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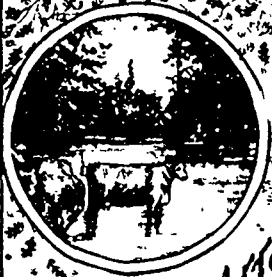
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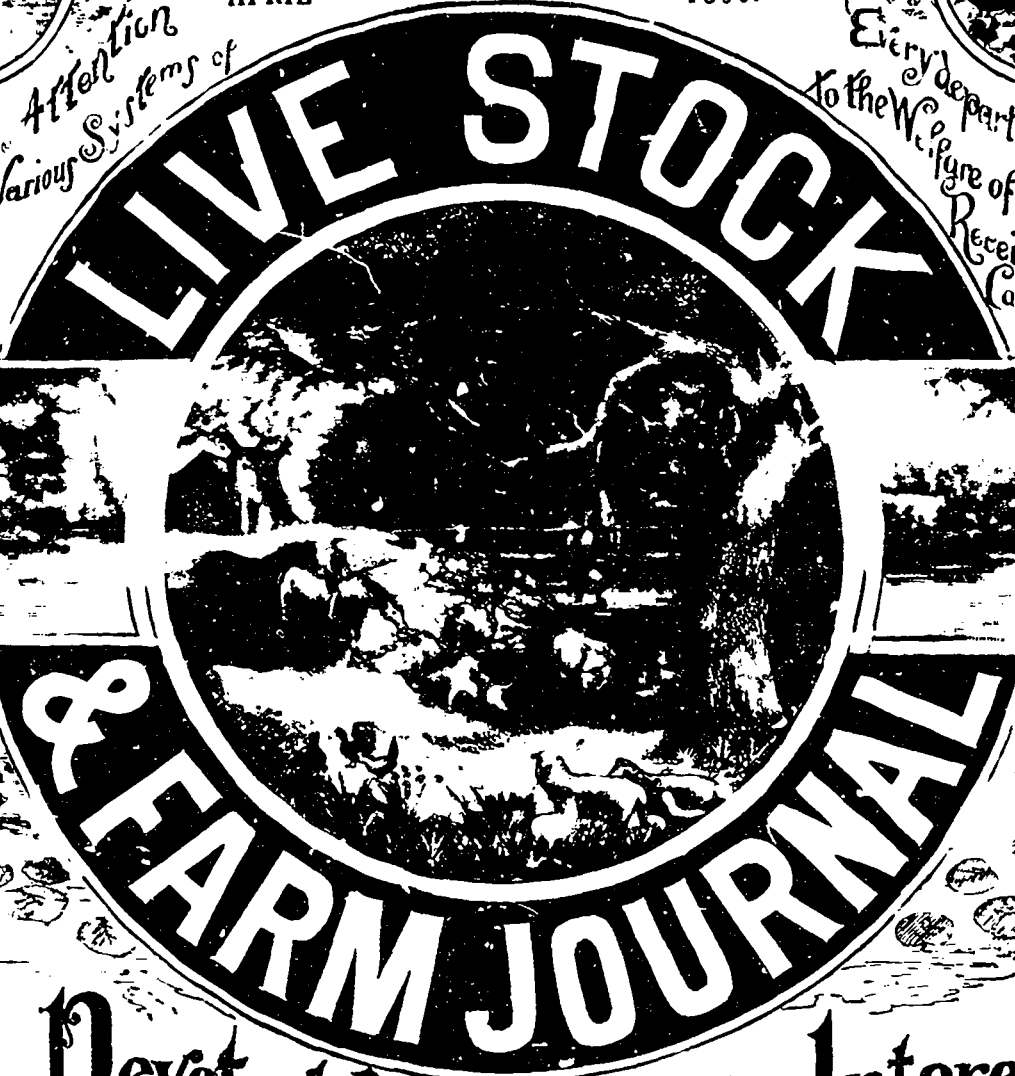
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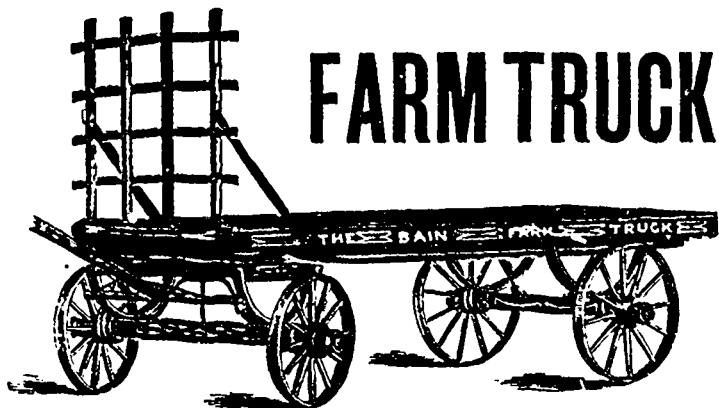
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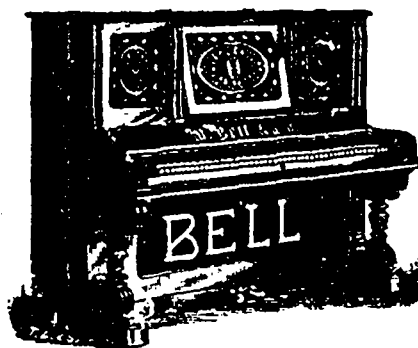
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GENTLEMEN—This is to certify that I used one ton of your Sure Growth Fertilizer on barley, spring wheat, oats and corn, and must say am well pleased with it. Am satisfied that the yield was better and also obtained a good stand of clover. The season being very bad owing to the excessive rains in the spring followed by extreme drought, we did not get as good results as had there been a favorable season. I also bought another ton in the fall to put on my wheat, and must say there is a marked difference where I used it and where I did not apply it; can recommend to all my brother farmers.
(Signed) **W. A. N. WEST.**

BEAMVILLE, Jan. 8th, 1890.
GENTLEMEN,—Have used your Fertilizer the past season, will say I am well pleased with results for the following reasons: 1st. My grapes were harvested a week or ten days earlier and berries larger and sweeter and ripened more even. 3rd. Vines in better shape for next year's crop. Also used it on pears with good results, they were smoother and more even in size, and am pleased to order another ton for this season.
(Signed) **SAMUEL M. CULP**

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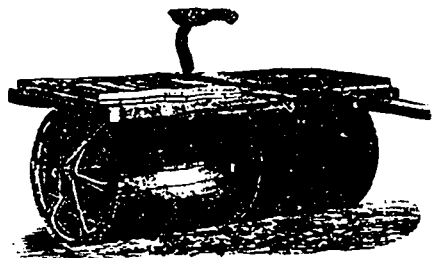


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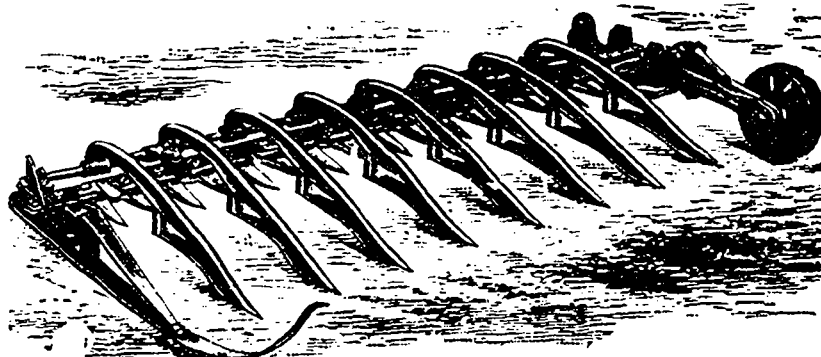
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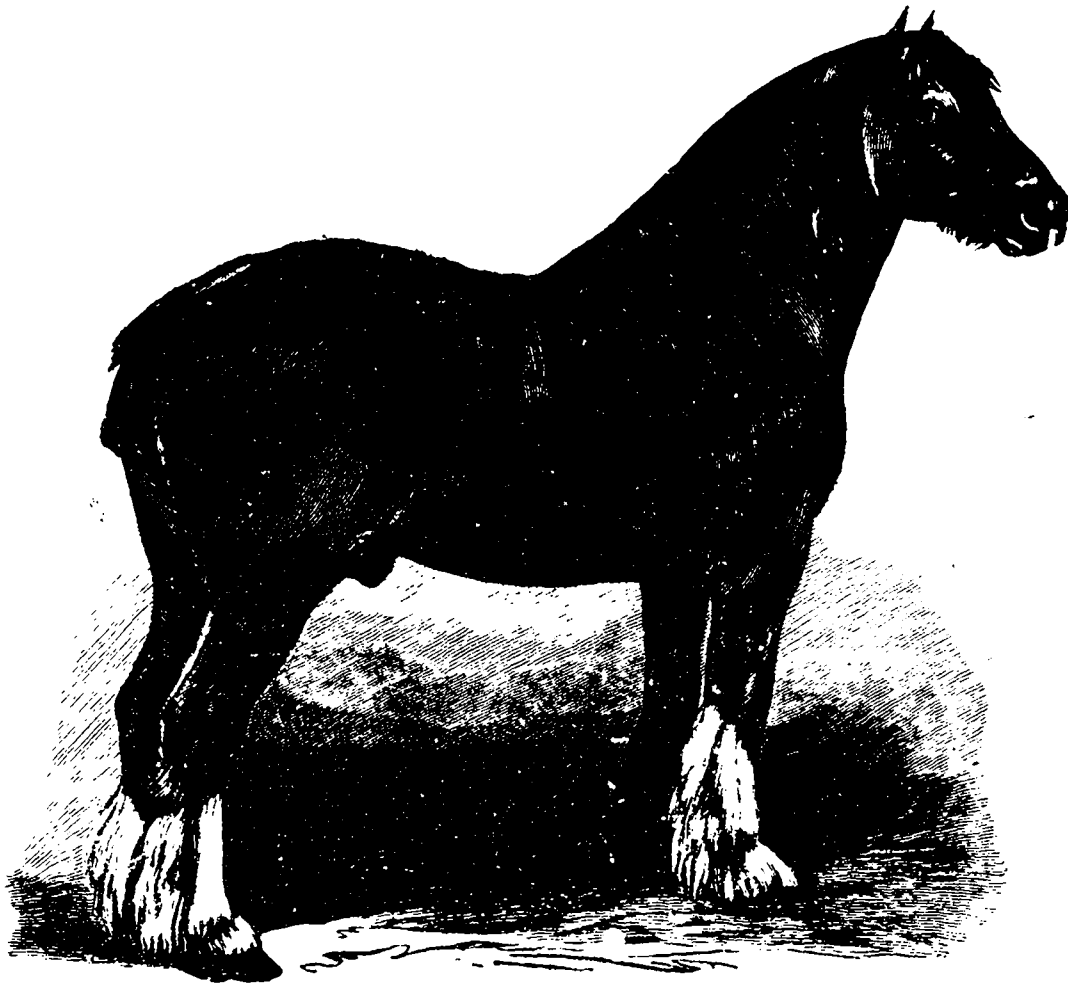
THE CANADIAN LIVE STOCK AND FARM JOURNAL

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

VOL. VII. No. 4.]

TORONTO, APRIL, 1890.

[WHOLE No. 78



A SHIRE STALLION.

Imported and Owned by Messrs. Ormsby & Chapman, Springfield-on-the-Credit, Ont.

Our Illustration.

The illustration that occupies our first page this month is an imported Shire stallion, Commander IV. (7045), from the widely known stud of Messrs. Ormsby & Chapman. As this establishment was described with complete details given in our last issue, we shall briefly confine ourselves to the subject of our sketch. This stallion was sired by Walpole Wonder (8584), and was out of the mare Bonny, by Matchless (1523), so that, in point of breeding, there is but little to be desired. In form this horse approaches near the typical Shire type, being broad and thick, while his bone and muscle are of a high order. In quality he is excellent, being finely furnished in all parts. Strength and substance are qualities that are abundantly his, judging from his muscular development and sturdy appearance. This horse has won a good record for himself in the show-ring, having secured, amongst other awards, 1st at Hamilton Central last year, and 2nd at Toronto Industrial the same year. We would direct the attention of our interested readers to the

extended account of the doings of this energetic firm, and the full description of this stud that appeared in our issue of March.

Our New Dress.

So many expressions of appreciation have we heard from our friends in respect to the yellow-colored cover of our Christmas number that we became restless with a desire to attach this pleasing feature to our regular issue, and the outcome of this has been that, in unison with nature and her untutored friends, we herald the spring in a brighter tunic. What more appropriate color could we have nailed to our mast? The source of all light is the yellow-tinted sun, and the piercing shafts, radiating from old Sol, that swiftly speed the plant in its work of storing up energy to give activity to animal life, are yellow in hue, and if we can make our luminary symbolic of light for the agriculturist, and if the rays that go out from our dress are half so effective in stimulating the minds of our

readers, no happier choice could have been ours. Then, there is the golden glamour, tinting the autumnal landscape, that is reflected from ripening harvests, which gladdens the heart of the husbandman and wreathes his face in genial smiles; and so, if our monthly harvests meet with as generous and pleasant a reception, no greater meed of reward could follow our new venture.

Our Schemes.

In the hog-raising and barley-growing competitions we have started well under way, we feel sure that our readers will find much to interest them. To secure the best results from these, we should have the vigorous co-operation of every stockman and farmer, for only by having this may we hope to gather data from the former of benefit to the live stock fraternity, and results from the latter of worth to our farmers. We would ask our friends to not only join in the hog-raising competition if the way is at all clear to do so, but also encourage the boys to enter the other, and thus give them a zest for farm work and life, that will everafter be theirs.

THE Canadian Live Stock and Farm Journal

PUBLISHED MONTHLY BY

The J. E. Bryant Company (Limited),
58 BAY STREET, - - TORONTO, CANADA.

Terms, \$1.00 per annum in advance.

To Subscribers.—The subscription price of THE CANADIAN LIVE STOCK AND FARM JOURNAL is \$1.00 a year, in advance. Single copies, 10 cents each; sample copies, free. The date to which each subscriber is paid is printed on the address-label of his JOURNAL. Subscribers continuing to take the JOURNAL from the post office after their time of subscription is expired, will be considered as desiring to renew their subscription. Notice to discontinue the JOURNAL should be properly sent to the publishers by returning the first number received after the subscription has expired. The publishers reserve to themselves the right to continue sending the JOURNAL to responsible persons until all arrears are paid.

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All communications should be addressed THE J. E. BRYANT COMPANY (LIMITED), 58 Bay Street, Toronto, Canada.

TORONTO, APRIL, 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.

With a fervent desire to have our farmers clearly realize that the most profitable line of work for them to follow is that of live stock husbandry, we have decided to devote our best energies and spare no expense to lay bare this fact so strikingly that no one, be he ever so deep in the ruts of custom, can fail to grasp the truth. We have convinced ourselves that through the swine industry we may best demonstrate this, because there is less difficulty in drawing up the scheme of competition with justice to all, and also because we may better carry it out. We would like our stockmen to feel that this is not undertaken especially to boom the swine industry, but mainly to prove indisputably to our farmers that stock-raising and its attributes will yield more profit than grain-growing. We view the matter in this light. Through showing the farmer the profits in swine raising, and inducing him to undertake such work, which he will readily do if shown beyond dispute that it is profitable, as there is little capital needed in starting, we may reasonably hope that the light will gradually dawn upon him with the result that he will aspire higher, and enter other branches of the live stock industry. For this reason we trust that every one interested in live stock matters will lend a hand, so that we may incontrovertibly prove to the farmer that it is to his interest to follow such lines of work.

Following out this idea, we shall offer a series of prizes to the value of \$72.50, divided as follows: value of first prize, \$25.00; value of second, \$20.00; value of third, \$15.00; and \$12.50 as the value of the fourth. These prizes are for the best marketable hog, and it should be remembered that they are additional to the market prices of the hogs entered, as Messrs. Davies & Co., of Toronto, have consideredately and liberally consented to pay the highest market price at the time for all that are entered.

In making the awards, the judges will give most prominence to (1) form and quality of the hog, keeping in view the market demands, and also to (2) the cost of production as determined by the food fed, and other items of expense, as well as the age of the pig or time of production. In regard to the first, the ideal hog will be small in the head, light in the jaw, long in the body, broad across the loins, full and deep in the hams, and light in the bone. The mixture of the fat and lean, as well as the nature of these, will be considered important. In respect to the second, as one of the chief features of this competition is to determine the profit, we must have clear certified statements as to the age, foods fed, and full details as to the cost of production, while the various items of management followed by the winners will be of interest merely for publication.

We will have printed forms ready shortly to send out to all intending competitors, and we would ask all thinking of entering

to send in their names at once. In the meantime all that is necessary is to note the date of birth, and the various items of expense, so that the forms may be readily filled out. We may say that the prizes will be further supplemented by others, given by public-spirited men. We shall, as soon as possible, give the limits of time between which the hogs should be shipped to Messrs. Davies & Co. Remember this costs you nothing, and that you stand a chance of winning a handsome prize, besides obtaining the highest market price at the time for your hogs. We would earnestly ask all to give us their heartiest co-operation in this matter, for the value of the results to the live stock fraternity, and our farmers will depend greatly on the warmth of the interest evinced by all. If further details are desired, a postal card addressed to us will be readily answered.

The Quality of Pork.

It has long been known to those handling and feeding pigs for market that the foods that are fed have an influence more or less strong on the quality and character of the pork. Peas are credited with producing firm flesh that shrinks but little; skim-milk is a white pork, inclined to be chalky; barley is thought to yield a bacon soft and oily; while corn-fed bacon is stated to be of medium firmness, and possessed of the peculiar quality of being able to retain its oily substance while being cooked; bran middlings fed alone have won the reputation of giving a pork inclined to be insipid, but when these foods are mixed with milk they are said to yield pork of the finest qualities. The question of the influence of different foods on the proportion of fat and lean was not much discussed until Prof. Henry, of Wisconsin, brought it out prominently through extended experiments. While these experiments are very important, in so far as they clearly show the effect of the different foods in determining their proportion, yet the fact should not be overlooked that there are other elements of stronger influence that have their effect also. In the breed, the disposition of the animal, the quantity of exercise, are to be found elements that, to our mind, over-balance the single one of food in determining the quality of the flesh. The aptitude to fatten shown in any breed of domesticated animals depends principally on the degree to which the members of that breed have been selected with suitable disposition for laying on fat. Look into the examples that the human race offers in respect to the matter of disposition. The person inclined to obesity through his disposition, though he may partake of the same food as one not of like disposition, waxes fat while the latter does not. The other conditions may also be the same, yet owing to the difference in disposition the two very different results follow. It appears to us that the same is applicable to quadrupeds, as much as it is to bipeds. The exercise the pigs get will, no doubt, prove an element in determining the quality of the pork, for it is well known that excessive fatness is almost impossible if exercise is given or taken. The quality of pork being an important factor in influencing the market, demands our special attention. It, therefore, becomes a matter of consequence for the feeder to use a pure-bred sire, individually representing the desired disposition, and of a breed that is known to possess this characteristic, and further, to give the pigs the conditions of management and food that will best tend to keep them healthy and vigorous.

Placing Corn on the Free List.

While we have considered it more in our province to utilize our forces in advocating measures that have to do with the individual efforts and enterprise of the stockman and farmer, yet we feel our position as a

defender and promoter of their interests calls for a plain and pronounced statement in regard to the corn question, which is now exciting so much discussion. There are two opposing points of view from which to look at this question, namely, that of the stockman who buys most of the grain he feeds, and that of the least progressive farmer, who sells off his farm all the grain he can raise upon it. These are the two extremes between these are those who more or less follow the two lines we have indicated. The former finds that there are few foods that will yield as much to pork, beef, or butter, as corn fed in its different forms to pigs, steers, or dairy cows, respectively; and also in view of its cheapness, especially if it were put on the free list, the feeder pronounces it to be one of the very best foods at his disposal. The fact must be accepted, that the stockman must look for his profit in these days almost solely through lessening the cost of production, and to enable him to get this down to rock-bottom, he must get the foods that he feeds at the lowest price, for the buying of food is the chief item of expense in fattening steers, raising pigs, or maintaining a herd of dairy cows. Not only for feeding purposes is corn in strong demand, but also for the making of ensilage. The silo is the greatest profit-making ally the farmer has ever enlisted in his service, and for the purpose of making silage no plant equals that of corn, and to get good seed of the best varieties for ensilage, he must import it. The feelings of those farmers that are exporting the grain they raise on their farms have certainly a claim for consideration, as they are the ones that most need a helping hand; but the best way to lend them a hand is to guide them into the buying of coarse grain for feeding stock, rather than the selling of it. There is no doubt but that the free importation of corn would cause a slight drop in the price of oats or some of the other coarse grains, but if this duty is kept up with the purpose of encouraging the selling of coarse grain (as it is, though it may not be avowed), and it succeeds in its aims, then it favors a system of agriculture that, if generally adopted, would imprint ruin on even our fertile acres. The placing of corn on the free list would encourage farmers to feed it and grow it for ensilage purposes, and in this way ring in a better system of agriculture that would abundantly increase the prosperity of our farmers. We hope that the Government, in keeping with the spirit they have shown in the establishment of experimental farms, will reflect the same sentiment of good-will to our Canadian farmers, by seeing that the corn question is rightly dealt with in the promised tariff changes.

Fall or Spring Calves.

There is much difference of opinion, even amongst farmers, as to whether calves should come to hand in autumn or in spring. While there are some good reasons which may be advanced in favor of either view, we cannot but conclude that, taking all things into consideration, the autumn is the best time to have calves come to hand that are intended to be kept.

The following are some of the more important arguments in favor of this view:—1. The farmer has more time to feed and care for them. When the calves come, say after October or November 1st, he can give them that careful attention which is necessary if they are to be of the first order. Even though time be taken to feed them properly in spring and summer, the process is costlier, in the sense that time to the farmer is worth at least twice as much in the summer as in the winter. When reared in the winter,

they are always at hand where the other feeding is going on. They can therefore be attended to with not very much cost for labor.

2. They may be *summered* cheaply the first season. When a calf is ready to wean in spring, say upon the approach of grass, it then grows on evenly without any period of stagnation in development, as grass of itself at that season of the year makes a very suitable food.

3. The spring-time is the most suitable for *weaning*. When a calf is weaned in autumn on the approach of cold weather, unless it is well nursed and fed with much care, it will not continue to grow as rapidly as it should. Careful and attentive feeding are not only required, but a kind of food must be given which is costly compared with grass, the ration given to the spring-weaned calf.

4. The autumn calf will cost less to winter it the *first* winter after weaning. The spring calf, being weaned in the fall, will require not only care and more costly food as mentioned above, but this will have to be continued quite on until spring, whereas the other may be fed comparatively cheap food, a portion of which may be straw with a ration of roots or ensilage.

5. Calves which come to hand in autumn may be sold at a more suitable *age* than the other class. They will be ready for market, if beef-making is the object, at two and one-half years, which is certainly a very suitable age. They can seldom be made quite heavy enough at two years, especially if raised on skim-milk, and this would be the age at which they would require to be sold when they come in the spring, or else they would have to be kept over until the third year before being disposed of.

6. The milk has less of a tendency to produce *scouring* in the winter than in the summer. This is because of the less succulent and sometimes the less nutritious nature of the food fed, and the difference which it makes in the ease with which calf-raising may be conducted is considerable.

7. Having calves come in the fall is exactly in the line of *winter-dairying*. The milk required is forthcoming at the proper season, and is abundant in supply. Where the milk is made into butter, the skim-milk may be utilized in the most profitable manner in rearing calves.

The principal argument in favor of having calves come in spring time is that the milk on which they are fed costs less to produce it at that season, while the dams may be wintered at but little expense. We cannot but conclude, however, that the balance of argument is quite in favor of rearing calves in autumn and early winter, and those who agree with us will govern themselves accordingly.

With the Stockmen.

COMMENTS OF A RAMBLER.

The breeders of pure-bred cattle that smother their whims and fancies of little import for those that prove strong factors in profit making are not over numerous, so that when one happens upon a herd reflecting the work of a breeder of this kind it becomes the more strikingly noticeable, and doubly so when behind this there is the blood of the most fashionable strains. Blending utility with breeding is a work for the master hand, and I must say that to attain that end Mr. Andrew Holland, of Ottawa, with his herd of Jerseys, has launched well under way. Mr. Holland has in all twenty-five head, twelve of which comprise the herd of the Hon. Mr. Tupper, Minister of Marine

and Fisheries. The foundation animals of what is known as the "Tupper herd" were two imported cows, Lady Mignome 40140, and Lady Bellerobe 40409, typical dairy animals, solid in color, with black points, and though, we are informed, not heavy milkers, yet very rich butter cows. Lady Mignome was sired by Conquest, P.S. 428, and Lady Bellerobe by Baron 2nd, P.S. 428. From the herd of Mr. A. P. Ball, of Stanstead, Que., nine other registered cows were chosen, while four handsome yearling heifers were selected from the herd of Mr. Beeman, of Belleville, Ont. The useful type and vigorous appearance presented by almost all of the cows of this herd was one of the strongest impressions of it that I have. They were of good size, strong in bone, deep ribbed, broad loined, and wide in the quarters behind, and further, they are rich in the blood of such strains as St. Lambert, Victor Hugo, and Scituate. The bull at the head of the herd is Armsdale's Pride 18471 A.J.C.C. This bull is not only a superior individual, but he is also of the best of breeding, having been sired by Grand Master Pogis 14121 A.J.C.C. He is an animal of excellent form, lusty and vigorous, with many prominent evidences of worth as a dairy sire. No better evidence of this, however, is needed than a view of the excellent lot of young calves containing a number of this bull's get. There are in these stables a fine collection of young animals, numbering thirteen in all, ranging in age from eight to ten months old, so that it would be an easy matter to make a selection here. Mr. Holland has been using corn silage for some time past, having two silos in his stables, and he has found that for feeding to dairy cows it cannot be surpassed. Mr. Holland supplies patrons in Ottawa with butter made from the milk of his Jersey cows, and there is something significant for butter-makers in the statement he made to us, "I cannot supply the demand for Jersey butter this winter, at 30 cents per pound."

FOR THE CANADIAN LIVE STOCK AND FARM JOURNAL.

The History and Breeding of Bates' Short-horns.

By R. GIBSON, Delaware, Ont.

[SEVENTH PAPER.]

ROBERT COLLING'S RED ROSE, OR CAMBRIDGE ROSE TRIBE.

If to the Duchess tribe we must ascribe the place of honor as being the best, the most noted, and valuable of all the tribes possessed by Charles Colling, with equal right may the same place be assigned to the Cambridge Roses, as being the most valuable and best known of any of the tribes descended from the herd of Robert Colling.

There is no better pedigree in the Herd Book, descending, as it does, through a long list of noted ancestors to the very pillars of the breed. Commencing with Hubback, then Foljambé, the sire of Favourite's dam, then Funch, the son of Hubback, followed by Favourite, then Yarborough, who was sire of Red Rose 1st, the foundation cow purchased by Mr. Bates, from Mr. Hustler, in 1819.

The legend in connection with this tribe (you know all old respectable families have either romances attached to their history, or a ghost to their castle) is, that a Mr. Hustler, on coming to New York to enter into business, brought with him from Yorkshire some Short-horns, and on his return took one of the cows back with him, her sister Red Rose having in the meantime become quite celebrated in England. It is through the American cow that was taken back that all the Cambridge Roses trace their descent. In the

English Herd Book, Vol. I. p. 457, we find the following entry: "Red Rose, red, calved in 1811, bred by Mr. Hustler, the property of Mr. T. Bates; got by Yarborough, dam (bred by Mr. R. Colling, and called the American cow) by Favourite," etc. Mr. Robert Colling and his brother breeders appear to have held this sort in great favor, as at his sale, in 1818, the highest priced bulls as well as females, except one, were of this tribe.

Red Rose (a sister to the American cow, according to the Herd Book, but in R. Colling's sale catalogue her dam is given as being by Ben, instead of by Punch, as in the Herd Book)—at the time of the sale she was 17 years old—had been a magnificent cow, but was patchy. "Moss Rose by Favourite, her daughter, by her own sire Favourite, was a very good cow, a handsome roan, very even, wide, and massive, of fine symmetry and quality, but by some thought to be rather small," (Thornton's Circular) being 11 years old, and not likely to breed, was withdrawn. She had been a regular breeder, especially of bulls, amongst the most celebrated being Midas, who was let to Mr. Robertson, of Ladykirk, for three years, at 300 guineas. He made, in all lettings and sale, 1100 guineas or \$5500. He was bought by that shrewd judge and noted breeder, Mr. Sam Wiley, when 10 years old, for 270 guineas, and though he only left him two calves, both bulls, he was well repaid for his outlay. Red Rose was also the dam of Pilot, purchased by Mr. Booth, for 270 guineas, and perhaps no bull ever left his work for good on a herd to the same extent as Pilot did in that of the Booths; his influence was felt in the Warlaby, as well as those of Studley and Killerby.

Lancaster, purchased by Messrs. Simpson & Smith, for \$3100, was a white, by Wellington, out of Moss Rose above. Mr. W. Smith, who was one of the largest purchasers at this sale, was tenant of a farm which my father afterwards occupied; he was also a noted breeder of the Dishley, afterwards called Leicester sheep. When a boy, I have often listened to the old herdsman describe the Dishley herd, and have since regretted that I did not make notes at the time. I, however, well remember his making the remark, speaking of Lancaster, "he hadna enough middle," he "liked Ketton better."

Of the females of the tribe sold at the Barmpton sale, but little need be said; they went into different herds and gradually dropped out of sight. It must not be forgotten that the sale took place four years before the first Vol. of the Herd Book was published; hence the reason so many pedigrees were lost or carelessly preserved. Too many breeders of that day were of the same opinion as Mr. Clay, of Kentucky, that no herd book could give as good a pedigree of their cattle as they could: "My word is sufficient, Sir!" Forgetting, or not realizing, that the herd book did not interfere with their right to give a pedigree, but that it merely placed on record and preserved such.

The Cambridge Roses all descend through the American cow, sister of Red Rose above. On being acquired by Mr. Bates in 1819, he bred her to His Grace, a Duchess bull, and named the offspring Red Rose 2nd, and she, by 2nd Hubback, bred Red Rose 9th. Now 2nd Hubback was by the Earl, out of Red Rose 1st by Yarborough, so the inbreeding commenced. 2nd Hubback has been very much criticised. Mr. Whitaker describes him as having "beautiful fore quarter, hind quarter poor, space large." Mr. Bates "considered him the best bull he ever had." He was a light red with lemon muzzle, and as perfect in his points as could be desired, at the same time evenly and smoothly covered with flesh of the best possible quality. The Druid,

writing in 1870, remarks: "His (Mr. Bates) idolatry for this bull did his herd no small harm, and it was only when he found that he had lost 28 calves in one year, solely through lack of constitution, that he began to cast about and in vain applied to Mr. Whitaker for his famous Frederick." I have perhaps occupied too much space over this matter, but as 2nd Hubback was a bull of the family we are considering, and one who has caused a good deal of controversy one time or another, I have thought this would be the proper place to go more fully into his history. Perhaps if we take a medium line and say he was a good individual, but as a stock-getter neither much better nor much worse than the average, we shall not be far out; though I believe it is generally conceded that from him the fine mossy coats and good mellow handling hides can be traced. Had his sire, the Earl, been lucky enough to live, I think without doubt he would have proved a much better stock-getter. Red Rose 9th produced Cambridge Premium cow by Belvedere.

At Mr. Bates' sale, 3 females were offered. Mr. Balden purchased Cambridge Rose 5th, by 2nd Cleveland Lad, and afterwards acquired Cambridge Rose 7th, and she bred for him the noted bulls, Duke of Cambridge, used by Sir Charles Knightley, and also 2nd Duke of Cambridge.

Cambridge Rose 6th, purchased by Mr. Harvey Combe, bred at Cobham Park eleven calves, the most celebrated being The Beauty and The Buck by Puritan, the latter being used on that branch of the Barringtons known as the Lady Bates. From The Beauty, by Puritan, descend Mr. Alexander's Audely Roses, Lord Braybrook's late Heydon Roses, and Mr. C. Lynn's most excellent family of Red Roses.

Cambridge Rose 6th also produced Moss Rose by the Gwynne bull Marmaduke (a celebrated show bull, and Thorndale Rose, by 4th Duke of Thorndale. Moss Rose was purchased when 8 months old for \$1300 by Mr. Hale, at whose sale she was sold to Mr. Betts for \$1250, and for whom she bred the noted bull Royal Cambridge; for Mr. Foster she bred Royal Cumberland, she was then sold to Mr. D. R. Davies for \$2000, and for him bred Royal Chester and Royal Lancaster. I have been a little prolix in the history of Moss Rose, as I wish particularly to call attention to her as a bull breeder, the one of the family that has distinguished herself as such.

The Suffolk Punch.

To know that any breed comes through many decades possessed of fixed attributes and qualities, which each year of repetition deepens and makes more stable, certainly adds to the worth of that breed, for it is a known principle of breeding that the further back any breed may trace in its distinct features, the greater the tenacity of these and the stronger the influences necessary to obliterate them. This is shown markedly in the subject of our sketch, for though strains of alien blood were often infused, yet but few of these were successful in any way of modifying the form or wiping out the more fixed characteristics of the original type; while, on the other hand, crossed upon others, this same prepotency that shields so successfully their own peculiarities from being obliterated asserts itself strongly when used for grading or crossing purposes.

As to the origin of the breed, chroniclers of ancient times cannot carry us back far enough into the ages, but the assumption has been made, solely on the common ground of color, that the Suffolks are connected with the race widely diffused throughout the north of Europe and Asia, from the Scandinavian

Alps to the plains of Tartary. It is believed by many to have been introduced into the eastern counties of England from Normandy, which, it is stated, yet possesses many excellent horses of this breed, introduced, as Low affirm, by the Scandinavian invaders. Writing in 1741, Arthur Young, commenting on the sorrel horse of his time, asserts that they were very low in the fore end, having a large, ill-shaped head, with slouching, heavy ears; a great carcass, and short legs, and concludes by saying that an uglier horse could hardly be viewed. The redeeming features of the older breed that made them especially valuable were their steadiness in hauling and the honesty of their work. At a pull, no breed could equal them in their dogged resolution.

About 1800 improvement began, as there was a general waking up of English horsemen at this time, and all breeds began to make more rapid progress. Commenting on the breed at this stage, Jerry Cullum states that clean legs and well-formed shoulders are criterions of the true Suffolk, points which enable them to be good movers.

A new era may be noted from the appearance on the scene of Crisp's noted horse in 1768. The old Suffolk changes in type after the introduction of this horse with marked improvement in many features. After this, a couple of horses were brought into the Suffolk district from Lincolnshire, one a trotter known as Blake's Farmer. The effect of this was to add to the activity of the breed, while the other referred to from Lincolnshire, called Farmer's Glory, appears to have added much to the size of the breed as a whole, as instanced by the fact that Munn's Bover steeple-chase stallion, standing, it is stated, 18 hands, and weighing a ton, won the cup at Saffron Walden, in 1840, as best stallion at the show. Suffolk Champion was one of the best of this strain, he being 17½ hands high, red chestnut, weighing thirteen hundred weight. Passing over a period of next infusion worthy of note is the thoroughbred blood. These infusions mentioned may be said to be the only ones that have had effect in moulding the Suffolk of the day. Cully, writing in the early part of the present century, says that "their merit probably consists more in constitutional hardness than in shape, being in general a very plain horse. Their color is mostly yellowish or sorrel, with a white ratch or blaze on their faces. The head large, ears wide, muzzle coarse, fore end low, back long but very straight, sides flat, shoulders too far forward, hind quarters middling, but rather high about the hips, legs round and short in the pastern, deep barrelled and full in the flank. Here, perhaps, lies much of the merit of these horses, for we know from observation and experience that all deep bellied horses carry their food long, and consequently are able to stand a longer and harder day's work." Stonehenge says the improved Suffolk is lighter and quicker than the older breed, with a low powerful shoulder and a very drooping croup. The claims for the Suffolk made in the stud book assert that "as an agricultural horse suitable for all purposes of British agriculture—smart between the shafts, active in the harness, quick at the ends of the plough, a fast walker on the harrows, and a staunch slave at the collar, be it flour, lumber, or chalk behind him, is unsurpassed by any breed of horses in England or Scotland either." The fact is cited by their admirers, as a proof of their good qualities, that from 1839 to 1861, when the cart horses were exhibited in mixed classes at the Royal of England, during those years, the Suffolk stood first fourteen times out of a possible twenty-three. A recent writer on these

horses makes the following observations: "A neat little thoroughbred pony head is to be deprecated, and we stipulate for what is termed an old-fashioned Websterian, sensible, well-proportioned, bony, and angular one, deep in the jaws, with room between them to bury a pint bottle, plenty of width between the bold but kindly eyes; an open, pliant nostril; full, but muscular and not pendulous lip; ears medium-sized and alert; a *couçon* of Roman nose is not objectionable, and the whole should betoken calm determination with high lineage. A game-cock throttle can be no drawback to any horse. A well-turned, massive, hard crest, denotes a powerful splenius muscle and consequent power. The neck should be thick through, muscular, and very deep in the collar. The mane, flaxen for choice, must be as fine of texture, and with the nacreous lustre of floss silk. The "low shoulders thick on top," spoken of by Youatt, have been bred out, and though some breeders think that the well laid back, sloping shoulders of the Suffolk of to-day militate against draught, but as it adds to activity, and induces sprightly action, we hail the efforts in this direction. A short, strongly muscled neck is invariably accompanied by an iron constitution. "The long hours," writes Mr. Biddell, "without food, which seems a noted practice all over the country, renders a roomy carcass a positive necessity. A Clydesdale or Shire bred, with a light middle and short rib, may do in London, where the nose-bag is always at hand, but the long day and short rations, from 6.30 to 3 o'clock in the plough in Suffolk, will reduce a horse of this form to a skeleton." The distinctive and valuable points of the Suffolk may be summed up to be prepotency, constitution, stamina, and activity.

The Suffolks have gained a foot-hold in Canada, as the observers at the Toronto Industrial would be well aware from the excellence of the exhibit there. The chief breeders and importers of the breed within Canadian borders are Messrs. Irving & Christie, of West Winchester, Ont.; Snider & Edmonston, of Brantford, Ont.; A. & J. W. Salmon, of Thorndale, Ont.; J. Beck, of Thornburg, Ont.; and A. J. Clinton, of Kerwood, Ont.

Sheep Breeding.

A PROFITABLE INDUSTRY.

Read by ALDERMAN FRANKLAND, of Toronto, before the Dominion Sheep Breeders' Association, March 14th, 1898.

Why not followed in Ontario to a greater extent? Grain crops don't pay, and cattle are not as high as they were, yet the Canadian farmer realizes three-quarters of a cent more for his fat cattle per pound than the feeders of the United States.

Sheep are high and indeed very scarce, but a man may travel all through Ontario for a year and he will never see from out of a railway window 100 sheep in a flock; if he does they are the collection of some drover who has collected them together in twos and threes, awaiting shipment to some market. Of late years, owing to the higher price of Down wools, the use of rams of the larger Down breeds upon the Leicester and Cotswolds' cross that constitutes the common sheep of the country has been prevalent, and we must admit there has been an improvement both in mutton and fleece. All, however, are brought up to leave the country and our stock is short. Our farmers should turn their attention to sheep, for sheep demand only little and very light attendance. 200 sheep can be cared for as easily as 20 cattle in winter; they should have the run of big pens with constant access to an outside run, for

sheep more than any other animal must have exercise and fresh air, be it ever so cold. They don't like damp weather, but cold weather they do not mind. There are no stalls to clean out, no chaining and unchaining, no milking, no conveyance of milk to the factory. The litter of a sheep pen need not be moved until the spring; they get higher but no harm is done, and it is the best manure a farmer can put on his land. In summer it is easier to move 200 sheep from one enclosure to another than 2 head of cattle; they follow readily, and there is no racing about after them. It is calculated that seven sheep eat as much as one bullock eats in five mouthsful, whereas the sheep's tread is known as the "golden foot." Our natural June grass or wild pasture is exactly suited to them, and they only want an occasional top-dressing and chain harrowing to make as good and close as a Southdown of Hampshire or Sussex. If farmers would become flockmasters they could do with half the fencing, and sheep follow cattle to great advantage. The "big bite" of grass in early June can be fed off by cattle, finished with some meal on the grass; the sheep follow and bite closer and like a short

be adopted, but I am not speaking of the sheep breeders and importers who have select breeding flocks and sell for fifty dollars a head. What we are talking of is, why should not flockmasters of 300 or 400 good mutton sheep take the place of the scraggy, wretched, half-dozen crosses, that one sees around the outbuildings of most of our farmers, and from which the itinerant drover has to procure his wares? I think no good reason except the dog worry exists, for keep and care are both cheap and so are the buildings. The cheaper and airier these are, the better the sheep will do. Costly buildings and frost-proof would be worse than thrown away upon them. Are not all these reasons for trying sheep farming here? Early lambs are in great demand in large cities, and there is no risk in having lambs come in dry cold weather if 24 hours' protection is afforded to the little ones. If proper precautions were taken, I believe there would be no greater death rate among lambs coming in January than in May, and the ewes will take the ram after the first cool nights in August. But early lambing is not the only recommendation. Sheep are scavengers and eat away the weed crop in the fence

they have better carcase and better fleece, and it pays, as also does early pasturing of them on rye, which can then be ploughed in time for the spring crop of something else.

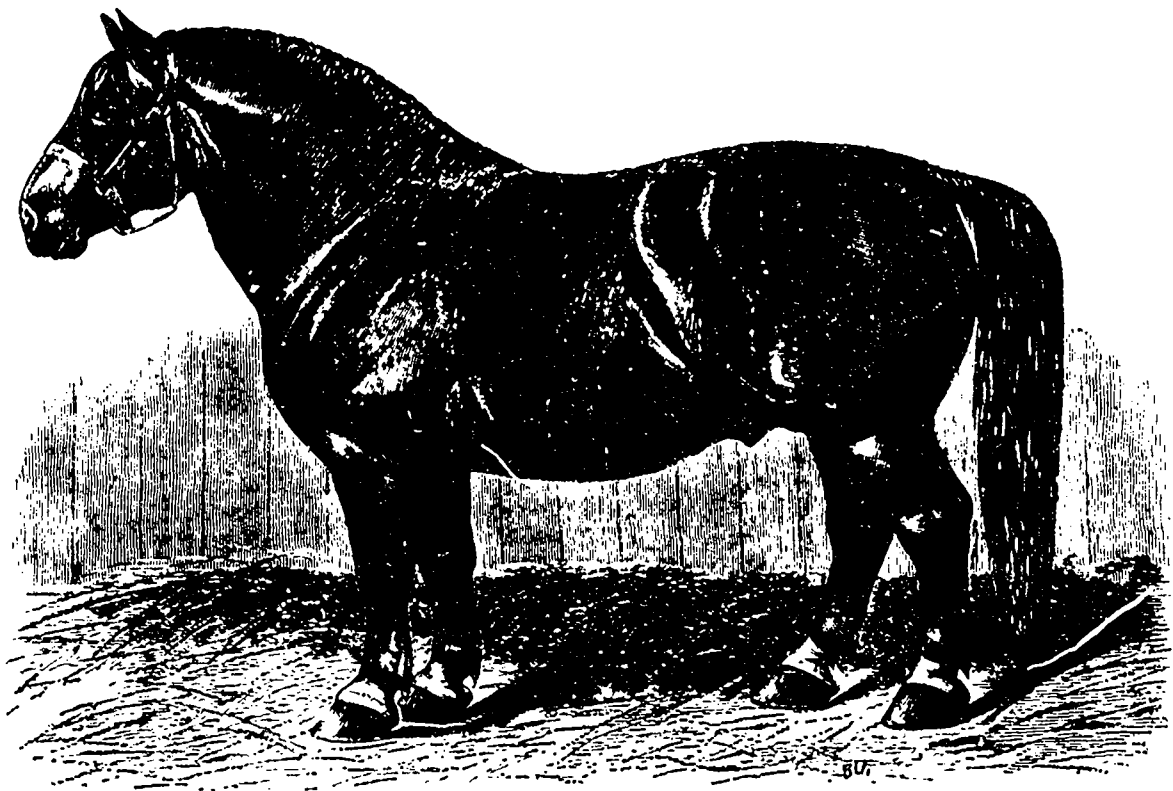
What I should recommend would be the establishment of large flocks of ewes, and the use of a Shropshire ram. This would improve the mutton and give more size than the cross with the South-down. Shropshire sheep, too, are very hardy, and thrive on land that would kill Leicesters or Cotswolds.

Profitable Hog-Raising.

By DR. W. L. HERRIMAN

A paper originally read at the West Victoria Farmers' Institute, January 7th, 1890, and rewritten especially for THE CANADIAN LIVE STOCK AND FARM JOURNAL. The illustrations are from the pencil of W. Utley, Esq.

The hog has long been domesticated and used food for man. In some countries, especially Denmark, they are the staple product of the farm.



SUFFOLK STALLION WEDGEWOOD (1749).

Winner of Gold Medal awarded by the Royal Agricultural Society of England at Windsor, 1889.

nibble. They should be driven from one pasture to another at least once a week, for they hate the ground that has been stained by their own species. They are not exacting either summer or winter in the matter of water, and when ordinary dews or rains freshen the grass, they will not drink of even clear water running within their reach. Then see how quickly they come into profit. A good Down-cross will clip 10 lbs. of wool when a year old, and at the same time next year will have one or two lambs and another fleece to dispose of. There is nothing on the farm that pays so quickly or so well. Here we are free from the diseases that have decimated the flocks of England. The liver-fluke and the rot are comparatively unknown, as is foot rot; all of them being plagues resulting from their being too thick on the ground in the old country. All that we have to guard against is contained in the old legend, "beware of the dog." I believe this is a principal reason why more sheep are not owned, and the township laws, allowing a proportion of the value for worried sheep, is not a method of compensation, but makes up for the risk. It is a terrible risk and few owners have escaped heavy loss from this source; but surely it is avoidable if proper precautions are used. Opinions will differ as to the breed of sheep to

corners and out of them. Nothing but wild grass, natural pasture, can stand the constant bite of sheep and live.

I have shown that they are remarkably free from the diseases that assail flocks in the old country, that they take but little attention, and come into profit sooner than any other stock; improve the farm rather than drain its resources; subsist on natural pasture; are best housed in the cheapest buildings; and possess every attraction for our farmers. I believe they will yet resort to sheep farming, and we shall see flocks of 100 where we now see ragged disconsolate half-dozens. There are plenty of good sheep in the country for the propagation of rams that put to the cheaper ordinary ewes of the country will suffice for the production of large flocks of mutton sheep, and make them at least as common as the notable little flocks of breeding Shropshires, South-Downs, Oxford-Downs, Cotswolds, and Leicesters are now in all parts of the Province. It is foreign to the purpose of this paper to enter upon details concerning the feeding and care of sheep. Nearly every farmer knows enough of that, but I may say that the sowing of rape is employment for a slack season of the year, and sheep are greatly improved by feeding upon it before going into winter quarters;

In our own Ontario I think, for several reasons, the industry of late has been too much neglected. Many of our older farmers say it does not pay to fatten pork, and no doubt when grain was dear and pork cheap and badly bred, the statement was true. Now there is a change of circumstances, grain is cheap and pork dear.

The breed also has been much improved, which, in connection with the improved mode of feeding, gives better results.

I wish to bring a few facts to your notice to-day for your consideration and opinion, not that I can expect to instruct you, but rather to be benefited by your varied observations.

Does it pay to raise pork? This is, and should be, the first question; my answer is that it does pay, and just now it is the most profitable branch of agriculture.

In this opinion I am supported by some of our most extensive breeders and best farmers, as well as

by many who are dealing with it on a smaller scale. Yet not one-half the hogs are bred in Ontario that would find a ready market at paying prices.

Wm. Davies & Co., of Toronto, one of our largest firms for packing and exporting, say they cannot get half the stock they want, and are obliged to go to the States for it. They often slaughter as high as 60,000 hogs a year. During 1887 they slaughtered 63,457, and they say "owing to the indifference of Canadian farmers more than half that number were obtained on the other side of the line."



Figure 1.—IDEAL BACON PIG, shewing small head, small jowl, light shoulders, deep ribs, long sides, broad loins, small bones, and good square deep hams.

They have, with others, kept up for several years an export trade of the hog products, amounting to over 7½ millions of dollars—a yield equal in value to our dairy product, and produced with half the attention and cost.

Yet with all this large export they, or we, do not control the great London market, simply because our farmers have not as yet raised in sufficient quantity the kind of pork which that market demands. In fact, I may say the markets of all our own towns and cities demand the same brand of pork.

Denmark seems to have stolen the march on us, and now daily ships to London immense quantities of bacon, which should be the product of our own farms, and at remunerative prices.

Until within the last two or three years we have been encouraged to raise and market large and very fat hogs; the latter the better, and the larger and the fatter the better prices we were offered.

In this respect there is a change, very heavy and fat pork is wanted only for the shanties (and we are told corn-raising districts can out-do us in that).



Figure 2.—BACK VIEW OF IDEAL BACON PIG, shewing small head, small shoulders, long body, broad back, and well developed loins and hams.

We must cater to the public taste and raise the kind of pork that is demanded. The great demand now in the best market is for small, well-fed, but lean and juicy pork; more lean than fat.

Therefore, to make that kind, you must feed with food containing the elements that go to make lean meat. People do not want mere fat; the composition of fat and lean is very different.

The fat consists principally of carbon, hydrogen and oxygen; but the lean, while it contains all these elements, has also nitrogen. If you want fat meat, feed corn and oil meals, which are oily. But to produce the lean, you must feed food containing nitrogen. These foods are called albuminoids, nitrogenous compounds, or protein compounds. And good examples are found in beans, peas and clover; these are called leguminous plants. Any of these will supply it, but clover will do it the cheapest and most satisfactorily in connection with small rations of the others.

This has been proved by actual experiments at many of the experimental stations in the States. And this is one reason why such a revolution has been wrought in pork-feeding in the last three years.

Clover-feeding is the secret of profitable hog-raising, remember that. Mr. Stephen, of Wisconsin, says more pounds of pork can be made from an acre of clover than from an acre of corn. This statement seems extravagant, but he figures it out this way: he says,

50 bushels of shelled corn will be an average yield per acre, and he allows one bushel of corn to make 12 pounds of pork, that gives 600 pounds of pork for one acre of corn.

Again, one acre of clover will pasture eight hogs from the time it starts in the spring till fall, and anything like a good hog when turned out weighing 100 pounds will gain another 100 pounds by fall, without any other feed. That would give a gain of 800 pounds of pork for the acre of clover against 600 pounds from the acre of corn.

But you may discount that 25%, and then have the clover equal to the corn product. However, he thinks it better economy to feed regularly every morning a little grain with the above; it not only aids in growth, but keeps digestion healthier.

Put hogs in the clover as soon as there is a fair bite; supply plenty of silt with ashes. These should be kept under cover and easy of access.

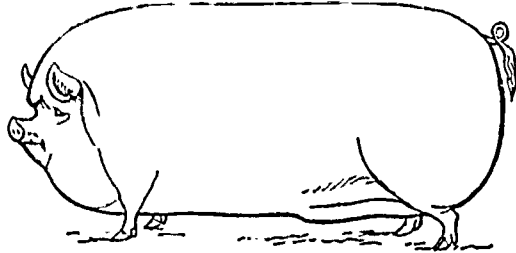


Figure 3.—TYPICAL ENGLISH BERKSHIRE, shewing fine deep sides, good hams, small shoulder, small head, and large jowl.

It is thought by some farmers that they cannot compete with the corn-growing sections of Canada and the United States. But that is a mistake, for in many corn-raising sections they begin to find that pork can be raised on other grains with the use of clover, and other cheap green food of the farm—cheaper than on corn, and that it will be better when raised.

Mr. Brown, of Ohio, says he thinks it is ordinarily cheaper to feed oats, bran and oil meal than corn. If that is true in Ohio, where corn grows, how much more so in Canada, where we can raise oats at 25 cents, and where we sell barley at 30 cents a bushel. I do not forget that oats contain much more fat or oil than barley, but it is not all fat we are after. We want muscle or lean meat, and barley with peas will give it, for peas contain a large amount of nitrogenous compounds.

Mr. Louis, of Wisconsin, speaks highly of clover as an important element in profitable feeding, together with bran and ground oats.

Mr. Shaw, of the Agricultural College, says we must raise more pigs, and feed more clover.

I might continue quoting important authorities on this subject, among which would be the weighty and practical testimony of the Hon. Charles Drury.

As to the comparative profit of raising pork or beef, I am satisfied there is more profit in feeding pork than beef.

By actual experiment it has been found that by killing your pigs at a proper time, you can make a pound of pork out of 2¼ pounds to 2½ pounds dry feed daily from weaning to killing; and it would take four times that amount of food to make a pound of beef during the second year of a steer's life. Yet pork sells on our market for as much or more than beef by the hundred, and don't cost a quarter as much, with very much less trouble; and the returns will be four times as quick, for beef will take at least two years to produce, while pork may be killed in six or eight months every time.

If you want to make pork-raising profitable, you must be prepared for it, and go about it right. You must have proper fields, yards, sheds, water, and shelter.

In the first place, get the right kind of pig, for if you want to make the most meat out of your coarse grain and green food in the shortest time, you must have some of the pure-breds or high grades. No man can feed profitably the restless, ill-bred, old-fashioned racers or razor-backs, but to-day they are still bred in some of the States, as well as in Ontario, but not with profit.

Contrast in appearance that breed with the Berkshire, the Poland China, or Yorkshire Whites, or even the Suffolk.

The Berkshire is a good pig, but too much inclined to put on fat; much more so the Suffolk. It seems now the larger Improved Yorkshire White is likely to

be the coming pig to sire the brood, or else the Tamworth, which in England is becoming more and more of a favorite every day.

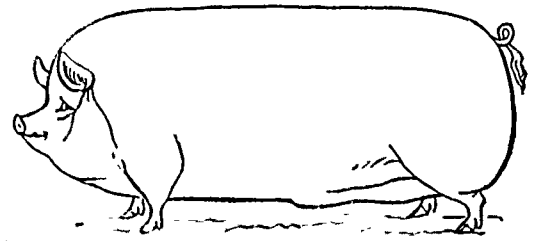


Figure 4.—TYPICAL AMERICAN AND CANADIAN BERKSHIRE, smaller in the head and much smaller in the jowl than the English type, and longer in the body.

You want long deep sides, with lean well developed, so the Yorkshire White, or the Tamworth, seems the best calculated for bacon, and the Berkshire for hams; but a cross is better, so it is said by good observers.

I give you a few illustrations, showing the great contrast between the unimproved wild or native breeds and some of the more desirable sorts. And from the fact that so great an improvement can be made in breeding the hogs from the useless racer to our ideal of a fine, fat, well-favored pig, we need not despair in trying to develop our ideal of a lean, juicy, desirable hog, just suited to the demands of the present market; for no other animal, perhaps, shows a greater readiness to respond to well-observed rules of ideal breeding than the pig.

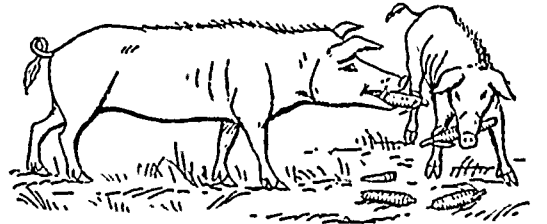


Figure 5.—RAZOR-BACK RACERS in peace.

Here (Fig. 5) is the racer just after foraging in a neighboring corn-field, and his ever-hungry brother, fighting for a share of the plunder. Compare his thin, narrow back with the broad, meaty back of the Improved Berkshire. Here (Figs. 1 and 2) we have a long, deep, thick bacon-producing form, which is found at present nearest to the form in the Improved Yorkshire White, or the Tamworth.

My illustrations also show the English favorite form of the Berkshire with its largely developed jowl; while the American Berkshire has this removed by careful breeding. We also see the great contrast between the old-time racers with their narrow, sharp, razor-like back, and the modern, well-formed, broad-backed and meaty Berkshire, Yorkshire, or Tamworth.

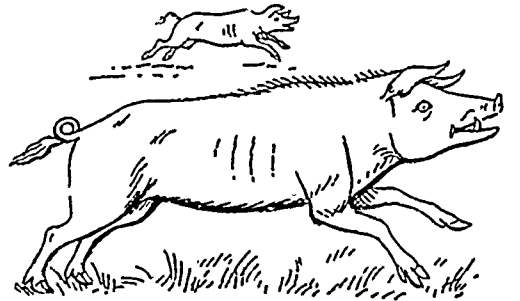


Figure 6.—RAZOR-BACK RACER on the warpath.

But as every one cannot have just the best pig at present, we must utilize such kinds as are now bred. I would say, avoid the Suffolk as much as possible, and in absence of a better kind, use the Berkshire crossed with the Poland China, or better still, the Yorkshire White or Tamworth, and watch results. Thus, with careful observations and proper breeding, we will soon establish a claim to the London market, and compete creditably and profitably with Denmark, if not entirely supplant her, in her monopoly of the trade.

I am satisfied by research and careful inquiry of farmers that, if this business is properly gone into, you will find it the most paying you can enter upon. In this country we are noted at home and abroad for our cheese, and while that will continue it furnishes a great help in fattening pork, for the whey is a great help; and where butter is made, the skim-milk and buttermilk pay also. I take it for granted that the



Figure 7.—TYPE OF YORKSHIRE, showing small head and bowl, long deep sides, and flanks, thick, firm flanks, strong bone, and the all-tons.

dairy will be continued, and used in conjunction with pig-raising; largely using your clover-fields, mangels, and other green food. With milk for young pigs, a little oats, peas, and barley meal, should be fed all along, and finish off with the concentrated foods at six and eight months old. Winter over, only the brood sows, or fall litters, require to be well provided for with mangels and clover.

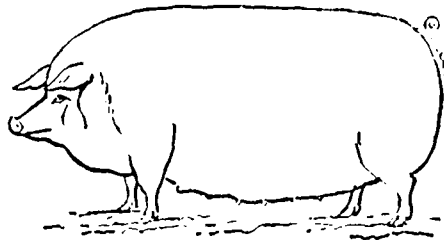


Figure 8.—TYPE OF ENGLISH RED FAWORK, showing a bowl head side, with relatively light bones, and thus with a small percentage of waste.

You will make money if you watch the markets, and if prices from over-production or any cause are not right, it is an easy matter to drop out of it. By doing this you are enriching your land with the growth of clover, and returning what is taken from it by having large amounts of manure to keep your land in a healthy and productive state of fertility. I will simply add, have your pigs ready to slaughter at six or eight months old, and not to weigh over 160 or 180 pounds. Every pound put on up to fifty pounds is cheaper than after that, and the heavier it gets the more every pound costs to make, and you cannot sell the heavy pork for as much as the light.

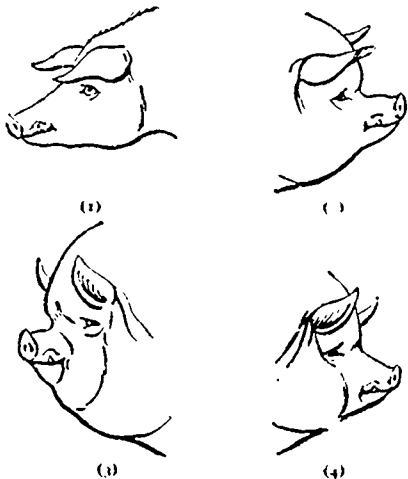


Figure 9.—TYPICAL HEADS. (1) Razor-Back Racer. (2) English Yorkshire. (3) English Berkshire. (4) American and Canadian Berkshire.

Have pigs farrowed in March and killed in September; early markets are generally the best. As I did not purpose to write on the rearing and feeding of pigs generally, but simply to bring out a few specific points, and as the limit of my time is reached, I must commend this subject to your consideration and good judgment, sincerely hoping to see an increased impetus given to profitable pig-raising in this district. Then we will see buyers thronging the country, competing for your stock, eager to make up car-loads to ship to the packers, whereas now the supply is so limited they are scarcely seen among you, for it is very difficult to get even half a car load of suitable live hogs in any district.

Shire Horse Association.

The annual meeting of the members of the Shire Horse Association of Canada was held in Toronto, March 13th. The report of the Secretary of the Association, Mr. Henry Wade, showed that during the past year twenty three stallions and ten mares had been recorded, bringing the total list of registered Shires up to two hundred and thirty-three, which was thought sufficient for the issuing of a stud book. The election of officers resulted as follows:

President—F. Green, Inverkip, Ont.
Vice-Presidents—J. Gaudhouse, for Ontario; H. Munn, Brandon, for Manitoba; and J. V. Papineau, Barnstead, for Quebec.

Directors—John Dunkin, J. Y. Ormsby, Chas. Jackson, R. Markness, W. Clendenning, and F. M. Jarvis.

Auditors—C. George, and F. Shore.
Delegate to Central Farmers' Institute—W. H. Millman.

Delegates to Industrial Board—J. Y. Ormsby, and F. Green.

The judges recommended to Exhibition Association were: Wm. Elliott, Richard Gibson, John Hope, W. H. Hunter, S. Evans, D. Rowntree, J. Bell, J. Honey, and W. Bell. Messrs. Ormsby, Gaudhouse, and Dunkin, and the president, were appointed by the Association to act with representatives of the Agricultural and Arts Association in pronouncing upon pedigrees.

Glasgow Stallion Show.

Thirty years ago the spring show for stallions was begun at Glasgow to encourage the breeding of heavy draught horses, and the premium offered was to secure the best animal obtainable for service in the Glasgow district. At the first show held there were only some four animals competing, but for many years past there has been a large and representative gathering of Clydesdale sires, and this show is considered the great meeting of the Clydesdale year. The entries for this year were about 400, several were entered in two classes, and others failed to come forward. About 250 were on the ground. The show was therefore a good one as regards numbers, and was a fairly good one as regards quality. There were however, a good many animals on the ground that should have been between cart-shafts, rather than on the end of a halter. The society offers two main premiums, one of \$400 for aged horses, and the same amount for three-year-olds. The winners of these prizes have to sign an agreement to travel the Glasgow district for the season. Last year the penalty for not complying with this rule was \$200. The year before last, the horse winning the three-year-old prize had been chosen by a deputation for another district. When the prize was awarded to their favorite, they promptly paid the \$200 and took home the horse for the season. This year the penalty has been put at \$2,500. The result of this is, that now many of the best horses in Scotland will not compete for the Glasgow premium, as their owners can do much better in other districts. The directors, to keep up the show, have opened another class, free to all, but even this fails to bring out the top horses, and this year some 60 horses had made their season's engagements before the Glasgow show. Some thirty deputations were present from district societies, all of which made their selections on the ground. This is a feature in horse breeding in Scotland that is well worth a trial in Canada. A district society is formed, which can be any size agreed upon by the members. A meeting is held, the service fees are put at an agreed figure, and a list of mares is made out. A deputation is appointed who take their list and offer and select their horse, the best one obtainable for the service fees agreed upon. It saves the stallion owner much trouble and expense, and gets for the district the kind of horse the deputation fancy. One feature of the Glasgow show is peculiar. They do not require a pedigree with the stallions exhibited. Animals shown may be registered and may be able to show that they have been bred from animals of acknowledged excellence for generations, yet they are not considered any way superior to cross-bred animals, or handsome mongrels. Breeders who have studied the principles of heredity and descent will not be surprised to know that the Glasgow district is very far from holding the foremost place in the breeding of Clydesdales. Things there will have to be changed somewhat before the farmers

can talk of taking showings in the Highlands from the profits of their Clyde breeding. This Glasgow show was a Lord Erskine (1744) year. In the short list for the aged class he had three representatives, Carruchan Stamp, Look Again, and Lord Skarmon. The other horses drawn were Mains of Keir, Golden Ayon, Knight of Ellershe, and Sir Everard. The latter was the premium horse last year, and obtained the three-year-old prize in 1888. He was again chosen and placed first. Sir Everard (5353) is a dark brown horse, sire, Top Gallant (1850), by Darnley (222), dam, Rosie (7437), by London Prince (472). He was in the pink of condition, splendid bone and hair, but not moving as well as some others. Carruchan Stamp (5627) was second. He is described as a massive horse of fine quality, sinks beautifully on his pasterns, with good feet and broad clean hocks and strong, well-formed thighs. For three-year-olds, over 90 animals were shown. It took a long time to bring out the short list of three, Bridgend Quality, Money-corn, and Lord Montrose. Bridgend Quality (6541), sire, Springhill Darnley (2429), dam by Crown Prince (207), has a deal of Darnley type, and is a capital mover. He was placed first, with Lord Montrose second. In the open class the prizes went to the following:

1. Sir Everard (5353), sire, Topgallant (1850).
2. Mains of Keir, sire, Young Lorne.
3. Browning (5591), sire, McCamon (3818).
4. Look Again (5972), sire, Lord Erskine (1744).
5. Guinea Stamp, sire, Sanquhar (2393).

Open class for three-year olds.

1. Prince of Kyle (7155).
2. Gallant Prince.
3. Bridgend Quality (6541).
4. Lord Montrose (Vol. XII).
5. Grampian (6813).

Two year-olds.

1. Rosedale (8194), sire, McLellan.
2. Master David (8033), sire, Topgallant.
3. Lord Carling (7943), sire, Lord Erskine.
4. Lord Barglas (7936), sire, Flashwood.
5. Sir Erskine (8253), sire, Lord Erskine.

FOR THE CANADIAN LIVE STOCK AND FARM JOURNAL

Horse Breeding and Wheat Raising in Manitoba.

(From our own Correspondent.)

The three months just past have been about the most steadily cold of any I have yet seen in the country, and yet they have been such as to fill us with hope of a good seed-time. The snow fall has been above the average, and it has lain well, even on plowed land, thus ensuring sufficient moisture to germinate the seed when put in. The prairies will get soaked, and the sloughs will fill fairly well, all good things for us here and now, and the lateness of the start will ensure rapid and vigorous growth. As the St. Paul Pioneer Press has well said, "No one who has gone through such a mild winter as that of '88 and '89 will ever wish it to be repeated." A genuine Northwest winter ensures, as a rule, a good summer.

The leading feature for April will be our spring horse shows. Portage la Prairie will, as usual, be chief, with a very strong lead. They have got a firm hold of all the Clydesdales they want, and, therefore, offer \$75, \$50, and \$30, to encourage them. But the Shires are coming in too, and \$100 are offered for one good horse. Then they aim at a good general purpose horse, and want to ascertain the best way of building him. Their veterinarian, Dr. J. G. Rutherford, has some love for warm blood in a horse, and argues that on a roomy farm a high and heavy thoroughbred mare would make a good cross; so they offer \$100 more to draw one of the best, and they are pretty sure to get her. Along the same line others prefer to cross with a Cleveland Bay, so they offer \$100 for a registered horse; no other need apply. We think here that a four-cross stallion is not a clean cut sample, and, after the thoroughbreds are arranged for, the general purpose horse gets only \$20 to help him along. To ensure any prize the winner must travel the district three days in the week, whatever he does with the rest of his time. The smaller societies will follow suit, and there will be a fair turnout of horses, either thoroughbred or general purpose, all over the province. We have lots of good mares everywhere too, but I am not so sure that all of us who own them know, or have the proper means, of turning their breeding powers to the best account. There is

too little easy jobbing in all this country to keep breeding mares in good form. A big day in the bush or at the elevator, and two or three other days in a stuffy or draughty stable, followed by hard driving in seed time on stinted rations of grain, are not, I guess, the best conditions for a mare in colt, and some of us don't seem to get at these rudimentary truths in any other way than by dearly bought experience. Slipshod cultivation may do here in some seasons, but slipshod breeding won't succeed in any season, and you in the East will still have the chance of selling us carloads of good horses, at least till such time as the scrub breeder has gone out, or gone under.

I have just got home from a ten day's trip on the other side of the line, and I have come back with a decided preference for one part of our own system of wheat-raising here. I have seen hundreds of samples of low grade wheat there, and if nature had been the only agent contributing to its degradation I should have said nothing about it. But one day I rather surprised my fellow-workers in the Farmers' Institutes by lifting two bags of seed brought in for examination, and telling them, without opening them, that the one bag had been threshed from the shock, and the other from the stack. There may be occasional seasons when the methods of the big bonanza farmers up there, threshing from the shock and hauling the grain right off to the elevator, will succeed; but if the air is not extremely dry, there is too much moisture in the grain to make it safe to store it any length of time, and it is only the occasional movements afterwards and the severe frosts of winter that prevent its getting heated or musty. What we do grow here we know how to handle, and our wheat, even when a little soft in the grain, comes to market clear and bright to look at, while, with a shower or two in harvest time, most of the wheat raised south has a dull or positively sodden look that knocks down the grade, and as a consequence, knock a few cents off the price. When this weathered and bleached grain is threshed from the shock and put away in a farmer's barn it too often gets musty, and is always soft, thus gradually and surely deteriorating the general vitality of the seed grain. When stacked and sweated there for a few weeks the excess moisture goes off, the berry brightens, and it rattles like shot. There are some of our Canadian brethren south there who do stack and turn out first-rate grain in large quantities, for this among other reasons that they don't grow almost anything else. But I say confidently that we have a larger proportion of good farmers here than I find to the south, and that north or south the Canadian is a front rank man, if he did not come here at the first because he was a proven failure at home.

We are hustling vigorously to get hold of some of your surplus farming population, but I don't expect many from some of the western townships, as many of their young men have already got here and south of us. We will be sure to get some all the time, and as the world is likely to last some time yet, I see no harm in waiting for an easy and gradual settlement. We are every year gathering more experience and skill in grappling with the adverse conditions peculiar to this country, and the experience of the Indian Head district for the last seven years shows conclusively that by plowing one season and sowing and reaping the next paying crops can be got six years out of seven, even should the rainfall be limited to a very few inches per annum. Some of the gas has been knocked out of our heads by such trying seasons as the two last, but this country has a very big future before it, and I, for one, shall stay in it as long as I can.

Our citizens have made a strong and determined bid for a Provincial show in the fall, and if the scheme fails, it will only be because the Government and its agricultural committee will not raise one-fourth of the funds necessary to make it a big success. Every other interest, including the railroads, will give it all the help they can, and it will only be the unwise parsimony of our rulers that can hinder us from having the best show of stock, and let us hope, general produce, ever seen in the Northwest.



For the CANADIAN LIVE STOCK AND FARM JOURNAL.

How Shall We Increase the Fertility of Our Farms?

Bad seasons, bad crops, and low prices have contributed to render farming almost unremunerative. The first of these being a dispensation of Providence, the agriculturist is perforce compelled to submit to them,

yet the bad effects may, in a great measure, be obviated by proper and effective drainage. Bad crops are sometimes the result of bad seasons, but may be more frequently attributed to bad farming and overcropping. If we listen to the accounts given by old settlers, we are told that the land now is nothing like so productive as it was in their time, a favorite example being the wheat crop, which, they affirm, used to turn out 40 bushels and over to the acre on land thickly studded with stumps. How often do we see such a crop now-a-days, even on land totally free from stumps? There is little doubt that continuous overcropping, all being taken off the land and little or nothing put back, is the true cause of this deterioration, and having ascertained this fact one naturally seeks a remedy. Scientific, as well as practical, farmers unanimously recommend manure as the antidote, and advise the feeding of stock. Many have at once jumped to the conclusion that by keeping stock the land will quickly recuperate itself, and have, perhaps, commenced dairy farming, feeding to their cows the principal portion of the rough grains, etc., raised on the farm, but quite forgetting that, although less exhaustive than grain-growing, yet the milk sold causes a considerable drain on the land. England has frequently been quoted as an instance of fertility having been preserved unimpaired, and even increased by stock-keeping, and I believe it to be an incontrovertible fact that by stock-keeping and feeding the products of the land the soil can be rendered more fruitful, but the process is slow where the crops raised on such land only are fed. It may, perhaps, be asked, in what way can the desired object be attained quickly? Let us take a glance at the manner in which farming in England has been pursued. Referring to a common form of a lease of a farm in that country, and it must be remembered that the larger portion of the land there is rented, we find, amongst other covenants, one by the tenant not to grow more than two white crops (grain crops) in succession without an intermediate crop of turnips, clover, or other beneficial crop: neither is he allowed to sell hay or straw off the premises, and, in many instances, the covenants to feed all coarse grains and turnips grown thereon. From the lease we see that the method of cultivation is, within certain limits, strictly laid down, and that little is allowed to be sold off a farm in the way of crops, and by this practice the fertility of the soil is kept up, and even increased somewhat, yearly. Looking a little further we find that, besides feeding up almost all the products of the soil, England increases its productivity by robbing other lands. She imports not only feeding stuffs, such as corn, wheat, cotton seed, etc., from America, but guano, bones, and other products containing the elements of fertility from all parts of the world. Such is undoubtedly the method by which England has attained so high a position as an agricultural country, and while some nations have been attempting to keep up the price of grain by placing duties on grain imports, she has been acting the wiser part, and has not only been purchasing and importing feeding stuffs but also matured stock to eat it, thus contributing still further to increase the productiveness of her land, for it is a well-ascertained fact that an animal while growing takes more out of the soil than one more matured. The inference that may be fairly drawn from the foregoing instance is, that to quickly restore our lands to their virgin freshness, we must amend our system (1) by giving up overcropping, and (2) by applying more manure, either barn-yard or artificial; the latter is expensive, besides it is often difficult for a farmer to ascertain what particular element of fertility his soil is lacking in: we have, therefore, to fall back on barn-yard manure. By proper management and feeding all the crops, we may assume that the land can be kept up, and gradually increased in fertility, and it is evident that the sooner the poverty of the soil is overcome, the larger will be the profits, especially if effected with little or no expense. Glancing once more at England, we find that not only does she import food but also stock to feed on it from a distance of thousands of miles, thus incurring the cost of the carriage of both; if this can be done at a profit, surely it can be done in Canada, where corn grows right at our own door, and where, instead of having to pay freight over 3,000 miles for both corn and cattle, we should only have to pay freight on one. There is no cheaper way of rapidly increasing the fertility of our farms than by purchasing and feeding additional coarse grain, for by so doing we not only should make a profit, but at the same time increase our manure pile, which has rightly been called the "farmer's bank." The duty on corn and coarse grains has always

appeared to me rather like cutting off one's nose to spite one's face. It was imposed, as we know, with the intention of keeping up the price of coarse grains for farmers, yet there is little doubt that it has also acted as a factor in hastening the deterioration of our farms. But a comparatively small portion of our country is adapted to successful corn-growing, and even in those parts the duty has probably not been an unmixed benefit to the producers, as in all likelihood it has tended to encourage the sale rather than the feeding of the product. There is an axiom in business which is worthy attention, especially of grain-growers, "Turn your money over as frequently as possible," and it appears to be often lost sight of by them. We are told by them that when crops are good there is a profit in grain-growing. Cattle-feeders likewise inform us that there is a profit, even in bad times, in feeding cattle, provided the right kind are kept. Now, if both of these statements are correct, and there is every reason to believe them, does it not seem the height of folly for a farmer to sell his grain and make only one profit per annum, when he could make a second profit by feeding it, and a third profit by having the manure right on his own farm, all accruing within the same space of time.

AGRICOLA.



For the CANADIAN LIVE STOCK AND FARM JOURNAL.

A Stock Barn.

In response to your solicitation for plans of barns, I take great pleasure in describing one that I erected two years ago. I call it a stock barn for a one-hundred-acre farm. It is 53 feet wide and 78 feet long, the outside posts 22 feet high, and the purline posts 30 feet. On the right of the side drive is a mow 24 feet wide, and on the left, one 18 feet wide for grain. The great height in the centre of the barn (about 36 feet) allows me to put away 30 tons, without any tramping. A rack-lifter elevates the grain. No hired man is required, as a boy, 14 years old, built the loads in the field, and led the horse at the barn. The barn is on a stone wall two feet thick, 10 feet high, with one side and one end set in a bank 5 feet, leaving only 5 feet of a bridge. The part for cattle is 53 x 54 feet, divided off for 20 cattle tied, and six box-stalls. The floor is Portland cement, with freestone dressed for the drop. The box-stalls are cedar paved. Water is supplied from a well drilled 140 feet, at a cost of \$120; a tank in the barn floor, protected from frost with chaff, holds 19 barrels of water, and from this pipes are laid to all the cow-stalls, where there is a square box for them to drink out of. The supply of water in these boxes is regulated by a float in the tank, so that there is not the least trouble whatever in watering, and the water is always clean. The remaining 24 x 53 feet is the horse-stable and sheep-house. The floor here is 5 feet higher than the level of the cattle floor, and it is paved with cedar blocks. There are stalls for 5 horses, also 2 box-stalls 12 x 14 for colts and brood mares. Water comes from the tank right in front of the horses, and it is given to them in a pail. The sheep-pen is 16 x 24. On the barn is a 14 feet windmill, which pumps the water, runs a circular saw, cutting box, grain crusher, and root pulper. The mangers in the cow-stable differ from those commonly built, in that the bottom of the manger is the top of a two-foot stone wall that has been nicely smoothed on top. This wall was built purposely for this, and rises about two feet above the floor. The sides of the mangers are wood. Below I give you a rough estimate of the cost of this barn. Carpenter, \$250; stonemason, \$100; lumber and shingles, \$375; windmill, \$308; water lime and Portland cement, \$38; hardware, \$70; cave troughs and tinware, \$36; lime, \$25; window sashes, \$20; drilling well, \$120; stone, \$50; hay fork and steel track, \$30; rack lifter, \$25; mason for cementing work, \$20; painting and material, \$90; blacksmithing and hired help, \$50; boarding men and hired help, \$175. Total, \$1,782. The timber was got in the old buildings.

A. A. McDUGALL,

Milton P.O.

Homestead Farm.



The Clydesdale Spring Stallion Show.

The friends of the Clydesdale Association have every reason to feel highly elated over the outcome of their efforts to make their fourth annual stallion show surpass its predecessors, for

never within our Dominion limits has there ever been assembled such a brilliant and worthy galaxy of this favorite breed. The numbers that gathered here reflect the fact that the Clydesdale as a breed enjoy a wide and enduring popularity, while the merit of those shown, as a whole, gives birth to the statement that those who are patronising draught stallions are more critical in their selections, which, in itself, portends a brighter future of prosperity, and a more extended interest in our horse industry.

The Canadian bred classes were the first to be shown. The representation was not as large in numbers as one might reasonably expect, nor was the quality of the highest, though, especially in the yearling exhibit, there were a number of excellent stallions that would get colts that would never want a market. The aged class was passed over for the very good but much to be deplored reason that there were no competitors. In the next, that of stallions foaled in 1887, two, very opposite in type, entered the ring, one, a dark gray rangy horse, Merry Boy [621], by Border Chief (imp.) [602], shown by his breeder, Alex. Doherty of Ellesmere; and the other, a smooth and thicker stallion, Topsman [944], by pride of Perth (imp.) [282], bred and exhibited by Edward Barker, Thornhill, Ont. The tussle resulted in Merry Boy [621] being pronounced the winner. The yearlings responded in stronger force, and they were undoubtedly the best in quality of any of the Canadian bred classes. Strathmore [1246], though not as heavy as some

extremists would like, was excellently furnished, nicely proportioned, and moved in such a smooth, fearless and taking manner, that all adverse criticisms were quickly smothered. This stallion, the winner of first in this class was bred by Thomas M. Whitesides, of Ellesmere, Ont., from Self Esteem (imp.) [377], and out of Queen [1102]; he was exhibited by his present owner, R. Miller, Jr., of Brougham. A close though unsuccessful contestant for first honors with Strathmore was Pride [1212], a stallion of strong build, with short legs of good bone, broad clean joints and pleasing feather, shown by his breeder, William Crawford, of Malvern, Ont. His sire was Pride of Perth (imp.) [282], also the sire of many other excellent horses here exhibited. The third place was awarded to Pride of Peel [1205], a dark bay of excellent quarters fore and aft, a get of the Pride of Perth [282]. This horse was shown by Willis Bros., of Pine Grove, Ont., who were also his breeders. Messrs. Prouse & Williamson, of Ingersoll, came in for the fourth prize with a rangy chestnut of their own breeding. The battle for the sweepstake was fought by Merry Boy [621] and Strathmore [1246], with the result that the former was declared the winner of the gold medal given by the Industrial Association, though Strathmore had many admirers that thought his proper place was at the head of the list.

The assemblage of imported stallions that disported themselves before the judges during the afternoon must have gladdened the heart and brightened the eye of the most cynical of Scotia's sons, and even those of the audience that only take but a partial interest in this division of our live stock interest must have been exceedingly pleased with the large array of blooded sires of such a uniform high merit as to throw around each contest an exciting interest. One more than a baker's dozen of the crack horses from the leading studs of Canada faced the judges in the class for aged stallions. Graham Bros., of Claremont, pinned their faith on Macneil [1117], a get of Macgregor [1457], that they imported last year, and well did they pay their confidence. Our readers will remember this stallion well, as he appeared as a frontispiece to THE JOURNAL of February last. Being in full bloom, his massive appearance, heavily freighted quarters, broad full frontage, and many other noticeable qualities captivated the judges, and the highest honors in his class were consigned to his keeping. This is the type of stallion that is capable of throwing sturdy cart horses that would steady

the shafts and move the loads of our heaviest drays. From the stables of Messrs. R. Beith & Co. came a highly creditable delegation of five, all of their last importation. Among the number was Sir Walter [1131], a stout brown, of superior draught form and nice quality, winner of second place in this class. The next honorary station was held by Sir Maurice [1126], a bay get of the famous Lord Erskine (1744), with the best of bone and joints in legs that carried a well knit body and muscular quarter. The horse, in the opinion of a number, should have at least stood second. The rest of the representatives of this stud were the Earl of Lennox [1114], the winner of the commended ribbon, a stallion of the true draught type, being close to the ground; Ardethan Boy [1314], a smooth bay horse, got by McCamon (3189), with nicely feathered legs and well turned body; and Eastfield Style [1122], a thick stallion of the heavy stamp, awarded the highly commended ribbon, and got by Glidie Callum (3623). Henry Heiders, of Yelverton, Ont., had in Erskine's Pride [1332] a well jointed, strongly coupled, serviceable type of a stallion that was, in the estimation of a number of the on-lookers, a fit candidate for higher honors than the fourth place that was given him. This stallion is by Lord Erskine (1744), imported in 1857 by Arthur Johnston, of Greenwood. Jonathan Porter, of O'Leary, was awarded fifth on a strongly built low-set stallion of substance, Royal Scotsman [314], imported in '88 by Messrs. R. Beith & Co.

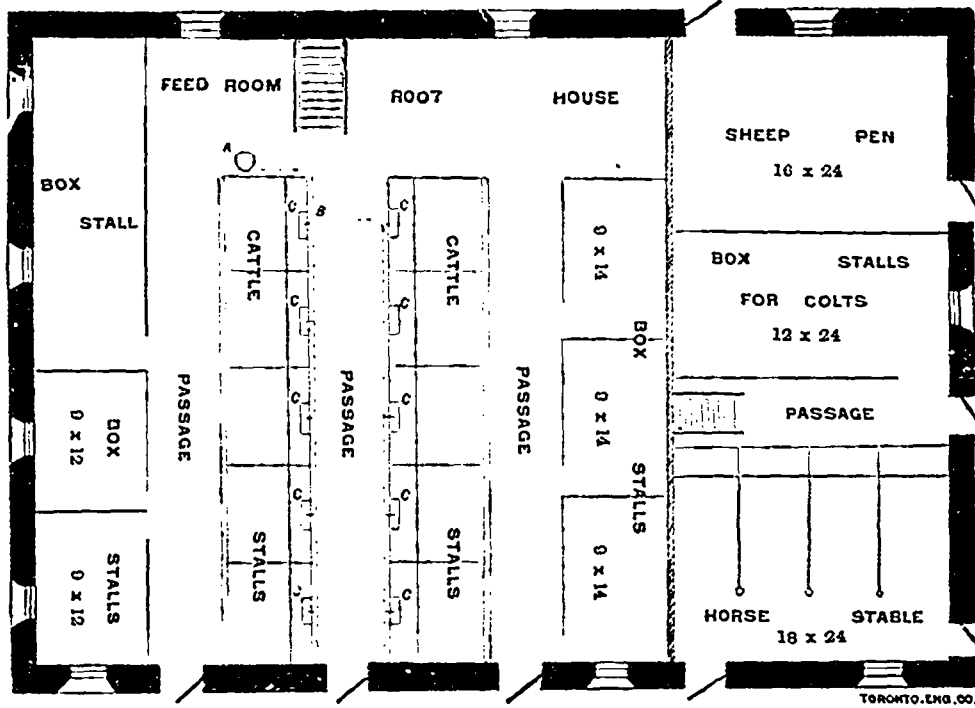
Messrs. Sorby, of Guelph, entered their Bold Boy [1147], by

this stable, including Chairman [1302], the winner of third prize in this class, a good all-round horse, deep in the body, plump in the quarter, and smoothly turned in all parts; Prince of Lothian [1103], by Aird (4217), is a stallion of substance, thick, and near the ground; Douglas [1191], another of the exhibit of this firm, is one of the blocky type, rich in quality, and sired by Lord Douglas; Main Top [1134] is of a lighter stamp than any of the others, with good bone and plenty of muscle; and last to be mentioned is Honest John [1150], a brown of symmetrical proportions, useful type and nicely furnished legs. Messrs. R. Beith & Co. also made a strong exhibit in this class. Clyde Admiral [1113], by Schlemmeister (3166), the possessor of a beautiful head, strong shoulders and snugly ribbed barrel, mounted on serviceable legs, was awarded the honor of second place. There were two others of the last importation of this firm. Eastfield Laddie [1127], to whom the judges awarded the very highly commended ribbon; and Eastfield Chief [1129], a get of Prince Laurence. Both were of excellent make, the former being of more stylish form, with a beautiful front, and the latter deep and stout in type. Just The Thing [1248], the winner of the fourth prize, was one of three exhibited and imported last year by T. W. Evans, of Yelverton. This horse is a good mover, massive in build, and short in legs, showing excellent bone and silky feathering. His sire was Jordanshaw (3343). The other two were Aubinleck [1311], also by Jordanshaw (3343), and Jubilee Sovereign [1247]. These two were uniform

in type with the first mentioned, being vigorous and strongly girded with muscle about the loins and quarters. Messrs. Sorby had two contestants in this class, the brawny Craigevar [1330], of Prince of Wales (673) blood, and Renfrew Jock [626], by What's The Odds [301]. Craigevar is a stallion of good parts, with abundance of quality and strength of bone. Sir Edward, [1266], an importation of his exhibitor, Robert Miller, Jr., of Brougham, Ont., was given the highly commended ribbon. This horse was well worthy of the laurels given him, for he was strong in limb, robust and active. Rose Hill [1334], owned by Thomas Meagher, Jr., of Doncaster, Ont., was the successful aspirant for the commended ribbon. He is a horse of substance, with a deep rib and muscular quarter. Jno. Gilmour, of Toronto, exhibited Colton Prince [1336], a likely colt of his own importation, sired by Ca Canny (3476).

Only four imported yearling stallions entered the lists to compete for the prizes given to this class. Messrs. Graham Bros. exhibited two. Ravenswood [1123], a pleasing colt of excellent bone and form; and Arbitrator [1124], a growingly youngster of nice proportions and finish, of Prince of Wales (673) descent. These won respectively the first and second prizes for their importers. Jno. Vance, of New Hamburg, exhibited an excellently topped and handsome colt in Cult's Stamp [1118], that a number thought should have been placed a niche higher. His action was fine and springy, while his quality, as shown in his chiselled features and fine soft feathering, could hardly be surpassed. He was placed third, while Jas. Chandler, of Ayr, Ont., followed fourth, with a trim and lusty get of Macgregor (1457), named McEain [1338], one of this gentleman's own importation.

Before the time for the sweepstakes arrived, it was the general opinion that MacClaskie (672), the winner of THE JOURNAL prize in the two year old imported class, would prove the champion, and here again the judges, Messrs. Burgess, of Illinois, and Gardiner, of Prince Edward Island, gave evidence of the good judgment and carefulness that characterized the generality of their awards by placing the red and white sweepstakes ribbon on the illustrious son of the clan Macgregor, thus honoring him with the handsome gold medal donated by the Agricultural and Arts Association.



A. Well and Tank; B, Iron Pipes running from well to water boxes (C) placed in middle of double stalls and fed by pipes from well.

Lord Erskine (1744), but, unfortunately, when exhibited he was hampered by a slight lameness that threw him out of a contest that he otherwise would have made warm for the chief competitors. Barring this, Bold Boy was in excellent fettle. Other horses shown in this class were, Brown Stout [1257], exhibited by Levi S. Bowles, Springfield, Ont., and one of Messrs. Dundas & Granby's importations. He was a strong stallion, deep bodied and excellently fitted. In Catch Me [1235], Jno. Gilmour, of Toronto, had a rangy and stylish stallion, one of his own importation, got by El Amer (3531). The Laird of Uga-dale [1337], owned by Jno. Sheppard, of North Toronto, and also exhibited in this class, was an active and showy stallion, sired by Prince Albert (616), dam Maggie (3256).

For THE JOURNAL prize the greatest rally was made, and it was the universal opinion of those present, including the judges, that such a gathering of blooded stallions of Clydesdale descent rarely comes together under the most favorable conditions, there being no less than seventeen exhibited, representing a rare average of merit, individual and ancestral. MacClaskie (672), from the Carnalgie stud, of which the Messrs. Graham Bros. are the proprietors, was readily singled out as the one to be made the receiver of the highest honors. This colt is one of rare promise, all that could be desired in structure and finish, while his action has that precision and elasticity which is so pleasing to the eye. There were five other representatives from

Dominion Sheep Breeders' Association.

The annual meeting of the above association, which was held in Shaftesbury Hall, Toronto, March 14th, brought out a fairly good attendance of prominent breeders. The president, Mr. R. Miller, of Brougham, Ont., opened the meeting with a few words, expressing the hope that sheep husbandry might meet with more general adoption, and as a reason for this he dwelt on the fact that sheep of all breeds have been holding their own better than any other class of live stock. A discussion followed having reference to the securing of a grant from the Government, to further the work of the association, and also to enable the society to print and issue their report through other channels than those of the Government printing bureau. A deputation was appointed to wait on the Hon. Charles Drury to lay this matter before him, and the result of their visit was that the Minister promised their request the earliest consideration. The officers elected for the current year were as follows:—

President, R. Miller, Brougham, Ont.

Vice-President, James Russell, Richmond Hill, Ont.

Secretary, F. W. Hodson, London, Ont.

Treasurer, F. Shore, London, Ont.

Directors, Messrs. William H. Beattie, John Jackson, John Kelly, J. C. Snell, William Rolph, R. Gibson, R. Bailey, P. Arkel, William Linton, and William Walker.

The Vice-Presidents for the various provinces were:—

Nova Scotia, A. C. Bell, New Glasgow; Prince Edward Island, B. Wright, Charlottetown; Manitoba, W. Struthers, Russell; British Columbia, T. Kirkland, Ladner's Landing; Quebec, E. Casgrain, L'Islet.

Alderman Frankland, of Toronto, then addressed the meeting, treating of a very interesting subject in his own inimitable way. The address we publish in full on another page. Mr. John Jackson, of Abingdon, the well-known breeder of Southdowns, followed in an essay reflecting much thought and care on the part of the writer. His subject was "Sheep: Profitable and Unprofitable." After referring historically to sheep husbandry and alluding to the desirability of making a specialty of sheep raising in some districts, the essayist gave the following sage advice that will prove, no doubt, very interesting to our readers:—

In considering the advantage of raising sheep, as compared with other stock, the cost of fencing would be very much less. This alone would be quite an item. Movable hurdles sufficient to hold sheep, that can be set wherever required, can be made at a cost of fifty cents a rod. As scavengers of noxious weeds, there is no stock to equal sheep; they scatter their droppings more evenly over the land, they require less expensive buildings, it takes less labor in caring for them, they will pull through a dry season better, and I believe a pound of mutton can be produced as cheaply as a pound of beef, and will bring more in the market, and thus leaves the wool in their favor. A sheep farm need not be an expensive one, and a rather heavy soil is the best. Farms rather far from market, and especially from towns or villages where a lot of useless dogs are always kept, would be well suited for sheep farms. I think about two sheep to the acre would be a fair estimate, and they should make an average of six dollars per head; if Merinos, more could be raised, and of some of the large coarse kinds, perhaps less. I will venture to say if you should start with the best of the common ewes of our country, and breed them to a good ram of any one of the best mutton breeds, and continue to follow it up with one of the same breed every time, the result would be satisfactory. There is an advantage in making one breed a specialty, even in breeding for mutton purposes. In doing so, it is more easy to determine the progress that is being made. It is easier to become acquainted with the characteristics and good qualities of one breed than of a number, and this is very important in selecting breeding stock. A mixture of too many different breeds leads to confusion. If we are once fully convinced we have started wrong, it is better to change than to keep on, but the man that has been fortunate enough to start with the Southdowns can go right on. The Down sheep have advantages that are too often overlooked. Owing to the fact that the fleece is more compact and smooth on the surface, they never become wet to the skin by being exposed to rain or snow; the lambs when dropped are smarter and better to help themselves; being rather smaller and naturally more lively, they are better adapted to come through a dry season in good shape. Just here let me mention it is better to provide some kind of soiling crop, and not allow the flock to shrink for want of sufficient food. . . . I know there are some who will hardly believe that ten sheep can be raised annually on an acre of land. But with the experience I have had with sheep, I believe it is quite within the range of possibilities, and at the same time the farm would improve from year to year. To do this, say on a farm of 100 acres, there should be about 70 acres in grass, 10 acres of this might be lucerne clover; the latter would afford two weeks of early pasture, allowing the other pasture to get a good start before turning them on. The advantage of this is too well known to require any comment. This lucerne would still produce two cuttings of good hay, even in the driest season. Now with 70 acres in grass, there would be 30 acres for grain, roots, and green crops. Suppose we take 20 acres of this for grain, oats, peas, and a mixture of the two. This would furnish all the grain required, and if cut a little on the green side, the straw would make a good winter feed. The balance, 10 acres, would be roots and green feed. The green crops should be composed of several varieties. Corn might form a part, a mixture of oats and peas is very good, but perhaps the very best is vetch, with a few oats to hold them up; these will bear cutting in time, and if fed principally through the month of August, when frequently the weather is hot and dry, it would save the pasture and bring the sheep through in the best shape. The ram lambs should be all castrated when young. This is an important matter too often neglected, and when weaned from the ewes they should be given the best of the field to push them ahead as fast as possible. A

certain number of the very best of the ewe lambs should be selected out, to put in the breeding flock, allowing as many of the older ewes to be culled out each year. The balance of the lambs should be pushed ahead and made ready for the market as early as January or February, when they usually bring a good price. A good way of disposing of the older ewes is to cull them out a year ahead, say in August; breed them as early as possible, feed them well, sell the lambs early and have the ewes fit for the butcher soon after the lambs are taken off. In this way the flock should make a return of from ten to twelve dollars per acre, with a comparatively small outlay. On the other hand, to stock a farm with some one of the more popular breed of pedigree sheep, the figures would show better results; this would require more capital to begin with, but if properly managed, and should we produce but one really good sheep to the acre, this would give a return of at least twenty dollars, which would show a good balance sheet at the end of the year. Pure-bred sheep at the present time, no matter how well bred, or what their individual merit may be, if not eligible for registration in their respective herd books, their value is very little, if any, above what they will bring in the market for mutton. . . . For good sheep with pedigree right there is a demand for all that can be produced, and will be in 10 years to come. Individual merit is one thing and pedigree is another. To those who can combine the two in the same animal to the highest degree, success is sure.

Mr. James Russell, of Richmond Hill, the vice-president of the association, was the next to favor the meeting with a spirited address, in which he strongly and clearly presented the claims of sheep husbandry upon the Canadian farmer. He stated liberally that quality and nature of the soil regulated the choice of breeds, and that the real value of such a breed as the Cotswolds consisted in crossing well with the common ewes. A sharp discussion followed between the champions of the different breeds. Among the resolutions passed was one expressing the appreciation of the meeting for the efforts the Industrial Association were putting forth on behalf of the live stock exhibitors, and also desiring to see an extension of their grounds, and another endorsing the action of Mr. John Dryden, in bringing the dog question before the Legislature in the manner that he has. The systems of judging were brought up, but the members were not in unison as to the value of the single expert judge idea.

Dominion Hog Breeders' Association.

The annual meeting of the members of this association was held in Shaftesbury Hall on the 12th of March. The first business to be disposed of was the election of officers. A motion was unanimously carried, to the effect that all the old officers be re-elected. They are as follows:—

President, J. Featherstone.

Vice-President, J. Y. Ormsby.

Treasurer, E. M. Jarvis.

Secretary, F. W. Hodson.

Mr. C. M. Simmons moved, seconded by Mr. D. DeCourcy, that in view of the fact that there are at the present time herd books established in Canada or the United States, for all the different breeds, it is the opinion of the Swine Breeders' Association that the principal exhibition associations should insist upon the production of registered certificates from the respective herd-books for all pigs exhibited of those breeds for which herd books are established, either in Canada or the United States, and that the Secretary send a copy of this resolution to the secretaries of the principal shows. After a brisk discussion the motion was carried, and another one of equal interest to the members was moved by Mr. W. McNish, and seconded by E. D. George, which read as follows: That whereas up to last fall at the principal exhibitions in Ontario there has only been one class provided for Large Yorkshires, Chester Whites, Ohio Improved Chester Whites, and other large breeds, and whereas the entries in this class last fall at the Industrial numbered 106, as compared with 24 entries in Essexes, and 30 in Poland Chinas, and whereas there were four exhibits of Improved Large Yorkshires and three of Chester Whites, as compared with four of Poland Chinas and two Essexes, it is highly desirable, in the opinion of this meeting, that two additional classes be provided, one for Improved Large Yorkshires, and the other for Chester Whites, and that the Secretary be instructed to forward a copy of this resolution to the secretaries in Ontario. After a lengthy and warm discussion the motion was carried. Two other resolutions of as much import as the former were also passed. One moved by F. Green, seconded by J. G. Snell, that it is the opinion of this meeting that one competent judge for each breed of pigs would give greater satisfaction than a trio at exhibitions, was unanimously carried; the other, moved by Mr. C. M. Simmons, seconded by J. Y. Ormsby, asking of the Government that corn be put upon the free list, and thereby greatly aid the swine breeders of Canada, was also universally endorsed.

Professor Robertson then addressed the association, presenting as usual many striking facts that never fail to stimulate his hearers to greater efforts. After briefly referring to the status of the hog-breeding industry, he entered upon the practical phases of the question. The important features in the sow are length, depth, and breadth, given in their order of merit. She

should be made to farrow in March or April, and September. A breeding sow should always get as much salt as she will take. The quarters should be comfortable, and separate from those of other pigs, as the latter in huddling together would lie on her. The acids of sour swill gives acrid blood. Over half of the pigs that are born die before four days old, because of feeding sour swill. The points he emphasized in reference to the boar were much the same as in the sow, giving prominence to the features of length, depth, and breadth of body. The boar should also have proportionately large bones, and be well covered with hair. It was advisable to allow the sow to suckle the young pigs three months. You can never have a young pig thrive so well, and cannot feed it better than through the sow. To emphasize the importance of feeding the sow liberally while suckling the young pigs, the speaker stated that when three weeks old a suckling pig received from the sow 30 lbs. of milk per day, and 30 lbs. of sow's milk is as rich in nutritive material as 30 lbs. of cow's milk, and the latter is considered a good yield for a cow per day. Among the other items of management clover pasturing was touched upon, and it was stated that 300 lbs. of dressed hog may be obtained from half an acre of clover. After dwelling upon, and explaining fully, the latest experiments in pig feeding which were conducted at the Agricultural College, and which will appear shortly in the annual report, the professor then answered several interesting questions that were broached. It was explained to some of the members who did not coincide with the advice given in respect to allowing young pigs to suckle the sow three months, that the rapidity with which they increased in weight afterwards, and the good use they made of the food fed them, more than paid for the extra trouble and care involved in following this practice.

J. Y. Ormsby read an interesting paper in respect to the accommodation given live stock exhibitors by the railroads and exhibition associations.

Mr. McNish read a carefully prepared paper on "Hog Raising in relation to Future Agriculture," which was well received. We shall publish it in full in a future number.

Whole Oats for Cows.

Editor CANADIAN LIVE STOCK AND FARM JOURNAL.

Let me, through your JOURNAL, place before my fellow stockmen a fact that I have learned through repeated experience, and one that may prove of equal benefit to them. Now that the cows are calving through the country, there will be many cases occurring of trouble with the cleaning or afterbirth not coming away. I will give you a preventive of such trouble that I have found to be worth a great deal to me. About ten days before calving, or when the cow begins to let down her bag, feed her about half a gallon of whole oats per day until she calves, and I will guarantee that she will clean alright. The oats must not be chopped. You may say it is very simple, and, perhaps, only a notion; but I have never known it to fail in my experience of sixteen years.

Atwood, Ont.

BREEDER.

Rape Growing and Salting Stock.

Editor CANADIAN LIVE STOCK AND FARM JOURNAL:

DEAR SIR,—IN THE JOURNAL some time ago an article appeared on salting cattle in winter. The usual way round here used to be to give some in the mangers once a week, but we got tired of that and tried to get rock salt but could not then, so we fixed a trough to the wall in the shed in front of the stable, and kept a supply in it; since then we made one for each of the sheep pens by taking two triangular pieces of board about the size that would result from cutting a six-inch square diagonally, nail them to the wall of the pen about two feet from the ground, and three feet apart, then nail on a narrow board, see that it is close at the bottom, so that the salt will not run out. If sheep are troubled with grub in the head smear tar along the back of trough, and as it is so narrow the sheep as they lick the salt will be apt to get the benefit of the tar; twelve sheep will take about six pounds salt in two weeks. We make the cattle trough the same only on a larger scale.

We use this plan in summer when pasture is near barn, and it gives good satisfaction.

I also see by THE JOURNAL that you are asking for experience on rape growing. I may say we have grown it for about five years and find it very satisfactory, it does well without manure on new swamp land, and is an excellent plan to clean new land of rubbish and weeds. The lambs seem to eat every green thing. But on old worked-out land it requires manure, and as that commodity is rather scarce, we tried a plan that has proved very successful, namely, work the land the same as for turnips, only leave the manure out until the drills are raised, which we do

with one furrow of a single mouldboard plow; then we put on well totted dung, between the drills at the rate of 6 to 8 loads per acre, and split the drills back with one furrow each; therefore, the drilling only amounts to one double drilling; then sow the rape with turnip sower at about 12 to 20 pounds per acre. When the rape is about 4 or 5 inches high, or when the weeds are in good shape for killing, we scuffle it, and then leave it to do what it can, which has always been good with us. When the lunds are eating it off they mostly stand between the drills, and so they manure that part nicely, thus overcoming the annoyance of the succeeding crops growing in streaks, as is generally the case when manure is put between the drills for turnips. We start to prepare the ground for drilling about the 20th of June, and like to get the rape sowed before the 10th of July. Any one that can afford 12 to 15 loads of manure to the acre might do it the same as turnips.

An opportunity was afforded me to compare the rape against bare fallow with manure. One of our neighbors last year had a bare fallow and manured it, I think heavier than we did for rape, and his land was in a richer state to start with. We fed quite a flock of lambs last fall on our rape, and both of us had barley on the fields this year, and I feel quite safe in saying that ours was altogether the best crop. Yours truly,

A FARMER.

Mount Forest, Ont.

Choosing a Breed.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

DEAR SIR.—I have read all your different accounts of the breeds, and am just as much in the dark as ever; but have an idea that the Ayrshire or Devon would suit me. The Jersey would suit as to butter, but I find a lot of milk is used on a farm, and they do not seem to give any too much if it is extra good. I have read somewhere that Holstein milk is rather blue, although they give lots of it. Now, if you or some disinterested party would give me, and the rest of the readers of THE JOURNAL, some good sound advice on this subject, they would greatly oblige.

A FARMER IN MANITOBA.

We are sorry that our efforts to make THE JOURNAL a pillar of cloud by day, and a pillar of fire by night, to show the way to benighted seekers after light, has in some cases proved ineffectual. We are pleased to have our correspondent address us so frankly, for only by so doing may the best results be accomplished. Our religion is to do good, and if our efforts are not as effectual as they might be, we want to know it. In the articles referred to, we have sought to bring forward strikingly the conditions and breeding of the breeds treated of in their native homes, the aims of their present breeders, and give the most fixed and striking characteristics of the breed at the present day. In doing that we hoped to make our writing so clear that any one would be able to draw sound conclusions as to whether the breed described would be suitable for his conditions and requirements. To attempt to give a review of the qualities and characteristics of the Ayrshire, Devon, Jersey, and Holstein, is beyond our powers in one article, but we may offer some general advice that will better enable him to make a choice. We would say (1), ponder well over the conditions of your farm and surroundings, and then from these (2) settle decidedly in your mind what line of work will best fit into your conditions, for in such matters, to make a profit, we must cooperate as far as possible with nature. Having arrived at definite conclusions in regard to both, then (3) choose that breed the qualities and characteristics of which will suit best both the natural conditions of your farm and surroundings, and the line of work adopted. In regard to the first, if the soil of your farm is light, it would be best to choose the lighter breeds, and if heavy and low lying, a heavier breed. If the character of the country is hilly and broken, which would entail a large acreage of pasture, consider well the claims of the strong and active breeds that are good graziers and rangers. In regard to the second, the demands of the nearest and best paying market is the important consideration. If it is such as to permit you to make a specialty of dairying, choose that breed that comes nearest to the kind of specialist you require. We would just say here that while it is alright to say that a breed is possessed of certain qualities, it is to be remembered that the individual members of that breed may not have these. There is so much in the individuality of cows, that we would impress upon our correspondent to not only obtain the best breed to meet his conditions and requirements, but also to be critical in seeing that the animals chosen are thoroughly representative of the breed.

The Jerseys Upheld.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL.

In your February issue, in an article on the late London Dairy Tests, Mr. Guy tries to prove that the Ayrshires, and not Jersey, should have won the *Advocate* prize.

He is loud in his complaints about what he calls the one-sided way in which Professor Robertson conducted this test, and tries to prove by a scale of points taken from the *Ohio Farmer* that the Ayrshires led by two points. How is it that he passes over the scale of points used by Professor Cheesman, whose test, he says, are "conducted on correct and approved principles, and uses this one?"

It is only after he is defeated that he finds out the one-sidedness of Professor Robertson's scale, yet all the breeders were aware for months before that this test was going to take place, and he and others could have found out by writing to Professor Robertson, what way he intended to conduct it. Had the Ayrshires won this prize, the readers of your JOURNAL would, I have not the least doubt, be reading an article of Mr. Guy's about the victory won by them, and the fair and impartial way in which they were tested.

With your permission, Mr. Editor, I will prove to Mr. Guy that by Professor Cheesman's scale of points the little Jersey still leads, as she has on almost all occasions like this, for if Mr. Guy will refer to the reports of these contests—ten in all—he will find that the Jerseys have won seven out of the ten, while the Ayrshires have only taken this prize once from the Jersey—(at Ottawa, 1889)—and then their score was far below the scores made at Toronto and Quebec in the same year. Professor Cheesman, when testing the dairy breeds, used the following scale: 8 points for each pound of solids, 30 points for each pound of butter fat, one point for each 20 days since calving, and one point for each 20 days of gestation.

According to the above scale, the amount of product yielded by each three cows in the aggregate at London would be as follows:—

| AYRSHIRE. | | |
|---|--|--------|
| 245 lbs. milk .. | | |
| Butter fat, per cent. 3.44 = 2.11 lbs. x 30 | | 63 30 |
| Solids, per cent. 26.09 = 6.52 lbs. x 8 | | 52 16 |
| 379 days since calving, 1 point for every 20 days | | 31 95 |
| | | 147 41 |
| JERSEYS. | | |
| 175 lbs. milk .. | | |
| Butter fat, per cent. 4.12 = 2.53 lbs. x 30 | | 107 90 |
| Solids, per cent. 27.22 = 6.80 lbs. x 8 | | 54 40 |
| 136 days since calving, 1 point for every 20 days | | 6 80 |
| 136 days of gestation, 1 point for every 20 days | | 1 50 |
| | | 168 60 |

Professor Robertson does not give the weight of solids or butter fat in his report, merely the per cent., but I find by referring to Professor Cheesman's reports, that the average weight is about one-fourth the per cent. which I have used here. Here we have a clear gain of over 20 points in favor of the Jersey, not taking into account points won by the different values of feed consumed.

Before Mr. Guy compares the Jersey with the Ayrshire as to cheese production, would it not be better for him to find out how the breeds were tested at Toronto in 1885, by Professor Brown—not Cheesman, as he says—and not make an imaginary scale to suit his own purpose. I will give below the scale by which they were tested:—

1. Weight of milk in 24 hours, allow one point for every pound.
2. Butter per 100 lbs. milk, 35 being the standard, add or deduct 10 for every one above or below.
3. Cheese curd per 100 lbs. milk, allow 1 point for every pound curd.
4. Time since calving, add 1 point for every 10 days.

It will be seen by the above, that the cows were tested to find out how much cheese curd per 100 lbs. milk each cow would make. By Mr. Guy's scale, the cow that gave the greatest quantity of milk must of necessity make the most cheese. Just fancy the Holstein cow Pieterje and, with a yearly record of 3318 lbs. milk, making 3032 lbs. cheese! Why, if friend Guy goes on at this rate, he will "glut" the cheese market within six months. Any one who has had any experience with a dairy cow, knows that one cow's milk will make more cheese or butter from a given quantity than another, even if they are of the same breed. To prove how absurd his arguments are, we will take his own two cows—Ayrshires—tested at Toronto in 1885, and note the results. The cow "Rosette," gave in 24 hours, 23 pounds of milk, from which was made 4.68 lbs. butter, and 13.49 lbs. wet cheese curd per 100 lbs. milk, 167 days in milk, a total of 62.50. The other, "Chawa Lass," gave 22.6 lbs. milk, 4.14 lbs. butter, and 13.33 lbs. wet cheese curd per 100 lbs. milk, 14 days in milk, total number of points 54.14. Now this last cow ought to have been in a better condition for the test (according to Mr. Guy, as she was in her flush), yet from nearly 10 lbs. more milk, she made over 5 lbs. less cheese curd than Rosette, and did not score near so high. This proves that a cow giving a large quantity of milk will not make more cheese or butter

than one giving a lesser quantity. Mr. Guy states that as two of the Ayrshires were a year-old, a certain number of points should be allowed for that; where did he ever see in a test like this points allowed for age? Where were all his matured cows, that they had to fall back on their 3-year-olds? Truly they must have been hard pressed.

As to time since calving, is he aware that a cow in the United States last year won a like prize through her score being made up by points gained from being so long in milk? and the results of the test of his own two cows at Toronto show that a new calved cow in her full flow, does not stand such a good chance as one five or six months in milk.

Mr. Guy's remarks as to how the Jerseys were fed, or as he tries to make out, starved during the test, I will leave for their owner to reply to, but will say that Mrs. Jones did not intend competing for this prize, and it was only when she was informed that our Jerseys were not at London that she entered hers, so as not to let the Ayrshires take it by default.

We have kept Ayrshires and Jerseys together, and the very best of each breed, and I can assure Mr. Guy that our Jerseys have made as high as two pounds of butter to one from the Ayrshires, from the same amount of feed, and as to the great majority of the Jerseys giving only a very small quantity of milk, it is not the case, and I ask Mr. Guy for proof of such. Does he forget that the Jersey cow, Jolie of St. Lambert, 5126, stands to-day champion sweep-stake milk cow over all Canada, having met and defeated all sweep-stake cows—Mr. Guy's Ayrshires included—since 1884? Her score of 123.38 points has never been attained by any other cow, and she was tested by Professors Brown and Cheesman by the same scale as he wants. Our reasons for not competing for the *Advocate* prize was that the cows could be owned by more than one person; we objected to this from the very first, and wrote the editor of the *Advocate* and Professor Robertson about it, but it was too late to change the rules, as they were published. Our objections to this rule were that three "Queen" cows could be picked out from several herds that would make a good showing, yet as a whole the breed which they represented might not be a good dairy breed. We are willing to compete at any time with 3, 5 or even 10 of our cows against the same number owned by one party, and let them be tested by the scale used by either Professor Brown, Robertson, or Cheesman, the tests to take place at any of the principal fairs in Canada.

Such a test, Mr. Editor, would, I think, prove to the public which is the best dairy breed, and settle this vexed question.

GEORGE W. A. REBURN.

Ste. Anne de Bellevue, P.Q.

Veterinary.

The Education of the Horse.

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

[FIRST PAPER.]

In dealing with this subject, it is not my intention to discuss the methods which horse trainers use in attempting to overcome vices or defects in horses, for it would be impossible to handle such a variety of subject matter in a short paper. It is more particularly my aim to indicate what, in my opinion, is the proper course to pursue in order to avoid the development of undesirable traits.

The objects we should have in view in educating a colt are to keep down the cost of breaking to a minimum, by losing as little time as possible in the process and by getting as much useful work out of him as we can during the operation; in addition, to so regulate his work that his physical powers and intelligence may develop as much as possible. Defects of temper in the horse are natural or acquired. Hereditary influence is undoubtedly an important factor in determining this predisposition to vice. Either sire or dam transmit it; but the defective disposition of either parent is considerably modified in the progeny by the temperament of the animal with which it is mated.

In a colt in which there is a predisposition to develop bad temper, greater care is necessary. Breaking young is a good plan, but by this I don't mean to break an animal before it is sufficiently grown in order to do a fair amount of useful work without injury to

it. Some recommend breaking early in life, and after a colt has got to be handy allowing him to go idle until he is more developed. This course occasions a considerable loss of time, and beyond halter breaking, which can hardly be done too early in life, is not of much benefit. As soon as a start to break a colt is made, it should be perseveringly and unremittingly carried out. It is the halting, or irregular method of working colts, that is frequently the occasion of causing them to develop bad habits, such as shying, bolting, kicking, baulking, and other common forms of perversity in horse life. A superabundance of nervous activity tends to harshness in imposing necessary restraint, and chafing under restraint often develops bad temper. It is a much safer plan, especially in a colt of high spirits, or if there is a predisposition to waywardness, to keep such an animal on low diet for a time before an attempt is made to handle him, and during the time he is being broken, under-feeding is much safer than full feeding.

It must be acknowledged that as a whole the horses of this country are wonderfully free from vice, when compared with those of Great Britain, especially the light classes of horses of that country. There being such a considerable infusion of thoroughbred blood amongst the old country light horses, it renders them more prone to vice, for the more highly organised an animal's nervous system is, the more susceptible he is to good or bad influences. This tendency to vice has become pretty thoroughly established in many horses of the old land, so that there is the hereditary predisposition to contend with, in many cases, in educating a colt. But the two factors which, in my opinion, have conduced most towards the development of vice in old country horses are late breaking and idleness. It is not at all uncommon there for colts to be let run until they are four years old, or even five in some instances; and as they advance towards maturity, they become much less impressionable to teaching, but decidedly more obstinate. If a colt gets his way in opposition to the will of his trainer, it makes a marked impression on his memory, and if he continues conquering, as opportunity affords, the habit, whatever it is, becomes indelibly impressed on his mind, and in the case of a mare or entire horse, the ingraining of a propensity is likely to be seen in their progeny. Horses have extremely retentive memories. Physiologists consider that every mental act results in a change in some of the nerve cells of the brain, and that every repetition of this act serves to render the change more permanent. In this way the animal's nervous organisation becomes altered, and his tendencies changed.

Although it is most undesirable to allow a colt to get his own way in opposition to his trainer, yet it is equally inadvisable to place him in a position likely to excite opposition. If he gets into a habit of compliance, he will never seek to thwart the will of his driver. There is a great deal of work entailed and risk run by breaking a colt in single harness or in the saddle, when compared with breaking double. If a horse of suitable age and temper is available as a mate, there is practically no risk except from kicking over the traces or tongue. Perhaps the only advantage that single hitching has over double is that a kicking strap can be used on shafts, and thus any danger from kicking averted. But, as a rule, if the spirits are kept under by steady work and restricted feeding, there is not much danger from this; and the companionship of another horse gives a colt an amount of confidence and encouragement which causes him to act at the will of his driver, without knowing what opposition means. If a colt is used

double steadily, hitched twice a day if possible, and given an amount of work that only just avoids his being jaded, very little trouble is encountered. He should not be used on one side all the time, but after being hitched half a dozen times, he should be changed from one side to the other occasionally. A few weeks handling of this sort will make a colt tractable, and to a degree that he may be considered broken single, and can be mounted without much trouble.

A New Remedy.

Editor CANADIAN LIVE STOCK AND FARM JOURNAL:

SIR,—In the February number I saw an article headed "Rubbing the Tail," which reminded me of something I was told by an old horseman some years ago. I had a very fine mare that was subject to colic, having it very often; my friend was admiring her very much, when I told him the trouble I had with her. He said if I would give her a small handful of clean ashes once a week he would guarantee a cure, and that she would not rub her tail so much. I tried it with the best of success, and have so continued to use it with equally good results for the last twenty years. Hoping others may find it the same,
I remain yours,

A SUBSCRIBER.

Aylmer P.O., Ont.

Tumor on Cow's Jaw.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

DEAR SIR,—I have a valuable cow that has a lump growing on the side of her jaw. I first noticed it in the fall, when it was very small, and it has been growing steadily larger since then. It appears to grow inside of the jaw as well as on the outside. I am afraid it will grow so much as to interfere with her eating. It is quite a common trouble here, and has been so far the last few years. What is the cause of it, and what remedy would you advise?

L. O. LEMIEUX,

Oak Lake, Man.

The growth described is partly bony and partly fleshy, and is called Osteosarcoma. It is better to fatten victims of it before it interferes with the teeth. It is said to be due to a vegetable fungus that localizes itself in the jaw generally, but sometimes in other places. The fungus is most likely taken up in grazing, and this disease has been found prevalent among animals pastured in low lying fields.

Some report favorable results from the application of iodine ointment to the growth. It is, however, more satisfactory as a rule not to rely on such remedies in these cases.—[DR. F. C. GRENSIDE, Guelph, Ont.]

Epilepsy Amongst Cows.

Editor CANADIAN LIVE STOCK AND FARM JOURNAL:

SIR,—We have an ailing cow, and as a subscriber to your paper I would like to learn of proper treatment through your columns. I purchased cow last fall, and she was beginning to milk; the day we got her home she took a kind of fit, and she continued to take one a day for two or three days. The spells were a fortnight or more apart as far as we can tell. When she has them she suddenly falls backward, and down sometimes, cutting herself, quivering all over, frothing a little at mouth, etc.; she gets up gradually on her forward knees first, and when on her feet will rest her weight by putting horns to a post. She is very thin, but eats heartily. I would like to get her cured, and fat her for beef. She is not with calf now.

F. H.

Windsor, N.S.

Epilepsy was no doubt what the cow was suffering from. It results from a variety of causes. Irritation of the digestive tract from the presence of worms, or undigested food, is the usual cause of the trouble. It is usually a good plan to clear out the digestive organs with a purge, and afterwards stimulate their healthy action with tonics. The following tonic dose for a cow may be given three times a day in meal: Sulphate of iron, one drachm; nux vomica, one drachm; gentian, two drachms. The food should be wholesome and nutritious, as good hay, a few roots, and plenty of chopped oats.—[DR. F. C. GRENSIDE, Guelph.]

Difficulty in Rearing Colts.

I have a blood mare that could never raise her colt beyond three months. She being very vigorous the colts at birth are active, but as they grow they get duller, and die before they are three months old. Last year I paid \$30 for the service of one of the finest horses in the country, and the colt came strong and active, but died before it was three months old. I dissected it and I noticed that the blood appeared to be very weak—like

reddish water. That was the third one I lost. She is due to foal again the 1st of April; will it be advisable to wean the colt at birth? The mare is twelve years old, and has been driven very hard when young. I have had her examined by a veterinary surgeon here, and he stated there was nothing wrong with her. Last year, two days after she foaled, I turned her out in the pasture, and kept her there until her colts died, without having her in harness at all. When in harness for some time pimples come out readily, break after a few days, run a little, and then heal up again. She is a valuable beast to breed from, and I would like exceedingly well to raise a colt from her. I would be glad to get all the information I can in regard to the matter.

Manitoba:

SUBSCRIBER.

It is impossible to assign a cause in many of these cases.—[DR. F. C. GRENSIDE, Guelph, Ont.]

The Farm.

Banner Oats.

As our supply of Banner Oats is exhausted, we hereby give notice to all concerned that we cannot supply any more oats as premiums for new subscribers or otherwise. This premium has been most successful, and we regret not being able to make use of it longer.

Clover Sowing for 1890.

The safe rule for farmers in sowing clover or mixed grasses is to put in the amount required by the usual rotation, whatever that amount may be. But in addition to this, it may be well to sow clover for other than hay-growing or pasture-producing purposes only. It may be well sometimes to sow it mainly for the purpose of enriching the land, at other times two of the three purposes indicated may be attained, and yet again all three may be realized.

To the extent of the acreage called for by the rotation, grasses, and more especially the clovers, should be sown every spring, but sometimes it may be desirable to sow some fields with the object in view primarily of enriching the land. This should not be done to the same extent when clover seed is very dear, as there is always some risk from the possible failure of a catch, which is almost certain to be the result on heavy soils in a dry season. The loss in such an event is quite considerable when clover is dear. The seasons then that should be chosen for this purpose are those in which the seed may be cheaply bought, as at present. The price of clover seed is lower than it has been for years, which affords just the opportunity that we have been advocating above.

Some farmers advocate sowing some clover seed with all the spring grain they put in, except peas, even supposing they are going to plough the land again in autumn. When seed is cheap this will likely pay well, but when dear, say \$8.00 a bushel for the small red, they should certainly hesitate.

When it is thought best to sow some fields with clover seed which are not to be kept for meadow, those ought to be chosen which are likely to secure the best "catch." Spring wheat, winter wheat, and barley, are more suitable for the purpose than oats, owing to the leafy habits of growth of the last mentioned crop.

Some adopt the plan of sowing to clover what they intend to fallow the following season. When this is done the ground is not ploughed until June of the next year, and when broken up it is worked on the surface until the time of wheat-sowing. There is thus afforded an excellent pasture, both autumn and spring, before the clover is turned under. This plan is best adapted to heavy soils, where weeds are more easily killed than in deep loams. There is one strong objection, however, to sowing clover on fields to be cropped the following season unless they are quite free

from weeds. It would interfere with that autumn cultivation so generally practised now, where good farming is the order of the day. If the fields were ploughed immediately after harvest the benefits resulting from sowing the clover would be largely lost, owing to the short time given to the roots to fill the soil.

Where rape is to be sown the following season the field may be sown to clover, as during the whole of the autumn it would afford an excellent pasture, and for a time also the next spring, by which time the roots would have well filled the earth, and by their decay would thus have a very beneficial effect on the land.

In all farm operations, the one who keeps his farm clean has the advantage. He can sow clover in any field when this may be desired, and the same may be said of the sowing of any other crop, while he whose farm is foul is of necessity required to adopt some particular line of culture.

The Importance of Early Sowing.

Most persons engaged in agriculture are aware that there is some advantage in early sowing, but few, however, realize the extent of this advantage. It has been noticed in instances, not a few, that grain sown only one week later has produced much less of a return, but records are not forthcoming as to the real difference caused by sowing as soon as the ground is ready, as compared with what is sown later at successive intervals. Here again is good work for our experimental farms, and we hope they will not be slow to take the hint which is now thrown out to them.

Of course early sowing is out of the question, unless the ground has been ploughed the previous autumn. This is a matter of the utmost importance to the farmer. The greatest loss from attending exhibitions indiscriminately comes in here. The farmer gets behind with his autumn work, including ploughing, and much of what ought to be thus made ready for receiving the crop is not ploughed until spring, when it is impossible to have it ready

for receiving the seed in due season, owing to the amount of work that engages the farmer's attention at that time. The benefits arising from more thorough pulverization, and greater warmth and moisture which characterize a seed bed made on autumn ploughed land, are also lost, and those beneficial influences also favorably further aeration and absorption all through the early part of the season.

A first benefit from early sowing consists in getting ahead with one's work at the outset. This puts a farmer on a vantage ground, which he can retain with due watchfulness throughout the season. When one keeps abreast of the work, he can always accomplish it with much less labor, and can usually do it in better form than when not so situated.

A second advantage, as already stated, is the larger return realized in the crop. This not only consists of

an increased yield of the grain, but it also favorably affects the quality of the same, and gives, in most instances, an increased yield of straw of a better quality than what is obtained from grain sown later.

A third advantage arises in the curing of the grain at harvest time. If grain is not sown in good season, it cannot ripen in good season. The early ripened grain, in nine cases out of ten has more favorable weather for curing it, as the more advanced the season after harvest time comes, the darker and damper are the days, showers are generally more frequent, and the dews heavier and more prolonged, while the increased moisture remaining in the straw still further enhances the difficulty of curing.

A fourth advantage consists in the better "catch"

on the farm to exert himself to the utmost next spring to get his seed in the ground in good time. Let everything be done that can possibly be overtaken by way of getting ready before spring opens. All tools required should be on hand and in good order. All seeds required should be ready and cleaned after the best fashion. The teams should be in good spirit, and nothing left undone that can be done to make ready for a season of active and painstaking work.

N. Awrey, Esq., M.P.P.

President Central Farmers' Institute of Ontario.

The names of but few men in this Province are now so well and favorably known amongst the farmers of this country as that of Mr. Awrey. For many years he has been a prominent figure in the Legislature of this Province, and his services in many a hard fought campaign have been eagerly sought and freely tendered, although he is still among the younger members of the house, notwithstanding the fact that he is now serving his third term in Parliament.

Mr. Awrey was born on the 8th day of June, 1851, in the Township of Binbrook, County of Wentworth, where he still resides, and where he is still engaged in following farming, the great industry of our Province. Like many of the foremost men of our country, he got much of his education in the common school, and has worked himself up to his present proud position of honor and usefulness through the sheer force of will power, industry, and perseverance, to which, however, his very superior gifts as a speaker have contributed in no small degree.

Mr. Awrey is come of the grand old U. E. Loyalist stock, his great grandfather on the side of both father and mother having left their all behind them, for the sake of King and Country, at the time of the American Revolution. One of his grandfathers also served in the Canadian forces throughout the war of 1812. He himself served for seven years as an officer in the Canadian volunteers at the time of the Fenian raid.

The subject of our sketch had a natural predilection for legislation, which led him to interest himself in the politics of his country at a very early age. He was elected a member of the municipal council in the Township of Binbrook in 1877, and in the following year was the choice of the people in South Wentworth, to represent them in the Ontario Legislature. He was at that time but 27 years of age. The election of so young a man to Parliament is almost without precedent in the annals of Canadian legislation. But the wisdom of the choice has been more than justified, for so satisfactory has been his course in the house that he is still representing the same constituency, and was never so strong in the estimation of the yeomen of his county as he is to-day.

Mr. Awrey has always taken an active interest in things pertaining to agriculture, and has done a great deal of hard work in this line. He served for eight



N. AWREY, ESQ., M.P.P.

President Central Farmers' Institute of Ontario.

of grass obtained when sown on grounds that are put in early in the season, but this will of course only apply to such kinds of grain as are sown to grass, as barley and spring wheat. The benefits of a good catch of grass usually extend over three years.

A fifth advantage lies in the opportunity it gives to gang-plough stubbles early in the season after the crop is reaped. It is now becoming common, and happily so, to gang-plough stubbles soon after harvest, with a view to the destruction of weeds. But the earlier in the season this can be done after the grain is cut, the more effectively will this purpose be accomplished, as it gives a longer period for weed seeds to sprout and grow in the upturned soil.

In view, then, of all these benefits arising from the early sowing of the standard spring cereals of this country, we appeal to every reader of THE JOURNAL

years as Secretary Treasurer of the Townships of Bimbrook and Saultfleet fairs, with much satisfaction to these societies, and has also been a member of the Great Central Fair board for a number of years. He was elected member of the council of the Agricultural and Arts' Association of Ontario in 1889, and on the retiring of Mr. V. E. Fuller, who for two years had served as President of the Central Farmers' Institute, Mr. Awrey was the unanimous choice of the members of that body as his successor. This was also in 1889, and so completely satisfactory have been his services to the farmers of this country that, when the time came round for the annual election of officers in February last, the convention would hear of no other name for the position of president, and elected him again with one voice.

Mr. Awrey has done much hard work in the interests of agriculture since his election as president of the Central Farmers' Institute. He has continually responded to the calls to address conventions of farmers in all parts of the Province, and, as was apparent from the financial statement of the treasurer, at no expense to the Institute, thus freely and ungrudgingly giving both time and means to the promotion of the interests of the farmers.

The first Minister of Agriculture was appointed, as our readers are aware, in 1888. This office was created at the request of the Central Institute. The names of several prominent farmer members of the house were spoken of as being suitable to fill the position, and the fact is very significant that the name of Mr. Awrey was of the number.

Honors have come thick and fast to the subject of our sketch during recent years, but they are certainly well-deserved. An intimate knowledge of farm affairs from an early age, the deep public interest which he has always taken in agriculture, and the gift of pleasing and powerful speech, have all contributed to render Mr. Awrey the general favorite which we find him to-day in the estimation of the farmers of Ontario. They fully appreciate the importance of having one so strong in argument to battle for their interests.

Mr. Awrey is still comparatively a young man, not yet beyond the shady side of forty, and if spared has, without a doubt, a future of still wider activity before him. Judged by the estimate of past attainment and present usefulness, why may we not expect with no little confidence that he will be found occupying still higher spheres of usefulness? The barrier of youth is passing away, and with the ripe judgment which years create, we make bold to say that in wider fields no man could serve better the interests of the people of Ontario.

The New Agricultural Text Book.

SHOULD THE TEACHING OF IT BE MADE COMPULSORY?

The school system of Ontario will compare favorably with that of any country in the world. We may justly feel proud of it, and yet, like all else that is human in its origin it is not absolutely perfect. The lack of instruction on agriculture in the rural schools has always been a great weakness, especially when we remember that agriculture is the great interest of the country.

The necessity of making provision for this deficiency became apparent to the Hon. G. W. Ross years ago, and no sooner was he appointed to his present position than he began to look about for some one to undertake the preparation of this book. Writers of agricultural text-books proved not over plentiful in Ontario, but

the work was taken up eventually by President Mills and Professor Shaw, of the Ontario Agricultural College, Guelph.

We are indebted to the publishers for access to the proof sheets of a large portion of this work, which is now going through the press, and we have given it a most careful examination. As a result of this examination we are prepared to state that this text-book will be one of the very best that has ever been written on agriculture. The amount of information that it will contain is very great, and the thoroughly practical way in which the subjects are handled cannot but prove of immense service to the farmer of the future who has studied it thoroughly.

We understand this book is authorized to be taught in the common schools, and even this much is matter of thankfulness. But this is not enough. We argue that unless its teaching be made compulsory in our rural schools the benefits resulting from its authorization will, to a great extent, be lost.

Our reasons for thinking so are as follows:

1. A large number of the teachers are not well posted themselves on the subject, and will therefore naturally feel inclined not to undertake the work of teaching it unless under constraint. They no doubt feel that the list of subjects is pretty heavy already, and in self-defence will naturally incline to undertake no more than is absolutely required of them.

It is vain to answer that the subject is not in itself a difficult one to teach, nay, that it is not only easy but one that must prove so interesting that out of pure love for it the teachers will readily undertake the work. A subject is never interesting to either teacher or pupil until it becomes more or less perfectly understood, and the acquisition of such knowledge is always accompanied with effort. The teachers in our common schools are not required to undergo an examination on this subject when they obtain their certificates, and they are not likely to become inclined to impose upon themselves the labors of mastering this text-book unless constraint from some quarter compels them. For these reasons we conclude that the teachers generally will not of themselves urge the introduction of this book, but rather that they will give it at least a negative opposition.

2. We believe that a large section of the farmers will not favor the introduction of this book for a time. This statement may seem startling at first thought, but it has not been made in haste. The apathy that has been content to do without a text-book on agriculture during all the past is not going to be converted into a zeal for its introduction in a day. The more intelligent portion of the farming community will hail its introduction with glad welcome, but the less intelligent portion will be more than indifferent. They will be hostile. A farmer who will not allow an agricultural newspaper to cross the threshold of his door is not likely to become enamored all at once with an agricultural text-book. A tiller of the soil who has cherished in all the previous portion of his life a most thorough contempt for what he looks upon as "book learning," is very apt to conclude that the time spent by his son at school while thus engaged is more than frittered away.

3. Its introduction will not be favored at first by a large section of the pupils. Wearied with the full course of study which they are now required to take up, they will naturally resist any addition to this course. To find pupils clamoring for an addition to their course of studies is a thing almost unheard of in their earlier years. Give them their choice and the list of studies would be very short indeed.

For these reasons and others that might be given we feel that this book the greatest boon that has ever

been furnished to the farmers of this country in an educational sense will receive a negative welcome on the part of a large section of teachers in our rural schools, and also from a numerically strong section of our farmers; and that therefore its introduction to the country schools should therefore be made compulsory. It is our firm conviction that if the Minister of Education makes the teaching of this book imperative in the schools already mentioned, that he will confer a boon on the whole farming community the benefits of which would be difficult to estimate. The successful introduction into our schools of a suitable work of this nature would of itself cover his administration with a renown that would go down through the centuries.

Lucerne Clover.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

DEAR SIR,—I would like to ask my brother farmers, through your valuable paper, to sow one acre of lucerne clover to satisfy themselves that it will give good pasture in our dry and hottest weather. The roots go down from two to three feet, and it gets its nourishment from the sub-soil. I have had some of it on one of my farms for six years, and I am well pleased with it. I believe lucerne clover and orchard grass will last longer than any other grass we have, and are the coming grasses for permanent pasture for this Canada of ours.

Yours truly,
ALBIN RAWLINGS.

Forest, Ont.

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 our May competition:

- (1.) Green Fodders for Milking Cows.
- (2.) The Feeding, Care and Management of Working Farm Horses.

Essays for June Competition:

- (1.) The Rearing, Feeding and Management of Steers for Market.
- (2.) Selection of Breeding Pigs.

Our Barley Competition.

We are pleased to state that the scheme we started underway last month in respect to barley growing, is meeting with hearty encouragement. The names are coming in fast, and to induce others to join in the contest, we publish a list of the competitors received up to date.

The Barley Bulletin of the Dominion Government.—The bulletin on barley lately issued by Prof. Saunders, Director of the Dominion Experimental Farm, will mark, we venture to say, an epoch in the agricultural history of Canada. What we are going to do and here describe has been incited by the statements made in that excellent document.

The Failure of the Importance of the Canadian Barley Crop. A few years ago barley was one of the most profitable crops the Canadian farmer could produce. His grain was of the best. There was a great demand for it in the United States. The American farmer could not produce so good a grain, nor could he produce enough for his market. The consequence was that Canadian barley was grown for profitable sale in the American market. Now, however, the United States farmer has learned to produce a good grain. And the demand for barley there is greatly lessened owing to the use of corn, rice, glucose, and other substitutes for it. The result is that barley growing has become unprofitable to the Canadian farmer.

Two-rowed Barley.—All the above applies to "six-rowed" barley, the kind hitherto principally grown in Canada and used in the United States. In England the barley used is two-rowed; but two-rowed barley has been but little cultivated in Canada.

The price of two-rowed barley in England is such that if a good two-rowed barley were grown in Canada, in sufficient quantities to permit of its being transported to England at reasonable cost, its price in Canada would range from 86 to 98 cents per bushel of 56 pounds. Every Canadian farmer will, therefore, see the importance of trying to raise a two-rowed barley that will satisfy the English requirements.

What Two-rowed Barley Should Be.—Two-rowed barley should be plump in the kernel, and light in the husk; and it should not be cut until the grain is fully ripe. This latter condition is of great importance. Again, the grain should be perfectly whole, and it should contain no admixture of the six-rowed sort. Moreover, it should not weigh less than from 54 to 56 pounds per measured bushel.

Best Varieties.—Prof. Saunders has been at great pains to get samples of the best varieties of two-rowed barley, and these he has had tested in various parts of the Dominion. From all the different varieties we have selected **The Beardless**, as the one that, in our opinion, promises the best returns to the Canadian grower. The Beardless variety is bearded like other sorts, but it often sheds its beard when fully ripe; and it drops its beard so easily when mature that it is more easily threshed and cleaned than other sorts. We may add that Prof. Saunders also thinks this Beardless variety to be one of the very best sorts.

Superiority of the Beardless Variety.—Besides these points of superiority, the Beardless variety returns a good yield per acre (50½ bushels at the Experimental Farm at Ottawa); and its weight per bushel is also good (56 pounds at the Experimental Farm at Nappan, N.S.).

What We Propose to Do.—Through the courtesy of the Hon. Mr. Carling, Minister of Agriculture, of Ottawa, and Prof. Saunders, of the Dominion Experimental Farm, we are enabled to offer to every young subscriber of THE LIVE STOCK JOURNAL who desires to enter our competition, a 3-pound bag of pure, clean two-rowed barley of the Beardless variety. Each bag will contain exactly 3 pounds, no more, no less. It will be sent, post-paid, and free of all charges, to any applicant who will send us his name, on the understanding that the applicant shall comply with the conditions of the competition.

What the Competition will be in.—The competition will be to see which of our young subscribers shall be successful in producing the greatest weight of pure, clean grain from his 3-pound bag of seed. The grain must be sown by himself, cultivated by himself, harvested by himself, and threshed and cleaned by himself. Then it must be weighed, and its weight and purity and the integrity of the whole proceeding must be attested by disinterested witnesses, and a pound of the grain harvested must be sent to us, that the awards may be justly made.

What the Prizes will be.—We shall award four prizes, of the value of \$20.00, \$15.00, \$12.00, and \$4.50, respectively, for the first four best results. These prizes will not be in money, but will be chosen rather with a view to permanent value and utility, and their suitability to keep in remembrance an achievement of more than ordinary interest. These prizes will be described in subsequent issues of THE LIVE STOCK JOURNAL. It is probable that we shall be able to announce new supplementary prizes.

Other Conditions of the Competition.—Intending competitors must be subscribers (either in their own name or that of their parents or guardians) of THE LIVE STOCK JOURNAL. They must not be more than 20 years of age on 1st of September next. They should send in their names as competitors as soon possible. They will then receive their bag of seed, and a blank form of report. In this report they must enter such particulars regarding time of sowing, method of sowing, methods of cultivation and manuring, time and manner of harvesting, and weight of grain obtained, as we shall ask them. The attestation of the witnesses as to weighing, etc., must be made on this report also. Then this report must be sent to us not later than the 1st of September. Each competitor will also be expected, at the close of the season, to fill in a blank form which will be supplied by the Department of Agriculture, and to send a pound of his grain to Ottawa, as a sample of what his method of cultivation has been able to effect. The successful competitors will also be required to send us a pound or two of their grain, for exhibition at the principal fall agricultural exhibitions.

What the Competition will Effect.—This competition will enable every competitor to obtain, at no cost to himself, a sample of the most valuable variety of what is going, in all probability, to be in the future one of the leading grain crops of Canada. At the end of this season he will have, if fairly successful, something like two bushels of seed grain. Sowing this next year, he will have at the close of the season say from 25 to 40 bushels of seed (or perhaps more) available for 1892. He will thus have, in addition to a great deal of most valuable experience, a sufficient quantity of seed to enable him to enter upon the production of two-rowed barley as a profitable pursuit.

Conclusion.—Now, boys and young men, send on your names at once. Let us have a grand contest. Should the interest taken in this competition be what it should be, we will do all in our power to make it useful to the country at large, and especially useful and profitable to those actively engaged in it. We trust to be able to add to our prize list considerably. Remember that the question whether two-rowed barley can be profitably grown in Canada is as yet undecided. Many people think it can. Each farmer will have to find out for himself, that is, so far as his own farm is concerned. He must also learn how to sow it, how to manure it, how to cultivate it, how to save and cure it. He can learn this only by practical experience. If you engage in this competition, and learn all this, and if it should prove that two-rowed barley is a good crop for Canadian farmers to produce, then you will be one or two years ahead of all those who do not begin to get their experience this year. The appended list gives those that have already entered the competition. They are all from Ontario, with the exception of one, A. E. Cook, of Dundee, Manitoba. We would be glad to have a number of our young stockmen resident in the various provinces enter into the contest, for by their doing so, the results may be made far more valuable.

W. A. Christy, Bloomfield. Joseph Henry Dobson, Schomberg. John Kenwick, Lakeshore. W. J. Douglas, Tara. Wm. Jickling, St. Mary's. James Gibb Fleming, Chatham. J. A. MacVannell, St. Mary's. George Braven, Byng. John McCarthy, Garnet. W. J. Chipsham, Sparrow Lake. A. H. Baird, Chesterfield. Louis A. LaPierre, Paris Plains. Archie Murray, Hollin. Barwell Foote, Zephyr. Franklin Smith, Simcoe. J. Lang, jr., Jermyr. R. C. Read, Northwood. A. E. Cook, Dundee. J. B. McPherson, Hermon. N. A. Black, Appin. Fred Schenderinger, Preston. Dan. F. McEwen, Hensall. James E. Coutts, Lucas. Cornelius O'Mahony, Rillton. D. C. Smith, Druart. A. Roberts, Ancaster. David Hill, Cummock. Thomas Laidlaw, Hanover. John Ferguson, Harrison. George Collins, Union. Wm. E. Bergey, Mannheim. H. J. Ince, Hagersville. J. A. Stewart, jr., Menie. Curby Masterson, St. Catharines. David N. Dunn, Mandaumin. Peter Moir, jr., Rodgerville. Arthur C. Ratcliffe, Anderson. C. West, Ridgetown. Chas. Bonycastle, Campbelltown. John Labrash, Westwood. Skene Smith, Belmont.

Talks with the Boys.

FEEDING BREEDING SOW

It is an easy matter to lose young pigs at the time of farrowing, as many of our boys may have noticed to their sorrow at their own homes. Well, boys, this cannot always be helped, but it generally can if the sows are properly fed and cared for.

The most common mistake lies in feeding the sows too well in the winter when carrying their young, and in not giving them enough of exercise. When the food is dry and very nutritious, as corn or peas, it is too stimulating for them, and they produce pigs small and weak, if indeed they produce them at all, as we have known sows die in the farrowing from this cause. They should then be fed some roots, if you have them, a little grain, particularly in cold days, and swill from the house, which may contain some ground oats, or wheat middlings, or bran, if you see them getting too lean. They should have a warm, dry place to sleep in, and where they may be shut in when you desire it. At other times there is no better place for them in the winter than the barn-yard, rooting in the manure. This does the sows good, and it also does good to the manure. We will not stay just now to explain how this is, but may talk to you regarding this some time in the future.

The exercise does the sow much good, and to encourage her to take it you may sprinkle a handful of grain of some kind over the manure now and then. A little of this may never be found by the sow, but she will find most of it, and the exercise she is taking when thus engaged will be very beneficial to the young pigs.

Before she is going to produce her young, feed her with soft food, and rather sparingly for a few days. If fed heavy at that time her condition becomes much fevered, which endangers her own life, and is almost certain to destroy that of the pigs.

After farrowing give her all the warm drink she will take, but it must have only a sprinkling of meal in it. For the next two or three days give her plenty

to drink, but increase the meal very slowly. When the pigs are a few days old feed her all the food she will eat clean, but always in the condition of thin slop, which favors the production of milk.

When the pigs are weaned take them all away at once, and reduce the diet of the sow very low that she may dry quickly. Then she should be fed fairly well to build up her reduced system.

In summer when the sow has access to plenty of clover, or the grass, and plenty of water to wallow in, she does not require any additional food.

Although it is not best to have the sow real fat when she is carrying her young, she should not be too lean, as then her flesh cannot be sustained while she is suckling her pigs. The best condition in which to keep breeding animals is that which may be termed neither fat nor lean, but medium.

Now, boys, if you take care of your sows as we have outlined, we promise you that you will have good, strong young pigs, and you will get two litters in a year after the sows are one year old, if you wish it.

How to Raise the Draught Horse our Market Requires.

By YOUNG STOCKMAN, Amherstburg.

[PRIZE ESSAY.]

If a little more attention and forethought were given to the above subject, the farmers and horsebreeders of this fair Dominion would be better off than they are to-day. The first thing necessary, in order to raise the right kind of horses for the market, is to select a mare suitable for the purpose. She should be sound, neat, and tightly built, weighing between 1,200 and 1,500 pounds. In selecting a stallion, do not choose one that is deficient in any part in which the mare is, as it tends to weaken the offspring in that particular part. Use a heavy, active, pure-bred horse, of gentle disposition, and sound in every respect. When you have selected one (be sure he is a good one, as like begets like), do not merely use him one year and then get another, but keep on using him if possible, as you are sure to get colts alike in many respects. If you can get them to match, they will sell better, as a rule, than they will if sold single.

The size and vigor of the colt depends a great deal on the care and food which the mare receives before foaling. The colt will learn to eat in a few days, if allowed to eat with the mare. When the mare is being worked, do not let the colt suck while the mare is warm, as it is apt to give the colt the scours. When the colt is weaned, place it in a warm, dry, well ventilated stable, with a small yard adjoining, where it may be turned out for exercise on fine days. While the colt is yet young, accustom it to lead, by tying it to the mare a few times, as it will save a lot of trouble than if left until it is older and stronger.

As to the feed they should receive, they must have bone and muscle-producing food, which is very necessary in all young horses, that they may be better fitted for the work they will have to do in after life. Good bright clover-hay is much better than timothy, as it is a better bone and muscle-producing food. Oats and bran are of the best foods that can be fed. Do not feed the colt more than it will eat up clean, but just enough to keep it in good growing condition. Provide plenty of good pure water, and feed regularly. In the spring, change gradually from dry to green feed, and provide good pasturage and plenty of water during the summer and fall. During the second winter they may be fed the same grain foods in greater quantities, with good wholesome clover or timothy hay, but be sure and provide good stables.

Corn Ensilage: Best Method of Making, and its Value for Feeding Stock.

By WM. LYONS, Salmonville, Ont.

[PRIZE ESSAY.]

Probably there has not been any subject of equal interest to the farmers which has been discussed more fully, and yet in respect to which there is so much

doubt as to its value, as that of ensilage; and that doubt might not yet have been made very clear had not practical farmers of the province made careful investigations and experiments, which brought to light the true principles of the system. When these are followed with good judgment, satisfactory results are almost certain to be realized. Absolutely sweet silage is very rare, but practically sweet, or ripened silage, is easily and certainly obtainable.

The land for a corn crop should be drained either naturally or by artificial under-drainage, and ploughed deep in the fall, so as to be cultivated into a fine seed-bed in the spring. When the corn is planted early it should be shallow, but if late it should be deeper. A quantity of barnyard manure should be liberally applied. The crop should be grown in rows three feet six inches apart, running north and south, and the seed should be put in not thicker than one grain every six inches in each row. A common force-feed seed drill may be used, all the spouts except two or three being stopped up. The best ensilage corn is the sweet southern corn from Virginia. When the corn appears two inches above ground, it should be harrowed, and the harrowing should be repeated twice before it is six inches high. The cultivation should be continued between the rows, so as to keep down grass, destroy all weeds, and promote growth, but when the corn is two feet high, it should be shallower. The corn should be cut when the lower leaves begin to turn yellow, and the ears are in the milky stage. The stalks should be left in armfuls to wilt and dry for a day or two. A low platform truck, not more than three feet high, with a gangway trailed behind, will be found very convenient for hauling the corn to the cutting-box. The cutting-box should be set to cut into inch lengths, and an elevator should be attached, unless the silo be in the basement of a barn, when the elevator may be dispensed with. The foundation of the silo had better be of stone, one foot six inches above ground; one foot of clay being filled in, so as to make the floor one foot higher than the outside level. The studs should be at least 2 x 10 or 2 x 12 inches. Partitions are not necessary if the silo is long and narrow. A convenient size for the silo is 50 x 12 feet, and 16 feet high, having a capacity of one hundred and fifty tons. A covering of three or four inches of cut straw or chaff should be put on the floor before the filling commences.

The average cost of building a silo may be put at one dollar per ton capacity, but will vary according to the finish of the building and the price of material. Not more than four feet should be put in on one day, leaving it as it falls for three days, when it is shovelled out against the side, and tramped down. When through filling it should be covered with a few inches of cut straw, standing three days, and then putting on two feet of coarse grass, hay or straw. No weight is required.

The quantity that may be fed per head will vary, as in the case of other fodders, according to the stage at which the crop was cut. Two tons of ensilage will produce, when fed, as much milk or beef as one ton of hay. A mixed diet is always to be preferred, as the best results are not obtained from feeding silage alone. For milking cows the quantity that may be consumed will vary from 25 to 40 pounds per head per day. Should ensilage form the whole ration, the average cow will require 55 pounds.

An average cubic foot will weigh about 45 pounds. In Ontario an average of 20 tons per acre can be secured. From the above figures it may be easily ascertained the number of acres of corn or the size of a silo required to feed any number of cattle.

It is needless to say that not only the milch cow, but every animal on the farm, is absolutely in need of succulent food in winter. Ensilage seems to have got on a high wave of popularity, for it is unquestionably a grand food for the dairy.

Thoughts from the Boys for the Boys.

In this month's competition we have received many excellent essays, but, boys, you should see how the girls are taking hold of this essay writing. We thought the boys were best informed on many of the phases of practical garden and farm work, but we must confess, unless they make a point, we shall be forced to change that opinion. We would like to mention here that if any of our young stockmen know of any subjects that they would like to write upon, and state them to us when writing in, we shall be only too glad to give them a chance by setting such subjects for competition, if we get more than one mentioning the

same subjects. Boys, take up your pens, and not only generously help along your fellows, but also train yourselves to habits of thought and intelligent writing.

DAVID N. DUNN, of Mandamin, Ont., writes us a capital article on the draught horse question. He presents his thoughts clearly, and shows that he has a practical hold on the subject in hand. "In raising draught horses," he writes, "you must choose a pure-bred sire carefully, and I think Clydesdales will fill the bill about the best. The stallions of this breed are active, heavy in body, with strong well built limbs." Speaking of the management of the colt, he says: "The first winter the foal should be kept loose in a small stable or box-stall, and fed on oats and hay morning and evening, but at noon they should get some boiled feed, in the shape of bran, roots or barley. Corn ears and corn stalks are good for a change. In spring it should be turned out to graze, and will need but little attention except water and salt regularly until the fall. The second winter it should be fed the same as the first, but in larger quantities. The third summer it should be treated the same as the second, and in the winter should be learned to lead, then to be driven in the sleigh with an older horse, and by this time you will have a valuable animal."

ARTHUR H. SELLAR, of Souris, Manitoba, writes in a forcible and intelligent manner on the same subject. He says: "From its birth it should get plenty of milk, and to keep up a supply of this the mare should be fed plenty of nourishing food, or if in spring, be turned out to good pasture. I think it best to let the colt have access to the feed-box with its mother, as in this way it will more easily learn to feed than by feeding it separately. A colt should be treated with kindness and great gentleness, for upon this depends, to a great extent, whether the horse will be gentle or fractious."

D. C. SMITH, of Druart, Ont., favors us with a capital essay, in which he gives some good advice about the selection of the sire and dam. Here is what he has to say: "In the first place, get a mare of some draught breed, weighing from 1400 to 1500 lbs. In build, have her low, lengthy and wide, with a short strong back, good shoulders and long quarters. The legs and feet should be of the best. He should have plenty of nerve power, and be free from all hereditary defects and diseases. In selecting a sire, choose a Clydesdale, weighing about 1800 lbs., and from 16 to 16½ hands high. He should have a good ear and eye, a small head set on a strong, well-arched neck, springing from a deep, wide, full chest and good shoulders, wide across the top and not too sloping. The front legs should be hard and well muscled, while not the least inclined to be meaty. There should be plenty of fine silky hair, and all the pasterns should be at an angle of 45°, with hard flinty feet, not too flat. He should be thick through the heart, with a short strong back, good round barrel, long quarter, hind leg, well-muscled, and not too straight. He also should be sound, with good action, and plenty of life."

The Dairy.

The Creamery and Home Dairy.

Of late the interest in our butter industry has been revived, and with the resurrection there has been much discussion as to whether it is best to encourage the extension of the creamery system or home butter-making. We regard the private dairy and creamery as having two distinct spheres of work, and that of the former, to our mind, as the meeting of the special wants of the home market, and that of the latter the supplying of the export trade.

It has been asserted that the private dairy possesses the power to supply a better quality of butter than the creamery. This statement has obtained credence, but it is not a fact provided the creamery conditions are of the best, as well as those of the private dairy. Given cream in pure untainted condition the butter-maker in the creamery can turn out as good a product in quality, and a better one in uniformity, than any private dairy. The function of the private dairy is, we have asserted, to supply the home market. Owing to the fact that the quantity of butter made is small, and the conditions of production almost completely under control, it is easy for the private butter-maker to shift his practice to meet the desires and tastes of his special customers.

If we, as a producing country, are to add to our revenue through the export of butter, it can only be done successfully through the extensive adoption of the creamery system and its best method. The creamery stamps uniformity of a high degree upon all its output. The value of this uniformity cannot be overestimated, especially in considering its relation to the sale of exported butter. If a bolt manufacturer did not make his bolts of a uniform standard and quality, so that purchasers in buying a quarter-inch bolt could not rely upon it fitting into a quarter-inch hole soon he would lose his trade. So it is in butter manufacturing. The butter-maker, to gain customers and hold his market, must make his output "fit into" the tastes of his buyers every time. One dissatisfied and deceived purchaser will do an article more harm than two will do it good who have found the article all that it was represented to be; for the latter feel they have obtained true value, which they naturally looked for, and which is not a subject for especial praise; but the former, feeling aggrieved and cheated, fails not to voice his dissatisfaction unobscured. We can only guard against such results by the adoption of the creamery system as far as possible. With the examples we have before us in our cheese industry, with the light of Danish practice shining full upon us, no further proof is needed to show that the creamery system is the true avenue to reach the European and other foreign butter markets.

Milk from Different Breeds.

At the annual milking trials held under the auspices of the British Dairy Farmers' Association, it has been the rule to analyse samples of morning and evening milk of the different competitors, and in this way during the ten years or over that the society has been carrying on this work, several hundred accurate analyses of the milk of different herds have been made. No trouble or expense has been spared by them, to make these accurate, and for this reason, the data collected may be considered of more than usual interest. A correspondent of the *Agricultural Gazette*, thus tabulates the results of these trials, including the one this year:

| Breed. | Lbs. of Milk. | Total Solids. | Fats. |
|----------------|---------------|---------------|-------|
| 119 Shorthorns | 43.13 | 12.87 | 3.73 |
| 31 " | 44.80 | 12.89 | 3.81 |
| 118 Jerseys | 37 | 14.56 | 4.59 |
| 43 " | 28.41 | 14.94 | 5.47 |
| 49 Guernseys | 28.39 | 14.00 | 4.77 |
| 14 " | 31.15 | 14.46 | 5.03 |
| 26 Crosses | 39.12 | 12.91 | 3.69 |
| 3 " | 51.86 | 12.28 | 4.23 |
| 7 Dutch | 43.31 | 12.11 | 3.26 |
| 13 Ayr-shires | 34.26 | 13.43 | 4.15 |
| 2 Devons | 30.12 | 14.34 | 4.90 |
| 3 Red Polls | 41.10 | 12.72 | 3.60 |
| 1 Welsh | 46.00 | 12.74 | 4.16 |
| 3 Kerries | 23.50 | 14.22 | 4.49 |

As the writer says, the number of animals tried of the last six herds, is too small to be conclusive, but those of the Shorthorns, Jerseys, and Guernseys, supply reliable information in respect to the qualities of their milk. The collector of the above material asserts that there has been a gradual improvement each year in all kinds of dairy animals, and he is of the opinion that the increase is not due to the more careful selection of the competing animals, but must be owing to a general and decided rise in the dairy qualities of them all.

Dominion Dairy Association.

At our Capital, on the 17th, 18th, and 19th of February, the dairymen of the Dominion held a successful series of meetings. Though thoroughly representative in character, as nearly all present were

delegates from the various dairy associations of the Provinces, yet it cannot be said that the work accomplished reflected this to any very marked degree. Professor Saunders in his address, after instancing the fact that our dairy exports had trebled in the last 10 years, and showing that our butter trade languished, because of the want of co-operation, gave a brief sketch of the conditions of the various provinces, showing how they were adapted for butter making. The speaker carried his hearers from Prince Edward Island to British Columbia, describing clearly, and in an interesting manner, the special features of each of our provinces that make them suitable for dairying. Touching upon the question of fodder plants, the lecturer stated that they had tested seventy varieties at the Central Farm, and furnished the following list of varieties that they had found to produce the largest weight of fodder, and advanced in maturity to the glazed state: Brazilian, thirty-nine tons; Golden Beauty, thirty-eight; Virginia Horse Tooth, thirty-six; Red Cob Ensilage, twenty-six; Mammoth Southern, twenty-four tons. Of the medium early sorts, the yields were in round numbers: Crosby Early, twenty-seven tons; Early Adams, twenty-six tons; Crompton's Early, twenty-two tons; Amber Queen, nineteen tons; and Early Narragansett, sixteen tons. Of the very early varieties, the Extra Early Adams yielded eight tons, and the Northern Red Sweet six tons. The Squaw Corn was the only variety that ripened at the Brandon station. Referring to their future cattle experiments, several striking facts were cited to bring out clearly the strong individuality of certain cows. The speaker stated that they had one Holstein that produced more butter fat than any one of their Jerseys, while they also had one Jersey that gave 6.05 per cent. of fat, and the other alongside her gave but 4.35. The question was broached as to the best way for the ordinary farmer to test his cows. The opinion of the meeting favored as the simplest and best the use of cream gauges, and the weighing of the milk. If the cream gauges are kept under similar conditions, the cream yielded will vary but little in proportion to butter yielded. Professor Robertson addressed the assembly on "Dairy Farming for the Dominion of Canada." After showing that dairy farming met all requirements in respect to procuring and providing food of acceptable quality, that it maintained the fertility of the soil and gave profitable occupation to a large proportion of the population, the professor dwelt on the adaptability of dairy farming to meet the needs of a nation, making the statement that there is no calling, except that of market gardening, that will produce so much valuable food per acre. The assertion was made by the speaker, that the farmer was not merely a producer, but a manufacturer as well, and in line with this he presented the forcible and striking figures that the substances in one ton of barnyard manure, worth \$2.50, through the skill of the farmer and his cows, became worth \$25.00, as substances composing foods we consumed, and it is thus that the farmer can give his raw products a thousand fold increased value. The cheaper we can make the best class of food, the

more profitable our agriculture will become. He stated that in selling grain we sell all the nitrogen, potash, and phosphoric acid, but the animal only takes out fifteen per cent. The animal so increases value as to give this 15 per cent. more value than the whole 100 per cent. To replace the elements of fertility exported in 1,000,000 bushels of wheat, by the purchase of commercial fertilizers, it would cost \$240,000. Instead of selling coarse grains, we should be a people buying coarse grain. The professor stated that, as ordinarily conducted, the man does the chores and nature the work. It was easier for a cow to pay something each week, rather than loaf around six months and pay like a discouraged debtor. Referring to our trade with England, it was stated that we were just one cent distant from the market of Great Britain. As an instance of what one may do, he cited the fact, that at Governor Hoard's creamery, a dairyman averaged \$2100 per year for butter-fat from thirty cows. He was offered \$15 for skim milk from each cow, but he preferred to feed it. The cows milked

The cost of feeding 155 days during the summer was:—
 Pasture and green fodder.....\$ 10 00
 3 pounds bran 3 26
 Total\$13 26

The returns were:—
 Milk, 7500 lbs., at 1 cent per lb\$ 75 00
 Taking from this the \$13.89 which it cost to keep each cow, the balance representing total profit is \$43.11. It is to be remembered that under such a course of feeding, the fertility would be increasing.

Professor Roberts, of Cornell University, N.Y., in his own original manner, dealt with the question of "Foods for Plants and Animals." The speaker referring to the general interest in all quarters in respect to agricultural questions, humorously stated that he knew the time when he was arraigned and hanged off the platform because he had objected to the making of ice-cream through a cow. Touching on the question of drain ge, he made the statement that drainage lands

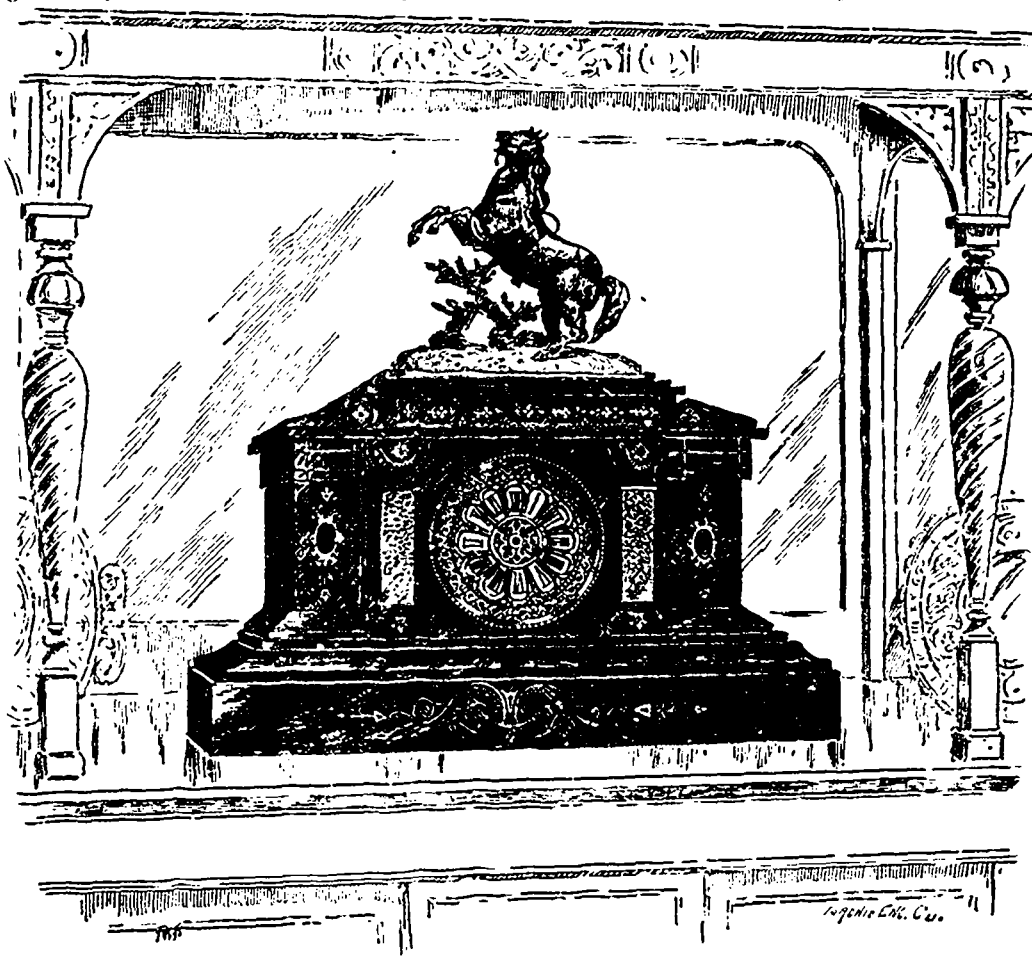
in need of it were made one-half to one-third more productive. It is, as natural for water to run up hill as down. Quality of product depends more on the quantity of plant food, rather than on the quality. A valuable idea cleverly brought out by the lecturer was that of rotating the fertility. The fertility of the soil was in it for us to make use of. Rotate it through the corn the silo, the cow and the manure. Turning to animals, many hints and suggestions were thrown out. The speaker stated that it is never possible to get a calf that will grow into a cow that will milk eleven months of the year, from a cow that will only milk three out of the year. Speaking of inheritance, he asserted that more attention should be given to what was behind the animal, for on this would depend the results of the breeder's skill in feeding and management.

In answer to the question whet it would be better to sow those varieties of corn that ripened, but produced only about 10 or 12 tons, or others

that produced 20 tons, but did not thoroughly ripen, Professor Roberts advised his questioner to plant the largest variety that will mature in that district. Plant it so as to get the most bushels of corn. Mr. A. A. Ayer, of Montreal, treated of the question of "Markets and Marketing" in a very able manner, with the practical results that a resolution was drawn up asking the Government to appropriate \$5000 annually, to develop the butter trade until the trade re-opened in exporting butter.

Excellent addresses were delivered by the President, Mr. D. M. McPherson, of Lancaster, Hon. John Carling, and others, but space forbids their notice. The election of officers for the ensuing year resulted as follows:

President, D. M. McPherson, Lancaster, Ont.
 Vice-Presidents (ex-officio), Presidents of all Provincial Dairy Associations.
 Secretary, J. C. Chapais, Montreal, Que.
 Treasurer, H. F. Foster.
 Executive Committee, Messrs. J. S. Pearce, Bissell and Haggerty, for Ontario; for Quebec,



A HANDSOME CLOCK.

Given by THE JOURNAL for the best two year old Stallion at the Clydesdale Stallion Show and awarded to MacClaskie (679) owned by Graham Bros., Clarendon, Ont.

from 10 to 11 months, and the butter sold for 27 cents per pound.

Professor Bernard, Secretary of the Council of Agriculture, Quebec, in the course of a very elaborate and exhaustive treatise on "Rational Feeding of Milch Cows," presented some figures from his own work that will be found interesting. With his own herd of twelve Jersey cows, varying from one-half to seven-eighths Jersey, he made a net profit of \$43.11 per cow. The cows were mostly young, and two did not calve last year. They gave a total milk yield of 75,788 lbs. During the 210 days stalled, they were fed:—

15 pounds of ensilage.....\$ 3 94
 8 pounds of hay..... 6 72
 3 pounds of straw..... 1 35
 10 pounds of milk..... 5 60
 1/4 pound cottonseed meal, }
 1 pound bran, } .. 99

Total cost.....\$18 63

Messrs. Tache and McCallum; Nova Scotia, Paul C. Black; New Brunswick, Mr. Peters; Prince Edward Island, J. Hamilton; Manitoba, E. A. Strouthers; North-West, Mr. Thorburn.

Winter Dairying for Ontario.

Read by JAS. W. ROBERTSON, Dominion Commissioner of Dairying, Ottawa, Ont., before the Permanent Central Farmers' Institute.

(Concluded from last issue.)

COWS.—I have no desire to enter the lists as a champion of any one breed. I am not deterred from engaging in the so-called *war of the breeds* by any feeling of timidity, but I honestly believe in the serviceability to the farmers of this province of each of the several breeds represented by their advocates as the *one only special breed* which a man can afford to own or feed. It is every dairyman's right to improve the earning power of the animals which he keeps, by continually enlarging their capacity from generation to generation. The particular points that indicate talent for service along the line already indicated (milk, stock, beef) are not always all found in every good cow, but they are so generally a useful and safe guide that I here repeat them. A long udder of soft elastic quality; soft mellow skin, covered with fine hair; a large roomy barrel, with ribs broad and wide apart, and with firm muscular development along the abdomen; broad loins, long rumps, and thin hips; a rather long lean neck, with clean cut face, broad between the eyes, and with them large and prominent. The inherited good qualities should be continuously improved and enlarged that they may be transmitted in still larger measure to the animals' progeny as a result of judicious breeding.

FODDER.—The difficulty that faces us in this department of dairy work is to obtain a fodder that will be in every way suitable for the support of the animal, and which will be at the same time obtainable at the least possible cost. By the use of fodder corn and a silo, the cost *per day* for feeding a milking cow, to her full capacity of production, may be reduced from 22c. to 12c. Because the farmers have neglected these two matters of breeding and cheap feed, I estimate that there are in Ontario 250,000 cows costing \$5 per head more for feed than the market value of their product annually. I am of opinion that a few years of earnest effort for improvement will result in making these 250,000 unprofitable cows yield at least \$20 worth per year of marketable product above the cost of the feed which they consume.

CREAMERIES.—The quantity of creamery butter manufactured is so small that it is hardly yet felt in the ordinary channels of Canadian commerce. The butter which we export is mostly made in small dairies. Its *lack of uniformity* would in itself be enough to relegate it to a third or fourth rank in the British market. The methods of handling it after it is made, all tend to depreciate its value though it may increase its strength. It would have been impossible to develop the cheese industry to its present position of primacy had not the co-operative method been generally adopted. Of all the cheese manufactured in the province 99½ per cent. is made in factories, and only ½ of one per cent. in home dairies. Of all the butter made in the province from the milk of nearly as many cows as are used to support cheese factories, less than 3 per cent. is made in creameries. If we had this state of affairs in butter-making reversed, and if only 3 per cent. of our butter were made at the farm dairies, its reputation would soon equal or excel that of our cheese, and the volume of its business would become annually and increasingly larger. If a few of the leading men in each section would begin to make butter during the winter, ample to meet the home demand, they would soon encourage their neighbors into following their practice, until a sufficient supply of cream could be obtained to support a co-operative creamery.

Within a month of this date, a carload of dairy butter was sold in this city (Toronto), at ten cents per pound. At the same time, creamery butter was in demand at 26 cents per pound. It may be just considered that some of the *dairy butter* is quite equal in quality to the best *creamery* that is made, but the substantial fact still remains that the average price of dairy butter is much less than that of creamery butter. The *cream-gathering plan* is the one best adapted to our conditions in Ontario. While bad roads and stormy weather may interfere with the drawing of

milk to a factory every day, neither would to any serious extent hinder the drawing of cream to a creamery twice a week.

There is no use of us striving to make Ontario into a butter-producing country in the summer time, and there is just as little use of us trying to make Ontario into a cheese-making country in the winter. I believe we are specially favored for the manufacture of cheese, that we have as good opportunities for the manufacture of it in climatic conditions as any country in the world, and that we can double our profits. There are nearly as many cows having their milk turned into butter as there are having their milk turned into cheese. There are at least 250,000 cows whose milk is made into butter, as against 26,000 whose milk is made into cheese. If the cheese manufacturers will agitate to have those 250,000 cows begin their milking season in the fall, then the cheese factories could be provided all through the country with appliances for making butter from November to March, and it could be sent over to England safely, instead of being spoiled in transportation, as is the case with butter shipped in the summer. If one could induce the patrons and farmers to raise the calves in the winter, they could rear the best ones, and would make better winter cows and fattening steers. In that way they would fortify themselves, so that if cheese were low for one year, the increased profit from butter would more than make up the deficiency. If that is done, there is no reason why we should not have as large exports of butter annually as we have of cheese. If we could co-operate more in the manufacture of butter, we would realize more from it, and in doing that, cheese-making would become more remunerative also.

It is my contention that *winter dairying* is a branch of agriculture which the farmers of Ontario can no longer afford to neglect. If it could be developed with good judgment and persevering energy, it would repair the shattered financial health of those districts which a long practice of *grain selling* has brought upon them. In the western states at one creamery, to my knowledge, a single farmer has received \$2100 in one year from the creamery for the butter-fat in the milk of his 30 cows. The skim milk was worth more than \$15 per cow to him besides that. The place where that was done is not in any sense superior to most of the province of Ontario, in either soil, climate, or market conditions. The *dehivrance* of our farmers from ever-recurring periods of depression and hard times is in their own hands. Winter dairying will help them to do for themselves what no outside help or governmental aid or hindrance can effect. It will provide large supplies of products always in demand at remunerative prices. It will increase the fertility of their fields, and give them a satisfying income the year around. I believe that the creameries of this province may become one of the greatest factors in furthering its material prosperity, through winter dairying.

Feeding Whey.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

DEAR SIR.—Could you inform me, through the columns of your JOURNAL,

1. What amount of feeding value is in factory whey?
2. Would you consider it injurious to the health of young animals?
3. What changes take place from the time it is run off, until twelve hours after, when it has become sour? Is there much difference in the feeding value?
4. What effect has boiling upon it; does it prevent scouring in young calves?
5. Would you consider it a just food for calves, either new or old?

By answering the above, you will greatly oblige

North Georgetown, Que.

A SUBSCRIBER.

1. The feeding value of any food depends chiefly upon (1) its palatability, (2) the nourishing qualities of the several constituents; (3) its chemical composition; (4) the nature, age, etc., of the animals to which it is fed. For young calves or pigs whey is palatable, and is also easily digested if it has not become excessively sour. The chemical composition of whey is about as follows:—Water, 93 per cent., albuminoids, 1.0; fat, 0.3; sugar, 5.0; ash, 0.7. The constituents that give it a value for feeding are the small per cent. of albuminoids and fat, and the large percentage of milk-sugar, which, however, is not of much value, compared relatively to the others. For young pigs and calves, whey has a feeding value that should prevent its waste when it may easily be obtained. Compared with normal milk, whey contains about 6 per cent. more water, 3 per cent. less albuminoids, 3 per cent. less fat and 1 per cent. more milk-sugar,

and about the same quantity of ash. The valuable substances that it lacks are the albuminoids and the fats, and for this reason whey should never be fed alone to pigs and calves, but in conjunction with such foods as oil cake, chopped peas and oats, or some other foods that would offset the weakness of the whey.

2. When it becomes sour, it is certainly injurious to feed it, for the reason that its sourness will interfere with the natural secretions of the stomach that perform the work of digestion, and in this way it becomes a cause of indigestion.

3. In becoming sour, the milk sugar of the whey breaks up into an acid and a gas.

As milk-sugar is the only constituent of value that is contained in any quantity in whey, its loss not only leaves the whey practically worthless for feeding purposes, but the whey becomes injurious through the acidity produced.

4. The boiling would have a slight tendency to prevent scouring, but it would be so slight as not to be of much avail. The boiling of whole milk has a decided effect in preventing scouring, but that result is, we believe, due to the effect the heat has upon the albuminoids of the milk and the acids, but in the case of the whey the milk-sugar is the principal constituent, and this would not be able to produce the desired result.

5. Whey that may be obtained without much trouble or expense may be utilised to good advantage for feeding calves, if such foods as oil cake, flaxseed, pea meal, etc., may be bought at ordinary prices. The calves should, by all means, get the first milk of the cow, and when ten days old, the whey could be fed in combination. About the best method is to mix oil cake and linseed together in equal proportions, boil them, and add one quarter pound of the mixture to each gallon of whey. Feed this three times a day in quantities to suit each calf. When about a month old, the strength of the food should be increased by the further addition of a half pound of chopped stuff, such as peas and oats, barley or bran shorts, etc., either singly or mixed to each gallon of whey. The quantities of chopped grain may be increased gradually, as the calves grow and become older.—[Ed.]

Poultry.

The Dust Bath.

This agent performs the same office for fowl that water and soap does for human beings, it cleanses their skin, frees them from vermin, and stimulates the skin to perform its excretory functions. It is not a matter of sentiment but is a *solutely* necessary to keep the hens in good health, though it does materially add to the beauty of their plumage. Owing to the openness of their feathers, fowl are prevented from adopting the methods of water fowl and so must rely on some such substance as fine dust. No better material can be furnished for this purpose perhaps than good wood ashes. The ashes should be kept under shelter in a position to get as much of the sun as possible, so that they may be dry and warm. Attention to cleanliness pays well, and as a means of securing cleanliness of body the dust bath ranks first. It has been recommended to add a little flour of sulphur to the heap if the hens prove to be much troubled with vermin.

Raising Broilers.

The supplying of broilers for the markets of New York, Philadelphia, and some of the other large American cities, has grown to be a trade of immense proportions, judging by the fact that the establishments that make a business of this, in the State of New Jersey, have a combined capacity for producing thirty thousand chicks every ten weeks. The hatching is done mainly through the winter and spring months, by incubators. The cross that finds most general favor, is a Leghorn, Brahma, or Plymouth Rock cross. The method of feeding adopted by those farmers that have been most successful in the work, is given by the New York *Tribune* as follows: The first feed of the young chicks begins when they are twenty-four hours out of the shell. Rolled oats

are placed before them every two hours, for the first two days. After that, the "regulation cake" is given, consisting of ground oats, mixed with bran and wheat middlings, slightly salted, and baked in a stove. This is crumbled into feeding troughs, which are removed as quickly as the chicks stop eating heartily. Boxes of pulverized charcoal, ground oyster shells, and ground bone, are always where the chicks can help themselves as they choose. The food is varied as much as possible, by additions of refuse from pop-corn factories, cracked wheat, and mashed potatoes, or turnips. When four weeks old, the chicks are fed four times a day, and always at regular hours. Clean water is always near them, but so placed that they cannot get their feet in it. Getting damp is a sure precursor of disease, and death to chicks subjected to the hot-house treatment. The home made incubators cost about \$12 for material for one large enough to hatch 300 eggs. The outfit for an establishment able to turn out 1500 chicks every ten weeks is \$1000. This is about the number that one person can attend to. The price of broilers varies from twenty to forty cents per pound, and at special times runs up as high as sixty cents. At ten weeks of age, the broilers weigh about 1½ pounds each. If of improved breeds, they will average a little more than this, without increased cost of growing.

Turkey Raising for Profit.

By MISS G. WILLSON, Oakville, Ont.

As I have been very successful in managing turkeys, I thought, perhaps, my experience would be of use to others, especially beginners, as it is only by practical experience we learn what constant care and attention young birds require. When setting the hen she should have a warm, roomy nest, made of old dry grass or straw, and after placing the eggs in, dust the nest well with insect powder. After the hen is nicely settled on her nest let nothing disturb her, for the quieter she is kept during incubation the better. A few days before the young birds are expected again dust thoroughly the nest, also the hen, with insect powder. You know the old adage, "An ounce of prevention," etc., for be as particular as you will with poultry there will always be more or less lice, especially on setting hens, and there is no greater enemy to young turkeys. When the eggs are hatching should the first birds that hatch become restless, and wish to leave the nest, taking the hen with them, which is often the case, remove and place them in a warmly-lined basket, giving them food if necessary, and place the basket in a warm room until the others, which are longer hatching, and consequently much weaker, have gained strength enough to leave the nest. Now, place the hen and all her little ones in a roomy coop, if possible over some soft dry soil for the first day or two, so that the hen can have nature's remedy, the dust bath; then move on fresh sod every day, and have it so placed in the shelter of some building that while the little ones enjoy the sunshine they will be protected from the wind, which is sometimes very chilly at that time of the year. Should they unfortunately hatch during a cold, rainy time it is often hard to save them, but, in that case, have the coop moved to some warm building, and over a thick carpet several inches deep of dry chaff and hay seed (what one would usually sweep from the barn floor); it is the best thing to keep them warm and dry.

And now with regard to their food, which should consist for the first two days of boiled eggs and bread and milk, soft bread soaked in rich sweet milk, in fact, I take as much care in preparing food for my young turkeys as I would for canaries; they should be fed often at first, as very little at a time satisfies them. Feed oatmeal porridge, boiled rice, or any soft nutritious food they seem to care for, boiled potatoes mixed with sweet milk is an excellent food; but as long as they are in the coop do not neglect giving them boiled egg once a day, be it ever so little, as nothing gives them so much strength. I never feed sour milk or curd. Now, all this time we suppose they are where they will be able to pick what green

food and gravel they require, and that a plentiful supply of fresh water is kept in their coop. See that the water-dish is cleansed once a day, for cleanliness is an essential in turkey raising. Just as soon as they seem strong enough they should be allowed to roam, as the hen will find a great many things necessary for them that we know nothing about. They should not be allowed out in the morning until the dew is off the grass, as damp is fatal to young turkeys, and they ought to be brought home before sundown. Do not use grease or oil of any kind, but dust a little insect powder under their wings now and then. After feathering out they are very little expense or trouble, as they are great scavengers, and live principally during the summer months on insects, and are really a benefit to the farmer. If they are not fat enough for market in the fall, they should be shut up and given about ten days' feeding on corn meal, vegetables, and scraps, giving them plenty of fresh water and gravel. They will not bear confinement long, as there is danger of them dying from excessive fat, especially should any be over a year old. If one has time and patience to devote to turkey raising, there is no poultry on the farm that will return such a nice profit.

Horticultural.

Windbreaks.

A recent bulletin of Cornell University prepared by Prof. Bailey treats of the influence of windbreaks on fruit plantations. The investigator sent out a great many circulars to fruit growers in New York and Michigan, and with the aid of the replies received the following summary of conclusions is given:

1. A windbreak may exert great influence upon a fruit plantation.

2. The benefits derived from windbreaks are the following: protection from cold; lessening of evaporation from soil and plants; lessening of windfalls; lessening of liability to mechanical injury of trees; retention of snow and leaves; facilitating of labor; protection of blossoms from severe winds; enabling trees to grow more erect; lessening of injury from the drying up of small fruits; retention of sand in certain localities; hastening of maturity of fruits in some cases; encouragement of buds; ornamentation.

3. The injuries sustained from windbreaks are as follows: preventing the free circulation of warm winds and consequent exposure to cold; injuries from insects and fungus diseases; injuries from the encroachment of the windbreak itself; increased liability to late spring frosts in rare cases.

(a) The injury from cold still air is usually confined to those localities which are directly influenced by large bodies of water, and which are protected by forest belts. It can be avoided by planting these belts.

(b) The injury from insects can be arrested by spraying with arsenical poisons.

(c) The injury from the encroachment of the windbreak may be averted in part, at least, by good cultivation and by planting the first simultaneously with the belt.

4. Windbreaks are advantageous wherever fruit plantations are exposed to strong winds.

5. In interior places dense, or broad belts, of two or more rows of trees, are desirable, while within the influence of large bodies of water, these or narrow belts comprising but a row or two, are usually preferable.

6. The best trees for windbreaks in the North-western States are Norway spruce and Austrian and Scotch pines, among the evergreens. Among deciduous trees most of the rapidly growing native species are

useful. A mixed plantation, with the hardiest and most vigorous deciduous trees on the windward, is probably the ideal artificial shelter belt.

Grape Culture.

Grape culture is rapidly extending in this country, in localities that are favorable. Although these embrace, comparatively speaking, a limited area, yet there is room in those localities for a vast extension of this happy and fruitful industry. The grape region embraces, properly speaking, a run of country running along Lakes St. Clair, Erie, and Ontario, as far east as Toronto, notably, the Counties of Essex and Kent, and the Niagara peninsula, taking out the high land running down through the central portion of the same.

We do not wish the inference to be drawn that the sections indicated are the only ones that will produce grapes with profit to the grower, but that they are those best adapted for producing the fruit of the vine in a wholesale way. Whole counties may be found, in addition to those named, in which the farmer may easily grow his own supplies by planting and trellising a few vines in his garden.

Grapes will grow on a great variety of soils, but they give the best returns proportionately on those that are alluvial with a sandy texture, which is usually a soil that will not bake. Any soil, in a good condition for growing potatoes or corn, will answer very well for growing grapes.

In vineyards, they should be planted 10 to 12 feet apart between the row, according to variety, and on the same basis, 9 to 12 feet apart in the row.

The ground should be kept well cultivated every season until the latter part of summer, when this may cease, as if continued until late in the season it induces too much of a growth of wood of too tender a character.

For the first and second seasons, a couple of rows of corn or potatoes, or some other hood-crop, may be grown between the vines, but this will, of necessity, have to be discontinued after a time.

The first year of planting the vines should be cut back to two buds on the wood of the previous year's growth, starting with two canes. The second year the pruning is much the same as the first. The third year the weakest cane should be cut away, and the remaining one cut back to from five to ten buds, depending on the strength of the vine. Further details about pruning would carry us beyond the limits of this paper.

The trellis should now be erected, putting one cedar post between every alternate pair of vines, and then string three wires of galvanized iron along these, the top one being much the heaviest. These wires may be placed from the ground 30 inches, 48 inches, and 66 inches, respectively.

There is no fruit the free eating of which will conduce so much to the health of the farmer as the grape in its season, after it has become fully ripe. It is best eaten in the simplest form—out of the hand. Any attempt of man to improve upon its deliciousness by artificial preparation is simply folly.

Let farmers, then, who have no grapes, plant them for themselves. Half-a-dozen vines will answer for a household. They should get a sunny situation on the lee side of a hill, wall, or building, as they are fond of a mild temperature.

The Concord is one of the hardiest and also one of the most prolific varieties, while for home use the Worden and Moore's Early are very good.

We hope that any farmer, living in a region where grapes will grow, who may chance to read this article, and who at the same time has no vines on his place, will allow us to persuade him to plant them this very season. The vines cost but little, and the returns, when the fruit comes by and-by, will gladden his heart. We have no misgivings but that he will then thank us for having called his attention to this matter.

For the CANADIAN LIVE STOCK AND FARM JOURNAL

Spring Work in the Home Garden and Orchard.

By ANNE L. JACK, Chateaugay Basin, Que.

April is here, and the yearly miracle is once more opening the buds of the trees, bringing the birds back to their old haunts, and with them the routine of duties that the season demands. Before the garden is ready to work the trees can be searched for insects. The apple-tree caterpillar, "*locampa Americana*," is so destructive that it repays to search for the rings that contain the eggs before they hatch out. They are generally found on the terminal branch, and can easily be seen and taken off. The waxy substance of which they are composed is easily broken, and as each ring contains about 300 caterpillars, any one can understand the necessity of taking them off, for, if left to mature, they would strip the tree of foliage and flower as if a fire had scorched it. If trees are mossy, or troubled on the trunks with bark lice or scale, it is well to scrape and wash with soft soap; an old brush is useful, and they can be scrubbed up into the limbs, and will repay for all extra care. Then prune dead-wood and overgrowth, remembering that all "superfluous" branches we lop aside, that bearing boughs may live."

As the weather becomes warmer it will be time to rake up all rubbish that may have accumulated about the yard. The children will enjoy a bonfire of the sticks and rakings; it is quite an incentive to the clearing up and chopping up of apple-wood to say, "Now, boys, you shall have a bonfire when this is cut up;" of course they wait till the wind is in the right quarter to keep all danger from buildings, then they enjoy the blaze, and burn up all unsightly rubbish.

The strawberry bed must be uncovered, and the raspberries pruned evenly with a pair of pruning shears, and then tied up to stakes. Grape vines, too, must be lifted before the weather is too warm, and get their first tying to the trellis, with bark or cocoa matting. The rose bushes that were covered with earth, or old boxes, last autumn had better be uncovered before it is too warm, for over-heat in the ground is apt to cook the fresh and tender buds, as it does the grape, and some of the shrubs. Of the latter there are many that are very beautiful, but need tender care; and so we tie up our Weigelas and Viburnums, our Daphne and Dentzia, with a hay rope, and this must come off when frost leaves the ground. I have a hardy Magnolia, and a hardy Peach, that came to me from the Arnold Arboretum, and seem able to stand our climate, as do the Japan quince fruits and flowers, without winter protection. Rake the dead leaves from the hyacinths, pansies, and the fancy peonies; they will grow all the quicker for getting to the sunlight. If you have a small hot-bed it will now need care, for after the plants are up they need to be shaded and watered through this month. The first sowing should be hardy vegetables; in one such cabbage, cauliflower, kale, or lettuce, and in another, sown later, should be the tomatoes, egg plants, and any tender thing. So of flowers, the early hot bed

may contain stocks, pansies, zinnias, and other hardy varieties, while verbenas, mimulus, and all marked "tender," should be sown together later, so that heat, airing, water, and general treatment can be given as needed. Did you ever have your hopes destroyed in early spring when the little plants were coming up by an exploring hen, that found it pleasant to scratch in the warm mellow earth? If so, profit by the sad experience, and keep a few of the branches pruned from plum or pear trees to cover the bed when airing. The thorns on these trees interfere with the hen's enjoyment.

In the garden all hardy seeds can be sown this month, and if one owns a seed-sower and has the garden in rows it is easily and quickly done. The ground can be harrowed, raked fine, and sown; then ashes had better be put lightly over radish, onion, and beet seed-beds, to keep away the fly, that black midget so destructive to these plants as soon as the leaves appear. If land is scarce, radishes do well sown with beets, and lettuce is generally out, if sown with carrots, before they are any size, and save thinning. Early peas or potatoes can go in, when an after crop of turnips or celery can be grown after they are off the ground. About the yard there is a great deal to do at this time of the year; probably a gate off the hinge, some implement in the shed that needs painting, the fences generally need some tightening or repair. Then, in the way of improvement, there are trees to plant, for they beautify the grounds, and can be made of great value in the appearance of the home; not too near the house, or they may prove unhealthful, by shading where sunlight should be, but at a safe distance they are wonderfully beautiful to a home. Our avenue of maples, planted by the "gud man" of the house in his bachelor days, are a delight to the household and guests; and far away as they seemed, a branch came from a tree through the sitting room window in a late wind storm, not very far from the hanging lamp that was lighted at the time, so that safety in the future must be thought of in planting the trees. It is well to go over some reliable catalogue and tally with what is wanted, for spring is very short, and if we miss planting now it will be too late by and by.

I remember one year we forgot to sow seed of parsnip and salsify, and it seemed to me all the following winter we missed those vegetables more than all we possessed. Parsnips keep so well and come out in spring so tasty, while the salsify is a treat to all who like the oyster taste it is said to resemble. At an early date, with the editor's permission, I will give my readers what years of study have taught me as to the merits of certain vegetables, and the methods of cooking. Meanwhile, if the garden is sown, the orchard in good repair, there is still time to set out a new tree or shrub. Let it have a label 1890, and then, in after years, you will remember the planting, and it will, if faithfully cared for, be a living monument of something done.

The Apiary.

Trees and Bees.

We heartily endorse the sentiments of our cotemporary the *Canadian Bee Journal*, that are given expression to in the following words: "The farmer and bee keeper can make no more profitable investment than by tree planting." Though there may be more immediately profitable fields for the farmer to invest in, yet we doubt with our friend if he could undertake a more profitable work that is lasting for all the time in its beneficial effects than that of tree planting. The farmer and bee-keeper should be one in this matter. There is not a more beautiful tree native in our forests, than the broad-leaved, clean

clothed and rapidly growing basswood or linden, and the sweets that the bees may obtain from this variety makes the best of honey. From another economic standpoint the basswood has much in its favor. It is, perhaps, next to the white pine, the most universally used material for all forms of woodwork and carpentry. A feature that enhances the value of this tree still further is the fact that it will do best in odd waste places such as the sides of ravines, hills, or any rough ground alluvial in its nature. To our mind this tree has not been rightly honored in the past, and we think both the farmer and bee-keeper should by practice and precept do what they can to encourage the planting of it throughout the country.

For the CANADIAN LIVE STOCK AND FARM JOURNAL.

Spring Care of Bees.

R. F. HOLTMANN, A.O.A.C., Romney, Ont.

Those who have but little experience in bee-keeping are peculiarly liable to handle their bees too much in spring. As early as the weather permits, everyone should satisfy himself that a colony has a good queen and sufficient stores, and this being the case, the interior of the hive should be allowed to remain undisturbed. What advantage can be derived by constantly satisfying one's curiosity as to the progress of a colony, disorganizing the bees and stopping them in their work; also allowing the warm atmosphere of the hive to be exchanged for cooler air outside? I am aware that some practise the spreading of brood, at certain times and under certain circumstances, with success, but there is no doubt that the beginner, at least, would better leave the operation alone.

As has often been stated, the hive should be well protected against cold by placing warm quilts or rags, woollen the best, over the frames. This keeps the cold out, and compels the warmth from the hive to remain in the hive.

Solid food only should be given to bees for stimulative feeding, otherwise robbing will be liable to result.

Spring is a dangerous time, yes, the most dangerous time, for robbing. The difference in the strength of colonies is so much greater at this time, and colonies at that time not strong may make very strong colonies and give good results by the time the honey season has passed. To prevent robbing is better than to cure it. The bees should not be permitted to get from anything but natural sources the least flavor of sweets, as such will induce robbing. If robbing has commenced, contract the entrance of the robbing colony, if you can find it, also that of the colony being robbed. If the colony being robbed does not obtain relief, it should be closed up entirely for a day or two. But to avoid causing robbing by careless exposure of sweets is far better than to stop it when started.

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 May competition are:—

(1) The feeding and care of ducks from the time of hatching until ready for market.

(2) The garden of the farm—What it should contain.

Essays for June competition:

(1) The rearing, feeding and preparing of geese for market.

(2) The growing of raspberries for home use.

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 seed-man 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 Making of Butter on the Farm.

MISS AGNES R. BAIRD, Chesterfield, Ont.

[PRIZE ESSAY.]

We think winter is the best time to make butter, as the weather is more suitable, the butter can be shipped more satisfactorily and the price is usually much higher. To begin with, the men must keep the stables and cows clean and comfortable. As soon as the milk is drawn it should be strained, and by adding warm water brought up to the temperature of 95 degrees, and then set in water at 40 degrees. In twenty-four hours skim it and strain the cream into the cream can, stirring it thoroughly every time more is added. Do not keep the cream longer than three days. It should be kept sweet until twenty-four hours before churning, when it should be raised to 70 degrees, to have it slightly acid when churned. Before starting to churn strain the cream through a strainer cloth, as too much curd can not be taken to have the butter clean and sweet. Start to churn at 62 degrees, gradually rising to 64 degrees by the time butter comes in small granules. Add a dipperful of cold water to separate the butter from the buttermilk, and after letting it stand a few minutes, draw off the buttermilk. Now put in cold water, washing it until the water comes off perfectly clear. Use $\frac{3}{4}$ oz. of the best dairy salt to a pound of butter, turning the churn slowly until the salt is well mixed. Let it stand in the butter-tub two or three hours, to allow the salt to dissolve, then work it slightly on the butter worker, taking care not to over work it.

Bring the lever down straight rather than slanting, so as not to break the grain. If it is to be consumed immediately, put it up in pound prints, having a print for the purpose. Wrap it in parchment paper, and ship it to a reliable man, and get cash for it rather than trade it off at the store.

The Feeding and Care of Turkeys from time of Hatching, until ready for the Market.

By MISS FLOKRIE EVERALL, Chilliwack, B.C.

[PRIZE ESSAY.]

Collect the eggs as they are laid, pack them on end in shallow boxes in bran, and turn them every other day. I prefer the common hen to the turkey hen to sit, for the following reasons: if you break your turkey quickly after her first lot of eggs you will get a second lot, and the hen does not lead the chicks so far away, nor get them in the long grass, which, if caught in the rain, will very likely get lost and die from the effects of the wetting, after going to the expense of keeping the turkeys for a year. Unless the greatest care is taken of them for the first three or four weeks, the loss will often be one-half or more, therefore it means a difference of a hundred per cent. in the returns. Do not be in a hurry to interfere with the chick after it comes from the shell, let the hen well broodle them till they get strong, then remove them to a dry warm room, and if the weather is cold start your stove and keep the room nicely warm; you can make a stove of coal oil can, which a neighbor of ours did last season, and reared 80 turkeys. The difficulty is to get them

to take the first meal, and they are often so stupid in this that they will die before they will try to eat. Now make the following jelly: half pint of new milk, one egg beaten up with a little crushed rice and crushed wheat, boil and stir till it comes to a nice jelly, give them a little of this at a time and often. This is enough for twenty chicks for one day. The yellow color of the jelly seems to take their attention, and they pick at it and soon begin to eat it. After they get strong enough give them a little run on sunny days, then feed them with any crushed gram they will eat; if they can't get any green food, boil nettles or cabbage chopped fine, with meal and any scraps of meat you have. Hurry them into the room if the weather gets cold or wet. Now get any shallow vessel and cut a piece of thin board that will fit easily in the inside of the vessel, and make several inch holes round the outer edge of the board, fill this vessel with water, or milk if you have it; they can now drink without wetting their feet, or getting drowned, as the board falls as the liquid is taken out. When weaned see that they come home with full crops; if not, fill the said crops with grain of some kind, for you cannot make a good turkey unless you keep them growing right along, and remember that the largest turkeys always sell better than half fed and consequently smaller ones. For three weeks before sending them to market, feed them with boiled potatoes, milk, and meal of any kind, barley preferred.

The Making of Butter on the Farm.

By MISS MARY MILLAR, Millar's Corners, Ont.

[PRIZE ESSAY.]

Let our fathers and brothers see that the stables are stocked with good cows, well cared for. Our business is to manufacture their milk into a first-class article of butter. Long ago the majority of farmers left the management of their small dairy to the women. Now, however, since it has been demonstrated that this industry is one of the most profitable branches of farm work, it has been more extensively entered into, and the old ways are all changed. The cheese factory is a friendly institution in the busy summer months, but during spring and autumn the butter brings in the money. The making of it may be enjoyable too, in a certain degree, if circumstances and surroundings are favorable. Contrast, for example, the position of a person making butter in some miserable substitute for a dairy house, with all the antiquated utensils used a number of years ago, everything apparently trying to hinder, rather than help on the work, with one who has all the modern labor-saving contrivances collected, and at work in a clean cheery room, and all the surroundings just as they should be. Probabilities are that the latter will command a higher price at marketing, although a good article is often produced, with hard labor, by the old methods. Just here allow me to describe our ideal of a dairy-house. A conveniently small frame building, with white-washed walls, and a cement floor, well-drained, thoroughly ventilated, and having one window which would be frost-proof in winter, and in summer covered with mosquito-netting, and a green growing vine. The temperature should be easily controlled, and a good pump and ice-house close at hand. Above all, the place where milk is kept should be clean, and have no disagreeable odors around. The most popular method of raising cream is by the cooley creamer, and oh! the relief when it superseded the shallow pans. It is important that the water surrounding the cans be ice-cold, and in winter that the milk be warmed, by adding warm water, to 90 degrees. If these particulars are attended to carefully, the cream will rise in 12 hours, and the Irishman's suggestion, "The quicker, the sooner," applies to butter-making in all its details, except churning. Now begins the critical part of the process, so the dairy authorities tell us. The cream must be carefully ripened, as soon as enough is collected for a churning. "Carefully ripened" does not mean covered closely and set out of the way, but treated to about 70 degrees, kept in an evenly-warm temperature and stirred often. It is often advisable to add a small quantity of buttermilk also. Here again, let me recommend the use of the most labor-saving churns, etc. We favor a "Daisy" barrel churn, and light vessels for holding cream, such as four-gallon tin pails, also in the absence of a butter worker, a light tub with good handles and a plug in the bottom to let out the waste brine. Cream should be churned

at about 62 degrees in summer, and 66 degrees in winter, allowing about 30 minutes to bring butter. As soon as it appears in grains about the size of wheat or corn, run off the buttermilk and wash with cold water until it runs off clear. Good salt should be used, allowing one ounce to a pound of butter, or less if for immediate consumption. After standing a sufficient length of time to strike through evenly, the butter is ready to mould into prints, or pack. The most convenient package for shipping is a small tub, holding about 20 lbs., or more. If made in prints or rolls, each should be wrapped in a strip of cotton, and packed carefully to avoid bruises.

When the same amount of pains is bestowed on all dairy butter, then we may hope to successfully compete with the creameries, and may demand their price, but not till then. However, if the present rate of progress is kept up, that day may not be far distant.

Girls, why not make a study of our work the same as with play or recreation? If we do, we shall at least have the pleasure of self-satisfaction, and a creditable effort put forth in a profitable enterprise. Our aim should be "perfect success."

Thoughts from the Girls for the Girls.

Our fondest hopes in respect to this department are being abundantly realized. We have received essays from all sources on many topics, and we must say that the girls have displayed more vigor and ambition in this matter than the boys. The winner of the prize essay has just reason for feeling elated over her conquest, for the competition was strong, and this fact should stimulate all to greater efforts, as the honors that are won have an increased value.

MISS MINNIE BIRDSALL, of Birdsall, Ont., wrote us a capital essay on buttermaking, reflecting careful thought over this question, as well as good abilities as a writer. It is too bad that we cannot give you the whole of the essay, but here is a part referring to the churning to you of our words of praise: "Now prepare your churn by pouring in it about a couple of quarts of hot water, and have it stand a few minutes; then pour it out and put in your cream, which should be so warm that the thermometer will stand at 62. Do not churn too quickly, for by so doing the butter is sure to be of an inferior quality, being kind of greasy, and nothing can be done afterwards to change it to give that peculiar brittle look when broken that proves butter to be of a good class. . . . I find that the old-fashioned dash-churn is the best, although it is harder to work, and takes a little longer time to fetch butter than some of the newly patented churns." In regard to the latter, there is no doubt but that excellent butter can be made from the dash-churn, as it is built on the right principle, that of concussion; but for easiness of churning, or more important still, for easiness in cleaning and washing the butter, the barrel or box-churn is the favorite.

MISS ELLIE BELL, of Hensall, Ont., age fifteen years, has sent us the clearest and most concise written essay that we received this month. Every sentence shows that the writer is a clear and close thinker, with power to dress her thoughts in good words. She treats of the milking of cows in an able manner. We think that the girls of the farm should not have the hard work of milking cows imposed on them, but at the same time they should know the proper way to do it. Our essayist says, "six or eight good cows is a sufficient number for an ordinary farm. They should be milked early in the morning, and after sundown, as they will then not be disturbed by flies. The cow's udders should be well brushed, and the milk pails scalded before milking is begun, as milk is very sensitive to odors or taints of any kind."

MISS WILHELMINA CARRUTHERS, of Ormiston, Que., also fifteen years of age, wrote on the same question. We have nothing but words of praise and hearty encouragement for this youthful essayist, the only trouble was the shortness of the essay. It is written in a beautiful hand, and for neatness in appearance it surpasses many others, while it ranks high for the choice of words. She says, "I will give you our method of making butter. After the cows are milked, the milk is strained and put immediately into creamers and set in cold water; it is left there until the cream rises, which takes about six or eight hours. The cream is then taken out and brought to the temperature of new milk, and set away for an acid to form in it, and when this is formed it is ready for churning. When churning, if the particles of butter do not form readily into lumps, a little weak brine added will gather it much quicker. The buttermilk is then thoroughly washed out; then salt it by using one ounce of salt to the pound of butter, work the salt well through, and when done pack away in hard-wood tennets. When the

latter are full, lay a clean piece of cotton on the top of the butter, and make a paste of salt and put it on the cotton, packing it well at the sides, to exclude the air from the butter.

MISS MAGGIE B. DICKSON, of Atwood, Ont., in a pithy essay shows that she is an advanced dairy thinker. She writes as follows: "The cows should have either clean stream water or good well water to drink. In the winter they should have hay that was cut five or six days before it ripens. Ripe hay makes the butter white. They should be milked with dry teats. Have the pails and everything perfectly clean. To make the cream rise rapidly, the milk should be heated to 120°. Do not let the milk get chilled, as it is apt to become in fall and winter."

MISS MABEL E. V. HARPER, of Harriston, Ont., brings out several important facts in a nicely written, thoughtful essay. She states: "The cream should be separated from the milk before the milk has become sour, and this is quite possible by keeping the milk at a proper temperature. . . . We must have all the cream of the same degree of sourness before churning, and it will not do to skim sweet cream and mix it with sour cream just before putting it in the churn." These matters are deserving of all the prominence given them by our writer, and they should be carefully attended to by all buttermakers.

MISS ANNIE E. CHRISTY, of Bloomfield, Ont., entered a cleverly written essay that contains much to commend it. One point she brings out which others overlooked is given: "As soon as possible after the milk is taken from the cow, the milk should be placed in the creamers. In cold weather 20° of warm water should be added to thin the milk and allow the cream to rise quicker. Place the cans in a vat of cold water with ice sufficient to keep the temperature below 45°." Our essayist shows that she is an advocate of the best methods. Although 20° is a little too much water to add, yet if it is observed that the cream is slow to rise, it is a good practice to adopt.

MISS ANNIE CARRUTHERS, of Ormstown, Que., writes a capital essay for one only thirteen years of age. She says: "The temperature of the cream when ready for churning should be 55° in summer, and 62° F. in winter." These temperatures are right; but they should be varied more or less with the condition of each batch of cream. The thermometer should be in the hands of every buttermaker, and our essayist has brought forward a point of importance that many buttermakers overlook.

MISS ANNIE CHASE, of Cornwallis, Nova Scotia has this to say on the feeding of turkeys, in a very intelligent essay on that subject: "They need no feed for the first twenty-four hours; bread and milk with hard boiled eggs is excellent food for the first ten days. After this time they need more of a variety, scalded corn meal and curds (made from sour milk), with wheat for grain, and also onions cut fine and given them freely. . . . To get them fat for the market, feed them all the corn-meal they will eat, and cold potatoes mashed with shorts occasionally, and plenty of grain."

MISS MAGGIE A. ROBBINS treats of the subject in such a manner as to show that she knows whereof she speaks. "The first thing to be considered," she says, "in order to be successful in raising turkeys, is the coop, which should be at least four feet square, having a peaked roof, with a wash on one side of it to let sunshine in while the grass is wet, and to let in the light on rainy days. . . . Great care should be taken at all times to keep them free from lice, which can be easily done by dusting a little sulphur under their wings, and on the top of their heads. The most critical time in their lives is when they are feathering out on the hack. If at this time they should droop, and do not eat, give them a pill, made of sulphur, pepper, and butter, and force it down them to keep their strength up. This is a splendid essay, and we are sorry space prevents us giving more of it."

MISS MARY McMILLAN, of Lorneville, Ont., who was the winner of a prize last month, writes in good style and in a clear manner on this question. She states, "As they grow older, give them bread and milk, mixed with finely cut dandelion and onion tops, and a clean drink of milk or water should always be provided. Feed a little sulphur occasionally, and sprinkle a little where they dust, to keep them free from insects. Also give them a tablespoonful of bone-meal to a pint of food twice a week, and fresh meat occasionally. They will stand neither heat nor cold, rain nor heavy dew. A little hemp seed is good for them until they get their red heads."

MISS T. CANNING, of Hagerman, Ont., gives sound advice in a pithy and pointed essay, displaying the writer's thorough grasp of this work. "Until they are three weeks old," she writes,

"they require to be fed about five times a day but after that time thrice daily is sufficient, with one feed of cracked wheat, or cleanings from the fanning mill. . . . When the turkeys are four weeks old, release the mother, and they will roam about the fields in search of insects. . . . When the time comes to fatten them for market, the best food is boiled potatoes, mixed with corn-meal in the morning, and corn in the evening, with an occasional feed of ripe apples, of which they are very fond. We have been very successful in the raising of Bronze turkeys for market, having from seventy-five up to one hundred and ten every year."

We have two other essays on other topics, but we are forced to hold them until later, owing to the want of space. Now, girls, we must say that we are exceedingly pleased to notice the warm interest you are taking in this new venture of ours. In the matter of choosing subjects; if any of you have a subject you would like to write upon, mention it to us in writing, and if we get others also stating they would like to write upon the same, we would be only too glad to make it one of the subjects for competition. Further, if there are any questions or matters that you would like to know of, that we or any of our readers could answer, broach them to us and we will do the best we can for you. It will be noticed that we sometimes publish two prize essays on the same subject; we do this because we deem them both worthy of a prize, owing to their excellence. Deluge us with letters, girls, and we shall endeavor to make room for them.

Jottings.

Sheep and Cattle Labels.—We are often asked for the addresses of those who have sheep and cattle labels for sale. Mr. John Dunkin, of Brucefield, places with us this issue an advertisement that meets the requirement.

A Progressive Business.—The Bain Wagon Company of Woodstock inform us that their output this year will exceed any heretofore made. Orders are coming in to them every day, which shows that their prices are right and their articles good.

Horse-foot Remedy.—Wm. H. Gorton, of 68 Spadina Avenue, Toronto, has opened an agency here for the sale of Campbell's Horse-foot Remedy, which he advertises in this issue. It is claimed, and there are many testimonials endorsing it, that this remedy is an efficient one for the many troubles and maladies that affect the feet of horses. Look up the advertisement.

Little's Sheep Dip and Cattle Wash.—This fluid still continues to gain in the estimation of those that have tried it. As the time for freeing cattle of lice and washing sheep approaches, the choice of an insecticide becomes important, so that all stockmen will find of interest Mr. R. Wrightman's (Owen Sound, Ont.) advertisement now running in THE JOURNAL.

A Vigorous Journal.—The *Turf Field and Farm*, published at 251 Broadway, New York, is putting forth its best efforts to maintain and even improve upon its past position as a journal. A feature of the coming winter issues will be a series of papers from one who is stated to be a well-known authority on "The Art of Training the Racehorse." Of its class this journal claims to be the most widely circulated in America. It is printed on fine paper, and well gotten up in every respect, and fully covers the line of work it is devoted to.

Helderleigh Fruit Farms.—Through the proprietor, Mr. E. D. Smith, of Winona, we have to hand his spring catalogue of trees and plants. Mr. Smith makes a specialty of fruits, particularly the strawberry, so that he is able to give the work careful attention in all branches. Raspberries (black and red), gooseberries, and currants are grown by him in endless variety, while grapes, of the most desirable varieties, are handled extensively. Collections at prices of one dollar, and five, are made up, giving the purchaser a good chance to make a choice collection at little expense.

Farm Implements.—Now that the time is approaching when harrows and seeders will be in active demand, we feel our readers will take considerable interest in the advertisement which the St. Lawrence Manufacturing Company, Prescott, Ont., place with us this month. The Corbin Disc Harrow, which this firm has made a specialty of for some years, has steadily advanced in favor with all progressive farmers. This firm has been long before the Canadian farmers, and every year has added to their list of pleased patrons. For fuller particulars of their specialties for this season see their advertisement.

A Shorthorn Calf Sells for Over \$3,000.—At the 22nd annual bull sale held at Birmingham, Eng., we learn from the *Pasture and Stockbreeder* that the Shorthorn bull calf Pinnacle, by Kissington Lad 4th, bred by Mr. Garne, was sold to F. A. Youmans for 660 guineas. The above authority, speaking of the sale on the whole, says: "The only lesson the results of the sale are calculated to teach is that good bulls will always find a remunerative market; that second-rate bulls seldom rise above second-rate figures, and all beneath that standard of merit, vague as it is, impoverish the breeder and disgrace the breed."

Implements for Spring.—Now is the time for the enterprising farmer to replenish his stock of implements. If it is true that "a workman is known by his tools," the saying is quite true of the tiller of the soil as of any other user of manual contrivances. We have, in this issue, a number of

announcements from the manufacturers of farm implements, and would refer our readers to them all. Prominent among them will be found that of the Gowdy Manufacturing Company, of Guelph, who have won a reputation as the makers of a good line of land-rollers, turnip-sowers, plows, mowers, and other useful farm articles.

Labor Saving Devices.—The word "hay fork" has won an unenviable reputation as being connected with many frauds that have perpetrated upon agricultural communities; but all the same any contrivance that will lessen the labor and increase the speed of hay-harvesting is a boon to the agricultural community. Mr. M. T. Buchanan, of Ingersoll, is placing with us an advertisement of an "improved pitching machine," that he claims will make the labor of unloading hay, and grain in sheaves, much less than by the hand methods in common vogue. We would advise our readers to correspond with him, and get full particulars about it.

The Study of Insects.—Professor John Henry Comstock, the eminent naturalist, begins in the *New York Ledger* of March 1, a series of six articles on the study of insects, in which he describes, not only those insects which are useful to the farmer, but also those which destroy entire fields of grain, cotton and rice, and ravage orchards, gardens and vineyards. He demonstrates how it was scientifically determined that an average annual loss of \$30,000,000 has been occasioned in the South by the cotton-worm alone; and that an average loss per year, of nearly \$2,400,000, has been brought about in the apple crop of Illinois by the ravages of the codlin moth. The series is profusely illustrated.

Dairy Supplies.—The Chr. Hansen's Laboratory Co., of Copenhagen, Denmark, and Little Falls, of New York, make a change in the handling of their western trade, and now all orders for their Butter Color, Cheese Color, Rennet Extract and Tablets, will be filled and billed by D. H. Roe & Co., of 54 N. Clinton Street, or Creamery Package Co., 26 N. Clark Street, Chicago, or any dealer in dairy supplies who is not interested in pushing some other manufacture. They have made a considerable reduction in many of the articles supplied to the dairy trade. They claim that their sales have quadrupled in the west, owing to the uniform high standard they have endeavored to maintain. Their pamphlet on "Butter and Cheesemaking" will be found to contain much information of general interest, as well as giving full particulars as to their goods.

The Tolton Pea Harvester.—The sowing of peas may now be greatly increased in this country, as an excellent machine has at last been invented for harvesting this crop, and at, comparatively speaking, a low price. We are much interested to know this, as the pea-crop may be one of much magnitude yet in Ontario. Indeed it should be so, owing to its great use in feeding, either in making beef, pork, mutton, or butter. The pea-bug also has gone virtually, and this has removed one of the great obstacles in the way of pea-culture. In sowing peas to be cut with the harvester, and it is really the only good mode of cutting them which is not too expensive, the ground should be made as level as possible before sowing them, and should be carefully rolled. Where there must of necessity be furrows, the peas can be pulled out of these with the scythe. To pull peas with the horse-rake is ruinous to the straw, which is an important factor in feeding, and it is usually attended with a large amount of shelling. For particulars regarding this useful implement see the advertisement.

Miller & Son, Farm Implement manufacturers of Morrisburg, Ontario, write us: "We have been running full force on our new model Disc Harrow and Stevens' patent all-steel arch-frame spring-tooth harrow. The former we have been making for three years past, and it has proven to be first class in every particular and demands a very large trade, spreading over the entire Dominion. We have shipped this season a number to British Columbia, and two car loads to our agents in Winnipeg. The Stevens' harrow we are making this year for the first, and, from present prospects, we will not be able to supply demand. Orders are coming in very fast from all parts of the Dominion. Having purchased special machinery in United States for manufacturing these harrows, we are in a position to get them out very fast, and propose doing everything in our power to fill orders this season. Although this harrow has only been on the market in the United States two years, it has taken the lead of everything in the shape of spring-tooth harrows. Messrs. A. W. Stevens & Son, manufacturers and patentees at Auburn, N.Y., have made and sold over 15,000 of these harrows during 1889. We have a distributing warehouse in London, Ont., for the western trade; we are thus enabled to fill orders in that section of the province at a very short notice. Our Mr. J. F. Miller, Jr., has charge of our trade west of Toronto, making his headquarters at Grigg House, London, Ont."

Annual Meeting of the Holstein-Friesian Association of America.—From our own correspondent we received the following, which, however, reached us too late for proper classification: "The fifth annual meeting of the above Association was held at the Fifth Avenue Hotel, New York City, on Mar. 19th. The membership now numbers 352, of which a good representation was present. The reports of the different officers were very gratifying to the meeting, and showed satisfactory progress all over the continent. The liberal prizes offered by the Association had brought out an enormous competition, and in the very great majority of cases the Holstein had made a clean sweep all along the line. So universal was the victory that the Association was obliged to unexpectedly draw upon their surplus, and it became a question with a very few breeders whether it ought to be repeated, but the decided feeling of the meeting was to hold the ground so well won, and not stop until the 'black and white' cattle received the recognition of their superiority over all other breeds which they so well deserve. The question of a separate herd book for Canada was brought before the Board at the request of Mr. D. E. Smith, of Smith Bros., President of the Canada branch, and after a lengthened discussion it was decided not to take any action at present. Appropriations were made for special premiums for 1890, and to aid Holstein-Friesian register; officers for the year were elected, and papers by Dr. Peter Collier, Director of the New York Experimental Station, and Benjamin C. Sears, Superintendent New Jersey State Agricultural Farm, were read. The next meeting will be held at Syracuse. This brought to a close a most successful meeting."

Publishers' Column.

Our Watch Premium.

Still Successful.—Our Watch Premium is still continuing to attract workers, and to give satisfaction. We could print pages of testimonials in reference to the good opinion which our young friends have of the watches and of THE JOURNAL, but our space is too valuable, and we must refrain. However, we would refer inquirers to the fine list of testimonials published in THE LIVE STOCK JOURNAL for February.

Satisfaction Guaranteed.—These watches are guaranteed to give satisfaction. We do not send them out ourselves. They are all shipped by the responsible firm of Kent Bros., Toronto we never seeing them. If there is any defect in the watch Messrs. Kent Bros. will make it right.

These Watches are Good.—These watches are good. Several of the young men in our office have provided themselves with them, and carry them constantly. They are perfectly pleased with them, and declare them to be good, honest time-keepers, and in every way satisfactory.

Watch No. 1.—Watch No. 1 (a solid, strong, hunting-cased, stem-winding watch) is given for ten new subscribers to THE LIVE STOCK JOURNAL at the regular rate of \$1.00 a year.

Watch No. 2.—Watch No. 2 (beautiful solid silver watch, stem-winding, and either open-faced or hunting-cased) is given for twelve new subscribers to THE LIVE STOCK JOURNAL at the regular rate of \$1.00 a year.

Description of Our Watch Premiums.—If any of our young friends want to go to work to earn one of these good watch premiums, let them write to us and we will send them full descriptions, order blanks, return forms, sample copies, and all necessary information for going to work to form clubs.

Why Cannot You, Young Friend, Obtain a Watch?—Why cannot you obtain a watch, as so many others of your comrades have done? Have you tried? If not, set to work at once.

The Banner Oat Premium.—The Banner Oat Premium, is now withdrawn. Our oats are all exhausted and we can supply no more.

Sample Copies, etc.—We shall be glad to furnish sample copies, Blank Order Forms, and all other necessities 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-forms provided for that purpose.

How 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.

Keep your eye on this column.—Keep your eye on this column. In it every month you will find something to interest you, and also to profit you, as we hope. Now, send in your orders as fast as you can.

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.

A New and Very Liberal Premium.

Boys, this is for You.—Hundreds of boys have been at work getting new subscribers for THE LIVE STOCK JOURNAL on our watch premium plans, and very many have been successful. But so many have tried to get the full number of ten and twelve and have not quite succeeded that, in order to reward them, we have devised a new premium, which in liberality, "takingness," and usefulness, cannot be surpassed.

What Our New Premium is Like.—It is intended expressly for you, boys; that is, for you rather than for your elders. You are all anxious to get information; but you want to get it in an agreeable form, and upon topics of current interest. So our new premium is a book, a new book, a book of great interest, of most useful information, upon a topic now uppermost in the thought of everybody—the great continent of Africa.

What Our Premium is.—It is entitled: *Pictorial Africa, its Heres, Missionaries, and Martyrs; containing Stirring*

Advertisements.

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FARM PROPERTY.

FOR SALE

THE GLENHOLSTEIN

Sheep and Cattle Farm.

880 Acres of the Finest Land
in Manitoba, Beautifully Situated on the
Brokenhead River.

200 ACRES OF OAK, ASH, ELM, SPRUCE, POPLAR AND MAPLE TIMBER.

Flowing well, never freezes. One-half fenced with five barb wires. Soil inexhaustible, yielding heavy crops of roots, grain, hay. Seven-roomed dwelling house, six-stall stable, stock sheds, 200 x 16, and other outbuildings. Present stock,

1,000 SHEEP, CATTLE AND MARES

remaining unsold, can be had at valuation.
C. P. R. station, two miles—36 miles east of Winnipeg. Sale in consequence of dissolution of partnership. Part purchase money may remain on mortgage. Address,

**J. STACE SMITH,
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To Let or For Sale!

200 Acres 1½ Miles from Paris.

155 Acres tillable, balance river flats, 50 Acres seed to Clover. Bank Barn. Stabling for 40 head of cattle and 15 horses. Hydraulic Water Works for house and stables. This is one of the best stock and grain farms in Western Ontario.

For terms, etc., apply to

**JNO. D. PETTIT,
PARIS, ONT.**

SELECTED FARMS

(WESTERN ONTARIO.)

FROM \$1,500 TO \$25,000. Address:—

EDWARD HARRIS, - 23 Toronto St., Toronto.

FARMS FOR SALE.

FARMS for Sale in Ontario. "LAKE'S LAND LIST" No. 1, with Provincial and County maps, is now ready, and contains descriptions and prices of stock, grain, dairy and fruit farms for sale and exchange. This is the largest list published in Canada. Money to Loan at low rate of interest on Farm property.

**E. LAKE & CO., Land, Estate & Financial Agents,
18 King St. East, TORONTO.**

The L.S.J. is read by 10,000 of the best farmers in Canada. Remember that when advertising.

Narratives of their Perils, Adventures, and Achievements, together with a Full and Descriptive Account of the Peoples, Deserts, Forests, Rivers, Lakes, and Mountains of the "Dark Continent."

Further Description.—The above is the title, but it gives one a very poor and meagre idea of the book. We may say further that the work consists of 400 pages of heavy white paper, handsomely printed and bound, and moreover contains 115 beautiful engravings, many of them full-page, and a fine copper-plate map of the continent, showing the latest discoveries.

What the Work is About.—To give even a summary of the contents would require this whole page; all we can say here is that the work comprises a history of all the great exploring expeditions made into Africa, and full accounts of the great explorers themselves.—Bruce, Mungo Park, Burton, Speke, Grant, Murchison, Baker, Moffat, Livingstone, Gordon, Stanley, and many others. Besides, the work is very full in its accounts of the travels of Livingstone, Gordon, and Stanley, particularly. In fact, it contains everything of importance that one wants to know concerning this most wonderful country up to the very latest times; its peoples, animals, fruits, grains, trees, scenery, climate, resources, products, etc., etc.

How the Work is Illustrated.—The illustrations are not only very numerous, but very interesting and beautiful. They comprise portraits of Livingstone, Gordon, and Stanley, and many other explorers; hunting scenes, war scenes, and domestic scenes; landscapes, mountains, waterfalls; native races, native animals, native forests; pictures of the slave trade, of caravan traffic, and of local traffic; in short, everything of interest that needs illustration concerning the whole continent, and that in great fullness.

The Value of the Work.—This book has been only just recently published in England. We control the market for Canada, and copies can be secured only from us. So the price is just what we say it shall be. But it would be considered a very desirable book at \$3.00 in any bookstore; and we shall not sell a copy at a less price. The postage alone on the book when we send it out as a premium will be 13 cents.

What We will Give this Premium for.—We will send this beautiful book, post paid, to any young stockman who will send us three new subscribers at \$1.00 each. As in all our premium plans, three trial subscriptions will count as one regular subscriber; but in every case the subscriber must be a new one, and not one already upon our books.

This is a Liberal Premium.—Now, boys, this is a LIBERAL PREMIUM. We know what we are saying when we tell you that in working for us to obtain new subscriptions in order to get this book, you will be earning larger wages than you will make at any other employment for a long time to come.

How to go to Work.—First make up your mind to do so. Then send to us for sample copies, blank orders, return forms, return envelopes, etc. Then set right about the work, and do not rest till you have secured the requisite number of names. For further particulars see our "Publishers' Column."

Finally.—Finally, we are so satisfied that this book will give pleasure to you that we say this: If, when you receive it, you do not find it just as we have represented it to be, we will return you your money, and yet send on THE LIVE STOCK JOURNAL to the subscribers you have secured.

Stock Notes.

Horses.

FRANCIS RUSSELL, Mount Forest, Ont., reports the sale (through advertising in our JOURNAL) of his Percheron stallion to a person in Arkansas, U.S.A.

MR. W. H. HUTCHINSON, of Napanee, makes a change in his advertisement this month to which we would refer our readers. He says: "My horses have wintered extremely well, and have grown both bigger and heavier."

THOS. J. KELLY, West McGillivray, Ont., the owner of Western Sprague 2288, informs us that his advertisement brought him many inquiries. Western Sprague was imported from Ashland Park, Kentucky, the stables of B. J. Treacy, Governor Sprague, the sire of this horse, has increased the number of his get in the 230 list from sixteen in 1883 to twenty-four at the close of 1889, a record stated to be equalled by no other stallion with only nine seasons in the stud, as he died when twelve years old.

JOHN A. MACKENZIE, of Presque Isle, County of Grey, has sold his fine four-year-old Clear Grit stallion, John A., to John Charles Eager, of Portage la Prairie, Manitoba, for a satisfactory price. This young Clear Grit took prizes at the Provincial, and Dominion, and Industrial Exhibitions, and is in fine condition for the coming season. His young Crown Prince, son of Old Crown Imperial, 18 months old, stands 15½ hands, and weighs 1035 pounds, is trained to cutter or cart, and will not disgrace his grand old sire.

MESSRS. GREEN BROS., of the Glen Stock Farm, Innerkip, Ont., report that the demand from the States for Shire horses is unabated, and that, amongst other sales, they last week sold their grand yearling filly, Gipsy, sired by William the Conqueror 579, out of imported Lacey, to a gentleman in Polk County, Oregon, U.S. Although we are pleased to hear of such sales, yet we always regret seeing good mares leaving the country, and it is a matter of surprise, considering the popularity that the Shire has attained in the States, that more farmers have not applied themselves towards meeting this demand.

INSPECTOR REAZIN, OF WEST VICTORIA AND MUSKOKA, is withdrawing from the share business in his Emsdale Stock Farm, and has just had a very successful sale of his share of the stock and implements which footed up \$3,040.25. Pair matched draught horses sold to Mr. White, of Toronto, for \$400; pair matched mares, \$250; pair matched drivers, \$250; pair matched Brazilians, \$160 (about half value); "Duke of Argyle" draught stallion, \$350; a blood colt rising 2, worth about \$200, was sold or \$80 to Mr. Thos. McGill (by "Extra," dam by "Highland

Stock Notes.—Continued.

Hoy," out of imported "Nellie." His mate was withdrawn. A pair matched Brazilians (drivers) sent to J. C. Bates, Esq., for \$160, about half value. The best cattle and all the South-downs were purchased for the "Beaumont Stock Farm." The Berkshires produced some keen building.

H. H. STENGER, of Dorset Farm, Brooklin, Ont., writes: "My Clydesdale mares are all with foal, and doing well. My colts are very promising. One yearling stallion, Prince of Dorset 4413, in the A.C.S.B., will weigh close on 1,600 pounds, with excellent points. My Scotch Shorthorns are doing very well. Have made a sale of 3 very choice young bulls of late, viz., Gold Leaf, sired by imported Patriot (533390), dam Isabella 4th 9312 sold to Mr. Geo. Wallis, Sarnfield, Ont.; Red Warrior, sired by imported Patriot, dam Isabella 4th 9309, sold to Mr. James Ward, Marshhill, Ont.; and Velvet Prince, a very promising bull, sired by imported Sussex (56625), dam Isabella 11th, sired by Venusarth 1302 (47192), sold to Mr. Peter Christie, Manchester, Ont. My cows are breeding a choice lot of calves, some very choice red bull calves amongst them. The one and two-year-old heifers are in good growing condition, and keep healthy. My Berkshires are doing well, & sows in farrow, and every appearance of big litters."

GEO. G. STEWART, of Howick, Que., writes: "I enclose a copy of a Certificate of a horse named Roballion, which I sold to Fred H. Milne, of Casey Hill, Que. The imported Clydesdale stallion, Roballion. Copy of Certificate of Pedigree from Clydesdale Horse Society of Great Britain and Ireland, dated 15th August, 1889.—Certificate of registration of horse Roballion, late Mac of Woodend (7032), Vol. XI. I hereby certify that the following has been registered, subject to the conditions on the back hereof, in the Eleventh Volume of the Clydesdale Stud-book as the correct pedigree of a horse named Roballion, late Mac, of Woodend (7032); foaled, 17th June, 1857; colour, brown, white stripe on face, white hind feet; bred by John Meikle, Grounfout, Linlithgow; sire, Gillie Callum (7029), Vol. VII.; dam, Queen Bess, bred by Arch. McVicarie, Woodend, Arnsdale; sire of dam, Stanleyburn (1536), Vol. III.; grand dam, Darling (1612), Vol. V.; sire of grand dam, Earl of Buchan (264), Vol. I.; great grand dam, Susie by Lochend Champpow (448), Vol. I.; great great grand dam, Jean, the dam of Lochfergus Champion (419), by Lofly (456), Vol. I.—(Signed) Arch. Macneil, secretary. A rangy horse, with attractive carriage and a splendid mover; very fine head, neck, chest and feet; has won several prizes in Scotland, dark bay colour, stand about 16 hands; weighs 1475 lbs.; is rising 3 years. My stock has wintered well."

Cattle.

Mr. F. J. RAMSEY, of Dunnville, Ont., offers for sale calves from imported Bates bull.

Mr. J. K. McMICHAEL, of Maple Avenue Farm, Waterford, Ontario, begins his career this month as a public advertiser of pure-bred Herefords.

F. BIRDSALL, of Birdsall, Ont., writes: "Our Shorthorns are doing nicely this winter. Disposed of my stock bull to Mr. Donald Douglas, of Warkworth, and also disposed of another to W. L. Burnham, of Cobourg, Ont."

Mr. JAMES McARTHUR, Gobles, Ont., offers for sale, in this issue, four young bulls fit for service. They are of Bates blood, Waterloo strain, being sired by Waterloo Duke 18th, a get of the 4th Duke of Clarence. Do not fail to look up his advertisement.

F. A. FLEMING, Weston, Ont., reports the following sales from his Hereford herd: to Mr. James Cairns, Cambricue, Ont. one bull, Aronos, and two heifers, Playful and Azalea, all year olds. Also to the Ontario Government, for the Ontario Agricultural College, Guelph, the three-year-old cow, Annot 13th, and her bull calf, Annalst.

JOHN HOGARTH, of Brooklin, Ont., personally informed us that his herd of Herefords are now doing well. Mr. Hogarth has been breeding Herefords for the last five or six years, and has now well established a herd of sixteen head. The foundation animals, four in number, were collected from the well-known herd of Mr. Drew, Ottawa.

Wm. DUTHIE, of Collyme, Eng., has, with commendable enterprise, succeeded in purchasing from the Messrs. Nelson eighteen cows of the famous Sutton herd, consisting of the following strains: three Lavenders; two Victorias; two Duchesses; two Lovelies; one Custard; two Cactuses; one Azael; one Alarilla; one Silvery; one Secret; one Juliet and one Veronica.

Messrs. E. & G. IRELAND, of Burlington, Ont., breeders of high bred Bates' cattle, have lately purchased from Mr. Jas. McArthur of Gobles, Ont., a Bates bull of the Waterloo strain, Waterloo Duke 16th. This bull was bred at Bow Park, and was sired by the 4th Duke of Clarence. He has done good service for Mr. McArthur, who has got a number of prime calves from him, some of which he offers in this issue.

Mr. D. K. HIGG, Jordan, Ont., has disposed of his two Shorthorn bulls, Golden Prince (11647), and Lord Irwin (11648), the former went to Mr. W. A. N. West, Pelham township, Welland County, Ont., and the latter to Mr. Albert High, Clinton township, Lincoln County, Ont. These bulls were sired by his imported Kinellar-bred bull, Golden Robe (54375), which won the 2nd prize at Toronto last fall.

Mr. PRYOR TOLES, of Mount Brydges, Ont., writes: My Shorthorns are all doing well, notwithstanding I lost two splendid calves with la grippe. I have over 50 head of Shorthorns, many of them are extra good ones, some of them are very heavy milkers. My opinion is they outstrip any grades of any breed or breeds I ever saw. My sheep are doing well, the lambs are coming strong and good, mostly pairs. We have no breeding ewes.

Mr. ARTHUR JOHNSTON, of Greenwood, Ont., writes to say that stock of all kinds are coming through the winter in finer

SITUATION WANTED

BY single man, who is a practical horseman, a scientific farmer and a pusher as foreman or manager of stock or grain farm (horse farm preferred). Can furnish the best references in regard to character and ability. Address, W. V. P., ALYMER P.O., Ont.

IMPORTERS' AGENTS.

To those importing stock from Scotland. For Forage and other supplies address

JAMES CLARK,

Hay, Grain and Straw Merchant (Forage Contractor), 401 Parliamentary Road, GLASGOW, Scotland,

One Hundred yards from Buchanan and Queen Street Stations. Forage of best quality supplied to shippers of stock on shortest notice. References by permission to MR. JOSEPH VANCE, New Hamburg, Ont., and other Canadian Importers.

TELEGRAPH, "FODDER," GLASGOW.

NOTICE TO IMPORTERS!

CHARLES CHABOUDEZ,

Hotel de France, et de Suisse, 1 Rue de Strasbourg, Paris, France,

Agent for the National Line. Information of all the horse districts given at the office. Charges strictly moderate. Correspondence solicited.

CHARLES CHABOUDEZ,

Proprietor.

ON 40 DAYS' TRIAL THE GREAT SPIRAL TRUSS

The Pad is different from all others. It closes Herma as if your extended hand was drawn together and one finger pointed in the centre. Rupture is held tight to day and night with the slightest pressure, and healed same as a broken leg. You will be allowed three exchanges during the 40 days. There is no duty to pay when received or returned, which many Canadians found more expensive than the truss. It is the easiest, most durable, and cheap Truss. Sent by mail. Send stamp for illustrated book. CHAS. CHATHILL, Surgeon, Machinist, 134 King St. W., Toronto.

SWINE FOR SALE.

SOME CHOICE SUFFOLK AND BERKSHIRE SPRING PIGS



FROM IMPORTED STOCK. \$6 EACH, OR \$10.00 PER PAIR. (Will Register.)

Also Sows and Pigs of different ages. Three Hull Calves 14 months old, from Imported Bates Bull. Prices reasonable. Dark Red in Color.

F. J. RAMSEY, Dunnville, Ont.

CHESTER WHITE PIGS

We are now Booking Orders for spring pigs.

This is the time to order and secure first choice.

R. & J. GURNETT, Ancaster, Ont.

BERKSHIRES

SPRING LITERS OF CHOICE REGISTERED BERKSHIRES

Now Ready for Shipment. Also a few Choice Shearling Shropshire Rams.

BROWN BROS., SPRINGVILLE - ONTARIO.



CHESTER WHITES originated in Chester County, Pa. If you send to me I can give you stock that will please you and benefit you. My stock make hogs weighing 800 lbs. at maturity. Walter 45315 is a noted hog valued at \$600.00. Write me. I guarantee my stock and cattle.

C. E. MORRISON, Londonderry, Pa., U.S.A.

100 SONGS for a 20 cent weekly issue & extra, Cash, U.S.

Stock Notes.—Continued.

shape than they have done for many years. At farmers' public sales store cattle have sold higher than ever before. Horses are a dull sale, unless they are very good. Sheep are scarce and very high. Enquiries for young bulls are plentiful, with sales at somewhat reduced prices, as compared with recent years. I have still on hand some as good young bulls as I have ever offered. Send for a catalogue.

Messrs. G. & W. GIER, of Grand Valley, Ont., have recently purchased from Mr. Arthur Johnston, of Greenwood, the exceedingly promising young bull, Baron Hugo, sired by the Cruickshank Victoria bull, Victor Hugo 20132 and out of Baroness Aberdeen and, by imported Heir Apparent (51380). The dam of Baroness Aberdeen was Hon. M. H. Cochran's famous low-low imported Beatrice, winner of first prize at the Quebec Provincial Exhibition two years in succession. Thus, Baron Hugo's breeding is of the very best, being Cruickshank on the one side, and Booth on the other.

Messrs. JOHN CURRIE AND SONS, of Everton, Ont., who have recently sold their well-known show bull to an Illinois man for a good price, have purchased from Mr. Arthur Johnston, of Greenwood, the young bull War Eagle, sired by imported Warfare, and out of Daisy Star, by imported Duke of Lavender (56712). The Daisies are an exceedingly good milking family, as well as extraordinary thrivers. War Eagle is a calf of very great size, substance and development for his age, and withal smooth, even and full of quality. He will be heard from in the show-yard in the near future.

Mr. Wm. WRIGHT, of Sandwich, Ont., places with us this issue an advertisement of his herd of finely-bred Bates cattle, comprising individuals of the well-known Duches, Oxford, Thordale Rose, Harrington, Kirklevington, Wild Eyes, and Red Rose families. Those of our patrons who have been reading Mr. Gibson's entertaining accounts of the Bates' Shorthorns will read this advertisement with considerable interest. The demand for Bates' Shorthorns is growing stronger every day, principally on account of their good milking qualities. Mr. Wright is a new member of our advertising confraternity; we welcome him among us, and trust that his business will meet with that success which his enterprise merits.

While the Holsteins, the Jerseys, the Ayrshires, and the other breeds of dairy cattle are all forging ahead and winning prizes in shows and favor with the public, the Guernseys also, though not so well known, are not one whit behind their competitors in their endeavors to satisfy the demands of critical dairymen, and their friends claim that they are not only successful in this, but even abundantly so; at any rate, we note that a very greatly increased interest in Guernseys is being taken by the makers of butter and patrons of creameries in Canada. Mrs. S. P. Taber Willets, of Rodney, Long Island, a well-known Guernsey breeder, who advertised her herd with us last summer, has noticed this increasing interest also, and places with us this issue two advertisements respecting her Guernseys, to which we would invite the attention of all our readers.

Messrs. A. C. HALLMAN & Co., of Spring Brook Stock Farm, New Dundee, Ont., have favored us with a copy of their recently issued catalogue for 1900. This firm have been breeding Holsteins since '83, when, they state, they started simply with the object of securing a better breed of cattle for their own dairy purposes, but finding the results so good they successfully extended their business to its present magnitude. Since then they have made many importations direct from Holland, one in the fall of '84; another in the spring of '86; and their last in the summer of '88. Their herd at the present time is particularly strong in the blood of two famous families of this breed, the Netherlands and Aargie, while they also have descendants of many other noted strains. Every animal in the herd is recorded in the Holstein Friesian Book of America. All desiring to become more thoroughly acquainted with this breed and this individual herd, which is one of the best in Canada, will do well to drop a postal card to the proprietor and secure a copy.

Messrs. SMITH BROS., Credit Valley Stock Farm, Churchville, Ont., have just issued a handsomely illustrated and excellently finished catalogue of their herd of Holsteins. This herd are all straight bred, each number being registered in the Holstein Friesian Herd Book of America. The Messrs. Smith have been very successful in Canada showings, as the long list of prizes won by them, given here, abundantly testifies. Their stock bull is Minks Mercedes Baron, a get of the famous Mercedes Prince (2150). The principal strains represented are the Mercedes, Netherlands, Mink Aggie, Clothilde, Ljepkie, Artis, Tena and Ykena. The herd number in all about seventy-five animals, including a number of vigorous young bulls and lusty young heifers. This firm has won a name for their herd which is equalled by few others in Canada. Any one thinking of going into dairying or starting a dairy herd cannot do better than secure a copy of this catalogue, which is a credit to the herd it represents. Messrs. J. E. Bryant & Co. were the publishers.

JOHN R. MARTIN, of Clarendon Stock Farm, Cayuga, Ont., writes: "My herd of Durhams have gone through the winter finely, notwithstanding the want of roots; calves coming strong, mostly heifers, which will compel me to get in a few young bulls for my May sale, of which I will give you due notice when day fixed. Of sheep I have now none; expecting an importation at an early date. Pigs are in fine condition, the young Baron von Bismarck doing full credit to his sire. Horses after their winter idleness can scarcely contain themselves. Sales have been almost nil this winter heretofore, but enquiries are now coming in from all quarters with reference to my stock-card in your JOURNAL, which appears to be widely extending its circulation. Every year I purpose, also this year, introducing the Kerry and Kerry Dexters as milkers; though small, they cannot be beat as either milkers or fatteners, and they cross excellently with the Shorthorns, to which only they are second, and are destined, as I believe, to be the poor man's cow."

C. M. SIMMONS, of Ivan, Ont., writes: "My herd of 35 Shorthorns are doing well. I have sold 1 roan bull calf to Thomas Jackson, Port Stanley, got by Aberdeen Strathallan dam Daisy of Strathallan 2nd, by Dr. Strathallan 3rd; one red roan bull calf to McDermid & Barber, of Fingall P.O., got

12/2/96

Stock Notes.—Continued.

by Sir Christopher = 3877 = dam Daisy of by Strathallan, Victor Regalis, Imported (47205); one red bull calf, to Thomas Wyatt, Springbank P.O., got by Sir Christopher = 3877 = dam Elvina 12th, by Duncan = 1732 =; one red H. C. to D. Clifford, St. Falls P.O., got by Aberdeen Strathallan, dam Mary Anne, got by 3rd Crown Prince of Strathallan; one roan bull calf to James McVev, Pluver Mills, got by Sir Christopher = 3877 = dam Broken Horn, by 3rd Crown Prince of Strathallan. Births, Elina 11, by Sir Christopher a c.c. red heifer; Daisy of Strathallan 2nd, a c.c. red and little white, by Crimson Knight; Red Rose of Strathallan 3rd, a b.c. red, by Sir Christopher; Daisy of Strathallan, a c.c. red, by Sir Christopher; Adelena, a b.c. red with white markings, by Crimson Knight; Elvina 12, a b. c. red, by Crimson Knight.

In our last issue, we referred to the sale of Jersey cattle that Mr. Brameld, of Oakville, intends holding on Thursday, August 10th. Since then, we have had a glance at the advance sheets of Mr. Brameld's catalogue, so that we speak more freely in respect to the high breeding of the animals to be offered. We cannot do better than give the owner's own words in speaking of the herd in a general way: "It is with reluctance, owing to the near expiration of the lease, that this herd is offered for sale. The animals are all healthy, and in thriving condition, and as regards breeding and individual merit, they are hard to surpass. This herd was most successful in the show-ring last fall, as with twelve head exhibited, they took nine firsts, diplomas, for best bull any age, seven second and three third prizes, including second with herd at Toronto Industrial (Mr. T. S. Cooper, Judge), and first at Great Central Fair, Hamilton, the only two places exhibited." This herd is rich in the best blood lines of high Jersey breeding, and as the entire herd is to be offered without reserve, it will be a rare opportunity for new breeders, as well as old, to secure fine animals.

BOLLER BROS., of Maple Grove Stock Farm, Cassel, Ont., write: "Our Holstein-Friesian herd, being greatly strengthened by the birth of some valuable calves: Geldette (who has a milk record of 84 lbs. daily, and tested 19 lbs. of butter in 7 days on grass alone) dropped a beautifully marked bull calf, sired by Sir Westwood; Emma J. Neptune, who last year as a two-year-old gave 48 lbs. in a day, and averaged 4 1/2 lbs. for 60 days, dropped a fine heifer, to Sir Westwood; Bonnie Queen 3rd, who averaged 40 lbs. per day for sixty days at two years old, dropped a very fine bull, to same sire; Jennie E., a very fine bull, by Barnum. These latter two heifers we found it impossible to dry off, had milk them regularly until dropping their calves. The value of these calves will be better understood when we say that the dam of Sir Westwood gave, at four years old, 80 1/2 lbs. of milk in a day, and made 18 1/2 lbs. of butter in 7 days; his grand-dam gave 80 lbs. in a day, and 20 1/2 lbs. in 7 consecutive months, and tested as lbs. well-worked butter in 7 days in the severe cold weather of January, 1886; the 15 cows (including a two-year-old heifer) to which Sir Westwood traces in his pedigree, averaged 86 1/2 lbs. of milk in a day, and 8, all that were tested, made 19 lbs., 6 oz. of butter in 7 days."

SMITH BROS., of Credit Valley Stock Farm, Churchville, Ont., write: "The sales of Holsteins have nicely begun for this year. A few weeks ago we sold to Samuel Flack our yearling bull, Harmonia's Mercedes Prince; he is half-brother to our stock bull, Mink's Mercedes Baron. They have six half-sisters that averaged 16 lbs., 5 oz. of butter in 7 days as two-year-olds, and one, Imjka Mercedes, gave 25 lbs., 15 1/2 oz. of butter in a week as a three-year-old. The grand-dam of Harmonia's Mercedes Prince made 29 lbs., 6 1/2 oz. of butter in 30 days, and took the *Brevard's Gazette's* Challenge Shield in a competition open to all breeds and the world. This bull is one of the best bred and most promising animals that we have ever seen. Another lot, 3 head, went to George White; a fine young bull, Billy Teake, a prize taker, and an excellent bull in every respect. With him went Ailsa, whose ancestors are in the advanced registry, and Credit Valley Maid, whose dam took 1st prize at Industrial Exhibition, Toronto, and at Provincial, London, also sweeps as best female of any age. She gave us as a three-year-old, on regular feed, 1,220 1/2 lbs. of milk in 30 days. We have made a beginning at testing our cows and heifers for butter. Stevie 4th, a two-year-old, gave 13 1/2 lbs. of well-washed, unsalted butter in 7 days; Onetta gave 14 1/2 lbs. of butter in 7 days, and this was 5 months and a week after calving; Cornelia Jensen has not completed her week yet, but has given 15 1/2 lbs. in 5 1/2 days. She is milked 3 times a day."

MESSRS. J. & T. MacKENZIE, Heathendale Farm, Scotch Block, Ont., write: "Since last writing you, we have made the following sales: To D. & J. Mackenzie, Campbellville, one Durham cow, one Durham heifer; to John Bullock, Hopetown, one Poland China boar; to Cranmer Woodhall, Scotch Block, one Yorkshire sow; to James Wilson, Solom, one Poland China boar, 2 sows; to James Cargill, Brookville, 3 Poland Chinas; to Captain Robert Reesor, Locusthill, 1 Poland China sow; to Cranmer Woodhall, Scotch Block, 1 Polish cock. We have imported from the herd of Messrs. S. E. Shellenbeger & Co., of Camden, Ohio, U.S.A., 1 Poland China boar and 1 sow; they are beauties. They reached us from Point Edward quarantine in fine shape, on Friday, March 15, to be used in our herd at home. We have also purchased from Mr. Joe Brethour, of Hurford, 1 Berkshire sow (pure bred), for breeding purposes. We have also purchased from Mr. Joseph Featherstone, 2 first class Suffolks, 1 boar, 1 sow, very fine animals; also 1 Essex boar from Mr. Joseph Featherstone; also from Mr. George Kennedy, 1 Berkshire boar. We have also purchased this winter from Mr. Robert Reesor, of Markham, 3 Clydesdale stallions, all red in the Canadian Clydesdale Stud Book. Our stock are doing well at present. We have found THE LIVE STOCK AND FARM JOURNAL the best advertising medium in Canada to-day, and we would advise all breeding good stock for sale to advertise in THE LIVE STOCK AND FARM JOURNAL."

A. C. HALLMAN & Co., SPRINGBROOK FARM, NEW DUNDAS, ONT., write: "Our stock is wintering well, considering the amount of food they are getting, owing to the dry season and failure of the root crop. We have the finest lot of cattle we ever had, with remarkable breeding and pedigree. We have some very choice calves, dropped this winter. Among the number is a heifer calf from Princess Margaret, H.A.B."

JERSEYS FOR SALE.

MODEL JERSEYS.

I have a few Beautiful Heifers For Sale,

Bred from deep milking and rich butter families. Heifers in calf.

YEARLING HEIFERS

To be bred next month. Heifer calves one to six months old.

Come and see, or address:—

J. C. SNELL, Edmonton, Ont.

THOROUGHBRED JERSEY COW.

FOR SALE CHEAP

The Thoroughbred Jersey Cow, BELLA DONNA, 4 1/2 years, light fawn, C.J.C.C., with Bull Calf 3 months

BELLA DONNA took two firsts and one second prize in the only three exhibits shown. Address, WM. BARNES, Green River, Ont.

JERSEYS FOR SALE.

Several fine Jersey Heifers; choicest strains. Prices low. Write G. M. BEEMAN, NAPANEE, ONT.

SHEEP FOR SALE.

IMPORTED AND CANADIAN-BRED SHROPSHIRE SHEEP FOR SALE, also Imported Clyde rams. All registered pedigrees. Agent for Dana's Sheep and Cattle labels. JOHN DUNKIN, Brucefield, Ont.

LORRIDGE FARM SOUTHDOWN SHEEP.

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

Imported Rams used only. Stock for Sale.

ROBERT MARSH, PROPRIETOR. Richmond Hill, Ont.

HOLSTEINS FOR SALE.

Two Holstein Bulls!

I HAVE FOR SALE

Two Holstein Bulls and one Heifer nine months old, at reasonable prices.

WM. SUHRING,

Sebringville, Ont.

TWO YEAR OLD PEDIGREED HOLSTEIN BULL

FOR SALE. Well bred and kind. HAS PROVEN A GOOD STOCK GETTER. I will sell him cheap.

Address:—

WELLINGTON MUISINER,

Port Robinson.

SHORTHORNS FOR SALE.

Three Young Shorthorn Bulls For Sale

MILKING STRAINS. FARMERS' PRICES.

ALEX. RITCHIE, Inverary P.O., Ont. NEAR KINGSTON.

Shorthorn Bulls.

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.

A. C. BELL,

TROUT BROOK FARM, New Glasgow, N.S.

Stock Notes.—Continued.

5256, with a butter record of 20 lbs. 1 1/2 ozs. in one week. Sire Prairie Aggie Prince No. 2, whose dam has a butter record of 20 lbs., 1 oz., in a week, as a five year-old. Considering the breeding on both sides, it makes it one of the best bred calves in Canada. We just sold a very valuable young bull of excellent breeding and quality, to Mr. William Shunk, Sherwood, Ont. Mr. Shunk wants this bull to head his fine herd of Holsteins, and it reflects much credit on this gentleman for securing a bull of such rare breeding and individual merit. His name (Haillie and's Artis Clothilde) shows, at a glance, that he is of royal lineage. His sire, Clothilde 4th's Artis, a son of Clothilde 4th, which has a butter record of 23 lbs. 10 1/2 ozs., as a 3 year-old, and stood second at the great Dairy and Cattle Show, New York, in 1887, competing against Jerseys, Guernseys and all other dairy breeds, her dam, Clothilde, taking first, with a butter record of 28 lbs. 24 oz. in a week, and milk record of 26,021 lbs. in one year. The sire of Clothilde 4th is Netherland Prince, which four cows (3 three-year-olds and 1 two-year-old) have made average records of 20 lbs. 1 and one-fifth oz. butter in one week. Haillie and, the dam, is also remarkably well bred, but space forbids giving her breeding. Her gr. dam, is Haillie, a celebrated cow; her dam, Negress, is a daughter of Netherland Prince, besides tracing direct to other wonderful cows, such as Constance S., with a milk record of 83 lbs. in one day as a three-year-old; Fraulein, 70 lbs. in one day; Crown Princess, 76 lbs., and Echo with a record of 23,775 lbs. 8 oz. in one year. There are other cows of equal merit, but we think the above is sufficient to show that he is of royal blood. Our Catalogue is now out, and we shall be glad to send a copy to anyone interested."

J. G. DAVIDSON, Kinnoul Park Farm, New Lowell, Ont., writes in his usual happy strain: "With your permission, I now hand you a few notes concerning our live stock matters, and I may as well begin with our Aberdeen-Angus herd. For a number of years now, we arrange to have our calving season begin by the first of September of each year. Our past season has been a most successful one. Our valuable stock bull, Imported Kunnymede 2nd 5220 (3217) 16], has more than justified our opinion of his breeding qualities, and being a heifer getter, his value to us has been greatly increased during the past season, as we are anxious to build up our herd of Angus to something like its past numbers. We have not a bull-calf of the past season's crop, and our experience heretofore has been two-thirds bull. Kunnymede and is a grandson of that fine old cow Ruth of Tillyfour (1769), and his sire and grand-sire being both Ruth bulls. He is, so to speak, a treble bred Ruth, thereby concentrating the blood of this valuable and famous Keilor-Tillyfour family. He has the shortest legs of any living Angus bull, and the 'nick' on our large-framed, roomy Angus females comes just right. His shoulder and breast formation is nothing short of a study to one interested in the make-up of the different breeds of cattle, and his temper is so good that he was seven years old before a ring was put in his nose. We propose to confine our live stock operations entirely to the Angus among the different breeds of cattle, and to the Shropshire among those of the sheep. We have the experience of both, and the longer we have them the better we like them. Our first purchase of Shropshire sheep was made at the dispersion of Mr. Dalton McCarthy's herds and flocks, in the April of 1888. Mr. McCarthy, with that keen insight and foresight which so distinguish him in everything he undertakes, had decided as far back as 1881 or 1882 that the Shropshires were the 'coming sheep,' and acting on his excellent judgment in this matter, he imported, regardless of expense, the best of the breed he could secure at the time, and again in 1884. After having the advantage of some years' actual experience of this breed of sheep on his fine farm at Barrie, he made another importation, this time from Ireland, and personally selected (we believe) by himself, and the writer can bear witness to the superb quality and size of the Irish grown sheep, having had five years' experience of them in that delightful land, where the grass is ever green. Among our recent purchases, we may mention a choice lot of 45-50 ewes from John Dryden, Esq., Brooklin, specially selected for his importation of last year, which importation we consider the best of the numerous lots that that gentleman has brought into the country. We hope he will permit us to say here, that we had the greatest possible satisfaction in our dealings with him, and further, that he deserves great credit for the energy and enterprise he has shown in the direction of our country's improvement. We purchased from Mr. Campbell the shearing man, Ward 12077, which took first at the London Provincial last fall, and we have bred him to our imported ewes. As to our lambing season, we may say that we have been unusually lucky this year, so far. All our ewes have a lamb a piece, some thirteen have strong twins, one has three, and one no less than four healthy, strong lambs, three ewes and one ram, four weeks old. It is the first quartette we ever saw living. The ewe is 174 Oakly Park, No. 10088, A.S.R.A. She was sired by Benven 11079, one of our stock rams, on the 19th of September last, and should have lambed about the 13th of February, but she held on to the 25th of that month, with above result. They all run with the ewe, but a young goat happened to kid shortly before the ewe, and we gave cow's milk to the kids (twins), and gave a 'lift' to the ewe and her happy family, by teaching two of the lambs to steal from the goat. In conclusion, I am also happy to inform you that it is the intention of my esteemed employers, Messrs. Hay & Paton, to increase during the summer both their herds and flocks, and put the farm almost entirely under stock. With my best wishes towards the continued success of your most valuable JOURNAL."

Sheep.

MR. JOHN DUNKIN, Brucefield, enters our lists as a regular advertiser of imported and Canadian pure-bred Shropshire sheep.

D. G. HANMER & SONS, of Mount Vernon, write: "Our stock are coming through the winter in good shape; our lambs are coming remarkably strong. Our recent sales in Berkshires are: 1 boar to W. S. Campbell, Bramford; 1 boar to Thomas McEwen, Mohawk; 1 boar to H. Hyslop, Ancaster; 1 sow to Major Walker, Calgary, N.W.T."

J. C. Snell, Edmonton, Ont., writes: "Our Cotswolds and Berkshires are doing well for us. We have had a steady demand for them all winter. Our lambs and pigs have come

SHORTHORNS FOR SALE.

WATERLOO.
FOUR YOUNG BULLS

From ten to twenty months old are offered for sale. They are from Waterloo Duke 18th, and out of pure-bred dams of Bates blood. They are extra good animals out of good milkers, and will be sold cheap.

JAS. McARTHUR,
GOBLES - - - ONTARIO.

FOR SALE 5 Young Shorthorn Bulls and 30 Berkshire Pigs.

All first-class. Send for Catalogue and Prices.

EDWARD JEFFS, BOND HEAD.

Show Bull For Sale.

WE offer for sale the two-year-old, red, show and stock Shorthorn bull, **MUSKETEER**, sired by the imported Cruickshank bull, Vice Consul, sweepstakes bull of 1888; dam, Lydia (imported).

J & W. B. WATT,
SALEM, ONT.

Young Shorthorn Bulls

WE have for sale young bulls of fine quality and good individuals, got by the prize winning Matchless Bull

LORD LOVELL --2030--

Write for particulars or come and see. We have also a quantity of Mummy Peas, pure and clean, for sale.

GAUNT & SONS,
Lucknow Station, G.T.R. St. Helens, Ont.

HORSES FOR SALE.

PERCHERON STALLION FOR SALE,

An excellent pure bred Percheron Stallion rising two years old; also a yearling. Some Bull Calves, and some Berkshire Boars and Sows.

B. BALLACHEY,
Address: - - - Brantford, Ont.

Stallion Show at Portage la Prairie, Man.

The third annual Stallion and Fat Cattle Show, under the auspices of the Portage and Lakeside Agricultural Society will be held on the Agricultural Grounds at Portage la Prairie, Man., on

SATURDAY, APRIL 19th, 1890.

PRIZE LIST:

| | | | |
|-----------------------------------|-------|------|------|
| Thorough-bred Horses..... | 1st | 2nd | 3rd |
| Cleveland Bays, (registered)..... | \$100 | | |
| Clydesdales..... | 50 | \$35 | \$20 |
| Shire Horses..... | 75 | | |
| Agricultural Horses..... | 20 | 10 | |
| General Purpose..... | 20 | 10 | |
| Roaster..... | 20 | 10 | |

Prize List containing rules and conditions furnished on application to

A. A. MacLENNAN,
Portage la Prairie, Feb. 22, 1890. Secretary.

Percheron Stallions.

I have been authorized by the Welland County Horse Breeders' Association.

-PUBLIC AUCTION-

AT THE **Manson House, Welland, Ont., on Wed., April 16th, AT 1 P.M.**

Both of their imported Percheron Stallions, **ENDYMION (Mark)** and **LE COMPTE (Grey)**. These horses are registered and first class in every respect. Sale without reserve. Terms to suit.

C. R. HELLEMS, Auctioneer.

CLEVELAND BAY STALLIONS FOR SALE.

BRED FROM PRIZE-WINNING STOCK. For further particulars apply to **W. G. BROWN, Meadowdale, Ont.** Farm is one-quarter of a mile from Meadowdale Station on C.P.R.

HORSES FOR SALE.

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. Also a few Canadian-bred Colts and Fillies on hand.

ORRANCE & BEATTIE, Summerhill Farm, 493 Markham P.O., Ont.

IMPORTED :- CLEVELAND :- BAY :- STALLION FOR SALE.

No. 459. All right in every particular. For particulars address **R ROW, AVON.**

BALLACHLY, Brantford, Breeder of Percherons, Shires, Horns, Shropshires and Berkshires. Stock for Sale.

PAIR CANADIAN BRED

Clydesdale Mares For Sale.

Six and seven years old, well matched, both bays, good to work and kind; weigh about 1400lbs. each. One is in foal to a registered Clyde Stallion that won second prize at Buffalo last fall. Apply to

A. YOUNG,
Princeton, Ont.

FOR SALE.

PURE BRED

IMPORTED CLYDESDALE STALLION,

BENLEE OF CULLEN (5537), Vol. X., foaled 26th June, 1886; Color, bay; white stripe on face; hind feet white above pasterns. Sire, Leopold (3766), Vol. VII.; Dam, Bet (1638), Vol. V.; Sire of Dam, Young Lofly (991), Vol. I. Also

ONE IMPORTED CLYDESDALE MARE,

GEORDIE Vol. XII., foaled June 1887; Color, dark brown, two white legs and white face; Sire, Sir Archibald Buchanan, (540), Vol. XI.; Dam, Jess of Smithston (7953), Vol. XI.; Sire of dam, Campsie (119), Vol. I.

Horses can be seen at stable, **EAST STREET, GALT.** Full particulars by post. Address,

JAS. McCOMBIE, Galt, P.O., Ont.

FOR SALE.

CLYDESDALE STALLION,
Bred from imported stock, 3 years old in May, good animal.

ALSO 4 SHORTHORN BULLS,
Ages ranging from 7 months to 3 years.

Or will exchange for good Clydesdale Brood Mares or Fillies.

John Idington,
STRATFORD, ONT.

English Shire Stallions CHEAP

WE have a few very nice colts left rising two, three, and four years old. We want to sell and as we have facilities for buying in England that cannot be surpassed, we are able to offer stallions and fillies at exceptionally low figures to parties buying before Spring.

We have First and Second prize winners at Buffalo, Toronto, and Hamilton in our stable.

ORMSBY & CHAPMAN,
Springfield-on-the-Credit, Ont.

STATIONS—Streetsville on the C.P.R.
Port Credit on the G.T.R.

BROOKSIDE FARM,



New Glasgow, Pictou Co., N.S.
Standard-Bred Trotters,
AMERICAN
CATTLE-CLUB JERSEYS.

Stock Notes.—Continued.

good and strong. Who will say Cotswolds are not ahead in the matter of fecundity—26 lambs from 8 ewes, is the record made at Willow Lodge so far. 7 triplets, and a litter of 5 lambs from one ewe—who can beat this?

ROBERT MARSH, TORRIDGE FARM, RICHMOND HILL, ONT., writes: "The Southdown sheep at Torridge Farm are coming through the winter in first class condition. The crop of this year's lambs commenced to make their appearance on the 4th of February, and now we have 30 lambs from 18 ewes, and as fine lambs as any one could wish to see. During the last year we exhibited at nine different fairs, and took 104 prizes. Our sales were very satisfactory, having sold 23 rams and 28 ewes. We have also had a good demand for our Berkshire pigs."

J. CAMPBELL, JR., Fairview Farm, Woodville, Ont., on the 22nd March, writes: "I am well pleased with the appearance of my Shrop lambs now dropping. An unusually large percentage are single, but I consider that no great loss, as nearly all my breeding flock are imported shearlings. Dams and lambs can be kept growing much easier. Stock of all kinds are wintering well, and prospects are encouraging. There is more activity in fat cattle trade, than was seen for some years past. Mutton sheep are also in good demand, so feeders of good stock will realize good prices for the cheap coarse grains, hay, roots, etc., fed this winter. Owners of well-bred and well-fed stock need not complain of hard times this dull year."

MR. ANDREW EASTON, of Bright, Ont., writes: My sheep, both home-bred and imported, are doing remarkably well this winter. My sales last season were to Parker, Ohio, 16 ewes and ewe lamb, and one aged ram; one ram lamb to George Aitken, South Dumfries; one ram lamb to Robt. Easton, Ayr; and one ram lamb to Bartlett, Princeton. I commenced my flock of Shropshires in 1882 with four ewes and one ram, which I imported, but unfortunately at the commencement they bred entirely to ram lambs, and I had occasionally to buy a ewe or two to keep the flock increasing. I have now got a nice little flock of 35 sheep, all pure-bred, and as I believe more in advertising than this show business, as soon as I have any stock to dispose of I shall be in your advertising columns again.

JOHN HARRISON, Owen Sound, Ont., writes: "The farmers in this section stand greatly in need of the information your JOURNAL contains, and I believe our Government would do well to make provision to send such a paper to every farmer in the province, even if they had to withdraw their aid from township shows, and some other institutions that might be named, which have passed their day of usefulness. I am glad to be able to inform you that my Shropshire sheep are doing very well. We have 39 lambs alive and well from 25 ewes. I will now relate a remarkable occurrence with one of my ewes, which had a fine lamb on the 12th of February, and on the 2nd of March she brought forth two more fine healthy lambs. Perhaps a great many will not credit this statement, but it is true all the same."

MESSRS. BROWN BROS., breeders of Shropshire sheep and Berkshire swine, have placed an advertisement with us of Berks and Shrops, which begins in this month's issue and which you would do well to notice. The following are a few sales which Messrs. Brown Bros. report having made lately: Two shearing rams to Matthewson Bros., Dak. U.S.; one ram to D. Tully, Fowler's Corners, Ont.; one ram to George Young, Peterboro, Ont.; one ram and two ewes to S. Matchett, Peterboro, Ont.; two ewes to A. Humphries, Keene; one ram to James Laing, Fraserville; one ram and five ewes to T. Graham, Cavanville; three ewes to R. Moncrief, Springville; one boar to J. Clarke, Moonson, N.W.T.; one sow to Edward Sutton, Ida, Ont.; one boar to M. Sanderson, Selwyn, Ont.; one boar to S. Coxworth, Claremont, G.T. Their pigs took all the firsts and diplomas at Peterboro Central, against strong competition, and their sheep, the pen prize and diploma. Messrs. Brown Bros. also advise us that their stock is looking well, and the young that have appeared are promising well.

Swine.

MR. F. J. RAMSEY, of Dunnville, Ont., one of our most persistent advertisers, offers for sale Suffolk and Berkshire spring pigs at reasonable prices.

C. M. JARVIS, ONTARIO LODGE FARM, CLARKSONS, ONT., writes: "My improved Yorkshires are in fine order. They are in very great demand, having made 24 sales which have given good satisfaction just recently. Advertising in THE LIVE STOCK JOURNAL is what does it."

E. D. GEORGE, of Putnam, Ont., writes: "Arrived last week a choice pair of sows bred by C. H. Gregg, Akron, Ohio, one of which won sweepstakes at Buffalo International. For early maturity, quiet disposition, and rapid growth to a marketable weight, the Improved Chester White leads."

S. COXWORTH, of Claremont, Ont., who has been successfully breeding Berkshires for some years, places a permanent advertisement with us to which we would direct attention. It will be noticed that Mr. Coxworth has changed his address from Whitevale to Claremont, where he now resides.

MR. C. T. GARBUTT, BREEDER OF COTSWOLDS AND BERKSHIRES, CLAREMONT, ONT., writes: "There is a continued urgent demand for large Berkshires, also Cotswold sheep. I have made numerous sales during the last two months, and amongst our customers we number such important breeders as T. L. Salter, Greenbank; J. C. Snell, Edmonton; George Warner, Strasberg; John P. Shiers, Wilfrid; J. C. Watson, Epsom; A. Martin, Jordan Station."

H. GEORGE & SONS, of Crampton, Ont., write us that since our last issue their imported sow, Daisy, has farrowed eleven fine long pigs; also their young sow, Jean, has ten nice pigs. This sow is sired by their noted stock boar, Royal 2851 imported. They will have several more sows to farrow within the next two weeks. Messrs. George & Son also say, "We find the sale of good long Chester boars on the increase, as they make a good

Stock Notes.—Continued.

cross on common Suffolk or Berkshire sows. We have made several good sales this month, but will give them later."

MESSRS. GREEN BROS. & BERTHOUD, of Innerkip and Burford, write us that owing to the inconvenience occasioned by distance apart, and had postal arrangements, they have, by mutual consent, dissolved the partnership which existed between them. Both, however, still continue breeding Improved Large Yorkshires, and intend increasing the number of their breeding stock. Since last issue they have made the following sales: a boar and sow to W. A. Fritch, Richwood, Ont.; a boar to H. Quetton St. George, Oakridges, Ont.; and a boar to Sampson King, Stratford, Ont.

SMITH EVANS, of Gourock, Ont., writes: "I have recently made the following sales of Berkshire pigs: to Mr. Wm. Dickinson, Midland, 1 boar; to Wm. Moran, Fuslinch, 1 boar; to Isaac Cober, Hespeler, 1 boar; to Mr. Huntsperger, Hespeler, 1 boar; to James J. Beaumont, Alport, Muskoka, 3 sows. My Oxforders are doing remarkably well this winter; my first lambs were dropped on 15th March, they are coming smart and strong. Mr. O. P. Stamer, of Nova Scotia, says that there is nothing like the Oxford wool. This is the second year that I have shipped wool to him."

R. DELFRIDGE, Winchelsea, Ont., writes: "My card in the breeders' directory of THE LIVE STOCK JOURNAL has brought a great many inquiries for Berkshires. I have made the following sales of late: 1 boar to John Hooper, Blanshard; 1 boar to James Johnston, Bayfield; 1 boar to F. H. Scholes, Constance; 1 boar to M. Morlock, Crediton; 1 sow to J. Andrew, Chivinal, Man.; 1 sow to D. R. Lennan, Lancaster; 1 boar to H. Edwards, Belgrave; and 1 boar and 4 sows to Geo. Green, Fairview. My pigs are all bred from Geo. Green's stock, except the imported ones. I have purchased Geo. Green's imported Charming Charley. The boar I have, that was imported by J. Snell & Sons, has done remarkably well, he is a promising lad. My stock are all doing nicely at present."

Poultry.

W. B. COCKBURN, GREENHOUSE FARM, ABERFOYLE, writes: "Since last writing, I have sold one black leghorn cockerel and 3 pullets to John G. Ford, Milton; 1 barred plymouth rock hen to Mrs. Hayes, Spring Valley; pair of barred plymouth rock pullets to Jno. Morrison, Newry; 2 black leghorn cockerels to H. Everley, Corwin. Having sold my entire stock of black leghorns and black javas, I can now give my other varieties more room and attention, which, I am glad to say, are better than ever I had to breed from. I have just purchased a fine light brahma cock, pronounced by J. Y. Bicknell, Buffalo, to be the best light brahma male bird in Canada."

A. G. H. LUXTON, OF HAMILTON, ONT., reports that he has been successful in winning the following prizes on Fancy Poultry at the Grimsby show, held February 25th, 26th, 27th and 28th: Light Brahmas, 1st on cockerel, 2nd on cock; Dark Brahmas, 1st and 2nd on cock, 1st and 2nd on hen, 1st on pullet, 2nd and 2nd on cockerel; Buff Cochins, 1st on cock, 1st on hen, 2nd on cockerel, 2nd on pullet; Partridge Cochins, 1st and 2nd on cock, 1st and 2nd on hen, 1st and 2nd on pullet; Langshans, 1st on cock, 1st on hen, 1st on cockerel, 1st and 2nd on pullet; Barred Plymouth Rocks, 1st on cock, 2nd on cockerel, 1st and 2nd on hen, 1st on pullet; White Plymouth Rocks, 3rd on cockerel, Silver Wyandotts, 1st on cockerel, 1st and 2nd on hen; Leghorns, 1st on single comb brown hen, 1st on rose comb white hen; Black Breasted Red Games, 1st on cock, 1st and 2nd on hen, 1st and 2nd on pullet, 1st on pile pullet, 2nd on pit game cock, 2nd on pit game cockerel; Black Hamburgs, 1st and 2nd on cockerel, 1st and 2nd on hen, 2nd on pullet; Houdans, 1st on hen, 2nd on cock, 2nd on cockerel, 2nd on pullet; Golden Polands Bearded, 1st on cock, 1st on cockerel, 1st and 2nd on hen, 1st and 2nd on pullet; White Polands Bearded, 1st on cock, 1st and 2nd on hen, 1st and 2nd on pullet; Black Javas, 1st and 2nd on cock, 1st and 2nd on hen, 1st and 2nd on pullet; Black Breasted Red Game Bantams, 1st and 2nd on cockerel, 1st and 2nd on pullet, 1st on hen; Golden Duckwind, 1st and 2nd on cock; Golden Sebright, 1st and 2nd on cockerel; Silver Sebright, 1st and 2nd on hen, 1st on pullet; Pile Bantams (Game), 1st on pullet; Ducks, Cayugas, 1st and 2nd on drake, 1st and 2nd on duck.

Grand's Repository



TORONTO.

Great Annual Spring Sale

400 HORSES

Including heavy draught and general purpose mares and gelding stallions, Saddle and harness horses,

APRIL 15, 16, 17, 18 and 19.

Entry book still open. Write for Catalogue.

W. D. GRAND.

SALES BY AUCTION, ETC.

IMPORTANT AUCTION SALE
—OF THE—
Lakehurst Jersey Herd, Oakville, Ont.,

THURSDAY, APRIL 10th, 1890,

WILL BE SOLD BY PUBLIC AUCTION.

The entire herd (22 head) of American Jersey Cattle Club Jerseys,

Comprising **YOUNG JERSEY BULLS, COWS and Heifers** of the St. Lambert and other noted families, including several prize winners at Toronto Industrial and great Central Fair, Hamilton, 1889. Also two pedigree Berkshires sows in farrow. Terms six months credit on approved promissory notes. Liberal discount for cash. Oakville station on G. T. R. midway between Toronto and Hamilton. Trains arrive at Oakville from Hamilton 7:50 a.m., 9:48 a.m. and 1:03 p.m.; from Toronto 7:50 a.m. and 1:03 p.m. Conveyances will meet all trains that day. Sale to commence immediately after the arrival of the 1:03 p.m. trains from the East and West which cross at Oakville. Catalogues now ready, can be had on application to

T. E. BRAMELD, Oakville, Ont.

GEORGE ANDREWS, Auctioneer.



T. W. PALMER'S
LOG CABIN STOCK FARM!

150 PERCHERONS.
100 JERSEYS.

To be Disposed of this Season.

For catalogues and particulars address

MERRILL BLOCK, Detroit, Mich.



PERCHERON
HORSES
AT BARGAINS!

We mean exactly what we say. We have 148 Head Imported and Pure Bred Stallions and Mares, 6 French Coach Stallions, 26 Head of Grade Stallions and Mares, 30 Rhodand and Kameer Ponies, and 27 Head Registered Friesian Cattle, must be disposed of during this season, owing to changes in our business. If you think of buying write us (describing what you want) for our Catalogue and Prices, and we will convince you that it will pay you well to buy of us.

Beland Home Stock Farm.

SAVAGE & FARNUM, Detroit, Mich.

QUEENS and BEES

(AM prepared to furnish colonies of Bees in the Spring at Market Prices.)

Italian in Langstroth Hives, good straight Combs, \$8.00 each.

| | | | | | |
|---------|----------------|--------|--------|--------|--------|
| | | 1 | 2 | 3 | 6 |
| Queens | Virgin, each.. | 5 c. | 40c. | 37½c. | 35c. |
| Italian | Untested..... | \$1.00 | 95c. | 90c. | 85c. |
| | Tested..... | 3.00 | \$2.00 | \$1.25 | \$1.90 |
| | Selected..... | 3.00 | 3.00 | 3.00 | 3.00 |

Orders filled in rotation.

Address,

R. F. HOLTERMANN,
Romney, Ont., Canada.

Get this out and keep until you want Queens.

HAY & PATON.
KINNOUL PARK STOCK FARM,
NEW LOWELL, ONT.



BREEDERS AND IMPORTERS OF CHOICE

ABERDEEN-ANGUS POLLS.

We have reserved from the sale of our champion herd of Polls, some 17 excellent females, with that splendidly-bred Ruth bull Runnymede and, at their head, and have started afresh to breed the comely doddie with individual merit (as before) the guiding star of our efforts. We are at present sold out, with the exception of two or three yearling bulls.

We have also a flock of over a hundred head of fine Shropshire sheep, the ram lamb and shearings of which we have now for sale at reasonable prices. Send postal card for list and terms.

JAS. DRUMMOND,

PETITE COTE, MONTREAL.

Importer and breeder of

PURE-BR

AYRSHIRE



CATTLE

Of Large Size, and from Choice Milking Strains.

The herd numbers sixty-five head, and for three years in succession has won Provincial or Dominion Prize as best milker. The imported bull, ROY ROY (3971), at head of herd.

Young Stock on hand at all times for sale

GUERNSEY BULL CALVES

-FROM-

THE OLD BRICK GUERNSEY HERD

A SPLENDID CHANCE FOR INVESTMENT.

A NUMBER of these bull calves will be sold in one lot at extremely low price if taken this month. All of the finest individually and in pedigree (see advt. of herd in journal.) Will be placed on board the car at Roslyn, registered and transferred with feed, etc., for journey.

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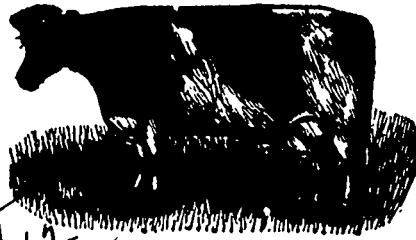
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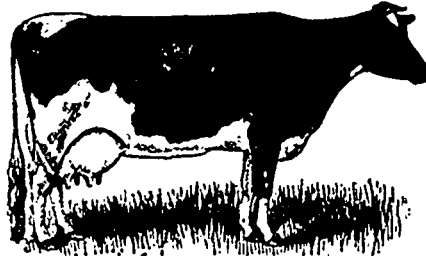
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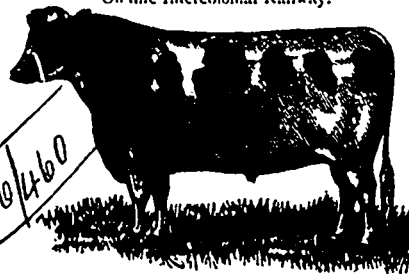
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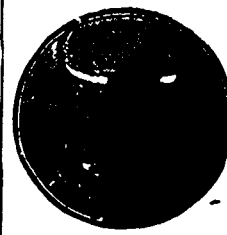
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Including 12 bulls of various ages, incorporating the best blood of the Sittyon, Kinellar, and Killerby Herds. Also Horses and Pigs.

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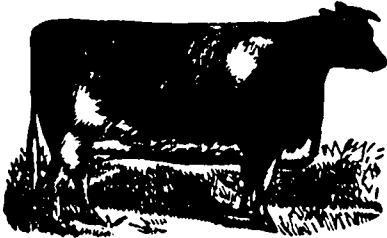
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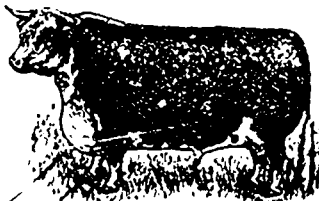
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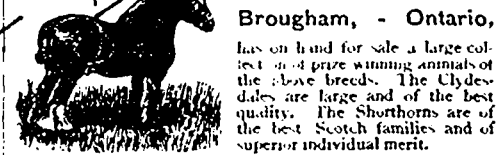
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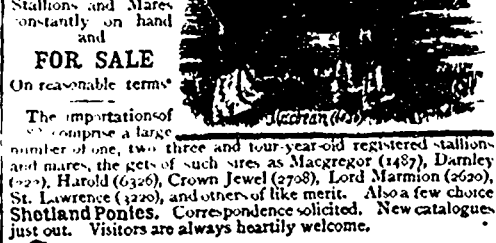
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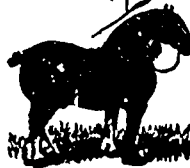
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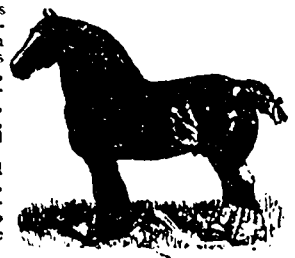
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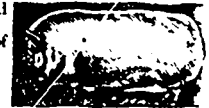
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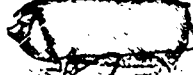
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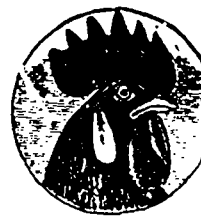
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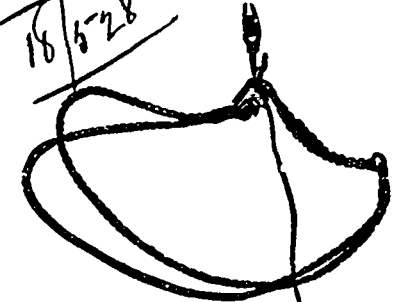
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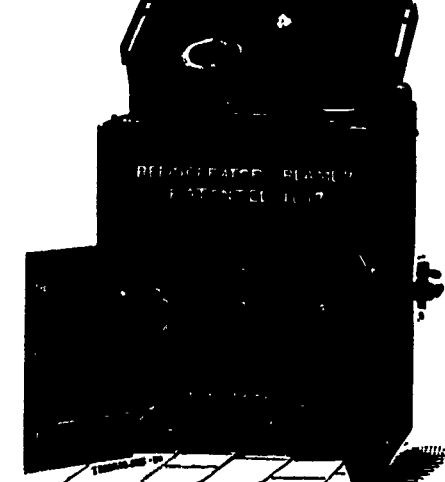
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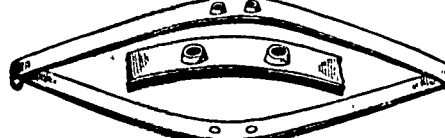
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