability of establishing here something on the European plan, should be demonstrated to be feasible. But we feel it is no part of our mission to advocate what is popular for its own sake, but to endeavor to show what is attainable in farming, and at the same time profitable.

There is no denying facts, and one fact well sustained is better than a hundred beautiful theories. Now, what are the facts? We have, during the past season, walked over permanent pastures in the popular sense of the term in the counties of Wentworth, Brant and Wellington, Halton, York and Ontario, Perth, Oxford and Carleton, and we have narrowly interrogated their owners, and with the uniform result that after the third winter, the only permanent grasses in the fields to any great extent, were June grass, Kentucky blue grass, timothy and orchard grass, and alsike and white clover. Beyond these six varieties, we are not prepared to go to-day, in our recommendation of grasses intended for a purely permanent pasture, and of these, June grass and white clover need not be sown, as they are indigenous, and will, after a time, burrow their roots amid the decay of the ashes of the others, and ultimately take complete possession.

We know that our talented Professor of Agriculture at the Experimental Farm, Guelph, has said and written a good deal in favor of the value of permanent pastures in producing beef and milk, but with all due deference to the good Professor, we regard his experiments in this direction as far from conclusive. He has told us what permanent grasses will do as regards the production of beef and butter in themselves during that part of the year when they flourish best, but two things regarding them he has not told us, that we would like exceedingly well to know. The first is their value in producing milk and butter the entire season through, from May 1st to Nov. 1st, for one year and for a successive term of years. The second is the comparative value of June grass, or the combination of grasses that we regard as

useful in forming a permanent pasture in the fulness of their variety, as pitted against permanent pastures as sown at the Experimental Farm.

Now, if we are correct in our interpretation of the report of 1885, and we have examined it with a good deal of care, the Professor's estimate for the six months' term of pasturage is based upon the returns for the first two or three months, and so of the beef test, the particulars of which were given in a bulletin issued from the Experimental Farm last summer. For milk production, there is no season of the year when any form of pasture will yield anything like a proportionate amount of milk, equal to what the month of June will give. We fully believe that the number and variety of the mixed grasses will produce more milk and of a better quality than any one form of grass alone, and so of beef, but there comes a time in the passing of our summers when all forms of grass for the time being fail if eaten very closely.

The comparative value of any form of pasture cannot be determined with any degree of precision unless pitted against some other form of pasture under like conditions. Fit up a piece of ground by piling on large quantities of manure and clearing it effectually by a hoed crop, and sow with June grass or two or three forms of grass in combination such as we ordinarily sow, and keep it for a term of years side by side with grasses sown, as at the experimental farm, and we would have a fair test. We have not the slightest doubt that the large variety would have considerable advantage the first and second years, from the fact that they, owing to their number, would form a more perfect food ration and to their more constant succession of growth throughout the season, and for this reason it might be well to sow them, but never in the hope of their abiding with us long in the face of our stern winters, and forming in the true sense of the term permanent pastures.

Before any experiment in agriculture becomes conclusive it must be tried repeatedly, and always under the same conditions, so far as these can be controlled by man, and before its superiority over any other system can be established, it must be repeated along with that other system for a term of years and under precisely the same conditions. Professor Brown has said to us: (1) That such pasture gives several crops per annum, (2) offers an earlier and later bite, (3) animals are more healthy and less liable to disease upon it, (4) it cannot possibly be destroyed by either drought or frost; (5) it gives more daily produce than any other kind of fodder; (6) it gives three times more of any animal produce per acre; (7) it can be used as a silage crop every year; (8) it is less expensive to produce and maintain than any other crop, (9) it is a continual source of reliance and wealth, and (10) it is permanent. We have looked at this panegyric of the grasses first on this side and then on that, and we have viewed it through the lens of charity, and the only verdict that we can arrive at as we sit in judgment upon it is the old Scotch one. "Not proven." It reminds us not a little of some beautiful myth of that older time, when the earth produced spontaneously, and universal justice prevailed among mankind. The good professor, in the moment of forgetfulness when he penned that encomium, must have had in mind the practice of the vendors of patent medicines or the market places of our towns and cities. To say that such pasture gives three times more of animal produce per acre than any other form of pasture is a strong statement when unsupported by evidence, and to assert that grasses are permanent in a climate where most forms of them will not live more than three years, as general experience is now demonstrating, is an unwarrantable statement. As yet Professor Brown has only furnished us in this matter food that should stimulate our inquiries and lead us to experiment. He has not given us established data on which we can safely build the structure of our plans in reference to the future of our pasture fields.

As to the varieties of grasses that we should sow to the acre in forming permanent pastures, and the quantities of seed, we may now say a word. We do not deem it necessary to sow them alone, but just as other grasses are sown, early in the spring of the year, along with other kinds of grain; nor do we name the large quantities fixed upon by some seedsmen and theory men as being the amount most suitable to sow. These will vary very much with soils. Those most suitable for a good catch require less seed than the others.

The following are the quantities that we would fix upon as a general average per acre:

CLOVERS.	
Small red.....	2 lbs.
Large red.....	1 "
Alsike.....	3 "
	6 lbs.
GRASSES.	
Timothy.....	4 lbs.
Orchard grass.....	3 "
Kentucky blue.....	3 "
Meadow fescue.....	1 "
English rye grass.....	1 "
Yellow oat.....	1 "
	12 lbs.
Total.....	18 lbs.

But the clovers and the grasses must be sown with the expectation that in three or four years they shall all be gone, or nearly so, save the timothy, Kentucky blue grass and the orchard grass, by which time June grass and white clover, which are indigenous, will have come to stay.

As to the value of *mixed grasses*, both for producing valuable hay and pastures for a limited term of duration, we speak in terms of the highest recommendation. In fact, we are disposed to give them almost unlimited praise. To the production of permanent pastures, in this sense of the term, we give our almost unqualified approval, but as we have already stated, these are not permanent pastures in the correct sense of the definition.

We have seen those mixed grasses growing in all their luxuriance, and we could mention a long array of names enthusiastic in their praises—men who have practiced growing them for a more or less limited term of years, and who speak from that best of all sources, experience. Amongst these we may mention A. Rollings, Forest; J. E. Brethour, Burford; John Hope, Bowpark; Thos. Nicholson & Sons, Sylvan; Wm. Rennie, Toronto, and R. J. Graham, Belleville. On Mr. Rennie's Seed Farm, Toronto, we saw these mixed grasses growing in a perfect tangle, covering the earth with a most magnificent crop containing many varieties, and of a firmness of growth that was simply the perfection of the grass grower's art.

Now, even in our ordinary system of rotation, that is, mowing two seasons and pasturing the third, we are of opinion that the husbandman is shortsighted who usually does not sow a mixture of grasses, unless he is looking for some variety of seed, or has some special object in view, as the sowing of clover for a green manure, or of timothy for horses. A mixture of grasses will, without doubt, form a more perfect food ration for cattle than any of these alone, either in winter or summer, and when they are thus grown together we get a fitness of growth in the hay crop that precludes all waste.

We would, however, recommend but little change in the varieties to sow as mixed grasses, as compared with the list we have recommended to be sown as permanent pastures. We would lessen the quantity of the orchard grass, or omit it altogether, it is so vigorous and so encroaching in its growth, so early in ripening, and so coarse withal, that while we look upon it as a valuable factor in a permanent pasture, we do not think it so suitable for producing hay. We would also increase somewhat the quantity of small red clover.

The advantages of growing a variety of grasses for pasturage are many, as the one flourishes when the others are not just in season, so that there is an attractive bite for the stock over a much larger portion of the season. Orchard grasses come both early and late, and the same of small red clover. The alsike and large red are at their best a little later, and each of them has its season, and we have not the slightest doubt that the nutritive value of an acre of such pasture, or of hay from a mixture of grasses is much more than from any one of them alone.

But there is a period of the year, when in a dry season no form of pasture will quite fill the bill. That period usually extends from the first or middle of July till the 1st or middle of September. The hope that permanent pastures will at this season of the year give a supply to our stock is a vain one, for beneath the scorching suns at the season indicated, no kind of close cropped grasses will flourish when the weather is not more than a dimly moist.

Farmers, and more especially dairymen, who do not make some suitable provision for tiding over this annual period of trial, must suffer in consequence. The remedy is in our own hands, and we are blind to our own interests if we do not apply it. It consists in the growth of some soiling product. This may be done in a variety of ways. Oats, vetches and peas may be sown at different times for cutting as a green

feed, that they will come in at successive intervals of growth, and green corn to come in later. We do not believe that any form or variety of grasses will relieve our farmers of this necessity, and they should not ignore the facts; no, not for a single season.

We will touch upon one point more before drawing this paper to a close, and it is one of the first importance, as many of you know, whether you practice it or not. It is this, that to obtain the best annual returns from any form of pasture, permanent or otherwise, most of us pasture too much. We keep our pastures eaten too closely. In Britain, with its moist climate, this matter is of far less importance than in Canada. Pastures not eaten closely will grow far more abundantly in spring, and also in autumn, than those that are at ways cropped, as the uneaten covering acts as a mulch preventing the rays of the sun from extracting the moisture so quickly.

We would suggest, then, that our farmers proceed in the matter of laying down permanent pastures with a prudent haste. If any new form of foreign grass proves its suitability, retain it, but until this is fully established we should not spend our hard earned money to any great extent in things tentative, but in the matter of sowing mixed grasses, it is not easy for us to make a mistake, unless we sow in a prodigal way those quantities of seed which some tell us it is necessary for us to sow, to get an adequate return.

Our Scotch Letter.

(From our Aberdeenshire Correspondent.)

SCOTCH BREEDS AT THE ENGLISH FAT STOCK SHOW.

Scotch breeders, and more especially Aberdeenshire men, are just now greatly elated over a well-earned victory which Polls have won at the great annual exhibition being held this week at Birmingham. It is the fifth year in succession that the "doddies" have carried the blue ribbon here, and the mere statement is sufficient reason for a good deal of jubilation, which is perfectly natural in the circumstances on the part of Scotchmen who are interested in this breed. The owner of the champion is Mr. Clement Stephenson, Newcastle, who four times out of the five has, with his polled Aberdeens, beaten "all comers" at this, the most important show in the kingdom after London. But while owned by an Englishman, the champion winner, like most of his former champions, was bred in Scotland; and we in the north do not wish you to lose sight of the fact, although it would be more flattering to our national vanity had the prizes themselves been brought north of the border. Everybody is surprised at the large measure of success which has this season attended these exhibitions, which, without exception, are really better than last year, there being a large increase in the number of entries, all round, while the quality of the stock has been thoroughly satisfactory. So far as I have seen (but the great national contest at London has yet to come off), there have been fewer individual specimens of very prominent merit in the fat show-rings than in some years I can remember, and the champion at Birmingham herself would have got her colors lowered by, say Mr. Stephenson's Polled heifers of 1885 and 1883. Still the excellence of the stock is remarkable, considering the terrible year through which our farmers have gone, and is a very pleasing proof that they have not even yet lost faith in the future of the agriculture of this country. The total entry of cattle at the Birmingham show was 234 as compared with 182 last year; sheep 104 as compared with 74, and pigs 99 as against 71 in 1886, being a gross increase of 110 entries. The display of Herefords was very good, several splendid animals in this class being shown from the Queen's royal farm at Windsor, one of which was reserved for the Elkington champion cup. Her Majesty was also one of the most successful exhibitors of Devons, winning the "breed" cup with a two-year-old, bred by Mr. Stranger, Court House, which for quality might have been pitted against anything in the hall. Shorthorns, with an entry of 55, made a creditable appearance, but I have often seen a better than even the best, and it may be mentioned that they only stood third in the order of merit in the final bout for the best animal in the hall. In the class for Shorthorn steers rising three years old, there appeared a ponderous ox that was laid aside by some writers in the London press as a probable champion. Owned by Mr. R. Wright, Vocton Heath, he certainly started the season well, having won the championship at Norwich and Oakham, and there was a great deal of in-

terest naturally in his appearance at Birmingham, but most people, I should think, would have been disappointed with him. To begin with, he is too far off the ground. You can never get a good one with a lot of daylight beneath, and he is rough in his bone, and very plain in his quarters. He has a great back upon him, and is well fleshed, while he gives a very good return for a year's feeding. Last year he scaled 13 cwt. and 2 qrs., and on the present occasion he turned the beam at 19 cwt., 3 qrs. and 14 lbs., which is not bad for a steer 2 years and 7 months old. He won in his class, but was defeated in the competition for the cup given to the owners of the best Shorthorn, by a very thick, symmetrical, wealthy heifer, the property of Mr. Thomas Jones, Sutton, Shrewsbury, 2 years and 11 months old, bred by Sir C. F. Smythe, Bt. This is a very good roan indeed, but is not more than she should be in her shoulders and hindquarters, in fact, though a thick, fleshy heifer, she rather lacks quality. The Scotch breeds—Polled Aberdeen Angus, and the picturesque-looking West Highlanders—have seldom been seen to better advantage at Birmingham, as may be inferred from the fact that they furnished the "crack" winner of the show, and it is probably the first time in the history of this institution, at least it is the only instance in the last half score of years, that this prize has gone to a cow which generally cannot compete with heifers or steers in the matter of symmetry and quality. Mr. Stephenson's champion was bred by Mr. George Smith Grant, Auchorachan, Glenlivet, Banffshire. She is named Young Bellona, 5 years and 7 months old, after Viscount Duff (1365), and out of Bellona (2579), and as a breeding cow was a winner at the principal English shows. It is stated, in fact, that she was only tied up to feed about three months before the show; and this being so, she came into the ring a wonderful example of the quickness with which the best types of polled cattle come on to the block. Showing the best characteristics of her breed, she is beautifully filled up behind in the shoulder, well covered on her crops, nicely turned in her ribs and carries her flesh well over her back, but she has not the same wealth of quarters that some of Mr. Stephenson's former winners had, and might be better in her shoulder plates. But for an animal that had produced two calves, and which was not intended for a fat show, her victory over the Herefords, Shorthorns and Devons, is a big thing, which ought to help the breed at the present time when the prospect is not very bright.

In the cross bred classes the polled cross predominated, and among the tops the Galloway cross was found leading more than once, in fact than a pair of steers, exhibited by Sir John Swinburne, Bart., of Galloway extraction, there was nothing finer in this department of the show, as was proved by the fact that one of them won the "cross" cup. Big, strong oxen they were, with a deal of substance about them, and had evidently inherited a dash of the Shorthorn, which was really more apparent than their polled progenitors.

There was great excitement over the awarding the exhibition challenge cup values for the best animal at £100, the judges having been evenly divided, three against three, between the Queen's Hereford steer and Mr. Stephenson's polled cow, and they had to call in a referee to make the award, which as has already been shown, went in favor of the cow, her surprising quality, lightness of offal, and ripeness, putting the Hereford quite in the shade. She weighs 16 cwt., 2 qrs. and 21 lbs.

QUIDAM.

Nov. 30, 1887.

Feeding Value of Bran.

This paper, by Joseph Osborne, Wyoming, Ont., was read at the East Lambton Farmers' Institute, held at Arkona, October 29, 1887.

If the early history of cattle feeding were written, we would in all likelihood find that the only object the farmer had in view in feeding was to keep the animal from dying. When the Egyptian or Syrian husbandman found it necessary to supplement the bare pastures of the plain with a little hand feeding, or was forced to move to a distance in quest of fresh pasture ground, it would be because there was a "famine in the land," and the cattle were dying before his eyes. Still in those primitive attempts at stock raising, little or no regard was paid to the nutritive value of the food given. Science in cattle feeding did not trouble our antediluvian forefathers, and as long as the cattle

lived and had enough to eat, their highest ambition was realized. But as human wants increased, and the race found the need of a religion, from whose altars ascended, morning and evening, the smoke of the burnt offering, men would be compelled by a priesthood that exacted the best of everything to aim at higher results than merely keeping life in the animal, and as men were observant then just as they are to-day, it would not be long before some shrewd cattlemen would notice that quality as well as quantity had something to do with desired results, and that by pursuing a certain course of feeding these results were more speedily and profitably attained. Still there would be much mystery in the business, and for long years cattlemen would require a lifetime in finding out what chemistry has revealed of the *why* and *wherefore* of those mysterious properties contained in the every day food of our fields and farm yards.

The present century has been rich in discovery and scientific research, in every department of human industry, but in none of the busy activities of this bustling world has more been done than in that of agriculture. We live in a remarkable age of the world, at a time when "many run to and fro and knowledge has increased." We need not live the years of a patriarch to know even the wonders of nature or the developments of science that our children can learn from the text books that our common school educational system puts into their hands. It would indeed be an interesting study and an appropriate one too, for a Farmers' Institute to take a retrospective view of the mysteries brought to light during the present century, but my paper confines me for the present to bran, and my purpose is to look at the light that science and experience have thrown of late upon this much undervalued cattle food. Many of us yet remember the time when the grist came back from the mill, we knew what to do with the flour, and we had a place for the shorts, but the bran—we would leave that anywhere out doors. Those days, gentlemen, have gone, bran is taking its place in the front, and we are indebted to our wives and daughters for the discovery, that when "bossy" was given a teed of bran the tops of the milk pails were yellower and the cream thicker and the churning had to be oftener done. Our cattlemen, too, can tell us something about bran, and it speaks well of the article to find bran as a mixture entering into all profitable cattle rations, whether for growth, beef or milk.

As both theory and practice in cattle feeding have proved that a mixture of foods will produce better results than feeding those foods separately, it will always be understood that the food value of wheat bran is best obtained when fed as a mixture.

I would like to guard farmers present against a mistake into which not a few were inclined to run a few years ago, namely, that with the new roller process of making flour, the bran being freed from all flour, is of much less value than in the olden times when there was more or less flour mixed with it, that the inferior machinery of the day was unable to take out, but the fact is that as a substitute for clover hay and a mixture to be fed with timothy, there is nothing equal to wheat bran, and the closer it is ground and the more closely the flour is taken out of it, the more valuable it is, ton for ton. The reason of this seems to be that in reducing wheat to flour by the roller process, the germ or embryo of the wheat is left to a greater extent in the bran, and as this is the richest part of the kernel (rich in nitrogen), a ton of roller bran is of more value for feeding purposes than the same weight of stone ground bran. Before closing my paper I will give a table shewing the comparative value of the two brans, but in the meantime will pass on to notice that in feeding cattle there are three things to be considered and three distinct objects to be aimed at: First, to make bone; second, to make muscle or flesh; and third, fat. Although these three points are dependent upon one another, and all needed in the make up of an animal, they are very different in their composition. Bone is not flesh, neither is flesh fat; yet without bone we cannot have flesh, and without flesh we cannot have fat. Experience has shown and science has given the reason that certain foods are better adapted to the animal while it is making bone and muscle, that is, when it is young and growing; while other foods are better suited when the animal is to be fited for the shambles. Now what is called science in cattle feeding is just putting the farmer in possession of the knowledge of those foods which are best adapted to the particular stage the animal may be in, so that he may save his fat-forming

foods till the animal has attained its growth, after which he can cease feeding the bone and flesh-forming foods. Hence science in feeding is simply economy in feeding, for it may be put down as a rule that "the closer the food approaches in its chemical constituency to the matter it is required to form, the sooner will the end be attained."

Cattle feed of all kinds is divided into two classes; those that form flesh and those that form fat. I presume every farmer present takes an agricultural paper. In that paper, whether it is the STOCK JOURNAL, or some other, or the agricultural column of his weekly newspaper, he will find these two classes of food referred to, but very likely under more scientific names than I have given them. But the farmer of the present day must not be afraid of science or scientific terms in connection with his calling. These high sounding and scholastic terms are necessary in speaking intelligently and correctly of the common things in farm life, and a knowledge of their meaning is a necessity in understanding the farm literature that comes into our houses. One of the functions of Farmers' Clubs and Farmers' Institutes is of an educational nature, where, as in a school room, we become acquainted with the principles of our profession and the terms used in connection therewith. The flesh forming foods are called nitrogenous, protien or albumenoids; and the fat-forming foods, non nitrogenous, or carbohydrates. They may aid in understanding and remembering those terms if you allow me to explain them a little. The flesh forming foods being rich in nitrogen, some writers choose to call them nitrogenous foods; other writers prefer the word protein, a word signifying "first," because they are the first foods the animal requires as the casein of milk, the fibrine of flesh, gluten of flour; whilst a third class of writers use the word albumenoids, because albumen, a substance resembling the white of an egg, enters largely into all the flesh forming foods. The carbohydrates, I would not undertake to explain further than that they are rich in carbon, which is both a fat and a heat-producer, and are represented by starch, sugar, gum, etc.

In all agricultural periodicals that aim at progressive farming, the results of the laboratory are given in tables from which we can learn at a glance the chemical and comparative value of all foods raised on a farm.

(Concluded in next issue.)

The Clydesdale Horse.

BY D. M'CRAGE, GUELPH, ONT.

(Seventh Paper.)

THE HURON CLYDES.

The county of Huron has for many years been well to the front with its draught horses, as far forward, probably, as any other county of western Ontario. Many of the early settlers in the "Huron Tract" were men from sections of the old land where good horses were known and appreciated. When the stumps of the clearings gave place to fields where a straight furrow could be drawn with the plough, these men very naturally looked out for a good bit of horse flesh to draw the furrow. Years ago, when ploughing matches were better attended and more talked about than they are now, some very creditable teams turned out to the work in Huron matches, some of them with evident traces of good blood and good care. Since then the standard has been much improved, and the number of good breeding mares much increased. The best have not always been kept, for here, as elsewhere, American dollars too often took away the best of the better bred ones—the ones that should have been kept for future breeding—and would have paid better at home than did their price. There are now, notwithstanding this, a good number of breeding mares of good Clydesdale character, and the number is steadily increasing. It is true that in some parts there is too much cross-breeding—or perhaps mixed breeding would be a better term to describe the habit of breeding to a recorded Clyde one season, to an animal without a pedigree the next, and again to an animal of mixed Shire and Clyde breeding, a select animal, or something of that sort. No steady, definite plan, but instead,

breeding to any animal that may for the season take the fancy. As a very natural consequence there are a good many animals of mixed breeding—good some of them may be, but by no means well-bred. There are still some who boldly advocate this system of breeding, but generally it results from no definite plan of breeding having been adopted; and when these latter look carefully into the matter the disadvantages are easily seen. It is different with other animals. In breeding sheep or cattle for feeding only, cross breeding has long been considered profitable. It frequently gives to the produce larger size and earlier maturity than either of the parents possessed. This is very desirable when the animal goes straight to the butcher; but breeding from these has always been considered very unsatisfactory; a good hit may be made, but this is very rare. And coming back to horses, those of mixed and cross breeding, especially the first cross, may be extra good in body and bowel, and may even stand well in the show-ring, but their produce are likely to be irregular in form and uncertain in quality. They have never held out as well as animals pure-bred; and this is the experience of both Scotch and American breeders. There have been a few exceptions to this. Now and then an animal of cross-breeding appears able to reproduce the form and style of one of his ancestors, but these are so rare, they only go to prove more clearly the general rule and cast by contrast a deeper shade on the great bulk of cross-bred animals that have been such miserable failures.

The first volume of the Clydesdale Stud Book of Canada contains the names of 26 breeders and owners from the county of Huron who have pure-bred animals there recorded. The late Hugh Love, sr., of Hillsgreen, is one of the foremost here named. He imported the black mare Bonnie Jean [131] (816), foaled 1872, and bred by Wm. Love Beith, Ayrshire, sire Farmer (285), dam by Young Garibaldi (973); the dark bay stallion Wellington [36] (1801), foaled 1871, and bred by Col. McDowell, Stranraer, sire Grand Duke (366), a horse bred by the late Lawrence Drew, Merryton, and the light bay Glenlee [106] (1669), foaled 1871. This horse had dark legs, black mane and tail, and was sired by Glenlee (363). Of younger animals he imported the dark brown horse Wellington [69] (903), foaled 1874; bred by Alex. Love, Kilmalcolm, sire Crown Prince (206). Emigrant [4] (1648), another dark brown horse bred by Routledge Bros., Old Mill, Port William, Wigtonshire; sire Warrior (908), and the young Lord Lyon (994), colt Heather [53], out of an Old Times (579) mare. A grand old horse was Old Times, and he left good stock.

Mr. John McMillan, M. P., Constance, imported in 1882 Rothschild [21], dark brown, bred by David Cross, Knockdon, Maybole, Ayrshire, sired by the very celebrated Darnley (222) whose death last year was regretted by Clydesdale breeders everywhere; dam Rosie by Old Times (579). From D. Frederick, Stranraer, he got Puzzler [22], another dark brown colt from an Old Times (579) mare, and sired by Ploughboy (590).

Mr. C. E. Mason, Brucefield, has had a number of good horses, amongst others the old grey horse Glenelg [32], sire Glenelg (356). The brown horse Honest Sandy alias Young Bergamie [67] (387), bred by Jas. Fleming, Falkirk; sire Vanquisher (889), dam by Sir William Wallace (804). One of the best bred of the Huron horses was one imported by Peter McGregor, Brucefield, called Count Careless [41] (1421), foaled in 1878, and from the celebrated stud of the Marquis of Londonderry, Seaham Harbor, Sunderland, England; sire What Care I (912), a horse that cost £1,500, and that has proved himself cheap at the

price. The dam of Count Careless was Countess, by Lochfergus Champion (449). Another well bred horse was General [42] (323), brown, foaled 1874, imported by D. Fisher, Goderich; sire Lord Derby (485), dam Keir Princess, by Prince of Wales, (673). The stud of Sir William Stirling Maxwell at Keir was, twenty years ago, the finest in Scotland. Some of the best horses of the present day trace to Keir in some of their branches. Here was bred Darnley (222), already mentioned, the greatest of all the grandsons of Lochfergus Champion (449).

There are in Huron now a number of good mares entitled to registry, and a few imported ones. Amongst the latter may be mentioned the dark brown mare Bell [137], imported by Horton & Dickson, of Clinton, by Crown Prince (207), and her daughter May Bell [138], by Craigie [18]. Spirk [115], a black mare, foaled 1876, sire Defiance (226), the property of C. Monteith, Osborne Bella [116], a bay after Rensfrewshire Jock (696), owned by John Rattenbury, Brucefield, and Bessie Lee [22], bred by John Grierson, Kirkcubright, sire Bonnie Scotland (1076), imported and owned by Humphrey Snell, & Sons, Clinton. These, with several others will in a few years help to bring up the standard of Huron Clydes still higher in the near future.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

White vs. Red

For many years there has been a prejudice against pure white Shorthorns, and amongst our cousins in the States it has extended to a considerable extent against roans. This feeling arises almost wholly from fancy and not from facts. If the question is put to the ordinary farmer as to what is the objection to white Shorthorns, the reply is almost invariably "they are more delicate," or "they are not as hardy as reds." Now let us examine and see if white animals are less hardy than colored. The hare changes his summer coat of brown for white in the winter, and does any one believe that on that account he is more robust in the summer than in winter. And again, do we not find that the Polar bear, who inhabits the extreme north, is clad in white, and it can hardly be claimed that he is delicate. The wild cattle of Chillingham, although they must now, through force of circumstances, be considerably in bred, show no delicacy, and yet they are white. Breeders of Shorthorns also state that they have not perceived any difference in the constitution of white and other colors, and add that they are almost invariably excellent feeders. So I think this objection must be put down as a popular fallacy. It is also claimed that they are more liable to be infested with vermin. This is probably because the vermin are more easily seen, owing to the color; but stabling should be kept free from vermin. Another reason is that Americans will not buy whites. Very true, but Americans purchase but a small proportion of our cattle, and those principally pure-bred, so this cannot apply to grades. Have no whites proved satisfactory in the show-rings in Canada? At the last Industrial Exhibition at Toronto, there were, if my memory is correct, three whites exhibited, each of which secured a prize, while the majority of prizes, including the champion bull prize, fell to roans. In the fat stock shows they have been equally successful. In early days we have Collins' "white heifer that travelled" whose live weight before slaughtering was 2,300 lbs. In 1872 Mr. Joseph Stratton's white ox won first at Birmingham fat stock show and the Smithfield championship in the same year, and after a year's feeding in Scotland he appeared at York fat show, a monster not only of size

but of symmetry and levelness. While we all remember the famous Clarence Kirklevington, also white, who weighed 2,400 lbs., and who was the first pedigreed beast of any breed who obtained championship honors at the Chicago fat stock show, and was the only animal of any sort that gained sweepstakes both on foot and on the block. But whatever the objection to whites is, it is certain that white bulls can be bought for very much less money than red or roan, and here is the opportunity for the farmer who is in want of a bull for raising steers, and who can often for a very moderate sum possess a very superior animal which will probably procure him a far better lot of feeding cattle than a hard-handling but deep-colored red. He should, however, be careful to see that his selection possesses a fair coat of hair with a yellow skin and plenty of soft handling flesh below: a white with a white skin he will find a dear bargain. I would urge the breeders of pure-bred Shorthorns not to follow the fashion and breed reds only, to the complete exclusion of roans. Where are the red bulls that would compare with old Barmpton Hero and many other roan bulls I could name? If the rule holds good that "like begets like," we should always use the best, and beyond all doubt the roans are at the top of the tree.

Col. Harris, of Linwood, Kansas, in a speech a few years ago, at the Kansas State Shorthorn Breeders' Association, referring to the color question, says, "I have just returned from Canada, and have been delighted with the stock cattle I saw in the hands of common farmers. They were nearly all roans and whites, and found in nearly every case, big, beefy roan bulls in use for steer breeding."

An amusing story is told by Mr. T. C. Jones in the *Breeders' Gazette* of an incident that happened in 1858 at the Ohio State Fair at Sandusky: "A queer sort of a Yankee tried to exhibit as a Shorthorn, a dark, dirty red bull with spike horns ornamented with brass knobs. Mr. Trimble, who was in charge of the department, meeting the man at the entrance to the ring, asked what he proposed to do with his bull. 'Do with him!' said the Yankee, 'just let me inside the ring and I'll show them fellows with their ring streaked and speckled critters what real solid cattle be!' 'What breed do you call him?' said Trimble. 'What breed? why red Durham, to be sure. You know there are two kinds on 'em, the white and speckled Durhams and the red Durhams—two distinct breeds.' 'No, I did not know that.' 'Well, I declare! The red Durhams is a new breed, and they have been lately getting one up. In Canada they tell me it's all the go.' 'Where is his pedigree?' 'Well, now, stranger, if you must have the pedigree I am afraid I'm dished. The man I bought this bull of brought him from New York State, and promised me to send, as soon as he got him, a full pedigree, showing him to be a straight, perfect and full blooded red Durham bull.'"

AGRICOLA.

SPECIAL CLUBBING RATES.

The "Journal" will be sent one year in clubs of three for \$2.55; in clubs of five for \$4; in clubs of seven for \$5.25; in clubs of ten for \$7.50, and an extra copy to the person getting up the club. The names may belong to different post offices, and may be either new or old subscribers. A little effort at Farmers' Clubs and Institutes, and other fall and winter gatherings and the work is done.

"I will endeavor to get a number of subscribers for JOURNAL again this winter. Your paper should have a place in every farmers' home."—C. S. Smith, Tilsburg, Ont.

Better Travelling Facilities to Fairs.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR.—In the October number of the JOURNAL you refer to the delays experienced by exhibitors on their way to and from fairs with stock. This year has been no exception to the rule, but, as usual, the time taken was long. The station agent at Ottawa informed us that if we were loaded in good time he would send us off by a train leaving Ottawa at 6.30 in the evening. Well, your humble servant along with one car, Mr. Cochrane with two cars, and one car for Mr. Fuller, were loaded by 3.30 in the afternoon. The agent again kindly informed us after we had loaded, that a train was to leave at 6.30, and that we were to go with it. At about 9 in the evening they told us there were two trains to leave soon, and that we were going with the first train. About 11 o'clock a train of about 32 cars went off leaving those already mentioned, and also one car of Mr. Ormsby. With others we were left in Ottawa yard till 6 in the morning, and at 11 we were 33 miles from Ottawa, and it was nearly dark before we reached the Grand Trunk. If I remember right the distance is 78 miles. We had a good run on the Grand Trunk Railway, and got to Guelph at 10.30 on Monday morning. Our stock were 59 hours in the cars. The first night was mild, the next night frosty, with a cold north wind blowing all the day following. I leave you and your readers to judge what the stock suffered by the changes in the weather, and the want of proper opportunity to feed and care for them.

WM. McCRAE.

Guelph, Ont.

Referring to Goats.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR.—I have received several private replies to the note of enquiry you were kind enough to publish from me some weeks ago, as to where I could purchase some goats. Permit me through your columns to thank my correspondents, and at the same time to say that I regret I cannot now avail myself of their offers. It was so long before I could get any satisfactory replies that I gave the matter up, and entered into other arrangements which will prevent me from getting the goat, this year at least.

Permit me to thank you personally for the courteous assistance you rendered me in your excellent paper. Its great value as a medium of communication is evidenced by the fact that the only information I could get was through the publication of my wants in your JOURNAL. Wishing it every prosperity,

CHARLES JAMES FOX.

Gravenhurst, Ont.

His Services Deserve Public Recognition.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR.—Your remarks in reference to the success of Mr. Hope in American show-rings, linked with those in reply to the statements of Mr. Turner of England, some months ago, when he said that "it was matter of common belief in England that all the good cattle shipped from Canada to that country came originally from the United States," ought to arouse every Canadian to a sense of his duty. Had Mr. Hope been some broken-down "political hack" who had done dirty service while he declared "these hands are clean," what a fuss would have been made over him! But no notice is to be taken for his thus advertising our country. But care is taken that our emigrant agents are better fed than Mr. Hope's Shorthorns, and blowed about and dined, and wine, etc., at the country's expense.

E. J. Y.

Wardsville, Ont.

Hereford Cattle as Beefers.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR.—The Montreal papers give an account of a drove of Hereford cattle sold in London, England, on the 19th of last month (November), at 14½ cents when other cattle were selling at from 11c. to 12½c. per pound. Would it not be well for our farmers to use good Polled Angus and Hereford males to cross on our coarse, long legged rough grade cows, which cost as much to fatten them as they are worth when fat? We have too few of the easy fed cattle in this country, such as the Polled Angus and Herefords.

A FARMER.

Good News for the Farmers.

More than once we have said that if the agriculture of Ontario is to become supremely great, it must be through increased attention to live-stock products. We have good reason to believe that this is fast becoming the sentiment of the most intelligent portion of the community amongst all classes. We have strong evidence of this in the attention given by the mayor and aldermen of Toronto to the appeal made to them during the week of the holding of the fat stock show in the Queen city. Our readers will remember that in the December issue of the JOURNAL we came out with a leader on the subject, "Simultaneous Meetings of our Live-stock Associations." In that article we used the following language: "As our readers all know, we have a fat stock show of our own. Hitherto it has not been well attended, which is not creditable to a country sending abroad 60,000 head of fat cattle every year. It seems to us that this show should be permanently located, and that a strong effort should be made to secure suitable buildings for holding it where the visitors would be as comfortable as though in their own houses. If the different agricultural associations fixed upon the same week for holding their annual meetings, and the Clydesdale breeders held their show at the same time, it would ensure an attendance from abroad that would go far to render the fat stock show a financial success. The centre to be fixed upon at the present time, and probably for all time, is Toronto. The convergence of our principal railways to that one point furnish an argument that is unanswerable, as there is no other point in the whole province which is so easily accessible from all parts."

About the time this article was penned we sent one very similar to three of the Toronto papers. It was only printed by one of them, very probably owing to their limited space. It appeared in the *Mail* on December —, and immediately caught the eagle eye of Alderman Frankland, whose unflagging efforts for many years past to develop a traffic fraught with great material gain to the farmer and benefit to the country at large, richly entitle him to the appellation which every one of our readers, we are quite sure, will heartily join us in bestowing upon him when we call him *the farmer's friend*, an appellation which we believe he will value more than that which his co-aldermen and others gave him when they crowned him, as they did the other night, the *cattle king of Canada*. He at once requested Mr. Wade, secretary of the Agricultural and Arts Association, and the editor of the JOURNAL, to appear before the mayor and aldermen to press upon their attention the mutual benefits that would accrue to both the city and the farmers if a suitable building were erected in the city of Toronto in which to hold the Ontario fat stock and other winter and spring shows, and to ask of them to give the matter their early and serious consideration. This was done. Mr. Frankland then determined to give a whole week of precious time to bring about results immediate and definite. He arranged for a colossal banquet at the Albion Hotel to be given to the aldermen of the city, the Council of the Agricultural and Arts Association, and the stockmen and farmers who would be exhibitors at the fat stock show.

Meantime Mayor Howland, whom prior engagements had called away to New York, appointed Mr. Frankland to act as chief magistrate in his absence, and wrote a letter addressed to the Council of the Agricultural and Arts Association of Ontario, asking them to favor the City Council with some general outline of the accommodation required in the proposed

building, before they should separate at the close of the show. This was done by a committee of the Association.

Meantime the banquet was held on the evening of December 14th, at which about two hundred representative men of various industries in Canada sat down, but the bulk of the company were farmers. Nearly all the members of the Agricultural and Arts Association were present, and most of the aldermen of the city. Mr. Frankland, in the capacity of acting mayor, presided. A happier and more enjoyable meeting it has seldom been our lot to enjoy, whether we refer to the pleasant entertainment provided, the earnest words that were spoken for four successive hours, or the easy and effective manner with which the acting mayor presided, which made every one feel so delightfully at home. There was much of the style of dear old England in the nature of the repast. A band of music was in attendance and played while the feast went on. A pleasing interlude was the carrying of a baron of beef around the tables headed by a band of music, in perpetuation of a very significant old English custom. All the toasts were drunk with water, and the hearty manner in which they were given was most refreshing.

But it is not of these things that we wish so much to speak as of the fact that almost every alderman who spoke, and all of those present did so, concurred with the farmers in the opinion that it would be mutually advantageous to both parties if the city were to erect a suitable building for the holding of these annual winter gatherings, and pledged themselves to lend their influence to have such erected.

We have long tried to act on the principle, that there is large proportion between results and the earnestness of the expectation which gives birth to effort, but the extent of the results achieved in this matter already we freely acknowledge have far exceeded our expectations. To be sure, not a dollar has yet been voted for the proposed buildings, but the aldermen have pledged their word, and we know that they are men. Some of them may not be returned to office, but many of them will. Where there was so much of unanimity of opinion amongst 200 representative men, what they ask cannot be unreasonable, and we know that Alderman Frankland, the man who has done so much to develop the enormous cattle trade of Canada, is not the one to let fall to the ground the project of providing a building for the cattlemen to hold their shows in, without the task should prove impossible. And why, we ask, need there be any impossibility about it?

We would fain give the various remarks made by the different speakers, but we must forbear. We have already said their words were earnest and there was a consensus of opinion amongst all the speakers that the future agricultural greatness of Ontario must come through the keeping of stock and the manufacture of live stock products.

Centralization in the Live-Stock Association Gatherings in Ontario.

We ask the indulgence of our readers for the insertion of the following address by the editor, at a banquet given to the aldermen and farmers at the Albion Hotel, on the evening of December 14th, 1887. We publish it because of the subject of which it treats, while we omit regretfully the publication of others at the same banquet:

MR. MAYOR AND GENTLEMEN:

It affords me unmingled pleasure to respond to the toast so felicitously proposed by alderman Dodds, and which has been so enthusiastically drunk to the agricultural interests of Canada. I feel that you have done

me very great honor in asking me to respond to the toast given to that interest, which is relatively by far the most important in the province, representing as it does nearly \$100,000,000. And when I say this I mean no disrespect to the other interests, which are also necessary and important. I will further preface my remarks, by saying that the acting mayor, Ald. Frankland, presiding over this meeting, has surely given the farmers of this country abundant proof of the fact that he is a true friend of agriculture—of this he has given us fresh evidence in the devoted labors bestowed at this time.

It is my conviction that the benefits resulting from holding not only fat stock, but all manner of agricultural shows are mutual to both city and country, and, therefore, the co-operation of the two classes should be most hearty. The farmers could not hold a good show without the active sympathy of the citizens, and it is useless for the citizens to attempt to run an agricultural exhibition without the patronage of the farmers.

The first thing to be considered, it seems to me, is the exhibition which occasioned our coming together to-night of sufficient importance to justify its continuance? Of this there can be but little doubt. The annual fat stock shows held at Chicago and the Smithfield of England, have been instrumental in teaching the farming portion of mankind that they had been wasting their time and all the life-sustaining portion of the feed given to a bullock kept beyond the age of three years, and the same will be found true of all other classes of live-stock intended for food; the gains are less and less per day the farther we get from the birth-period, notwithstanding the singular fact that the proportion of food required continually increased. The knowledge of that fact was now saving millions to the people of all civilized nations. It will not be creditable if, without a fat stock show, our people are sent over to the United States to get all the lessons to be learned when they have shown themselves so often capable of sweeping the board at those shows with their exhibits. When the American Shorthorn breeders sought to regain lost honors in the beef-breed contests, it was with the help of our own Mr. John Hope, of Bow Park, that they did it. When he appeared in the show-rings of the great west with his matchless herd, the result was the same in every case—he left with the highest honors. Another farmer, Mr. John Rutherford, of Roseville, Ont., had brought from the last fat stock show no less than \$850 in prizes on Canadian sheep. The country whose citizens are capable of accomplishing such work deserve a show of their own, where the young farmers of the country may be stimulated by the object lessons which their exhibits furnish to emulate their achievements.

It is clearly my opinion that Toronto is the place for holding such a show, owing to its unequal railway facilities. But it can not be successfully done unless a suitable building is provided. I am glad indeed to be permitted to address the aldermen of the city on this occasion in reference to this subject. I feel quite sure, after what they have heard to-night from the farmers present, that they will see the reasonable nature of their request, that the city co-operate with them in a hearty manner in their endeavor to get a building. Alderman Frankland has always shown himself the true friend of the farmer, and he deserves the thanks of every farmer in Canada for his labors at this time. I favor the centralizing of all the farmers' live-stock association meetings and think it will be wise to hold them simultaneously. There is no doubt that Toronto should be the centre, but I am not so clear as to the time, but probably Easter will be found more suitable than any other time, when in addition to the fat stock show there may be a magnificent show of stallions and bulls. The Shorthorn Breeders' Association, the Clydesdale Association, the Ayrshire and Holstein breeders, the shippers' association and all other live-stock associations may meet the same week. This would render the shows a success, and enable the farmers to transact business at a minimum of cost, while the influx of visitors would be equally helpful to the city. The eyes of the farmers are upon Toronto at this time, and if their expectations are not at least partially met, they will then look elsewhere for co-operation.

There is another reason why the live-stock interest, particularly in Ontario, should receive the most earnest consideration at the hands of all. It is this: It is through the growing of live-stock, and live stock products in future, that the agricultural

supremacy of this Province is to be sustained. At this moment in Ontario the farmer is getting as much for three pounds of butter and six pounds of cheese as for a bushel of wheat. There can be no question as to which of these courses is most profitable. The farmer usually takes two years to get a crop of wheat, with three or four ploughings and manure, and 30 bushels of a return is an extra yield. This gives him \$12 an acre of a return for one year. No farmer can stand that long, hence, the necessity of turning attention to live-stock and its products.

This interest is already supremely great in Canadian agriculture. The value of the live-stock in the Province in 1886 was \$107,208,935, while that of the entire crop growing, including all that would be required in feeding the stock, was but \$110,764,626. The export of grain of all kinds from the Province is now very much less than the export values of live-stock, and the gap in the relative values of these must continue to widen rapidly. I hope, therefore, that this meeting will not separate without taking such action as will lead to the result sought—that is, the securing of a building, or the use of one in this city adequate to the requirements of the case.

The Chicago Fat Stock Show.

The tenth annual fat stock show of Chicago was, as usual, we might almost say an unqualified success. The good work that it is doing is observable in the very marked change in the age of the bulk of the exhibits. At the first fat stock show held in that great western metropolis the bulk of the animals in the cattle classes were three years and upwards, now but few much over two years old are brought to the show, and those which do come but seldom win a sweep-stake prize. This is a wholesome revolution in the tendencies of the time, and cannot but result in the saving of millions to the farmers in the aggregate when it becomes universally practised.

The increase in the exhibit of horses is very marked, and the interest taken by the people of the city was manifest by the large numbers daily and nightly in attendance.

The following table gives the number and class of the cattle exhibits:

	Pure-breds.	Grades.	Total
Shorthorns.....	37	34	65
Herefords.....	8	46	54
Aberdeen-Angus....	10	19	29
Devons.....	10		10
Sussex.....	5	1	6
Galloways.....	—	8	8
	64	108	172

An increase of 9 head on the exhibit of last year. The total number of swine exhibited was 99 head, and of sheep 151 head.

The show of *Shorthorns* was particularly good. In three-year-olds the North Oaks white steer Prentice, a g. s. of the Duke of Connaught, 1155 days old; gain per day, 1.48 lbs., carried the honors. This steer, white in color, reflects much honor on the owner of the North Oaks herd and on our own Mr. John Gibson, formerly of Denfield, Ont., who has the herd in charge.

In the competition of 11 two-year-olds of uncommon merit, the first went to Mr. J. W. Pickett's (Plattsburg, Mo.) steer Clarendon, 983 days, with a daily gain of 1.65 lbs. Clarendon is by Aurdries Duke of Oxford 49688, a bull sired by 22d Duke of Airdrie, and out of a \$4 000 Oxford cow bought at Bow Park.

Of the 16 yearlings the Messrs. J. R. Peak & Sons' (Winchester Ill.) Morse, 678 days old, weight 1,300 lbs., and daily gain 1.95 lbs., was placed first, and in calves Mark, 303 days old, 1.035 lbs. in weight, with a daily gain of 2.93 lbs., was the winner. He was bred by the Messrs. C. C. Blish & Son, Kewanee, Ill.

The show of pure *Herefords* was smaller than in other years. There were no three year olds, and but 1 two-year-old. Of the yearlings 4 competed, Christmas Gift, owned by Mr. B. Waddell, 684 days old; weight 1,545 lbs.; daily gain, 2.26 lbs. The calf Samuel Weaver, 329 days old, weighing 865 lbs., daily gain 2.36 lbs., won in the contest. He is owned

by Mr. T. Ponting, Moweaqua, Ill., and is of Anxiety parentage.

Of the Aberdeen-Angus Polls, Mr. T. W. Harvey's Sandy was alone, in the three-year-olds. He now weighs 2,225 lbs. Mr. Harvey's Black Prince of Turlington, 1,075 days old, 1,995 lbs. weight, daily gain, 1.93 lbs., won in the two year-olds; and in the yearlings E-till Bros. Dot was successful—age 494 days, 1,250 lbs. weight, gain per day 2.53 lbs.

In *Devons* Mr. J. W. Morse's (Verona, Wis.) Morse, weight 1,665 lbs., at 1,375 days, daily gain 1.21 lbs., was first in three-year-olds. Mr. Wm. Younger's (Fairbury, Ill.) Beefy, was first in two-year-olds; the Messrs. J. W. Morse & Son's New Era, the first in two-year-olds, and Mr. Waddell's calf Brass the first as a calf. Beefy made a gain of 1.46 lbs. per day at 1,020 days; New Era 2.00 lbs. per day at 1,105 days, and Brass 2.76 lbs. per day at 203 days.

In *Sussex*.—Mr. Stanford's (Markham, Ont.) Speculation, weight, 1970 lbs.; gain per day, 1.41, at 1392 days, was 1st as a three-year-old. Mr. Lea's Rover, 707 days old; weight, 1270 lbs., with a daily gain of 1.80 lbs. per day, was 1st in yearlings; and Letham, owned by the same, 335 days old; weight, 710 lbs.; daily gain, 2 lbs., was 1st as a calf.

In *Cross-breeds*.—The sweepstakes went to Mr. Moninger's Shorthorn Stevens, in the three-year-old class. He is 1406 days old; weight, 2370 lbs.; daily gain, 1.69 lbs. In the two-year-old class, no less than 36 head competed. A Shorthorn, Glick, owned by Mr. Moninger, won again. His age was 1020 days old; weight, 1855 lbs.; daily gain, 1.92 lbs. In the yearling class, there were 31 entries. Sam Jones, Hereford, owned by Messrs. Fowler & Vanatta, 704 days old; weight, 1480 lbs.; daily gain, 2.10 lbs., won in this class. In the calf class, Mr. Price's Culom, by Regular 2d, was champion.

The Aberdeen-Angus herd of Mr. T. W. Harvey, Turlington, carried the honors; and Glick, the two-year-old Shorthorn grade, was made the champion of the show.

In the dead meat classes, the prize for best three-year-old carcass went to Mr. John B. Sherman's Hereford-Highland steer Scottish Prince; for best two-year-old, to the Interstate Galloway Cattle Company's Colonel, a Galloway-Shorthorn-Native steer, and for best yearling, to Mr. T. W. Harvey's Pistole, an Aberdeen Angus-Native; the beef made up largely of Scotch blood being the favorite on the block.

The percentage of dressed meat in the Aberdeen-Angus, Sandy, was 70.67; in Black Prince, of Turlington, 70.74, the Aberdeen-Angus thus netting the greatest percentage of meat.

In the sheep classes, Ontario either carried off nearly all the prizes, or furnished the material for doing so, as a number of the sheep shown in these classes by Mrs. Ann Newton, and Mr. J. F. Rundle, both of Michigan, were purchased in Ontario—a fact of much significance. The great sweep of prizes won by Mr. John Rutherford, Roseville Ont., and Mr. E. Stanford, Markham, Ont., will be found in the stock notes department.

The Ontario Fat Stock Show.

The Annual Fat Stock Show, under the auspices of the Council of the Agricultural and Arts Association, held in Grand's Repository, Toronto, Dec. 13th to 16th, was, under the circumstances, a fair success.

Although the exhibits were mostly on hand on the 13th, it was not till the afternoon of the 14th that the exhibition was formally opened by Alderman Frankland, accompanied by a large number of city aldermen, and a goodly representation of the solter sex.

The absence of the Messrs. Groff from competition, who were formerly the most extensive exhibitors, accounts for the number of cattle being considerably smaller than in past years, but we believe it was the general opinion that the quality was quite up to the average. With the exception of one specimen of the old-time mountains of beef, which, though by no means a bad one of the sort, had no chance of winning in the competition, the cattle brought out were a uniformly, smooth, short-legged, thick-fleshed lot, and reflects credit upon the skill and judgment of their breeders and feeders. As we give elsewhere the list of awards, we do not propose here to particularize

further than to say that, in the contest for sweepstakes in steers, the competition between Mr. Keith's two-year-old Captain and Mr. Kelly's three-year-old Little Davie, it was clear was by no means a "walk over" for either, and that, while the latter was more fully ripe, as his age would seem to require, yet the former was the model of a steer the modern Shorthorn breeder would delight to honor, and with a little more finishing work in feeding might possibly have wrested the honors from the older steer, but Little Davie was decked with the prize ribbon; and the decision, we think, was generally considered satisfactory. Mr. Keith, however, came to the front in the sweepstakes ring for females with his Daisy, a perfect model of a finished beef animal, smooth as an apple and ripe as a pear.

The cattle in competition were all either Short-horns or their grades, a circumstance which, we think, is to be regretted, as the interest of the show would be very much enhanced if breeders of the other beefing sorts would prepare representatives of these for exhibition. It is true the amount of money offered as prizes has not been sufficient to call out much enthusiasm, but we think there is a good prospect of an increasing interest being taken in this matter, and that we shall see more liberal things provided in the near future. In this connection we would suggest the wisdom of special prizes being provided by the Breeders' Associations to encourage enterprise in bringing out the best specimens of the breed in which they are interested, and we hope to see the association open up separate classes for the different herds.

The exhibit of sheep was unusually large and good. There were also a few exhibits of swine, but the exhibit of poultry was small. The details will be found in the prize list on next page.

We believe we give expression to the sentiments of the patrons of the fat stock show, and of stockmen generally throughout the Dominion, when we say that unmeasured thanks and praise are due to Alderman Frankland of Toronto for the unflagging interest he has manifested in striving to inspire the citizens of Toronto with a due sense of the importance of this interest to the city, as well as to the country, and from the expressions given by large numbers of the city aldermen at the grand banquet tendered by the city to the breeders and feeders during the show, we have many reasons for hoping that measures will speedily be taken to provide a building suitable for this and kindred purposes, in a convenient place, and on a scale commensurate with the vast importance of the live-stock interests of the country.

The warm thanks of the country are also due the Messrs. Grand for the very great pains taken to provide for the comfort of the exhibitors and of their exhibits. They used every reasonable effort to render the show a success, and much of the unusual interest centring in it this year was due to their efforts.

A Precious Christmas Offering.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Enclosed is my subscription for 1888, and I desire to say, Go on in the line you are traveling. You will be able to rest by-and-by. There will be green spots and cooling shade for your tired brain. You have worked hard and late, and your JOURNAL carries comfort to every household that it enters. O that our farmers would take more leisure, and study the fact, that enough with contentment is a continual feast!

The methods for training our young farmers that appear on every page of your JOURNAL bristles with facts that cannot be mistaken, therefore, with more method work will be easier, and culture will take the place of weariness, and often a tired look. May you enjoy Christmas and a prosperous new year.

F. G. FRANKLAND.

Toronto, Dec. 10, 1887.

PRIZE LIST OF CANADIAN FAT STOCK SHOW.

NAME OF EXHIBITOR.	ADDRESS.	PRIZE.	DATE OF BIRTH.	AGE IN DAYS.	WEIGHT, DEC. 14, 1887.	Av'ge gain per day since birth	NAME OF ANIMAL.	BREED.
CLASS 1—THOROUGH-BRED CATTLE OF ANY BREED.—SEC. 3. Best steer, 1, and under 2 years.								
James Oke.....	Alvinston.....	1	Jan. 5, 1886....	707	1325	1'87	White Prince.....	Short Horn.
Arthur Johnston...	Greenwood.....	2	Dec. 1, 1886....	378	856	2'26	Bob Johnston.....	"
George Keith.....	Elora.....	3	Nov. 2, 1886....	406	928	2'28	St. Joe.....	"
Best cow, 3 years and over.								
Jas. Deans.....	Paris Station.....	1	Jan. 25, 1883....	1783	1825	1'01	Victoria.....	Short Horn.
Jas. Hunter.....	Alma.....	2	Sep. 10, 1883....	1554	1643	'83	Gertrude.....	"
Graham Bros.....	Ailsa Craig.....	3	Dec. 27, 1879....	2916	1915	'65	Maggie the Pride of McGillivray	"
CLASS 2—GRADES OR CROSSES OF ANY BREED.—SEC. 1. Best steer, 3, and under 4 years.								
John Kelly, jr.....	Shakespeare.....	1	Oct. 31, 1884....	1138	2155	1'89	Little Davie.....	Short Horn grade.
Jas. Oke.....	Alvinston.....	2	Dec. 2, 1884....	1105	2032	1'83	Ranger.....	" "
John Devon.....	Milton.....	3	Apr. 15, 1884....	1359	1676	1'23	Bolivar.....	" "
2. Best steer, 2, and under 3 years.								
Geo. Keith.....	Elora.....	1	Jan. 30, 1885....	1046	1850	1'08	Captain.....	Short Horn grade.
Jas. Oke.....	Alvinston.....	2	Dec. 29, 1884....	1079	1910	1'77	Simon.....	" "
3. Best steer, 1, and under 2 years.								
Geo. Keith.....	Elora.....	1	Jan. 14, 1886....	698	1441	2'06	Hero.....	Short Horn grade.
John Russell.....	Brougham.....	2	Feb. 25, 1886....	656	1506	2'27	Eclipse.....	" "
Jas. Oke.....	Alvinston.....	3	Dec. 20, 1885....	723	1571	2'17	Snowflake.....	" "
4. Best cow, 3 years and over.								
J. & W. B. Watt.....	Salem.....	1	Mar. 27, 1883....	1722	1795	1'04	Mayflower 5th.....	Short Horn grade.
John Kelly, jr.....	Shakespeare.....	3	July 28, 1884....	1233	1740	1'41	Wild Roso.....	" "
5. Heifer, under 3 years.								
Geo. Keith.....	Elora.....	1	Jan. 26, 1885....	1050	1592	1'51	Daisy.....	Short Horn grade.
John Russell.....	Brougham.....	3	Jan. 15, 1885....	1061	1312	1'23	Thistle.....	" "
CLASS 3—SWEEPSTAKES FOR CATTLE.—SEC. 1. Best steer of any age or breed.								
John Kelly, jr.....	Shakespeare.....	1	Oct. 31, 1884....	1138	2155	1'89	Little Davie.....	Short Horn grade.
2. Best female of any age or breed.								
Geo. Keith.....	Elora.....	1	Jan. 26, 1885....	1050	1592	1'51	Daisy.....	Short Horn grade.
CLASS 5—SHEEP—LINCOLNS, LEICESTERS, COTSWOLDS, OXFORD DOWNS, AND THEIR CROSSES.—SEC. 1. Best wether, 2, and under 3 years.								
John Rutherford.....	Roseville.....	1	.....	982	.....	.....	Professor.	
".....	".....	2	.....	980	.....	.....	Robin Hood.	
".....	".....	3	.....	979	.....	.....	Sandy.	
2. Best wether, 1, and under 2 years.								
John Rutherford.....	Roseville.....	1	.....	612	.....	.....	Davis.	
".....	".....	2	.....	611	.....	.....	Hogg.	
".....	".....	3	.....	610	.....	.....	Lord Boyle.	
3. Best wether, under 1 year.								
John Rutherford.....	Roseville.....	1	.....	223	.....	.....	Lorne.	
W. H. Beattie.....	Wilton Grove.....	2	.....	215	.....	.....	Pete.	
J. Rutherford.....	Roseville.....	3	.....	227	.....	.....	Bob.	
4. Best ewe, 2 years and over.								
Laidlaw & Jackson.....	Wilton Grove.....	1	.....	996	270	'271	Daisy.	
Wm. Oliver.....	Avon Bank.....	2	.....	1382	301	'218	Shepherdess.	
Laidlaw & Jackson.....	Wilton Grove.....	3	.....	1738	293	'168	Miss.	
5. Best ewe, 1, and under 2 years.								
Laidlaw & Jackson.....	Wilton Grove.....	1	.....	633	248	'392	Wilton Beauty.	
Wm. Oliver.....	Avon Bank.....	2	.....	646	247	'382	Little Bo-Peep.	
".....	".....	3	.....	642	222	'345	Mrs. Scott Siddons.	
6. Best ewe, under 1 year.								
John Kelly, jr.....	Shakespeare.....	1	.....	284	180	'599	Bella.	
".....	".....	2	.....	268	170	'634	Kitty.	
John Rutherford.....	Roseville.....	3	.....	240	.....	.....	Ned.	
CLASS 6—ALL OTHER DOWNS, AND THEIR CROSSES.—SEC. 1. Best wether, 2, and under 3 years.								
John Rutherford.....	Roseville.....	1	.....	957	.....	.....	Jumbo.	
".....	".....	2	.....	951	.....	.....	Harvey.	
".....	".....	3	.....	955	.....	.....	Smut.	
2. Best wether, 1, and under 2 years.								
John Rutherford.....	Roseville.....	1	.....	598	.....	.....	Jim.	
".....	".....	2	.....	660	.....	.....	Black Bill.	
".....	".....	3	.....	590	.....	.....	Curley.	
3. Best wether, under 1 year.								
John Rutherford.....	Roseville.....	.....	.....	248	.....	.....	Peter.	
W. H. Beattie.....	Wilton Grove.....	.....	.....	219	.....	.....	Ben.	
John Rutherford.....	Roseville.....	.....	.....	251	.....	.....	Moses.	
4. Best ewe, 2 years and over.								
W. H. Beattie.....	Wilton Grove.....	1	.....	1322	274	'207	Topsy.	
John Rutherford.....	Roseville.....	2	.....	980	.....	.....	Jeannie.	
W. H. Beattie.....	Wilton Grove.....	3	.....	972	250	'257	Patsy.	

NAME OF EXHIBITOR.	ADDRESS.	PRIZE.	DATE OF BIRTH.	AGE IN DAYS.	WEIGHT, DEC. 14, 1887	Av'ge gain per day since birth	NAME OF ANIMAL.	BREED.
5. Best ewe, 1, and under 2 years.								
W. H. Beattie.....	Wilton Grove.....	1	.....	600	174	.029	Sally.	
".....	".....	2	.....	600	176	.029	Fanny.	
John Rutherford.....	Roseville.....	3	.....	605	.....	.....	Roseville Queen.	
6. Best ewe, under 1 year.								
John Rutherford.....	Roseville.....	1	.....	250	.....	.....	Sally.	
W. H. Beattie.....	Wilton Grove.....	2	.....	219	.....	.....	Neddie.	
John Rutherford.....	Roseville.....	3	.....	249	.....	.....	Jane.	
CLASS 7—SWEEPSTAKES FOR SHEEP.—SEC. 1. Best fat wether of any age or breed.								
John Rutherford.....	Roseville.....	1	.....	.....	.....	.....	Jumbo.	
2. Best fat ewe of any age or breed.								
Laidlaw & Jackson.....	Wilton Grove.....	1	.....	.....	.....	.....	Daisy.	
CLASS 8—HOGS, ANY BREED.—SEC. 1. Best barrow, 1, and under 2 years.								
John Denoon.....	Milton.....	1	.....	419	.....	.....	Dude.	
".....	".....	2	.....	419	.....	.....	Halton's Pride.	
2. Best barrow, under 1 year.								
R. Dorsey & Son.....	Summerville.....	1	.....	280	.....	.....	Sausage.	
3. Best sow, 1, and under 2 years.								
R. Dorsey & Son.....	Summerville.....	1	.....	.....	.....	.....	Salvation Army Lass.	
".....	".....	.....	.....	.....	.....	.....	Mischief.	
4. Best sow, under 1 year.								
R. Dorsey & Son.....	Summerville.....	1	.....	310	.....	.....	Bar-Maid.	
".....	".....	2	.....	280	.....	.....	Summerville Maid.	
CLASS 9—SWEEPSTAKES FOR HOGS.—SEC. 1. Best hog of any age, breed or sex.								
John Denoon.....	Milton.....	1	.....	419	.....	.....	Dude.	

Jas. Tomalin, of Brampton, was the only exhibitor in poultry; he shewed in every section.

Annual Meeting of the Clydesdale Horse Association of Canada.

The annual meeting of the Clydesdale horse association was held at the Albion Hotel, Toronto, Thursday, 15th Dec., 1887. There were present the following members :

Messrs. McCrae, Rennie, Smith, Beith, Sorby, Duff, Dalziel, Annan, Hager, Johnston, Dryden, Charlton, Graham, Marshall, Gardhouse, McGregor, Coleman, McHugh, Thos. Gardhouse, Spencer, Johnston, Jeffrey, Isaac, Bell (Athelstane, P. Q.), Davidson (Ashburn), Ormsby, Stewart, Leask, Gray, Ormiston, Crawford, John Gardhouse, jr., C. Jackson, James Jackson, Vardon, W. G. Ormiston, Hurd, Taylor, Russell, Hunter, A. Fanson, W. A. Fanson, Shipley, McGeachy, Vipond, Dow, Wilson, Snowball, Howden, Brandon, Whiteside, Shaw, Prof. Smith, Doherty and several others, whose names we were unable to learn.

The President, Mr. McCrae, took the chair, and called the meeting to order. He expressed himself as highly pleased with the number present, and hoped a good amount of work would be completed, as they had a good deal to do.

The minutes of previous meetings were read and adopted.

A letter was then read from Mr. Mills, Secretary of American Clydesdale Association, offering on behalf of his association the following silver medals for the best Clydesdale stallions and mares of the ages noted below, and bred in the Province, to be competed for at the Provincial fair of 1888 :

Best stallion, 4 years old and over; best mare, 4 years old and over; best stallion, 3 and under 4 years; best mare, 3 and under 4 years; best stallion, 2 and under 1 year; best mare, 2 and under 1 year; best stallion, under 1 year; best mare, under 1 year.

The Secretary was instructed to thank the American Clydesdale Association for the offer of the medals, and the matter was then referred to the Agricultural and Arts Association for acceptance.

It is a condition of entry that animals competing for

these medals be recorded in the American stud book, and as every Clydesdale shown at the Provincial fair must be recorded in the Canadian stud book, these animals must be recorded in both stud books.

SECRETARY'S REPORT.

The Secretary then read his very satisfactory and interesting report, announcing in the first place his hope that the second volume of the stud book would be out very soon. But before going on with this subject, he went exhaustively into the history of the stud book, beginning with the days when the Agricultural and Arts Association received entries for a Clydesdale stud book, to the formation of the Clydesdale Association, and the appointing of a revising committee to go over these pedigrees and reject such as did not come up to the standard they had established. How that, in order to keep faith with the old patrons, an appendix had been added to the stud book that was to contain the pedigrees of the cross-bred animals; and that each pedigree might be complete, there were published in another appendix the pedigrees of the sires and dams of all the imported animals, so that it was now a simple matter to make out the extended pedigree of a horse, such as would be used in a stallion bill.

SECOND VOLUME.

The second volume contains the pedigrees of 1015 animals, divided as follows: In the stud book, 335 stallions; 230 mares—565. Scotch appendix, 240 stallions; 210 mares—450. Total, 1015. There were 1277 pedigrees in first volume. The smaller number in this he attributed to the dropping of the appendix, which had been brought about in this way :

At the Executive Committee meeting last October, a largely signed petition, praying for the dropping of the appendix, had been presented by Messrs. A. Fanson & Son, Toronto, and as this petition contained the names of the majority of the patrons of the appendix, the committee consented. The chief reasons for doing so were embodied in the petition, the chief of which was: That the word "appendix" used

in connection with the animals therein recorded, carried with it the idea of insufficient and impure breeding, and did, therefore, injure the sale of the animal by conveying a wrong impression. In place of the appendix, the petitioners proposed the establishment of a new stud book, to be styled the "Improved Canadian Draught Horse Stud Book," with the same standard as to the number of crosses as the Clydesdale. They claimed that such a book, stating plainly in the announcement its character, the conditions of entry and other matters that would determine the style or designation of the animal, would in no way interfere with other stud books, and would prove a boon to the very large number of the breeders of the Canadian draught horse; and further, they claim that, as the Canadian draught horse has acquired a reputation at home and abroad, and particularly in the Western States, for general usefulness on the road and the farm, and while the registration of draught horses is yet, so to speak, still in its infancy in America, Canada should have the credit of establishing and giving the name to a favorite breed. The committee agreed to this, but objected to the title, fearing lest it might be thought they considered this an *improvement* on the pure breed of Clydesdales.

A lengthy discussion ensued after the Secretary had finished reading his report on the action of the committee in dropping the appendix, some arguing that it would be breaking faith with those that had recorded their animals in the appendix, others being of the opinion that it would add to the value of the animals to record them in a separate stud book, which was shared generally by those present that had animals recorded in the appendix, while those opposed to the matter were not engaged in the breeding of cross breeds. At last, to bring the matter to a close, it was moved by Mr. Arthur Johnston, Greenwood, and seconded by Mr. James Beith, Bowmanville, that the printing of the second volume of the stud book be delayed until the Secretary learn the desire, concerning the matter, of each breeder recorded in the appendix.

It was then moved in amendment, that the appendix be published with the third volume, but on being put to the meeting, this was lost, so the original motion, amended so as to mean that the appendix was to be published as before, was carried. The Secretary explained that this would delay the book a very considerable time, as he had not had the MSS. of the appendix entries prepared for the printer.

SPRING STALLION SHOW.

On the subject of the Spring Stallion Show, the Secretary said that, for the first attempt, the show last spring was eminently successful. As an additional incentive to exhibitors, it had been decided to publish the results of the show, so there would be found a tabulated statement, that, it was hoped, would be of interest, in a suitable place in the second volume.

It was unanimously decided to hold another show in Toronto next spring, sufficient notice of which would hereafter be given.

FINANCIAL REPORT.

The Sec.-Treas., Mr. Wade, then read a very gratifying financial report, showing a cash balance of \$134.50. This, he explained, would have been three or four hundred dollars more, only at the last annual meeting it had been decided to charge the old members no annual fee for 1887.

ELECTION OF OFFICERS.

President, David McCrae, Guelph; Vice-President, Wm. Smith, M. P., Columbus; Sec.-Treas., Henry Wade, Toronto.

DIRECTORS.

Wm. Rennie, Toronto; Arthur Johnston, Greenwood; Robert Graham, Claremont; John Davidson, Ashburn; James Beith, Bowmanville; D. Sorby, Guelph, and John McMilian, M. P., Constance.

Mr. Sorby gave notice of motion to change the constitution, so that the appendix could be dropped.

Mr. Rennie gave notice of motion to lower the annual subscription fee to \$2.

The meeting then adjourned.

Fall Meeting of the Agricultural and Arts Association.

The fall meeting of the Agricultural and Arts Association was held in Toronto, December 13th, 1887, at 2 o'clock, p. m., president Snell in the chair. Other members present were Messrs. Rawlings, Vance, Dawson, Legge, Aylesworth, McKinnon, Shipley, Rowand, M. P., Snell, Morgan, Drury, M. P. P., and the secretary.

The minutes of last meeting were read and adopted.

A letter was read from Hon. A. M. Ross, announcing the appointment of J. B. Smyth, of London, as the auditor on behalf of the Government.

The secretary read the report of the special committee sent to London to confer with the City Council and the Western Fair Board, saying they had arranged to go to London with the Exhibition in 1889, and every four years afterwards for twenty years, and consequently on those terms could cancel their lien on the old Fair grounds. The agreement was approved of.

The secretary then read a request he had made to the Mayor and City Council last Monday, asking the Mayor to open the fat stock show, and that the Council should provide a larger building for the fat stock show next year, and that they ask the exhibitors to a dinner at the Albion Hotel. He also stated that Mr. Thomas Shaw, of the LIVE-STOCK JOURNAL, had addressed them on the same subject.

A letter was read from John Lovell & Son, quoting

the price he would take for the balance of the Ayrshire herd books on hand.

A deputation was then heard, consisting of the Mayor of Kingston, John Carson, Esq., the president of the Midland Fair Board; J. B. Walkem, Esq., D. Nicol, Esq., President of the Midland Agricultural Association; John Wilmot M. P. P.; J. B. Derbyshire, Esq., Brockville, and A. Hagar, Esq., Plantagenet, asking that the next Provincial Fair be held at the city of Kingston.

A committee was appointed, consisting of President Snell, Messrs. Rowand and Legge, to confer with the deputation.

Ira Morgan then reported that he, by request of the president, had just addressed a number of the veterinary students at the mayor's office.

EVENING SESSION.

A letter was read from Mayor Howland to Alderman Frankland, asking that the Agriculture and Arts Association put in writing what they want for future accommodation of the fat stock and other shows.

The report as to requirements was then presented by C. Drury, as follows: Prize Farm, \$250; Council Expenses, \$725; Essays, \$100; Salaries, \$1,500; Printing and Postage, \$600; Educational Scheme, \$500; Fat Stock Show, \$700; Veterinary College, \$125; Exhibition Purposes, \$5,500—\$10,000.

Wednesday, December 14, 9 a. m.—Council meeting renewed. All the members present but George Moore and T. C. Rykert, M. P. P.

A large deputation was then received from Collingwood, consisting of Mayor Nettlewood; President Lawrence, of the Great Northern Fair Association; Charles Stevens, treasurer; also C. Macdonald and other gentlemen. They pressed the claims of Collingwood, to hold the next Provincial Exhibition there.

A letter was also read from Mr. Kains, secretary of the Southern Counties Fair, saying that the Council of St. Thomas was to hold a meeting that evening to see what could be done in that city, and in the meantime to invite the next exhibition to be held in that city.

The meeting then adjourned to help with the fat stock show. Met again at six o'clock.

After a good deal of debating it was decided that the next Provincial Exhibition should be held in the city of Kingston, commencing on Monday, the 10th of September, and continuing until Saturday the 15th.

Collingwood and St. Thomas were promised that their turn would come.

Wednesday, 10 o'clock, a. m.—Council all present.

A committee was appointed to report to the city of Toronto a scheme for the erection of an Agricultural Hall or building suitable for fat stock, horse shows, etc., consisting of Messrs. Rawlings, Shipley, Rowand, Drury and the secretary.

The two subjects for Essays, as given in another part of this paper, were then chosen.

A vote of thanks was passed to Mr. J. D. Grand for the use of his Repository so kindly offered, rent free, to hold the fat stock show in. The Council then adjourned.

Canadian Draught Horse Association.

A meeting of those interested in the breeding of Canadian draught horses was held in the Albion Hotel, Thursday afternoon, 15th Dec., 1887. There were present Messrs. A. Fanson, W. A. Fanson, Beith, Lawrence, Thos. Gardhouse, James and John Carstairs, Beatty, Coates, Davidson, Marquis, D. McLean, John McLean, Johnston, Clarke, Wilson, Vipond, McGeachy, Snell, Vance and Nathan.

Mr. Drury, M. P. P., was appointed chairman. After calling the meeting to order, he asked Mr. Wade, Secretary of the Clydesdale Horse Association, to state as briefly and clearly as possible the object for which they had been asked to attend this meeting.

Mr. Wade said the whole matter had arisen out of the dissatisfaction expressed by many at having their animals recorded in the appendix to the Clydesdale stud book. The Revising Committee that went over the pedigrees for the first volume of that stud book had thrown out these because they did not come up to the standard, and as their pedigrees had been viewed by the Agricultural and Arts Association before the organization of the Clydesdale Association, it was decided to publish them in an appendix, in order that faith might be kept with the owners of the animals. These animals all had the required number of crosses (4 and 5), but one or two of them were Shire horses. Last summer Mr. A. Fanson, of Toronto, and his son, who were deeply interested in this class of horses, began an agitation to start a new stud book, that was to embrace all their pedigrees of mixed Clydesdale and Shire breeding. They drew up a petition to this effect, which was very largely signed, nearly all the owners and breeders of the appendix animals giving their support. The chief objection raised to the appendix, was that the word used in the certificate injured the sale of the animal by conveying a wrong impression, as so many of the buyers imagined the horses lacked the required number of crosses for registration in the stud book. They thought, too, that a separate stud book would in no way injure existing books of the kind, and would prove a great boon to the fanciers of the Canadian draught horse, which had already acquired a good reputation at home and abroad for general usefulness on the road and the farm, and that Canada should have the credit of establishing and giving a name to a breed of draught horses. This book would also offer a capital registry for the offspring of a mare that had a Shire horse cross early in the pedigree, until such time as they were eligible for the Clydesdale stud book, if the owner so preferred.

The Executive Committee of the Clydesdale Association were quite willing to grant the request of the petitioners, so far as related to the making a separate book of the appendix, but they objected to the name Mr. Fanson had chosen, "The Improved Canadian Draught Horse Association." They feared the use of the word "improved" would be misunderstood, that buyers would think this an *improvement* in the pure breeds.

Mr. Wade said they had as a nucleus more than 450 pedigrees of animals of mixed Clydesdale and Shire breeding; these, he thought, should be augmented by half as many more, then they would have a fair sized book.

The Clydesdale Association, in the morning, had voted to retain the appendix, thus over-ruling the action of the Executive Committee and the wishes of the majority of the breeders of the appendix.

The object of the meeting was discussed at considerable length, when at last it was unanimously decided to organize an association for the purpose of getting out a new stud book; this would be done when 75 members had subscribed. Nearly all of those present that were interested in the matter joined the new association.

The following provisional officers were elected: President, Chas. Jackson, Cooksville; Vice President, A. Fanson, Toronto. Directors—John Gardhouse, Malton; W. Fanson, Toronto; Chas. Lawrence, Collingwood; F. T. Coleman, Antrim; Jno. Vipond, Brooklin; Thos. Nathan, Mackville; Dugald McLean, York Mills. Sec.-Treas., Henry Wade, Toronto.

Inquiries and Answers.

HENRY CLAY AND GRAY FANNY.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Can any of your readers inform me in regard to a horse called Henry Clay, a four mile running horse, owned in Brantford, Ont., or near there, some years ago? If this horse can be traced, please give his pedigree. Also, was there a mare called Gray Fanny ever owned in the same place?

JOHN VERNON.

Lawrence, Mich.

TURNIPS.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—In reference to turnips for feed, would you please say would the ten per cent. of solids said to be contained in turnips, if derived from some other source, and diluted with ninety per cent. of water, be of the same value for feed as the same amount of turnips? If not, why?

J. W. BARTLETT.

Lambeth, Ont.

No. It is not possible for the chemist to combine elements in such proportions as to endow the compound with the properties and actions peculiar to substances produced under the influence of vegetation.

MATING OF HORSES.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I would be much indebted to you if you would kindly favor me with your opinion in regard to the following questions:

1. Do you think the variation in size would be too much in mating the Cleveland Bay stallion with British Columbian mares? These are small, in fact ponies, and possess a fair amount of quality and good constitutions.

2. Would the result of the union give good general purpose horses, and would it be possible eventually to raise them to the standard required for the British army by in-breeding, or would large mares be necessary?

3. Kindly recommend a reliable work on breeds of horses; also one on the breeding of horses?

ANSWER.

I think the "Cleveland Bay" is the best possible cross you could make, to attain the end you speak of, with such a foundation as pony mares.

Of course if the mares were larger, it would be better, and you would accomplish your object by the first cross; but as it is, a second cross with the Cleveland may be necessary.

I know of no work that describes all the breeds, but "Sander's" work on horse breeding is perhaps the most comprehensive.

Veterinary.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

How Should Tubercular Subjects be Dealt With?

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

(Continued from December.)

After concluding that a subject is really the victim of tubercular consumption, the all-important matter is to determine what course to pursue with regard to such a case. It is one of the most unpleasant and unsatisfactory tasks a veterinary surgeon has to perform in advising his client as to the most rational course to pursue; for there are few stock-owners magnanimous enough to carry out a suggestion likely to entail any immediate loss, or what appears to be a loss; for as will be explained further on, there is no way of proceeding that loss can be obviated by; but if an irrational course is pursued it will result in a much heavier burden.

There is no doubt that many stock-owners would proceed more judiciously than they do under such circumstances, if they really understood the true state of affairs, and it is certainly within the province of a live-stock paper to make an effort to educate them.

An individual has a cow which is tubercular, and he consults his veterinary adviser as follows: "Is it safe for human beings to use her milk?" Experimentation is about the only way to settle conclusively this question; and for obvious reasons this cannot be carried out with the human subject. Next to actual experiment on the human subject, we may receive considerable light from experiments on the lower animals.

Bollinger took a litter of pigs, and allowed half of them to receive their nourishment from their mother, who was healthy, the remaining half were fed on the milk of a consumptive cow, whose condition was proved by a *post mortem*. The young pigs, after a few weeks, were all killed, and those that had been with the mother were found to be healthy, while those which received the cow's milk had all more or less tubercular deposit. Some observers have confirmed this, while others have experienced negative results. It is certain, however, that we can't conscientiously disregard such a lesson as Bollinger's, where human life is at stake. In addition to this there is much circumstantial evidence on record, where human beings have developed consumption after having consumed milk for a length of time from cows that have been proved to be subjects of this dread disease.

Would it be best to fatten a subject?

This is next to impossible, in some cases, and would not be profitable in some others; but there are subjects which lay on flesh rapidly, which are usually those that have no important organ involved in the deposit; as where the muscles or glands in the neighborhood of the jaw are also affected. Pigs as well as cattle have been made to contract the disorder by feeding on the diseased structure; and some hold that any portion of the flesh of a tubercular subject, whether presenting any local change or not, is liable to transmit the malady, while others consider there is only danger when the tubercular matter itself is consumed. Reasoning from the fact that tubercles progressively diffuse themselves throughout the system there must be a wandering of the germs of the disease, and consequent danger of these being conveyed to any suitable host that may eat the flesh in which they are circulating. It is further found that the germs of tubercles show considerable tolerance to the destructive effects of excessive heat and cold, and that ordinary cooking is inadequate to destroy their ability to do harm. At any rate the consumption of underdone meat from a tubercular subject, and deposit that may be readily overlooked, is certainly not without grave danger. So that it would seem that a veterinary surgeon who is anxious to allow no risk of human health to be run, cannot conscientiously advise preparing an animal for the block.

Should a tubercular animal be used for breeding purposes?

To this query a most decided answer can be given in the negative. It does not require a lengthy experience to determine the hereditary character of tubercular consumption. As has been already explained, the disease may not manifest itself in all the progeny of tubercular parents; but it is equally certain that a predisposition to the development of it is transmitted, and it is impossible to say when it may show itself; but it does so at a very early period of life, in some cases, and it is even found to exist congenitally. It is certainly a most irrational course for any breeder to pursue to use either a male or female, that not only shows any symptoms of the trouble, but if from the history of the animal any taint of system is known to exist.

The difficulty or impossibility of determining whether any tubercular taint exists in an animal constitutes one of the greatest dangers that a purchaser of high-class stock has to encounter, for it is seldom that the family history can be or is correctly given. I say high-class stock, for there is not only more money involved in their purchase, but undoubtedly certain breeds of them show a much stronger predisposition to this trouble than grade stock.

My experience is that the made breeds, as the Shorthorn and Polled Angus, seem to have a much greater tendency to the development of tubercle, than the native breeds of some districts, as the Herefords.

In-and-in breeding is often cited as a cause of this trouble, but there is evidently much misunderstanding regarding it. It is most unlikely that breeding in-and-in could of itself ever produce this disorder, if the subjects that are bred from possessed no taint of system; but if there is the slightest taint of system, and this course of breeding is carried out, it, along with other defects, becomes intensified, as do also the good qualities, which latter result is the object aimed at.

Another point worthy of attention is, as to whether there is any danger of infection from a tubercular subject. This is an important consideration, and one that should be recognized while there is any uncertainty about the diagnosis.

It is certainly not a markedly infectious malady, but the deductions of experience would indicate that it can be transmitted in this way, particularly where there is close contact of the diseased and healthy susceptible subjects.

Some authors prescribe a course of treatment for tubercular subjects, but it is certainly irrational to attempt to treat what is incurable, although a certain amount of temporary good may seem to result. But with all the attendant dangers of prolonging life under such circumstances, it is wiser not to excite false hopes by such a course.

(Concluded.)

Catarrh in Sheep.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Please give cause and treatment of catarrh in sheep, as it is often very troublesome at this season of the year. I hope you will be able to give the answer in the next issue.

A SUBSCRIBER.

Myrtle, 24th Nov., 1887.

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

There is nothing specific about the cause of catarrh in sheep, any more than there is for the same disease in other animals. Dampness and cold together, combine in forming the exciting cause for the majority of cases of this trouble, hence we can understand the reason why it is seen so frequently at this time of year. Sheep can tolerate a fair degree of cold, but humidity is particularly prejudicial to them, especially cold moisture. As the exciting cause is usually allowed to remain in operation, this disease is very much inclined to assume a chronic form. So that in the treatment of it, it is of prime importance to remove the subjects from injurious influence, and place them in a dry building—wooden is the best for sheep—where the air is of moderate temperature, not above say 40° Fah.

After the first few days of the attack, when the food should have been of a cooling character, as roots, etc., more nutritious aliment should be allowed, in the form of crushed oats, and clover hay, but roots should also be given.

Attention to these ordinary hygienic conditions is, as a rule, all that is required to arrest the discharge from the nose. If, however, improvement is not noticeable, it is well to resort to medicinal treatment. A teaspoonful of the following mixture may be given three times a day in the crushed oats: One ounce and a half of pulverized sulphate of iron and six ounces of powdered gentian.

The Farm.

Our friends will please bear in mind that they have it in their power to double our circulation at the present time, as the best season of the year is upon us for getting new names. ONE new name handed in by each present subscriber, and the work is done. The opportunity for getting names, afforded by the municipal meetings on nomination and voting days, will, we trust, be improved by our friends.

Where Have the Pea Bugs Gone?

The report of the Bureau of Industries of date November 9th, 1887, says in regard to this unwelcome guest of other days: "The absence rather than the presence of the pea bug invites comment." It is a curious question as to where the little pest has gone, and what has been the cause of its almost entire abandonment of the fields where till recently it reigned supreme. More powerful than the wisdom of man, who was very anxious to raise a crop of this most useful cereal, it said to him for successive years, that he must not, and now, without any noise, or ado, or farewells, it has gone away, and about all that we can say in regard to it is, "it has gone."

Where has it gone? What has been the cause of its disappearance? Will it come again? These are questions that will force themselves upon the thoughtful mind, and the reflection that there is none to tell us, apparently fills the mind with an unsatisfied yearning to know more of the relations of cause and effect, so far as these appertain to the mysteries of insect life.

While we tarry for some scientist to give us light upon this unsolved problem, we can take no little comfort from the reflection that those insect pests are gone. The little robbers of our cattle, our sheep and our swine, are off, it may be, to the realms of non-existence, with but few living representatives to tell what manner of creatures those were, which in their own domain were wiser than the wisest and stronger than the strongest of men.

In this we have a distinct pledge that other lines of pest life are doomed likewise. The potato beetles have troubled us long, and during 1887 they were both numerous and unusually diligent in their work of destruction. We can indulge in the hope, then, that their day is coming. Like the empires and cities of the past, insect pests have their day, and after flourishing for a time they pine and vanish away.

But this is far from satisfying us as to whence they come, as to why we are so powerless in their subjugation, and as to the reasons of their sudden disappearance, it may be just at the time that we are beginning to conclude that we will never be able to cope with their ravages. Will some one who labors under the too common delusion that farming does not require the exercise of much brain power, tell us why the pea-bugs, like the little girl in Wordsworth's immortal poem, "went away?"

From the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Farm Wages.

The English papers all agree respecting the decided reduction of weekly wages in the agricultural counties. In some ten shillings, and in other districts eight shillings is now the stipulated wage. No doubt the reduction is chiefly due to the fall in prices of all that is the result of the farm laborer's exertions on behalf of his employer. Two dollars and two dollars and a half are wages that nobody in this happily en-

dowed country would dream of accepting. Three meals a day, fuel, house rent, clothes, and recreation for self and family to be provided for half a dollar a day! We fancy we hear the scoffing laugh of many a well-to-do farmer in Ontario, who early in his life fled from a state of things which would have now environed him had he stuck to the old sod. He perhaps revels in the possession of a two hundred acre farm, a dozen cows with the inevitable group of young steers and heifers, two teams of work horses, two or three young colts, a good head of poultry, implements, tools, vehicles, and, as the auctioneers say, "other things too numerous to mention." He contemplates what might have been his lot "at home" with a shudder: and if he is a good man, his heart softens a little perhaps toward his hired man, whose little pile of unexpended wages is just bringing him to a point where he, too, will strike out for himself and fling his servitude behind him. The ease with which a farm laborer here, provided of course his head is level and his hands are strong, can lay by a thousand dollars, is an uncomfortable contemplation to employers, so often called upon to change hands and substitute a raw recruit for a trained and disciplined lieutenant. The good farm hand living in his employer's house, as is the general fashion here, gets sixteen dollars a month, or double the cash that his English brother receives, to say nothing of board, etc. He has only to clothe himself, and many such actually put away in hard cash, yielding 4 per cent. in a post office savings bank, one hundred and fifty dollars a year. As many an Ontario agriculturist starts out farming for himself on a capital of one thousand dollars, and that, too, with every prospect of success, if his trading and managing instincts are what they should be, it is easy to see that in six or seven years the successful hired man can emancipate himself. Now isn't this rather too much of a good thing, and may we not pause in the interest of employers, to ask if the master is doing as well as the servant just now, and to inquire what remedy, if any, can be found, and what is in the way of any inequality "settling itself" as one would suppose must be the case? The English papers show what is the result there. Does the wholesale narrow itself to conformity with the laws of supply and demand? Are there fewer laborers, or more employers, and therefore more land under cultivation? It is true, no doubt, that the Canadian supply of farm laborers is shorter than one would expect it to be, largely owing to the prevalence of an education that sets young folks against rural deprivations and inspires them with an insatiable desire for the tinsel and glitter of city life. Railway construction and lumbering are also factors in the diminution of the numbers applying for farm work. On the other hand, in the old country, we can understand the agricultural employers resist the emigration of the best hands, retaining them by fair means and foul from the seductions of the local emigrant agent. Extra allowances at home and a dire picture of the difficulties to be overcome in a colony, co-operate with the laborer's natural love of home and disinclination to face what is to him a gigantic upheaval of life-long ties, an ocean passage of long duration, some peril, great discomfort and a pictured uncertainty of employment on his arrival. Verily the man who faces it all and comes here must have something in him, or be utterly worthless and reckless. The latter class predominates as a matter of course. Too many leave Great Britain for Great Britain's good, but now and again all employers of agricultural labor here strike a nugget, and we have shown that in six or seven years this nugget develops into a gold mine, marries the girl of his choice, and if she be a well trained farmer's daughter, their

road to success is easy of travel. Such being a by no means too highly colored sketch of the good farm laborer's career in Ontario, and the facts being well known to the emigration agents in the old country, it is truly surprising that sensible workmen do not find their way here in greater numbers. If the farmer could see his way to hiring cheaper labor he would do so. No doubt he pays only what is exacted: and no doubt he knows that cheap labor means a poor hand, who wants watching and instruction at every turn, or has not the physical ability to turn out a good day's work for a good day's pay—a *sine qui non* in this country of short seasons. But any farmer who sits down at night to a profit and loss account must soon become aware that as all he raises is becoming cheaper and without any corresponding decrease in the cost of raising it, his pile is going down. Simultaneously the laborer's pile is going upwards. We know some men who have determined, till things "right themselves," as they put it, to let their farms gradually fall into grass, buying from those poorer neighbors who, working their own land, can afford to raise small crops of roots and cereals, all that may be wanted in addition to hay for winter feed. They will buy steers and sheep in May for sale in October, and winter over only what breeding and working stock they cannot dispense with. They will thus utilize their pastures to the fullest extent, and rid themselves of a big labor bill, with the accompanying uncertainties of yield, ripening and harvesting. They will have to break up some fields from time to time as the natural grass succeeds in pushing out timothy and clover. But one of them in our hearing said, that he even then thought he would buy hay rather than go again into rotation of crops to grow it, however small was the annual departure from his newly adopted system.

That the present inequitable standard of farm wages should bring about this result is a pity; but on all hands the evil is admitted, and its removal despaired of. The hired man, with sure wages, on a good farm with a good establishment, and where the owner does not act as a slave driver, driving himself as well as his man, has a good berth, and does better than many a struggling owner working for his own benefit, and taking all the chances. A man may possibly pay too dear for independence, and we could put our hand on many a farmer who would be better off in the receipt of regular wages. One good result of the present state of things may be, that owners will be induced to keep in their own hands a smaller area, and will discover that it is more profitable to farm 100 acres thoroughly than 200 in the slipshod, scamping fashion that we too often see followed now a days. Q.

The Prize Farm Competition for 1888.

It is impossible to say how much good has resulted from the prize farm competition inaugurated in 1880. When one enters his farm in this race it must be with the consciousness that it has some really good points about it, otherwise there is no hope of winning a prize. It must be tidily kept, well cultivated, clean, and fairly well managed, with the buildings tolerably good, and the fences at least average, before there can be the slightest hope of winning a prize with it. The desire to compete proves a stimulus to the study of better methods, and the determination to do so rouses sleeping energies and acts as a spur to higher and nobler effort.

The effect upon the neighborhood is also good. In a country where a bonnet worn by a farmer's wife has an effect upon her rural sisters, the influence of example from a well-managed farm cannot be lost. One neighbor borrows from this feature and another from

that, so that in time the standard of farming in the entire neighborhood is raised.

But the good resulting to the country at large cannot easily be measured. The reports are largely read. No farm is deserving of a prize when some of the methods practised are not superior, and these cannot be proclaimed throughout the country without being embodied in the system of numbers to whom they are altogether new.

These reports should be of very much value, if used as emigration literature. The strongest argument in favor of so using them consists in the fact that they have not been specially prepared for this purpose, and would therefore be received without that suspicion which surrounds literature of this class, gotten up with no other object in view, which suspicion clings to it with the tenacity of moistened clay.

The competition for 1888 comprises the counties in group No. 2, viz., Essex, Kent, Elgin, Oxford, Middlesex, and Lambton. The entries are made through the secretaries of the agricultural societies, and but three farms are eligible for the competition in each electoral district. The entry of these, giving the name of the farm, the lot, concession, township and electoral district, should be forwarded to the secretary by the 1st of May. During the competition of last year, and indeed that of every year, it was noticed by the judges that where the secretaries of these societies took a warm interest in the competition there was a full number of entries, and that where they did not, in some instances there were no entries at all.

Those who propose competing any year would do well to study carefully the regulations and rules which guide the judges in making their awards. They read as follows:

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

Any further particulars that may be desired can be had by writing to Mr. H. Wade, the secretary of the Agricultural and Arts Association, Toronto.

Tree Planting.

The man who plants a forest tree and secures to it an unmolested growth for the first few years of its life, leaves a legacy to his country that will bear compound interest, until the tree so planted reaches its maturity. The value of the gift to those who shall live after by him who plants a forest, is, therefore, very great. The hope of thus proving benefactors to the race should move us in the direction of tree-planting. If we look for a motive more direct in its action, we can find it in the increased value of the-heritage that we

shall leave to our heirs. It would often be the most valuable form in which a legacy might be left, for a growing forest not yet fit for the woodman's axe would not be squandered quite so easily as a bank account.

If we have none to heir our goods, or what is equivalent to about the same thing, no goods to leave our heirs, we may easily find reasons for our encouragement in tree-planting. There is that satisfaction that arises from watching the silent development of the tree. That we have planted it is always a bond of interest in that tree, and we find positive pleasure in witnessing its growth. Our dwellings want protection, and the cheapest and most effective form in which this can be given is by planting on the windward side belts of trees, which will interlock their branches in their efforts to protect us. Our farms want protection along our miles of highway. The winds that now drink up the moisture of our fields as they sweep over them, require checking in their mischievous gambols, and we want to attract rains to feed vegetation and all our springs and water-brooks in summer.

All this points in the direction of the wisdom of planting trees, and of doing so next spring-time, that their beneficent influences may commence to operate all the sooner.

Now is the time to lay our plans for the spring campaign. We have the whole winter before us, so that we may do this effectively, and get information regarding methods and varieties to plant.

Who better than Mr. R. W. Phipps can give us this information so clearly expressed and so comprehensively supplied in his forestry report?

It contains a report from 160 townships, giving the amount of wood fit for fuel, yet standing in the older settled portions of Ontario.

A report of a careful examination of two townships of Ontario, one lying southerly and one northerly, with the view of obtaining an accurate idea of the effects of woods, or lines of trees, on the growing crops, and the climatic differences observed since the clearing up of the country.

Notices of the progress of forestry in other countries.

Results of experiments in sowing evergreens in large quantities in Ontario, and directions as to how similar results may be obtained.

Complete directions as to raising all trees from seed, and planting them out.

Carefully prepared statements as to the lumber districts of Ontario, value and uses of woods here, planting in school grounds and on Arbor day, value of wood in preserving humidity in adjacent fields, proposed forest reservations, management of trees in cities, over-clearing in Ontario, plantations advisable on Ontario farms, preservations of birds, evergreen hedges, and many kindred subjects, as well as valuable reports from gentlemen who have of late years started plantations here.

This very valuable book can be had for *nothing*, or what is practically the same thing, for the asking. Mr. Phipps' address is 233 Richmond St., Toronto. He has done a valuable work for Canada in writing this report. Send for it, and read it carefully, for to those who have any desire to engage in tree-planting, it will be of more value than all the dime novels written during the century.

Tree-planting is intimately connected with successful stock-keeping, for it is now becoming rightfully understood that he who does not protect his stock from the torrid sun of summer is brother to him who neglects their comfort in the winter. Trees planted in clumps or corners of the fields, will in a very few years, make a most effective shade.

"I must congratulate you upon the eminent success to which you have obtained in making your paper a power for good in the land. No breeder who desires to keep himself posted in regard to live-stock matters can afford to do without it."—James Geddie, Paris, Ont.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Management of Manure.

Farmers waste money. It is true they do not waste it directly, or many of them knowingly, but they certainly waste their manure, which is equivalent to money. It seems strange that so much waste is tolerated by intelligent farmers. In these days of agricultural progress and agricultural papers every farmer should know how to take care of his barnyard, and yet how often do we pass by yards that speak plainly of neglect and waste.

Manure is composed of the solid and liquid excrement of animals, mixed with the litter used for bedding. A very great deal depends on the animal itself. A young animal requires a vast amount of food to build up and strengthen the system. A working animal also requires a great deal to supply the waste of muscle, and therefore these animals produce inferior manure. Animals that are being fattened produce a very superior manure, being unable to assimilate all the food given them. Some kinds of food make better manures than others. Rich foods make rich manures and poor foods poor manures.

Again, the manure of horses is very hot and dry, that of cattle very cold and wet, while that of hogs is intermediate. Now, if these manures are kept separate the first is likely to heat, and the most valuable part of it will escape into the air and be lost, leaving behind a pile of white and almost useless material. True, this may be prevented by allowing cattle and horses to tramp it down solidly in the pile. But there is a better plan.

The different kinds of manures should be *mixed*. When this is done there is little danger of heating. Dry manure of the horses will absorb the liquid of the other, which would otherwise not be absorbed at all, and would drain off in the ditches and be lost altogether. How many yards do we pass in the spring of the year and see the ditches to the distance of ten or fifteen rods flowing with the "milk and honey" of the barnyard! If this liquid manure were retained separately we would be astonished at the result. It is estimated that the liquid manure produced in one year by a span of horses and six cows would amount to about 40 tons, or 10,000 gallons. This, diluted with water, would make a good dressing for twenty acres of land. The solid matter of this is about three tons, and is worth as much as guano. Perhaps you will be surprised when you hear that the money value of it is about two hundred dollars. Is this worth saving? There are several ways of saving it. One is to dig a cistern and drain all the liquid into it, pumping it from time to time over the heap. This, however, is somewhat expensive, and not many farmers will take the trouble. A simple way to retain it is to give the animals sufficient litter to absorb it. This is not expensive and is very little trouble, besides keeping the animals much cleaner. With the old style of stables and buildings this will be found most convenient and profitable. [This can only be done perfectly where the floors will admit of no filtration, as when of concrete, etc.—ED.]

Another common habit is to have the barnyard and manure pile situated on the top of a small hillock. This is surely a mistake. When the heap is placed here all the liquid drains off at once and is lost. The proper way is to have the yard slightly hollow in the middle, so that the liquid may run to the centre and be absorbed. Some may object, saying it will keep the yard muddy. But if a good layer of straw be placed in it early in the fall it will prevent this, and besides, the edge of the yard is where the mud is to be found. In many yards the buildings are not provided with

eavetroughs, and the rain water is allowed to deluge the yard and wash off much of its strength. Buildings should be provided with troughs, particularly on the barnyard side.

For sandy soils the manure requires to be well rotted, and should not be applied till the crop is ready to use it, otherwise it will be lost. On clay it should be applied in a coarse state, as it keeps the soil loose and open, and there is no danger of it being lost for some time after its application.

Report of the Judges on Prize Farms for 1886.

(Continued from December.)

BALSAM LODGE FARM,

To which was awarded the Third Prize.

On going northward from Burlington, on Dundas street, and about a mile therefrom on the right hand side, one comes to a well laid out, level-lying farm, with clean looking fields and fenced in front with a high paling, close as you approach the garden, and open in front of the dwelling and painted a spotless white, the most chaste if not the most fashionable of rural colors. Venerable honey-locust trees stand sentinel at the highway, and in the rear of a well kept lawn on an elevation stands one of the most imposing two-storey gothic brick houses that you will see on any farm in this part of Ontario. The end first approached is completely hidden by a graceful Virginia creeper, in which in the early morning the sparrows keep up an incessant chatter. It is 30 by 50, with rear apartments such as are necessary, and a good cellar underneath the whole of it. In the rear of this majestic dwelling stand the barns and other outbuildings, with basements of stone and painted roofs that present a very finished appearance. They are very conveniently arranged.

We consider these outbuildings as amongst the foremost in the competition, and as nearly all the feed fed to the cattle is cut, they are well adapted to this style of feeding.

The farm itself, lot 17, 3d concession Nelson, Halton county, contains 210 acres, the balance of the 460 acres owned by Mr. Fothergill being three miles distant, and is just one mile in depth. The outline of the farm, as here sketched, will enable the reader to take it in at a glance, and it requires no second look to convince the reader that it is a nice-lying, well laid out farm. But the reality is much ahead of the picture, there was a look of so much richness in the fields at the time of our visit.

The woodland consists of 39 acres, and is well timbered, containing amongst other woods a large amount of pine, not easily found on improved farms to-day.

The fences are straight rail and are well built, and others of them wire, with top and bottom board, and the fields have all a very neat and clean appearance.

The crops were, as regards quantity, 40 acres pasture; 10 acres wheat, usually 20 to 25 acres, as this year one field winter killed; 37 acres barley, usually 25 acres; 20 acres oats, 10 acres turnips, 3 acres potatoes, and 11 acres corn. For the past three years the splendid averages have been obtained of 32 bushels for fall wheat, 50 bushels for barley, 60 bushels for oats, and 150 bushels in the ear for Indian corn—a statement well backed up by what we saw growing.

We now give the usual rotation. Sod is usually ploughed in the fall, and oats are sowed on this, followed by hoed crop and then barley, which is always seeded. One of the two fields of barley stubble is ploughed early, then manured and ploughed into ridges about 14 feet wide, the second time cross ploughing and a few open cross furrows are run. This is sown to wheat and seeded. The meadows are mowed not more than two years and are pastured one year or two. Peas are grown on the other farm. Summer fallow comes after sod or oats, the rule being to take the dirtiest fields, the manure being put on before the first ploughing. Usually Mr. Fothergill ploughs five times and harrows between the ploughings, sometimes also rolling. There can be no doubt that this system will very effectually destroy the weeds, but as to whether it or Mr. Wm. Rennie's system of decapitating thistles after harvest is the cheaper and more effectual way of getting rid of them, your judges are not agreed. It has only failed, however, once in thirty years, we should add, in producing for Mr. Fothergill a good crop.

In preparing ground for roots, 15 or 16 loads of manure well rotted are applied to the acre, and 1,000 to 1,200 pounds of salt. This is ploughed in the fall, then twice in the spring ploughing; in the manure the last time, and then drilling the contrary way, the drills from 28 to 30 inches apart. They are scuffled every ten days till the ground is cleaned, and hand-hoed twice or thrice; how could they be otherwise than good?

The manure is drawn out in part in the winter and snugly piled; what is left in the yard is kept piled thus also; and it is applied as stated above. Mr. Fothergill has tried artificial manures and found benefit from them, but prefers, on the whole, to try and increase the size of the heaps that come from the barn-yard.

The ground is well drained with tiles. The soil varies from a sandy loam to a clay loam, with a sub-soil of stiff clay. The extent of these drains is 2-inch, 7,750 rods; 3-inch, 188 rods; 4-inch, 261 rods, and the laterals are laid on an average 27 feet apart, and 3 feet deep.

The orchard contains 5 acres, and is in a good state, and the garden is sufficient, but not the perfection of tidiness, and the water supply is from surface streams, wells and cisterns.

It does a person good to see one of those Balsam Lodge fields of green corn. At the time of our second visit, September 1st, a tall man was soon lost sight of in walking through it. When harvested it is tied into sheaves with rye straw, grown and saved for the purpose, and stood up in stooks, which, when husked, are put up in small stacks kept well hearted. These are drawn and chaffed in winter as required. The feed thus obtained from one of these fields is immense.

One of the best herds of Shorthorns and Shorthorn grade cattle that we met with in all our rounds fed in the pastures, of Balsam Lodge—for it should not be forgotten that here is the home of Prince James—95—, on so many different occasions the sweepstakes Shorthorn bull of Ontario. The Shorthorns number 40 head, and the herd on both farms, Shorthorns and high grades, from 85 to 100 head. They have deep, heavy bodies on short limbs of medium bone, and possess much of that wealth of substance so eagerly sought by the Shorthorn breeders of to-day. Without a doubt they have quality, evinced alike in their bright, full soft eye, mellow handling skin, heavy silky coats, and well covered ribs. There are also 50 head of strong Leicester sheep and 7 teams of working horses, with 5 hands employed by the year and sometimes 10 in summer for the two farms, which comprise 380 acres of cleared land. Fifteen to 16 fat cattle are turned off every year.

The breeding cows get corn stalks and oat-straw cut in winter, and one feed of long hay per day, to regulate digestion. After March 1st hay is substituted for oat-straw. All the cut feed is mixed with pulped roots and bran. The milking cows have a portion of oatmeal and corn chopped, or peas and oats, and the feeding cattle get more of a stronger proportion, that for the cows being one part corn and two parts oats, and some bran. The young stock also get meal and bran. The cut feed is usually mixed a day ahead, being sprinkled and fed in four feeds. The fat cattle get from 8 to 10 lbs. of meal per day, the milch cows 4 to 6 lbs., and the young bulls and calves, 2 to 4 lbs., according to age, oilcake and bran being fed in conjunction.

There was a harmony about this farm that is seldom met with; everything was in keeping, the house corresponded to the barns, and the barns to the house, and the rich produce of the fields to both. A liberal system of tillage was practised and liberal returns reaped. Nothing was done on the scrimping scale, but there was a fulness in everything that betokened high class farming. Mr. Fothergill does not expect to reap where he does not sow, and therefore when he sows grass seed he uses 4 lbs. of small red clover, 4 lbs. of alsike and 6 lbs. of timothy to the acre, and so in other things. There was not that perfection of neatness and absolute cleanliness of tillage and finish in the fences, that did so much to place Kelvin Grove ahead in the race, and the outbuildings of Huntingford had, we considered, some advantage, other things being pretty well balanced; but pitted against the "Seed Farm" of Mr. Wm. Rennie, things seemed so near upon a swivel that your judges failed to agree, when the late Mr. Parker gave the casting vote in favor of Mr. Fothergill, for the pretty good reason, we understand, that Mr. Fothergill's was a system better adapted to the needs of the average farmer, and

for the further reason that the splendid herd of Balsam Lodge Shorthorns, long established, when put in the balance against the newly imported Clydes of Mr. Rennie, sent down the scale.

(To be continued.)

First Prize Essay

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

(By the Editor.)

(Continued from December.)

IMPROVEMENT OF THE RELATIONS.

From what we have said it is painfully apparent that the relations between employers and employed on the farm in Canada are far from satisfactory. We have already indicated some of the methods by which they may be improved, but these will only prove efficacious in degree. We have diagnosed the disease as *moral* in its nature, therefore the antidote applied must also be *moral*. The great sure remedy we have not prescribed as yet, and we give it now. It is the grand old Bible of our fathers, the teachings of the Gospel of the Eternal Son of God. That book, the teachings of which have built up all the nobility of the Anglo-Saxon character, and which is fast filling the world with the Anglo-Saxon tongue, is surely able authoritatively to adjust the relations between the Anglo-Saxon employers and employed on Canadian farms. The Gospel, which under Roman sway, could send back a slave—a runaway—to his master, and render his services thenceforth "profitable" to him—a feat which all the majesty of the Roman law, backed by all the might of her thundering legions, could not accomplish—can surely avail to adjust the abraded relations between the Canadian farmer and his workman, in this latter day of brighter moral sunshine. Mightier than all the enactments of Canadian legislators, and more potent than all the powers of British law, which can only force a sullen compliance, the Gospel produces that which is spontaneous, will ing, free. And though it be said that if its powers be such, why is there so much of derangement in the relations between employers and employed? We answer because it is so little read and pondered. Yet, the process of amelioration is gradually going on. The condition of the Canadian farm servants to-day is preferable to that of the retainers of Douglas and Percy, and Canadian farmers are better masters than were either of those feudal lords.

The ameliorating process, like that of all grand movements that are to endure, is slow, yet it is sure. Like the silent forces in nature that pulverize the rocks and thus prepare them as a habitation for plants, or which transform the mangrove marshes by the sea into a congenial home for higher forms of vegetable life, the work goes gradually on. And so it shall until there is a perfect adjustment in the relations between the employers and employed. In Anglo-Saxon climes the slave-driver lies deep in the grave of the infamy of the past, and the day of the task master is forever gone. The epithet of overseer almost sounds ominously now, and that milder one of manager meets with more of acceptance, and days that are vastly better are coming, even though it be in the distance, when even managers will scarcely be required, when the employer will no more grind the employed, and the employed will no more rob the employer, but when each will seek the welfare of the other, looking not upon the things which are his own. A beautiful dream, cries one! Thou scoffer of the latter day! if what we write pleases thee not, we say to thee what Byron said, when writing in a very different strain, "please close the book," until thou examine the eternal pillars of truth in the record that never falsifies, and on which the foundations of our argument are laid, for gladder tidings even than those are in store for this renovating earth, and more wondrous transformations in the golden age ahead, when "the wolf also shall dwell with the lamb, and the leopard shall lie down with the kid, and the calf and the young lion and the fattling together, and a little child shall lead them. They shall not hurt nor destroy in all my holy mountain, for the earth shall be full of the knowledge of the Lord, as the waters cover the sea." Oh, beautiful picture of what is yet to be! More beautiful than the loftiest conceptions of Raphael and Michael Angelo.

Oh sweetest music! Surpassing that of Handel or

Mozart, or even the distant voices of Niagara, or of a far off Tequendama; and yet its every strain is the echo of eternal truth.

He that believeth that "a righteous man regardeth the life of his beast" even, will not try to get the work of a day and a half out of his hired man in a day, and the employed who has faith in the eternal truth of the command, "Thou shalt not steal," will not feed his master's horses six quarts of oats instead of four as instructed, without previous consultation.

The faithful minister can do far more than the essayist toward adjusting the relations between employers and employed on the farm in Canada, or any other land. The latter lights a lamp that burns for a little while and then goes out in darkness, the former hangs up the light of duty on every Sabbath day; the latter lifts a voice, the echoes of which are soon hushed amid the cadences of a world's absorbing joys and sorrows, while the former insists by the reiterated reminders of the line upon line, and precept upon precept principle. The Sabbath-school teacher also does a part. When young men and maidens are directing the minds of our rustic boys and girls on Sabbath days to the value of the precepts of the Word, they are helping to adjust the relations between the employers and employed of the future, and so of the parent who on Sabbath evenings expounds the Word at home.

We might expatiate at length on methods that in the meantime would bring partial relief, but why attempt to clean this Stygian stable of relationship with fork and shovel, when the waters of a mighty river can be turned upon it at once, which will cleanse it in a moment of all its foulness? Yet those concerned must each one help to let the waters flow. That river is a little precept uttered once upon a time on a mountain side that overlooks fair Galilee. They say it was spoken by the Prince of Preachers, who "spake as never man spake." A man they call St. Matthew, who was listening, wrote it in a book, and it reads thus: "Therefore all things whatsoever ye would that men should do to you, do you even so to them." Well might the world agree to call this precept "golden," which has done more for the race than all the inventors of the old world and the new. When this precept becomes the motto—enshrined in the living practice of all masters and workmen in the country, labor combinations and trades unions will die, and the Council of the Agriculture and Arts Association of Ontario will never again require to call for an essay on the relations between employers and employed in Canada, with special reference to the farm, with a view to the improvement of these relations.

Agricultural Education.

Many of our readers are aware that, for some years past, the council of the Agricultural and Arts Association of Ontario have been granting certificates and offering prizes for proficiency in examinations on agricultural subjects. These examinations are held at the same time and place, and are subject to the same rules, regulations and supervision as the High School intermediate examinations of July.

These are of course preceded by a course of reading on agriculture, and although the examination questions may not all be based upon the books recommended by the association for study, they mention the following, as part at least, of the course, to be followed by the students:

1. First Principles of Agriculture (Tanner); Handbook of Agriculture, embracing soils, manures, rotation of crops and live-stock (Wrightson); Canadian Farmer's Manual of Agriculture (Whitcomb); Soil of the Farm (Sir J. B. Lawes and others); Catechism of Agricultural Chemistry and Geology (Johnston)—new edition by Cameron.

2. New American Farm Book (Allen); Talks on Manures (Harris), Chemistry of the Farm (Warrington); Elements of Agricultural Chemistry and Geology (Johnston and Cameron); Stock-Breeding (Miles); The Complete Grazier (Youatt and Burn); American Cattle (Allen); Feeding of Animals (Stewart); The Shepherd's Own Book (Youatt, Skinner and Randall), Treatise on the Pig (Harris); Veterinary Adviser (Law); Insects Injurious to Vegetation (Harris); Insects Injurious to Fruit (Saunders).

Of these works they would be disposed to recommend especially The Chemistry of the Farm (War-

ington), The Soil of the Farm (Sir J. B. Lawes), Stock-Breeding (Miles), and Feeding of Animals (Stewart); and for beginners, The Catechism of Agricultural Chemistry (Johnston).

The object of the association is to encourage the young men of the farm to pursue a course of study at home during the long winter evenings, which will greatly benefit them in the pursuit of the business of agriculture. Many of them cannot attend a course of lectures at the Ontario Agricultural College, but thousands of our farmers' sons may prosecute this course of reading if they choose; and those will choose who are fully alive to their own best interests. Who, with a mind rightly constituted amongst our young men, but desires to excel in some department of farming? You may excel if you so choose, and the course of study here recommended will greatly help you if you will only take it in. It is not creditable to the young men of the farm that so few have presented themselves at these examinations in the past. In no one year has there been more than a score: why may we not have ten times as many, and more? When you read this, young farmer friend, broach the matter to those older heads who in all probability can give you substantial assistance, and with their concurrence get the books and start in the race for intellectual superiority. Do not come up for examination till you feel yourself ready, and when you do come, bear away a prize. You can if you are so determined.

Intending candidates are required to send their names, accompanied with a statement as to whether they have ever attended any agricultural school or college in Canada or elsewhere, and also of the place at which they desire to present themselves for examination, to Mr. H. Wade, the secretary of the Association at Toronto, before the 1st of May.

Well Done, Little Lassie.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—My papa is a subscriber for the JOURNAL, and thinks a great deal of it, so I thought I would get subscribers and get him a book for Xmas. So would like you to send Horse Breeding, by J. H. Sanders. You will find ten dollars and eleven names for your JOURNAL, and hope this will be all right.

Yours truly,

Canada and the JOURNAL want one thousand friends such as the little lady of Duncreeff. Where can they be found?—ED.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Weeds.

BY PROF. J. HOYES PANTON, ONTARIO AGRICULTURAL COLLEGE, GUELPH.

II.

CLASSIFICATION OF WEEDS ACCORDING TO NATURE AND HABIT.

To combat successfully against such numerous foes it is necessary to proceed intelligently in the work. This requires some knowledge of the nature of these plants and their habits of growth. For convenience we will divide weeds into four classes:

1. Annuals complete the cycle of their existence in a year; they generally have fibrous roots (see cut 1), and produce many seeds. When young they are very weak and tender, consequently they are more easily destroyed at this period. If these are kept from seeding we must ere long get rid of them. In some the seeds are very hardy, and possess great vitality, often reappearing when you think all danger is past. Mustard is said to be vital over fifty years, and cases



are recorded where wild oats germinated when twenty years old.

Examples.—Shepherd's purse, mustard, penny cress, cockle, lamb's quarters, climbing buckwheat, wild oats, chess, foxtail, groundsel, purslane, ragweed, chickweed, mayweed, sow thistle, pigweed, pepperwort, false flax, corn mouse ear, red root, speedwell, darnel, soft chess, fireweed, crowfoot, small burr—26.

2. Biennials complete their growth in two years, the first year being spent in storing up food, usually in a taproot (see cut 2) for the production of seed in the second. Unless these plants are cut below the surface, cutting increases their vigor and aggravates the trouble.



Examples.—Wild carrot, blueweed, burdock, mullen, coarse purse, bull thistle, evening primrose, teasel—8.

3. Simple perennials continue growth from year to year (see cut 3) and will reappear till the root is utterly destroyed. Some of the hardiest weeds are in this group. They should never be allowed to have the benefit of light.



Examples.—Ox-eye daisy, mallow, sorrel, St. John's wort, plantain, bladder campion, silver weed, dandelion, chicory, golden rod, servian, motherwort, skunk cabbage, velvet grass, common campion—15.

4. Creeping perennials embrace some of the worst weeds the farmer has to contend against. Their reproduction by seed is less to dread than by root. The root is more or less jointed (see cut 4), each joint capable of growing, if separated from the rest. Continual cultivation and smothering from light are necessary to destroy plants of this class.



Examples.—Couch grass, Canadian thistle, toad-flax, milkweed, sow thistle (perennial form), yarrow, bindweed—6.

GENERAL RULES TO BE FOLLOWED TO GET RID OF WEEDS.

1. Never allow weeds to seed. This would certainly kill out the annuals.
2. Cultivate the land thoroughly, especially when the weeds are young and tender.
3. Keep the roadsides and fence corners clean.
4. Never allow the weeds to have the benefit of sunlight, especially in the case of perennials. The absence of light will certainly result in death to the plant.
5. In dealing with biennials cut them well below the surface.
6. Attack the weeds at a time unfavorable for growth either in the condition of the plant or the weather.
7. Secure, as far as possible, the co-operation of fellow-farmers.

If these hints are observed there is no doubt but clean fields will result, and much better returns be obtained. All weeds must perish either by cutting, rooting, or smothering, if done in a proper way and at the proper time.

ANALYSIS OF WEEDS.

Weeds to some extent give us a knowledge of the soils in which they grow, and what elements of good they take from the soil at the expense of other plants, among which they grow. A chemical examination of weeds shows great diversity in their composition as seen in the following statement:

	Ash.	Silica.	Sulphure Acid.	Phosphoric Acid.	Potash.	Soda.	Lime.	Magnesia.	Albumin.	Iron Oxide.
BlueWeed	4.69	4.79	2.23	2.78	16.65	1.41	22.44	3.49	3.6	5.1
Purslane.	1.52	2.46	13.20	5.19	66.89	3.52	10.67	9.47	4.9	5.4
Ragweed	1.93	3.16	8.00	7.90	31.40	8	33.78	11.75		.37
Mullein...	1.01	3.26	17.32	6.1	50.12	3.33	19.06	5.53	1.15	1.01
Dock	1.60	4.36	8.27	7.08	52.67	7.25	8.63	3.46	.45	.45
Dandelion		4.3	4.1	9	21.4	2.9	1.3	11.8		2.7
Cockle		2.4	2.4	7.2	22.9		29.3	6.1		1.2
Speedwell	2.7	3.4	44.0	25.4	4.2	13.2	4.9			1.2

From this it can be observed that weeds gather phosphates and alkalis from the soil, in considerable quantities, and thus rob useful plants of their food. On examination of soils in which weeds appear to flourish best we find that there are fewest in clay and most in loam, in about the following proportions:

Clay, 12 per cent.; sand, 15; peat or vegetable mould, 16; calcareous, 20; loam, 40.

Calcareous soil usually has a very distinctive vegetation. On it you are likely to see such plants as chicory, blueweed, ragwort, pepperwort and silverweed.

We shall now discuss the weeds individually, and treat of all belonging to the same order before considering others.

(To be continued.)

The Dairy.

The Butter Oleomargarine War.

The manufacturers of oleomargarine in the United States are writhing under the just law passed by the legislature, which compels them to sell oleomargarine under its proper name. The enactment in this aspect of it is so manifestly fair that one wonders at the exhibition of moral obtuseness that would call in question the wisdom of it. But oftentimes the love of gain is allowed to overpower all discrimination of the moral sense, hence we find the manufacturers of oleomargarine and butterine in the United States laboring vigorously to bring about a repeal of the law. They have employed some clever knaves to write a pamphlet on the subject, a copy of which has been sent to the representatives of both houses of the legislature. This has called forth a vigorous refutation from Mr. Robt. M. Littler, Chicago, secretary of the National Association, and of the Iowa Butter and Cheese Association. It is a stock argument of the oleomargarine men that the price of beef and pork are enhanced by the large quantities of tallow and lard used in the manufacture of their products. In this argument we admit that there may be some force, notwithstanding the strong array of the figures of the writer to the contrary. He shows that in the years 1885 and 1886 the palmiest years of the oleomargarine manufacture, the prices of beef and pork were less than in previous years. That is not a fair comparison exactly, for the depreciation in meat values were certainly not brought about through the manufacture of oleomargarine. Its effects upon the price must have been in the direction of a rise rather than a fall, hence the prices of meat had very probably been less than they were had no butterine or oleomargarine been manufactured.

The critic is more successful when he attacks the unwholesomeness of the product, and when he shows that the amount of these articles used displaced just so much of the real article that would have been demanded from the farm.

Congressmen need not for a moment hesitate as to what they should do. So long as it can be shown that oleomargarine and butterine do not injure people, men

have a right to manufacture them, and others are quite at liberty to purchase them as they choose. In this respect the manufacturer of these is simply on a par with the manufacturer of articles of confectionary so long as he properly labels his goods like they do theirs. To allow any class of men to make butter which is not the product of the milk of the cow, is an outrage on the civilization of to-day. If the principle of deception in labelling is sanctioned, there can be henceforth no guarantee as to integrity of product, which would at once sap the strong pillar on which the tower of commerce has been reared.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL Feeding Dairy Stock.

BY JAMES CHEESMAN, TORONTO.

It is quite safe to say that no other question of farm economy presses with greater weight at the present moment than that of cattle food. A season of unexampled drouth left the great majority of farmers with greatly reduced crops. To-day most feeders are at their wits end to make ends meet, and it is not unlikely that much valuable stock will suffer from under feeding during the present winter. The few means at his disposal should induce every farmer to make the utmost of his resources and to utilize to the fullest extent the knowledge and experience which successful practice can suggest.

The greatest feature in the harvested crops which strikes most men is their bleached, discolored, and in some instances, partially withered condition. Now all these disadvantages tend to make the fodders indigestible, partly because the excessively dry condition in which they were harvested has increased their proportion of woody fibre, and thus rendered their albumenoids more difficult of digestion, and also because their imperfect growth lessened the proportion of mineral matter contained in them.

How can we remedy these defects by manipulation, and so secure the maximum returns from our feeding, is the object of this article. First, then, the rule must be laid down that all fodder must be cut, and treated with boiling water for twelve hours, to render its woody fibre softer and the albumenoid or nitrogenous part of the food more soluble. Lest any one unaccustomed to this method should feel inclined to cavil at it as fanciful and merely theoretical, I will anticipate objections by saying it is the foundation of English and American dairy practice, and that the best known dairymen in both countries use it. I am quite aware that some will say it is cooking, and that this practice is fast going out of date, and that raw food is taking its place. There is a marked difference between cooking and preparing with hot water as is here advocated. In cooking, water and steam are usually resorted to. If only water be used it follows that the heat cannot exceed boiling point, 212° Fah., but if steam be employed, then the temperature will of course vary with the amount of pressure per square inch. The following facts illustrate the difference between cooking with boiling water and with steam under pressure:

Pounds pressure per square inch.	Temperature of steam.
1 lbs.	152° F.
5	162
10	193
15	213
20	228
25	240
30	250
40	267
50	281
60	292

Now, then, it will be readily seen that when we turn on steam under pressure at from 50 lbs. to 65 lbs. we get nearly 100 degrees of heat above boiling point.

Most, if not all the men who resorted to steaming, have now abandoned it as uneconomical, and experiment has shown that this method of treatment is injurious to the albumenoid portion of the food. The best temperature to employ is about 165 to 170°. It will be noticed that this degree is about the same as is used to scald milk; the Devonshire dairy woman uses it to produce her clotted cream; and as albumen does not coagulate below this point, and will harden when treated above it, the fact is an important one in dairying. There is another consideration of value in prolonged heating at moderate temperatures, and that is the ability of heat to change woody fibre into starch, and to burst starch granules open. These effects are best accomplished at the scalding point, say 165°. Every one knows the effect of hot or boiling water on the pure starch used for laundry purposes, and on corn starch used for puddings. Heat bursts the granules, enables them to absorb water, which largely increases their bulk and develops to the fullest possible extent their ability to feed and nourish animal life. The best illustration of the action of heat on albumen is to cook a couple of eggs. Let one be cooked in the ordinary way by boiling for three minutes, and it will be found that the albumen, or white of the egg nearest to the shell is firmer and more like rubber than that part nearest the yolk. The explanation is that the firm part has been toughened and rendered indigestible to delicate stomachs. For the sick and delicate, and for the well and hearty the best way would be to place the egg for twenty or twenty-five minutes in water at 170° Fah., and the result will be white or albumen in a light gelatinous condition, like that of the yolk. This cannot be done without a thermometer, but it will be more digestible, and cooked in this way will be more acceptable to any stomach.

Having endeavored to make good the claim for cooking, let me state just here that the water for cooking should always be boiling, and after treating the cut fodder and crushed grain with the quantity required to saturate them, which will be about 25 lbs. or 2½ gals. per head, the temperature will soon fall about 30 to 35 degrees, but will not go below 165 for several hours if the food mixtures be prepared in sheltered places, and a tight-fitting cover be used to secure a steam-tight condition.

As most of the dairy herds are small, seldom exceeding 10 animals, and averaging much nearer five or six to a herd in Ontario, the substance of this article is addressed rather to them than to those owning twenty or more head of stock, although its principles will be just as applicable in their cases. First of all one must know just what kinds, and what proportion of each kind a farmer has before he can intelligently compound rations for economical feeding. In the absence of this knowledge it must suffice to give general instructions in outline to so compound the fodders and grains as to obtain as great a variety of scent and flavor as possible. In doing this one can scarcely go astray in mixing with the timothy and clover-hay, wheat, oat, barley or pea-straw, and the grains in about equal proportions, supplemented with roots or ensilage according to the quantity one may have.

Such variety in scent and flavor secures a fairly balanced ration as to nutritive ratio, as well as promoting the secretion of those wonderful digestive ferments in the stomach which we call gastric juice. This latter is by no means a constant quantity, nor is its quality the same under all conditions. Ability to digest food perfectly is as fine an indication of health in man and beast as it is possible to obtain. As digestion is a physiological as well as a chemical process, it therefore follows that the animal is the greatest factor

in the matter. The animal being under our control, is very largely what we make it. To produce the best butter or cream we must have milk capable of giving fat, composed of their proper proportions of oleine, salmitin and those volatile oils which give to cream and butter their delicate flavors. That cream and butter are not the same from animals of the same breed and family fed under the same conditions, is well known. Nothing has impressed me so much as the experience gained during the last three years from observations made in many herds, including all the well-known breeds in our two largest Provinces. This, more than anything else, has emphasized the value of liberal feeding for dairy animals. The quantity and quality of food each cow should have must depend very largely on the judgment of the man who lives with his cows and who knows their individual capacity for milk and butter. The possibilities of common cows, such as are ordinarily met with on small dairy farms, has so often been demonstrated by skill and care in feeding, that it seems needless to call attention to them here. I know of several instances of men sending milk to cheese factories and butter-makers where separators are used, who get a cow average of 5,000 lbs. of milk from herds from five to eight animals in the season of six months, and rich enough to give one pound of butter from 22 lbs. of milk. Five hundred gallons of milk in a half year, or 230 lbs. of butter in common dairying, is worth having. Such results cannot be had without feeding and personal attention to the requirements of the individual cow.

We often hear a great deal about scales of points in judging animals, and much is made of skin-color and the size and quality of the escutcheon of cows. All this is very proper, but an animal's quality depends on its feed to a much greater extent than is usually supposed. In saying this I don't under-value breed, because breed simply gives us the economical apparatus for the conversion of food into milk and butter, and is to an extraordinary extent the creation of feeding. All the principal breeds, and especially particular families of them, are marked illustrations of the value of feeding. So important has this become that there are now many experts who can tell you the names of the winners in the milch cow competitions in the English, American and Canadian exhibitions before the contests come off, providing they know the animals, their distance from calving, and how much rest and quiet they are likely to get at the show yards. Let any one who doubts this take up reports of tests made during the last five years, and he will find abundant proof of what I say. It is becoming an easy matter to foretell the winners, because one can acquaint himself with an exhibitor's ability as a feeder.

Let it not be supposed for a moment that the rich oleaginous secretions of the skin and its beautiful shades of color, its unctuous feel under the touch, are the products of breed only. High breeding gives these in plenty, but they soon fade and disappear when food is stinted or the wrong proportions are given. I have seen choice animals, worth a thousand dollars apiece, with much of their beauty gone from errors in feeding, and others whose origin could not be traced, secrete oil and color their skins when fed well, and give two pounds of butter per day for weeks from 35 lbs. of milk.

To sum up these propositions briefly, the following may be taken to indicate the writer's conclusions:

- 1st. That high-flavored, rich milk cannot be produced without feeding a certain amount of well gotten clover or meadow hay, of which clover forms part.
- 2d. That meadow hay from permanent pasture is of much higher value than timothy.

3d. That roots are valuable whether ensilage is fed or not, and that the yellow globe, golden tankard, or, still better, the red carrot, are essential to health, and furnish much of the color to butter.

4th. That corn ensilage is one of the cheapest crops grown, and should form part of every dairy animal's food.

5th. That grains, of wheat, peas, oats, and corn, with bran, in nearly equal proportions, form the best selection for useful feeding effect.

6th. That an intimate mixture of grain and fodder in the partly digested condition, are necessary to complete digestion, and insure the greatest economy of food.

7th. That salt at the rate of two and a half to three ounces per head per day is requisite, and is best used to season the food.

8th. That food partly digested and a fair amount of roots or ensilage, or both, diminishes the amount of water needed.

9th. That all water fed to stock should be heated to a temperature of at least 60° Fah.

10th. That each and every cow's milk be carefully weighed every day, and fluctuation noted.

Holland Cattle Herd Books.

III.

(Continued from December.)

In West Friesland, one of the northern provinces of Holland, a herd book was published at Leenwarden, in 1880 or 1881, called the *Freisch-Rundvich-Stamboek* (Friesian Cattle Herd Book). This herd book is published in Dutch, French, German and English, all in the same volume. For instance, the registry is given complete in Dutch of cow No. 1, immediately under which the same is repeated in each of the other three languages.

Volume 8 appeared in 1884, containing only cows, and carrying the number to 1121. The rules and forms of registration in this book are much the same as in the *Netherland Herd Book*.

As only animals that have bred are registered in this book, an Auxiliary Herd Book has been established for young stock, the second volume of which appeared in 1887. It contains pedigrees of 50 black and white bulls, 344 bulls of same colors, also 2 red and white bulls, and 5 red and white cows.

In the province of North Holland, where this breed of cattle has attained a greater degree of perfection than elsewhere in Europe, or at least divides this honor with West Friesland, a herd book was established in 1884, the by-laws of which appeared in a pamphlet of eleven pages; K. Tensen, Pz., President, and A. Kool, Secretary.

The first volume of "*Het Rundvee-Stamboek Noord-Holland*," (North Holland Cattle Herd Book), published at Hoorn, 68 pages, registers 2 bulls and 120 cows, it contains names of the officers of the association, and owners of stock registered, besides a scale of points. The registry of each animal states date of birth, by whom and when bred, color, description, (often meagre), number of points scaled by each, class and order of escutcheon; also measurements, height at shoulder, hips, length and breadth of hips, circumference and date of same. Only cattle that are breeders are registered, and solely those of the black and white color and milk type. Skellinghout was made the headquarters of this association.

Volume 2 of the N. H. H. B. appeared in 1885. It contains 160 pages, and is translated in English like Vol. 1. Giving the number of points each registered animal scales is omitted in Vol. 2. An excellent feature in this volume is its illustrations, with thirteen

photographs (size, 3x5 inches) of representative animals.

One of these photographs is *Trijntje*, 111 N. H. H. B., purchased in Holland by Mr. Cornelius Baldwin, agent for Messrs. T. G. Yeomans & Sons, of Walworth, N. Y., for five thousand florins, or in our money \$2000. This is the highest price I have ever heard of being paid for an animal of this breed in Holland. Mr. F. C. Stevens paid Hon. Gerrit S. Miller \$2,000 for a two-year-old heifer, about five years since, and Messrs. Smith, Powell & Lamb paid \$4,200, bidding against Mr. Stevens for *Mercedes* 3d, out of *Mercedes*, the great butter cow that heat the world in a 30 day butter record, competing with the famous *Jersey*, *Mary Ann* of St. Lamberts.

This completes the list of herd books that register solely Holland cattle in Europe.

In 1886 appeared the first volume of the *Holstein-Friesian Herd Book*, compiled and published by Thos. B. Wales, Jr., Secretary.

This is the first herd book published since the union of the Dutch Friesian and Holstein Association. It comprises two volumes, one for bulls, of 621 pages, registering 2527, including transfer and index of bulls, and index to owners. The first 91 pages in this volume contains a list of the officers thereof: T. G. Yeomans, Walworth, N. Y., President; Thos. B. Wales, Jr., Sec'y, Iowa City, Ia., and twenty-two others; a list of members, the charter, by-laws, rules for advanced registry as amended Aug. 12th, 1885, scale of points, report of the first meeting of the Holstein-Friesian Association of America, also the first, second and third meetings of the board of officers.

Part 2 of Vol. 1, 694 pages, registers 3160 females, contains transfers and index of cows, and index to owners.

May 25th, 1885, "the Holstein-Friesian Association of America" was chartered under the laws of New York State.

In 1887, Vol. 2 of this association, F. C. Stevens, President; Thos. B. Wales, Jr., Secretary, was published by the latter in two parts.

Vol. 2, Part 1, 690 pages, registers bulls Nos. 2528 and 5475 inclusive. It contains transfer index to bulls and index to owners, lists of officers and members, the charter, proceedings of first annual meeting at Buffalo, March 17th, 1886. The Treasurer's report showed a credit balance of \$22,878.50, quite an indication of the association's prosperity. The list of members contains 298 names.

Time and space prevent my giving an account of one of the most important features of Holland Cattle Herd Books, viz. the *Holstein Friesian Advanced Register*, Vol. 1 of which was published in 1887, by the Superintendent, Mr. S. Hoxie, of Whitestown, N. Y. OSWEGO, N. Y. DUDLEY MILLER.

Withdrawal of Statement.

CASSEL, November, 1887.

TO JOHN LEYS, ESQ., Barrister, etc., Toronto:
DEAR SIR,—Referring to a letter in the September number for this year (1887) of the *CANADIAN LIVE-STOCK AND FARM JOURNAL*, entitled "A Difference of Opinion," written and signed by me, I beg leave to withdraw the statement made therein to the following effect: "Now, as to registering grades, I will say that a man who permits his cows to be led into the show-ring un milked, 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 pure-breds. It is a deed at once disgraceful to the man and unfair to the animal, and should be strongly censured by the agricultural societies." I acknowledge that the charge made against you is untrue, that I should not have made it, and I regret having done so. Yours truly,

HERMAN BOLLERT.

Farmers' Institute at Brockville.

(By our own correspondent.)

On 15th December, the Leeds Co. Farmers' Institute held its first session for the season, in the court house at Brockville. The President, Mr. H. Jelly, occupied the chair, and announced only a short informal session for the forenoon.

There was a good attendance of the leading farmers of the county. The President spoke briefly of the value and importance to farmers of such meetings, which they are too apt to ignore and neglect. He looked for a full house in the afternoon, and called upon Prof. Jas. W. Robertson, of the Ontario Agricultural College, to address the institute.

Prof. Robertson said that the farmers who did not attend such meetings stood in the light of their own prosperity. As Leeds was the leading dairy county in eastern Ontario, its farmers should be especially desirous of meeting for the discussion of matters touching upon that great industry. To most of them it had become a source of increasing profit. The farmers who were never found at such meetings, who never exchanged ideas on the best methods of raising and feeding stock for the dairy, were the men who loudly complained that dairying did not pay. Applied intelligence and the adoption of the most economical methods for milk production were needful in the present time of keen competition. Out of this need grows the occasion for the holding of farmers meetings. The lessening of the cost of production of every gallon of milk used in cheese-making is the task to which the progressive dairyman should apply himself. The general complaint that grain-growing in Ontario had become unremunerative was perhaps less due to the low prices than to the increased cost of production. Partially exhausted soils were unable to respond generously to the cultivating toil of the tiller. The dairyman should, therefore, carefully save and judiciously apply all the manure from their stock and stables. Barn manure contains necessary plant food. The waste of plant food means a consequent loss of animal food, resulting in the increased cost of maintaining stock.

Thus every gallon of milk is made to cost more in its production. The stabling of milch cows in well ventilated and comfortable stables fits them for making more milk from the same quantity of feed. The beneficial effects from the proper stabling, watering and feeding of milch cows during the winter, are most apparent in the larger yield of milk during the following autumn. Some farmers, while admitting that the best part of their income comes from their dairies, are still too often content to relegate the care of the cows altogether to the women folks. Since dairying is the most important and profitable branch of farming in Ontario, the farmer should make the other farm operations subservient to it, giving it the full benefit of forethought.

They should begin in November to plan and prepare for the next season's operations. Crops should be grown especially for the most economical production of butter and cheese. By such means, the farmers of Ontario would be able to win in the coming competition for the cheapest production, as they have already won in the race with other parts of this continent for the reputation of sending the finest quality of dairy products to the English markets.

Mr. D. Derbyshire, of Brockville, welcomed the farmers of the neighborhood and the speakers from a distance. He spoke of the need for farmers providing green feed for summer use, and said that much loss was sustained by the dairymen last season from neglect of that.

Mr. D. M. McPherson, Lancaster, President of the Eastern Dairymen's Association, in the course of an interesting address, said: "We have met to improve ourselves and our conditions as farmers and citizens. That is the purpose of agricultural exhibitions, farmers' institutes and the proper work of all such organizations. In dairying, the farmers of Ontario have had a comparative monopoly of the dairy industry for the past 15 years. Other nations have recognized the value of dairy farming in maintaining the fertility of soil, and are becoming envious of our large receipts from our exports of cheese. Hereafter, keen competition will compel the farmers of Ontario to improve their dairy practices and methods. Farmers deal with plant life and animal life. There is a necessity that they should provide good plant food and

animal food. Perfect health would thus be promoted in both. That involves the proper saving of manure and the providing of well balanced rations for the animal in comfortable stables."

AFTERNOON SESSION.

Mr. D. M. McPherson read a paper on the Construction and use of Farm Barns. He said that the science of barn building had not been recognized as important, although three fourths of the work of the farmer is done in or about the barn. Farmers have not read nor travelled nor thought enough about it. The use of the barn determines largely the productiveness of the fields. Most of the old barns need remodelling to meet the new needs and conditions of improved farming. Many barns are built from the roof downwards, or at least are planned as to their internal convenience after the roof is on. They should be built from the foundation upward, according to a settled plan. In the preparation of plans, regard must be had to the special kind of farming to be provided for, whether dairying, grain growing or stock-raising, etc. Strength, adaptability, durability and cheapness should be considered. Four leading requirements may be laid down as guiding principles:

- (1) The saving of plant and animal food.
- (2) The saving and promoting of good health of man and beast.
- (3) The saving of labor.
- (4) The saving of cost in construction.

Mr. McPherson had a plan—a barn constructed on these principles—and from it he described the details of the building, its capacity and conveniences.

(Prof. Robertson's address, dealing with the kind of cow to keep and how to keep her, will be given in another issue; also an abstract of Mr. Blue's paper on 'The Resources and Progress of Ontario.')

Mr. Frank McCrae said that there is more loss by overfeeding than by underfeeding of milking cows during the winter. A smaller quantity of suitable feed, well fed, with good stabling and regular care, will give the best results.

Mr. Wm. Stafford, of Lynn, read a paper on draining. The writer's farm is one of deep clay loam, slightly rolling, and which, in the spring, has generally been very wet. Three years ago he drained a field of 10 acres, parts of which were formerly covered by water, until the middle of June. After sowing 5 acres of spring wheat, he received a return of about 30 bushels to the acre—the only good crop he had raised on that field up to that time. While growing, he received for it the first prize from the Brockville and Elizabethan Agricultural Society. Pleased with the result, he continued the work of draining in other parts of the farm, until \$500 were expended. The expenditure has returned to him from 10 to 25 per cent. per annum. It has been enabled to sow grain earlier by two weeks, and also reap a more abundant harvest two weeks earlier than formerly. A better quality and greater variety of crop can be raised. The earlier harvest makes better fall cultivation of the land possible. It is a mistake to apply fertilizers to wet land. Drainage is the first step towards improvement.

After the usual votes of thanks the meeting adjourned.

In the evening the eighth annual banquet of the Brockville Board of Trade was held in the St. Lawrence Hall. A large company of ladies and gentlemen attended. Mr. James Miller, President of the Board, occupied the chair, and was ably supported by Mr. M. K. Everetts, of Eastons Corners.

A U. S. Consul on the Dairy Trade.

Mr. Lathrop, the United States Consul at Bristol, has made a very interesting report to his government on various notes connected with the commerce of Bristol, and though it is too long to give *in extenso*, parts of it relating to the provision trade will be read with interest and show what an outsider thinks of English business. The import trade of Bristol was largely made up of provisions, and in this connection Mr. Lathrop specially drew attention to the way in which Canadian cheese had supplanted the United States product. The Canadian cheese was imported each year in increasing quantities in the Bristol district, and found each year increasing favor both with dealers and consumers. While the import of all foreign cheeses fell off in Liverpool in 1886 by 250,000 boxes, Bristol imports from Montreal increased 12,000 boxes—the total for the year being 201,000 boxes, while the receipts from New York fell off con-

siderably. Great Britain manufactured each year 135,000 tons of cheese, and good cheese too, valued at about \$35,000,000. The very prince of English cheese was held to be Cheddar, and yet Canadian cheese made on the Cheddar principle had actually, right through Somerset, been sold for a penny a pound more than a cheese actually made in the Cheddar valley. As to the controversy as to what was the reason of Cheddar superiority, he thought there could be little doubt that superior methods rather than superior pasture was the reason. The Canadians had gone on improving till they had surpassed their teachers, while the United States had not proportionately advanced, or else reserved the best makes for home use. The import of Canadian and States butter fell off during 1886, principally owing to the fact that continental butterine had been more acceptable to the palates of those who sought a cheap butter than the real article if it had become, as it sometimes did, stale. American bacon had been less consumed because of the more extensive supply from home producers. As long as feeding-stuffs continued cheap, this state of things was likely to be unaltered.

Dominion Holstein Breeders' Association.

The following form of circular has been issued to the Holstein breeders of Ontario, and as there is a good deal of diversity of opinion on the subjects of which it treats, it is very important that there should be a full attendance of all who are directly interested in the breeding of Holsteins in Canada:

Meaford, Dec. 5th, 1887.

Mr. P. O.

DEAR SIR,—At the meeting of the association held in Toronto on the 14th of September, it was decided to call another meeting sometime toward the end of December, when the establishment of a Canadian herd book, the system of judging at exhibitions, and the adoption of a set of by-laws for the guidance of the association, along with any other matters that might be brought forward, would be fully considered. As there will probably be reduced fares over the different roads to the city during Christmas week, I have called this meeting for Tuesday, the 27th day of December, to be held at the Temperance Hall, Temperance street, Toronto, commencing at 10 o'clock, a.m., and I have to earnestly request your attendance.

Yours truly,

A. GIFFORD,
Sec'y D. H. B. A.

[This meeting is of course over. We shall take up the questions of which it treats in February issue.—ED.]

Poultry.

Of Interest to Poultrymen.

The American Poultry Association will meet at Indianapolis, Indiana, January 18 to 25, 1888, for the purpose of revising the "Standard of Excellence," a book which contains descriptions of all recognized varieties of land and water fowls, and which is the official guide for judging and scoring thorough-bred poultry all over the continent. As this book is revised but once in five years, the importance of such a meeting may be readily seen. All the leading fanciers of the United States and Canada, besides a number from England, are expected to be present. At the same time and place will be held the great International Poultry Show, which will be the grandest affair of the kind ever gotten up in America. Reduced rates have been secured from railroads, express companies and steamship lines, so every energetic breeder can be represented.

Premium lists of the show and further particulars may be obtained from the secretary, Richard Twells, Montmorenci, Indiana U. S.

"I like the JOURNAL well; both print and paper are splendid. Please accept my hearty thanks for the prize lists you published."—W. A. Allison, Frome, Ont.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Thinuing Out for Winter.

BY WM. B. COCKBURN, ABERFOYLE, ONT.

Both farmers and fanciers have at this season of the year surplus stock on hand that they must in some way dispose of. I mean such stock as is disqualified for breeding purposes, as hens over two years, which are past their term of usefulness, or such as are imperfect in their markings. The age limit referred to will not apply to turkeys, ducks and geese, which may be kept till an advanced age. We have heard of geese that had been continually kept on the same farm for twenty-five years, and even at that age more productive than at any previous period.

Birds intended for next season's breeding should not be kept in a condition for marketing. It is not easy to have both market and stock fowls kept in a proper condition, each for the desired end, when they run together.

Having tried many ways in fitting them to be palatable for the consumers, and profitable for the producer, in the shortest possible time, we are satisfied that in no other way can this be done so quickly as by inclosing them in a small, warm, compartment, two or three weeks previous to the time they are required to be slaughtered, when they will be found plump and fat if fed nothing but what will produce fat. The best food for the purpose is corn or peas, whole or ground, fed warm and cooked. Give them all they will eat, allowing them milk and water to drink; also gravel for first week, after which time it may be withheld.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

The Poultry Shows.

BY J. W. BARTLETT, LAMBETH.

The Grimsby and St. Catharines poultry shows have been a grand success, so says Mr. Jarvis, who was appointed as judge at both. The numbers on exhibition were very large, being about one thousand birds. We were unable to attend these shows, so can not give detailed account of the exhibits.

The question has been asked, "Are the poultry shows of any real benefit to the country at large?" We consider this question is about on a par with the oft repeated one, "Does poultry-keeping pay?" First, let us consider for a moment the value of our poultry products. Last season, 1886, we sent to the United States one million seven hundred and twenty thousand dollars worth of eggs, or in round figures, one and three-quarter millions; and are we not safe in placing the home consumption at as much more? Any industry that produces three millions of dollars per annum in our country of five million of inhabitants is worthy of more than a passing notice.

But to return to the subject. There is no question that the easiest avenue to a man's heart is through his pocket; and although there is no prize given for mongrel fowls, neither should there be; yet the exhibitions encourage old breeders to greater exertions, and develop the latent fancier into a breeder. We have always noticed that in the neighborhood of a breeder of pure-bred stock of any kind, there will be more or less grades bearing the impress of his pure-bred, and particularly so in fowls. And farmers often catch the hen fever at the poultry shows, though they may have tolerated poultry on the farm all their lives. This is usually beneficial to the barn-door fowls at home; and even if he does not introduce pure-blood among them at first, greater attention will lead to greater profits. Indeed, we might say the man that can't make his barn-door fowls pay their way had better not waste

time and money on pure breeds; but if he can make his mongrels pay he can make pure breeds pay better. Thus it will be seen the influence exerted by a poultry exhibition is very often productive of much good outside of the circle of those who are immediately connected with it and support it; and should poultry exhibitions become defunct, there would be a very great falling off in the value of poultry products.

The Apiary.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

The Late North American Bee-Keepers' Association.

BY R. F. HOLTERMANN, BRANTFORD, ONT.

Owing to the date of the convention, only a brief outline of the above meeting could be given in the last issue of THE CANADIAN LIVE STOCK AND FARM JOURNAL. Although several topics of deep importance, and whereon bee-keepers differed widely, were brought up, the harmony which pervaded the meeting was very pleasing. The reports from the various vice presidents, who each represent a state or province, was very instructive, and is further evidence of the poor honey season generally. In the reports it must be remembered that bee-keepers have no method of securing anything like accurate figures of either the number of colonies possessed or the yield per colony; reports, therefore, must be secured from individual general reports in sections, and although generally pretty reliable cannot be entirely depended upon.

Eugene Secor, Iowa, reports: "From all I can learn, the season of 1887 has been a very poor one throughout the state. The eastern and southern portion probably suffered more than the northwestern part. Fruit bloom and the early blossoming of white clover put the bees in good condition. Brood rearing went on till they were fairly booming; but they got just enough nectar from these sources to build up rapidly and not to store any. White clover proved a failure for honey in all parts, so far as I know; hence those bee-keepers who depend on that for their white honey got scarcely any. Those living near enough to linden forests to catch the flow from that magnificent honey-tree got a partial crop. I obtained twenty pounds per colony of well filled sections."

Arthur Todd, Pennsylvania, says: "This state had an exceedingly light crop of spring honey, and in certain sections it was an almost total failure. Late in the fall there was an exceedingly heavy flow of honey, apparently from astors, of which there was a profuse bloom. In some parts this fall honey was abundant enough to admit of extracting, while leaving the colonies ample for winter. Owing to this flow of honey so late in the season, it is expected that bees will go into winter quarters strong and amply provided with both young bees and provisions."

J. P. H. Brown, Georgia, reports: "That the honey crop for that state has been below the average. About the 1st of May there was a fine flow for about two weeks from poplar or tulip trees, then a drouth came on and the flow ceased." From that time until early in September, he states, they gathered scarcely enough for their own use; since that time they have gathered enough from astors, golden-rod and other sources to carry them through winter.

Jonas Scholl, Indiana, writes: "Bees are generally in good condition for winter. The crop reared has been very light, but enough to pay expenses in a well managed apiary. The drouth did not begin until July 1, and the honey season generally closes July 1

to 10. Other atmospheric conditions caused the failure."

E. O. Tuttle, Vermont: "Bees wintered poorly, twenty-five per cent and even forty per cent. of colonies having been lost by prominent apiarists. There was a scarcity of early honey—fruit bloom passed by hardly noticed by the bees; this was followed by a hot and dry season, which kept back the clover. Still, bee-keepers were hopeful. The previous season had been a poor one, and one poor season seldom follows another. Bass promised well by budding uncommonly full, but was deficient in nectar, the bees only working on it early in the morning and late in the afternoon. The crop was probably one-third of that obtainable in a good season."

H. F. Hunt, Quebec, reports: "That the past season has been a fair one, particularly where clay and heavy loams predominate, notwithstanding the unprecedented lack of rain and the rapid maturing of the flowers. In some localities honey has been gathered late. Losses in wintering average about 19 1/4 per cent., and reports indicate an average of 16 1/2 pounds of extracted honey and 26 pounds of comb honey per colony."

W. S. Hart, Florida, reports: "A light crop generally in his own part, the east coast. May and June was a light crop, but gave many of them a surplus over and above what is likely required during the year. Black mangrove enabled strong colonies to store as much as 100 pounds each, as high as 14 pounds being secured in one day. The fall flowers yielded a light crop."

R. F. Holtermann, Ontario, states: "While the report of an inferior honey yield throughout America generally cannot be excepted by Ontario, we are nevertheless pleased to say that a kind Providence has favored us above the average. Linden, which promised so much, proved an almost complete failure; clover yielded even less than linden. There will be no honey upon the market shortly."

These reports will go far to show what an unprofitable season that of 1887 has been to the average bee-keeper. There is, however, a redeeming feature about the shortage: the prices of honey, which have gradually become lower, have gone up; all honey will be sold before the next season, and bee-keepers are hopeful that that downward tendency has been stopped.

Essays from G. M. Doolittle, Borodino, N. Y., and J. H. Martin, of Hartford, N. Y., upon the "Cost of the Production of Honey," was received with interest. Mr. Martin, I find, says the cost of production in his yard has varied from 2c. to 50c. per pound.

He values his bees at \$5 per colony.

In 1886 he had 200 colonies, valued at.....	\$1000
Empty combs, hives, fixtures, etc.....	300
Interest at 6 per cent	\$78
Hired help, rent of apiary, etc.....	72
His own work, five months.....	150
Total expense.....	\$1500

He secured 10,000 pounds of honey, making it at 3c. per pound.

In 1883 he secured 16,000 pounds from 160 colonies, making the cost 2c. per pound.

In 1882 his yield from 100 colonies was 200 pounds at an expense of \$100, or a cost of 50c. per pound to produce it. This year his yield is 6000 pounds at a cost of 4c. per pound to produce it.

The average for a series of years, he says, would be 5c. per pound. The above figures are for extracted honey. He claims that the remainder of the year the bee-keeper may turn his attention to something else. He claims that an expert should handle

300 colonies in a yard with little or no help; this was for running for extracted honey having surplus combs, and making only a moderate increase.

Mr. Doolittle stated: "That many think that a bee-keeper is entitled to no more pay than the man who cuts wood, carries the hod, or breaks stone upon the highway; or, in other words, whose working value is about \$1.25 per day."

He asked the question: "Then whence was the apiarist to receive remuneration for sleepless nights passed in forming plans to be carried out in the apiary during days of toil in the hot sun, only, perhaps, to find at the close of the season he had nothing? He had no doubt there were present those who had spent more hours, days, weeks and years studying bee-keeping than the most noted lawyer or physician ever spent over his calling; and yet there were bee-keepers who were insane enough to think bee-keepers can afford to work for the same wages as the hod-carrier, one who had probably never spent an hour's thought upon his profession."

"The dealer who purchased honey at 8c. per pound claims he cannot sell it for less than 10c., a profit of 25 per cent., yet the bee-keeper must furnish brains, interest on capital invested, rent of land and buildings, pay taxes on bees, pay for transporting his honey to market, perform one year's hard physical labor—all for four-fifths of the selling price; this was wrong."

"After a careful study, he considered 45 pounds of comb honey per colony, as a rule, an average crop. If a man managed 100 colonies, which he would allow, he will get 4500 pounds of comb honey, the result of a year's labor."

Interest on bees, \$36; taxes, \$4; sections, \$25; foundation, \$30; shipping crates, \$40; double interest on \$200 invested in hives, which would be needed to keep them in repair; rent of shop and land, \$30; carting honey to railroad, \$11; in all, each year, \$200.

"Now, a hod-carrier's wages for 313 working days in the year would be \$391.25, making \$591.25 in all to produce the 4500 pounds of comb honey, or a trifle over 13c. per pound. Allowing that one half more extracted honey can be produced, it would give us 8½c. as the cost of a pound of extracted honey."

In conclusion, he stated: "Whoever sold his honey for less than these prices took smaller wages than a hod-carrier."

In the discussion which followed, the majority objected, stating that the figures were too low altogether; the percentage of winter loss and loss from disease had been left out, and 45 pounds per colony was too high an estimate for an average. Mr. Martin's estimate for five of the best months of the year at \$30 per month was unreasonable also. Some stated they could produce the honey for the price estimated, and would be willing to contract for the price given. The lesson given was, however, that in order to make bee-keeping pay for the care, capital and time required, there should not be any downward tendency in prices, and we should aim at producing for less money.

"I like the JOURNAL much the best of any paper that I get."
—Isaac Fisher, Goderich, Ont.

"Your Nov. number was a specially good one. The cuts on front page are superb. May you go on improving and prospering."
—William Irvine, Lamash, Ont.

"Would be quite lost without your JOURNAL and think that no farmer should be without it who is alive to his own interests."
—John Cousin & Sons, Buena Vista Farm, Harriston, Ont.

Horticultural.

We publish in this issue and the following an interesting paper by Mr. Blue, the Deputy Minister of Agriculture, on the trade in fruit, which was prepared by that gentleman in response to an invitation from the Fruit Growers' Association of Ontario to prepare a paper bearing upon fruit, to be read at their last annual meeting, held at Grimsby during the closing days of September. We observe in this paper that our people are consuming large quantities of fruit imported from the United States in the face of a duty, and of kinds that our own country will produce. Why do our producers allow this to go on? We hope they will note well the kinds of fruit in which a large trade is done in this way, and set themselves to work with renewed energies to grow for our consumers what they want in those lines:

The Trade in Fruit.

At the annual meeting at Grimsby of the Ontario Fruit Growers' Association, the following paper on "The trade in fruit trees between Canada and the United States," was read by Mr. A. Blue, Deputy Minister of Agriculture:

The chief object of this association I understand to be the advancement of the science and art of fruit culture. Its meetings are held for the discussion of all questions bearing on fruit and fruit growing, and it aims to collect and publish useful information on these subjects for the common benefit of all who are either producers or consumers of fruit.

I do not propose, however, in this paper, to deal with practice or theory, as related to the production of fruit or vegetables; for whatever I might be able to say from a knowledge of the literature of the subject, I could not hope to say anything which might not be better and more fittingly spoken, with the clear perception which practice and observation in the field afford, by ninety-nine out of a hundred of the fruit-growers themselves.

A knowledge of the best means of producing fruit is of the first importance; no one will question that. But next to the producing is the consuming, where one grows more than one can eat; and to owners of the fine orchards and gardens of this Niagara peninsula, access to markets is one of the first essentials for a successful career in the business. It would be interesting, no doubt, to discuss the whole subject of the fruit trade of the country, domestic and foreign, but I propose to limit this paper to one section of it, viz., our trade with the United States. For the six years of the present decade (1881-6) our exports of fruit to all countries, as shown by the trade returns of the Dominion, reached an aggregate of \$2,995,193, being a yearly average of nearly half a million. Of these exports the United States took for consumption, according to the trade returns of that country, the value of \$914,868, or an average of \$152,478 for each year. This is equal to 30 per cent. of our fruit exports, but in two years of the six the United States took 62 per cent. of the whole. As showing how large a share the south-western counties of Ontario had in this trade, it may be stated that the imports at American ports on the St. Clair, Detroit and Niagara Rivers for the six years make a total of \$377,885, or 41 per cent. of all the fruit imports of the United States from Canada; but, besides, it is certain that a large part of the fruit sent from those counties goes direct to New York and Chicago.

Our total exports of roots and vegetables in the same period of six years are valued in the trade tables at \$5,693,586, whereof the portion shipped to the United States is valued at \$4,825,189, or 85 per cent. of the whole. Our exports of garden and other seeds to all countries in the six years are valued at \$1,661,499, of which the United States took for consumption a quantity valued at \$781,587, or 47 per cent. of the whole. About \$550,000, or 70 per cent. of those imports, are reported from the Customs districts of the St. Clair, Detroit and Niagara Rivers, showing that they were the produce of our grand south-western peninsula. It thus appears that of our total exports of fruit, vegetables and seeds in the six years, 1881-6, amounting in value to \$10,350,278, the United States

furnished a market for produce of the value of \$6,521,644, or 63 per cent. of the whole. During the same period of six years our import of green fruits from the United States, exclusive of oranges and lemons, are valued at \$1,572,100; of fruit trees, plants, shrubs, etc., \$425,686, making a total of \$3,682,350, or \$613,572 a year.

The following table shows the aggregates of quantities and values of the principal articles for the period of six years, imported from the States, together with the duties paid thereon:

ARTICLES.	Quantity.	Value.	Duty.
Apples, Brs.	182,584	\$400,449	\$ 73,045
Black, goose, rasp and straw-berries, qts.	1,148,562	122,082	22,971
Cherries and currants, qts.	177,500	17,278	1,774
Cranberries, plums and quinces, bush.	65,320	147,154	16,823
Grapes, lbs.	1,748,144	141,176	36,939
Peaches, bush.	122,887	300,662	49,135
Other green fruit.		443,299	88,670
Fruit trees, plants, etc.		125,686	84,603
Potatoes, bush.	349,811	180,022	34,979
Tomatoes, bush.	46,048	85,442	13,818
Other vegetables.		370,894	74,178
Seeds.		1,048,206	157,487

In the trade tables the numbers of fruit trees of the principal kinds imported are given since 24th Feb., 1882, and from that date until the end of the fiscal year, 1886, we imported from the United States, 859,029 apple trees, 154,739 pear trees, 88,860 plum trees, 36,646 cherry trees and 13,576 quince trees, being an aggregate for the five years of 1,152,850 trees, or enough for an orchard area of 20,500 acres. The declared value of this importation is \$156,503, in addition to which there is a value for other trees of \$41,919, and the total charge of customs duty is \$39,099. The duty paid on all imports of fruit and fruit trees, vegetables and seeds imported from the United States in the six years, was \$654,222, or an average of about eighteen per cent.

On this subject of the customs tariff on fruits and other articles I may be allowed to refer to a section of the Tariff Act of 1879, which enumerates certain natural products of Canada and the United States, including green fruit, seeds of all kinds, plants, trees and shrubs, and provides that they may be imported into Canada free of duty, or at a less rate of duty than is provided in the Act, upon proclamation by the Governor in Council, which may be issued whenever it appears to his satisfaction that similar articles from Canada may be imported into the United States free of duty, or at a rate of duty not exceeding that payable on the same on such proclamation when imported into Canada. Now, by the United States Tariff Act of 1883, which came into operation on the 1st of July of that year, the following articles were placed on the free list:

1. Fruits, green, ripe or dried, not especially provided for, such as oranges, grapes, preserved fruits, etc.
2. Plants, trees, shrubs and vines of all kinds not otherwise provided for.
3. Seeds of all kinds not especially enumerated, except medicinal seeds.

Those articles have been admitted into the United States from Canada and all other countries free of duty since the first of July, 1883, and notwithstanding the provision of the Canadian Tariff Act of 1879, the duty on similar articles imported into Canada from the United States has neither been removed nor lowered. Our producers have the boon of a continental free market; while our consumers, who vastly outnumbered the producing class, are "cabin'd, cribb'd, confin'd, bound in," not by "saucy doubts and fears," as was the thane of Cawdor, but to the tardy market of their own long-wintered country, with a cordon of customs posts to keep out earlier fruits of a sunnier land. Looked at from the point of view of a consumer, and not without consideration for the large interests of the producer, it seems to me that our Government has made a mistake in failing to meet the legislation of the United States in the spirit of the terms of its own Act. It is possible, I am bound to consider it probable, that the failure to reciprocate has not been intentional, but rather that it has been owing to an oversight of the changes made in the United States tariff, whereby the articles referred to were placed on the free list four years ago.

It is for our interest that this attitude towards the United States should continue—that while placing on the statute book a standing offer for the free exchange

of specified products, we should ignore the acceptance of our offer by the United States? Suppose our neighbors should retaliate and not only reimpose the old duties on articles which are now free, but, following the recent example of our Government in the case of potatoes and other vegetables, make a duty of 25 to 50 per cent. higher than before, or make the duty prohibitory at once, how would it affect the fruit, seed and vegetable growers of Canada? Where could they hope to find a market for the 60 per cent. and over of their products, which, during the past six years, was taken by the United States? And bear in mind that I am not putting a purely hypothetical case, for numerous instances are on record—notably in connection with the Fisheries question—in which the United States Congress prohibited the importation of products of these British Provinces in retaliation for the conduct or the policy of the British Government; and I say it is not wise, without excellent cause, to provoke retaliation, or even to seem to provoke it.

(Completed in next issue.)

The Home.

Washed Ashore.

Old Mike dwelt under the Curlew Cliff;
The cliff as white as curds,
The sands beneath it are gold and grey,
And the long swell murmurs night and day
Like the music without words.

But a lonely soul was poor old Mike
And one whose heart was sore;
His little girl with the golden hair,
Went out in the world, the neighbors said,
And she came back no more.

When the children built their towers of shells
And laughed to see them fall,
The tide ran up to the sunny strand,
And chased the steps of a bright-eyed band,
And old Mike loved them all.

For sorrow never can turn us sour,
If God's love keeps us sweet;
And a wholesome heart may find its bliss
In a child's fresh laugh and dewy kiss
As long as it shall beat.

But the blue sea does not always play
With little ones on shore;
Sometimes it wakes with a giant's might,
And small waves swell to an awful height,
And burst with angry roar.

A fickle friend is the grand old sea,
Whose changes none can tell;
It rose one day in a cruel mood
And roared as a lion roars for food,
Just after twilight fell.

On the wild, wild sands the fishers stood,
And gazed through mist and storm;
The surf dashed high and the light was dim,
But old Mike said there was shown to him
A vessel's tossing form.

The others turned from the shore away;
But he watched there alone,
And prayed for the souls in mortal pain,
Till the faint gray daylight crept again
O'er cliff and sand and stone.

And just at the base of Curlew Cliff
Lay something stiff and cold;
And the seaweed wrapped it round and round,
But Mike beheld, with a great heart-bound,
Its dripping curls of gold.

"The ways of God are not ours," he said;
"I thought him hard to me,
The grave has taken my fairest things,
But lo! this day to my feet He brings
A treasure from the sea."

"'Tis better to wait His time, he said,
'Than win our way and will';
The plans of God are past finding out,
And we test His love with cry and doubt,
But find it changeless still."

To his cabin, built beneath the cliff,
The senseless child he bore,
And the eager folk came crowding down
From the scattered lots and busy town,
To that rain-beaten shore.

Long, long it seemed ere her eyes unclosed,
Long ere they heard her sigh;
On her neck and wrists were jewelled bands,
And Mike unclasped them with gentle hands,
And laid them safely by.

And days went on, and her baby smile,
Lit up his cabin small,
Till his waste life blossomed like the rose;
The years that come at the journey's close
Are often best of all.

And the neighbors called the maiden Pearl,
So bright she grew, and fair;
An ocean gem, by the billows thrown
Into a casket, empty and lone,
To shine its beauty there.

When Mike lay calm in his dying hours
She watched him night and day;
But a proud lord to the cabin came,
And called the girl by her mother's name,
And bade her come away.

"I sought my daughter many a year,"
(He told her o'er and o'er);
"In a cruel storm my wife was lost;
But seamen spoke of a baby, tossed
On some unfriendly shore."

Then old Mike whispered, "I found the child,
Washed up by yonder brine,
A pearl of price from the stormy sea,
Our God has lent her for years to me;
Now take her, she is thine."

But Pearl looked up in her father's face,
"Not yet, not yet," said she;
"There is time to give and time to take,
I cling to him for his long love's sake,
While he has need for me!"
—Sarah Doudney, in the *Sunday Magazine*.

1888.

Before the January number of the JOURNAL shall have reached the bulk of our readers, they shall have passed the threshold of the year 1888; they shall stand face to face with its momentous probabilities. Each day thereof shall entail fresh obligations and bring new duties, that must be discharged by young and old who are to give account of their stewardship with joy and not with fear.

Who, in looking back over the past year, does not see some ugly stains upon the page that chronicles the story of his doings? Who, if he could, would not use some corrosive to eliminate them from the record of all lives if it were in his power? But he cannot. There they remain through all time, to meet retrospective vision with awful glare until the journey's end is reached. In this respect shall the next year be the repetition of the past? Reader, it rests with you to say: "Is the record of every year like the cast-off slough of the serpent, to be a *fac-simile* of the former?" It remains for you to determine. The record of young lives should resemble the story of their school days. There should be progression. In every form of moral development, where growth is healthy, the order, is "first the blade, then the ear, then the full corn in the ear;" but where there is no full corn in the ear it is because of a sickness of growth in the blade. If a rich ripe harvest of fruition is to be reaped in the form of golden deeds for the store-house of eternity during this year, we must look well to the character of the seed we sow in the nature of the motives that prove the mainspring of our actions.

Why, we ask, is the record of 1887 so very different from what we desire that it should be? Can we lay our finger upon the cause of the mistakes we made? If we cannot, there is no likelihood that the story of the page of 1888 will be an improvement upon that of 1887.

Every mistake of the human family is rooted in the deep rank soil of sin, and a sinful nature is cradled in that innate depravity which is the common heritage of mankind. This it is that makes men "prone to evil as the sparks that fly upward," and leads them to do the very things that they are conscious should not be done and which they have resolved not to do. This it is that turns life into a battle-field from the cradle to the grave, and daubs the record of each year with pictures so unsightly.

Is there no hope then of an improvement, or must we go on like the brook, forever painting the unsightly record? Yes, thank God, there is hope. The record of our years, instead of the unsightly daub, may be made a beautiful picture, which the angels of

heaven shall look upon with happy approbation. How shall it be done? Not by human might nor by human strength, but "by my Spirit, saith the Lord." Let us seek this help where it may at any time be found, and we shall not seek it in vain.

In other years we have gone down to battle like Goliath of the Philistines, trusting to our sword and shield and spear to bring us victory; therefore it is that we have failed. If this year we can meet our foes with the consciousness that we come down to them "in the name of the Lord of Hosts," though only armed with a sling and stones from the brook, we are assured of victory.

That is an ignoble mind that does not strive to make the story of every passing year an improvement upon the past. Every year adds something to the stature of the growing child; every season the growing tree adds another circle to its circumference; and, so in moral growth, there should be a perpetual advance. In natural growth the limit to development is maturity, but in moral growth, large thanks to Him who so arranged it, that limit is *infinite*.

The year 1888, like all its predecessors, will be filled brimful with much that is pathetically tragic. Numbers will curse the day that ushered it in, because of the ills that shall come to them this year, although it only brings the harvest-time that during other years has been growing from seed that they have scattered. Others, again, will bless the day that brought to them another year, so fraught with opportunity to serve both God and man. Some will become more sour in temper, a terror and an object of hatred to all with whom they come in contact, both within and without their homes; others will make their homes what they should be and what they may be, more perfect types of heaven, and will scatter happy sunbeams over every countenance with whom they come in contact. Many will drift toward the awful precipice that borders the verge of time regardless of the existence of a life beyond or of its nature, and others will lose no day in making preparation for its glad or stern relations.

What the picture shall be that the readers of the LIVE-STOCK JOURNAL shall paint this year, it remains with them to determine. Although the power to paint a pretty picture of life's story is not in man inherently, as we have said in other words, it is within man's reach. An ocean of help for all who desire improvement is within their reach. Although the reservoir is in heaven the ducts leading from it to earth are as numerous as its inhabitants. A full supply will flow on the turning of two taps, the first is labelled *ask*, and the second *try*. It is useless, however, to invert the order, for turn the second tap first, as thousands foolishly do, and no supply will come.

Our youthful readers have a golden prospect ahead. We know the days and hours of 1888 are spread out before them like the fairyland vision of some delightful dream, and we are glad that so they see it, for the opportunities it brings them for every species of development are like the unfoldings of a lovely panorama. Yet we would have them remember that in the background, though they may not see it, is a dreary desert land, full of pitfalls and snares and solitude and gloom. No one has ever found it safe to traverse such a country without a guide. A guide is always in waiting, and although He has led millions through this country He has never yet been charged with leading one astray. To you He is calling now, and to every one, "Acknowledge Me in all thy ways, and I will direct thy steps, and I will bring thee into a good land, a land of brooks of water, of fountains and depths that spring out of the valleys and hills."

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Mother.

The girl was fair, her eyes bright, her cheeks were glowing with health; moreover, she was kind, lovable and a favorite, abroad and at home, where a kind friend and valued stepmother did her best to fill a mother's place. People said she didn't miss her mother, that the place vacant so early in life had long been filled. But if so, how account for the following:

Her school work is done, her eyes are heavy, and seem far away; the aching head is propped up with one hand while with the other she writes over and over again the one dear word, "mother," sweetest of all words in our language! She writes and writes, again and the writing of it seems to make it dearer. Who can say there are no longings in the young life for the love—the pure, true, untiring mother's love, which she now yearns for, but has never known?

From the one in the bloom of youth turn with me to another picture. In a room, clean, polished and handsome, there lies a woman on her death-bed. Her wrinkled face and hoary hair speak age; the high white brow of intelligence, and the firm mouth almost harsh—speaks of severity. And severe the world has termed her and judged her, for position and wealth to have thrown aside even nature's ties. But listen, she is speaking, and the voice is musical, suggestive of the sweetness there must have been long ago. Three times is the word repeated, and it is "Mother! Mother! MOTHER!" The mind is wandering, and has been for days, but the mother is above all.

Surely He is nearer the motherless who is a Father to the fatherless, and when afflicting so sorely, it is to show more kindness and do more than any mother can do.

FOREST LEAVES.

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 three for \$2.55; clubs of five for \$4.00; clubs of seven for \$5.25; and clubs of ten for \$7.50—an extra copy going to the person getting up a club of ten.

Jottings.

Why Not?—Why not get up a club for the JOURNAL, and why not begin the work now? See our special terms to club agents.

A Valuable Animal. The Polled-Angus bull Japan, owned by Wm. Servenwright, of the town of Bothwell, and bred at the stock farm of the Geary Bros. Co., has been purchased by Mr. Alex. McKinnon, of Hillsburg, Ont.

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.

Enlarged Journal.—Pressure of interesting and valuable reading matter again compels us to enlarge the JOURNAL four pages this issue. Though this enlargement is to us a considerable additional outlay, we are bound to give our readers the best possible value for their money. The JOURNAL is booming. Our friends will please send along the subscribers.

Correction.—In the last number of the Journal, 1st page, the g. sire of Bravissimo (476), owned by Mr. Wm. Rennie, Toronto, is given as Old Prince of Wales (67). It

should read Glenlee (363). The sire of dam is given as Lochfergus Champion (449), which was the sire of his g. dam. The weight of Bravissimo is at present 2,100 lbs.

Hairy Legged Horses.—I think the importation of the hairy legged horses is being overdone, as many farmers do not breed judiciously for want of knowledge how to do it. Keep the blooded stock in the first place, then you can have the horse, and farmers cannot go very far astray in breeding their horses to them. I. Mitchell, Sarnia.

Protecting Cucumbers from Insects.—While visiting the Woodburn Farm of Mr. H. Woodruff, St. David's, early in last July, our attention was arrested by dark circles which enclosed within each one of them a hill of cucumbers. We were told that it was made by pouring coal oil lightly around each hill and that it proved effective in protecting the vines from the ravages of the bug in any season.

Kingston Business College.—We clip the following from the Kingston News: "The history of the Dominion Business College has been one of uninterrupted success, until it has now attained a national reputation. It is eminent by deserving of the most liberal patronage and our people do well to foster and encourage so excellent an institution."

Holstein-Friesian Association for Canada.—At the meeting of the Holstein breeders, held in Toronto on the 27th Dec., the following gentlemen were appointed a committee to draft a constitution and by-laws, to be submitted at a subsequent meeting, of which due notice will be given: A. Gifford, Meaford; J. Leys, M. P. P., Toronto; S. Shunk, Edgley; G. S. Smith, Dundas, and A. Hallman, New Dundee.

Ontario Pump Co's Windmills in England.—We understand this company, with headquarters at Toronto, Ont., is doing a fine business in England. They have now about 75 mills erected there from 10 to 50 feet in diameter. We hope in next issue to get room for the opinions of one or two Englishmen regarding our Canadian windmills.

Comparative Values of Wheat and Bran.—A subscriber asks, is it cheaper to feed bran to working horses at \$16, or oats at 30¢ per bush? Oats at this price is a better feed and cheaper than bran at that figure, when we consider the results. Bran should be fed occasionally to horses whatever the cost, in reason, owing to its laxative effects upon the bowels, but as a regular feed it has not the staying powers of oats.

Let the Good Work Go On.—Thanks to the active efforts of our friends in various parts of the country our subscription list is having a tremendous boom. The renewals and new subscribers are far in advance of what they were the corresponding period a year ago. Let the good work go and the "scrub" must go too. See reduced club rates on another page. "Nothing succeeds like success." Every friend of the JOURNAL is expected to do his duty.

Poultry and Pet Stock Show.—The premium list of the fourth annual exhibition of the Poultry and Pet Stock Association is to hand. The show will be held in Ottawa, Feb. 14th to 17th, 1888. The expert judge selected, is J. V. Becknell, Buffalo, N. Y. The list of premiums is large, including a very long and liberal offering of specials. The Secretary is P. G. Keyes, 467 Rideau Street, Ottawa.

Prize Essays for 1888.—The subjects for the essay competition this year for the prizes offered by the Agricultural and Arts Association are: (1) field roots; their comparative value as cattle food, and the best method of cultivation. (2) The hindrances to progress in Canadian agriculture, with a view to their removal. The manuscript is not to exceed twenty-five pages. The first prize in both instances is \$30, and for second, \$20. MSS. to be sent to H. Wade, Toronto, Sec. of the Association, not later than 1st August.

West Highland Cattle.—One result of the victory won by the Hereford West Highland steer at the recent Chicago Fat-Stock Show will be this, that it will certainly draw more attention from the people of this western world to the merits of this famous breed. On the upland ranges, the protection of their shaggy coats is certainly much in their favor, where they must rough it through the long and cold winters. The meat, too, is of a very excellent quality. One chief objection to their introduction is their slowness in maturing. Their ability to stand cold is not much of a recommendation in this climate where cattle are housed in the winter, but their ability as well to live upon the herbage to be found in rough places, should lead some of our land owners in the provinces to ask whether we have not a place for them here, especially in the wide North West.

Shorthorn Breeders in Session.—The date has not yet been fixed upon for holding the meeting of the Annual Shorthorn Breeders Association, but we would suggest the same time as the annual meeting of the Central Farmers' Institute of Ontario. This will take place the 21st Tuesday in March. The Shorthorn breeders might convene a day sooner or remain a day later; in any event they should not attempt to complete their business in one sitting, for in such a case there is no time that can be devoted to the discussion of any matters relating to the improvement of the breed.

Medical Science.—This is the name of a new monthly medical journal, the first issue of which appeared in November. The editors are P. H. Bryce, M.A., M.B., L.R.C.P. and S. Edin; Wm. Nattress, M.D., M.R.C.S., England; P. J. Strathy, M.D., M.R.C.S., England, and W. B. Nesbitt, B.A., M.D., C.M., names which of themselves form a sufficient guarantee that the work will do honor to the Province. This guarantee is abundantly fulfilled in the initial number by the large amount of original matter furnished, of a high order. It is published in Toronto, and the subscription price is \$2 a year.

The Illustrated London News.—The Christmas number of the American edition of this incomparable illustrated newspaper is in itself worth \$4, the annual subscription, to a lover of fine illustrations. Along with it came four beautiful chromos in life colors. One representing faith, a beautiful maiden, with trustful face, is the picture of guilelessness, and all are very fine. In the volume itself are life-like illustrations of life in the Sierras, a charming picture of Evangeline "that maiden of seventeen summers," bringing home the Christmas tree and many others, all of superior order. Office of publication, Potter Building, New York.

Feeding Wheat.—Will those of our subscribers who have tried the experiment of feeding wheat, kindly forward to us the result for publication? Hitherto wheat has been mainly used for purposes of distinct consumption by the human family, but if by feeding to some kind or kinds of stock it may be converted into food for man in some other form that will yield a greater profit, why should it not be done? Its value as a food for producing eggs has long been known, why may it not be valuable also for producing beef, butter and cheese when it gets down below a certain price?

Destruction of Rabbits.—The Government of New South Wales, says the *Mark Lane Express* (advertising a reward of £25,000 to any person who will make known and demonstrate at his own expense any method or process not previously known in the colony, for the effectual extermination of rabbits. These must be a gigantic evil in the country when a government offers so handsome a reward for a discovery of this nature. The offer is hedged in with the conditions:—(1) That after 12 months' trial, the experiment shall receive the approval of a board appointed for the purpose by the Governor; (2) That such method or process shall not be injurious, and will not involve the use of any matter, animal or thing which may be noxious to horses, cattle, sheep, canals, goats, swine or dogs.

The Oleomargarine War.—At the joint meeting of the National Butter, Cheese and Egg Association, and the Iowa Butter and Cheese Association, held at Manchester, Iowa, early in Nov., the following strong resolutions were passed along with others having a similar object in view: That in the different states and territories not prohibiting all substitutes for butter, it is desirable to have laws passed: (1) Prohibiting the imitation or semblance of butter in any substitute therefor; (2) Against the fraudulent sale of any substitute as for butter; (3) Prohibiting the use of any substitute in imitation or semblance of butter in hotels, restaurants, or other places of public entertainment; (4) Creating a department with suitable appropriations for their enforcement.

Farmers' Institutes in Wisconsin.—We have received a circular, issued on 1st Oct. last, by the farm committee board of regents for the state of Wisconsin, which contains the programme of Institutes mapped out for the coming winter. The first page contains a list of some 82 places in the state where Institutes will be held with the dates. The second and third pages contain a list of names of parties who may be secured to read papers, with the subject or subjects and the p. o. address. The last page contains suggestions to local committees as to the necessary preparation for these meetings. We notice the name of Prof. J. W. Robertson, Montreal, is down for five papers, all on dairy subjects. There is one missing link of explanation to a stranger; that is the way in which these local committees are formed. Will Mr. Robertson or some one else please explain?

The Ontario Veterinary College.—From a letter simply of friendly correspondence from a student in attendance at the above institution we glean the following: The attendance at the college is very large this season, evidence of the increasing popularity of the school, both in this and other countries, for we have students here not only from every part of the Dominion and nearly every state in the union, but from the mother countries, England, Scotland and Ireland, and from the Sandwich Islands and Australia. Not only is the college advancing, but also the vet. science in many ways. Many diseases, the origin of which two years ago could not be explained, are now becoming well understood. Regarding these in former years, many distinct hypotheses were brought forward, not only by the best veterinary pathologists, but by many medical men of high repute, all whose theorizing proved nothing, feasible as they seemed. The causes are now demonstrated as due to micro-organisms, and I believe ere long many things in Etiology which have hitherto proved vexatious questions will be explained in the same way.

The Culture of Farm Crops.—This is the title of a book from the pen of Henry Stewart, author of "The Shepherd's Manual" and other useful agricultural books. The author's reputation is a sufficient guarantee of its value. It is published by D. H. Nash, Millington, Morris Co., New Jersey, the enterprising manufacturer of that wonderful implement so much used in the processes of pulverization, the "acme harrow." It contains 334 pages, embracing six chapters. The first and second chapters treat of the sources of plant food, the third treats of the effects of the different processes of cultivation, the fourth the improvement effected by manures, the fifth the various processes of growth, and the sixth the processes of tillage. There is also an article on special crops. It is thus apparent that the book goes to the root of the principles that underlie successful agriculture. The author applies these in the most practical and pleasant manner, and in language that anyone can understand. It is not a book got up simply to sell. It cannot be read carefully without much profit to the reader.

The London Live-Stock Journal Almanac for 1888.—This very valuable work has just come to hand. It is even an improvement on its predecessors, and that is saying a good deal. It contains no less than thirty-five original articles, all on subjects of much importance to the farmer. Of these we mention "Revival of Horse Breeding," by Earl of Coventry; "Arabian Horses," by E. F. D.; "How to Breed Horses," by Walter Gilby; "Yorkshire Coach Horses," by W. Hutchinson; "Shire Horses," by G. M. Sexton; "Clydesdale Horses," by A. McNeill; "Hackney Horses," by H. F. Euren; "Galloway Cattle," by James Biggar; "Sheep Culture," by F. H. Bowman. D. Sc.; "Somerset and Dorset Sheep," by H. H. Farthing, and "The Bacon Curer's Pig," by Saunders Spencer. There are also 43 live-stock illustrations, embracing a great variety of subjects. It contains a list of the live-stock and agricultural societies, of the fairs and markets in the United Kingdom, and a breeders' directory, containing a list of no less than 600 breeders with their addresses. It may be obtained from the Messrs. Vinton & Co., 9 New Bridge St., Ludgate Circus, London, Eng.

Ontario Veterinary College.—The Christmas examinations of the Ontario Veterinary College were brought to a close on Wednesday evening. We regret that we cannot give the notice of this work that place which its importance deserves, owing to the fact that our first forms are now in print. The college is in a more flourishing condition than ever, as evidenced by the attendance of students from the Sandwich Islands, Australia, New Brunswick and all parts of the United States. The examining board consisted of Messrs. Charles Elliott, V. S., St. Catharines; J. H. Wilson, V. S., London; J. D. O'Neill, V. S., London; W. Cowan, V. S., C. It.; W. W. Shaw, V. S., Dayton, Ohio, U. S.; G. Lloyd, V. S., Newmarket, and C. H. Sweetapple, V. S., Oshawa. After reading over the names of the successful gentlemen, who succeeded in passing the final examination, a list of whom appears below, Dr. Lloyd addressed them in a few well chosen remarks, reminding them that they were about to enter the ranks of the veterinary profession, and that it would depend upon themselves, whether they elevated or depreciated the profession which they had chosen. His remarks were received in an enthusiastic manner, and the proceedings then terminated. The successful candidates were: George Baxter, Toronto, Ont.; W. F. Broad, Soya; W. H. Clapp, Dresden; H. Cooper, Davisville; C. O. Collins, Obolds, Pa., U. S.; R. C. Coates, Bothwell; W. H. Carpenter, Holly, N. Y., U. S.; E. E. Cunningham, La Porte, Ind., U. S.; H. Dean, Tavistock; W. A. Ewing, Newmarket; W. M. Evans, Simcoe; W. H. Heck, Mildmay; M. Kannon, Montreal, Que.; W. A. Kump, Waterloo; S. P. Kintner, Wooster, Ohio, U. S.; C. M. Mc-

Murray, North Baltimore, Ohio; C. L. McLaren, Highgate; J. H. Oyley, Harrisburgh, Pa., U. S.; F. Pike, Toronto; W. Shillinglaw, Staffa; R. W. Story, Princeton, Ill., U. S.; B. Taylor, Hillsborough, Dakota, U. S.; W. Thomson, Orillia; R. J. Walker, Ireland. Primary on materia medica, G. E. Bracken and R. J. Widdifield. Primary on anatomy, J. H. Teller.

Annual Meeting of the Dominion Draught Horse Breeders' Society.—About 40 members of this society gathered in the Council Chamber, Clinton, at the recent annual meeting. In the absence of Mr. John McMillan, M. P., President, who was too ill to venture out, the Vice-President, Mr. D. McIntosh, took the chair. The Secretary submitted a report showing a membership of 90, with about \$800 in fees, and an aggregate of 422 entries received to date. It was decided that as the notice of intended change of standard had been published only in the November issues of the stock and agricultural journals, the time for receiving entries under the present standard be extended to March 1st, 1888, when it will close, and the following new standard will come into force: Sec. 11. Every application for registry must show that the animal whose pedigree is submitted for registry is the offspring of an accepted sire, and of a dam the produce of an accepted sire. Sec. 12. Accepted sires are (1) imported stallions of the Clydesdale and Shire breeds that stood for service in the Dominion of Canada prior to 1886, but are now dead or removed from the country, having pedigrees satisfactory to the council. These sires the Society agrees to register free of charge and accept, and their male produce in Canada with imported Clydesdale or Shire mares may be registered and will be accepted sires; (2) Stallions registered in the Shire stud book, or in the Clydesdale of Great Britain, Canada or the United States. All animals so registered of mixed breeding shall be named Dominion draught horses. The new rules as submitted by the special committee were then adopted with some amendments, and the election of officers proceeded with, resulting as follows: President, John McMillan, M. P.; Constable P. O.; Vice-President, D. McIntosh, V. S., Brucefield; Secretary, James Mitchell, Goderich; Treasurer, J. J. Fisher, Benmiller; Directors, John Mason, Londonboro; T. Green, Dublin; J. D. O'Neill, London; John McDiarmid, Lucknow; P. Curtin, Adare; J. J. Fisher, Benmiller; Thos. McLaughlin, Brussels; S. Smillie, Hensall; Wm. Wellwood, St. Helens; J. E. Blackall, Clinton; J. Aikenhead, Goderich; Alex. Innis, Clinton; James Henderson, Belton. Auditors, S. Smillie and Peter McGregor. The first volume of the stud book will be edited and placed in the printer's hand immediately after the first of March next. At the conclusion of the annual meeting, the Council met and appointed an Executive Committee for the examination of entries for registration.

[We shall be greatly obliged if the Secretary will forward to us a copy of the constitution, by-laws, etc., of this Society.—Ed.] (See Adv't.)

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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.

Major Hodgson, has removed his business from Myrtle to Port Perry, Ont. Mr. Hodgson deals in no less than twelve varieties of poultry, also in Cleveland Bay and other kinds of light horses, as stated in his advertisement.

Mr. James S. Smith, Maple Lodge, Ont., writes in connection with a change of advertisement: "Our stock are doing very well, although they were thinner in the fall than we usually have them—the pasture was so scarce. The stock bull Duke of Colonus is developing in fine style, and we are very proud of his calves—extra good and uniform, mellow handling, mossy coated fellows, that show their feed right along." We understand this firm are offering a grand lot of bulls and young cows and heifers for sale.

Mr. Henry King, Priceville, Ont., is the owner of an imported Percheron stallion and also a Clydesdale. The Percheron was purchased from Powell Bros., Springboro, Pa., and the Clydesdale from Wm. Rennie, Toronto. The latter named Dandy Boy (335), vol. ix; sire by Harold (2854); g. s. Lord Lyon (994); g. g. s. Lord Lyon (489); g. g. g. s. Hercules (378); dam Darling (237); by Old Times (579). This horse is a nice, smooth, large animal with good action.

Little Wonder, the English Cob stallion, imported by Mr. John Fothergill, Burlington, Ont., made a most successful season last year in his own neighborhood, having been used mostly on half-blood mares of the leggy order, and the results cannot fail to be watched with much interest. Little Wonder was bought in the Autumn of 1886, by Mr. Fothergill, from Mr. Pierson, Westmoreland, England, by whom he was bred. He is a beautiful bay with black legs, feet, tail and main, has clean cut limbs, is good over the back, round as a barrel, and neat and full and even and well proportioned, with great qualities of endurance.

Mr. Robert Blair, Almonte, Ont., reports that his imported stallion Rising Sun (62), has made a very successful season and is proving a grand stock horse. He has also been a successful horse in the show-ring; won 2d at Ottawa in 1884, 1st at N. R. Lanark, Almonte, in 1884, 1885, 1886 and 1887, and special prize of \$10 for best stallion and five colts sired by one horse. He was also 1st at S. R. L., Perth, in 1886, and 2d at S. R. R., Renfrew, same year. His Shropshires are doing well. They were bought from J. Miller & Son, Brougham, Ont. Has sold one ram lamb to Mr. M. Patterson, Appleton, and one to Mr. D. McLaren, Dunmore, Ont.

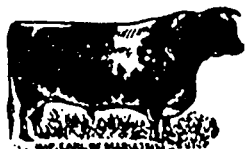
The Messrs. Dundas & Grandy, Yelverton, Ont., send the following notes in re their Clydes: "We have sold to Mr. J. Whitfield, Cavan Co., Durham, Ont., the filly Ladybird vol. x, B. C. S. B., a noted prize winner in Scotland, bred by Mr. Allison, Brownhill, Galston; sire, Gallant Lyon (5613); dam, Daisy vol. x; sire of dam, Young Prince of Kilbride (1013); g. d. Daisy (1012); sire of g. d. Lofy (460); g. g. d. Lilly of Broomhill. The North British Agriculturist, commenting on this filly, says, she has a nice even top, and few Clydesdales are better at the ground. To Mr. Wm. Philip, Newry, Ont., the yearling filly Campbellton Maid, vol. x, which won 1st at Campbellton in 1885. Bred by Mr. Barbour, Duchama, Kintyre. Sire, Jacob Wilton (1718); dam, Lily (1911); sire of dam, Reil alias Lofy (664); g. dam, Maggie (991); sire of grand dam, Lord Clyde (2938). To Mr. John Mounsey, Fraserville, Ont., a nephew of the well-known Shortbush breeder, Mr. S. Campbell, Kinellar, the very promising filly Gallant Lass, vol. x, which was a prize winner in Scotland this year; foaled 21 June, 1886; sire, Gallant Lad (1781), which won the Glasgow premium in 1885, and was first at Highland Agricultural Society's Show same year, Jan. Topsy of Westerton (1741); sire of dam, Admiral (2550). We have still on hand a number of stallions and fillies, which are doing well. The demand for choice animals keeps good."

Mr. John R. Martin, of the Clearville Stock Farm, Cayuga, Ont., has recently made the following sales of farm stock to A. C. Smith, Manitoba, six Shortbush bulls, bred from imported stock, at \$100 each, one bay mare, bred to Norseman, \$100, one

THE GLEN STOCK FARM,

Innerkip, Oxford Co., Ont.

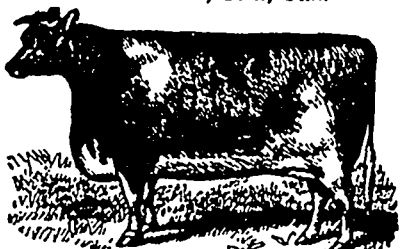
**SCOTCH SHORTHORNS,
SHIRE HORSES,
BERKSHIRE PIGS.**



Herd headed by imported Earl of Mar (4785), winner of the gold medal at the Grand Dominion and 39th Provincial Show, and numerous other prizes.

GREEN BROS., THE GLEN, INNERKIP.

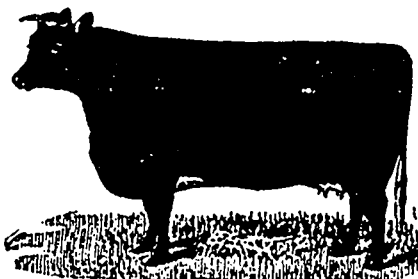
ARTHUR JOHNSTON,
Greenwood, Ont., Can.



I HAVE now on hand and for sale 10 extra good young home-bred bulls, all by imported sires and mostly out of imported dams, besides an excellent lot of imp'd and home-bred cows and heifers. All for sale.

I expect my recently imported young bulls and heifers home from Quarantine about January 25th, 1888. New catalogue now ready. Send for one. I have also a good lot of imp. **CLYDESDALE STATIONS** and **MARES** for sale. Claremont Station, C. P. R., and Pickering Station, G. T. R. Parties met at either station on short notice. Come and see them. No business, no harm.

FRANK R. SHORE & BROS.,
R. R. STATION, LONDON. P. O., WHITE OAK.



SHORTHORNS AND SHROPSHIRE

Have a grand lot of bull calves sired by our imp. Cruickshank bull Vermilion (50587), and a very choice lot of heifers, now in calf to Vermilion; also shearing rams and ram lambs from imp. sire and dams. Prices moderate. Terms easy.

MAPLE LODGE STOCK FARM

Stables one mile west of Lucan Crossing, of London, Huron and Bruce and Grand Trunk Railways, 16 miles north of London.

We are now offering **FOR SALE**

decidedly the best lot of **YOUNG BULLS** we have ever raised, age from 8 to 15 mos. They are good reds and rams, lengthy, thick-fleshed, with bulls on short legs, choicely bred, and our cows are first-class milkers.

We also wish to sell about one-half our females. Our prices are very moderate.

Come and see us. **JAS. S. SMITH, Maple Lodge P. O., Ont.**



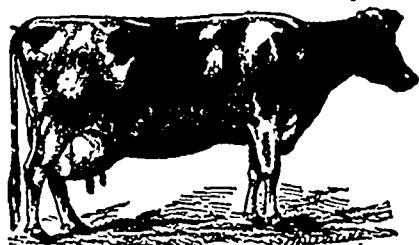
**LORRIDGE FARM
SOUTHDOWN SHEEP.**

Flock first established 1857. Commenced exhibiting 1867. Since then have taken over 1,200 prizes, including a large number of medals and diplomas.

Imported Rams used only. Stock for sale. **ROBERT MARSH, Proprietor.** RICHMOND HILL, Aug. 17th, 1886.



The Manor Stock and Dairy Farm



HOME of the imported Holstein-Friesian bull **MARS ELLIS** No. 661, Vol. 1, H. F. H. B., selected in *North Holland* by special request, and whose 3 calves secured first prize at the Dominion Exhibition, held at Sherbrooke, Que., Sept. last, 1886.

Parties wishing to secure bull calves or yearlings from such a grand individual, and out of nothing but imported Holstein-Friesian cows, will find it to their advantage to write to

F. N. RITCHIE,
Ste. Anne la Perade, Co. Champlain,
on line C. P. R., near Quebec.

No Reserve. All stock for sale and in A1 condition.

OAKLANDS 'JERSEY' STOCK FARM

(All registered in the American Jersey Cattle Club (Herd Register).)



Cows with well-authenticated test of from 14 lbs. to 24 lbs. 13 oz. in one week, and from 81 lbs. to 106 lbs. 12 1/2 oz. in 31 days are in this herd. Young bulls (registered in the above herd book) for sale from \$100 to \$500 each.

A herdsman always on hand to show visitors the stock, and the stock-loving public are always welcome.

VALANCEY E. FULLER, Hamilton, Ont.

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. SCATCHERD,**
Secretary, Wyton, Ont.

A. FRANK & SONS

Cheltenham Station, C. P. R. R.,
The Grange P. O., Ont.

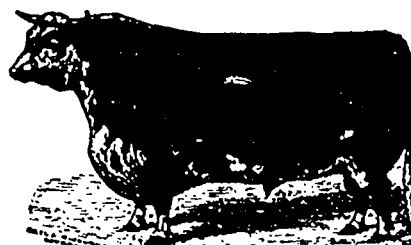
Thoroughbred Horses

Shortorns. Southdown Sheep
of highest strain and pure-bred.

SUFFOLK PIGS, all registered. Young stock of all the above for sale. All orders promptly attended to. A number of young Shortorn Bulls for sale at moderate prices.



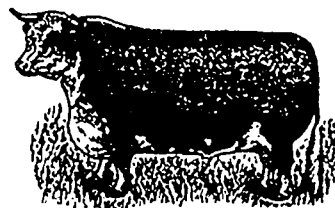
The Park Herd of Herefords,



THIS herd embraces over fifty head of choice animals. All registered. Catalogues sent on application.

F. A. FLEMING,
Weston Co. York, Ont.
Farm, half a mile from C. P. R. and G. T. R. Stations, eight miles from Toronto.

THE TUSHINGHAM HEREFORDS



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.

J. W. M. VERNON,
Tushingham House,
Waterville, P. Q.
WATERVILLE is on the main line of G. T. R., not far from the United States boundary.

LOWLANDS HERD.



A CHOICE LOT OF

YOUNG HEREFORD BULLS
FOR SALE.

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 imp. Welsh and Suetland Ponies for Sale.

"Lowlands," HILLHURST, P. Q. **E. W. JUDAH.**

POINT CARDINAL HERDS.



HEREFORDS
Selected with great care from the celebrated herds in England. At the head of the herd stands the imported Marlow bull Rambler 6th (6630) 23514.

SHORTHORNS
Heifers and bulls for sale, mostly sired by imported Duke of Hazelcote 68th, 65707.
Also a number of fine Hereford grade heifers and young bulls.
G. F. BENSON, Cardinal, Ont.

HEREFORDS FOR SALE.



30
Imported Yearling Hereford Heifers

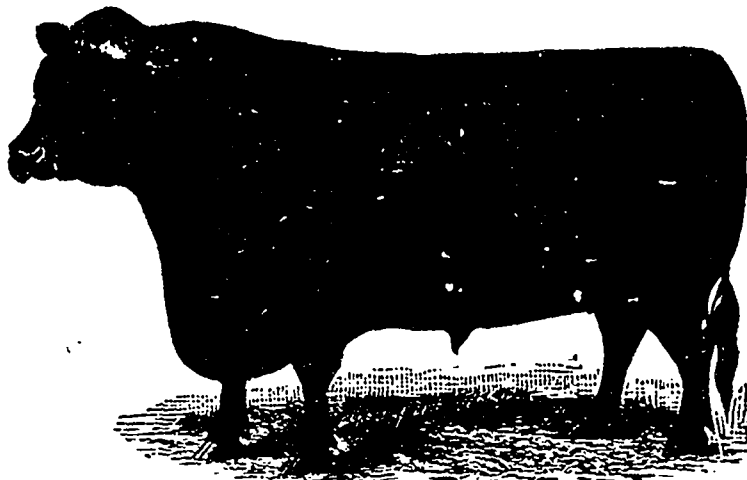
Eligible for entry in American Herd Book, all of which have been bred during the past season. Will be sold from \$250 per head up.

ALSO A FEW CHOICE YEARLING BULLS

R. H. POPE, EASTVIEW, COOKSHIRE, P. Q. sep



CANADIAN HOME OF THE ABERDEEN ANGUS-POLL



Imp. Chivalry, (1765).

The Champion Bull Chivalry (imp.) (1765) 2691 [2]

Winner of First Prizes, Medals, Diplomas and Sweepstakes at Barrie, Collingwood, Ottawa and Toronto. Sire of Miss Charcoal, Mary 3d of Knockiemill, Master Peter of K. P., and the invincible Emma of K. P. 8174.

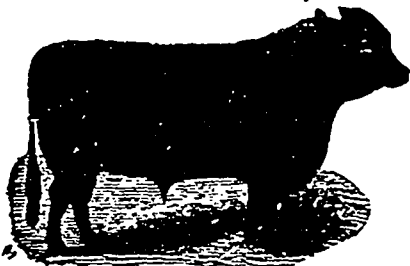
IN wishing our friends and patrons the compliments of the season, we take the opportunity of saying that we are in a position to supply young Bulls of the above excellent breed of cattle at prices within the reach of all, and as to their quality we need only mention that our herd finished this season by taking the medal and diploma, for the fifth year in succession, at the Provincial Exhibition, held in Ottawa. Send post card for our Illustrated Catalogue, and give us a call before investing.

HAY & PATON, Proprietors.

Kinnoul Park Stock Farm, New Lowell, Co. Simcoe, Ont., Canada.

KEILLOR LODGE STOCK FARM,

THE GEARY BROS. CO'Y, Proprietors.



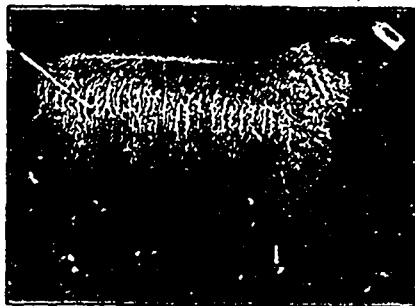
IMPORTERS AND BREEDERS OF
POLLED ABERDEEN-ANGUS CATTLE
 AND ENGLISH SHIRE HORSES,

Young Stock, Imported and Home-bred, for sale

The Geary Bros. Co'y, Bothwell, Ont.

BLI BRO STOCK FARM,

GEARY BROS., PROPRIETORS,



IMPORTERS AND BREEDERS OF
 Polled Aberdeen-Angus Cattle, Lincoln and Shropshire Down
 Sheep. Young stock, imported & home-bred, for sale.

GEARY BROS., London, Ontario.

HILLHURST HERDS

HEREFORD,

Aberdeen-Angus and Jersey

HEIFERS, COWS AND YOUNG BULLS FOR SALE

At reasonable prices, Send for new catalogues.

M. H. COCHRANE, Hillhurst, Que., Can.



JAMES DRUMMOND,

Petite Cote, Montreal.

Importer and Breeder of
 PURE-BRED
AYRSHIRE
 CATTLE



Of Large Size, and from Choice
 Milking Strains.

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.

Young Stock on hand at all times
 for sale. fe-17

A. C. HALLMAN & CO.,

NEW DUNDEE, WATERLOO CO., ONT.



Importers and Breeders of Thorough-bred

HOLSTEIN-FRIESIAN CATTLE.

Herd headed by the noted prize-winner Prairie Aaggie Prince H. F. H. B. No. 2, first prize at the Industrial and Provincial in 1886; dam, Prairie Flower, 5 yr. old butter record of 20 lbs. 1 oz. unsalted butter per week. This herd has been crowned with more honors in the showing than any other herd in Canada. Selections made from the finest herds and most noted milk and butter producing families in America. Every animal selected for its individual merit—symmetry, size and weight a special object. Our motto "QUALITY." Stock for sale. Visitors welcome. Correspondence solicited.

SMITH BROS.

—MOUNTAIN VIEW STOCK FARM—



DUNDAS, ONT.

Breeders and importers of pure-bred

HOLSTEIN-FRIESIAN CATTLE

Stock always on hand for sale. Send for catalogue. Visitors always welcome. jae-6

100 PURE-BRED ABERDEEN-ANGUS CATTLE.



MOSSON BOYD & CO.,

BIG ISLAND STOCK FARM,

BOBCAYGEON, ONTARIO, CANADA.

Ericas, Prides, Windsors, Victorias, Sybils, Kinnochtry Bluebells, Westertown Roses, Ballindaloch Coquettes, and Lady Fonnys, and animals of other good families, both male and female, for sale.

Bobcaygeon is in the County of Victoria, 90 miles east of Toronto and 20 miles east of Lindsay, and is reached from Toronto by the Midland Railway, a branch of the G. T. R., via Lindsay, with which the boat makes close connection. Telegraph and Post Office, Bobcaygeon.

RIVERSIDE STOCK FARM

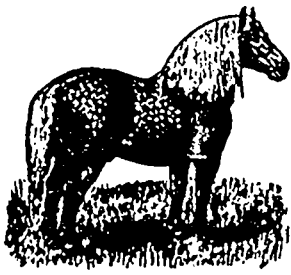
Degen Bros., Ottawa, Ill.,

Importers and Breeders OF

Percheron,
Belgian Draft

—AND—

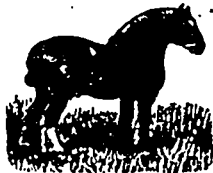
French Coach
HORSES.



WE have now over 150 head of imported Percheron Stallions and Mares on hand. Our importations this year have been selected from the best breeding districts in France. Our Belgian Draft Horses are all prize-winners and recorded in Belgium and America. Our stock is all recorded in France and in America. Our French Coach Horses are the best that could be found in France. We will be pleased to show our stock to visitors. Correspondence invited and promptly answered.

Imported Clydesdales FOR SALE.

Prices moderate and terms to suit purchasers. Not long arrived, a superior lot of registered



CLYDESDALE
Stallions and Fillies

from 1 to 3 years old, and with the exception of three all have been prize winners at leading shows

in Scotland. Including gets of the celebrated sires Darnley, St. Lawrence, Lord Hopion, Macgregor, Old Times, Gallant Lad and What-care-I.

Our horses are all selected with the greatest care from the best studs in Scotland. We pay a little more for our choice than those who buy in job lots. Parties wishing to purchase superbly bred animals should inspect our stock.

DUNDAS & GRANDY,

Velverton P. O.,

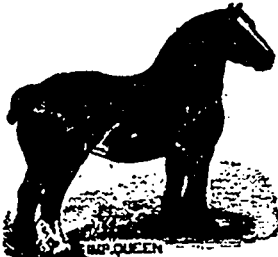
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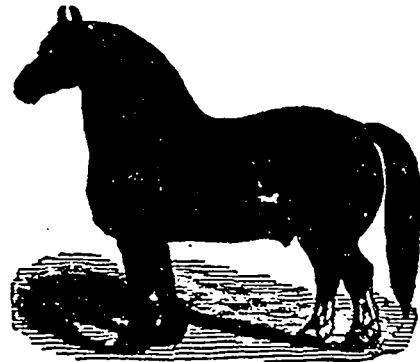


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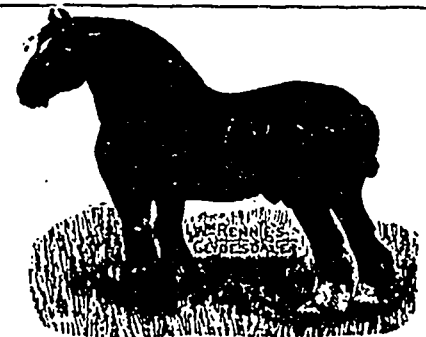
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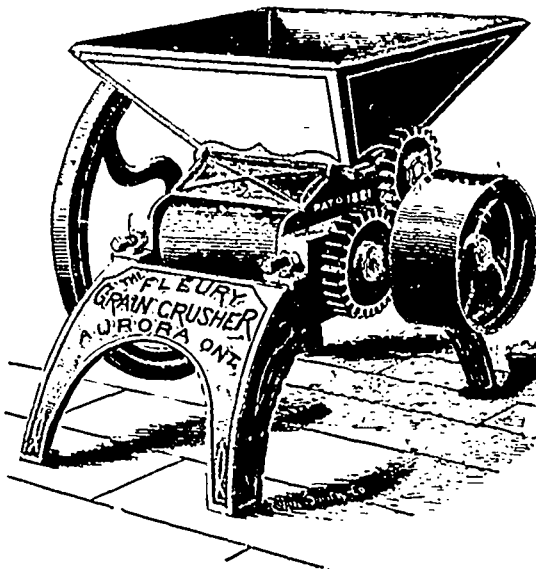
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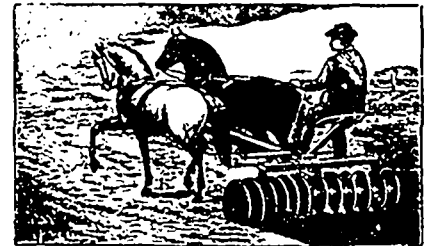
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