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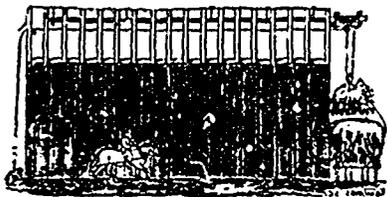
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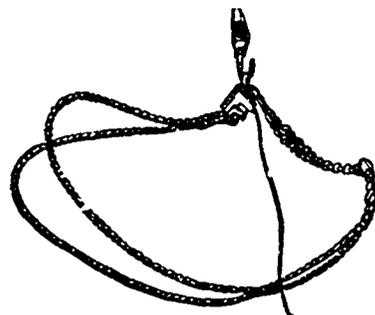
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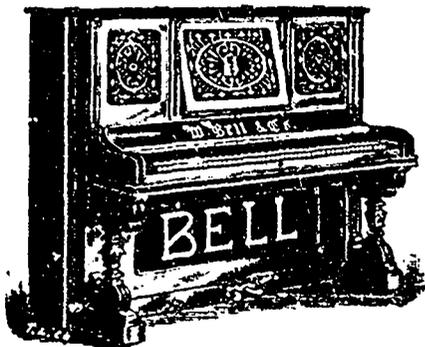
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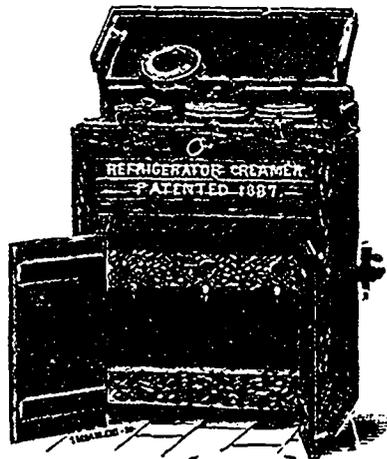
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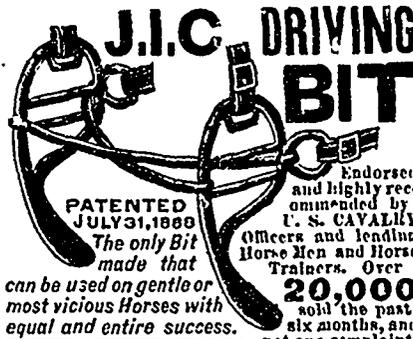
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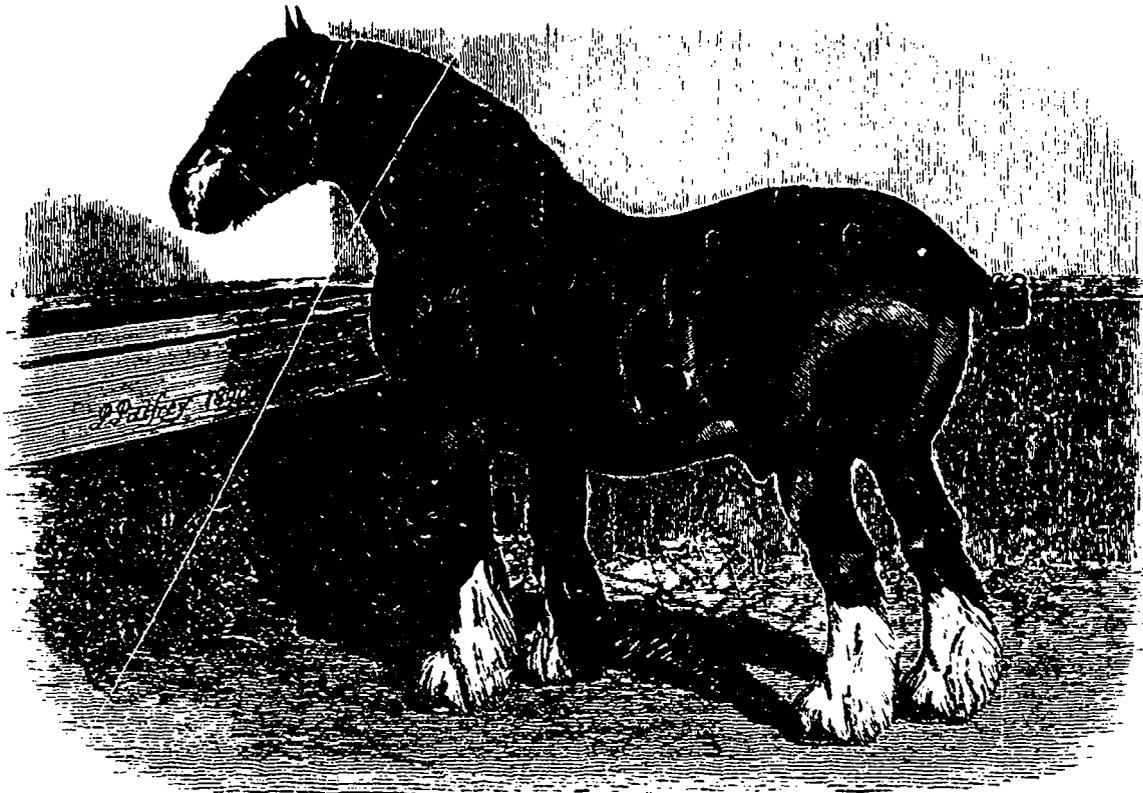
THE CANADIAN LIVE STOCK AND FARM JOURNAL

Devoted to the Interests of the Stock-Raisers and Farmers of Canada.

VOL. VII. No. 6.]

TORONTO, JUNE, 1890.

[WHOLE No. 80



THE CHAMPION SHIRE STALLION OF ENGLAND, "HITCHIN CONQUEROR" 4458.

The property of Mr. Freeman-Mitford, proprietor of Batsford Park Stud, Gloucestershire, England.

Our Illustration.

Our illustration this month differs from those ordinarily placed before our readers, inasmuch as the subject of it is a representative of a foreign stud, and has, perhaps, won greater distinctions as a prize winner than any other that has in the past brightened our first page. Hitchin Conqueror 4458 was the winner of the Ekenham Challenge Cup as the best stallion at the great London Shire Horse Show, held in February last under the auspices of the Shire Horse Society of Great Britain. This stallion was bred by Mr. Shepperson, Lockington, Derby, and was purchased, in 1887, from Mr. Renson, by his present owner, Mr. Freeman-Mitford, Batsford Park, Gloucestershire, for 1000 guineas. Hitchin Conqueror was exhibited at the Shire Show in 1887, and was given a reserve number. He was then stated by an authority to be "a horse of great size and substance, standing on a grand set of legs both fore and aft, the biggest son of 'Ould William,' and by many thought to be the best." In build he is described as being of striking appearance, a beautiful bay in color, standing 17 hands $2\frac{1}{2}$ inches high. His fore end and neck is marvellous, and his feet asserted to be perfection, a quality which, Mr. Freeman-Mitford informs us, appears prominently in all his stock. As an evidence of

his value as a stock getter, we learn that a three-year-old son of his fetched \$5000 at Islington this year, and one of his fillies at Mr. Clarke's sale brought \$2500, she being purchased by the Prince of Wales. Hitchin Conqueror was got by that famous sire, William the Conqueror 2343 and out of Flower by Honest Prince 1058.

The Batsford Stud, of which Mr. Freeman-Mitford is proprietor, was founded in 1886, and the foundation was well and truly laid by the purchase of the famous champion mare Chance. This mare has never been beaten in the show-ring since she was shown as a foal at Lythall in 1880. She won the Queen's Gold Medal, with the championship, at the London exhibition of the show of the Royal Agricultural Society of England with ease, and has captured twenty-nine first prizes and cups. Her owner says she is as beautiful as ever, but will never be shown again. The following spring, 1887, the two renowned sires that have been in continuous use at Batsford—Laughing Stock 4516 and Hitchin Conqueror, 4458—were purchased, and along with them the mares Horbling Beauty, first at the Islington Show; Maimoun, first at the Islington show for yearling fillies; Lady Burgess, second in her class, and Princess Royal, *h. c.* in her class. Laughing Stock was reserve number for champion and first in his class at Islington, 1888, and the same again in

1889. Mr. Mitford writes candidly: "It is only fair to him to say that whenever he has been shown against Hitchin Conqueror he has beaten him. It is curious that in 1889 the second prize for yearling colts at Islington, was obtained by me with Hitchin Conqueror's son Mars Victor, and the same prize was carried off by me this year with a son of Laughing Stock, Momus. Laughing Stock's youngsters are turning out wonderfully well." The crack mare of the lot of those added to this stud was undoubtedly Lockington Beauty. Her progeny have stamped her as the best brood mare in England, they being as follows: Prince William, twice champion at Islington, and winner of Queen's Gold Medal at Windsor; Premier Prince, first at Islington as a yearling, and recently champion at the Dublin Show; Blue Ruin, now unfortunately dead, a mare that has been over and over again first at Islington; Maimoun, sold for \$5000 at the age of twenty-two months; Mars Victor, second at Islington as a yearling in 1889, and Momus by Laughing Stock, second at Islington as a yearling in 1890. Mr. Mitford paid for this mare \$2500, and she was then in foal to Harold. The stud now numbers nearly sixty head of the best of Shire representatives, including many from such sires as William the Conqueror 2343, Champion 457, Merryman 1571, Harold 3703, Premier 2646, and many others equally famous.

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TORONTO, JUNE, 1890.

Original Plans, Devices, and Ideas.

If you have an original plan, device, or idea, that you think would be of benefit to your fellow farmers or stockmen, turn to our March number and see how we will pay you for it if you send it to us for publication. Space forbids us printing the whole scheme in full, as usual. We would refer those desiring to know more of this to our January, February, and March numbers, where the premiums are given in full with complete particulars.

Our Hog Competition.

It affords us much gratification to inform our readers that up to the present the competitions we have launched under way are meeting with hearty appreciation. Those desiring to enter for the hog competition we would refer to our previous issue of March, April and May, and we would impress upon them the advisability of sending in their names at once, and securing the forms. If there is any matter upon which information is desired in regard to the prizes or conditions of competition write us at once and we shall gladly supply such to the best of our ability.

SHEEP can chew more money out of the soil and stamp more riches into it than almost any other class of live stock. So many are the breeds, and so various are their qualities, that any Canadian farmer at a fair price may obtain good animals to suit his conditions, whether the land be high and dry or low and damp.

It is indeed ungenerous on the part of the too ardent admirers of the useful Jersey to claim for their favorite beef-making qualities, when they know that she is even now sacrificing her flesh and blood in the interest of these ungrateful patrons in sustaining and advancing her justly earned reputation as a prodigious yielder of luscious butter.

OUR British and American friends have been at loggerheads for some time past over the type of Shire horses most desirable for draught purposes in their separate countries, but it seems they have indulged greatly in "multiplying words without knowledge," for it now turns out that the qualities desired in a good draught horse are the same in both.

PIGS and clover have as strong a brotherly feeling for each other, and enter into a partnership as agreeable and profitable, as man, strawberries, and cream. One acre of clover will yield, with the help of vigorous pigs, from five to six hundred pounds of superior pork,

or even more than this, if soiled, while at the same time it will increase the fertility of the field on which it grows.

Those who believe that from the ranks of the politicians is to come the Moses who is going to lead them to the promised land overflowing with milk and honey, are going to stay in the howling wilderness until they realize that the politician is more often a small fly on the wealth producing wheel than the farmer turns, than he is an assistant in making the wheel run faster and smoother.

THEY have found at the Massachusetts Experimental Station, in their late experiments with milking cows, that the net cost of feed was one third less per quart of milk when fodder corn, corn stover or corn ensilage served as substitutes for meadow hay in the daily diet of milch cows, and they also draw the conclusion from these experiments that corn ensilage as well as roots proved best when fed in place of one-fourth, to one-half of the full hay ration. From twenty-five to twenty-seven pounds of roots, or from thirty-five to forty pounds of corn ensilage per day, with all the hay called to satisfy the animal, in either case, is the proportion they give, besides the grain, consisting of corn meal, bran, and gluten meal.

The Brood Mare and Foal.

Too much careful attention cannot be given to these before they are separated. Good treatment will show its effects upon the foal before weaning more than any other time during its life. By all means strive to give the mare a week's rest before working her after foaling. If it is necessary to work her it is better to keep the foal from running at her side. Many valuable colts are rendered useless through being crippled in some way while running with the mare at work. It is of importance to feed the mare such foods as will induce a copious flow of nourishing milk. The best possibly that can be fed is that of bran with plenty of green fodder, such as clover, peas, and oats, or corn. If the mare is working it is of prime importance to be careful in every instance to allow her to cool herself, if warm from working, before suckling the colt. Carelessness in this respect will lead to digestive derangements of the foal. If the mare cannot be made to give as large and as rich a flow of milk as may be necessary for the colt to make a strong and rapid growth, what she does give may be supplemented with diluted cow's milk. As ordinary milk contains about double the quantity of albuminoids and fat that is contained in normal mare's milk, the necessity of diluting it about one-fourth with water is apparent. If this is not done the cow's milk, being too strong, will give rise to digestive troubles. The colt will readily take to the milk, and the only precaution to be observed is to guard against feeding too much at one time. Feed often rather than too liberally at distant intervals. For the purposes of giving the colt confidence, as well as to further advance its growth, a small feed of ground oats will be found excellent. If on weaning the colt, there is any difficulty because of constipation, a half pint of boiled linseed mixed with bran or oats will be found beneficial, in fact it makes a food that might profitably be fed at frequent intervals as a change. By all means feed often and liberally after weaning, for this is one of the most trying periods of the colt's existence. Pasture, with the nourishing food it yields and the healthful exercise it affords the colt, is best management that can be given, and ground oats with perhaps a little bran is the grain food that it should be fed.

The Polled Durham Cattle.

Though some breeders may be critical enough in their taste to refuse the originators of the Polled Durham cattle any mead of praise for substituting bald pates for the beautifully crumpled and waxen horn of the typical Durham, yet it must be conceded that from a practical point of view an advancement has been made. For twelve years within the State of Ohio, in the valley of the Miami, which by the way is also the home of the Poland China swine, a couple of breeders, Messrs. Shafer and Clawson, have been working together with the object before them of evolving a strain of Polled Shorthorns. They sought to retain the deep red color, the early maturity and the square carcass of the Shorthorn, without the horns. The *Miami Farmer* tells us that they resorted to "muley" cows of good size and shape, of a red color, and of general Shorthorn contour. The muley cows being bred to pure bred bulls dropped a large proportion of red hornless calves. Heifers of this generation that came up to the standard were bred to Shorthorn bulls. Once more this was repeated, so that the calves of this third generation had in their veins blood that was only derived in the proportion of one-eighth from the muley cows, the other seven-eighths being derived from pure bred sires. By this time bulls of similar pedigree had been provided for breeding purposes, and the heifers were served by their polled relatives in place of pure bred Shorthorn bulls that had been previously used. Then the breeders returned to the Shorthorn blood again, and using a pure bred Shorthorn bull, still further diluted the original muley blood to one-sixteenth, while the offspring still maintained the desirable polled character. Scarcely a calf of the late generation shows a horn. The prepotency of the bull now at the head of the herd is so strong that seventy-five per cent. of his calves are polled when he is bred to longhorned cows. Ten of these cattle were shown at the Centennial Exhibition at Columbus, and eleven were shown at the Ohio State Fair last year. A number were on exhibition at Chicago last year, and steps were there taken for the formation of a herd book for the "Polled Durham."

Turn Off the Idlers.

Sometimes we find animals kept on a farm which may, properly speaking, be termed idlers. The list embraces such animals as females which will not breed, cows of which the udders have gone wrong during the winter, ewes which have lost their lambs, and others that might be named. These hangers-on—for they become such when they cease to give a direct and fairly constant return,—should be put away at the earliest moment when this can be done. Matured animals which do not produce a revenue will soon eat their heads off, and in these days of small returns in agriculture must be sent off to the butcher at the earliest possible moment. Many farmers do not dispose of this class of animals until autumn, and principally for the reason that they are not in condition. They leave them to come into the market in competition with grass fattened animals of all sorts, and must therefore sell for a low price, whereas had they been kept in good condition through the winter they might have been disposed of to advantage in the month of June or even earlier.

A cattle beast in the month of June will sell for more per pound by at least one cent than the same beast would fetch in the month of October if only in equal flesh. By keeping the beast then until October that could have been disposed of in June there is the

loss of at least the amount of the feed consumed during the interval, or to state it more accurately, the loss represents the difference between the value of the gain in flesh and the less price received, which is just about certain to be on the wrong side. The calculation is in no way abstruse. If a cow weighs 1,000 lbs. in the month of June and is in fair condition she will, at the present price of meat, bring four cents per pound live weight. Her value then is \$40.00. Now suppose she is pastured until October and then sold at three cents per pound, which is no less relatively than four cents in June. She is not likely to gain more than $1\frac{1}{4}$ lbs. per day, since she is matured. She weighs when sold four months later 1,150 pounds and fetches \$34.50. The loss in this case is \$5.50 with the cost of keep added.

It is of much importance therefore that the idlers should be turned off early in the season. Of course this cannot be done, as already said, if the animals are lean beyond a certain point. But this should not be. The farmer who has his animals lean beyond the point of rejection by the butcher has them too lean, in fact in that condition which will entail more cost for maintenance than if they had more flesh on them.

We do not mean here that breeding animals should be kept in that condition which best suits the purposes of the butcher, but with enough flesh on them to prevent their rejection by the butcher in case of any mishap that would disqualify them for breeding purposes. If not in this condition they should be so near it that some extra meal added to their usual ration would fit them for being turned off in a very few weeks. In these days of narrow margins a little calculation will accomplish more, it may be, toward making the farm pay than the expenditure of a large amount of muscle. The farmer cannot afford to keep about him on the farm any class of idlers, or any kind of live stock that is not more than paying its way.

Ensilage for Fattening Steers.

In the past it has been looked upon as almost an impossibility to make beef without a liberal supply of roots, hay, and grains fed in the form of meal. But the world is moving. It now appears that beef can be made from meal only and ensilage corn, quite as effectively and more cheaply, if anything, than from the old time-honored ration of roots, hay, and meal. This, we believe, is the result of an experiment just completed at the Experimental Farm, Guelph, which we have every reason to believe has been conducted with very much care and accuracy. This does not show conclusively that ensilage and meal will prove as satisfactory as the old time-honored ration in every instance, nor even that such will usually be the result. The experiment requires confirmation, and we believe it is the intention of the present Professor of Agriculture to repeat the experiment over and over again. This one instance, however, is very significant, as it indicates how the needle is pointing. We understand the pair of steers on which the experiment was tried were three years old, and were grown before the experiment commenced, and that, notwithstanding, they have made the excellent gain of nearly 2 lbs. per day in a four months test. The general opinion during recent years in regard to ensilage has been, that while it is a good ration for milk production, it is not of much value for meat making. So firmly has this opinion been grounded in the minds of the farmers, that the idea of wholly supplementing roots and hay, with corn ensilage, in beef making, was looked upon as chimerical. The very possibility of being able to make beef on this simple ration should be hailed with much satisfaction by the farmer, as the

process is a very simple one. The cost of the labor of feeding will be much less. The feeder has simply to go to the silo and get his food ration, put upon it the usual modicum of meal, and the whole thing is done. By the other process hay must be chopped, roots pulped, and meal mixed with the ration, which is more troublesome in every way. Indeed, it must prove exceedingly gratifying to know that milch cows, young stock and fattening animals may be supplied with food from the one common source, with the variation only of the ration of meal or of other cut fodder as may be thought necessary.

Corn may be grown in almost any part of Ontario for ensilage purposes. It will grow fairly in large sections not well adapted to the growth of roots, as on black loams rich in humus, which are found in the valleys along the banks of streams in clay sections. The area then for beef production will be considerably extended by the use of this food factor. Corn may be grown for the silo at a cost of not more than \$1.75 per ton, even though the labor of growing were all hired, including the work of men and horses, but not including any rental for land. The average crop is fifteen tons to the acre. The cost of growing an acre and putting it in the silo is about \$26.25. It may be done by the farmer, however, at a less cost, who is doing it on a large scale. The chief difficulties in the way are the securing of an engine to run the cutter, or of some other power, and performing the labor of filling the silo at a busy season of the year. But the first of these will be in a measure removed when silos become numerous; the latter is one that will remain, but it is not an insuperable difficulty. We should mention here that in the experiment referred to the ensilage fed was reckoned at \$2.50 per ton, which would leave the farmer who grows fifteen tons to the acre a profit of \$11.25 per acre for his crop. We cannot leave this subject without urging upon our farmers to look deeply into this corn question.

Milk or Beef.

The keepers of live stock have always been divided into two camps on the question as to whether it is more profitable to keep bovines for the production of milk or beef. The answer to this question depends much upon locality, relative values of the products, and the skill shown in their production. The dairyman who lives near a city, or a railway station, will always have an advantage over the one who is not thus favored, and the one whose farm naturally produces succulent and abundant pastures, will always be more favorably situated for carrying on a successful business, than where the conditions are the reverse of this. When the facilities for marketing are not favorable it is doubtful whether dairying should be engaged in at all, even though the conditions of nutritious pastures and pure water are everything that may be desired. The relative values of the products of meat and milk vary at different periods, but at present the milk producer probably has the advantage. A few years ago the advantage was the other way, and what the future may be no one can say with certainty. The third contingency mentioned, however, the skill of the producer, is very largely under the control of the individual, and it is perhaps more potent in its results than either of the others mentioned. One who is well skilled in producing meat in the most desirable way, should hesitate before giving up its production to engage in that of the production of dairy products exclusively, if wholly unacquainted with the work of the latter, and the converse of this is also true.

It is happily possible, however, to produce both milk and meat in conjunction, and on the same farm, and this combination with the average farmer is perhaps the desirable one. Calves intended for shippers even may be raised on skim milk after the first few weeks without any difficulty, and without in any way seriously interfering with the dairy interest. This would involve, however, the keeping of Shorthorn, Holstein, or Ayrshire cows, or at least high grades of one or the other of those classes, and for this purpose the Shorthorn grade would probably be the best, as the steers from the latter would be the most suitable, taking them all in all. It would also require much care in the choice of the bull, that the milking properties might be well sustained.

That milk and meat production may go hand in hand has been demonstrated over and over again. That this combination is desirable sometimes, is clear from the fact that one is an article of food as much as the other, and that the production of meat is always to a large extent dependent upon the production of milk.

That growing meat on new milk at the present time is unprofitable, is patent to all who look into the matter. The average milk yield of the Ontario cow for the factory season is under 3000 lbs., but putting it at this amount it would all be required to raise a calf fed upon it, estimating the milk to be worth but one cent a pound, the cost of the calf for this item of its food alone would be \$30, which is already more than the calf would bring as meat at the close of the milking season. Add to this sum the other food fed, and also something for the keep of the cow during the period of gestation, and allow the manure made as an offset to the labor, and we find that a calf which will not bring more than \$20 for meat at weaning time, has cost twice that sum.

Now by the use of new milk for a short time and then skim milk, with flax in some form and meal added, a calf nearly as good can be raised, and at a very much less cost. It is clear then that those who are to raise shipping steers must call a halt. They must raise such when calves upon skim milk, and this will enable them at the same time to use the whole milk in the production of butter. The combining of meat and milk production on the same farm has the further benefit of utilizing to advantage any kind of food that may be grown upon the farm; some of them may be more suitable for the production of one or the other of these products indicated, and where both are grown they may be fed in that way which will be attended with the best results.

Feeding Calves for Beef.

There is a feeling of difference amongst many feeders for the beef market as to the best time to have the calves dropped. There are numerous advantages in having the cows calve in September, October, or in the later months, and these are the more striking if the stables are comfortable in every way and planned with a view of lessening the labor of attendance. Under such conditions the calves can be better taken care of, as work is not so pressing at this time, and as a result more attention can be given to the care of the calves when they most need it, and further, hired labor is cheaper and more easily secured. The cows are also more easily attended to, and the annoyance that follows when breeding time arrives is easily got over. The calves by coming in the fall go right ahead when they get on the grass after being weaned, and that is a most important matter, for if once the young calf goes back or loses its calf flesh, as it is

termed, extra care and expense only will make up for the loss. There is also many shades of opinion as to the advisability of the calf being allowed to suck the cow or whether the latter should be milked and the calf fed from a pail. Circumstances largely determine the force of the arguments advanced. If a large herd of cows are kept with the sole object of producing superior steers for the top price of the market, and the surrounding conditions are such as to make it no object to save the milk for other purposes, the easiest and most profitable practice to follow is that of allowing the calves to suck their dams until six months old, the time of weaning. Milking a great number of cows is a very laborious work, and there is no doubt that the calf in sucking takes the milk in best quantities and manner to ensure its complete digestion. By all means under any conditions take all the milk from the cow if the calf does not do so each time it is turned in with the cow. There is no more successful way of impairing a cow's usefulness as a milk giver than carelessness in not taking all the milk away from her. If the cow is a very heavy milker the calf may not, though allowed to go to her three times a day, find use for all the milk at its disposal, and in such cases it would be demanded that the cow be milked. By milking the cow, taking out the cream, and adding boiled linseed jelly in the proportion of one to three of warm milk, the dictates of economy are most closely followed, and many breeders as well as feeders are adopting this practice. The calves should be kept in well lighted, ventilated, and bedded box stalls. To do well they must be comfortable in every way. The males intended for beef should be castrated when from two to four weeks old, according to their thriftiness. As early as possible they should be induced to nibble some hay by having the latter before them. By the time they have reached the age of two months they will get away with a little ground feed and sliced roots. Chopped oats and bran, $\frac{2}{3}$ of the former and $\frac{1}{3}$ of the latter, makes an excellent ration along with sliced roots. Of all foods at the feeder's disposal none are so universally praised as roots, either for young stock or those being furnished for the shambles. The quantity of food to be fed rests upon the feeder's skill in judging of the needs of individuals. No more should be given than they will eat up thoroughly, and if they leave any of the food in the trough it should be removed or it will become sour. The calves should get their regular milk supply until six months old at least, for there is nothing like good warm milk to supply nourishing blood and give calves that sappiness that causes the feeder's eye to twinkle. Giving the calves the run of a good rich pasture is one of the best means of pushing them ahead, and if they are fall calves it fits in especially well. If the calf has been got by a sire of good beef form and possessed of the highest attributes of a beef animal it will be ready for the market at two and a half years old. Through early maturity the best means of lessening the cost of production is afforded. This quality is governed by the use of a vigorous sire of one of the beefing breeds and by feeding with the object of keeping the calf progressing steadily from the time it is dropped until it reaches the block.

Feeding Working Horses.

It has been pretty well determined that feeding horses with cut food is economical of the same. By cut food we mean cut hay or straw, or cut hay and straw mixed in any desired proportions, with ground grain of one or more varieties added to it. Experiments carried on for the purpose in certain establish-

ments in London, England, demonstrated some years ago, that feeding on the plan described above effected a saving in food amounting in some instances to nearly 25 per cent. It is but rational to conclude that this saving would arise, and for the following reasons amongst others:—

1. When the fodder is fed long and the grain unbroken, a much larger time is consumed in eating it, which so far deprives the horse of the perfect rest which he might enjoy when not so employed. Hence, to accomplish a given amount of work he has less of reserve energies to bring to bear upon it. Take an engine which has spent a part of its accumulating steam in shunting cars while getting ready for the journey, and so starts with less than a full head of steam, he goes to his work lacking in reserve force, and therefore requires more food to enable him to accomplish a given amount of work in a certain time.

2. Feeding the meal upon cut fodder prevents impaction in the stomach, and by enabling the gastric juice the more readily to penetrate the mass, which is thus kept in a porous condition, digestion is both more speedy and more thorough. Many diseases which grow out of imperfect digestion, as colic and various forms of inflammation, may thus be avoided. Indeed it is hazardous to feed corn meal and pea meal in any other way.

3. Certain foods may be used in the ration which horses would otherwise reject, such as straw and, it may be, some forms of grain. A horse might reject pea meal or barley meal even when fed direct, who would take the same readily enough when fed along with the cut feed. In this way the farmer may use such grains as he may happen to have in the absence of others that he may think more suitable. Let it be granted, however, that the best results are realized when the food is fed in this way, we are met with the difficulty as to how the average farmer is to accomplish this. He may do so readily enough in the winter season by the aid of horse-power, but cannot so well in the summer under a pressure of work. He might, however, do this. He may so far anticipate his wants that enough fodder would be cut to carry him through the season of grain-sowing, at which period the work is usually severe. He might then cut enough fodder by hand to feed his teams at noon, when it is especially important that the food should be in form for easy mastication, owing to the limited amount of time required in its consumption. The amount required need not be large, not more than 4 lbs. for one horse. It would thus only require half an hour of hand cutting to provide the noon feed for at least a week at a time. An excellent object would be attained by running green food through the cutting box in the season to provide the noon meal. The effects of this food upon digestion would be of a laxative character, and so would tend to keep the stomach and bowels in tone. In such a case, however, the cutting would require to be done daily, otherwise the food so cut would spoil through undue fermentation. But one feed of this green food per day is better perhaps than more than one, as when the food fed is of too succulent a nature the muscle formed from it is too soft to endure hard work. For the same reason hard worked horses cannot stand labor so well when pastured, even though the pasture is abundant.

The leading grain food for horses in this country is undoubtedly oats, and this place will no doubt be held by oats through all time, but not to the same extent in future as in the past. Barley is a good ration for horses when used with oats in the proportions 1 of barley and 2 of oats. We need not, therefore, be dis-

consolate at the loss of the American market for our barley, so long as we can profitably feed it to our horses. It is also very useful as part of a food ration in fattening cattle, or swine, and in feeding milch cows. Any one of these modes of using it is surely preferable to that of making it into beer.

For the CANADIAN LIVE STOCK AND FARM JOURNAL.

The Cattle Trade.

Cattle are in good demand in the British markets. Prices are in advance of those ruling last fall. Feeding cattle are especially high, and buyers complain that they are so scarce that the price has been forced up above the point where there is any profit in them. This has been caused by the mild winter and the extra abundance of food. In many parts of England grass was green all winter. The turnip crop grew in the fields much more than usual, and everywhere rough feed was abundant. All feeders were in the market as a consequence, for a larger number of cattle, and they were not to be had except at increased prices. Outbreaks of disease on the continent of Europe closed some of the sources of supply, and all tended to increase the price of feeders. When finished, farmers hold for a profit which it is very difficult to get. The market for well bred, moderately fat animals is very large. Some time ago accommodation was provided at Aberdeen for landing and handling Canadian store cattle. Advice from that market say that "We think that Canadian store cattle will sell very well here this season, as farmers did very well with last year's purchases." Dundee is following Aberdeen in providing accommodation for similar trade. The Harbour Trustees are now building the necessary landing stages and cattle sheds, but it will be some months before these are completed. The size and importance of this trade may be judged from the fact, that within a radius of thirty miles around Dundee, the farmers purchase for feeding about 2,000 weekly. This is over 100,000 per year. The shipments from Canada last year were only about \$5,000. It is probable that this number of young well-bred feeders would have given as much profit per head as those sent. The extra food used by the last would have raised very many more, returning a greater profit to the farmer. The trade is only in its infancy. If farmers are alive to their best interests, they will at once seek to improve the quality of their breeding stock, and by using the best beef bulls raise the quality of their cattle and their own profits. We have the chance now. The Americans are making strenuous efforts to secure it. They have now a number of the British live stock papers working for them. A leading one lately had an article on the subject strongly advocating the admission of American feeding cattle, because there had never been any pleuro disease in the United States west of the Alleghany mountains. By such absurd statements they seek to gain their ends. Improve your cattle and increase the trade we have. If farmers would wake up, the shipments of 1891 might be made double those of last year.

D. McCRAE.

For the CANADIAN LIVE STOCK AND FARM JOURNAL.

The Pure Breeds of Cattle.

By Professor THOMAS SHAW, Ontario Agricultural College, Guelph.

[SECOND PAPER.]

THE ORIGIN OF SHORTHORNS.

While it may be, and doubtless is, true that some breeds are possessed of superior all-round qualities of utility as compared with others, there is one respect in which nearly all the breeds stand on almost an

equal footing. I refer here to the thick cloud of obscurity that hangs over their origin. It would be quite correct to say that the origin and history of every one of them is involved in much obscurity, and this sweeping statement is quite as applicable to Shorthorns as to any other breed.

The early builders of the greatness of the Anglo-Saxon Commonwealth evidently looked upon the sword as more applicable to their purpose than meat and milk, and felt that victory in battle was of incomparably more importance to the welfare of the nation than success in breeding stock of a greatly improved type. The historians of the time were evidently of the same mind, hence all succeeding generations have been left in doubt as to the precise origin of nearly all the breeds of live stock which Britain has given to the world.

But little, if anything, has been chronicled that may be implicitly relied on regarding the origin of Shorthorns, prior to the closing years of the last century.

very similar; 3, That during the last century good herds of these cattle had been established, not only in various parts of Durham and Yorkshire, but in some of the bordering counties, notably, Northumberland; and 4, That the Shorthorns of that period possessed the essential characteristics of those of the present day with some modifications.

The *first* claim mentioned above is fully established by the concurrent testimony of the early writers on Shorthorns, and has, so far as I am aware, never received contradiction. The *second* claim is established by similar testimony. The Holderness cattle were found at first in east Yorkshire, and the Teeswater belonged more distinctively to the valley of the river Tees. There is also concurrent evidence to prove that those two varieties afterwards became so blended that any distinctive peculiarities, which they may have possessed at the time, have now been obliterated. The *third* claim is supported by a class of evidence that is very satisfactory. The earliest writers on

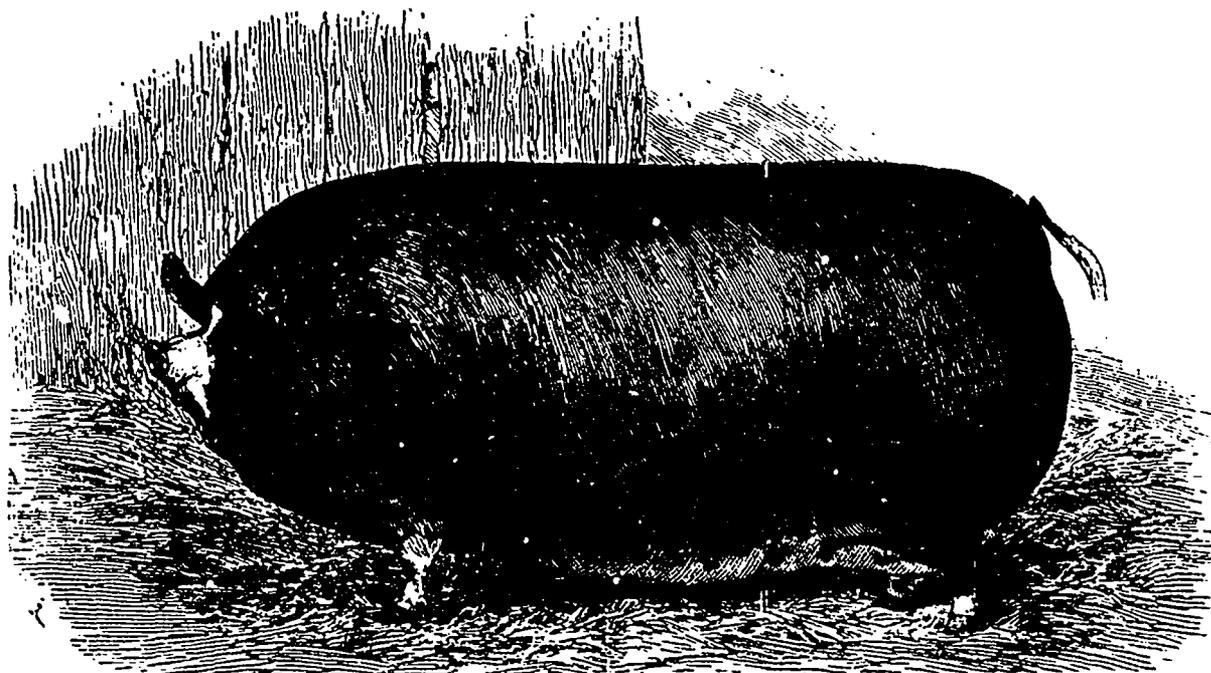
to what it is at present, that the proportion of offal was greater, that there was more of roughness of carcasses, and that they were slower in maturing than the modern Shorthorn. The statements made by some of these writers that are not sustained by conclusive evidence include the following:

1. That the Shorthorns of to-day are descendants of cattle brought to Northumbria from Denmark, and provinces to the southward by Danish sea-rovers, when they subjugated that portion of the country.

2. That the cattle of the same part of England were subsequently improved by bulls imported from Holland about the year 1640, and by further importations made at a still later date or dates.

3. That the Shorthorns of to-day are indebted to a considerable extent to the Galloway breed, for at least a measure of their excellence.

The contention that the Danes brought their cattle with them when they conquered Northumbria, is not at all an improbable one, but it does not prove



THE BERKSHIRE PIG "HIGHCLERE."

This sow was first in a class of forty-three at the Windsor Show of the Royal Agricultural Society of England, and was also winner of the £20 Cup offered by the British Berkshire Society.

Chief amongst the writers of that period who have made reference to Shorthorns are Creley, Marshall, Bailey, and Lawrence. During the present century Berry, Youatt, Martin, Bates, Carr, Beever, Bell, and in America, Allen, have all written regarding this famous breed, but as might naturally be expected, can throw but little fresh light on its origin in addition to that given us by the writers of the last century who have just been mentioned.

The statements made by these writers regarding the early history of Shorthorns may be regarded as consisting of two classes, viz.: Those which are sustained by evidence, and those which are not so sustained.

In the former class are inclined the claims: 1. That Shorthorns originated in the counties of Durham and Yorkshire, in the valley of the river Tees, running between these counties; 2, That they are the immediate descendants of two varieties, the Holderness and the Teeswater breed, existing in those counties during the last century, which bore considerable outward resemblance to one another, and which possessed qualities

Shorthorns have given us the names of several of the breeders; of these may be mentioned the Earl of Northumberland, Sir William St. Quintin of Scampston, Milbank, Croft, Stephenson, Maynard, and Wetherell. They also give the weights of various animals which were bred, one of which, a five-year-old ox, fed by Mr. Millbank, of Barningham, dressed 2100 lbs., and 224 lbs. rough tallow. These writers lived almost contemporaneously with the events which they narrate, and were therefore in a position to get reliable information. The *fourth* claim is sustained by the descriptions preserved for us by those same writers, and by the harmony of those descriptions; some paintings of individual animals, made at the time, are also in accord with these descriptions. The Shorthorns of the eighteenth century, or at least until towards its close, are represented as being possessed of large frames with carcasses broad and high. They were possessed of good milking qualities and also an aptitude to fatten. We have good reasons, however, for believing that the quality of the flesh was inferior

enough, for after a time they virtually conquered all England. Although the pastures on the Tees are very rich, and capable of supporting large-bodied cattle, so are those on the Severn, and in the valleys of other rivers of England. Why then did the stocks brought over by those few kings and their followers fail to improve equally the cattle in other parts?

The claim that Dutch bulls were imported from Holland, at the dates already indicated, is supported by evidence somewhat frail. But even though ever so well substantiated, there is still the missing link required to make it certain that the improved Shorthorns are descended from animals so crossed. Mr. Bates in his day, tried the effects of a Kyloe cross with the Shorthorn, which, however, was not a success. Although it could be shown, therefore, that the Dutch cross had been tried, it remains to be proved that it made a favorable impress on the ancestry of this renowned cosmopolitan breed.

That some of the Shorthorns of to-day may be descended from the cow Lady, owned by Charles

Colling, and possessing *one-eighth* Galloway blood, may be perfectly true, but the number of these cannot be very large, as this cow Lady was only one of thousands of good Shorthorns then in existence. Granting that even a considerable number of these do trace to his cow, how much of Galloway blood do they carry in their veins, tracing back through ninety years of breeding from pure Shorthorn sires?

It is not my desire to prove that Shorthorns are not the descendants of cattle brought over into England by the Danes a thousand years ago, nor to establish the fact that they do not carry either Dutch or Galloway blood in their veins, but to render it apparent that the case is not supported by sufficient evidence. Though it could be proved that a dozen different breeds had been used in the improvement of the original Shorthorn stocks, what harm could this work to the latter? They would be Shorthorns all the same and would still be no better nor worse than they are, for we know fusion of blood skillfully managed may be made a mighty factor in building up breeds.

(To be continued.)

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FOR THE CANADIAN LIVE STOCK AND FARM JOURNAL.

Various Conveniences and Suggestions.

In response to your call for essays on subjects dealing with the farm and farm life in its different phases, I send you a description of some of the conveniences I have tried and found useful.

First, I want to improve on the small doors of that model pig pen you gave in the January number of your valuable paper. Instead of having the door which leads into the yard slide up and down put it on pivots and let it swing in and out. My doors have a half-inch iron rod between the cleats and the door, half a foot above the centre and through the jambs on each side. This door will always swing shut and the pigs can open it at will.

My second convenience is the horse-stable. My horse-stable and driving use are under one roof. Over both parts I keep hay, which is fed down to the horses through box-tubes reaching from the loft floor down well into the manger.

One of these tubes is placed between each two horses, and is about two feet square at the top but larger at the bottom so that the hay will easily slide down as the horse eats it out at the bottom. The horse eats from an oval hole cut near the bottom of the tube and just large enough to admit his nose (if the hole is cut on a level with the bottom of the tube the horse is apt to pull out more than he can eat). This tube will hold about 24 hours' feed, the hay is always fresh and there is none of it wasted.

The partition in front of the horses is boarded up tight. In front of each horse near the loft floor is a small door for ventilation. My oats are in a bin in the corner of the driving-floor, and are fed in boxes that slide into the manger like a drawer.

M. W.

Mildmay, Ont.

Choice and Care of Bulls.

The following is an extract taken from a paper read by John B. Kiser, Oregon, before the Wisconsin Farmers' Institute:

While Shorthorns stand to-day at the head of all breeds as beef animals, yet they possess dairy strains to an extent with which no other beef breeds can begin to compare. These strains should be fostered and developed; therefore do not lose sight of the value of dairy strains in the breeding bull. My model of a Shorthorn bull would be one that weighs at maturity not less than 2000 lbs. nor more than 2300 lbs.; red or roan in color. His nose nut brown or copper colored; his eye clear and bright; his head well proportioned, broad and full between the eyes; his horns of medium length, strong and well set, curving in and down rather than upward; the neck in proportion to his body—not too long nor too short; it should be a little full midway between the horns and top of shoulder, and clean cut and slightly arched from the throat to the breast. His front broad, deep,

and full; his shoulders set smoothly on his body; his arm strong and well developed; his fore legs wide apart, yet set well under his body; straight, clean cut, and fine from the knee to the hoof; from the top of his shoulder to the root of his tail straight and broad; well filled behind the shoulders and from point of hip to root of tail, and strong across the loins. His body good length and depth; his ribs well sprung and closely coupled to the hip; his lower line almost parallel with his upper line; his hind quarters broad and well developed, tied low down; his hind legs straight and strong. He should stand square on his feet. His tail set on a level with his back, small and tapering; his hide loose and mellow; his hair fine, thick, and good length. Animals of pronounced dairy strains are usually of rougher build than those of a beef type.

We should aim to keep the bull in good, healthy, thriving condition, not overfat. In order to do this he should be fed regularly and at proper intervals with good, substantial food, such as hay or grass, or corn fodder with sufficient grain, such as corn, oats, and bran, to keep him in proper condition. We have two bulls in service at present. One has reached maturity. His feed consists of all the timothy and clover mixed that he will eat, with three quarts of ground corn and oats and bran, equal parts, twice a day. The other is still growing and is fed the same as the first, except he is grained a little heavier, receiving five quarts twice a day. He should be watered regularly and at least twice a day. When kept in a good, cool box stall in the summer time this is sufficient, but if kept in close, hot quarters, or exposed to the sun in summer time, he should be watered at least three times a day. He should be provided with proper shelter to protect him from summer's heat and winter's cold. A box stall is best, as it gives him more freedom and is safer for an attendant, as he can feed and care for him without placing himself in such a position as to take chances of getting hurt. His hind hoofs, when too closely confined in a stable, are apt to grow and become unshapely—not wearing off at all, but turning up in front and preventing the animal from walking squarely on his feet. When the hoof gets in this condition it should be shaped properly by means of saw, hammer, and chisel. He should have regular exercise. The best way to exercise an animal is to have a small lot or pasture in which he can be turned for exercise.

Canadian Horse-Breeding.

THE GOVERNOR-GENERAL DWELLS UPON HIS IMPORTANCE.

The inaugural ceremonies of the Haras National at Outremont, near Montreal, took place on May 11th, under auspicious conditions. The Hon. Louis Beaubien, ex-Speaker of the Quebec Assembly, the president of the Company, and Mr. Auzias Turenne, the secretary, entertained on this occasion a number of distinguished gentlemen more or less interested in the breeding of fine stock. The guests included His Excellency the Governor-General, several senators, and many of the members of the Dominion House, and also a number from the Local Houses of both provinces.

The usual toasts and speeches were indulged in, in which the importance of such an institution as the Haras National to the further improvement of Canadian horse-flesh was dwelt upon. Lord Stanley, in replying to the toast of his health, said that being a lover of good horses and a lover of good company he had expected great pleasure from the acceptance of Mr. Beaubien's invitation, and he was not disappointed. He came with the intention of learning all he could; he was anxious to see what were the good points of the Percheron and the Norman horse and how far they were applicable to this country, and he was quite sure that some of the horses were such as to improve the stamp of our horses, and consequently to increase the wealth of the farmer and the wealth of the Dominion. There were a good many people who did not see the advantage of breeding a good horse instead of a bad one. There were people who thought that, providing the sire was in good form, it did not matter how radically bad the other parent was. They had seen half of the future race to-day and they could only hope that those with whom the stallions were mated would be of such a character as to produce good stock. He believed that in former times the Canadian horse was

renowned for its good qualities, for its powers of endurance, and for its hardness and applicability for all that was required, but he was afraid that in these later days, in some parts of the province at any rate, sufficient attention was not being paid to the breeding of good horses. He was therefore glad to see so much capital, so much skill and so much science being applied to the creation of such an establishment as this, which he hoped in time to come would merit its title of Haras National and have a good effect, not only upon the Province of Quebec, but upon the whole Dominion. Though we were not jealous of our great neighbors to the south of the line, we did not like to see them getting the advantage of us in any way. He spoke thus without any reference to politics. Some of these fine horses were to go to Dakota and to the States and be sold where there was the best market for them, and he trusted that some of those present would make a resolution that they would try and keep some of the good horses for Canada. If they had had their eyes opened as to the good points of the Percheron, and as to the question of breeding them, good results would accrue from their meeting to-day. The farmers, as they were all aware, were suffering from depression at home which was largely induced by active Canadian competition, but some of them had tideed over that depression by breeding good horses, which had a good market all over the world. He could not help thinking that in an old settled part of the country like this there were many circumstances to induce farmers to turn more attention to horse-breeding and to make it a source of good income and of incalculable benefit to the Province.

Speeches were made by the Hon. Mr. Chapleau, Senator Cochrane, the Hon. Mr. Taillon, and Mr. Edward Cochrane, M.P. for East Northumberland. The Hon. Louis Beaubien, president of the company, in returning thanks to His Excellency and the other distinguished persons who had honored him by their presence on this occasion, said that they were trying to imitate the States in this matter. From five to six thousand Percherons were imported into the United States annually, and when he took hold of this matter it was with the view of trying to divert to his own province a little of that stream. If these were good horses for the States they would be good for Canada. If it had not been for the help of Mr. Auzias Turenne and of Baron Mandat de Grancey he would not have been successful in its establishment. Most of their sales had hitherto been made for exportation to the States, but they were determined to increase their sales in Canada. He concluded by offering any society who could send him eighty notes of \$6 each, payable in four, six, or eight months, or even a year, the use of one of the stallions for a season, and run all risks.

Hog Raising in Relation to Future Agriculture.

By W. H. McNISH, Lynn, Ont.

Read before the Canadian Hog Breeders' Association at Toronto, March 12th, 1900.

In reviewing the history of past events, one fact, in particular, is deeply impressed on the mind, and that is this, the success of all great movements has depended upon the organization of all the forces in sympathy with them to the concentration of all the energy of their promoters upon the object in view.

As one who takes a great interest in the agricultural industries of our country, I view with pride and satisfaction the formation of this association, which has for its object the elevation of a hitherto much neglected animal to that point in the public esteem to which its many good qualities entitle it.

The bulletin recently issued by the Ontario Bureau of Industries on the swine industry, reveals to us the astounding fact that this Dominion is annually importing from the United States over \$2,000,000 worth of hogs and their products. Why is this? Because the Canadian farmer has yet to learn that lesson which he might acquire from the thrifty habits of his Saxon or Scandinavian brother in Europe, who, less favored by nature and forced to coax a livelihood from an often unwilling soil, is compelled by these circumstances to turn every product of the farm to the best advantage. This province alone, with its favorable climate and fertile soil, should produce as many hogs as are consumed in the whole Dominion, besides exporting large quantities.

During the past decade our system of farming has undergone great changes. Wheat growing, which has failed to yield the profit of former years, has been abandoned to a great extent, and the virgin soil of the boundless prairie claims that industry for its own. Beef raising, too, which at one time claimed a great share of attention, is likewise emigrating to the cheap lands of the far west, and we are looking about us for a more remunerative field for our labors, and if we, as farmers here in the eastern portion of Canada wish to make a success of our calling we must look about about us and adapt our methods to our changed circumstances.

How can we do it? By dairying some one says. Only partially, I answer; dairying to be really profitable must go hand in hand with swine raising. The greatest success in farming consists in converting all unmarketable products into marketable products. The offal from the dairy has no market value; we have, too long, been literally wasting it, we must provide some means of converting this waste product into goods of some market value. The channel through which we can do this most quickly and profitably is by means of well-bred, thrifty pigs.

The dairy interests of our country, under the fostering care of the Government, have made enormous strides during the past few years. New and improved methods of converting milk into marketable products are continually being introduced, but it is a lamentable fact that the part of dairying which makes it really profitable, swine raising in conjunction, has received very little else but neglect. It is, however, gratifying to know that the hog, as well as the cow, is at last having its claims recognized, and it remains with us to show our appreciation of the efforts of our Government, in a practical manner, by turning the mass of information it has placed at our disposal to a profitable account.

The Danes are here held up to us as models to copy from in dairy matters, and they, in conjunction with butter making, have taken hold of swine raising so vigorously and systematically that their hog products are fast acquiring a world wide reputation. In the British markets they are fast replacing the Irish bacon, so long held in high esteem.

With the use of the silo and other improved methods of feeding, dairying is bound to make still more rapid strides than it has made in the past, and there is no reason why we Canadian farmers, with the assistance of free corn, cannot raise pork as cheaply as those living in the corn belt, especially when we take into account the vast number of hogs which succumb to the cholera. There is nothing to prevent us from raising a pound of pork to every pound of butter or three or five pounds of cheese.

It seems to be a recognized fact that the days of heavy fat hogs are numbered, and consumers are clamoring for lighter and leaner hogs. The weight that seems to be most popular among packers is an animal weighing from 150 to 200 lbs., dressed weight, a weight which can easily be acquired at from six to eight months.

I will not enter into the details of the management of the hog as they have been exhaustively placed before you in the previous papers.

In conclusion, I would urge every member of this association to be untiring in his efforts to place this very important branch of farming in its true light before the farmers of this Dominion. Let Canada hold the same proud position in the production of bacon that she does in the production of cheese.

The Ontario Agricultural College.

Of the many sage truths that have left the pen of the versatile Dickens, not one has better stood the trying test of time than the aphorism written by him which reads: That part of a farmer's or landowner's possession that will best pay him for cultivation, is the small estate within the ring fence of his own skull. The truth of this is denied by none, yet it is one of the weaknesses of mortal man to accept a truth as a quietus to the still small voice of conscience, and not obey its mandates. The triumph of mind over matter is so clear as to need no demonstration, but that it is ignored is plainly to be seen in the conduct of many of our farmers, not only in respect to themselves, but to the young men under their guidance. A bitter wail goes up from many agricultural communities because of the young men leaving the farm for other pursuits. Let us remind the fathers who fail to

recognize it, that a vigorous youth, such as Canadian conditions mature into manhood, is brimful of ambitious yearning, with high hopes of his abilities, and feels himself "caged" if not given scope for his energy, "cribbled" if thought nothing more of than a living mechanism, and "confined" if his mind has not been stirred and strengthened into activity by looking deeper into the workings of nature. Give such a young man a chance to see what a field for conquests he has before him in Canadian agriculture awaiting his energy, business ability, and intelligence through a course at the Ontario Agricultural College, and we will go vouch for the strong statement that, if he has rightly chosen his calling, his love for the farm and its work will sink deeper into his being. Appreciation for much benefit received, as well as justice to an institution that is not patronised as it should be, leads the writer to affirm that the farmers of this country have been and many are yet remiss in their duty towards it. Turning to the recently issued report before us we find that the college roll contained the names of one hundred and thirty-four students, a goodly number it may be said, but what a small representation from the thousands of young men to whom the doors of this institution stand wide open! With all the warmth that may be put in a pen we would urge our young men to put forth every effort to secure the benefits from the teachings of this institution.

The report of the President, Professor Mills, presents many interesting details in regard to the different departments, and more particularly in respect to the students in attendance. Of the one hundred and forty-three students over seventy per cent. are from this province, there being thirty-one counties represented. Leaving the dry particulars as to the class lists we reach the department of natural history and geology, under the charge of Professor Pantou. Those of a botanical term of mind will find here a very interesting list of plants contained in an instruction book specially designed by the Professor to make the classification of plants clear and interesting. Two bulletins that were issued sometime ago are reprinted, one on Strawberries and the other on Chess. The variety of strawberry that is ranked first is Wilson's Albany, with the Crescent Seedling second. It is recommended to grow them in rows and renew the plants every two years. If properly cared for and kept clean, two years appears to us to be too short a time to change the plants, as there is considerable trouble in preparing a strawberry bed, and the plants do not begin to yield profitably until the second year. The paper on chess thoroughly disposes of the much debated question of wheat degenerating into chess, and clearly shows that chess and wheat are two distinct varieties of plant.

Professor James, in his report as professor of chemistry, gives place to those two valuable bulletins, both of which appeared in THE JOURNAL some time ago, on the Composition of Milk, and Ontario Oats. The latter bulletin was an especially timely one, and the Professor merits the heartiest thanks of our farmers and stockmen for calling attention to the importance of this crop in such a manner as he has. As a stock food there is no other grain for all round feeding purposes that will approach this crop. Various other matters coming within the scope of the chemical department are treated of, which we are prevented from noticing.

From the report of the agricultural department is reflected the unceasing energy of Professor Shaw. In the matter of making fences, weed-fighting, and road-making, an immense amount of work has been done. Valuable data has been collected, and is here given in respect to the various grains (most of them foreign) and their behavior under our conditions. A very commendable feature of the experimental work is that which has been undertaken in regard to the fodder crops. On no other subject are our farmers more anxious for light. In respect to the cultivation of rape, that drilled on the level yielded 10.08 tons per acre, and that grown in ridges 13.1 tons, and it was also found that drills eighteen inches apart gave better results than those farther apart. Interest is added to the report of this department also, through those of the farm foreman Mr. J. Storey, and Mr. C. A. Zavitz, B.S.A., who has charge of the experimental department. The immense amount of valuable and reliable data gathered together by the latter, who is most watchful and careful in such work, in respect to the various cereals, cannot but be of incalculable worth to every farmer.

The contributions of Professor Robertson, as professor of dairy husbandry, demanding more than a passing notice, we must defer extended drafts until later. Nearly every phase of dairy husbandry is treated of, which, as the Professor states, has not only to do with the production of milk and its sale, but involves also the cultivation of the soil, growth of crops, selection of animals, and the many other annexments to this expansive industry. Within these pages any farmer will find much of exceedingly great interest to him, so that we would warmly recommend all to secure a copy. The value of the report would be greatly enhanced if the several papers read, or addresses delivered by the Professors at our farmers' institutes published in it a.o. Most of the American colleges have adopted that idea, and through it many valuable papers that quicken thought and action, reach the farmer, which would otherwise have only a local distribution.

Advanced Registry.

Restless and effective enterprise has characterized the work of Holstein breeders on this continent, and the latest indication of this is the issuing of what they term an advanced registry. This, we understand, originated with Mr. S. Hoxie, of Yorkville, N.Y., the present superintendent. After a rigid examination and close gathering of the ideas, we feel that we cannot commend too highly the value of such a work, not only to the breeders for reference and instruction, but also for the breed, as it cannot fail to greatly improve the latter. Every animal that enters its covers passes a careful examination in three important respects, viz., individual appearance, practical performance, and breeding. The former is gauged by a carefully prepared and closely drawn scale of points, and the animals seeking entrance are examined by expert inspectors, and measured in every particular. The performance of the cow for milk and butter is tested by these inspectors, who conduct the tests and carry out every feature of them under their own personal supervision. A correct and full pedigree must be furnished with each applicant, tracing back at least to importation. The scale of points is as follows:

FOR BULLS.

	POINTS.
Head—Showing full vigor, elegant in contour	2
Forehead—Broad between the eyes, dishing	2
Face—Contour graceful, especially under the eyes, medium in length, broad muzzle	2
Ear—Of medium size, fine; covered with soft hair	1
Eyes—Moderately large, full and bright	2
Horns—Medium in size, fine in texture, short, oval, inclining forward	2
Neck—Neatly joined to head and shoulders, wearily free from dewlap, of good length, proud in bearing	5
Shoulders—Of medium height, well rounded and even over top	4
Chest—Low, deep and full	8
Crops—Full and level with shoulders	4
Chine—Straight, broadly developed and open	3
Barrel—Well rounded with large abdomen	6
Loin and Hips—Broad, full, long and level	5
Rump—High, long, broad and level	5
Thurl—High with great width	4
Quarters—Long, straight behind, wide and full at sides	4
Flanks—Deep and full	2
Legs—Short, clean, tapering, with strong arm, in position firm, wide apart; feet of medium size, round, solid and deep	6
Tail—Reaching to hocks or below, large at setting, tapering finely to a full switch	2
Hair and Handling—Fine, soft and mellow, skin of moderate thickness, secretions oily and of a rich brown or yellow color	10
Mammary Veins—Long, large, branched, with extensions entering large orifices	10
Rudimentary Teats—Not less than four, large, well spread	2
Excutecheon—Large and fine development	8

Perfection

A bull that has from three to five of his progeny in Advanced Registry shall be credited with five points in excess of what he may scale in structure.

A bull that has five or more of his progeny in Advanced Registry shall be credited with ten points in excess of what he may scale in structure.

No bull shall be received to Advanced Registry that does not scale 80 points.

No bull shall be received to Advanced Registry that, in the judgment of the Inspector, will not reach a minimum weight of 1,800 lbs. in good flesh at full age.

FOR COWS.

	POINTS.
Head—Decidedly feminine in appearance, comparatively long from eyes to base of horns, fine in contour	2
Forehead—Broad between the eyes, dishing	2
Face—Contour fine, especially under the eyes, showing facial veins, length medium, broad muzzle	2

Ears—Of medium size, fine, covered with soft hair
 Eyes—Moderately full, large and mild
 Horns—Set moderately narrow at base, fine, oval, well bent, inclining forward
 Neck—Fine, nearly free from dewlap, neatly joined to head and shoulders, top line slightly curving, of good length, moderately thin, elegant in bearing
 Shoulders—Fine and even over tops, lower than hips and moderately thick, deep and broad
 Chest—Low, deep and broad
 Crops—Full and level with shoulders
 Chine—Straight, broadly developed and open
 Barrel—Well rounded with large abdomen
 Loin and Hips—Broad, full, long and level
 Rump—High, long, broad and level, with roomy pelvis
 Thurl—High with great width
 Quarters—Long, straight behind, roomy in the twist, wide and full at sides
 Flank—Fairly deep and full
 Legs—Short, clean, tapering, with strong arm, in position, firm, wide apart; feet of medium size, round, solid and deep
 Tail—Reaching to hocks or below, large at setting, tapering finely to a full switch
 Hair and Handling—Fine, soft and mellow, skin of moderate thickness, secretions oily and of a rich brown or yellow color
 Mammary Veins—Large, long, crooked, branched, with extensions entering large orifices
 Udder—Capacious, flexible, well developed both in front and rear, teats well formed, wide apart and of convenient size
 Escutcheon—Large and fine development

Perfection

A cow that has made a milk or butter record in excess of the minimum requirement applicable to her case shall be credited one point for each and every eight per cent. that such record exceeds such requirement.

No cow shall be received to Advanced Registry that does not scale 75 points (credits from milk records being allowed as provided above.)

No cow shall be received to Advanced Registry that in the judgment of the Inspector will not reach a minimum weight of 1,000 lbs. at full age, in ordinary flesh milking form.

The inspectors cannot but do thorough work as the terms of the descriptions are very complete, and each term has a definite and distinct value, so that it is an easy matter for experienced inspectors to rapidly and correctly judge the animals before them. Stated broadly the requirements as to performance are as follows: a two-year-old must have a record of not less than 6500 lbs. of milk in a year, or not less than 354 lbs. of milk in ten consecutive days, and the butter record at this age is placed at 9 lbs. in seven consecutive days. The three-year-old record must be not less than eleven pounds of butter in seven consecutive days, or not less than 7900 lbs. of milk in ten consecutive months, or less than 432 lbs. of milk in ten consecutive days. The four-year-old record must be not less than 13 lbs. of butter in seven consecutive days, or not less than 9300 lbs. of milk in ten consecutive months, or not less than 511 lbs. of milk in ten consecutive days. The five-year-old record must be not less than 15 lbs. of butter in seven consecutive days, or not less than 10,700 lbs. of milk in ten consecutive months, or not less than 589 lbs. of milk in ten consecutive days. All records must be made within a period of one year from date of calving. The cow is milked dry at the commencement of each test, and the butter must be of good marketable quality, salted at not higher than one ounce per pound, and worked free from excess of water and buttermilk. Every such record must be sworn to by each and every person assisting in making it, including, in every case, the owner of the animal. Affidavits are made out, and the inspector besides certifies that in his judgment the cow, which must scale 75 points and be estimated to weigh when mature 1000 lbs. live weight, is capable of making such a record. It might be urged as a slight discrepancy, that the quality of the milk is not arrived at, and that it would be better to rule that cows which came up to a certain combined standard of milk and butter production should also be entered. We take it as it is now, that a cow with the required milk record, or a cow with the desired butter record is eligible, provided she possesses the other necessary attributes, but no idea can be formed as to the richness of the milk of the former, or in other words her butter capacity, or the milk producing qualities of the latter. It appears to us that if every test for milk were accompanied with a butter test and *vice versa*, the facts presented would be intensely valuable.

Mr. Hoxie, for the various original ideas shown all through the work, deserves the warmest appreciation of all breeders of cattle, for the formation of such a system, and the carrying out of it successfully, points the way for others to make like advancements. The only two breeders that we know of that have had or have now animals in this registry are Messrs. Smith

Bros., of Churchville, and Messrs. Hallman & Co., of Dundee. There are, however, over six hundred cows registered in it, and about sixty bulls.

Annual Meeting of the Ayrshire Importers and Breeders' Association of Canada.

TWENTIFTH ANNIVERSARY.

In consequence of his desire to retire from official duties, Mr. Rodden produced much information he had collected concerning the rise and progress of "Improved Ayrshire dairy cattle," including evidences of their superiority, also a concise statement of the origin and business of the association, with the establishment of Ayrshire Herd Books, their necessity and present position in Scotland, Canada, and the United States, with other matters of importance to dairy farmers.

Over a century has passed since England, Ireland, and Scotland found it necessary to provide better means of supplying food for the increasing populations. The increased demand for dairy products occupied much attention, cattle were fed for British tables and armies. While this was decreasing the supply in England, it became necessary for Scotland and Ireland to improve their dairy cattle, and extend their dairy products, for their home consumption as well as for the English markets. Scotland improved theirs by the most judicious crossing and feeding, particularly in the dairying districts of Ayrshire, where care and attention produced a class of cows that became famous for their superior production for the food consumed. That example may safely be followed in Canada. While it will be most profitable to raise dairy products, the maintenance of a proper proportion of the livestock on the farm will preserve the producing power of the soil and improve the bank account of the farmer. Excessive shipping of young stock for beefing purposes should be guarded against in eastern Ontario and the eastern provinces, where dairying for maintenance of fertility of the farms is so necessary. Dairy farmers are particularly warned of the danger to their herds from the use of ill-bred young bulls, or those from families long fed for beefing purposes. The study of feeding and breeding for milk requires more attention. Good dairy animals cannot be profitable if kept most of the winter days in barnyards picking up straws scattered on the snow or sloppy dunghills. Care and more succulent food is needed to produce good milk. The following evidence found in records extending back for one hundred years shows that Ayrshires are the best suited to Canada's soil and climate, and most profitable. Their reputation in Ayrshire was first publicly established by the tests of the poet Burns at his cheese-making in a Dumfries dairy, as evidenced by his letter of November, 1788; he pronounces a Dunlop Ayrshire the best, and thence forward they became most popular. Scotch cattle were sent by Sir William Alexander to the eastern provinces about 1625 to 1630, and settlers from Scotland brought Ayrshires for the use of passengers on the ship, and subsequently found them superior to any others for use on the voyage and on land. The Governor, Lord Dalhousie, imported Ayrshires in 1821 to 1823, they gave much satisfaction for dairy purposes. Some of these were obtained by land owners about Quebec and Montreal. The report of the then Montreal Agricultural Society in 1827 announced their superiority for yield in quality and quantity for the food consumed, and for their adaptation to this climate. The societies first importations were then made, and continued up to 1852 when the importation was continued by members of the Quebec and Montreal societies, and two Ontario societies. All declaring their excellence.

The governments of two of the eastern provinces imported cattle for the improvement of live stock and dairying. The countries that obtained them were called upon to report on their respective merits. From the reports of twenty county societies of farmers I read that Ayrshires hold the first place in popular estimation, are valued as hardy, healthy, good breeders, best milkers for the food consumed, and the use of Ayrshire bulls has given a superior class of grade dairy cows.

IMPORTED AND CANADIAN BRED AYRSHIRES IN THE UNITED STATES.

We are much indebted to American breeders of Ayrshires and to professors in their state experimental dairy farms and agricultural colleges, for valuable practical tests and scientific experiments of milk products. Several of the American herds of Ayrshires were produced from animals imported to and bred in Canada, many were of the best to be found in the district of Montreal and eastern Ontario, some of them have reports of the tests of six to twenty cows varying in weight from ten to over eleven hundred pounds each; several of the cows have given in one month 2025 lbs. to 1145 lbs. of good milk, and from 6000 to 10,000 pounds per annum. The cream tests by tubes in cold water varied from 22 to 30 per cent of cream, quality not tested, and quantity of cream does not indicate quality. Forced tests

show from 10,000 to 14,000 pounds a year. I found such forced tests to be injurious to the future usefulness of cows and only gave some advantage at the time, and should be avoided. Generally speaking, their feed in winter to those not forced, yet fairly well fed, was hay, straw, and roots or ensilage, or a little grain and bran. In summer they were pastured, if field feed was short, green feed, or a little ground grain and bran was given to keep up condition.

The officials of the experimental stations called upon the Ayrshire Breeders' Association to furnish Ayrshires for the tests. Similar requests were made for the Jersey, Holstein, and Durhams. The following figures taken from reports of a professor's tests of four of each of the four breeds, for the year 1889, show the Ayrshires to be the most profitable producers of milk and butter for the food consumed; they show the lowest cost of keep, and the least cost of producing milk and butter.

Ayrshires. Jerseys. Durhams. Holsteins.

Quantity of milk (lbs.)	Ayrshires	J Jerseys	D Durhams	H Holsteins
tested, 4579 to 6658, 3616 to 5650, 4732 to 7452, 5171 to 7361				
Cost of keeping.	\$44.41	\$46.49	\$48.14	\$50.12
Cost 100 lbs. milk.	.78	.99	.81	.85 1/2
Cost butter per lb.	.11 7/10	.13 3/10	.13 1/2	.18 3/10
The variation in cost of butter.	9.0 to 15.5	10 to 16.0	10.6 to 18.8	12.4 to 23.7
Per cent of butter fat.	4.28	5.12	3.86	3.11

The professor placed a value of 25 cents per hundred pounds on the skim milk in each case, and deducted it from cost of keep. He says, as a rule Ayrshires are under estimated as butter producers. As to economy in the utilization of food the Ayrshires leave very little to be desired, their vigorous constitution, and good temperament are points of no small importance; he urges breeders to know the per cent. of fat in the milk of their cows, and abandon the use of scrub bulls.

Others of their professors report that the keeping qualities of Ayrshire milk are good, and stands shipment very well. It has kept bottled on steamers for use all the way to Europe, and is a very good market milk. Its proportionate amount of solids makes it most desirable for cheese making; they report 600 pounds each of cheese made from Ayrshire cows per annum, and more in some cases. Another reports it as very desirable for drinking and for children. Professor Law gave instances where children improved by a change to its use. One of their presidents says Ayrshires can be bred to produce solids for good milk, and the Ayrshire cow is to be the business cow of this continent, and will give more good milk than any other breed that is known here. Space will not admit of more similar testimony from the United States.

WHAT HAS BEEN DONE IN CANADA.

In the last ten years there has been some public practical tests, confined in some cases to the proportion of milk given to size of cow, with others the quantity of milk per cow, in others both the quantity and quality were determined. In the cases referred to, members of our association were the successful competitors at Ottawa, Montreal, Sherbrook and Quebec cities, with animals bred on their own farms from Montreal importations; in some of these there were milk tests performed scientifically, in which the solids were 14.6 to 15 per cent., and butter fat was 3.80 to 4.50 per cent some exceeding 5.00 per cent. In a few cases milk records have been kept; they show products of from 6000 to 8000 lbs. a year, some exceeded that on such good feed only as should be given to dairy cows in most cases without forcing where actual profit was considered. The standard here for milkmen's herds of ordinary grades is 3.00 per cent. butter fat, and it has been exceeded. Where there were Ayrshire grades it exceeded four per cent. I have certificates to above effect. In several of the counties of the province of Quebec and in eastern Ontario, there are large herds bred from the use of pure Ayrshire bulls, that give from 4500 to 6500 lbs. of milk per annum, of good quality, giving from 250 to over 300 lbs. of butter for the season, some of those are in counties having Canadian cows with Ayrshire crosses.

The latest test in Canada was made at London, Ontario, September, 1889, for the very liberal prize offered by Mr. W. Weld, of the *Farmers Advocate*. It should have been better patronized. The only animals offered for that contest were "three Jerseys from the herd of Mrs. Jones, Brockville, and three Ayrshires from the herds of Mr. Smith and Mr. Thomas Guy, Oshawa, Ont." I have carefully examined the professor's report of this test and all the comments thereon which bring me to the following conclusion. The professor has adhered to the stipulated condition and reported accordingly, nevertheless it is not such a test as reaches the required points of excellence of the two breeds, and it is a failure as far as Mr. Guy's Ayrshires are concerned, inasmuch as their breeding, keeping, and feeding has not been such as to merit the position of first-class pure-bred Ayrshires, bred and fed for dairy purposes. For many years that family of Ayrshires has been bred and fed for show

and have stood unmilked at exhibitions to sell and to obtain prizes for good appearance; the feed they received at the test was not in the same proportion of suitable food for producing milk as that which was given to Mrs. Jones' Jerseys, of a more sapient nature and less effective than that given to Mr. Guy's cows; the food he gave was better calculated to build up the flesh of the body, than to fill the pail.

Dairy cows should not receive large proportions of grain and dry hay feed, and should not be allowed at exhibitions to remain unmilked to inflate the udder for appearance sake, thus be taught to convert food into meat instead of milk, as has been done in the case of the beefing breeds. A few days' tests at exhibitions, without sufficient time to recover from the effect of removal from home, cannot produce true indications of the difference in merit, particularly where similar proportions of food are not given to each breed, and where quantity and quality are not together calculated. This I know from over 25 years' experience in home tests at much expense. This report would not be complete without evidence from Great Britain, where Ayrshires have taken the lead, and are holding it in their best dairies, as evidenced by the following extracts from reports. Members of the British Dairy Farmers' Association met the Scotch Dairy Farmers at Ayrshire, in June, 1889. The meeting was attended by Dukes, Earls, Hon. members of Governments, professors, a large number of public men, and the best dairy farmers who kept from 50 to over 100 cows, and paid 15 to 20 dollars an acre annual rent for farms, by dairying with Ayrshires. Mr. Dunlop said "he took 50 Ayrshires to London, England, 20 years ago, they are there now by thousands in the front ranked dairies, and gained a world wide ascendancy over every other breed, coming to Scotland warmed his heart, amid the classic scenes made famous by their Scottish Bard and the Ayrshires." Mr. McAdam said his experience was that more Ayrshires can be more profitably kept on the same land. For 20 years his average yield of cheese was 50 lbs. per cow, and increased. Mr. Wallace reported tests of Ayrshires, showing 6 to 8 lbs. of milk per day, making 14 to 18 lbs. of butter each per week. Mr. Ferme's Ayrshire cows when four months calved, averaged 18 lbs. a day at Bristol, England; the same cows beat all comers in quality and quantity. Mr. Nuttal, lecturer of the Royal Agricultural College, said he got thirteen pence a pound for cheese; it paid to make the best. He found salting in the ripening of cream gave nine pounds of butter instead of only eight if made before salting. Hon. Mr. Vernon, M.P., was pleased to have assisted in having a Herd Book for Ayrshires, it assisted in many sales to England, Sweden, Austria, and America. Mr. W. Bartlemore, of Paisley, secretary of the Renfrewshire Agricultural Society, Scotland, being a recognized authority on everything relating to Scotch dairy herds, presented much information collected for the Glasgow and West of Scotland Society, which indicated Ayrshires as preeminently suitable for cheese making. The milk globules were small, mixing with curd-butter, made evenly rich cheese of over five hundred weight per cow in the season; some selected animals came up to and some exceeded Jerseys. Taken as regards actual quantities, Ayrshires were now far ahead of any other breed in actual results for quantity and quality per food consumed, strong proof of this is found in what was done at shows in London, Windsor, Oxfordshire, of the Royal Society of England. At the last British Dairy Farmers show, Mr. Holmes' champion cow was not exhibited, but by request she was put on trial without previous preparation, and beat the Jersey winner a long way, by making 110 pounds, her milk weighed 57 lbs., 2.2% solids, 14.8% butter fat, 5.4% per cent. Mr. Wallace had on record, a cow giving 1305 gallons per annum. Herds not specially selected gave 630 to 650 gallons, and over it in many cases, selected animals did better and gave 800 gallons. Professor Wright, corroborated this; one of the leading prize winners gave 41 pounds of good milk at a milking, at other shows the Ayrshires stepped far ahead of Shorthorns, Guernseys, and other breeds. The victors of Ayrshires in England at York, Preston, and their other dairy farmers' shows, were fresh in their memories.

Mr. Taylor, flesher, Paisley, said, Ayrshire cattle when well treated fed to make capital butchers' beasts, they weighed well, and quality of flesh was excellent. Mr. Wilson and Mr. W. Bartlemore, corroborated this, knowing they did better than any other breed, bred for milking purposes. As a general purpose breed, the Ayrshires hold a very prominent position; he knew heifers that sold for £30 as beef, and young bullocks sold at auction for £15 at 15 months old.

The Ayrshires cross very well with Shorthorns, their progeny fattening well, were hardy, and milked well. He warned dairy farmers to respect as inferior any Ayrshires or other cows that would not give 1 to 15 per cent. of cream, about 12 1/2 per cent. of solids, 12 to 14 1/2 per cent. of butter fat, selected animals did better than that. The foregoing information obtained of tests had to be much curtailed in numerous details given, of practical tests made at farm dairies, as all dairymen should know the

good, and discard the unprofitable animals of their herds. Many details of scientific tests and methods of increasing dairy profits cannot here be given that are in the report, sufficient is afforded in as concise a form as possible to enable readers to understand the progress that is making, outside of Canada, and to show dairymen the necessity of using their herds in a careful, judicious manner, and thus insure much larger profits at a little extra expense. Less than \$60 to \$70 returns per cow does not satisfy European and our American dairy neighbors. The maintenance of a better class of dairy cattle is an imperative demand to ensure success.

Holstein Friesian Association.

At the meeting of the Holstein Breeders' Association, held at Woodstock, April 28th, there was but a small attendance, for the weather was very disagreeable and the roads bad. The President, Mr. D. E. Smith, of Churchville, Ont., brought up the herd book question. After some discussion, during which there were various shades of opinions aired as to the advisability of establishing a branch herd book here or not, the matter was eventually referred to a committee. The most of the time was taken up with the reading of papers. After the paper read by the editor of the JOURNAL on "What the Aim of the Breeders of Pure-bred Dairy Stock Should Be," which was published in our issue of last month, Mr. William Thompson, Jr., of Derwent, Agricultural editor of the London *Advertiser*, read an instructive exhaustive paper on dairying in Ontario, in which he showed the status it has attained in Ontario, and possibilities of its further expansion.

We give part of the essay below, which takes up the question of THE SUBDIVISIONS OF DAIRYING.

In Ontario last year some 700 or more cheese factories were running and 4 refrigerators, the latter an increase of 11 over 1888. Besides these there were the private butter maker and the men who supply cities and towns with milk and cream. This gives us four classes of dairymen: 1st, cheese factory patrons; 2nd, private butter makers; 3rd, milk men; 4th, creamery patrons. This brings us to the last point for consideration, viz., the milk making machine, her majesty, the cow—without her all else profiteth nothing. Probably the most abused animal in America to-day is the general purpose, or double purpose or all purpose cow, and the farmers are told to abandon her for the special or one purpose cow. But, gentlemen, to quote ex-President Cleveland's historic phrase: "It is a condition that confronts us, not a theory." All depends on what the dairyman is aiming at. He must select to purpose, and his conditions must determine his objects. The city milk man runs a cow for all she is worth and when she fails at the pail, he abandons her. Possibly the creamery patron or private butter maker might do better to veal his bull calves and abandon the beef idea *in toto*, but some of the most successful farmers I know to-day, have for years been turning out annually a handsome bunch of fat steers of their own raising in addition to the production of butter.

Next comes the case of the cheese factory patron—a large and most important class. Can he afford to depend solely upon a cow that starts business on May 1st, operates till October 1st, then shut up shop, having given 2500 lbs. of milk, and proceeds to spend the next six months eating expensive food and occupying expensive stable room? The special purpose of that cow is to ruin her owner. He must rally to his aid a better milk machine.

Ridicule is heaped upon the farmer on the assumption that he tries to dairy for eight or ten years with a beef type cow, in order that she may be successfully fattened at the end of that period. If she can be converted in fair beef why so much the better, but that is not the idea. It is rather this, to handle a dairy cow whose male calves, usually grades, can be profitably turned into fat steers at an early date. Is that problem beyond the breeder's skill? The steer supply in Western Ontario has been running down low and the demand lately has been keen. Prices are looking up. Ontario will continue to produce beef. Can breeders and farmers afford to ignore this adjunct of the business? Is it not worth preserving? Our conditions are favorable and we have every privilege that our U.S. beef growing rivals are not likely to secure in the ports of Great Britain.

The cow of the hour seems to be 1st, one that will economically convert her food into a generous flow of milk, 2nd, when the cheese factory is not running, she should be able for at least four months' good service more as a butter maker. After that I would give her a couple of months' holidays to prepare for another year's business, 3rd, she should produce for her owner, male calves that can, as steers, be fattened with profit.

Do I ask too much, or am I wrong? If so I am willing to be convinced of the error of my way, but, gentlemen, there is an army of cheese factory patrons whose cows are not doing them justice in their six months' work at the pail. As breeders I ask you the question, what are you going to do about it?

Mr. George Rice, of Curries Crossing, followed with a paper on Value of Pedigrees which we shall publish in part at the earliest opportunity. Mr. Bollett, of Cassels, Ont., the Secretary of the Association, read a carefully prepared paper, on the Dairy Qualities of the Holstein Friesian. The paper reads as follows:

"In times of depression, men in all vocations strive to lessen the cost of the manufacture of their productions. In order to accomplish this successfully, they continually strive to invent improved machines, and employ skilled labor, so that they can offer their manufacture to the public at a reduced price and still make a good profit. The farmer and dairyman are of necessity, compelled to follow in the same footsteps; the grain farmer makes use of the different labor and time saving machines, by which he may lessen the cost on the products of

the soil, and so places himself on equal footing with the others in the race for cheap production. The dairyman, if he does not want to be left behind, but keep pace with the others, must also make use of improved machinery, in the form of the improved dairy cow. The cow which yields the greatest profit from the food she consumes, is the cow which the dairyman should choose, for it is only by lessening the cost of the production that he may expect to keep even with the others. But where will he find this cow. Owners of all the different breeds of dairy cows claim to possess her, but let us examine them a little and we will soon find which is the most profitable cow for the general farmer and dairyman. It is the cow that will yield the largest amount of milk, butter, cheese, and beef, from a given amount of food. The Jersey is only a special purpose cow and hence is not suitable for the general dairyman; the Ayrshire also, does not find favor with the general purpose farmer on account of being too small for all purposes; the Shorthorn, at one time a grand dairy cow, has, through breeding for the beef form entirely, been runned as a profitable milch cow; the Holstein Friesian is in reality the only worthy general purpose cow, she has almost equal size with the largest special breed, is a rapid grower, actually outstripping all others in early maturing qualities. They are already in the foremost ranks as dairy cows, none dispute their claims as the greatest of all milk producers and slowly, but surely, they are also acknowledged the greatest butter producers. They are hardy, acclimate readily in all climes from the far north to the sunny south, and prove themselves economical consumers of food under all circumstances. In Germany, where for many years back, tests have been conducted to ascertain which breed gave the best returns in all directions, for food consumed, the Holstein Friesian has always been leading, and ever loud has been the praise (of our forefathers, who emigrated from that country) of the large black and white cows from Holland with their immense udders. The stables of the nobility were filled with them, and the cream and butter of these Holsteins graced the tables of the richest in the land."

Mr. Bollett then quoted statistics from the report of American consuls, showing the position of the Holstein in other countries, particularly Belgium. The breeders present were all well satisfied with the progress of the Holstein during the past year, and felt confident of their future.

Removing Tusks.

Editor CANADIAN LIVE STOCK AND FARM JOURNAL: Having had to take the tusks from some boars, I will give you my plan, and if any of your readers have a better one, I would be glad to know it. I take a light handy crowbar that we use for digging post holes, and grind it pretty sharp on the flat end, and have an assistant hold it tightly against one side of the tusk, then take a cold chisel and give it a smart rap with a hammer on the other side, and never fail to remove a tusk at every flip.

Edgemont Farm, Bradford, Ont.

G. BALLACHY.

Pure-Bred Sires.

Editor CANADIAN LIVE STOCK AND FARM JOURNAL: In your issue of April it was a pleasure for me to read those papers on sheep breeding. I think that this industry has been neglected in the past, and I feel sure that with a little more care the outlook could be greatly improved. There are many well-bred flocks in the country, from which the farmer in the fall could secure a first class ram, and I am convinced that a few dollars spent in purchasing a well-bred ram is economically and profitably spent. Sheep breeding is similar to the breeding of every other kind of stock, you must breed carefully to make it pay best. I have been breeding the Leicester ever since I started farming, and I have no trouble in selling my young stock in the fall for breeding purposes, at good paying prices. I notice the importers and large breeders are booming the Shropshire Down. I have nothing to say against them, but there is one thing certain, the Leicesters are holding their own against them. Let every man choose that breed which he likes the best, and place a well-bred ram at the head of his flock, and sheep breeding will soon pay even better than it is doing at present.

Atwood, Ont.

HERDER.

The London Dairy Test.

Editor CANADIAN LIVE STOCK AND FARM JOURNAL: DEAR SIR,—Permit me to say a few words in reply to Mr. Reburn's letter in your April issue, on the "London Dairy Test." As your space is limited, I shall try and be as brief as possible. This gentleman commences by saying, "That it was only after the Ayrshires were defeated that I found out the one-sidedness of Prof. Robertson's scale." Perhaps he will be surprised to hear that when this scale was first published I wrote to the Professor more than once on the subject, and said that I did not consider the standard a just and fair one, as by its rules I could not see that the quantity of the milk would count, only its quality, i.e., its butter fat and solids were to be allowed for. His

replies were to the effect, that he had arranged the scale on what he considered an equitable basis, that the rules had been published and could not be altered. So your correspondent will see that I did not wait until the Ayrshires were defeated to find fault. But although I did not consider the scale a correct or just one, this did not deter me from entering, although I scarcely expected, under the circumstances, the Ayrshires could win; yet, on the other hand, I did not like them to be unrepresented in such a contest, and I consoled myself with the idea, that in case of failure, we lived in a free country where I thought I could express my views on the subject after the battle was over, without incurring the displeasure of any one or cherishing in the least any ill-feeling against any breed of cattle or their worthy and respectable owners. My desire is to discuss this question in a fair and impassioned manner, and let your readers judge for themselves which is in the right.

Mr. Reburn further says, "Had the Ayrshires won this prize the readers of your JOURNAL would be reading an article of Mr. Guy's on the victory they had won," etc. Well, we scarcely think your correspondent can point to a case where we indulged in undue boasting. We have won victories before with our animals, not merely over the Jerseys, but other breeds as well. As a case in point I might mention the \$100 prize given by the Editor of the *Farmer's Advocate* in 1882, at Kingston, for the best five cows of any breed for general purposes and profit. This prize fell to our lot for five cows, all our own breeding, and yet we never wrote a scrip to any of the papers boasting of our great victory. I suppose if one of our Jersey friends had won this prize we should not have heard the end of it up to this day.

Again he says, "If I will refer to the reports of these contests, ten in all, the Jerseys have won seven out of the ten, whilst the Ayrshires have only taken this prize once from the Jerseys." I fear your correspondent in his zeal is going beyond the facts. We have won this prize twice from the Jerseys, viz., at Toronto in 1882 and 1884. Mr. Yuill twice at Ottawa, 1887, and Kingston, 1888, and Mr. Drummond and Brown at Sherbrooke, Montreal, and Ottawa, so I fancy Mr. Reburn must have misplaced the figures, the larger number should have been placed to the credit of the Ayrshires, the lesser to the Jerseys.

In estimating the results of the late London test, supposing it had been conducted according to Mr. Cheesman's scale, why does he leave it blank against the milk product? He must surely know that both he and Prof. Brown allowed one point for a pound of milk, as well as thirty points for every pound of butter, and was very similar to what I copied from the *Ohio Farmer*. The aggregate then would stand as follows:

AYRSHIRES.

245 lbs., at 1 point per lb.	245.00
Butter fat, per cent. 8.44 = 2.115 x 30	63.20
Solids, per cent. 26.09 = 6.5225 x 8	52.16
369 days since calving, 1 pt. for every 20 days	31.95
	392.41

JERSEYS.

175 lbs. milk, at 1 point per lb.	175.00
Butter fat, per cent. 14.12 = 3.53 x 30	105.90
Solids, per cent. 27.22 = 6.805 x 8	54.40
136 days since calving, 1 point per 20 days	6.80
30 days of gestation, 1 point for 20 days	1.50
	343.60

This shows a clear gain of 48.81 points in favour of the Ayrshires, and I believe this to be a fair and honest way of estimating.

His argument on the cheese question is rather vague and vacillating. Evidently it does not suit his purpose to discuss this on its merits. But I can assure our friend, that when I referred to it in my last letter I did not "make an imaginary to suit my own purpose." Mr. Reburn, I presume, will know as well as any one, that ten pounds of milk is what is considered the standard quantity to make a pound of cheese at the various factories in Canada. The difference in the richness of the milk from the cows will show itself more in the quality of the cheese than in its quantity.

The remark I made about three-year-olds was merely a suggestion of my own, and I did not expect that any action would be taken on it at the late test.

I don't remember ever competing against his champion cow, Jolie of St. Lambert, and consequently can't see how he can say this cow has defeated all others, "Mr. Guy's Ayrshires included." With regard to the future our friend may rest content. Should there be any more prizes offered, and the scale by which they are to be judged a fair one, there is no doubt but what the Ayrshires will be on hand, but if it is to be the same as at London, I don't believe there will be any competition.

Yours, etc.,

THOMAS GUY.

Oshawa, Ont.

Questions and Answers.

If there is any subject bearing upon this or any other department of our JOURNAL, upon which you desire information, write us and we shall be pleased to intrust your query to competent persons and publish the answer thereto in our earliest issue, and if an immediate answer is required, such will be gladly given if a postage stamp is enclosed. Write the queries on paper detached from all matters of business, sign your full name and address as a guarantee of good faith, and write only on one side of the sheet. We request the assistance of our readers in making this a useful and interesting feature, and we shall always be pleased to hear from any, either desiring information or obliging enough to give it for others upon any topic within our field.

STUD BOOK FOR THOROUGHBRED HORSES.—R.D.: Is there a register for Thoroughbred horses in Canada or United States? If so, kindly oblige me by giving the address of the Secretary? [The only stud book in America for the registration of thoroughbred horses is Bruce's American Stud Book, edited by S. D. Bruce, 251 Broadway, New York City.—Ed.]

DOUBTFUL PEDIGREE.—N.T.: Please tell me if the enclosed pedigree is correct? This horse is travelling here, and I would like to know if he is bred as it is claimed he is. [The pedigree as given on bill you enclosed is correct. The stallion is registered with pedigree as you gave in the fourth volume of the Canadian Clydesdale Stud Book just issued.—Ed.]

CLYDESDALE STALLION GENERAL LEE (5034).—A.C.: Will you kindly tell me if there is a Clydesdale stallion General Lee No. 5034, registered in the B.C.S.B., and if he is an imported horse? [The Clydesdale stallion you inquire of is registered in the Clydesdale Stud of Great Britain, and he was imported to this country by Messrs. John Miller & Sons, of Brougham, Ont.—Ed.]

WHO KNOWS "BLACK NEGRO"?—M. J. Mackay: Could you or any of your readers tell me anything about a stallion that was owned in Montreal some years ago, that went by the name of "Black Negro"? He is either a roadster or a thoroughbred. [We do not know anything of the horse. If any of our readers do we would feel greatly obliged if they would write us.—Ed.]

LIVE STOCK INSURANCE COMPANIES.—N.W.F., Manitoba: Can you oblige me by letting me know the names and addresses of any companies in Ontario and Quebec which insure live stock? [We would refer you to the Mutual Live Stock Insurance Company of Ontario, of which Mr. John McMillan, Constance, Ont., is president, and Mr. M. Y. McClean, of Seaforth, the Secretary. We do not know of any others.—Ed.]

SHROPSHIRE AND RED POLLS.—J. Blioper, New Stark, Ohio: Please tell me where I can get first-class Shropshire sheep and Red Polled Cattle. [In our advertising columns you will find the best flocks of Shropshire sheep in Canada represented. The only Canadian herd of Red Polled Cattle we know of is that owned by H. B. Hall, of Gagetown, New Brunswick. For breeders in United States apply to the secretary of the American Red Polled Cattle Club, J. C. Murray, Maquoketa, Iowa, and he will gladly give you the information you ask. There are so many that it would be transgressing too much on our space to publish them.—Ed.]

CREAMING CANS.—Farmer's Daughter: I wish some of your influential dairymen would petition Government to pass a law limiting the depth of milk cans to twenty-eight inches, or else persuade the farmers not to buy them higher. Imagine a person with their head away down in a can trying to reach the cloth in hot steaming suds to wash the bottom of the can out. While writing let me ask some one to set their inventive faculties to work and give us a more durable can cover, which will not cut our fingers as those at present are apt to do. [By beating into cringing submissiveness the common sense of the tinsmith with a little stinging eloquence, and branding your wants in the mind of the "guid man" when he goes to town, with a hot harangue, you have the most effective law in your own hands.—Ed.]

PEAS AND OATS FOR GREEN FODDER.—T.P., Ont.: I have been told that peas and oats make a good fodder to feed when the pasture begins to dry up. Please let me know in what proportion it is usual to sow them. Have they ever been used for ensilage purposes? [You cannot make a mistake in growing a patch of peas and oats for feeding as green fodder. They make an excellent ration and the cows will lift up their voices in praise of your forethought when the pastures begin to go back on them. The usual proportion is one bushel of oats and two bushels of peas. Do not sow on too strong a piece of ground, as it will induce too rank a growth. Choose the oats for their stiffness of straw and known freedom from rust. In regard to making ensilage of it, we may say that it has been successfully accomplished, but for silage purposes no crop equals that of corn. Peas and oats will make a richer silage than corn will, but not near the same quantity can be raised.—Ed.]

BREEDERS OF WELSH PONIES.—E.R.H., Ont.: Are there any breeders of Welsh ponies in Canada? I mean are there any persons at present breeding them that make a speciality of it? You will also greatly oblige me by stating what the differences there are between the Welsh and Shetland ponies? [The only persons that devote considerable attention to the breeding of the Welsh ponies that we know of, are Messrs. G. Smith & Sons, of Grimsby, Ont. They have an extensive stud and make a speciality of breeding these horses. Inferring that you mean the differences in respect to appearances and peculiarities, we would say that the Welsh pony is lighter bodied, finer limbed than the Shetland, while at the same time equally symmetrical. They are of equal height on the average, but for activity and stylishness the Welsh pony is the superior of the Shetland. They are counterparts of the Thoroughbred horse in miniature, possessing perhaps more symmetry than the latter. They are equally as hardy and as easily reared as the Shetland.—Ed.]

REGISTRATION OF JERSEYS.—W. B. Barnes: Will you kindly tell me if the animals possessing enclosed pedigrees are eligible for registration in the American Jersey Cattle Club Record? The pedigrees are as follows: (1) Mulberry Boy, dropped March 15th, '85, solid color, registered in the American Herd Book, sire, Prince Edward 1442, dam, Mulberry 1095, imported from Jags Farm, Island of Jersey. (2) Bella Donna, light fawn, dropped Sept. 20th, '85, bred by Joseph Cherry, Whitechurch, Ont. Sire, Gov. Lorne 3566, A.J.C.C., and 3591 A.J.H.B. [The bull Mulberry Boy is eligible for registration in the A.J.C.C. Herd Register. The rules for registration in the A.J.C.C. are more stringent than those of the American Jersey Herd Book, and no animal can be entered in the former until both its sire and dam are recorded in the A.J.C.C. herd register. If you write to F. W. Weeks, secretary of the American Jersey Cattle Club, No. 1 Broadway, New York, he will furnish you with all particulars as to cost and method of registration. The cow is not eligible, as her dam Louise 3959 A.J.H.B., is not registered in the A.J.C.C. Register.—Ed.]

BRAN FOR COWS ON PASTURE.—T.M., Ont.: I send you samples of bran with prices. Please tell me which you consider best value. Would it pay to feed either to cows on pasture? My pasture is good and holds out well, but as I can get bran at a reasonable price I would feed considerable of it if I thought it were advisable to do so. [The sample marked No. 2 we consider would give the best value. Many hold to the idea that the bran with the most flour in it is the best for feeding purposes. Such, however, is not the case; the freer bran is from flour the richer it is, owing to the fact that the outer covering of the wheat grain contains all the gluten or albuminoids. We feel certain that it would pay you well to feed No. 2 to cows on pasture at the price you mention. It is a mistake to think that pasture grass is a complete food. It contains a great deal of water and but a small proportion of nourishing material. It would be advisable to feed them a mess morning and evening in quantities that agree with your judgment on the matter. As a rule, it is best to feed it dry, as it is better masticated and digested by the cows in that condition.—Ed.]

SHIRE STALLIONS.—E. Hallock, Brockway, Mich., U.S.A.: May I trouble you to find out the importers of the following stallions: British Ensign, Donald Dinnie, Masterman, Waxwork, Hard Fortune, and Lord Clyde? Could you also give me their pedigrees? They are all Shire stallions. The reason I would like to get these pedigrees is, that I have sold four young stallions bred from some of these horses, and I want to get them registered in Canada for the purchasers. It may assist you to know that Lord Clyde was owned by Messrs. W. Stubbs & Middleton; Donald Dinnie and British Ensign by John Bell; and Masterman by Jas. Anderson. [The most of these stallions are registered in the Canadian Shire Stud Book, which is, however, not yet issued. The number of British Ensign is (68), that of Donald Dinnie (70), Masterman (95), and that of Hard Fortune (13). There are, however, three stallions registered under the name of Waxwork, and as in all cases the owner's name given is not similar to that mentioned by you, it is impossible to tell which one you refer to. There is no stallion registered by the name of Lord Clyde as a Shire, but there are a half dozen or more by that name registered as Clydesdales in the Canadian Clydesdale Stud Book. Write to Mr. Henry Wade, Toronto, Ont., the secretary of the Ontario Agricultural and Arts Association, naming the horses you want registered and stating full particulars, and he will let you know if they are eligible and give you the information you ask in regard to the pedigrees of these horses which are numbered. Want of space prevents us from doing so. If any of our readers know anything of the Shire stallion Lord Clyde, they would oblige us as well as the enquirer by letting us hear from them.—Ed.]

FEDDING BULLS.—R. S. Hopeville, Ont.: Will you kindly tell me what is the best ration for a two-year-old bull to make him a reasonably sure getter? He has served quite a number of cows this past year with very poor results? [We would require

to know more about the breeding and management of this bull in the past to give an answer in best form to the questions of our correspondent. From the brief statement given we cannot possibly define the cause of his comparative sterility. If it be hereditary there is probably no help for it. If it arise from lack of natural vigor, then the constitution should be built up by liberal food supplies. If induced through pampering and over-confinement, the food ration should be reduced gradually, so as to decrease the amount of flesh carried, and abundance of exercise should be given in a paddock as well as in a box stall. The proper treatment of a bull of that age would be somewhat as follows:—Give him the opportunity to exercise as stated above. Feed him so that he shall be only in moderate flesh. His ration in summer may consist of a variety of foods. Indeed a number of rations might be given, any one of which would answer. We give but one. The fodder may consist of hay at first, then hay and green food, of which there are so many varieties, and later of green food altogether. The usual ration may consist of bran and ground oats in the proportions of one and two, and in such quantity only as to produce but a moderate amount of flesh. There is no special kind of food that we are aware of, the feeding of which will alone tend to restore productive powers that have been impaired. In the above ration roots in moderate quantity will do good in season, but only by way of keeping the system in tone. All stimulating foods as corn, rye, or pea meal, should be avoided, unless used in very small quantities.—Ed.]

CHURNABILITY OF MILK FAT.—D.M., Ont. I have heard considerable in connection with milk testers, and especially in respect to ensilage, that there is a great difference in the fat in milk and that food and breed affect the amount of fat that can be obtained from certain milk. Some persons that have tried ensilage tell me that cows that are fed on it yield a greater percentage of the fat from their milk than when fed on other foods, as hay for instance. Is that so? If it is, it is a strong argument in favour of ensilage. [It is now generally accepted that the succulence of the food that is fed has a marked effect on the churnability of fat, and it has been determined by many of the experimental stations that the food fed will affect materially the relation existing between the amount of butter fat in the milk and the percentage that is recovered in the butter. It has been a subject for experimentation with a number of the experimental stations, and the general conclusion is that particular foods have the effect of making the cream churn better in the sense of yielding a larger proportion of its fat in the butter. Alvord conducted an elaborate experiment extensively quoted, and his conclusion was that "the greater the proportion of succulent food the more completely the churn will do its work." Sturtevant, of the New York Experimental Station, carried on experiments in the same direction, and found that ensilage had a strong influence for the better on the churnability of the fat. Woll, of the Wisconsin Experimental Station, found that during an experiment, in which ensilage was contrasted with dry corn fodder, that the percentage of fat obtained in the butter was 12.60 per cent. greater during the period in which the ensilage was fed. Perhaps the latest returns in this respect comes from Pennsylvania Experimental Station, at which Armsby has been noting the difference in effect in this respect in dry grass and green grass, and he found a difference of nearly ten per cent. in favour of the green grass. The breed does undoubtedly influence the churnability of the butter fat. It is generally conceded that Jersey milk not only yields its cream more readily, but that a larger proportion of the fat in the cream is gathered in the butter by churning.—Ed.]

Veterinary.

The Education of the Horse.

By DR. F. C. GRENSIDE, Guelph, Ont.

[SECOND PAPER.]

Horses are, to a marked extent, creatures of habit, and the longer and more repeatedly they are used at a particular kind of work, the more efficient they become at it. Their performance of it becomes mechanical; they lose the conscious effort, and as this is lost they gain in perfectness and precision. We do not, as a rule, in horse life realize the importance of educating the nervous system. We are too apt to think that a high state of muscular development constitutes equine perfection, and to lose sight of the fact that muscles stand in the same relation to the nervous system as the servant does to the master. The muscles stand to the nerves as servants who discharge their various offices with all the greater ease and alacrity according as they recognize with greater readiness the voice and authority of their master. The most re-

markable example we have in horse life of the effects of education in promoting an ability, is in the American trotter. We cannot refer the phenomenal performances of some of the members of that family to any peculiarity of conformation. It is not because their bony levers are of a certain length and form, and that they are related to one another in a particular manner, or that their muscles are made of any peculiar material that enables them to accomplish the feats of speed they do, although they have their influence; but it is in the nervous system that this power resides. The nervous system has simply been educated up to it. Every member of the family of trotters requires individual education in order to perfect his powers, but the education of his progenitors has a very important determining influence upon the success of the member as a performer.

A brief study of the physiology of the nervous system indicates that a colt should be brought to work by degrees, but that his education should go on steadily. That defect of gait called "hitching," so frequently seen in young roadsters, is the result of an animal being driven at a higher rate of speed than his strength will warrant. It soon becomes a confirmed habit if the cause is not kept out of operation. In some instances it is the result of laziness, or driving a horse too fast when first taken out.

Very little attention is paid in this country to the making of a horse's mouth or, in other words, to biting. It is seldom that a bit is placed in a horse's mouth until he is harnessed, and then when pressure is brought to bear upon it he is entirely ignorant of what it means, and the more restraint is used, if he is at all excited, the more he pulls, cutting or abrading one or both sides of his mouth. Thus a great deal of pain is caused him, and he either gets a one-sided mouth or one so delicate that it cannot be relied upon to guide him accurately, or else a mouth like leather that will pull a person's arms out. The definition of what constitutes a good mouth is hardly known in this country. Most men here consider that a mouth is good in proportion as it is hard and unyielding. Drivers of fast trotters are generally agreed that the greatest control can be kept over a horse, and the greatest speed got out of him, by forcing his nose out with an over-check, and drawing on his under jaw with reins run through a martingale, or, in other words, fixing his head as if it were in a vice. But the general public forget that they are not all driving fast trotters, and cultivate this cast-iron mouth. In England a hard, unyielding mouth reduces a horse's value one-half.

The character of the mouth has a great deal to do with a horse's carriage and action. Nothing tends more to destroy the arching of the neck, the flexibility of the mouth, and the grace and elasticity of movement than the over-check. The horsemen of England consider a good mouth to be one with moderate firmness, but one that will yield to moderate pressure, and admit of easy and accurate guidance. Certainly this is what one would like for comfort's sake, if not for appearance. This sensitiveness and elasticity of the mouth has to be cultivated something in the way that a child has to be taught to write. The nerves of sensation and motion of the right arm have to be educated to a delicacy of touch so that the point of the pen will not be dug into the paper, and the muscles under the guidance of the motor nerves must be taught that smoothness of movement so essential to rapid and plain writing. This requires some time to acquire; so it is with a horse's mouth. At first the bit should be simply placed in the horse's mouth for a few days, an hour or two each day. The colt thus becomes accustomed to its presence; then some pressure should be exerted on it by attaching the reins of the bridle to the surcingle, just tight enough so that it will exert slight pressure when its head is kept in its natural position. He should be reined up this way every day for a couple of hours during a fortnight. This plan will do much to create a delicacy of touch and suppleness of the muscles of the neck; in other words, a good mouth, if the subsequent handling is what it should be. It is very unwise to use a severe bit on a colt; a plain, straight, thick barred bit is the best. Pullers that are excitable are made worse by a sharp bit. Work is the panacea for most of the defects of manners in horse.

Questions and Answers.

This feature of our Veterinary Department is for the free use of our subscribers. Answers to all questions sent us coming within the scope of this department, will be given by Dr. Gren-

side, of Guelph, Ont., a veterinary surgeon with a large practice and professor of Veterinary Science at the Ontario Agricultural College. Address all queries on paper separate from all matters of business, and write only on one side of the sheet. Give symptoms as fully and clearly as possible.

A KNEE SPRUNG COLT.—W. G., Bridgetown P. O., Ont.: I have a Cleveland Bay colt that is badly knee sprung. He was very much so when he was foaled, but got quite over it. But I was forced to work him a little this spring, and he shows this defect very much again. As he is a very fine colt, I would like to know the best remedy for it. Would you advise shoeing; if so, in what manner? Would you advise blistering or would you recommend a liniment? [It is not possible to entirely cure a colt that is naturally knee sprung, and that remains so for some time after it is foaled. In this case I would recommend not working the colt, and turning him out to pasture. It will be better not to work him until he gets age and strength. I would certainly not shoe him; but just pare his hoofs to the natural length and leave them for the summer. In the winter keep him in a loose box, and feed him off the ground. Colts that are dropped knee-sprung, as a rule straighten up entirely within a month. If they remain over longer than that, it is apt to become a chronic and incurable condition.]

COWS EATING BOARDS.—Young Farmer, Hopeville P. O., Ont.: Will you kindly tell me, through your JOURNAL, the cause of cows having a craving for eating pieces of boards and sticks, and how they may be cured of it? [The tendency to eat such indigestible substances as referred to, is due to a morbid condition of the digestive apparatus, and is generally spoken of as depraved appetite. In such cases treatment must comprise change of diet and of general surrounding conditions. Turning out to pasture should be beneficial. A constant supply of salt should be allowed. If the animal continues to be housed and fed, a purge should be given, followed by two tablespoonful doses, three times a day in the food, of the following powder: Bicarbonate of soda, 4 ounces, nux vomica, 4 ounces, gentian, half a pound.]

The Farm.

"Superintending the Earth."

Under this caption a correspondent, in a communication published in this issue, holds up to effective ridicule and biting scorn a certain class of farmers—they might be called a genus, so distinctive are their traits—who, readily gulping down the belief that the cloud of agricultural depression now brooding over all lands may be swept away by legislative enactment, work on that doctrine, and neglect their business to become its apostles. Let the farmer weigh carefully in the balance of his own judgment his fixed convictions, and we without hesitation foretell that the pan in which he can place the pounds of individual thrift, enterprise, and intelligence, will hoist skyward the few drachms of panacea that the politician has the power of placing on the opposing pan. The majority of farmers have, perforce, realized that by mixing brains with their methods, and studying the laws of supply and demand, they may do more to determine the profitableness of their labor and capital than the most entrancing eloquence of the prettiest politician.

Canada, more than any country on this globe, has convincing reasons for being proud of the fact that she can enlist in the public service men of such sterling character and mighty minds as those common to all Canadian parties, but, at the same time, we cannot accept the idea hinted at by our correspondent, that the farmers of this country should implicitly trust in the judgment of any of their representatives. This would lead to following their parties similarly to a flock of sheep trotting after the "bell wether." Reposing this power of governing in the hands of a few who may make politics a profession, would build up tight-drawn class distinction, and Canada wants none such, much less one that in time becomes so defined in separation, and so direful in effect, as that of the governed and governors. The most glaring neglect of duty that the farmers of this country are answering

for, has been due to the acceptance of this principle, when they have time and again been hocused-pot used into closing their eyes and opening their mouths at the bid of politicians of all parties, and they have been meted the ungenerous reward of having their noses twinged and a bitter pill chucked down their throats. The obligations to country and home should eloquently appeal to every farmer to weigh well all matters of politics, and we cannot but believe that the majority do not give it that deep and independent minded consideration, that it merits. The farmers of this country have not been guided enough by self interest, as other classes have, and as a result they have never been able to bring to bear that pressure upon politicians which the weight of their numbers and calling would guarantee. The most of farmers should ponder more with minds free and pure over political matters; should, with their fellows, discuss liberally and genially the various relations of such matters to their calling, and finally let the sentiment of self-interest more easily guide the hand that places the cross upon the ballot.

For the CANADIAN LIVE STOCK AND FARM JOURNAL.
"Superintending the Earth."

"His wife took in sewing, to keep things a-going,
While he superintended the earth."

The above words will bring to the minds of most readers instances which go far to prove the truth they contain. It is notorious the amount of time lost by many men in superintending the earth, or at least a part of it, when they have certain men delegated and paid for that purpose, but who seem to imagine that these delegates, who are selected presumably for intelligence and general fitness for the work, who have at their command facts and figures bearing directly on all subjects to assist them, and with this, able discussions by the leaders of public opinion and in the press as well, cannot act intelligently without a great deal of advice from their constituents, represented by chronic grumblers or advisers, who imagine that they are the grand depositories of wisdom and knowledge on all subjects, whether social, moral, or political.

They are found among all classes of men, but confining our attention to the farmer alone, note how many hours he loses in superintending the earth that would be better spent in seeing to his flocks and herds, cutting thistles around fences badly in need of repair, and the thousand and one little matters that are neglected in order that the affairs and business of others may be attended to and carried out. Who cannot bring just such men to mind? men claiming to be good farmers, attending every fair or auction sale within a twenty mile drive of their home, not so much for the purpose of buying or selling, or to improve themselves and their position as farmers by comparing the stock shown with their own at home, but just to see what is going on and to meet with many men, who, like themselves, came to kill time, instead of staying at home and killing thistles and other pests. On the way home they call in at the wayside hotel just to water their horses of course, and they couldn't think of using his water without doing something for the house, when all the same they are perhaps within a mile of their own well full of water. When over in they sit and talk and drink and talk again.

"Fast by an angle, bleezing finely,
Wi' teaming swats that drank divinely,

they spend the fleeting hours discussing all manner of subjects, such as combines and their bad effects on farmers without thinking that if they, like the combines, would pay more attention to their own business and farms, they would not have so much reason to complain. They talk of the iniquities of the Government and the high tariff, whilst they are of their own free will spending more in one night than perhaps the tariff costs them in a whole year. At last they start homewards, and reaching there the boys who have done up their day's work and are sitting with their mother at home, reading and studying, are sent out to put in the horses, while for he, the "lord of creation," the always busy and overworked wife and mother must hustle around and get supper, all the while listening to the excuses made by the head of the household as to his late return home. Such, briefly

drawn, are the facts with too, too many farmers in this country, although I do not say it is confined to farmers alone. A certain amount of going from home, must be done by every farmer to buy and sell the produce of the farm, and this cannot be done without a certain amount of expense, but I think I am safe in saying that one-half of our farmers could do their business just as well and not lose more than one half the time they do. Besides this the example they set their boys in thus going away often, and early, and coming home late, is to say the least of it bad. They see their father neglecting his work, doing it in a slipshod way or leaving it undone, in order to get away to town, and almost always coming home late, and what wonder if they do likewise and fall into the same bad habit. I believe if farmers would stay at home and work more systematically, and read more farm and live stock literature, by beautifying their homes and making them more attractive to the boys and girls and thus perhaps prevent them from leaving home, by leaving the work of making and administering laws to those who are delegated to do so, knowing that by reading up on the business of the day they have at the polls a veto power on the actions and utterances of those delegates, they would be doing more to elevate the farmers' position in society and in the country, than by spending good hours and money in saloon or corner grocery clamouring over politics. In a word, I believe that more can be done by private energy and economy to secure the happiness and prosperity of the people, than by public legislation, or by listening to the clamouring of demagogues, who attempt to show farmers an easy road to wealth.

JUNIOR.

Rotation of Crops.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

Thinking that my system of cropping might prove interesting to your readers and also feeling that we, as farmers, might profit much by exchange of opinions in such matters, I send you a few notes upon the course I have pursued in the past. My rotation is as follows: I break up sod in the fall if intended for oats, or in the spring if for peas. On the pea stubble I sow wheat in the fall and seed down with clover seed both in equal proportions. This lies in meadow for three years, and then I pasture it for two more, after which I break it up and sow peas as above. My oat stubble I plough in the fall, and then I sow with barley or spring wheat. It is very important to first see that the manure has been drawn out in the winter and the ground top-dressed before sowing. I either seed down or summer fallow the barley stubble the following year, by ploughing the ground once and cultivating several times through the season. I draw my manure on the fallow before ploughing the ground. Wide furrows are turned and the cultivator mixes the manure thoroughly with the soil. By seeding time I have a fine seed bed. I use the roller several times through the season. Just before I sow the seed I harrow the ground and drill in the wheat and there is always moisture enough in the soil to give the wheat a nice start. I then seed down with timothy in the fall and clover in the spring, then mow three years and pasture in the spring, and break up as above.

Yours truly

I. H. HAWKER

Canboro, Ont.

A New Fence Law Called For.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

DEAR SIR, - In your August number, 1238, I first noticed an article mentioning the prohibition of cattle running at large, which I quite agree with. Had, previous to seeing that article, mentioned to our M. P. P. the service it would be to farmers if the Fence Law was altered so that instead of the farmers being compelled to fence their farms to keep the stray cattle out, all who kept cattle should fence them in. I further agree with Prof. Shaw, as given in his paper in your March number, in the doing away with fences along the highways entirely, and thus making the country a civilized one, but I cannot agree with him in confining that idea to the old settled countries and leaving the newer settled country exempt from participating in that much wanted favor to the farmers. The new settled country needs such legislation as much as any part of the Dominion. Where there is a settle in advance of others his own cattle draw his neighbour's cattle around him, and his neighbours make him herdsman for the whole drove. After having put fence near all around a 200 acres to turn the cattle except on the back side in the bush, thinking that will not be known by the cattle, an owner of one cow drove her cow around the end of the fence to

show her the way and left her to find her way into my oat fields, and then in the evening this person would go along the road in front of the farm, but not in sight of the house, take down the bars, let her out, put them up, and drive her along the front of the house rejoicing over the full feed of oats she had got. My oat field and my cattle gave rise to an "out of pocket" system for me. On complaining to the owner of the cow I was told to put up my fence and the cow could not get in. Now my fences were burnt down by a fire running through the bush the fall previous, and I was not able to get them up in time, so I received a double loss, and no law to support me because the fence was not law-proof. If there was a law compelling this person to take a little trouble and expense to keep that cow in, I would not have to spend much labour and expense in keeping her out. As my farm is close to the town of Gravenhurst I have considerable trouble in this matter. The town fathers prohibited cattle running free in winter, but not before they were compelled to for their own sake. The farmers lost so much hay while they were waiting to sell, through cows eating from their loads, that they got the idea into the minds of balancing matters at an open stream not far from the town.

This matter is one of great importance, demanding instant action on the part of farmers. And it is certain that if a law were framed on the principle that all owners of cattle should be compelled to keep their cattle in, it would be a priceless boon to the farmers of this country.

ED. BURKINSHAW

Westwood Farm, Gravenhurst, Ontario.

Questions and Answers.

If there is any subject bearing upon this or any other department of our JOURNAL upon which you desire information, write us, and we shall be pleased to intrust your query to competent persons and publish the answer thereto in our earliest issue, and if an immediate answer is required, such will be gladly given if a postage stamp is enclosed. Write the queries on paper detached from all matters of business, sign your full name and address as a guarantee of good faith, and write only on one side of the sheet. We request the assistance of our readers in making this a useful and interesting feature, and we shall always be pleased to hear from any either desiring information or obliging enough to give it for others, upon any topic within our field.

WIRE FENCING.—G. W., York Mills: I would like to get the address of the manufacturers of a wire fence that I saw some time ago. The posts are iron bars fastened into stone, and the plain wires run through the bars. [We have not been able to obtain for you the address you desire. Having seen the fence referred to at the Ontario Agricultural College, we wrote to Professor Shaw in respect to it, but he was unable to furnish us with the address, as the fence had been put down many years ago. We are inclined to believe that it is not now manufactured anywhere in Canada.—Ed.]

CORN CULTURE.—A. C., Colpo's Bay, Ont.: How much corn should be sown to the acre in drills (a) for ensilage, and (b) for seed? 2. Where can I purchase an all iron field roller, and at what price? 3. Can you or any of your readers give me any practical proof of the value of ensilage for sheep? Does corn ensilage when stored for sheep feed, require more careful curing than for cattle? 4. Have wooden rollers any advantage over the iron rollers. Do they last as long? (1. In both cases drill not thicker than eight quarts per acre. Under our conditions the most desired object in growing ensilage corn is to secure as great a growth of rubbins as possible. 2. Drop a card to any manufacturers of farm implements advertising in our columns. 3. We could quote American instances of practical proof of the value of ensilage for sheep but we would like very much to hear from any Canadian stockmen who have given it a trial. There would be no difference in the method of curing, but in both cases it is very important to have the corn in an advanced state of maturity before putting in the silo. 4. The chief advantage of wooden rollers is their cheapness, while the chief drawback is the shortness of their term of usefulness.—Ed.]

TAME OATS BECOMING WILD.—W. M. Muir: Will tame oats turn wild? From appearances I am of opinion that they do. We bought some Welcome oats, and I found amongst them, oats, some with long spears and others with hairs, and of these I send you a sample. Is there a wild White oat as some people speak of? If there is such a thing as tame oats turning wild what are the conditions that cause them to do so? [There is good reason for a difference of opinion in respect to the above queries. There are instances where it has been found that it would be impossible to account for the appearance of the wild oat other than that it had degenerated from the cultivated variety. The sample sent us is that of the usual type of wild oat (*Avena sativa*), the grains being of a brown tinge and with long spiral spikes running out past the smaller end. We think the belief of the majority is that it is quite possible for such a degeneracy to occur. The botanist of the Washington depart-

ment of agriculture, however, writes as follows in respect to wild oats. It is generally thought to have been introduced from Europe where it is native, but it has become diffused over many other countries, including Australia and South America. It is held by some to be the original of the cultivated oat (*Avena sativa*); that the common oat has been known to degenerate into the wild oat, and also that by careful cultivation and selection, the wild oat has been changed into the common cultivated form. But on this question there is a conflict of opinion, and the alleged facts are not sufficiently established. That these statements are rather strong for the reason that we have no less an authority than Darwin, writing in *Plants and Animals Under Domestication*, p. 177, as follows: "With respect to oats, according to Mr. Brickman (report to British Association, 1857,) the wild English oat (*Avena fatua*), can be converted by a few years careful cultivation and selection into forms almost identical with two very distinct cultivated races." The conditions that would favor this degeneration would be infertility of the soil, unfavorableness of the season, or any condition that would interfere with the normal healthy growth of the oat plant. For remedies for the wild oat see article on Weeds, by Professor J. Hayes Pantton, in *JOURNAL* for September, 1888. - Ed.]

CORN SMUT.—A. J. Stone, Highgate: Will you kindly tell me what we can do to prevent smut growing in corn. We can and do raise very fine corn in this part of Ontario, perhaps as good as they do in some of the corn producing States to the south of us, yet I have not heard a farmer say aught against the duty being removed, as they are becoming convinced that it will pay better to feed it all and more too. [The most efficient remedy is that known as the Jensen hot water treatment. It has been recommended by many experimental stations, and thought to be better than the use of the copper sulphate treatment, as it was found that the latter affected the germination of the corn injuriously, while, on the other hand, the Jensen remedy heighten the germinative power. The method of Jensen is as follows: Provide two vessels for the hot water, of size suited to the amount of seed to be handled. If only a few bushels are treated, small vessels will suffice, or one small boiler besides the reservoir that is attached to the stove will be ample; but if a large quantity is to be treated, then two large kettles or one kettle and a large tub should be provided. A sack should be made of loosely woven cloth so as to admit the water freely, and of size suited to the vessel in which it is to be used. Vessel No. 1 (or the stove reservoir) is to be filled with water having a temperature of about 100° to 110° F. Vessel No. 2 should contain water at a temperature of 137°, and should remain on the stove so that this temperature can be maintained. The seed-grain is to be inclosed in the sack and then put into vessel No. 1. The object of this immersion is to heat the grain so that when it is removed to vessel No. 2, the temperature of the latter will be but slightly reduced. A few minutes immersion in vessel No. 1 will therefore be sufficient, after which the sack of grain should be immersed in vessel No. 2. After a minute or two, it should be lifted and stirred about so as to insure contact of the hot water with every grain. This should be repeated several times—oftener the larger quantity being treated. After 15 minutes the sack should be lifted from vessel No. 2, and plunged immediately into cold water for the purpose of cooling it quickly. Another portion of the grain can be treated in a similar manner, and so on until the entire amount has been handled. After thoroughly drying the corn is ready for sowing. A common thermometer with a plain scale could be used. As soon as any part of the corn is known to be affected the stalk should be immediately cut down and burned. Do not throw it to one side but burn it, as the spores in the former case will continue to thrive. Corn at all diseased with smut should not be fed to live stock of any kind, for the reason that it will cause disease and even death, and the manure from the animals that have eaten it will carry the spores back to the field. It will pay one well to go through the corn field often, and cut out every stalk or ear that is affected and burn it. - Ed.]

Young Stockman's Department.

Our Prize Essays.

To deepen the interest of our farmers' boys in the work of the farm, and so strengthen their love for a life in the country, to awaken their slumbering talents and stimulate their efforts for self-improvement, we offer the following book-prizes as inducements for the boys to write on such subjects as we shall announce each month:

1. *The Soil of the Farm*, by Scott & Morton.
2. *The Chemistry of the Farm*, by Warrington.
3. *Handbook of Agriculture*, by Wrightson.

The conditions to be observed by competitors are:
1. The writer must not be over 17 years of age.
2. The essay must not exceed one column in length.
3. The essays for competition for the prizes to be given in any month are to reach us on or before the 15th of the preceding month.

Essays for July competition.

- (1) Has the Dog a place on the Farm.
- (2) The Growing of Oats and their value for Feeding Purposes.

Essays for August Competition.

- (1.) Why I Like my Favorite Breed of Sheep.

Our Barley Competition.

The success of this competition is now ensured, and we may say that it was indeed pleasing for us to experience the hearty appreciation that has been given this venture by our readers. There are now about two hundred competitors, and we feel certain that valuable and profitable results must flow from this work to all taking part in it. We would urge upon our competitors the importance of rigidly complying with the conditions given on the forms which have been given to each and every one.

Steers for Market.

[PRIZE ESSAY]

By ADDISON H. BAIRD, Chesterfield, Ont.

Feeding steers for the British market is becoming quite an important and profitable branch of Canadian farming.

To begin you should have large, smooth, well-bred cows, that are average milkers, and breed them to a first-class, short-legged, heavy-bodied, Shorthorn bull. Remember that "like begets like," therefore have nothing to do with scrubs or long-legged, slab-sided bulls, no matter how good their pedigree.

Let the calves be dropped in the fall or early winter. Now take Mr. Calf and put him into a clean well ventilated box stall, and feed him his mother's milk three times per day for the first two weeks, then gradually change to warmed skim milk adding a little boiled flax seed or oat meal to take the place of the butter fat. Also have constantly before him a ration consisting of the following: one-half bran, one-quarter chopped oats, and one-quarter pea meal, until he begins to eat regularly, when he should be given about three pounds of this mixture along with all the cut roots and good clover hay that he will eat. Continue giving him about twenty-five pounds of skim milk per day, until he is four or five months old when it may be withheld from him.

In summer he should be kept in a darkened stable and fed on meal and green clover, and the other soiling crops as they come in season. They may be let out to pasture at night until the nights become cold, when they should be kept inside at nights and let out during the day.

Calves fed in this way will weigh about eight hundred pounds at one year old, and they will be a credit as well as a pleasure to their feeder.

The second winter they should be fed cut clover, hay, and straw, along with 30 pounds of cut roots or ensilage, and about 4 quarts of bran and chopped oats per day.

The second summer they may be let out to grass, care being taken that they always have sufficient feed to keep them growing right along.

As soon as the pasture begins to fail they should be stabled for the fattening period, and feed them on cut feed damped and mixed with about ten quarts of bran, oats, barley, and pea meal, and about half bushel of roots. They should get water once or twice a day in the stall if possible. They may be let out for a few minutes' exercise every day, and they should get a good cleaning off when they are put in.

If they are attended to in this way they will weigh at two and a half years old from 1400 to 1550 lbs.

If the manure has been properly saved and applied to the land, it will go quite a distance in paying for the feed they have consumed.

Notes From the Boys.

Now lays you have all done something that it would benefit your fellows to know of. If you have not, you have at least seen on your own farm something that has surprised you as being a work of more than usual merit. Smother your modesty with generosity and let us hear of your efforts and victories, and in this way urge others to do better also. If you want to know of anything that bears on the farm or its work, do not be backward in asking such questions, for we shall be pleased indeed to answer them.

WHO HAS A PLEASURER LAMB THAN THIS?—We have a grade Oxford Down lamb forty-seven days old, that weighs fifty-seven pounds. This lamb has been gaining since it was thirty days old at the rate of one pound per day. —ADDISON H. BAIRD, Chesterfield, Ont.

THE PIG HAD NOT TIME TO SQUEAL.—"Let me tell the rest of the boys how I fed a pig that weighed 160 lbs. at the age of six months. I fed it on shorts and bran scalded and put in boiled vegetables and swill. It was given this three times a day and for the last while I gave it two bushels of peas that were soaked in water." —ARTHUR BROWN, Goderich, Ont.

BE A FRIEND TO THE SWALLOWS.—"At our place we let the swallows alone, but I notice that many other boys are always pegging stones up under the eaves to smash the nests. Do swallows do any harm or is it only the bad nature of some boys that cause them to do this?" FRANCIS MARTIN. (Swallows are the most beneficial birds that could be kept about the farm and should be protected as much as possible. The little annoyance they cause in making litter should be far overbalanced by thankfulness for the work they do in destroying insects. By building a small house for them with little rooms in it about six inches square for nests, the litter difficulty could be got over. Swallows prey upon all kinds of injurious insects, and particularly the Hessian fly and clover moth. Being very strong fliers and on the wing continually, they do triple the work in destroying insects that any other bird will do. Be a friend to the swallows, study their habits, and they will twitter their appreciation for your kindness.—Ed.)

THE COCOON OF A MOTIL.—"I send you a strange thing that is very common in our orchard. I have found a number of them and do not know what they are. It takes a good climber to get them as they are fixed on high branches. Some say they belong to insects but I thought they were too big for that." WILLIE HAGIN. [The "strange thing" reached us, stranger still it would have come in better condition if you had put it in a small pasteboard box. However we were able to tell what it was. It was the cocoon or winter dwelling house of a large moth called the Emperor moth that may be seen flying about later on. It is not very injurious, and is quite common in Ontario orchards. Keep one of them, fasten it on the side of a sunny window by running pins through the twigs, and in a few weeks it will come out a most beautiful moth. Better still, fasten it with pins in a small box, over which put a pane of glass, and through the ends of which bore a number of small holes to act as ventilators. Place this in the sunlight, and in a short while that dark black thing in the centre of the cocoon will change into one of the most beautiful moths you ever saw.—Ed.]

The Dairy.

Preventible Losses.

To prevent the slight losses that surely gather in huge deficits is one of the departments of the dairy in which intelligence is away beyond par. Prof. Long, in a recent number of the *Farmer and Stockbreeder*, gives the following on the losses which at the present time are preventible and numerous. Among them are: (1) Losses by milk being allowed to stand in the cow house before being set for cream. (2) Losses by setting milk that has travelled and which has lost its heat. (3) Losses by deep setting at too high a temperature. (4) Losses by careless milking and failure to strip the cows. (5) Losses by the employment of unwholesome foods. (6) Losses in churning sweet cream, cream at a wrong temperature, and cream placed in too small a churn. (7) Losses by the use of shallow pans, obsolete implements, and unsuitable rooms.

Improving Value of Pure-Bred Stock.

Though all that have carefully thought over the matter are convinced that the introduction of pure-bred dairy stock has had a very noticeable effect in improving our native cattle, yet strong and deep though that conviction may be, there has always been a tantalising want of reliable figures to impress its truth upon those who had never given it much thought. It is refreshing in this sense to dwell on

the facts brought to light through the Secretary of Agriculture, Mr. J. C. Rusk, in the report of the United States Bureau of Industry. Questions addressed to thousands of breeders, most of them careful observers who have had long experience in the live stock business, elicited replies which show that the yield of milk by the offspring of native or unimproved cows coupled with purely bred bulls of dairy breeds is from 25 to 100 per cent. greater than that from unimproved or common native stock. The general average increase of yield of milk resulting from the use of such bulls on native cows, has been for the whole country 57.94 per cent. The yield of butter is increased by the same cause 69.78 per cent. It is to be remembered that these figures have been the outcome of wide and careful inquiry amongst all the farmers of the Union, and we may err on the side of safety in saying that the improving value of pure-bred bulls has been equally as high with us, for our herds of pure-bred stock will compare favorably with those of our southern neighbors. Materialize those figures still further, and it will be found that the offspring from a common cow giving 2000 lbs. per year (which is not making her very common, for the average is below that,) and a pure-bred dairy bull should give over 3100 lbs. of milk per year; that the offspring of a common cow yielding 150 lbs. of butter per year, and a pure-bred butter bull should give fully 250 lbs. of butter per year. These figures will be considered too low by those who have given most thought and attention to this question. No farmer can make a mistake in carefully choosing and economically purchasing a pure-bred dairy bull to improve his herd for dairy purposes. The strength of the testimony of experience is only equalled by that of observation in favor of this practice.

The Most Profitable Dairy Cow.

The most profitable dairy cow does not belong to any one breed, at least it has never been demonstrated that she does. Over and over again it has been claimed by breeders in many lands that the particular breeds which they handle are the most profitable, but as yet, the claims put forth in this direction have not been sufficiently well supported by evidence to lead to anything like a consensus of opinion. At one time in the show-rings, an animal of one of the dairy breeds will carry off the palm for performance in the production of milk and butter, and at another time it is borne away by an animal of some other breed. This tends to prove that individuality in breeds is a more potent factor even than breed itself. The significance of this fact cannot well be over-estimated by those engaged in the production of dairy products. That it is easily possible to find a Holstein or an Ayrshire purely bred that will give a return in dairy products at least one-half greater than another animal of the same breed, taking an equal amount of the same kind of food, has been demonstrated over and over again. We must look for the explanation in the difference in the powers of digestion, or more particularly, in the difference in the powers of assimilation possessed by the two animals. The one assimilates for the production of milk of a certain quality, the other assimilates for the production of both meat and milk, and a third fails to assimilate successfully for either purpose. In the last mentioned instance, there is evidently incomplete digestion of the food, and consequently a waste. We find an illustration of this in the different effects obtained from food in the human family. One man will eat a much larger quantity than another, and yet will be lean and ill

favoured as compared to the other, evidently pointing to some imperfection of digestion. Because of the differences in this respect, and because digestive qualities are as easily transmissible as any other, it is easily possible to bring together a herd which will give a very much larger return on a given amount of food than will be obtained from another herd on an equal amount of the same. It is also easily possible to breed such a herd from a small beginning, but to do this requires time.

Why then, we ask, are our farmers contented with animals whose performance is far inferior to that of others, which cost them quite as much to keep? They should grieve over the loss of one-fourth or one-third of their earnings, and justly so, but many fail to see that the loss is just as real when they give food to animals that will give one-fourth or one-third less of a return for it, than would be obtained from other animals of the same breed.

This train of thought arose in our mind as we gazed upon a Holstein cow in the excellent herd of Smith Brothers, of the Credit Valley Stock Farm, at Churchville, Ont., which had made a milk record in 1880, of 10,607 lbs. Putting the low price of one cent per pound on this milk, we have the return of \$106.07 from this cow for the food fed to her. Now any farmer knows that the food given this cow did not cost anything like that sum, as she was given the same kind of ration as that given to other animals of the herd, that is in the winter a mixed ration of cut hay, straw, pulped turnips, and a quantity of bran and meal, and in the time of good pasture only grass. This cow had also produced a calf worth \$150, but this is a factor which is but a side issue in our argument, although of much importance in itself. But allow that this cow is one of the best in the herd, and divide her milk product by two, we have still over 5000 pounds of milk, which is easily attained in any dairy herd as an average, by any farmer who gives attention to careful selection and breeding. Now 5,000 pounds per annum is still a long way in advance of the average of attainment in dairy cows; why then should the farmers remain content with a cow that will give but 3000 or 4000 pounds of milk per annum, when they might just as well have cows that will give 5000 lbs. to 6000 lbs. on an equal quantity of food? When the farmer sets out seeking improvement in the direction indicated, he should not fail to remember, that although he may commence his herd on a common foundation he cannot improve upon their good qualities in their progeny, or even retain them, but by the use of a pure-bred bull of the right type, for such a male is far more capable of transmitting good dairy qualities in the progeny of a good dairy cow of common breeding, than the cow is herself.

Below a given return in milk there is loss in the keep of a cow. We are much mistaken if this loss does not occur in a greater or less degree in every instance where the milk return is under 3000 lbs. Nor does this loss include the labor of feeding and milking. The profits must therefore increase proportionately with the advance in the return beyond the actual cost of production, hence those who obtain the highest averages from their herds of dairy cows kept in a normal way, will certainly make the most money.

The following is selected as a sample from numbers of letters we are receiving every week:

Mr. J. D. Leaman, Charlottetown, P.E.I., writes: "Have been a subscriber of your paper for several months, and am more and more pleased with each succeeding number. The information already gained in stock feeding alone more than compensates for the subscription price."

Poultry.

The Feeding of Fowls.

[SECOND PAPER.]

The number of meals to be given fowls per day will depend upon a variety of circumstances. When confined in small runs they should receive three feeds per day, which seems to be the proper thing in feeding any kind of live stock, unless in the first stages of growth.

When a farmer's fowls can have free access to the barnyard, in the short days of winter two feeds may suffice, but only on the condition that they are able to find a considerable portion of food in the straw or litter, or in the apartments where other animals are fed. Ordinarily they do not have access to those apartments, as it is not consistent with a proper condition of cleanliness to have it thus. But when animals are kept in groups in pens, as in the case of sheep or swine, it may be no harm to allow the hens to go in at will and pick up what might otherwise be wasted. When the fowls roam about on the farm, at certain seasons they will get along admirably on one meal a day, as in time of grain drawing, but ordinarily they should have two all through the summer. But when confined in a fowl house, they, of course, should get food as frequently as those kept in close quarters in the heart of a city. Something, too, will depend on the number kept. When this is large they will require feeding three times a day, even when at liberty.

The morning meal should be given early, that is, when the fowls leave the roost, or at least soon after. This will depend upon the season and the nature of the place of confinement. They, of course, leave the roost much earlier in summer than in winter, and therefore should be fed earlier in the latter season. When confined they naturally look for food when they begin to stir, and they certainly require it after the fast of the long night. When not confined they hang about until feeding time comes without going far away, whereas if food had been given soon after they leave the perch, they would feel at liberty to go abroad and gather other supplies such as they require.

The time for giving the noon meal need not vary throughout the year, as during that portion of the season when they leave the perch early they return to the same with corresponding lateness; that is, the earlier they leave the perch in the morning, because of the soon approach of the light, the later they return to it in the evening because of its tardy departure.

The time of the evening meal will therefore be later in the long days, and should be given but a short time before the fowls go to roost.

It may seem superfluous to add that *regularity* in feeding should be observed with much care, but it is never amiss to say this to persons who feed when it is a matter of convenience to themselves, rather than at a set time. If they would but think of the discomfort they themselves feel when they have to wait for a meal beyond the usual time, they will have some idea of the discomforts felt by their dumb dependants when so circumstanced. The ruffled feelings of the household find vent on such occasions on the servants who may be blameworthy, or on someone else, but the poor fowls have no powers of utterance with which to reproach the negligent feeder who has kept them anxiously waiting for the tardy meal. The only possible punishment they can give they fail not to administer in the withholding of profitable returns.

Horticultural.

Apple Tree Aphids.

This insect is one that is not only very effectual in its work, but it is also very hard to defeat in the attainment of its object. It is very small, and the difficulty of destroying it is further increased by the fact that it lives and does its injurious work by sucking the nourishing sap from the tree, and hence the spraying with such compounds as Paris green or London purple are not effectual. The best time to begin operations for its destruction is just as the leaves are coming out nicely, as the aphids are just hatching in great numbers. The best method of getting rid of them is by spraying with kerosene emulsion, which may be made by agitating violently with a force pump two gallons of kerosene mixed with one gallon of hot soap solution, made by dissolving half a pound of common soap in a gallon of water. For use dilute this emulsion with nine times as much pure water and apply through the force pump.

OF THE CANADIAN LIVE STOCK AND FARM JOURNAL.
The Month of Roses.

By ANNIE L. JACK.

No month compares with June—it is the empress of the year by every right of beauty in tree, and flower, and fruit.

One need not repeat the hackneyed phrase that "God could have made a better berry than a strawberry, but He never did," to appreciate this queen of fruits. And yet, as a proof of "one man's meat being another's poison," there are members of our own household who cannot eat, or even smell the aroma of this delicious fruit without sickness. But to the generality of the people it is the treat of the season to have a plenty of this berry in its month, for it lasts about that long. In our home garden the plants are put out between rows of grape vines, so that varieties will not mix, for they are a very social plant, perhaps, like the meddlers to be found in every locality, always reaching over and mixing up with other folks' affairs.

The winter has been very severe on strawberry plants, whether covered or not, and we prize all the more this bonnie June the fruit that the frost has left us—a "Big Bob," a giant, but they are scarce; a ball-shaped Sharpless; a smooth, handsome Cumberland. How they vary just as people do, for the Wilsons need to be steeped in sugar an hour before tea, as some natures need sweetening and refining. Then the Seth Boyden, juicy and fragrant, with no fault but extreme tenderness, as some delicate souls that cannot battle with the world, but keep the aroma of their lives for the home. The Dominion seems to be stronger than some varieties, and has resisted the variable season better than many near it, so we will cherish this Canadian berry and treat it loyally.

Roses are opening into full beauty. "I don't care for your hybrids," said a gentleman to me lately, "they have no perfume, or rarely so. Give me the old cabbage rose that grew twenty years ago in an old neglected garden by the river side. There was fragrance, rose fragrance, not a mixture of pepper and cologne, as some of the new fangled kinds are." I could not deny the truth of his words, for the beauty of the Baroness, and others of that ilk, is not very much more than some of the paper roses that are made to imitate, and, like many things now-a-days, are more for show than for real value and true sentiment. There is one rose that grows well and is always a curiosity. It is called York and Lancaster, for on one branch will be all shades, from palest pink, often a few petals of white, to the deepest crimson. For a summer rose it lasts in bloom a long time, and has only been winter killed two or three times in thirty years. The white rose, Madame Plantier, is satisfactory, and by the end of June a bush of this variety is first in its pure loveliness. There is always something about a white rose that signifies purity. You would not like to see them in hands that you knew were unclean, for they always recall the sentence, "The white flower of a blameless life," as no other blossom does, not even a lily.

Roses are so easily propagated after this season of the year; peg down a branch, and when it has rooted, slip the knife through it beyond the roots and lift it to a new place, either in autumn or early spring. They brighten the home, children love them and will remember them as long as they live.

Work in the garden consists of constant hoeing and keeping down the weeds, for we all know that "One year's seedling is seven years' weeding" of these pests. There will be rose chalers, and slugs, scale and aphides, caterpillars and canker worms too—the worm in the bud that must be searched for and taken off. Whale-oil soap, or common soap-suds with a little hellebore, is beneficial when the aphides are bad, but they destroy the clean leaves of the plant for awhile, and I prefer to search for and hand pick the enemy when possible. And it is best to cherish the birds, for they destroy the moths that do so much harm in our gardens, and eat the insects themselves. There will not be many aphides when the yellow birds are plentiful, and children should be taught to protect the garden's feathered friends.

The days are long, and we have now the nearest approach to twilight that this country can boast. The eight-hour system does not answer in a garden, for one must work when the necessity arises. If the sun shines there is no chance of carrying a sunshade and a hoe at the same time, nor, if it rains, can one transplant with a waterproof and umbrella. Better far to hoe in the early part of the day, and to set out plants just before or after a shower; for method will show in the long run, and work must be done by some plan and forethought to be done best.

The strawberries and roses have answered to their names and filled their places in the yearly fruition. Then comes the weeding and the pruning, the after care for next year's crop. And so we go on in life, between a constant anticipation that is a spur to our efforts in preparation, and realization or disappointment as a result; and in a garden we meet with both, and enjoy much that we should never know if we did not grow our own roses and strawberries.

Farmers' Daughters' Column.

Our Prize Essay.

With the avowed object of helping our farmers' daughters to make the life on the farm more pleasant and more enjoyable through a wider knowledge of the work that may properly come under their guidance, we purpose offering a series of prizes for essays written by them on various topics. That there need not be any lagging on account of the want of subjects, we shall from month to month suggest a few, but it is to be remembered that a choice of any prize will be given to the writer of the best essay on any suitable subject that reaches us that month. You may choose your own subject, and if none better reach us that month, and the subject chosen is one that will interest the other readers of this department, a choice of any of the prizes will be given to the writer. The conditions to be observed by the writer are:—

- (1) The essay must not exceed one column in length.
- (2) The essays for competition for the prizes to be given in any month are to reach us on or before the 15th of the preceding month.

The subjects suggested for July competition are:—

- (1) The Best Breed of Fowl for the Canadian Farmer.
- (2) Flowering Shrubs Suitable for Canada.

Essays for August competition.

- (1) Window Gardening.

The following are the prizes we offer:

- (1) *The Canadian Queen* one year, \$1.00.
- (2) Seeds, cuttings, bulbs of any kind, selected from the catalogues of any seedsman advertising in our columns, to the value of 1.00.
- (3) *Vick's Illustrated Floral Magazine* one year, \$1.00.
- (4) *The Ladies' Home Journal*, one year, \$1.00.

This list will be increased later.

The Growing of Raspberries for Home Use.

By MISS AMANDA BROWN, Binbrook, Ont.

[PRIZE ESSAY.]

The raspberry, like all other kinds of fruit, has its preferences of soil, but at the same time will flourish on quite a diversity of soil. The soil best suited for the raspberry is a rich, moist, deep loam, inclining to

a clay rather than a sand, well drained, and thoroughly worked, either trenched with a spade or ploughed and subsoiled as deeply as possible.

The ground may be laid out at rows six feet apart, and the plants set singly two feet apart in the row. This will allow plenty of room to cultivate between the rows. The planting can be well done by two persons, the first placing the plants on the ground with the top pointing in the direction in which he is going, the other follows, and with a hoe draws a little earth over the plant, and placing the toe of his boot upon it gently, yet firmly, presses it into the soil in such a way that the top will approach an upright position. The plants should be prepared for planting by cutting off the cane or top to within a couple of inches of the root.

All the growth that takes place from the top during the season in which the plant is set out, only tends to exhaust the root, if not wholly destroy it.

Plants that have been removed from the parent stool and grown one year, are the best for planting. The cultivation during the first season after the planting will consist in keeping the soil well stirred on the surface, and free from weeds. Early in the following spring the plants should be well manured and cultivated during the summer in the same manner as in the first summer.

After the fruit has ripened, the canes that produced it should be cut off at the ground and removed. The manuring should be renewed every spring, in order to produce a large crop of fruit. At this second spring, and each succeeding spring, the bearing canes should be shortened into a point that will enable them to stand upright beneath the weight of fruit. When the canes are properly cut back to three or four feet high, according to their strength, the buds will break nearly throughout the entire length of the cane, thus distributing the fruit more evenly and protecting it from being soiled with earth.

There are many varieties. Perhaps one of the best for home use is the Brinckle's Orange. The Hornet, Philadelphia, Mammoth Cluster, Doolittle and Black Cap, are also in high favor.

Jottings.

Farm Bells.—A clear-toned farm bell is an agreeable, as well as a very useful, fixture on the farm, especially during the summer, and we cannot say a better word to those who have not got one than to ask them to look up the advertisement of the J. B. Armstrong Manufacturing Co.

Clydesdale Stud Book.—The twelfth volume of the Clydesdale Stud Book, issued by the Clydesdale Society of Great Britain, is beautifully frontispiced by photographs of several Clydesdale worthies, including one of the famous Prince of Wales (673), taken from a portrait painted by Lutigen in '73, when this stallion was in his prime. Another appears of the champion stallion of '89, Prince of Albion (6178), and one also of Chrysal (5387), first prize brood mare at the Highland and Agricultural Society Show at Melrose, 1889. The volume contains 3,728 entries, including 1,002 entries of stallions, and 1,332 of mares.

American Association of Nurserymen.—The fifteenth annual meeting of the American Association of Nurserymen, which convenes at the Park Avenue Hotel, New York City, June 4th, promises to be a notable event. Twenty-five practical men will be present with off-hand talks, or papers, on topics of great interest, including Professors I. P. Roberts, L. H. Bailey, J. L. Budd, B. E. Fernow, B. T. Galloway, Also Hon. H. E. Van Deman, Chief of the Division of Pomology, A. S. Fuller, and many of the eloquent and silver-voiced speakers so well known to nurserymen. Three hundred or more members will discuss the subjects presented. Reduced fare has been secured on all railroads east of Chicago, and reduced prices also at the new fire-proof hotel. For particulars, address Chas. A. Green, Secretary, Rochester, N. Y.

Canadian Wheat.—An important stimulus to the importation of Canadian wheat is likely to be given by a verdict which has been passed upon samples just received at Liverpool. The samples, consisting of two large sacks of red Fife wheat, have been received by Mr. John Dyke, Canadian Government agent at Liverpool, from the Department of Agriculture at Ottawa. Mr. Dyke thereupon submitted them to the judgment of one of the leading members of the Liverpool corn trade, who has a large practice as arbitrator in disputes as to quality of grain, with the result that the wheat is pronounced to be the finest red Fife wheat ever seen in the Liverpool market, and of a quality to command a ready sale at the top prices of the day.—*Farmer and Stockbreeder.*

Farming Matters in Manitoba.—From information of recent date we are pleased to learn that the crop prospects in Manitoba are very bright. The Manitoba officials in this province state that the average under crop is larger this year than ever before, and that the seeding has been completed under the most favorable auspices. Just about the time the wheat was sown, a two days' rain gave it a fine start. Last week there was a fall of snow, which thoroughly soaked the soil and wonderfully helped the growing crop.

During the last week in May the weather has been very warm, and the vegetation, we are assured, is in a forward state,

and gives promise of an abundant harvest. There is now very little fear of trouble from drought, and we sincerely hope that the expectations of the Manitoba farmers may be fully realized.

A Visitor to Great Britain. Mr. Henry Wade, of Toronto, well known to every stockman and farmer in our Dominion as one who has been very closely identified for years past with our live stock and agricultural interests in various public capacities, has sailed for Great Britain to spend a pleasant holiday, and at the same time further advance his knowledge of the interest he has so thoroughly to heart. Mr. Wade will favor us with contributions, giving his impressions of live stock and agricultural matters as he observes them in the mother country, and these we feel sure our readers will find very interesting. We understand it is Mr. Wade's intention to visit the leading shows of England and Scotland, as well as inspect many of the most prominent herds of these countries. Our friends will join with us in wishing Mr. Wade a pleasant trip, much enjoyment, and by all manner of means a safe return home, for the land of the maple leaf has yet great need of such services as he can render to our greatest of all industries.

The Tolton Pea Harvester. In a former issue we called attention to this useful article. We again desire to do so, as we are satisfied that on all sorts of farms requiring many furrows its use will obviate the necessity of pulling peas with the scythe, and will very greatly facilitate the work of harvesting. We look upon it as being quite as useful in the pea field as mowers are in the hay field. Formerly it did not cut peas well unless quite ripe, but it has been so improved of late that now it will cut them very well indeed on the green side if necessary. We notice that it is referred to in very high terms by Professor Shaw, in a letter to the Messrs. Tolton Bros., regarding its behavior on the Ontario Experimental Farm, and the Messrs. Solby Bros., Guelph, who have used it for ten or twelve years, speak of it in the very highest terms. The pea harvester consists of an attachment to the ordinary mowing bar, and it is necessary to have the bar sent to the manufacturers to have this attached. Those intending to purchase should lose no time in giving this matter their attention, that the pea harvester may be ready in good time. The inventors of this machine, which is also furnished at a moderate price, deserve the thanks and patronage of the farmers. More particulars are given in the advertisement on another page.

Publishers' Column

Blank Forms of Remittance. On the first of April we sent out in every copy of THE LIVE STOCK JOURNAL a blank form of remittance, and a printed envelope addressed to our selves. We did this for the convenience of our subscribers. We have pursued the same plan for several years in all our publications, and as we publish several papers and magazines, reaching almost every class of the community—farmers, merchants, tradesmen, lawyers, doctors, clergymen and teachers—we are certain the plan meets with general approval. That is, we send to every one of our subscribers, on all our publications, once a year, a blank form of remittance, and a printed addressed envelope, for their convenience in remitting to us. The idea is that every subscriber will thus have an easy means of making a remittance for his paper or journal if a remittance is due, or if one is not due, something that he can easily keep for use when a remittance is due. The expense to us is very considerable and we sometimes wonder if it pays, but the convenience to our subscribers is so obvious that we do not like to give up the practice.

A Misunderstanding.—As we have said above, we do this with every publication and with every subscriber to every publication. To make a selection of names and send out these blank forms simply to those in arrears would be impossible, as everyone who has the least acquaintance with the publishing business knows. Each person receiving these blank forms looks at his address label to see how his own subscription stands, and if it is paid lists the form aside for future use, but if his subscription is not paid, then if he is a prompt payer he fills out the form and encloses it with the amount due in the envelope and drops it in the post office and the thing is over. We regret to say that one subscriber to THE LIVE STOCK JOURNAL has entirely misunderstood the nature of these slips, and has seen fit to write us a very abusive letter on the matter. For the sake of decency we will not quote the language of the letter nor will we publicly announce his name and address, although the provocation to do so is great. All we have to say is: We simply wish to do as we would be done by. We know no better rule either for public or private business. And if ever we make a mistake in our dealings with any one, we shall be delighted to acknowledge the error if our attention is called to it, and to make full redress if redress is due. But we wish to remind our ready friend that abuse is a poor way to settle a grievance. It rarely convinces anyone of the right, and seldom wins the respect of others nor even the approval of the judgment of him who indulges in it, when once the heat of his passion is passed away.

Sample Copies, etc. We shall be glad to furnish sample copies, Blank Order Forms, and all other accessories for the securing of subscriptions, to anyone desiring them.

Trial Subscribers. We will send THE LIVE STOCK JOURNAL for six months, on trial, to any address for 25 cents. All trial subscriptions must be written out on our blank order-form provided for that purpose.

Low Trial Subscribers Count.—Three new trial subscribers count as one new regular subscriber in all our premium plans.

How to Secure Your Own Copy Free.—Send us \$2.00 with the names of two new subscribers, or \$1.50 with the names of 6 new trial subscribers, and we will advance your own subscription one year free. Remember that the subscribers so obtained must be new, old subscribers will not count. The trial subscriptions should be written out on blank order forms which we will supply on application.

How to send your money. Send it by Registered Letter. This is a perfectly safe and satisfactory way. If the amount is large send by Post Office Money Order. Never send money in an unregistered letter. There is no means of tracing it if it is lost, and losses are sure to occur now and again.

The picture of the Ontario Agricultural College. We have received from the late managers of the JOURNAL a number of fine lithograph pictures of the Ontario Agricultural College. It is a beautifully colored plate, 14x27 inches, giving a good view of the College and the surrounding buildings and grounds, and quite suitable for framing. To every present subscriber sending us money, either for arrears or for renewals, we will send a copy (if requested) of this picture until the stock is exhausted.

How to address your letters.—Address all correspondence to THE J. E. BRYANT PUBLISHING COMPANY (Limited), 58 Bay Street, Toronto. Put all matter intended for the editor, all items of news, stock notes, and matter intended for publication, on separate sheets. Please bear this in mind; it saves a good deal of trouble.

Advertisements.

To Advertisers.—Advertisements of an appropriate nature will be inserted in the JOURNAL at the following rates. For a single insertion, 18c. per line, nonpareil (24 lines make one inch); for three months, 15c. per line each insertion; for six months, 13c. per line each insertion, for one year, 10c. per line each insertion. Cards in Breeders' Directory, not exceeding five lines, \$1.50 per line per annum. Copy of advertisements should reach us not later than the 25th of each month (earlier, if possible). If later, it may be in time for insertion, but often too late for proper classification. Transient advertisements payable in advance. No advertisement inserted for less than 75c. Contracts broken by insolvency or otherwise will revert to the casual rate of 18c. per line each insertion. Advertisers desiring to obtain extra copies of the JOURNAL may do so at the following rates: Per dozen, \$1.00; per 100, \$7.50 (in lots of not less than 25). A reasonable number of copies will be sent at these rates to any address supplied by an advertiser, with the advertiser's own advertisement marked, and a notice on the wrapper calling attention to it. In this way the advertiser will be saved the trouble and expense of addressing and mailing.

TOO LATE FOR CLASSIFICATION.

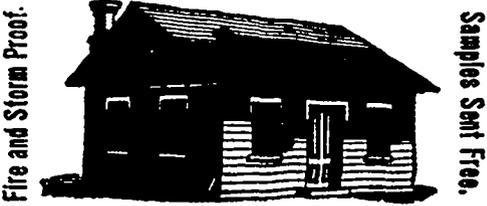
AYRSHIRE BULLS FOR SALE.

THREE yearling Ayrshire Bulls, imported in dams, also six Bull Calves, sired by our imported bull, 'Royal Chief, out of imported dams.
21/629
DAVID MORTON & SONS,
Hamilton, Ont.

REGISTERED Clydesdales and pure-bred Jerseys. All bred from imported stock. Young stock for sale.
22/611
JOHN PULFER,
Spring Valley Farm, BRAMPTON, Ont.

REGISTERED improved large Yorkshires. Imported Boar, Holywell. Wonder II. heads the herd. Young stock for sale.
22/612
JAMES FIELDS,
Castle Hill Farm, ANCASTER, Ont.

TWO AND THREE-PLY READY ROOFING.



This Roofing can be applied by any intelligent person. Write for prices, etc.
21/630
J. W. PATERSON & BRO.,
Toronto, Ont.



VARIOUS ADVERTISEMENTS.
AGENTS WANTED MOST LIBERAL TERMS.
to canvass for the sale of our Home-Grown Nursery Stock.
Established in 1846.
G. & T. SMITH, Geneva Nursery,
Geneva, N.Y.

Stock Notes.

Horses.

At a recent sale of Hackneys, the property of J. R. Bamham, Hull, England, the forty mares and geldings averaged about \$400; the top price was \$2005.

JAMES McCORMICK, Galt, Ont., writes: "My imported Clydesdale stallion, Benice of Cullen, has done well this winter. He weighs 2000 lbs. Sales have been rather dull."

John Duff, of Everton, Ont., won first-prize in the imported heavy draught class at the Hillsburg Spring Stallion Show, on his Clydesdale stallion Reform, and Messrs. Currie & Co., of Oshinga, were second with Lion Chief.

In the class of imported stallions at the Caradoc Spring Show, held at Mt. Brydges, Mr. T. Charlton was first with Baron and Drumlanrig, T. A. Faulds second with Farmers' Pride, and Messrs. Charlton and Oliver third with Marquis of Salisbury.

THE COMMISSION OF THE HARAS NATIONAL, of Montreal, Que., held an auction sale on the 17th of May, but owing to the disagreeableness of the weather there was not a large attendance. They sold three Percheron stallions for \$1370, \$1500, and \$1650 respectively.

MESSRS. KIDD BROS., of Listowel, Ont., have been very successful at the spring shows with their horses. In the standard bred class at Listowel they secured first with Oliver Wilkes, first in thoroughbreds with Ten Broeck Jr., and second in roadster class with Corncracker.

The young stock of the Prince of Wales, 673, did fairly well at the Ayrshire Agricultural Society Show. Gets of his were 1st and 4th in the three-year-old entire class, 1st and 2nd in the two-year-old entire class; 1st and 3rd in the opening class of yearling entries, 1st, 2nd, and 3rd in the Derby Sweepstakes.

MESSRS. ADAMS BROS., of Elnora, Ont., won first and second at the Elnora Stallion Show, in the imported heavy draught class, on their two Clydesdale stallions, St. Gatten and Sir Maurice. These horses are well known to our readers, coming, as they do, from the stud of Messrs. Beath & Co., of Bowmanville. Mr. Peter Beaver was third with Tarry Robb in this class, and second with Hambletonian King in the roadster class.

The breeders of the Hackney in Great Britain look upon the turn out at their last show in March, as very encouraging. In 1885 the number of entries were only 133, but this year there were no less than 159 stallions and 86 mares shown, making a total of 245. The chestnuts seem to be the favorites, for out of thirty-six prizes that were awarded, no less than twenty-three fell to chestnuts. The champion stallion, the champion mare, and the winner of the cup, offered in the young stallion classes, were all of this color.

JOSEPH VANCE, of New Hamburg, Ont., has sold his Clydesdale stallion, Wigton Lad, to Messrs. E. W. and G. Charlton's stud at Duncrief, Ont. Mr. Vance thinks his horse has gone to head the best group of Clydesdale mares in Ontario. They will in all probability be taken to the Chicago show this fall. We notice that at the West Williams Spring Show, Wigton Lad was successful in securing first in the class of imported draughts. The Messrs. Charlton are to be congratulated upon securing this stallion to represent their stud. The price given was a large one, \$7300.

TITOS GOOD, of Shamrock Avenue Farm, of Richmond, P. Q., writes to say that he has sold the yearling filly Perfection to Mr. Geo. McFarlane, Rosetta, Ont., for \$125. Her sire is Little Jock Elliot (3768), out of a mare by the Baron of Anchen-doir (1377), and, as her name implies, she is perfection in all points, and will make a \$300 mare. The cow Bright Eyes has given birth to twin heifer calves, and beauties they are—a rich roan and a red and white. Other stock doing well, especially the yearling bull Wilkie Collins. Our crop of Southdown lambs are a splendid lot, exceeding in numbers and quality previous seasons.

MR. JAMES H. WILSON, of Lifford, Ont., has, with his usual enterprise and dash, again added another fine animal to his stud in the form of a year-old Yorkshire Coach stallion, Marmion (1116), bred by Mr. Christopher Bower, Pickering, Yorkshire, England, and imported in 1888 by the Barrett Brothers, of Manchester, Ontario. Marmion is described as being a powerfully built animal, standing about 16 1/2 hands high, and weighing 1,500 lbs. In point of breeding he certainly ranks high, being by Salesman (417), dam by Emperor (145), and traces back twice to the celebrated Bay Richmond, and once to the equally great progenitor known as the Boye's Horse.

MR. H. H. HURD, of Burlington, Ont., holds, as intimated in our advertising columns, a large auction sale of pure bred Clydesdales on his farm at Burlington, Ont. In glancing over the pedigrees one cannot fail to be impressed with the high breeding of some of the animals offered. Notably amongst the sires is the superior stock horse Pride of Perth (1282), that had 50 many of his get stand out prominently as prize winners at the late spring stallion show at Toronto. The Prince of Aird (1530), another sire of a number of those offered, that appeared some time ago on our first page, has won a name also as a stallion that has transmitted excellent Clydesdale qualities to his progeny. He is now doing splendid service for Mr. Fothergill, of Burlington. This may be said to be a first class collection of Clydesdale females, strong in the best of strains as far as breeding is concerned, and we would particularly impress upon our readers seeking excellent young breeding mares, the value to them of such an opportunity as this.

THE KILMARNOCK (Scotland) SHOW brought out the best season's exhibit of Clydesdales. The entries included 408 Clydesdales, 205 light legged horses, 04 sheep, and a number of implements. In brood mare class, first went to John Galbraith on Topman's Princess, by Prince of Wales out of a Topman mare. Second went to Andrew Montgomery on Nettie, a get

Stock Notes.—Continued.

of Belted Knight. In three-year-old fillies first went to Mr. Walker's Sweetbrier, by Macgregor. Mr. Lockhart won first in class for one-year-old fillies on a Prince filly out of a Darnley mare. Good judges assert that she is the best yearling filly ever shown in Scotland. Mr. Wm. Montgomery was second with a Sirdar filly, and Mr. Andrew Montgomery third with a get of Macgregor. In two-year-old geldings Mr. Peter Crawford won first and second with two of the gets of Prince Lawrence. In class for three-year-olds Mr. Kilpatrick's Prince of Kyle won first, and Mr. Peter Crawford secured second on Eastfield Laird, by Prince Lawrence. In the yearling colts class the competition for first centered around Mr. McAlister's colt got by Prince Albion, a son of Prince of Wales, and Mr. Lockhart's colt got by Prince of Wales. The former was placed first, the latter second, Mr. Peter Crawford third on a Lord Erskine colt, and Mr. Andrew Montgomery fourth with a colt by Prince of Wales. In the competition for family groups Mr. Andrew Montgomery was first and third, in the yearling class, with two groups by Macgregor, Mr. Peter Crawford was second with a group got by Lord Erskine, and Mr. Dunlop was fourth with a group sired by Skelmorlie. For similar groups of two-year-olds Mr. Peter Crawford won easily on a group got by Prince Lawrence.

THE GLASGOW AGRICULTURAL SOCIETY SHOW (Scotland), brought up a strong lot of Clydesdales. The class of Brood mares in foal or with foal at foot was headed by Mr. Sinclair Scott's Marchioness by Taste All, and Mr. David Mitchell's Sunray by Prince of Avondale, was second. In class of yield mares, Mr. R. Riddell's Windsor champion Sunrise, of Darnley descent was first. Mr. Howies' Flora by Prince of Wales, was second. Three-year-old fillies were headed by Earl of Cawdors' Lady Lawrence, by Prince Lawrence, and second was won by Mr. Gilmour's Gay Lass, by Garnet Cross. Two-year-old fillies were headed by Mr. Scott Sinclair's Scottish Snowdrop Prince of Wales descent. Mrs. Lamant's Heather Bell, by Top Gallant, was second. First in class of yearling fillies, was awarded to Mr. George Alton's Lady Louisa, a Prince of Wales filly, and the second and third prize winners were furnished by J. A. Wallace, second being by Prince Aldino, and the third by Flashwood. Three-year-old stallions were distanced by Mr. Kilpatrick's unbeaten Prince of Wales horse, Prince of Kyle. Mr. A. Scott obtained second on Earl Dunraven, by King of The Forest. Master Young, by Prince of Wales, obtained third, and Mr. R. Riddell's Gallant Prince by Prince of Wales was fourth. A Prince Lawrence colt, Lawrence Chief, owned by A. Scott, was first in two-year-old class; Mr. P. Crawford's Lord Carling by Lord Erskine second, and third and fourth with another son of Lord Erskine, went to William Ford, by St. Gatten. In class for yearling colts, Mr. Lockhart's Prince of Wales colt was placed first; Messrs. McAllister's Prince of Albion colt second; and third went to Mr. R. Crawford, on a get of Lord Erskine.

Cattle.

MESSRS. NAGLE AND DONALDSON, of Mt. Brydges, won first at Caradoc Spring fair, on their Holstein Bull.

Mr. R. Platt, of Missouri, sold his herd of Galloways with the result that fifty head averaged about \$145. Twenty-five females averaged \$150, and twenty-six bulls \$160.

The Kerry cattle appear to be advancing in popular favor. Lord Egerton, of Tatton, Knutsford, recently held a sale, and the prices for cows ranged from \$80 to \$95 per head.

At the annual show and sales of Shorthorn bulls, held at Kelso, England, on the 11th ult., the prices realized were \$25 a head on pedigree, and \$15 a head on non-pedigreed animals over those of last year.

Ireland heads all European countries in having 864 head of horned cattle per 1000 inhabitants, and 49 head per kilometre. United States is next with 849 per 1000 inhabitants, and Denmark next with 682. Great Britain has 188 head of cattle per 1000 of population.

On 3rd April, Messrs. John Thornton & Co., London, England, sold a selection from the herd of Shorthorns owned by Mr. W. Talbot, Crosbie. The bidding was brisk. The highest price realized was \$550 for a young bull, and the average of the twenty animals sold was \$210.

Mr. Wm. HEWILL, of Heathcote, county Grey, purchased lately 10th Duke Moultondale, from Mr. F. J. Ramsey, of Dunnville. 10th Duke was got by Mr. Ramsey's imp. Statira Duke 12th, and is a model young bull. Has already taken several prizes as a calf and a yearling.

Judging from reports from all parts, beef cattle are going to be dear this year, as the supply is from 20 to 30 per cent. short of last year. Our leading exporters state that there will be a big trade done this season, as the demand is strong in Britain and the ocean freights are more favorable than they have been for some years.

Score one for the Ayrshires for fecundity. A reliable contemporary in Ayrshire tells of a pure-bred Ayrshire cow that has died a short while ago at the age of thirty years. She had a calf yearly for twenty-three years, and until she had reached the age of twenty-five. She was one of the best milkers in the herd of her owner, Mr. John Baird.

Jerseys appear to be holding their own in England. Here are some of the prices realized at the sale of Mrs. Willets' (Whitten, Hounslow, Eng.) herd. Thirty-six cows averaged over \$120, and six bulls \$96, making a total average of about \$120 for 42 head. At the sixth biennial sale of Jerseys belonging to Mr. E. A. Hambro and Hugh C. Smith, 33 cows and heifers averaged over \$110, and six bulls about \$95, making the average for 39 head about \$105.

ALEXANDER DRUMMOND, of Clifford, Ont., has recently purchased from James Hunter, of Alma, Ont., a very good yearling Shorthorn bull, sired by Sir Guinand = to890 = dam Rose of the Valley, by Socrates = 237 = ; granddam Rose of Summer, said to be one of the best cows of her day in Ontario. He is just the

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Stock Notes.—Continued.

sort to cross with the small Scotch cattle. He is a nice red, with a grand mossy coat of hair, and of good quality all round.

A GOOD WORD for the Jerseys comes from Mr. A. Holland, proprietor of the Holland Farm herd of Jerseys, Ottawa. Mr. Holland says: "My stock have wintered splendidly, and I have nothing to complain of as to the capability of the Jersey to stand our winter climate. I did not find that she wanted to come into the stable on a winter day any sooner than a native, and when she was in she did not look any colder than the others when the temperature of the stable was reduced."

ARTHUR JOHNSON, of Greenwood, Ont., writes: "We have made several sales of females within the past month, at what used to be called very moderate prices. Demand for both sexes has greatly improved. The supply of cattle of all classes is short over all this country, and prices must go up, no matter what the price may be. Litter looking exceedingly well. I have the best lot of calves I have ever raised. They are mostly by the imp. Cruickshank Victoria bull Indian Chief (57485)."

F. J. RAMSBY, of Dunnville, Ont., writes that his Shorthorn, Shropshire sheep, and Suffolk pigs have come through the winter in fine shape. His Suffolk sows have all farrowed some very fine litters. At the spring show for Western Branch of Norwich, he made three entries in Shorthorn bulls and secured 1st, 2nd, and 3rd prizes. Baron Constance 9th, bred by John Gibson, Delaware, now stands at the head of his herd. The JOURNAL has brought him a good many purchases.

The Devon herd bred by the late Viscount Falmouth was recently dispersed by auction sale. A five-year-old cow, Bloom ng Heather, of the Quarterly Curly tribe, by the prize bull Sir Watkin, fetched the highest price of the lot, viz., \$1300, while her dam, the Blooming cow, sold for \$700. The average price for fourteen cows and heifers was about \$570, and the average prices realized on three bulls was \$500. The prize bull Lord Wolsley, first at the last three shows of the R.A.S.E., sold for \$800.

THE HEREFORD CATTLE BREEDERS' ASSOCIATION held their second series of spring shows and sales a short time ago at Hereford (Eng.) Upwards of one hundred bulls were catalogued, the majority being yearlings. There was a good demand. The highest price brought was \$450, paid by the Earl of Coventry for the two-year-old Prince Rudolph, by Sovereign. A yearling brought \$285, and the first prize two-year-old \$275, and the second \$200. The rest sold at prices varying from \$100 to \$200.

C. M. SIMMONS, of Ivan P.O., Ont., places a breeder's card in our columns, and writes: "I have made the following recent sales, one yearling bull got by Sir Christopher, dam Elvina, to Mr. Caveshill, Vaneck P.O.; one yearling bull got by Lord Stathall, dam Adelina, to Mr. Wilson; one three-year-old cow and B. C. to Allan Gray, Hyde Park, also a Berkshire boar and sow to the two last named gentlemen. The crop of '90 is good, all reds except one roan. My herd never looked better, and now includes thirty of both sexes."

JAMES CUNNINGHAM, Tarboech Castle, Douglas, Scotland, sold a draft of 9 cows, 18 three-year-old heifers, 24 two-year-old heifers, 8 one-year-old heifers, and 2 bulls, 61 in all, from his famous herd of Galloways. The draft represented the most popular strains of the day, and the sale was satisfactory. The 9 cows averaged \$135, and their eight calves averaged \$155; the 18 three-year-old heifers averaged about \$135, and four of their calves averaged \$145; the 24 two-year-old heifers averaged \$136, and the 8 yearling heifers averaged \$90 and the two yearling bulls averaged \$80.

MESSRS. D. MORTON & SONS, of Hamilton, Ont., report the sale of yearling Ayrshire bull, White Prince 2nd, to Mr. William Stewart, Jr., of Menie, Ont. This bull was imported in dam Red Rose (5510), sired by White Prince (1264), of the well known prize-winning herd of John Caldwell, Esq., Bogside, D'indons 14, Scotland. White Prince (1264), took first prize in 1889, as a 40-year-old, and again first this spring in the three-year-old class, at the Dundonald cattle show. If this youngster does not give a good account of himself under Mr. Stewart's care, we will be disappointed.

MESSRS. NELSON & SON, of Liverpool, England, the purchasers of the entire Cruickshank herd, have not carried out their first intention of exporting all to South America. Lately W. S. Marie, of Uppermill, bought a handsome red bull calf, out of the Sittytton Crocus, which was recently sold in the draft that went to Collynie, and his sire was the noted roan bull Cumberland. J. Deane Willis, of Braplin Manor, Codford, Wilts, has also bought the whole of the heifers calved at Sittytton last year, with the exception of one, Violet, sold sometime ago. The whole draft numbers thirty-three head, and along with them Mr. Willis takes the yearling bull, Scottish Archer, of Mr. Surname, and by the famous old bull Cumberland.

MR. JNO. THORNTON, of London, Eng., recently sold the Elmhurst herd of Shorthorns, owned by Mr. Geo. Fox, comprising about fifty head of the Barrington, Darlington, Kirklevington, and Winsome tribes, and crossed with the celebrated bulls Duke of Ardie 24th, Lord Barrington Bats, etc. The thirteen bulls averaged \$160, and thirty-six cows made an average of \$175. The general average was \$170 for 49 animals. The biddings, it is said, were fair for the best cows, stiff for the heifers, but the heifer and bull calves sold well. The highest priced female was Deepdale 7th, by Waterloo de Broos 2nd, she bringing \$350. The bull that brought the highest price was Sharon Duke 29th at \$315.

MR. J. W. FRENCH, of North Andover, Mass., U.S.A., who is well known to all Ayrshire breeders as a prominent breeder, furnishes the following facts for publication. His sixteen head of Ayrshires, ranging in age from three to twelve years old, averaged for the year, January 1st, 1889, to January 1st, 1890, 5437 lbs of milk. The largest quantity was yielded by an eight-year-old cow, Nelly Day, viz., 7274 lbs. in 324 days. The cows were given moderate feed, the main object being to keep them in good breeding condition. The summer feed was pasturage, with green fodder and bran, 2 to 4 quarts, about the 1st of

Stock Notes.—Continued.

August. In winter the average feed was 8 quarts of mangels, and 3 to 6 quarts dry grain. The milk was weighed twice daily.

Mr. F. J. RAMSAY, of Moultondale Farm, Danville, reports the sale of some fine young Shorthorn bulls, got by imp. Statira Duke 12th, and Berkshire and Suffolk pigs for the month of May: One roth Duke Moultondale to Wm. Hewgill, of Heathcote, county Grey; one to Wm. Hannah, Esq., of Danville; one to Peter Bicket, Esq., Fenwick, Suffolk boar and sow to H. Donnelly, River Desert, Que.; one Berkshire boar to Edmund Ingalls, Freleighsburg, Que.; one Berkshire boar to Jno. Ferguson, Calmachie; one Berkshire boar to R. Brice, Cayuga; Berkshire sow and boar to D. Smathers, Sherbrooke, Que.; one Berkshire boar and Suffolk sow to J. M. Vancouver, Danville; one Berkshire boar and sow to F. E. Bird, Reaburn, Manitoba; one Suffolk boar to R. Gleason, Wainfleet

MR. R. S. STREVENSON, of Ancaster, Ont., writes: "Our Holsteins have come out in fine shape this spring. Inquiries for stock are numerous. We sold a very fine pair of yearling heifers to Messrs. Kearns Bros., of Qu Appelle, N.W.T., about a fortnight ago. One of them was from Johanna Tensen, an imported cow that has given us 72 lbs. of milk in one day on grass. The other was a granddaughter of the same cow. They were both sired by the Duke of Edgely, the late stock bull of the Messrs. Smith, of the Credit Valley Stock Farm. They were a very fine pair of heifers, and the Messrs. Kearns are showing good judgment in buying good heifers to start their herd. The Messrs. Kearns inform me that these are the first Holsteins taken into their part of the N.W., and if they do well, as there is no doubt they will with fair usage, there will be an unlimited demand for them, as the farmers there want cattle that will give large quantities of good milk, make good beef, and thrive where any other cattle will, and this they can get in the Holstein-Friesian."

Sheep.

The three Lincoln sheep that won first, second, and third prizes in the Shearling ram class, at the Windsor show of the R.A.S.E., sold for a total of \$2250 to go to Victoria, Australia.

GRD. BALLACHEY, of Edgemont Farm, of Brantford, Ont., writes: "My lambs and young pigs are doing well. The outlook for live stock is improving. The two-year-old Percheron stallion has done well, and is a very promising young horse. I have lately sold an excellent yearling stallion colt to Mr. David Emery, of Titusville, Pa. This horse was detained twenty-five hours in Buffalo through the red tape of the customs department. The fall wheat on the light land never looked better, and that on the heavy land hardly ever looked worse. Hay will doubtless be good."

Swine.

MESSRS. POLPHAMPTON AND FRENCH, of Truro, N.S., place in our advertising columns an advertisement drawing attention to their herd of Improved Large White Yorkshire swine, and also to their poultry. They are making a specialty of Black Chinese Langshans, of the pure Cross strain. This breed has a wide popularity. We would recommend our readers to make a point of seeing their advertisement.

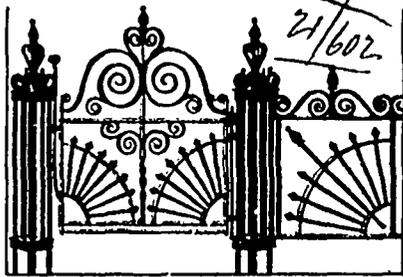
MESSRS. POLPHAMPTON AND FRENCH, of Truro, Nova Scotia, have entered into a partnership for the purpose of breeding extensively the Improved Large Yorkshire pigs. These gentlemen are the first importers, we are informed, of this breed in Nova Scotia. They are now importing all the best specimens now in the lower provinces. Mr. French imported a pair of pure Cross Langshans, and several other importations are now on their way from the famous herd of Mr. F. Walker Jones, of England.

CHAS. J. STUCKEY, Atlanta, Ill., U.S.A., places amongst our cards for swine breeders a notice calling attention to his herd of Duroc Jersey Red Hogs. This breed originated in America, and many qualities are claimed for them, the most valuable being hardiness, good feeding qualities, early maturity, and prolificness. Through the secretary of the society that publishes their herd registry, we learn that Mr. Stuckey is the first to have exported any of this breed into Canada, he having sent eleven head last year to breeders here. We would direct attention to the card from this herd in our advertising columns.

C. T. GARbutt, of Maple Lane Farm, Claremont, Ont., writes: "Our silver medal herds of Berkshires and Cotswolds are still increasing in quantity and quality. Have made the following sales of late: To E. Whittleton, Goodwood, Ont., one boar and sow; Wm. Eminans, Montsberg, Ont., one boar; E. H. Graham, Miller's Corners, Ont., boar and sow; D. Field, Goodwood, Ont., one boar; Wm. Benson, Claremont, Ont., two sows in farrow; J. P. Shier, Wilfrid, Ont., one sow and boar; J. Pickett, Glenn Major, Ont., one sow in farrow; J. Howitt, Claremont, Ont., one sow; A. Crawford, Claremont, Ont., one sow in farrow; S. Snowden, Bowmanville, Ont., one boar and sow; Geo. Russell, Whitby, Ont., two sows; M. Roundtree, Uxbridge, Ont., one boar and sow; H. York, Uxbridge, Ont., one sow; D. Morgan, Claremont, Ont., one sow in farrow; J. Stack, Jr., Glasgow, Ont., one sow; J. Har-mour, Blyth, Ont., one boar."

Spring Shows.

THE PELHAM AGRICULTURAL SOCIETY held their Spring Show at Fenwick. Following is the prize list: Stallions, heavy draught—1st, Norris, Stone & Wellington, Fonthill; 2nd, Mr. Kattmier, Thorold; 3rd, Mr. Dalrymple, Wellandport. General purpose—1st, Walter Upper, Allanburg; 2nd, James Garner, Fenwick; 3rd, J. Tokons, South Pelham. Carriage—1st, B. Upper, Thorold; 2nd, J. T. Pegg, North Pelham; 3rd, J. Stull, St. Catharines. Roadsters—1st, Crown Imperial, St. Catharines. Durham Bull—James Garner. Free for all race, purse \$100—Merritt's Golden Jacket, 1, 3, 1; Owner's Grey Tom, 2, 1, 2; Owner's Helene, 3, 2, 3. The second heat was very exciting, all the horses finishing in a bunch.



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I HAVE for Sale a number of Spring Pigs got by a first-class imported boar. Dam got by "Real Briton" (Imp.) one of the best Boars that ever left England. Price reasonable. JAMES GIBB, Brookdale P.O., Ont.

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Also Sows and Pigs of different ages. 1 young Holstein Bull "Barrington" family, nearly 11 months old. Imp. sire and dam. A perfect model at a bargain. Prices reasonable. F. J. RAMSEY, Dunville, Ont.

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FOR SALE a number of Thoroughbred Berkshire Sows in pig. Young sows and boars 7 months old. Young Pig: 6 weeks old. Registered Pedigrees, all bred from Imported Stock. Price reasonable. Address, C. R. DECKER, Chesterfield P.O., Ont.

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SPRING LITTERS OF CHOICE REGISTERED BERKSHIRES

Not Ready for Shipment. Also a few Choice Shearling Shropshire Rams. BROWN BROS., SPRINGVILLE, ONTARIO.

Stock Notes.—Continued.

HIBBERT AGRICULTURAL SOCIETY held their annual Spring Show on the 31st April. The following is the prize list: Aged draught, imp. ad—1st, Thomas Colquhoun, Rakersfield; 2nd, Charles Brooks, McMaster; 3rd, George Martin, Pride of Glasnick.

3-year-olds—1st, Thomas Colquhoun, McKaig; 2nd, Hodgert Bros., Prince of Kibbhill.

Canadian draught, 2 years old—1st, Joseph Morris, Young Charlie Ross; 2nd, John Miller, Young Glennis.

Thoroughbreds—1st, N. J. Klinkhammer, Barwood; 2nd, J. A. Norris, 2-year-old—Robert Barber.

Diploma—Thos. Colquhoun, Rakersfield. Aged—1st, W. N. White, Scotland.

Best calf since January, 1888—1st, F. R. Hamilton, Corsair. Bull calves since January, 1889—1st, F. R. Hamilton, Lord Stratford; 2nd, W. White, Russeldale.

Diploma—F. R. Hamilton, Lord Stratford.

Judges: Horses—J. Sinclair, Tuckersmith; T. Green, Dublin; P. Rinn, Hullett. Bulls—Wm Pridham, Fullarton; Robert Charters, Tuckersmith; Robert Hogarth, Cullarty.

SOUTH OXFORD SPRING SHOW was a centre for strong competition amongst several leading stables. The prize list reads as follows:

Thoroughbred—Four entries—1st, S. B. Fuller, Goldfellow; 2nd, W. H. Millman, Dandie Dimmont; 3rd, H. George & Sons, Bon Dera.

Roadster—Three entries—1st, David Karn, Fearnought Junior; 2nd, C. Kennedy, Johnnie; 3rd, Alex. Ross, Alladin.

Three-year-old—One entry—McLachlin & George, Lord Lafayette.

Carriage—Canadian bred—Four entries—1st, Jas. McCartney, Clear Grit; 2nd, Charles Burrell, Combination Bill.

Three years old—One entry—J. B. Galloway, Lapidist Chief. Carriage imported—Two entries—1st, F. Row, Candidate; 2nd, M. S. & J. B. Doyle, Milo Morey.

Three-year-old—One entry—1st, W. H. Millman, Grove Accumulator.

Heavy Draught, imported—Five entries—1st, Walter & Mitchell, Lord Fyfe; 2nd, A. Rossiter, Storm Signal; 3rd, Wm. Harris, Bold Lyon.

Three-year-old—Four entries—1st, H. George & Sons, Lennox; 2nd, Swartz & McIntyre, Plowman.

Heavy Draught, Canadian bred—Two entries—2nd, John G. Gourlay, Lord Wellesley.

General Purpose—Four entries—1st, R. Anderson, Herod; 2nd, Mark Jackson, Young Dauntless; 3rd, John Rock, Royal George.

Three-year-old—Two Entries—1st, Waller & Mitchell, Scotland Chief.

Hanoverian—2nd, Jas. McCartney, Red Bird.

Judges—Jas. Chambers, of Ingersoll, and Wm. Cowan, V.S., of Galt.

NORTH MIDDLESEX SPRING SHOW, held at Ailsa Craig, Ont., was well attended. The quality of the exhibit of stallions is said to have been splendid. The prize list reads:

Draught (aged)—1st, Wigton Lad, owned by Charlton Bros. & Oliver, Duncrief; 2nd, Sir Malcolm, owned by Neil McLachlan, Nairn.

Agricultural (aged)—1st, Young Gungarry, owned by James F. Stewart, Falkirk; 2nd, Young Deulas, owned by Richard Briggs, Duncrief.

Agricultural (three-year-old)—1st, Glenree McGregor, owned by George Alexander, Ailsa Craig.

Carriage (aged)—1st, Yorkshire Lad, owned by Cameron & Dewar, Duncrief; 2nd, Black Warrior, owned by Ed. Maguire, Exeter.

Carriage (three-year-old)—1st, Bay John, owned by J. Briggs, Duncrief; 2nd, Gen. Grant, owned by Jas. O'Neil, Birt.

Roadster (aged)—1st, Chester, owned by H. McLurg, Falkirk; 2nd, Bonner, owned by Thos. Bissett, Exeter.

Roadster (three-year-old)—1st, Woodrock, owned by John Eynon, Ailsa Craig; 2nd, Young Bookmaker, owned by T. Rosser, Denfield.

MANCHESTER (ONT.), SPRING SHOW was well patronized by horsemen, but there were not many entries in the cattle classes. The names were as follows:

Imported draught stallion, aged, eight entries—1st, William Richardson & Son, and Samuel Graham.

Three-year-old draught stallion, imported, one entry—1st, Hiram Lamb.

Canadian draught stallion, four entries—1st, and 2nd, Barrett Bros.

Canadian three-year-old draught stallion, four entries—1st, E. Neddry, 2nd, John Swanning.

Canadian two-year-old draught stallion, five entries—1st, Barrett Brothers, 2nd, James Coates.

Saddle or carriage stallion, six entries—1st, Jonathan Porter, 2nd, H. McKenzie.

Cleveland Bay stallion, two entries—1st, Barrett Brothers, 2nd, William Pearson.

Span of draught horses, one entry—1st, Charles Brown.

Saddle horse, six entries—1st, A. & J. Claughton, 2nd, D. F. Hagerman.

Imported draught brood mare in foal or foal by her side, four entries—1st and 2nd, Laing & Melharry.

Canadian draught brood mare, in foal or foal by her side, 1st, Laing & Melharry, and William Pearson.

General Purpose brood mare, in foal or foal by her side, four entries—1st, John Martin, 2nd, William Foster.

Saddle or Carriage brood mare, in foal or foal by her side, two entries—1st, A. & J. Claughton.

Single Driving horse, 15 1/2 hands and under, four entries—1st, Joseph Baird, 2nd, James Laing, 3rd, William Pearson.

Single Driving horse, 15 1/2 hands and over, four entries—1st, Laing & Melharry, 2nd, F. Earchman, 3rd, John Tommonds.

Special prize for Imported Blood horses—1st, John Wylie, Bowmanville.

Barrett Brothers special prize for two-year-olds sired by Master Morgan—1st, John Munro.

In horses there were sixty-one entries this year while last year there were but forty-five.

Durham Cattle—Aged bull, two entries—1st and 2nd, James Graham.

Two-year-old bull, two entries—1st and 2nd, William Pearson.

Stock Notes.—Continued.

SHAKESPEARE (Ont.) SPRING SHOW attracted a number of fine horses. The honor list is as follows: Heavy draught, 5 entries—1 and 2, David Vance. Heavy draught, 2 years old—1, David McFarlane; 2, Vance & Eby. Agricultural—1, R. Reberry; 2, Vance & Eby. Carriage or Roadster, 3 entries—1, Vance & Eby; 2, James Riddell. 2 years old, three entries—1, R. Thompson; 2, H. Patterson. In bulls there was only one entry in each class, viz., Mr. Jas. Crerar, aged bull; Mr. Donald McTavish, 2 year old; Mr. Crerar, 1 year old. Judges—Messrs. W. Sterling, V.S., A. McTavish, and A. Robertson.

STRATFORD SPRING FAIR was a success in every way, the weather being splendid and attendance large. There was strong competition in the live stock department. The following were the awards: Imported Clydesdales heavy daught, aged—Charles Brook, John Jacobs.

Three-years old—D. McFarlane, 1 & 2. Canadian draught—John Nichol. General purpose, aged—Chris. Werner, Mark Kelly. Three-years old—Donald Innes, William Roxburgh. Gariage horses aged—William Dunseith. Three-years old—J. H. Shantz. Roadsters, standard bred—Ford & Murphy, J. Miller. Roadsters, aged—D. W. Clarke, William Steele. Three-years old—R. Thompson, H. W. Paterson. Two-years old—Joseph Rankin, James McFarlane. Blood horses—W. Honey, Joseph Laird. Judges—George Moore, Waterloo; Samuel Lee, Woodstock

BROOKLIN (ONT.), SPRING SHOW brought together a number of crack horses. The awards were made as follows: Imported draught stallion—Thomas Wilson, J. Porter, William Richardson & Son. Imported draught, two-years old—John Davidson, William Radcliffe.

Canadian draught—D. McFarlane. Canadian draught, two-years old—John Morrison, James Davidson (Cherrywood). Sweepstake—Thomas Wilson. Saddle or carriage stallion—J. Porter, George Sterricker. Saddle or carriage stallion, two-years old—1st, and 2nd, W. J. Murray. Thoroughbred horses—John Wylie, C. Lynde. Durham bull, two-years old—James Stocks, sr., A. Ketchen. Hereford bull—R. J. Mackie, S. W. Dearborn. Hereford bull, two-years old—L. G. Drew. Hereford bull, one-year-old—R. J. Mackie, S. W. Dearborn. Sweepstake—L. G. Drew.

ST. MARYS SPRING STALLION SHOW is stated to have brought out a good show of fine stock. The prize list reads: Imported heavy draught—1st, James White, Lord Russell; 2nd, James Henderson, Lord Elm. Two-year-olds—George Gray, Craighead Stamp. One-year-old—1st, George Spearin, Cairnbrogie Chief; 2nd, D. Aitchison, McLeod. Cart or Shire—Bannerman & McDonald, Harwell Enterprise.

Norman Percheron—P. Whelihan, Prince of Normandy. One-year-old—P. Whelihan, Duke of Percheron. Two-year-olds, Canadian draught—R. B. Mowbray, Young Prince of Scotland. Canadian heavy draught, one-year-old—W. Porter, Major Douglass; 2nd, H. Greason, Young Success. General purpose aged—1st, M. Kelly, Decidee. Two-year-olds—W. B. Roxburgh, Young Scots wha Hae. French Canadian—C. Warner, Young Decidee. Roadster, aged—1st, E. Hanham, Cloud Lexington; 2nd, J. W. Clarke, Wellwood. Special prize—Heavy draught, any breed, any age—Silver medal and sweepstake—Joseph White, Lord Russell. Roadster—Two-year olds—E. Hanham, Stone River; 2nd, J. W. Cathcart, Omas. One-year-old—W. Amos, Chestnut Joe. Carriage—Two year-olds—George Grafton Almont Magician. Carriage—Aged—Wm. Dunseith, Mambrino Star. Sweepstakes and Silver medal, light horses—George Grafton, Almont Magician.

GUELPH SPRING STALLION SHOW was well attended, and a number of good horses competed. The prize list is as follows: Heavy draught stallion—1st, Peter Beaver's Lord Armsdale; 2nd, J. Elliott's Castleford. Light draught stallions—1st, Peter Beaver's Tarry Rob; 2nd, D. & O. Sorby's Craigie Var; 3rd, Alex. McCaig's Perfection. Carriage stallions—G. & E. Thompson's Robin; 2nd, John Williams' Swallow; 3rd, James McDermott's Charlie Valentine. Roadsters—Peter Beaver's Hambletonian King; 2nd, Wm. Ryder's Royal George; 3rd, D. Cummins' Jr. (Mount Forest) Valentine. Saddle horse—J. Heffernan's Orange Boy; 2nd, Donald & Carmichael's Goddard. Judges—George Moore, Waterloo; James Alexander, Waterloo; and T. Ellis, Milton.

ACTON SPRING STALLION SHOW brought together a number of good horses, of which the following were given awards: Heavy Draught—John Duff's Reform; 2nd, A. J. & J. D. Currie's Lion Chief; 3rd, Adam Cook's Davy Lad. Canadian Draught—Brook Swackhammer's Honest Tom; 2nd, J. & T. McKenzie's Renfrew Jock; 3rd, Freeman Thomas' Young Bryant. General Purpose—W. Hull's Norseman; 2nd, George Davis' Patroclus; 3rd, Thos. McCutcheon's Young Gladstone. Carriage—John Williams' Swallow; 2nd, Jas. McDermid's Charlie Valentine; 3rd, James Matthew's Pure Gold. Roadster—Wm. Kyder's Royal George; 2nd, D. Cummins' Valentine Jr.; 3rd, J. A. Watson's Crown Eclipse. The judges were Messrs. W. B. Smith, Toronto; Jas. Alexander, Waterloo; Wm. Young, Binkham.

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Messrs. John Thornton & Co. will sell by Auction without any reserve at Streetly Hall, Linton, Cambridgeshire, on July 22, 1890 the entire remainder of this noted flock of Southdowns, bred entirely from the old Babraham Flock of the late Mr. Jonas Webb and comprising 250 yearling Rams and ewes (being the lambs of 1889).

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1 Bull, aged 5 years; 1 Bull, aged 19 months; 1 Bull, aged 14 months; 1 Bull, aged 12 months. All of Dom. S. H. H. B. registry, except the bull aged 19 months, which is eligible to N. S. H. B.

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Important Auction Sale

Purebred Clydesdale Fillies!

MR. H. H. HURD will sell by Public Auction at his farm in Burlington, County of Halton, on Wednesday, JUNE 18, 1890, Commencing at 2 p.m., the following

PURE-BRED REGISTERED CLYDESDALE STOCK

- 1 Bay Filly, Maud of Oakwood, [775] Vol. III; foaled May 26th, 1887, sire: Alex Macgregor (imp.) [123].
1 Light Bay Filly, Maid of Oakwood, [773] Vol. III; foaled June 5th, 1887, sire: Morris Ranger (imp.) [121], (3850).
1 Brown Filly, Queen of Oakwood, [774] Vol. III; foaled June 4th, 1887, sire: The Bright (imp.) [121].
1 Bay Filly, Aggie of Oakwood, [769] Vol. III; foaled June 4th, 1888, sire: Lord Lie steuant, (imp.) [975], (4529).
1 Brown Filly, Belle of Oakwood, [779] Vol. III; foaled June 14th, 1888, sire: Pride of Perth, (imp.) [282], (2336), 2264.
1 Bay Filly, Nellie of Oakwood, [772] Vol. III; foaled May 24th, 1888, sire: Pride of Perth, (imp.) [282], (2336), 2264.
1 Bay Filly, Maggie of Oakwood, [771], Vol. III; foaled June 5th, 1888, sire: Morris Ranger, (imp.) [121], (3850).
1 Dark Brown Filly, Martha of Oakwood, [995] Vol. IV; foaled March 25th, 1889, sire: Prince of Airs (imp.) [530], (4641).
1 Chestnut Mare, Dancer [211] Vol. I; foaled June 22nd, 1884; sire: Lord Seafield (imp.) [34], (496). [This mare has a horse colt at her foot from Prince of Airs (imp.) [530], (4641).]
Also 1 Bay Horse Colt, 10 months old, from imported sire and dam, and eligible for registration.

All the above stock are in fine condition, and are bred by some of the best breeders in Canada. They are low set, blocky-built, and first-class stock, just the kind the farmers of this country should breed from.

The whole to be sold without reserve. Terms of Payment.—February 1st, 1891, on furnishing approved joint notes. Discount of 6 per cent. per annum allowed for cash.

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PURE BRED CLYDESDALES FOR SALE.

Imported Clydesdale Stallion, Benteo of Cullen (5537). Vol. 2, and also Imported Clydesdale mare, Geordie Vol. XII. Apply to, JAMES MCCOMBIE, Galt, Ont.

Horses for Sale!

SADDLE HORSE.—A beautiful bay, 7 years old, fine upstanding gelding, sixteen hands high and weighing about twelve hundred pounds. This horse is excellent under the saddle and an honest and stylish driver in every way. He is strongly muscled, clean limbed, and would make an excellent hunter. As a gentleman's horse none could be better. Will be sold reasonably.

ROADSTER.—This horse is a pleasing seal brown color, with superb action, and is a superior roadster. He is five years old, stands sixteen hands and weighs about eleven hundred pounds. He is stylish in appearance either standing or in action. Sound in muscle and limb and in every way a horse to be trusted. Terms apply to J. C. DIETRICH, GALT, ONT.

IMPORTED CLYDESDALE STALLIONS FOR SALE From three to six years old. We have just received a fresh importation, including the winners of several prizes in Scotland. A few Canadian-bred Colts and Fillies on hand. TERRANCE & BEATTIE, Summerhill Farm, Markham P.O., Ont.

BALLACHEY, Brantford, Breeder of Percherons, Shorthorns, Shropshires and Berkshires. Stock for Sale.

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To sell lambs or sheep, or any other species of live stock at the highest obtainable prices should be the aim of every farmer. You cannot secure the highest prices unless you breed the best qualities. You cannot breed the finer qualities unless you know how. To know how you must keep abreast with the times. To keep abreast with the times you must read THE CANADIAN LIVE STOCK AND FARM JOURNAL.

GALT SPRING STALLION SHOW brought out the following list of prize winners:

Heavy Draught, aged—1st, D. & O. Sorby, Bold Boy; 2nd, Peter Beaver, Harry Robb; 3rd, A. Marshall, Clydesdale Style.

Heavy Draught, 3 years old—1st, D. & O. Sorby, Craigie Var; 2nd, A. Marshall, Wonderful Boy.

Agricultural—1st, John Scott, Travers Hero; 2nd, I. W. Wambold, Dandy Boy; 3rd, Jas. Chandler, Sea Breeze.

Judge—Mrs. Innes, Clinton.

Carriage horses—1st, Jacob Anderson, Pilot; 2nd, Schultz & Heiming, Young Coachman; 3rd, Jno. Verth, Dick Rulleman.

Roadsters—1st, Peter Beaver, Hambleton King; 2nd, John Scott, Captain Smith; 3rd, Wm. Smuck, Young St. Jerome.

Juror—Jas. Palmer, Guelph.

BULLS.

2 year-old Durham—1st, John Fraser; 2nd, Jas. Scott; 3rd, Andrew Kersell.

3 year-old Durham—1st, Robert Clouston; 2nd, F. Lowell & Son; 3rd, R. Reimelton.

Sweepstakes—John Fraser.

Judge—James Laidlaw, Guelph.

MARKHAM SPRING SHOW, under the auspices of the East Riding of York and Markham Agricultural Societies, brought forward the following stock. The prize list reads:

Blood Stallions—1st, A. Gates; 2nd, J. Manuel.

Roadster Stallions—1st, P. Walden's General Crozer; 2nd, N. Cummer's General Brock; 3rd, J. Palmer.

Carriage Stallions—1st, A. Marshall's Son; 2nd, S. C. Sander, J. J. Joseph Leary.

Imported Clydesdales—1st, J. Fortnes's Lord Walter; 2nd, W. Beattie's Lord Lieutenant; 3rd, J. Bell's Arctican Boy.

Imported Clyde-Lites, 2 years—1st, Graham Brothers' Dangle; 2nd and 3rd, R. Beattie.

Canadian Draught—1st, J. McPherson; 2nd, J. McCraigh; 3rd, J. Lawrie, St.

Silver Cup—J. Fortnes's Lord Walter.

Gentleman's Driver (style and speed)—1st, Jan's Waite's Post House Boy; 2nd, J. Munshaw's Pacer; 3rd, James Lawrie.

Durham Bulls, aged—J. Isaacs.

Durham Bulls, 2 years—1st, J. Isaacs; 2nd, J. Little.

Jersey Bull, aged—1st, D. W. Reever; 2nd, Capt. R. Jeph.

Ayrshire Bull, aged—1st, J. Lawrie, Sr.; 2nd, W. J. Haycroft.

CARTWRIGHT SPRING STALLION FAIR was held at Bowmanville, and the following well known horsemen had their horses decorated with many tickets:

Clydesdale stallion, imported—1st, Henry Henders' Erskines Pride; 2nd, S. Graham's The Bright; 3rd, William McCall's Lord North.

Clydesdale stallion, not over three years old—1st, T. W. Evans, The Thistle; 2nd, T. W. Evans, Auchincleck.

Clyde, Canadian bred—1st, John Henders' Prince Imperial.

Roadster stallion—1st, H. McK. 1776; 2nd, Hambleton King; 3rd, Robert Taylor's Ontario Snaguit; 3rd, Wesley Henders' Clear Grit.

THE BROUGHAM SPRING FAIR was a success. The following are the prizes won in their order:

Draught stallion, aged—John Miller & Sons, Beattie & Middleton, Mann & White.

Draught, year old—Arthur J. H. son, John Miller & Sons.

Canadian Draught stallion—John McPherson, James Davidson, Cherrywood.

Blood mares—James Davidson, Cherrywood, James Found, Dunkerton.

General purpose team in harness—James Found.

Road or Carriage stallion—George Sterricker, T. H. Daniels, John Robson, Brooklin.

Carriage Blood mares—George Davidson.

Carriage team in harness—G. Perry, Urish Young.

Single driver—1st and 2nd, James Lawrie, John Buss.

Fastest trotting mare or gelding—James Lawrie, J. H. Buss.

Fastest trotting stallion—George Sterricker, T. H. Daniels.

Thoroughbred stallion—John Wylie, Bowmanville.

Durham bull—Major & Whiston.

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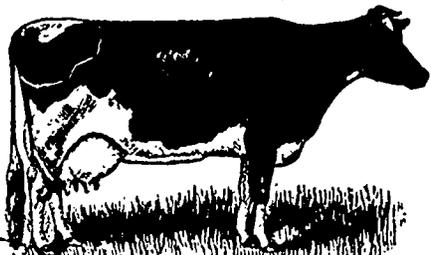


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Stock of all Ages and both Sexes for sale from above Families. Prices reasonable considering quality. Send for Catalogue. 16/462

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Breeder of Choice Devon Cattle. During the past five years, at the leading Exhibitions in Canada, my herd has stood first whenever shown, winning five Diplomas, one Gold, thirteen Silver and one Bronze Medal. Stock for Sale including Berkshire Pigs, Cotswold Sheep, and Plymouth Rock Poultry. 318

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CRESCO, = IOWA.

120 HEAD. 20 Males and 15 Bulls of Cruickshank Families Proper.

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Numbers considered the quality of this draft has never been excelled at public sale in the West. Sooner than incur the trouble and expense of sale in Chicago, I shall pay half the freight on all purchases to destination.

The larger part of sale draft is made up of Scotch-topped animals, including many show-beasts. A Canadian by birth, and a liberal purchaser at various times, of the best Scotch cattle to be had in Canada, I extend to my Canadian friends a cordial invitation to visit my sale and secure some now popular Cruickshanks.

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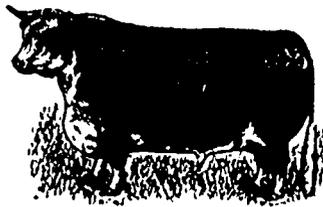
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Remedy for Barrenness.—Parties having barren mares or cows, irregular breeders, will learn something to their advantage by addressing H. W. Campbell, Raune, Wis. 324

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THIS herd is remarkable for the number and uniformity of the good calves that it produces. It has taken a 1 the Medals given in the Province of Quebec, at leading exhibitions the last three years. Breeders who are anxious to get bulls or females with plenty of hair and of good quality and good milk producers, should see this herd before purchasing elsewhere.

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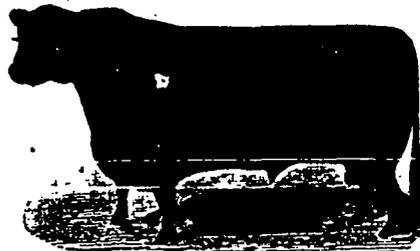
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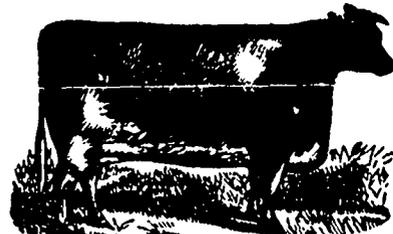
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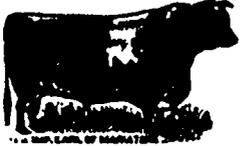
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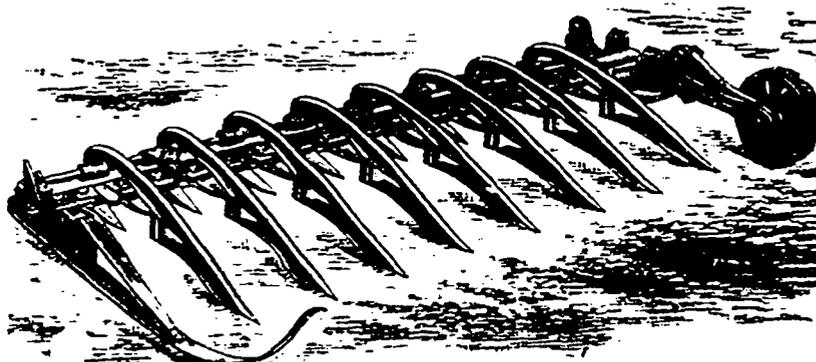
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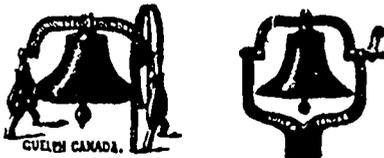
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