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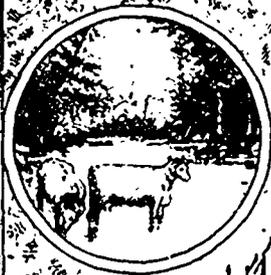
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& FARM JOURNAL

Devoted Mainly to the Interests
of the Stock Raisers of the Dominion,
But Overlooking no Department
Of the Farm.



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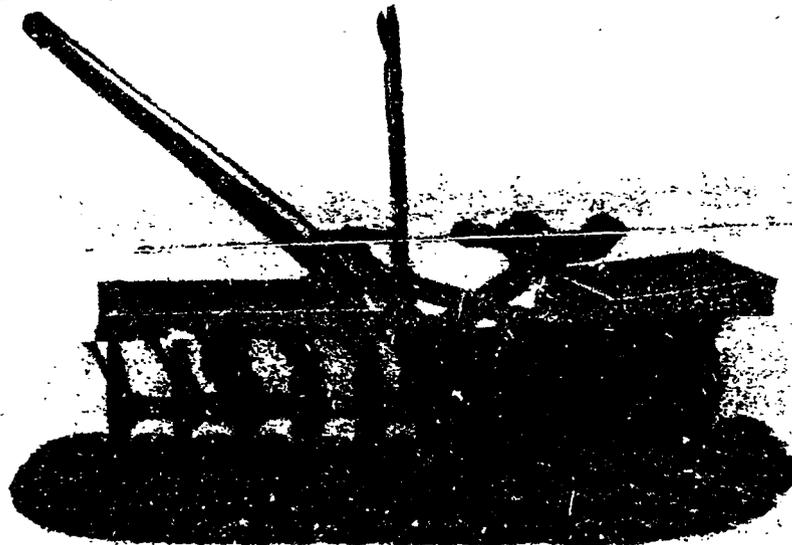
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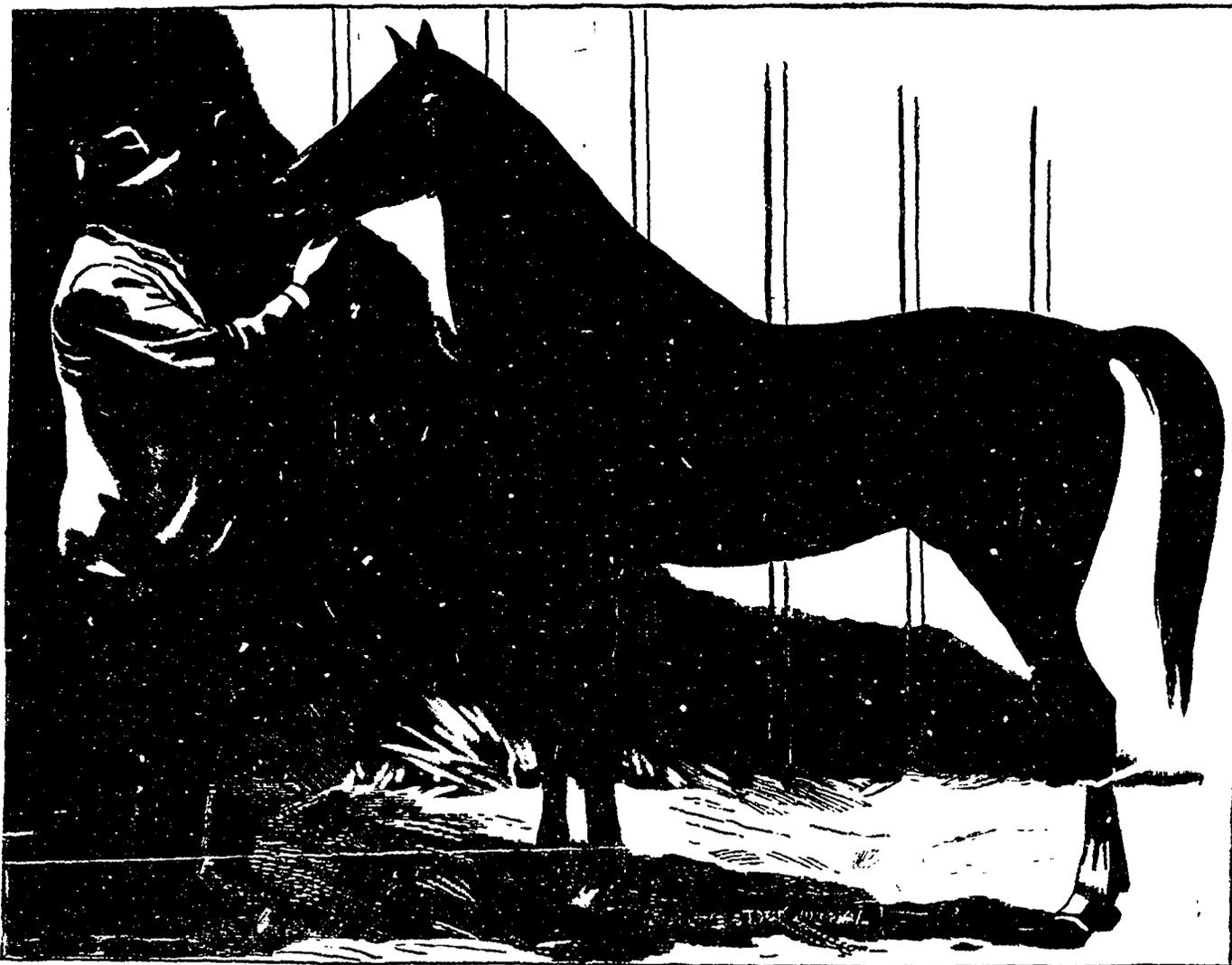
THE CANADIAN LIVE STOCK AND FARM JOURNAL

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

Vol. VI.]

TORONTO, DECEMBER, 1889.

[No. 74



A HIGH BRED ARABIAN.

Owned by Mr. William McKay, Morewood, Ont.

Our Illustration.

To preserve and transmit to paper the features that are characteristic of such a stallion as that which brightens our first page requires the trained eye and skilled hand of the true artist; for if these are not made clear the type, which is a special peculiarity of the blue blooded Arab is lost, or mellows into one representative of inferior breeding. But these traits have been truly caught by our draughtsman, so that we treat our readers this month to the rare pleasure of viewing an engraving, true to life, of a high-bred Arabian.

Cyprus, the subject of our sketch, is owned by, and stands in the stables of, Mr. Wm. McKay, of Morewood, Ont. With the aid of the above illustration we shall not have any difficulty in making clear the distinctive features that belong to this high strung, and powerful, though small, stallion. Cyprus stands 14.3 hands high, and he is the most evenly proportioned

that it has been our fortune to review. It is a known fact that it is a very easy matter to single out faults of conformation, but here one is at bay; for, barring those that may arise from hard usage and age, there is a complete absence of weak spots, though few strikingly impress the onlooker as being remarkably strong owing undoubtedly to the smooth symmetry of all parts. With head always on high and brush carried banner-like, he is the embodied ideal of all that a fiery spirit, courage and exultant ambition may impart, and make a stallion majestic in appearance and gay in movement. In every incament of his head, and every other part of his body quality is plainly written. His head possesses that straight front line, fine muzzle, and large elastic nostrils that are so indicative of quality. A neck exquisitely moulded smoothly joins a strong shoulder, and withers built for a saddle. A very noticeable point in his make-up is the projection of his chest and its depth. Coming to his barrel, here the eye lights upon his salient feature for such a well-knit, strongly ribbed, and cylindrical body, topped by

a back and loin of impressing strength, it is rarely that one, with even the most extended experience, has the pleasure of examining. Then the next in order to claim the attention is the extreme levelness of his hind-quarter, and its length from hip to root of tail, a trait which the thoroughbred has inherited in common with many other prime quantities from his Arab progenitor. Taken as a whole Cyprus is a stallion of rare build, and possessed of great energy and vigor.

Mr. McKay became the owner of this stallion through a fortunate circumstance. Mr. A. J. Anson, the *aide de camp* of Governor-General Lansdowne, on account of his return to England was forced to part with his favorite, and he sold him to Mr. McKay in 1880. This stallion was purchased in Arabia in 1878 when a four-year-old by Colonel Anderson of the 2nd Bombay Lancers, who sold him to General Lambton, of England, and the latter gave him as a present to Mr. Anson. Cyprus is of the Anaga strain, which is claimed to be the blue blood of the desert. Writing about this stallion Col. Anderson says, "I have had

some thirty years experience amongst Arab horses, and although I have had some very high-bred ones I never possessed one of higher blood than the one you refer to. If good looks and pure Arab blood should improve the breed of the horse in Canada your Arab stallion should certainly aid in doing so." We had the pleasure of seeing a number of young colts from this Arab, and we think Col. Anderson's words have been more than verified. Some of them that we saw were out of ordinary serviceable roadster mares and others from Exmoor ponies, and they every one possessed those remarkable features so strongly shown in the sire. There is no question but that this stallion will vastly improve the class of horses in the district in which he is standing if but used.

Two other stallions, Bullion, a thoroughbred, and Forrester Boy, a standard-bred trotter, also grace these stables, but elsewhere we notice them. A herd of Jerseys are also kept, containing a number of prime dairy cows, mostly all purely-bred. From the herd of Messrs. Frank & Sons, of The Grange, Ont., Mr. McKay has lately selected a number of pure-bred Suffolk pigs. The farm comprises 360 acres in all, about half of which is cleared and part of the rest woodland, with a good sugar bush of about one thousand trees.

THE

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TORONTO, DECEMBER, 1889.

Our Programme.

On the intelligence and judgment of the farming communities of Canada and elsewhere, we have ever implicitly relied for appreciation of our efforts to place within their reach a publication of sterling merit and true principles; and it is but repeating ourselves to emphasize what is already clear to our readers, for us to say that we have always found our many friends responsive to every improvement and advance that we have made. It has been our policy not to supplicate for leniency of criticism, but to build up a live business periodical, so that every farmer shall feel it is an absolute necessity for it to be on his table. How far we have succeeded in this it is not for us to say, but as we have received every encouragement that could nerve us to greater efforts, we have decided to trust more freely in

the appreciation of our readers, hoping that our more strenuous exertions may quicken and strengthen their co-operation with us in the good work of diffusing abroad in our rural communities the true principles of economic stockraising and farming in all their phases, and thus elevate and ennoble Canadian agriculture as an art and science.

We are pleased to be able to promise our readers, with every assurance of fulfilment, that during the coming winter we shall offer them a mental bill of fare that has never before been equalled in Canadian agricultural journalism. From across the ocean monthly articles shall reach us to enliven our pages from the pens of several universally known live stock writers, notably among whom we may mention Mr. Thomas Dykes, of England, to whose charge we confidently commit the draught horse interest abroad, and Mr. Sanders Spencer, of St. Ives, Eng., who shall regularly favor us with contributions on various matters pertaining to swine husbandry, a department of vital interest at present to our farmers, and one upon which Mr. Sanders is the highest authority known to us.

Our Canadian corps of contributors is composed of the best informed and clearest writers that we could possibly procure. In respect to contributors from our own province we may mention that Prof. Robertson, of Guelph Agricultural College, has started a series of valuable papers on dairy husbandry, that shall acquaint our readers with the best methods and practices of the day, that apply to this growing feature of our agriculture. Mr. D. McCrae, of Guelph, one of the best writers in Canada on live stock in general and draught horses in particular, shall regularly contribute to our pages on various matters vital to live stock interests. In his accustomed good taste and forcible style, "Agricola" shall still continue to favor us monthly with articles treating of various features of the stockraising industry. Articles from the pen of a new contributor, "Blue blood," shall from time to time appear, dealing with swine raising, and we feel sure that after having once read some of his productions, the first of which will appear in our next issue, our readers will be chafing for more. Mr. Richard Gibson, of Delaware, from whose pen has come none but interesting articles, shall regularly enrich our pages with instructive contributions full of Short-horn lore. Our veterinary department shall be as vigorously conducted as ever by Dr. F. C. Grenside, of Guelph. Our Young Stockman's Department has more than met our most sanguine hopes and we have been surprised with the effectiveness of our effort to awaken the dormant talents and interests of our farm boys. This department shall receive our careful attention and best thought. Our Poultry Department, as soon as our present arrangements are completed, shall be enlarged and more attention given to that important feature of farm work. Our Apiary contributor, Mr. R. F. Holterman, shall give that interest careful attention with his usual good judgment; and in respect to our Horticultural Department, we promise that in the future it shall be even more vigorously conducted than it has been in the past.

In the great desire to make our Ontario representatives as strong and as complete as possible, we have not by any means overlooked the interests of our sister provinces.

Our Maritime friends shall be monthly treated to spicy productions from the quick moving pen of "Farmer John." Another correspondent from down by the sea, "M. R. L." is also to continue with us, so that with this strong team we may hopefully repose the pleasure of interesting our Maritime readers by offering something good with each issue. The great interests of the North-West Territories shall be ably

represented by a most efficient correspondent; one that is in a position to speak with authority and justice on all provincial matters. In conclusion we would say that as the principles of this JOURNAL were first founded on rock bottom truths we have never had reason to swerve from its old time course, and it shall constantly be our care to see that the helm verges neither to the left nor right but steers us straightly onward.

Lay the Foundation Now.

The prices obtained for pedigreed animals of the beefing breeds is very moderate now compared with what it was years ago. A large number it seems are inferring from this that low prices for beef will rule in all coming time, and so are giving less attention to the production of meat and meat-producing animals. We regard this as a serious mistake. We rejoice in the increased attention that is being given to dairying and to dairy products, and in the fair prices that are being obtained for these, but we cannot conclude that prices for dairy produce will always be relatively high and meat prices relatively low. Anglo-Saxon speaking peoples are essentially meat-eaters, and will continue to require large quantities of good meat as well as dairy produce in liberal supply. Such being the case it is highly important that increased attention should be given to meat production. There never was a better time for securing good foundation animals upon which to build the herds of the future than the present, as they may be abundantly obtained at moderate prices. The time for laying the foundation of a herd is not nearly so opportune when values have gone up, for then in addition to the enhanced price there is less opportunity for selection owing to the greater frequency of the sales. By consulting our advertising columns it may be readily ascertained where the best that is in the country in the various lines of live stock can be obtained. It requires some courage to invest in a business when values run low, but the history of the past has taught us that such is a safe time for investment.

Improvement of Stock.

In the quotations of the prices of live stock at yards in Chicago during a certain week of last August, we notice that while but \$2.15 to \$3.30 per pounds live weight were paid for Texans, the price paid for good well conditioned grades from the farm ranged from \$4.00 to \$4.50. On a bullock weighing thirteen hundred pounds this would make an average difference of \$28.27½, or in other words while the Texan bullock brought but \$28.92½, the well-bred animal brought \$57.20, or nearly as much again. Assuming that there was neither loss nor gain in the production of the Texan, it by no means follows that there was a gain of \$28.27½ on the well-bred animal, for it would probably be reared under conditions that were more costly; what we wish to emphasize more particularly here is that it would be folly for farmers living on lands that are valuable to try to make a livelihood or any portion of it, by raising a class of animals of so low a grade of quality that they come into the market in competition with animals of the Texan class. It is unfortunate that we have lots of animals of this class on our Ontario farms. This is the more inexcusable because of the plentiful supply of good sires at low rates. These are never likely

to become relatively lower. Let those then who have done but little by way of improving their stock seize the favorable opportunity of purchasing a good sire and thus reap the advantage that is brought within their reach. The efforts of those who have at heart the improvement of the stock of the country should never rest till the last of the scrubs is gone.

Lucerne Clover.

Lucerne or Alfalfa, as it is sometimes called, is one of the most useful forage plants grown in warm climates. It gives very satisfactory results in some parts of Ontario, but in others it does not. In such cases, the reason is no doubt in most instances a lack of adaptability of the soil. The soil best suited to it is a rich sandy loam, with a well drained subsoil. It is usually sown here along with clover, timothy and other grasses. It seldom grows very thickly in such cases, and perhaps one reason is that the other grasses smother it to some extent when young.

In France it is usually sown in drills 15 to 18 inches apart, and hoed, during at least, the first year. In the Southern States the same method of cultivation has been introduced, and with results quite satisfactory. We have not yet heard of any one having cultivated it after this fashion in this country. It is certainly well worthy of a trial. A small plot of Lucerne near the outbuildings would prove of much value in the early part of the season for soiling purposes, before clover is ready for cutting. As it is a plant that will retain its hold upon the soil for several years when once firmly rooted, it would pay well to take some extra trouble to give it a good start at the first. It is usually the amount above the average that brings in the large profit in conducting the operations of the farm.

A Word to the Institutes.

"He who was taught only by himself had a fool for his master." So says the gruff, frank, and pleasingly original Ben Johnson, and certainly, though we may not be willing to accept the sentiment expressed in its fullest sense, yet it must be granted that it contains much to commend itself, and no one will be more willing to acknowledge this than he who has been a sharer in the benefits that flow from the interchange of experience and who has felt the inspiration that cheers his hopes of success from contact with those that are walking in similar paths and have surmounted their ever attendant difficulties. If there is any one sign that portends a brighter and more stable future for our agriculture, it is unquestionably the universal interest and united action that all our farmers are taking in their institutes. This is as it should be, for what can be more conducive to the farmer's individual as well as collective interests than to congregate and listen to essays on subjects vital to their calling and indulge in what has been appropriately termed "Friendly free discussion calling forth from the jewel truth her latent ray."

Though the institutes have passed that stage in which all is experimental yet it may not be amiss to mention a few of the principles and ideas that should ever be before and in the minds of those that have the interests of the institute reposing in their charge. In the laudable endeavor to draw up a programme that will be sure to bring together a large crowd, there is apt to be a tendency shown

to squelch out home talent by the introduction of too much that is foreign. While it is beyond question a good plan to have a couple of speakers from a distance to increase the interest in the proceedings, yet it should, be ever before the officers that it is a very desirable matter for the benefit of the community to enlist in the work the best of the local essayists and speakers. This will not only create a more healthy and pleasant feeling amongst the members, but will also materially advance the educational work of the institute through bringing to the light the abilities of many and awakening slumbering talent.

Again, this same desire, which is without a doubt one to be encouraged, to rally a large gathering to the place of meeting, instigates the compiling of a lengthy programme, and the preparation of papers is intrusted to so many that it is never expected to listen to them all and so an almost needless task is imposed on willing workers, and what is more detrimental to the success of the institute, the instructive discussions that should follow each paper are necessarily smothered. Now, every one is prepared to grant that there are few things more tedious and more sleep-inducing, though they may be learned, than a series of papers unbroken one after the other; and on the other hand, there is nothing that will excite the interest as well as inform the mind more than a vigorously conducted and intelligent discussion. These cascades coming between the otherwise smooth currents give a spice and variety to the proceedings, such as nothing else will and it should be the desire to encourage discussion of the right nature and in the right time. Short practical papers with animated discussions skilfully guided by the chair, are the causes that produce the pleasurable effect of a successful institute meeting.

A feature of the work that should be carefully looked after is to encourage the young men of the neighborhood to take a zealous and fervid interest in the institute and its work. Enlisting these in the corps of workers is one of the most effective means of gaining their attention and securing their continued services. It would be a sad state of affairs indeed, if the older farmers were in need of a spur to urge them to evince a greater interest in the proceedings, but it is a fact that many of the young men capable in every way of rendering valuable aid to the cause are not coming forward as plentifully nor entering into the spirit of the work as heartily as they should. It is the care of the older ones to encourage the young men by example and precept to identify themselves with this work, for if the institute only receives the patronage of the older members of the community, it falls far short of its proper value as an educator. With but few exceptions, the young men will feel proud of the responsibility intrusted them and respond to the honor in a becoming manner if they are but encouraged and helped by the older members.

The work of the institute is noble, having to do as it has with the better part of our natures—widening mental visions by diffusing knowledge, stimulating further advancement by a generous emulation, and encouraging a class that most needs it to indulge in that sweetest pleasure of our being, social intercourse. He who labors to carry out the aims of the institute and helps it to attain its objects, works for a good cause, and everyone connected with the institute should feel this, and then unconsciously perhaps, on their part, will they transmit to others that sustaining enthusiasm that will nourish it into a vigorous life.

Breeds that We Have Not Yet Tried.

Considering the comparative youth of our country we have certainly done well in the progress we have made in the introduction of many of the different breeds of live stock into the Dominion in the years that are past. In no province of equal area can so great a variety of first-class stock be found anywhere on the North American Continent. But the question will sometimes come up in the mind notwithstanding as to whether there is not room for some of the other breeds.

Without a doubt we have now many of the best breeds represented. There are some good ones, however, without a single representative in the Dominion, so far as we are aware. The Sussex cattle, a goodly beefing breed, are, so far as our information goes, entirely unrepresented. They are making their way to the front in the shows of England and America. They have won prizes at the leading fat stock shows of both Great Britain and the United States, which no breed can do without possessing considerable merit. The Welsh cattle, though popular in their native country, and given a full class in the prize lists of leading English shows, have never been landed upon our shores so far as we can learn. Then there is a very handsome class of cattle, the Red Polled, good for the dairy, and both gentle and easily kept, but meagrely represented as yet. This breed has become quite popular in some parts of the United States, where a Society has been formed to look after its interests. The little Kerry cow is quite famous for her many good qualities as a dairy cow in her own island home, but she has not as yet made any impression on Canadians, although we have lots of upland and mountainous pastures that would just suit the hardy little Kerry cow, which produces butter that is finely flavored, and a goodly supply of it in proportion to the food given.

In the line of sheep we have done very well, but here, as in cattle, we are quite unrepresented in a large number of breeds. The Suffolk Sheep Society in Great Britain is looking actively after the interests of the breed, and a full class is given to it in the premium list of the Royal Show. The Kentish or Romney Marsh, with their big bodies, long wool, and good feeding qualities, have not yet reached us, although we have river bottoms that give as good pasturage as the valley of the Thames. The Devon Long-wools figure conspicuously at some English shows, but have never been seen at any of our exhibitions, and the same holds true of the Dartmoor, the Ryeland, the Exmoor, the Wensleydale, and the Limestone breeds, all of which figure as conspicuously in the prize list of the Royal Show as the ancient Southdown or the Cotswold. The Roscommon has but just lately been imported, but not in any numbers. Half-a-dozen Cheviots have reached this country, where we have a place for thousands and tens of thousands of this mountain and valley breed, and the same may be said of the West Highland, which for hardihood and ability to brave the fury of storms are without a rival, unless it be in the Welsh Mountain sheep, who pasture in their native country on equal altitudes with the former. Both classes produce a quality of mutton fit for a king; and the wool of the Welsh Mountain, though but little in quantity, is of a quality that wonderfully resists wear when made up into cloth. The Burdwick sheep has seldom been heard of in Canada, and the same is true of the Lonk, although both are breeds of some prominence in England. Some of those breeds would probably be of little value here, but others of them would likely do as well as in their native haunts,

and indeed they might improve. This cannot be known until it has been tried, and what work we ask can be engaged in by a gentleman of leisure that will afford him more pleasure, or that may be more useful to the country than the introduction by him of some of these breeds?

We have long thought that the Ontario Agricultural College might do good work in this direction. Why should not an institution such as that introduce a dairy breed of cattle that has proved itself useful in the mother land, and demonstrate its value to the people of this country? It might commence with the Red Polls, whose many good qualities are quite unknown to a large majority of the farmers here. This breed figures quite as conspicuously now in the prize list of the great St. Louis Show as does that of the Jersey or the Holstein.

Then other countries produce good stock that have never been tried here. Switzerland is as proud of her two great dairy breeds of cattle as Great Britain is of hers, and France, in her northern provinces, has some dairy cows that are by no means to be despised. Other countries have lots of goats, which would flourish as well on Canadian uplands as on those of their native homes.

It may be objected that no good purpose can be served by the introduction of other breeds, as we have all the good ones that we want, or at least that we have a sufficient variety for all purposes of utility. But how can we be sure that we have the varieties best adapted to the varied wants of the country, until these have been tried?

An Eastern Stud.

Among the many excellent studs that are scattered over many of the districts within the domain of our Dominion, that add greatly to the wholesome pride we feel in respect to the excellence and extent of this feature of our stock raising industry, we may, with just propriety, number the stables of Mr. Wm. McKay, jr., of Morewood, Ont., that shelter a fine collection of light horses, not many in number but high in quality. Besides the spirited high-bred Arab that embellishes our first page, there are at present at this stable a thoroughbred stallion Bullion, and a standard bred trotter Forrester Boy.

Bullion is a thoroughbred of rich lineage, but it is not on the strength of this alone that he hopes to gain public favor. This stallion differs very greatly from the generality of thoroughbreds in that he is an extra strong boned and muscled horse. Strength is every where discernible in his build—his large size, full muscular development, his heavy firm boned framework, and whip cord tendons. He is a chestnut in color, and in form, besides the characteristic of strength that is at once impressed upon the onlooker, he is very symmetrical in all his parts. Though an extra large thoroughbred, he has yet that feature of finish and quality which is the just pride of this breed, and besides that he is filled with that likewise valuable trait of the thoroughbred, indomitable spirit and activity. His finely modelled head is carried gaily on a strong full neck, that joins distinctly a strong shoulder more upright perhaps than one would care to see in a driver. His body is snugly ribbed, and especially is his loin strong. Muscles hard and knotty, are on his fore arm, and fill up his hindquarter to plumpness. His legs are clean, with good joints, but an accident has marred the appearance of a hinder one. This horse should throw an excellent class of sturdy and rangy drivers, that would not perhaps be noted for their speed but for great staying qualities, long service, and not without pretensions to beauty.

This stallion was bred by A. K. Richards, of Kentucky, U. S. A., and was imported by Mr. McKay this year. The following schedule of his breeding speaks for itself:

Bullion	War Dance	Lexington	Boston
		Reel	Alice Canaal
	Gold Ring	Ringola	Imp. Glencol
		Ann Percy	Imp. Gallopade

This forces the conclusion that Bullion is well bred, for here we see that Bullion is a near relative of War Dance, Lexington, and Boston through his sire, and almost as richly bred through his dam. There is not a vestige of doubt but that Bullion will do good work in the district in which he is standing for mares, and throw a class of colts too rare in this country.

He who is a fervid believer in first impressions would become attached to the opinion that Forrester Boy is not worthy of the praises sounded by his patronizers, for it is only after a close scrutiny of his structural qualities and a thorough inspection of his ancestral connections that such erroneous conclusions gradually fade away. In form he is not a tall horse but is lithe looking, with rare muscular development working on an evenly proportioned frame of firm flat bone. He is a pleasing color, being a dark brown, known to lovers of the gay Morgan as a "Morgan brown," with black points, and this with the bloom on his coat further augments the smoothness of his parts. To go into particulars—one of the first features to catch the eye of the critic is the beautiful head that he possesses, it being distinctly lined, and there is an intelligent look about his face and expressive eye (which may be termed the window of the mind) that augurs well for a disposition that is gentle, and a mind that is intelligent. A clean defined throat-latch and a thin rangy neck, are in keeping with his short back, long underline, and well knit barrel. Forrester Boy has excellent legs, and the bunch of hard muscle that is gathered on his fore arm in conjunction with his strong loin accounts largely for his speed propelling power. His step is sprightly and elastic, and when in rapid motion he travels smoothly, and needs no toe weights or other aids to balance his stride. Above all he keeps his head, and may be relied upon in the most exciting contest. His trot is natural, free, square, and taking to the eye, and has carried him over the ground at a 2.44 clip, which is his lowest mark.

It is only after we have looked carefully into the breeding of Forrester Boy, following the pedigree in its many branches and sub-branches back through a number of generations, that we may pronounce a just opinion on him. His sire was Forrest Golddust, by Golddust (Dorsey's) (150), record 2.43, the progenitor of the Golddust family. Golddust 150 is the sire also of Lucille Golddust 2.16½, (dam of Lucille's Baby 2.20½), Indicator 2.23¼, and Fleety Golddust 2.25. Rosalind Wilkes, that has a record of 2.14½, one of the fastest of the famous Wilkes family, is out of a grand-daughter of Golddust. From this it will be seen that Forrester Boy's grand sire was a trotting stallion and a getter of trotters, and this is more shown if we trace his influence still further through the many dams of noted sires that he got. Golddust 150 was sired by Vermont Morgan, the sire also of Driver, the sire in turn of the well-known pacer Mattie Hunter 2.12¼, a mare of great staying power, as shown by the fact that she paced six heats, the first in 2.12¼, and the last on the same day in 2.15¼. Vermont Morgan

was by Bernard Morgan, and he by Gifford Morgan, so on to the far famed Justin Morgan. The dam of Forrest Golddust, the sire of Forrester Boy, was got by the noted Alexander's Edwin Forrest 49, that in 1834 had the best record for a number of years with a mark of 2.31½; Alexander's Edwin Forrest was also sire of Billy Hoskins 2.26¼, Champagne 2.30, and of the dams of So So 2.17¼, Tony Newell 2.19½, Mambrino Dudley 2.19¼, London 2.20½, and others. Through his grandsire Forrester Boy obtains much of his Morgan blood and some Arabian through imported Zilcaadi, and by way of the dam of his grandsire he traces to the thoroughbred Sir Archy, and the world-renowned imported Messenger.

Darcus, the dam of Forrester Boy, has flowing in her veins a very large percentage of Morgan blood, tinged with a little of that of the thoroughbred. She was sired by Green Mountain Black Hawk, by Hill's Black Hawk. The latter was the sire also of Ethan Allen 43, record 2.25½ (2.15 with running mate), Lancet 2.27½, and Bell of Saratoga 2.29. Ethan Allen, a trotter of great stamina, sired Billy Bar 2.23¼, and six others with records of 2.30 and better. Sherman Morgan, considered the best son of Justin Morgan, the founder of the Morgan family, was the sire of Hill's Black Hawk. The dam of Green Mountain Black Hawk was also Sherman Morgan, he by Justin Morgan, and yet again the grand dam of Green Mountain Black Hawk was sired by Sherman Morgan, by Justin Morgan. From this it will be seen that the sire of the dam of Forrester Boy, was a very closely in-bred Morgan, and a near descendant of the great Justin Morgan. Through Princess, the dam of Darcus, Forrester Boy inherits chiefly thoroughbred blood, tracing to Sir Archy, imported Diomed, and American Eclipse.

We have followed out this pedigree thus closely to make clear the large preponderance of Morgan blood that flows in the veins of this stallion. With the death of Daniel Lambert in June last passed away, at the ripe age of thirty-one years, the last direct descendant of Sherman Morgan, and with him the chief representative of the Morgan family. The Morgan blood is distributed into many channels, and is a prominent part in the pedigrees of many of the best performers on the turf to-day. There are few stallions living of the blood of this trappy, spirited, and long wearing strain of our trotting horses that contain as much Morgan blood as Forrester Boy. The Morgan horses have long been noted for their undying spirit and wonderful bottom and staying powers, and these features that made them invaluable as drivers has made them equally precious for crossing on those more sluggish in disposition, and in these cases they never failed to vivify and enliven the blood of their progeny.

Swine Rearing.

Swine rearing and swine feeding are coming somewhat prominently to the front at the present time. Our American neighbors are doing a great deal of experimenting in this line, some of which is well done, and some again is to but little purpose. The subject to them will always be one of vital importance, owing to the vast amount of corn which they grow, which is better adapted to swine-rearing than to any other single purpose.

We grant that the adaptability of their country to the production of corn gives them a marked advantage in pork-production, but in more than one respect we have an advantage over them. We grow a greater variety of foods on which to feed swine, and therefore in all time will be able to grow a better quality of

pork, although we may never be able to grow it so cheaply.

This disadvantage, however, is likely to be equalized by the better price which our pork will bring. We feel that we are safe in stating that one of our leading pork-dealers in Toronto has stated that good Canadian fed pork is worth to him a cent a pound more than the American-fed. This represents quite a difference, and will allow for feeding food from 15 to 20 per cent. dearer.

We can readily believe that there will be as much difference as what we have stated in the relative values of pork fed on corn and on a mixed diet of a suitable nature. Food not only influences the taste of the meat but also the manner in which it is put on. When therefore corn, which is essentially a carbonaceous food, is fed alone, the fat and lean are not well mixed, nor has the meat that tender relish which characterizes meat nicely intermixed, and produced from a mixed diet that is largely nitrogenous in its nature.

Ours then is essentially a land for the production of good pork. We can grow peas, which are good fat formers, oats rich in albuminoids, roots in abundance, and as long as our country is noted for wheat production we will have large quantities of wheat middlings. With such food factors along with any amount of clover, we can always grow a fine quality of pork.

The style of hog wanted now is one long in body, that it may be able to give a large amount of side meat, that will make good use of the food given to it, that will mature early, and not given to lay on fat in masses; for habit in this particular determines the character of the meat, though not to the same extent as food.

The Improved Yorkshire has been frequently mentioned as very suitable for this purpose, and we earnestly hope that the expectations regarding them may be more than realized. But in all things, and generally at all times, a prudent haste is in order. We would like to know two things regarding them: just what exactly is meant by Improved Yorkshires, and second, has it been determined that this breed will make a better use of the food fed to it than some other breeds of a different conformation, and now numerous in the country? By the first question we do not mean for a moment to raise the question of purity of breed, but ask it historically, as the works written on live stock do not show this point very clear, owing in part to its comparatively recent origin. There are small, medium, and large Yorkshires, then there is a hundred breed called the Cumberland Yorkshires, and now the Improved Yorkshires. We know it is generally believed that the Improved Yorkshires are the large Yorkshires refined, but what are the facts? Those who have imported them will doubtless know, and we hope they will take an early opportunity to remove the haze that surrounds the knowledge possessed by the people of this country regarding their early history, by giving the same in the columns of the JOURNAL.

It is possible that the Improved Yorkshires may make a better use of the food given them than other breeds; we hope they will, for if they do not, this fact cannot be known too soon. Here again is good work for the Ontario Agricultural College. No better work could be undertaken by this institution. We need scarcely add that we think very favorably of the Improved Yorkshires, but when the tide is coming in bearing high upon its bosom the fortunes of any breed, we do well to find out all we can about its adaptability.

The rations that are best adapted to feeding young pigs of autumn litters may be various. They cannot, of course, get the green clover of summer so helpful

to their growth, but field roots will make up very largely for the lack.

When they are first weaned they should, if possible, get skim milk and wheat middlings, with some peameal, but not very much at first. Where skim milk is not to be had a mixture of two parts wheat middlings, two parts ground oats, and one part ground peas steamed, will give good results; some roots may be added. As the season advances the proportion of peas should increase. This ration is but one of a number that might be named. The nature of the ration will be largely determined by the kinds of food on hand. Those grown on the farm should usually be fed, the skill of the feeder coming out in a proper blending of the foods.

Many may not have facilities for cooking or steaming the food; there is all the more reason for them to keep the pigs warm. If this is done, and the food properly blended, the results will be satisfactory. The bedding is to be changed frequently; the colder the weather the oftener this is to be done, owing to the dampness which it draws at such times in the form of condensed vapor. In attention to this matter, the feeding of carbonaceous foods and the lack of exercise, are the principal causes of that incipient paralysis which has so often rendered winter-pork making unprofitable. When the pigs may root about a part of the day in the barnyard in fair weather, they seldom suffer from this cause.

It is important in winter as in summer feeding that they are kept pushing well ahead. A stagnation period in winter is even more hurtful than in summer, as winter feeding is always more expensive. The proper feeding of October litters will bring out nice young pigs of 150 to 175 pounds, for the brisk March and April markets.

The English Rubies.

A SKETCH OF THE HISTORY AND QUALITIES OF DEVON CATTLE.

Whatever honor a breed may claim for being so long, long established that their history carries them back to the earliest days and shrouds their origin in mystery, this the Devon may justly command. Our well-known and acknowledged authority, Youatt, considers the Devon one of the best existing representatives of the original British cattle, and in doing this he testifies to the fact that through many decades they have been bred without an infusion of foreign blood, which in itself would account mainly for their strong prepotency and stability of type. Dickson writes in 1822 that "the red cattle of North Devon and Somerset may be considered as one of our original breeds, and one which has possessed most of its primitive form." The antiquity of this breed is one of the many features they possess that command our respect and excite our interest, and deeming that their history and qualities would be of some interest to our readers, as well as to our correspondent who asks for information regarding them on another page, we present this article.

There is abundant testimony for believing that the Devon has been kept pure in blood and fixed in type by careful breeders for more than a thousand years. It is not infrequent to find even now in the mother country that, on some farms in the districts in which they flourish best, herds have descended from father to son, and have been wisely bred and prudently managed for over 200 years. Their stronghold always has been the county of Devon, and part of Somerset, Cornwall, Dorset, and Hants. There are said to be types—that of the North Devon and the Somerset Devon, but

these are now so nearly alike, and are becoming more and more blended each year, that they may practically be considered as one. Special attention may be said to have been given to this breed since 1827, but it was not until 1851 that a Devon herd-book was established by the late Col. T. Davy, who published a series of eight volumes, containing the pedigrees of 1671 bulls and 3739 cows and heifers. In 1884 the Devon Cattle Breeders' Society was established, and the herd-book passed into its hands. The American Devon herd-book was established in 1880, necessitated on account of the rapid spread of Devons in America.

The Devons possess many distinctive attributes, and to fully understand these it is necessary to know at least something of their habits. The country of North Devonshire is most mountainous, moorish, and hilly, and supports an herbage far from luxuriant in growth. A fact also to be noted is that the Devon characteristics were fixed long before the questions of improved grasses and pasture lands had occupied the attention of the English agriculturist. To these two facts the Devons of to-day are debtors for their great activity, their strong muscular development, their vigorous constitution, the inherent prepotency on the part of the bulls, and the remarkable fecundity of the cows. As an indication of the latter, it is only necessary to glance through their herd-book, when it will be found that it is not unusual for cows 19 or 20 years old to be still breeding, though they may already have fifteen or sixteen calves to their credit. The impressiveness of the bulls is noticeable at once in their grades, and their well-developed muscles and other like qualities, indicative of robust constitutions, at once catch the eye as soon as it is turned on a true specimen of this useful breed. The activity and docility of the Devons are features that stood well by them in the days of early pioneering, for these qualities, which they possess to a great degree, make them grades invaluable as oxen. The writer remembers well taking a spry four-year-old bull of this breed out for exercise with a rope snapped into the nose-ring (a seeming indiscretion permitted of by their kindness of disposition), and impression is so vivid that leads us to say forcibly that the Devons are a breed of rare activity and wonderful powers of draught. In color the Devon is a solid, deep red, though, if we may judge from historical data, they were a few decades back somewhat lighter in color. A patch of white on any part of the body, omitting the udder, is a sign of impurity of blood. In form, though the typical Devon may be said to appear very small, yet, in common with the best type of the "doddie," they possess the feature of rotundity. Their barrels are round, instead of filling an apparent parallelogram as the Shorthorn does, and less successfully, the Hereford. Bulls will be frequently found to girth from 7 ft. to 7 ft. 8 in.; and the running of the tape around some of those thought small would surprise many a critic. They are comparatively short, but are thick and compact, close to the ground, and very cylindrical. The head is ornamented with a pair of yellow, waxy horns, rather long to suit most ideas, and with a couple of clear, prominent eyes, usually surrounded with a yellowish ring. The neck is short and full, the shoulder upright, and the chest prominent and wide. The body is snug, compact, and round, while the loin and quarter is capable of carrying a wealth of flesh. The legs are short and the bones fine. The skin is covered with that mossy and fine curly hair that causes the eyes of the Hereford admirer to glisten, and there is present that mellowness of touch that pronounces them to be just what they are, rapid fatteners; while its bright orange tinge, wherever it may be seen, around the eye or in the ear, is equally a surety for their butter-giving qualities. They are capital pas-

ture rangers, and are under best conditions when on rough hillsides, where other breeds, with the exception of the Highland, Ayrshire, or Galloway, would have a hard struggle for mere existence. The high quality of their flesh is universally known, and this, in conjunction with the lightness of their ossal, accounts for the favor shown them by the London West End butchers, as well as those of New York. Dickson, before referred to, says: "Their high reputation as feeders and the excellence of their beef have been acknowledged for ages, and Mr. Bakewell has paid them the highest compliment that they could possibly receive by declaring to an inquirer that the Devon cattle could not be improved by any cross with other breeds." The Devons, though they lay flesh on rapidly when placed in stall, are not early maturers, as it takes about four years for a steer to mature, and they take at least three years to build a frame necessary to carry a marketable quantity of flesh, and on this account, largely, they have not come in competition with the other recognized beefing breeds in the more fertile and level districts. There are many instances of Devons attaining to heavy weights. Barrister 281 weighed 630 pounds when eight months old, and 2275 when four years old; Felix 55 weighed 1530 at two years, and the Duke of Hampton 50 weighed 2030 when three years old. The bull Robin at four years of age weighed 2056 pounds. Golden Cup 2nd that captured first prize at the Smithfield Show, weighed, when four years old, 1867 pounds. These weights, though the best obtainable, yet show that the Devon will lay flesh on rapidly and that they may be fed to good weights. The average of good Devon steers may be said to be, when three years old, 1200 to 1400 pounds, while those of four years will average from 1500 to 1800 pounds.

As butter-givers the Devons have many friends, both on this and the other side of the ocean, to voice their praises. But facts and cited cases are more convincing than generalities, so we give a few of the records that have been made by cows of this breed. A writer as far back as 1803 mentions the case of a cow, Cherry 5157, that yielded in one day 33 pints of milk, from which was made 2 lbs. 5 ozs. of butter. This strikingly illustrates one of their most marked qualities, namely, the richness of their milk in cream. The flow is limited in quantity, but extra good in quality. Gem 1343 produced 215 pounds of butter in 95 days; and what is worthy of being noted, Beauty 506, when fourteen years old, produced 16 pounds of butter in one week. Baker's Fancy 1222, owned by Mr. Baker, of Wisconsin (who captured with his Devons the premium for best herd of milch cows, quantity and quality considered, at the Minnesota State Fair in 1882), produced 408 pounds in six months on pasture alone, and Banker's Bright Promise 724 made 20 lbs. 5 ozs. in seven days. Dr. J. C. Morns, of Philadelphia, has been making butter from his Devons for some fifteen years, and the yearly average, he states, has varied from 170 to 175 pounds per cow. An other American breeder, Mr. J. A. Fomeroy, with a dairy herd of 24 cows, testifies that his herd has averaged 230 pounds a year. Even allowing that some of these may be special cases, we may nevertheless place the average butter-yield of the Devon dairy cow between 200 to 300 pounds per annum.

The first Devons to reach America were sent out by Lord Leicester as a gift to Robert Paterson of Baltimore in 1817, and since that time they have made marked progress; and wherever they have found the rugged hills and undulating pasture of their native land, they have done well and given entire satisfaction in the United States, and in Canada as well, though here we know of but two herds, those of Mr. Samuel

Harper, of Cobourg, Ont., and Mr. W. J. Rudd, of Eden Mills, Ont.

With the Stockmen.

THE COMMENTS OF A RAMBLER.

(Continued from last issue.)

MR. MACKIE'S HEREFORDS.

The Herefords of Mr. R. J. Mackie, Oshawa, are doing well on their native pastures, and reproduce their kind with an ever-recurring uniformity. You can find but few females in this herd which do not breed with an unflinching regularity. The show cows, Velvet and Albana, hold well their own, and carry to-day an ample load of flesh. The old Victoria cow, which proved a source of revenue to Mr. Mackie equal to a farm, is still in the herd, but she, now in her 16th year, begins to show the effects of wear of time. She is deserving of a box stall of her own, airy and warm, and food of the choicest nature as a recompense for the services of the past.

Calves are still thick in this herd, as they have always been. The old imp. stock bull Cecil 18469 (8385) is still smooth and low and broad and level, and might yet do good service in other herds. The young bull Commodore 32943, by Cassio, is now mostly used. He may not prove so compact as his sire, but is evidently a smooth and good bull. I had almost forgotten a bunch of some five heifers two years old, all but one having calves by their sides by Commodore 32943. The appearance of the young things augurs well for the future of Commodore as a useful sire.

MR. DREW'S HEREFORDS.

Mr. L. G. Drew has Herefords to the number of some twenty five head. Several of these are descended from Heatherbell, bought some years ago at the Experimental Farm, Guelph. The stock bull is Harmony Wilton, out of the dam Heatherbell 4th, and by the sire Conqueror, of the Experimental Farm. He is a good straight bull, long and level, with smooth outline, and a good deal of spirit and style, but is like a good many of the calves of Conqueror, just a little bit slack in the flank.

While looking at the nice smooth coats of the Herefords, with their well finished quarters, I could not but reflect as to the reasons why this easy keeping beefing breed is not extending more rapidly in the country. Three reasons presented themselves to the mind, and we give them. First, the Shorthorns have long been favorites with the farmers, who are slow to introduce changes at any time; second, many of the Hereford herds were introduced at a time when meat values began to decline; and third, the owners of them have not demonstrated to the farmers of Canada their value for producing shipping steers. If once the fields of the grazier were dotted with white faces intended for transatlantic shipment, the farmers on every side would want to know the reason why.

MR. GUY'S AYRSHIRES.

The Ayrshire herd of Mr. Thos. Guy, Oshawa, is in good shape. It numbers from some 50 to 60 head, and the individuality of the animals composing it stands high. If the herd fails to win so many first-prizes relatively, it is not because of any decline in the quality of its members but because of the increased opposition springing up in other sections, and largely from animals of Mr. Guy's breeding. Mr. Guy never has been an extensive importer, but rather a breeder who has enriched the country by giving it a large number of animals carefully bred on certain lines and carefully tended, hence the high average of excellence attained by the Ayrshires of this farm. Provincial

prize-winners are still thick in the herd. Violet, a five-year cow of fine smooth and well developed proportions, victorious in many a Provincial contest, and Lady Wallace 3rd, by the Model Farm imported bull Stoncalsey, also a Provincial prize-winner, were there. Amongst the yearlings were Lily Dale 2nd and Model 3rd, both first at leading fairs, and the nice prim, neat and well-developed calf Model 4th, which proved so attractive to Mr. McQueen, the excellent Scottish judge, in the Provincial show-ring at London. The "Auld Granny" of the herd, Perfection by name, is becoming very venerable looking. She is 17 years old and has produced 18 calves, on one occasion she produced twins, and she still looks fairly well. It has been found difficult sometimes to dry this matronly old cow, herself an indisputable example of the stamina of the breed she represents.

MR. KEOUGH'S GALLOWAYS.

The Galloways of Mr. Keough, of Owen Sound, are in fine shape. The stock bull, Claverhouse (4250), is a fine massive fellow; he was bred by Thos. Biggar & Sons, Chapelton, Dalbeattie, Scotland; he possesses general good development, including a most remarkable loin and quarter. The females of this herd deserve high praise. They are, taking them all in all, one of the evenest and best lots of females that I have yet seen in any of the herds of Ontario. Mr. Keough has, during the few years which he has been breeding Galloways, shown the best of judgment in his selections and breeding. The cows, three-year heifers, two-year heifers, yearlings and calves are uniformly good, and almost without any exception. If no mishap comes to the herd Mr. Keough will prove in future a very stiff competitor in any American show-ring.

I noticed some good Galloway grade yearlings in the herd, which gave evidence of fine growth and general development. The demonstration of the value of Galloway sires in this way is a very potent way to convince the farmer that Galloways are all that their admirers claim for them for beef-producing purposes.

THE SHORTHORNS OF MR. BRETHOUR.

Mr. J. E. Brethour, of Burford, has a herd of Shorthorns numbering some 16 or 18 head. The average of quality is high in this herd. The imported bull Provost heads the herd, a massive red of Kinellar breeding. His stock is proving very satisfactory.

Amongst the good animals our attention was drawn to a two-year heifer, Authoress = 16204 =, and a one-year, Landress = 16206 =, animals of much substance and quality and comely in shape.

Berkshires have proved very profitable in the past to Mr. Brethour, and he has a goodly supply, chiefly sows, on hand.

His latest love, however, is the Improved Yorkshire, of which several head were imported this year, notably three sows, which have bred nearly three dozen young pigs, and all three have been bred again. The offspring are all sold, and Mr. Brethour informs us that he might easily have sold twice as many more at good prices.

The Improved Yorkshires are not comely in appearance when young. The face is rather long and slightly Roman nosed, but as they grow older this assumes the dished shape with a pug nose. It is for length and depth of the sides that this breed is more especially prized, and for the intermixture of fat and lean in the meat.

THE BOW PARK SHORTHORNS.

Some old men tell us occasionally that they believe Shorthorns have deteriorated in size and quality during recent years, but those who speak thus cannot surely

have made a recent visit to Bow Park, where for numbers, quality, size and symmetry, the animals composing this herd will certainly equal anything in the line of Shorthorns to be found in the world. If the Shorthorns of former days were superior, then the artists of those times have deceived us.

The normal strength of the Bow Park Shorthorns is from 200 to 250 animals of all ages. One of its features is the almost entire absence of culls, another is the fine development of all the animals in it, both young and old. There are no "pony built" animals at Bow Park. A third feature is the admirable development and the symmetry of the bulls; a fourth is the extraordinary size of most of the calves; a fifth is the purity of several of the line-bred families, as the Duchesses and the Oxfords; a sixth is the orthodoxy of the colors, mostly a rich roan or red; and a seventh is the fine pedigrees belonging to every animal in the herd.

Amongst the stock bulls now in use we may mention the Duke of Leicester 7th (80196) imp., a smooth red of beautiful outline, and with a straight Duchess pedigree; Baron Waterloo, bred at Bow Park; Ingram's Chief (51423) 81433. The last is by Sir Arthur Ingram, a noted Royal Society winner in England, and he is proving himself a very successful sire. Baron Waterloo, now two years old, is virtually the sweepstakes bull of America, having at Detroit been put ahead of Cupbearer, who won over all breeds at Buffalo. Cupbearer is also a stock bull now at Bow Park.

Appearances generally at Bow Park indicate vigorous and thorough management. Everything is in order. The stock look well from beginning to end. No apologies are made for things being out of order, for the simple reason that none is required. It is without doubt one of the finest stock establishments to be found in any country.

THE SHORTHORNS OF THOMAS RUSSELL.

The herd of Mr. Russell at Exeter is not large but very select, and possessing high average individual excellence. The stock bull Riverside Hill, two years old, is a strong roan, with a large amount of growth. He is by the sire imp. Mariner, and out of the dam Bracelet and imported. A one-year bull, by Mariner and the dam Jane Gray, possesses much excellence. There is also a very promising bull calf at Riverside, which it is hoped will do a lot of good some day at the head of some man's herd. Tempting offers have carried away some choice animals from this herd, which accounts in part for its comparatively reduced numbers.

One item of Mr. Russell's management arrested my attention, and is well worthy the consideration of cattle breeders, that is, he is very chary about pushing young heifers ahead during the first year, which are intended for breeding purposes. I do not mean that he does not keep them growing thriftily, but he refrains from making them overfat, which seems to have the effect of checking full development. Mr. Russell is careful not to harbor around him any rubbish along with a few good things as is the manner of some.

THE SHORTHORNS OF THE MESSRS. NICHOLSON.

The herd of Shorthorns owned by the Messrs. R. & S. Nicholson, of Sylvan, Ont., is about 40 strong. The stock bull, imp. Warrior, is an immense fellow of a good deal of smoothness, and possessing great development, more especially in those prime essentials of a breeding animal, depth and thickness. He is continuing the good evening up work in the herd, so well begun by Prince Albert - 2057—, a son of Barmpton Hero. The two heifers, Vacuna 13th and Dagmar 8th, now two years old, white and roan respectively, are in fine shape. Both are soon to calve.

Some of the young things in the herd now coming on will doubtless find a place at our leading shows like so many of their predecessors have done during recent years.

The Messrs. Nicholson have done a good work for the section in which they live. They have been breeding Shorthorns now for about fifteen years, and the bulls sold from the herd in that neighborhood have effected a good deal of improvement in quarters where it was considerably needed.

THE SHORTHORNS OF JAMES S. SMITH & SON.

The herd of the Messrs. James S. Smith & Son, of Maple Lodge, is a very even one, containing as it does a good lot of animals in fine breeding condition. The resemblance they bear to one another, particularly the younger animals, indicates careful breeding. Some of the animals of this herd, which numbers about 40 head, are noted for their good milking qualities. The foundation, like that of nearly all the Shorthorn herds in Canada, is purely Bates, but Scotch bulls are now in use.

The stock bull, Conqueror, is exceptionally good. He was bred by Mr. John Dryden, M.P.P., Brooklin. He is of the Cressida family, by imp. Vensgarth (47192), and is pure Cruikshank in pedigree back through several generations. Conqueror is low, level, thick, mellow fleshed, and full of quality.

For many years the Messrs. Smith have raised a number of their pure-bred calves on skim milk, and with a success so complete that in the autumn it could not be told from appearance which had been reared on new and which on skim milk. Of this I have been more than once an eye-witness.

Relatively this is a vital question of much importance to the farmers of this country. If calves can be reared as well, or nearly so, on skim milk as on new, it is of much moment that this be done, for at present prices there can be no question but that it costs more to rear them on new milk than on what is skimmed.

The Leicester sheep of this farm are very excellent. One of the very best rams in the country is in service. He was bred by W. Whitlaw, Guelph, and is of Polworth ancestry.

Our Manitoba Budget.

(From our own Correspondent).

The weather up to about the middle of the month kept very pleasant and open, having only once gone below zero. When a cold spell does occur early in the season, the run of fine weather for weeks afterwards fully makes up for it. Plowing went on pretty late and there is a large area ready for the seeder, larger perhaps than ever before. Even the men who have had to withstand the damage from drouth are as resolute as ever. One who on land that, so far as his explanation goes, was fairly farmed, had not got his seed back, assures me that he has over 300 acres ready for next spring, though he does not know where the seed is to come from. Some of your eastern men come up here and kindly advise us through an eastern city paper after they get back that bad farming is very much to blame. Bad farming and worse seed are, they say, the main causes of any shortage they have found. One Agricultural Society here, that of Souris River, met lately and passed resolutions, dictated by a very excusable indignation, that such statements are unjust and to a large extent unfounded. I find men known to me as among the best and most successful farmers with a poorer return this year from their best worked lands than I have often seen after repeated grain crops. Both here and on the other side of the line are too many cases of good land, good work, and good seed,

followed by miserable returns. Those scorching south-west winds that have been so prevalent this season have fairly wilted everything exposed to their full sweep, and all the good crops I have yet seen were found on land where bush exists in such quantity as to give a degree of protection. We have had in the growing months from 3 to 6 inches of rain, and the greater quantity usually where there is least grain to save. This amount of rain would easily mature a good crop of grain, provided there was any sap in the earth to start with; but when the dust was flying off in clouds at seed-time, and all the subsoil dry, grain had not the ghost of a chance. I fear that, taking bad and good, my early estimate of 10 bushels to the acre may prove too high.

In reference to this bad farming and bad seed business, let me explain what I saw in 1888, to some extent here, but much more so in Dakota. A very cold and dry spring was followed by a warm, wet June and almost tropical rush of growth. Then came a frosty night and more heat after it. All the rich, well-farmed land, especially in the valleys, got frosted, while the poor land and stubble-plowing made a very tidy crop of excellent wheat. I knew thousands of acres of choice wheat burnt where it stood, while the poorer stuff, all through it, was safe. The frost crawled down into the valleys and killed the rankest growth, but the meaner crop was little or nothing the worse. The men who have no knowledge of such facts may talk glibly enough, but no unvarying rule can be laid down here that can be worked for every season. So the Manitoba Farmers' Club decided the other night, and I say "ditto."

The next point is frosted seed. I would not advise any man, except under the pressure of necessity, to sow it anywhere else but here, and not always even here. But I will undertake to go out any place where frosted seed has been sown, here or in Dakota, and get five men to say that they have done well year after year, whenever forced by necessity to sow it, for three that will talk the other way. I don't speak only of the sort of seed that has got wrinkled a little and would be cut down in price five cents a bushel by a grain-buyer. I have by me at this moment seed—and forward by post a small sample—that might be worth thirty cents or less as pig seed, with the product inside as raised this year on the farm of R. D. Foley, south of Manitou, on stubble-plowing, the worst sort of land for this season, and giving a yield superior in quantity to anything sown with first-rate seed on the same kind of land. His next neighbor, Mr. Robson, sowed the same seed this year also against a first-rate sample of 1887 seed, and could not tell the difference on the field or afterwards. This seed, as tested at Ottawa last spring, made a very poor record, which you will not dispute after looking at it. I sent a sack of it to the Experimental Farm at Brandon to be tested, pound for pound, against 1 extra sown alongside under precisely the same conditions. It was the same all the season, as plenty of visitors could see for themselves, but the test was spoiled by the two lots being mixed up after threshing by a man who could not see any difference. Mr. Elder, of Virden, one of the most successful and level-headed farmers in Western Manitoba, writes me to-day saying that he tried 1 hard and 2 frozen side by side, on both summer-fallow and stubble plowing, "with a fair crop on both and no living man could tell the difference in either case." There are cases this year where such seed is blamed for the shortage of crop, but when sifted it is found that other causes are quite as much to blame, though on very dry land in spring I would admit that sick seed would wilt first. This seed is really not diseased; the germ is comparatively little injured in

its vitality, though nearly all of the starch that is meant to feed it till it can support itself until it grows out of the earth is destroyed. But our climate and soil are very stimulating, and for one year, or even more, frosted seed makes a wonderful show. If finely run, I think that the product from this year's frosted seed of low grade will go below that from the very best, but the test will come in from the Indian Head farm within the next month for this point also.

The farmers who got out their fall beef early did very much better than those who held on until this month. The first market proved the best, and the dealers who bought here on these advices got scorched. It would be difficult to make much more than two cents on foot in our country towns for average beef, with lower quotations for poorer beasts. This is not much encouragement for those who expected to get over their wheat shortage by selling fat steers for good prices.

The swampy lands to the north of us are proving this year of immense advantage to stockholders. Store cattle can be wintered on straw if not let down in the fall before sharp winter sets in, but this year's straw seems to lack nutriment to some extent. Hay costs from \$4 to \$8 a ton, according to quality and location, and bran \$13 a ton; but a full-sized beast can be wintered out north on capital hay for \$6 a ton till grass comes again. There is therefore no necessity, as the misinformed New York press despatches to England declare, for giving away our cattle for want of food, either here or on our western ranches. Perhaps they do not mean to lie, but are only a little "off" in their geography. The *St. Paul Globe*, on the authority of J. J. Hill, says the coming winter will be terribly hard on stockmen in northern Dakota and western Montana, and adds, "there is not a blade of grass on most of those ranches, and the cattle will have to be fed on hay and oats at enormous expense. All the way down to New Mexico the same state of things prevails, with local exceptions, and south-west of Denver thousands of fat cattle and sheep, besides a few cowboys and herders, have perished in snowdrifts." It is generally believed here that all these places can be found in the United States; they are certainly not between this and the north pole. We would be awfully glad of a good blizzard here just now, and a foot of snow along with it. Fine weather will do us more harm than all the blizzards could do. The weather prophets promise us a big lot of snow this winter, and I fervently hope they may prove reliable.

Improved Pigs and Their Management.

By SANDERS SPENCER, Holywell Manor, St. Ives, Hunts, Eng.

In no single thing has there been so great a change in the public taste as in that for bacon and other hog products, and one might even go further, and say that in no article of agricultural produce has there been such an increased demand, which is partially owing to the improvement in the common pig, due to crossing with improved pedigree boars, but in a far greater degree to the marvellously improved system of manufacture of bacon. There is not the slightest doubt that two of the greatest benefits to any locality are the establishment of a bacon factory and the introduction of a really serviceable kind of pure-bred pigs. There will be but little difficulty in proving that it is possible to find a breed of pig that will at once provide the farmer with an animal that will leave a handsome profit and also furnish the curer with a carcase of pork which he can convert into bacon that will command the highest price on any market in the world.

If we look closely into the subject we shall find that the wants of the farmer and the curer, instead of being, as some persons assert, antagonistic, are in reality identically the same; both require an animal of quick growth and of early maturity. To the farmer this means quick returns. Again, pigs light in the bone and offals are desired by both; by the farmer, as bone costs so much more to grow compared with flesh, and by the curer, as the carcase with the finest bone and the least offal makes much the higher price when converted into sides of bacon, than does the coarse-boned pig, with a great proportion of offal. The curer finds that the best style of pig for his trade is one long and deep in the body, light in the neck and shoulders, and wide and square in the hind-quarters; and the farmer finds that the pig which is most healthy, most prolific, and comes to a given weight the quickest is that pig which most nearly answers to this description. Anyone who has not had any experience with pigs having the points mentioned would scarcely believe how great a difference exists between the cost of fattening one of them and one of those heavy-shouldered, coarse-boned, and rest less brutes; so that not only in the much higher value of the carcase of an improved pig, but in the lessened cost of its production, does the pig keeper reap a benefit. This is not the opinion of pig-breeders or farmers and bacon curers in one particular part of the world, but correspondents and customers of mine in England, Ireland, Germany, Holland, Denmark, Sweden, Canada, etc., all state that the Large White Yorkshire pigs have invariably cost less to fatten, and have made the very best bacon and hams. Some curers and bacon merchants go so far as to assert that a pig with a black skin will only produce second-class bacon. This may be due to two causes first, the nicer appearance of a side of bacon made from a white pig, and the difficulty of finding a black skinned pig to furnish a high quality carcase of pork.

There is no domesticated animal which is better able to take care of itself, nor one which requires less attention, except during the very young stage, than does a well-bred pig. The pig comes into the world without any assistance, it lives entirely on its mother for about a month, then it begins to feed out of the same trough as its mother, who thrives and milks best on wheat offals, or ground oats and rye. In summer the little pigs may remain on the sow for six weeks, and in the colder months about two months. Those pigs not required for breeding purposes should be operated upon when they are about six weeks old. If care be taken to have this operation performed when the little pigs have been kept from food at least twelve hours, there is little or no risk, whilst the meat of a pig which has been attended to is of far greater value, and not only that, but the castrated pig will fatten very much faster. A pig from two to five months should not be allowed to lose condition, but should be supplied with a fair amount of wheat refuse, oat, rye, or barley meal, and in the summer with clover, lucern, or clover hay; and in the winter with but kohl rabi or clover hay, cut into chaff, and boiling water poured over it. In summer the young pigs should be allowed to run about on a pasture and in winter in an open yard. After they are about five months old they should be kept in a confined place, and fed on meal made from one-seventh wheat, and two-sevenths each of barley, oats, and rye. This should be ground as fine as possible, and the best return will be obtained from it if it is fed to the pigs dry, another trough being

put in the sty, in which is always to be found a supply of clean water or dairy refuse either in the form of skim-milk, outter-milk, or whey. By the time the pig is seven months old it ought to weigh 150 to 170 lbs., when it will command the highest price in the market, and will leave behind it a good profit for the breeder, the feeder, and the bacon-curer. The breeding sow will require but little attention except at the time when she is suckling. A few peas, beans, or maize, or house brewery, or dairy refuse mixed with a little meal will keep a well-bred sow in prime condition until within about a fortnight of the time when she is due to farrow. Then it is better to shut her up at night in the place where it is intended that she should pig, and to give her slightly more nutritious food.

The American Horse Show at Chicago.

(By our own Correspondent.)

Our cousins on the other side have long been noted for their large undertakings, but in the Horse Show, which was held at Chicago during the first week of last month, they have certainly surpassed themselves. One thousand two hundred and seven entries appear in the catalogue, and although many of these are the same horses, yet it is seen that the number of horses which were entered after the publication of the catalogue brought up the number to 1,400. A lot could be written about this show, but as a majority of the horses would be unknown to a large proportion of our readers it would be tedious to particularize, and we shall, therefore, confine ourselves principally to generalities, and only briefly refer to some of the more important classes. The show was held in the Exposition building at the corner of Adam Street and Michigan Avenue, close to the lake front. The building is oblong in shape, the centre being occupied by an arena 88 feet wide and 300 feet long, being the longest indoor course in America; an amphitheatre encircles the arena with a seating capacity of 6,000, this during the evenings was crowded to overflowing and presented a sea of faces; the remainder of the building being occupied with stalls, either box or single. As is unavoidable in cases where entries are accepted after the date of closing, the number of stalls were insufficient, and several horses were compelled to seek stabling outside until stalls could be built for their reception; another defect was the ventilation, which was conspicuous by its absence, the air was consequently bad and heavy, colds were prevalent both in the human and equine race, and men and horses suffered accordingly. The judging department was another weak point, and the results can hardly be said to be satisfactory; the judges were Messrs. John Hope, Brantford; K. Gibson, Delaware; J. Gibson, Minnesota; R. Miller, Brougham; R. Graham, Claremont; W. S. Frazer, Ill.; and M. W. Mitchell, Chicago, all good men on their respective breeds, but when they were required to decide on all breeds from a French Coach horse to a Belgian Draught it is not to be wondered at that, in some cases, it was not only unpleasant to the judges themselves, but also somewhat hard on the exhibitors. With these exceptions the management was excellent, and at no show have exhibitors enjoyed more privileges or had their wants more quickly attended to. Clydesdales were well represented, and a good lot they were. The class for aged stallions contained several horses that figured in last year's show, and this year the contest was renewed with, if possible, greater vigor. Ten entries competed and, after much consideration, a short list of 4 were drawn, composed of the well-known McQueen, a

former importation of Messrs. Graham Bros., Claremont, exhibited by Mr. Ogilvie, a grand topped horse, with clean flat bone and silky hair; Mr. Clarke's Chastlar, sired by Darnley; Messrs. Galbraith's Go-ahead, the black son of St. Lawrence, on good feet with plenty of bone; and Mr. Huston's Home Secretary, a bay sired by Windsor (2509). The die was eventually cast, and McQueen once more came out on top for the third time in succession at this show Chastlar being second, and Go-ahead third. The competition in three-year-olds was, if possible, stronger, and 14 horses entered the ring for the inspection of the judges, first going to Rescue, a good bodied horse, with massive quarters and plenty of bone, owned by Mr. Huston; second to Mr. Holloway's Ensign, a bay standing on clean flat bone, with good feet and pasterns; Mr. Ogilvie's Marmion, a bay with plenty of size and bone of the right kind, being placed third. In aged mares several well-known animals competed, among them being Mr. Holloway's famous trio, Cherry Ripe, Jennie Roy and Maid of Glencoe, and considerable interest was taken as to whether Cherry Ripe would add another triumph to her credit, age, however, had told on her, and the judges decided in favor of Mr. Clarke's Lillie Macgregor, a short backed mare in grand condition; Mr. Ogilvie's Mary Queen of Scots, a mare of great scale, and on grand legs and pasterns, being second; third going to Mr. Holloway's Maid of Glencoe, and H.C. to Cherry Ripe. One of the notable instances in the Clydesdale female classes was the success of Mr. Holloway as a breeder; in two-year-olds, two of the winners were bred by him, as were also the same number of winners in yearlings. In the class for stallion and three of his get, McQueen, Cedric, and Chastlar, were led out, the two former being represented by foals, the latter by yearlings. The first-prize evidently lay between McQueen's colts and the yearlings of Chastlar, the deciding vote being given in favor of McQueen's lot, a wonderful good lot of fillies and of fine quality, one of them being out of a Canadian-bred mare. The gold medal for the best Clyde stallion of any breed was awarded to McQueen, who, for the second time in succession, also won the Farmer's Review Challenge gold medal, which consequently now becomes Mr. Ogilvie's property.

If Clydes were out in force, Shires were still more so, the number of entries being 102 to 79 of Clydesdales, which would seem to indicate that this breed is becoming a great favorite in the States.

Aged stallions consisted of 20 entries, among these were the well-known Holland Major, the champion horse of 1885, a grand bodied horse, but a little light perhaps in bone; the massive Carlton Blaze, weighing 2,000 lbs.; and many others that would take too much space to particularize; out of these were drawn Messrs. Galbraith's Mirfield Yeoman, the chestnut Nabob, the roan Sir Robert, and Holland Major. The latter being placed first; Messrs. Burgess' Sir Robert, a short backed horse, second; and Mirfield Yeoman, a stylish horse of good quality, third. Three-year-olds were an excellent class, and the balance trembled between the grey Knight of Labor and Great Gun, a bay of fashionable breeding, his sire being Royal George II. (2485), and his dam by old William the Conqueror (2343); the grey was a horse of great quality, being well quartered, standing on heavy, flat-bone, with an abundance of fine silky feather, and was a great favorite with the crowd, but his action was hardly as free as that of Great Gun, who, after a long and careful inspection, was awarded first place; third going to Mr. Brown's Western Bill. Aged Shire mares contained 13 entries, first went to Messrs. Stericker Bros. massive mare Stella, which occupied the same position last year, she was thick and broad and near

to the ground, but her legs were hardly as clean as desirable; second went to Mr. George Brown's Princess, a good fronted mare with legs of the right sort; and third to Messrs. Green Bro.' (Innerkip), chestnut mare Georgia, whose breeding is identical with that of the first-prize three-year-old. In this class two mares were shown by Mr. W. H. Milman, of Woodstock; which later on were awarded second-prize as a team. In three-year-olds Messrs. Burgess made a clean sweep of all three prizes, while in yearlings they captured first with an 8 months old filly of immense proportions, sired by Lothair. The gold medals offered by the English Shire Horse Society for the best Shire stallion and mare were awarded to Holland Major and Stella, respectively.

Percherons were a large exhibit, Messrs. Ellwood and Dunham's showsteeds were out in strength; the exhibitors of other breeds went to considerable trouble in decorating their stalls, but the Percheron men launched out lavishly, regardless of expense. Mr. Ellwood's exhibit occupied a double row of stalls, Percherons on one side and French Coach horses on the other side, with an alley way between, the stalls being decorated with harness, pictures, prize rosettes, and other devices, while a matting was laid down the full length of the alley way for visitors to walk on. Mr. Dunham had his horses similarly arranged, overhead was a roof of different colored bunting, and a gas light placed behind each horse to counteract the darkness occasioned by the stretch of bunting. French Coach horses, of which a large number were present, are a showy breed with a considerable amount of action, they are, we believe, similarly bred to the German Coach horse, a few of which were exhibited, and are a cross-bred horse, being the result of a commingling of English thoroughbreds and Cleveland Bays on the native mare of the respective countries. The color of those exhibited were chiefly browns, bays, and chestnuts. Belgians are a breed which is at present unrepresented in Canada, they are a draught breed, short backed, and low to the ground, their legs are free from hair, and as such will suit the fancy of some people, but the legs display an inclination to beefiness and roundness of bone, which certainly would not find favor in the eyes of a Clydesdale man.

Cleveland Bays are fast becoming favorites with Americans, and a good exhibit was present; in aged stallions Mr. Brown's Consort was once more placed first, this horse has been very successful, having, as a three-year-old, won the Cleveland Association prize, and in 1888 the gold medal for the best Cleveland bred in Illinois. There were several entries in Hackney horses, and in aged stallions 9 competed, and here the crowd was certainly not in accord with the judges; first went to Mr. Harvey's chestnut Rob Roy, a good-looking horse but singularly deficient in action; second to Mr. Trueman's Reality, a good mover but gone in the fore-legs; and third to the Swell, a horse which won first at the New York Show, and was formerly owned by Mr. A. Wilson, of Paris, Ont., while Mr. Stericker's Saxlingham Fireaway, which had far and away the best action of any in the class, was left out in the cold; a decision we could not concur in, for action is one of the most important points in a Hackney.

The Trotting horse was, of course, one of the most important classes in the show. Stallions of any age: first went to Ambassador (2.21½); 2nd to Mambrino King, said to be the handsomest trotting stallion living; 3rd to King René; and 4th to Star Hambletonian. In the herd prize for the best 5 colts, sired by one horse, the sons of King René claimed the prize, amounting to \$1,750.00. It was an interesting sight to see the jockey, speeding each colt in turn round the ring,

seated on a running horse, while the trotting-bred colt, kept up its even pace by its side. Another feature was the Kentucky saddle-horse, which went through the different gaits of single foot, etc., with well-trained ease, and performed various other feats, which, although possibly an essential in a Kentucky saddle horse, would in England knock off half its value.

In ponies under 14 hands, 1st went to Messrs. Burgess' Charley, a roan pony from the mountains of Wales, and a wonderful jumper for his size; 2nd going to Mr. Hoag's bay, Prince of Wales, a pony very deficient in action; Mr. Milman's Lord Mar, an infinitely better pony than either of the winners, being entirely passed over. In pony stallions three years old, and also in yearlings, Mr. Milman obtained first, the former going to Cupid, which was first at this year's Royal, and had the honor of being led out for inspection by the Queen.

The end of each evening was occupied by jumping, and here Canadian horses carried all before them; in addition to Messrs. Moorehouse & Pepper's string of horses from Toronto, Mr. W. H. Milman won a 2nd on his hunter, Flora. For the high jump Messrs. Moorehouse & Pepper's cream horse, Roseberry, a horse which, after experiencing many vicissitudes of fortune, has at length found its proper sphere of life, and has attained the honor of negotiating in good style the highest fence ever jumped, a height of 6 ft., 11¾ in.; Ontario, the horse which stood 2nd in the high jump to Roseberry, is also, we believe, a Canadian-bred horse, formerly owned by Dr. Grenside, of Guelph, Ont. One of the most imposing sights were the exhibits of carriage horses, and in which the outfits were taken into consideration; three years ago we were informed such a sight could not have been witnessed, and a signal proof is given of the rapid Anglicizing of the tastes of the people. Here were tandems, four-in-hands, broughams, etc., well-horsed with coachmen and grooms in neat liveries, and perfectly appointed; all in remarkably good taste, the horses, many of them imported, being far superior to anything we have seen at our Canadian shows. The managers of the American Horse Show may indeed well feel proud of such an exhibition, and even if it should not prove a success financially, although from the attendance it can hardly fail to be, yet they have the gratification of knowing they have had the largest and best display of horses ever collected under one roof.

The History and Breeding of Bates' Shorthorns.

By RICHARD GIBSON, Delaware, Ont.

[FIFTH PAPER.]

THE MATCHEM COW OR OXFORD TRIBE.

If the value of a tribe may be estimated by the favor in which it is held by its originator, it will be found in the resort to its use for sires in his own herd. If this proposition is right, after the Duchesses we must certainly assign the second place to the descendants of the Matchem Cow.

If the history of the purchase of the original Duchess is full of romance and mystery, the early history of the Matchem Cow may be said to be clouded in obscurity. Mr. Bates purchased the Matchem cow September, 1831, she then being four years old, at the sale of Mr. Brown, of Chilton, for £11.15.0, along with some 15 steers for feeding purposes, the pedigree given with her, was as being: by Matchem (2281), dam by Young Wynyard (2850). Whether her history could be traced further back is very doubtful, though several old breeders

contemporary with Mr Bates, claimed she descended direct to Mr Mason's herd, but as Mr Bates had been in the habit of criticising (or even a harsher expression might be used), and stating that Mason's herd was rotten and full of scrofula, he did not desire to trace to that herd, consequently, he did not give the tribe any farther descent than to Young Wynyard. Other enthusiasts have tried to trace it to the Princess pedigree. Mr Bates having written a letter to Mr Vail, "roy, N Y", stating his bull Wellington, a son of Oxford Premium cow, was full of Princess blood. This, of course, he could be, without being descended in a direct line through his female ancestry. Matchem, the sire of Matchem Cow, being by St. Albans or Bonny Face, and it is generally conceded that St. Albans was the sire, and he was a pure Princess bull, being by Wynyard out of Nell Gwynne, and one of those land marks in ancient Shorthorn history that will never be lost sight of. Again, Matchem cow's dam was by Young Wynyard, another Princess bull. So we find the Matchem cow herself was $\frac{3}{4}$ Princess and $\frac{1}{4}$ unknown blood.

The Matchem Cow put to Duke of Cleveland, produced the Oxford Premium cow, so named from having won the Royal Societies 1st prize at the Oxford meeting, and afterwards bred Oxford 2nd, and the Cleveland Lads, used by Mr. Bates upon his Duchesses. From Oxford 2nd, all the Oxfords at the present time trace their descent.

It has been said Mr. Bates was taunted into using Cleveland Lad. "In 1837, Mr. Bates exhibited at some local show, several of the get of Belvedere, amongst others, Duchess 34, and her son, Duke of Northumberland, and won with them. At once it was said by rival breeders that he could never win until he showed the get of Belvedere, and that Belvedere had made him. On returning home from the show he had Belvedere slaughtered at once; at that time Belvedere was eleven years old, healthy, active, and vigorous. In 1839, Mr. Bates went to the great National Royal show, at Oxford, and showed only the get of Belvedere, except the Oxford cow, and won with all the animals he showed. Again, the cry was Belvedere had made him. Then it was that he tried Cleveland Lad."

The probability is that the cow was bought, as many more had previously been, by Mr. Bates, to be used as a dairy cow, and that finding she responded so well to the Duchess blood, and proving also an excellent milker, he determined to keep her. After her daughter won 1st at the Royal, her sons, own brothers to the winner would naturally be too valuable to steer.

Having used Cleveland Lad on some of his cows notably Waterloo 3, Red Rose 13 or Cambridge Rose and Duchess 37, and presumably being satisfied with the results; 2nd Cleveland Lad was also used and followed by that most excellent bull 2nd Duke of Oxford, the one to whom the tribe is most indebted, as a specimen of a bull both as a sire and an individual, and one that probably did more than any other one animal to establish the value of the Duchess blood for crossing. For could an animal be produced in two crosses by the use of Duchess blood, from a cow purchased for £11.15.0, that was as good an individual and as successful a sire, there must be a wonderful volume of prepotency in the blood of the Duchess family to produce such. Again, may we not say that as Mr. Bates had so persistently grafted and intermingled the Princess blood on his Duchesses, using Belvedere to his own daughters, did not the "Sage" intuitively see the need for a outcross and in thus selecting the plebeian Oxford

did he not show the skill of a great breeder? Did he not by the use of the despised cross prove once more by its success, that he was worthy to occupy the proud position of being one of the most noted and original of that great host of breeders that have made the British Isles the home and breeding ground of nearly all the most valuable breeds of cattle, horse, sheep and swine. It is the light touches of the brush that distinguishes the Royal Academician from his lowly brother striving to earn sufficient to pay for oils and canvass. The same notes are sung by the Diva as are sung by the modest village maiden.

We may criticise the cross at this late period, but we don't know the object the master had in view. No doubt his inbred herd had become delicate, and required an outcross, hence the introduction of the vigorous Oxfords.

As a tribe, they still retain their vigor, and are often large, approaching to coarseness, the bulls have proved successful sires, and the females are prolific. Whether the bulls possess the same power of impressing their stamp, now as formerly, is doubtful at least there are not as many now at the heads of noted Bates herds as formerly. There are no pure females left, and the following are some of the principal outcrosses used in the make up of the present branches:

Earl of Warwick not strictly speaking an outcross being a Princess.

Priam, bred by Mr. Dickenson out of Cressida, a descendant of the celebrated Cassandra by Miracle. These two occur in the Grand Duchess of Oxford, bred so successfully at Holkar.

Lord of Eryholme, a successful outcross occurs in the pedigrees of the Holkar, Baroness of Oxford and in the Lady Oxfords. He was a bull bred by Mr. Maynard and descended from Mason's Starling, this branch has produced some Royal winners.

In the pedigrees of the Maids and Marchioness' of Oxford, we find Marquis of Carrabas, introducing the blood of Mr. Fawkes, this bull was of a similar descent to the popular Constances and some excellent animals with this cross have been produced at Kimbolton.

In the Ladies of Oxford from N. Y. Mills, there is but little outside blood, they are the purest now to be found, the only outcross being a little Booth coming from Grand Turk through 6th Duke of Thorndale.

The Oxford Belles and Countess' of Oxford branch contains the blood of the Marquis of Exeter's Romeo, a good show bull and sire of that grand cow Romeo's Oxford, who produced the lovely Gem of Oxford.

Lamartine occurs in the Belles of Oxford, so long cultivated at Penrhyn.

For the CANADIAN LIVE STOCK AND FARM JOURNAL.

How to Breed and Train Our Trotters Without Professional Aid.

[SECOND PAPER.]

FARMER JOHN DISCLOSES SOME PRACTICAL HINTS IN COLT TRAINING.

I think I am about due with my second paper on how we farmers may breed and fit trotters for the buyer, without professional aid. You will remember I started to do it in my last communication, and instead of doing so got of in a different strain altogether, and ended up with politics. Well, it is a fault of mine, and your kind readers will only have to bear with me, when I diverge, by the way, to other subjects as they suggest themselves. By the way I have just sold one of my trotting-bred colts at three

years old, to a professed driver and trainer, for just a bit more than that for which I might buy a grand pair of farm horses. The particular breeding of this colt will be of no great interest to your readers, but the way we educated him so that the practiced eye of the professional picked him out as a likely subject to further educate, may be. First, when at five months old we weaned him, and gave him his first lessons in how to behave. This we do by halter breaking, then each day we learn him to lead nicely by the halter, never making his lessons so long that he became tired of them. By the time he was properly halter broken, and had learned to stand tied like an old horse, we had learned him also to be handled, each day picking up one foot, then the other, and going through the pantomime each time of driving the shoe, learning him to stand over, back, and understand what was meant by the words "whoa," "get up," and such like commands, every day or so when opportunity offered. Some of the boys took the colt out in the lane and gave him a good spin along at the trot. At nine months old we had him accustomed to the harness, bridle, breast-plate, saddle and breeching, and educated to drive along, to pass teams on the road, and trot along his clip when asked to do so. At twelve months old he was scholarly enough, had we wished to give him a trial between the shafts, but instead, we gave him the early spring grass to nip, and frolic amongst the fallow of the summer. Each time any of us passed the colt in the field, we endeavored to play with him, coaxing him with an apple, a bit of sugar, or some other tit-bit, that we knew he had a weakness for.

By Autumn, he had grown, and showed the effects of the few oats he got each day at pasture, as well as the tit-bits. After getting him in the stable for the winter, and we had time again to work with him, we renewed our instructions, by again first introducing the harness, letting him look them well over, smell them, and become perfectly satisfied that they would not hurt him in any way. The next step was to harness him, and learn him the use of the bit. This we did by passing the rein through the shaft loop and from the bit and down half way on his hip. Standing yourself directly behind the colt, you are ready to learn him how to obey your wishes by the rein twitch; pull to the left, the colt's head will point that way, and the rein pressing on his thigh pushing in the opposite direction, becomes a double motor in conveying your desire to the colt, and saves you the annoying twisting about of your colt, as may be often seen in older horses when driven by the reins when not attached to some kind of a vehicle.

After two or three weeks of this particular teaching, for there is lots of time, and it is the most particular part of all in colt breaking, if you have done your work well, and your colt is fairly intelligent, he is then ready to be hitched to a road cart, and the chances are nine out of ten he will go off as steady as an old plough horse. After he has been driven a few days and become in a measure used to this new state of affairs, he begins to trot out a bit. Now is the time to be careful with him; don't drive him over himself; when he breaks, which he will in an awkward kind of way, just pull him gently back to you, and let him try it again, and when he telephones you, which he will, that he is going to make another mistake, gently pull him back again, and steady him with the reins. Each day you will see an improvement; some day you will come back from that nice bit of road back of the farm that you work him on, satisfied that you have a trotter, that with professional handling will beat 2.30. Now

don't lose your head when this happens, for if you do, you are not the kind of a farmer to raise standard-bred trotters, but instead of going to the expense of giving him, your colt, to some self-constituted professional, keep on doing as well as you have been. Your colt by this time is only two years old and it is now fall. Put him in the stable for the winter, give him plenty of feed, and a sufficiency of exercise to keep him hearty, and if there is a good place to trot him on the ice during the winter months, keep him off it, unless you are quite satisfied with the command you have in yourself—that you will not trot him out with every fellow that comes along and gives you a challenge to do so. The spring that he is three years old, after you get in your crop, and the evenings are long, is the time to again begin working your colt for a sufficiency of speed to catch the buyer. He has grown a lot since the Autumn, you find him stronger, and that he is anxious to trot right out, and altogether he has improved quite a lot in his way of going by being almost let alone during the winter; now you must get a pair of quarter boots for him. You will notice that he seems to want to pace; well, he always will amble a bit, but just when you began to think you had a trotter you find that he might be one if he did not pace.

Now, I tell you what to do, take him to the blacksmith, have him put 7 ounce shoes on behind and 12 ounce on before. You have done that, and he still changes into a pace now and again, and just when you do not want him to. Now, to stop that put on 4 ounce toe weights and the chances are 10 to 1 you have made him a trotter. After you have got him going nice and level again, and when you think he has forgotten his desire to pace, take off his weights, and try him with the 12 ounce shoes alone, and the chances are not a few he will trot as level as a die. Never ask him to trot as fast as he is able, and don't let him break if you can. The professional will learn him to trot at his best in his more advanced lessons, but if he does break, try and find out the cause; take your time about it; you are in no special hurry. Ah, you see marks on his hind hoof, close up to the hair; get a pair of scalping boots—that stops him breaking, does it? But as he improves in speed, which he will each week, if you are a good teacher, you find he has taken to breaking again. Well, it is a pity, but you will have to find out the cause, for cause there is. Get the spot cured.

Now, you have got a quarter of a mile marked out on that good bit of road you work on. Your colt is now three years old and you have given him quite a lot of attention; you look him over, and decide he looks like a trotter, you know he is bred to be one, so take your brother along out with you and give him a quarter just to see if he is not one. You have done it and he trotted without a skip in 45 seconds, a three minute clip, not so bad; if he is good looking and good dispositions, there are 100 people ready to pay you at least \$300 for your colt. If he can show a quarter in 40 seconds, then you need not feel a bit nervous in asking \$500 for him. Fancy breeders would ask you \$1000 or \$1500 for him. Now is the time to sell him, for you have two or three other young ones growing up, and all you have to do is to advertise in some good solid paper, like the CANADA LIVE STOCK JOURNAL, that you have a three-year-old colt, bred so and so, that has never been off the farm, that you will warrant to show just a little faster than you claim for him, whatever it may be. You will soon find a buyer. Generous feed, careful attention, kind treatment, with a determined resolve on your part not to

show all his speed to every neighbor who drops along when you are working your colt trotter, goes far in his preparation for the market; and then you will find a ready buyer, at a figure that will well repay you for trouble taken at odd times, that you could easily spare from the corner store or in the political meeting,

New Glasgow, N. S. FARMER JOHN.

A Parting Shot at the Appointment of Association Judges.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

I am sorry that I am again compelled to take up my pen in defence of my position on this much discussed subject, but as this will be my last I hope you will allow me to notice two or three things in Agricola's letter in the September number of the JOURNAL. In the first place, he says, it gives him pleasure to know that I did not intend to reflect on the prominent members of the D.S.H.A., at the same time he would like your readers to infer that I did. His attitude in this strongly reminds me of the adage, "that none are so blind as those who will not see." Indeed, nearly the whole of his letter is made up of hair splitting and quibbling, and the old device of drawing a herring across the scent. The great question is this: Is it right for a few exhibitors to draw up a list of judges, the same exhibitors to appoint one or two of their number on the Industrial Managing Board, to appoint judges for the Shorthorn class, these same one or two to be amongst the chief exhibitors, while the great rank and file of the breeders have no voice in the matter? Now, I ask, is it not according to human nature (and as the late Artemus Ward says, "we have all got considerable of it") that they will appoint judges whom they believe to be favorable to themselves? Will they appoint judges who are unfavorable to them? Not much. Bear in mind it is not the individuals that I am opposed to, because the best of judges are only appointed for the year, those sent by the D.S.H.A. to the Industrial Board are sent yearly, and the year following it may be in some one else's power to work for their own advantage, no, it is the system and not the individual that I am opposed to. If Agricola and his friends believe this is a just and equitable mode of appointing judges, they have a perfect right to think so; but they must allow me to think differently. I believe it to be a most unjust and iniquitous system.

He then quotes that much abused good old English maxim, as he calls it, "that every man is innocent until he is proven guilty," this is quite irrelevant to the subject, and better omitted. He says he agrees with me that it is a startling thing to be told that to obtain justice, say at the Provincial, it is necessary to become a member of the D.S.H.A., the word in italics he leaves out, which quite changes the meaning of the sentence. I just cited that shew as an instance, and he then clamors for proof. It is his own proposition. I said that the members of the D.S.H.A. had the advantage over non-members, as these had no voice in appointing judges; he says let them join and they will be in the same advantageous position; if he wants proof here it is from his own pen.

Agricola then takes me to task for using the term "dealer" incorrectly. If I had known the schoolmaster was abroad I would have been more careful, but I was very much amused at his definition of that term, namely, as "a man who sells." I have consulted five dictionaries, and not one of them gave that definition or anything approaching it. If Agricola consults every dictionary that is printed in the English language he will find that not one will give any such definition. From his definition he goes on to argue that every breeder is strictly a dealer. He might with as much consistency say that a breeder of Shorthorns and a dealer in second-hand clothing was one and the same thing; or that a farmer who killed a sheep for his own use and sold the skin was not a farmer but a dealer in sheep skins. To illustrate what I believe to be a dealer in Shorthorns, allow me to cite the following: Some years ago I saw the advertisement in one of the American papers of a whole herd of Shorthorns for sale. The proprietor's reason for selling out was that he was going to build a barn, the whole herd to be sold without any reserve; in due time they were all sold, but what was my surprise in just one year after the first advertisement appeared to read that the same person was going to have another large sale of Short-

horns, some 40 or 50 head, and his reason for selling was that he was "going to build a barn;" one year previous to this sale his herd was all sold, consequently he did not breed those that composed the last sale, therefore he was not a breeder but a dealer. Quite an honorable transaction if we leave out the farce about the barn building. Now suppose some of these cattle were next year in the show-ring, and quite likely they would be, for they were represented as being show cattle, and this dealer was a judge, would they come before an impartial tribunal? Not by any means. Would not this dealer be desirous to make his former statement, namely, that they were show cattle, correct?

He then incorrectly charges me with approving of the old style of appointing judges. Not one word that I have ever written will bear him out in this conclusion. The worst features of the old are ingrafted into the new, but more intensified in the latter. I am not in favor of either. I think the method of appointing judges for the Royal in England is far superior to either. In the former part of his letter he infers that he is sustained in his position by a number of the readers of the JOURNAL. From the maledictions I heard hurled at your humble correspondent from around the show-ring at the late London show, I have not the least doubt but that he is. I might also state that dozens of the most prominent farmers throughout the province sustain me in my position on this question, and that it was discussed and made public none too soon.

Thanking you, Mr. Editor, for space granted, I now take pleasure in stating that so far as I am concerned this discussion is at an end.

Sylvan, Ont.

STEPHEN NICHOLSON.

Beware of Retrogression.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL.

DEAR SIR,—Having spent some weeks in visiting the stock farms of this country, I would like to call the attention of the breeders to the fact that in the beefing breeds as a whole, some indications of retrogression are observable. This remark does not apply to every herd, but to a considerable number of them, and I feel it my duty in view of the importance of the subject, to ask the breeders to give this matter their most earnest consideration.

In comparing the average excellence of the leading herds of to-day with that of the herds of four years ago, I feel pretty certain that the palm would be borne away by the herds of the former period. This does not imply that there are not some excellent specimens to be found in each of the numerous herds of this province, but that the number of these is not so great and that the average excellence of the animals in the herds is not so high as it was some years ago.

Two reasons may be assigned for this condition of things. First, the prices for shipping animals and for beef generally has declined. Second, during the past year or two, the prices for good bulls relatively has gone up in Britain, so that it has not been so easy for our breeders to obtain them. The difficulty of their doing this has been further increased by the restrictions put upon importation from time to time in consequence of outbreaks of pleuro-pneumonia in various counties of Great Britain.

The decline in prices is usually followed by less attention being given to the production of the article which has so declined. It is particularly unfortunate that this should be the case with those who purpose to continue breeding the same class of live-stock, for prices may rise considerably in a single year, but the breeder cannot regain lost excellence in his herd for several years. There have been some indications during the past season that prices of meat are going to improve, and if this improvement should continue, of which there is a reasonable hope, it would be most unfortunate if the stockmen were not in a position to take advantage of the increasing trade which a revival of prices would certainly bring to them.

It would be far better to go out of the business altogether than to allow retrogression for one moment to set in, through any indifference on the part of the breeder; for by allowing this, the past honors that a breeder may have won become dimmed, and profitable trade passing by his door is diverted into other channels.

The *immediate* cause of the receding current to which we have referred, is to be found, very probably, in the use of a class of sires, some of which are not equal to what their predecessors were. At least, so it appears the writer after a visit to many of the leading herds of the Province. If I am correct in assigning the cause, the remedy is not far to seek. Every attention will require to be given in the choice of suitable sires. It will not be enough to have them right in pedigree and individuality, but they must also be right as stock-getters. As soon as it is found that a sire chosen to head a flock, stud or herd is not throwing stock of the right type, he should be discarded for stock purposes, regardless of what he may have cost.

The prejudice against the use of aged sires simply because they are aged, has, I think, wrought much mischief in this Province. Sires that have proved themselves exceptionally prepotent and getters of stock of a high order, should not be allowed to go to the block until from age they fail to be profitable. Purchasers are naturally anxious to get young sires that they may use them for a longer period than they could so use older ones, but it would certainly be better every way to choose a middle-aged sire of proved excellence in performance, rather than a young one untried, and all the more so when the former class of sires can be bought more cheaply.

I sincerely hope the breeders of Ontario engaged in the production of pedigreed animals of the beefing breeds, will receive this criticism in the kind manner in which it has been my desire to give it. I have observed with pride that the Province of Ontario in the past has eclipsed every Province and State on the American continent in the excellence and variety of pedigreed stock which she has produced; I rejoiced in common with Canadians when so many sweepstakes prizes were won for Ontario in the great show rings of the United States in the month of September last; and also during recent years, I have looked on with feelings of unmingled satisfaction at the ever-growing current of trade in many of the lines of pedigreed stock during recent years, and I would now faintly cling to the hope that the excellence of the live-stock product in Ontario in the future will still be of such a character as to keep her in the van of all the Provinces of Continental America.

It would be nothing short of a reproach if the breeders of the present and of the past should fail to outdo their predecessors. The herds from which they have to choose are certainly more numerous and varied, and prices of sires are far more reasonable. The principles of breeding are becoming much better known than formerly, especially by the many, and there is improvement in stabling and in feeding facilities all along the line. Will, then, should the breeders of to-day fall one whit behind their former selves or their predecessors? That they see to it that they do not, is a duty which they owe to country and to self.

Guelph, Ont., 1889.

THOMAS SHAW.

Veterinary.

Lameness in Horses.

By F. C. GRENSIDE, V. S., Guelph, Ont.

The evidence of pain or inability which a horse shows in the act of progression is commonly called lameness. From the nature of this animal's work his legs and feet are subjected to great hardship, and consequent liability to disease and injury. Lameness results from a great variety of conditions, as disease of any part of the bones of the legs. It may be cartilage, ligaments, tendons, muscles, the hoof, or any of the structures that the hoof envelops.

Inflammation, the result of direct violence, or the jarring to which the legs are subjected from pounding on hard roads, and occasionally the settling of rheumatic poison in some part of the limbs, may be the cause of lameness.

Violent exertion, or a sudden slip, often causes a stretching or rupture of some or all of the fibres of a ligament tendon or muscle, and is termed a sprain or

strain, which usually gives rise to lameness that will take from a week to two months to repair. Bruises, especially about the feet, are common from picking up a stone, or stepping on a solid projecting body. The use, or rather abuse, of the knife in paring the sole of the hoof, renders the foot particularly liable to this form of injury.

The heels are often bruised, causing what is called a *corn*, from allowing the shoes to remain on too long, or until they become imbedded in the horn at the heel. The toes grow out to an undue length, and act as a lever in increasing the weight and pressure on the heels, until the quick is injured. This practice also has the effect of causing increased tension on the ligaments that support the fetlock, and thereby increase the liability to straining of them.

Those common eyesores called wind galls are aggravated if not produced by this error.

Cracked heels or scratches are often so sore as to produce marked lameness until the skin becomes supplanted by movements continued for a mile or two.

In many cases in which there are local indications of disease or injury, as when heat, pain and swelling are present, or some such obvious source of lameness as a *quarter crack*, there is seldom much difficulty in concluding as to the nature and situation of the trouble, but in some obscure forms of derangement it is often a most difficult task to arrive at a correct conclusion. It is one of the most difficult and anxious tasks that the veterinarian has to undertake.

It is possible, however, in some cases in which there are no local signs of anything wrong, to determine the situation of the trouble, by the manner in which the animal stands, but more frequently by the way in which he moves, or in other words by his gait.

Some of the more palpable cases may serve to illustrate. Standing with one fore foot in advance of the other, which is usually called pointing, is often an indication of pain in the foot or low down in the leg. However, it is in some instances simply a habit, being a position of rest and comfort to some horses, and if unassociated with any tenderness in travelling it is of no importance. Standing with both fore feet forward is a sign of chronic soreness in the feet, and in fact evidence of disinclination to put weight on any of the feet is symptomatic of lameness.

The evidence afforded by the manner in which lame horses move is of more assistance than that gleaned from standing positions.

The presence of a foreign body in the foot, such as a nail, is indicated pretty clearly by the victim going on his toe and taking long steps, especially in case of a hind foot.

Short steps on the toe of a hind foot evidence the existence of spavin, and in some cases this peculiarity of gait may be the only means of determining its nature for some months, or until a bony lump shows itself externally. In the incipient stage of a spavin, in which the lameness is not pronounced, going on the toe may not be noticeable, and the absence of this peculiarity of gait is no proof that spavin is not present.

In splint lameness the affected leg is carried stiffly, there is not the natural bending of the knee.

If the seat of lameness is in the region of the shoulder there is more or less dragging of the leg.

A slow jog trot is the most favorable gait to take observations on the manner of a horse's movements. Have him jogged straight from you, and then towards you: if the lameness is slight the jogging should be done on hard ground.

Tenderness in a foot, although slight, will usually cause increased wincing if the animal is abruptly turned on the lame leg.

Valuable as the symptoms afforded by the gait are, it is always a satisfaction to be able to confirm their indications by a manual examination. Tenderness on pressure, perceptible heat, associated with swelling, are all plain positive signs of disease. The uninitiated are apt to draw wrong conclusions from abnormal conditions that are evident to the eye.

For instance, a horse may have a quarter-crack, ring bone, splint, or some such evident trouble, and it may be causing him no inconvenience, but at the same time he may be lame from a corn; so that one should not be satisfied with a casual examination. Every advantage should be taken of observing the gait, and drawing conclusions from its peculiarities; this, aided by the confirmation of a manual examination, will usually lead to correct conclusions.

In lameness in the fore leg always examine the foot carefully; gentle tapping with a hammer will sometimes find out the tender spot.

In case of a corn, tapping the inner quarter will usually cause wincing. If the seat of trouble cannot be readily found out, the removal of the shoe will facilitate the examination. The use of the pincers often helps to find out the seat of a bruise in the foot.

Having a lame horse immediate attention should be given him.

After removing the cause if practicable nothing is so imperative as rest. In many cases every step simply aggravates the trouble, and delays, if not destroys, the chance of recovery. Many cases become chronic or incurable from being worked a week after showing lameness. Many horse-owners are unreasonable enough to expect relief from medicinal applications or other remedies, while irritation of the part is kept up by work or other causes.

Nature is a wonderful healer, but she cannot successfully contend against exciting causes or other sources of irritation.

It is certainly very annoying to have to lay a horse up when his services are much required, but as a rule it pays much better in the long run. In many cases rest alone suffices to remedy the trouble, but if one cannot arrive at a correct conception of its nature it is better to employ an educated and experienced hand, or at any rate abstain from the use of violent measures. Soothing treatment should always be resorted to in the first stages, where inflammation is caused from bruises, strains, etc.

Poultices or fomentations will hardly ever do harm and generally good, at any rate abstain from irritating applications, such as the ordinary patent liniments, for they usually do more harm than good in the first stages. After acute tenderness has subsided the active remedies may be called for, but should not be used hap-hazard. Time should be allowed nature to repair the trouble, aid may be given but time she must have.

Rubbing off the Mane.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

DEAR SIR,—I own an imported Clydesdale stallion who has rubbed his mane nearly all off. His neck appears to be itchy at all times. Please give us your opinion in the December issue of your JOURNAL as to what will stop him from doing this, and I would also like to know what would be good to make the hair grow again, and you will greatly oblige.

A CONSTANT READER.

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

Wash the mane out thoroughly with soap and water, and apply some water, daily, soaked slightly with oil of vitriol. Restrict the diet, and feed a small quantity of roots once daily. Twice a week instead of roots give bran mash. Give two drachms of bicarbonate of soda 3 times a day in the feed, to which add a table-spoonful of Fennugreek.

The Farm.

Improve the Roadsides.

The roadsides of this country are a standing rebuke to the slovenly ways of our farmers. A majority even seem to make them a dumping ground for stones, broken pottery and sundry kinds of rubbish. If sods are wanted to bank a cellar or for any purpose, they are taken from the highway, the place whence they have been removed soon growing up with thistles. When statute labor is done upon it, little or no regard is had to neatness. Usually the portion of the highway between the ditches and the enclosing fences is most uncouth and untidy, although it ought to be and might easily be made as level as a lawn. We forget that this untidiness costs us dearly when we want to sell, for most men are better pleased with a fine appearing front when they want to buy. If the question were put, what can our farmers most profitably do to beautify their homes and homesteads, we would answer, spend a week or so every year in removing rubbish and weeds from the highway and in levelling the sides thereof, and otherwise adorning it. *Beautiful*, would be written on the face of the landscape if our highways were what they ought to be and what they might be.

Improving Public Roads.

There is no embargo perhaps that costs the farmers of this country so much as one of mud. The condition of the roads, particularly in clay sections, is simply wretched at certain seasons of the year, and where gravel and stones are far away it is difficult to mend matters. Yet it is possible to make them much better than they are. It is possible for any township to have one good leading road running through it, however it may be situated. Most townships are willing to give a very large bonus to have a railroad come that way, who will vote down any attempt to obtain a large amount of money to build a suitable highway. While, of course, it is better to have a good foundation, where gravel is put upon clay, it is surprising the effect it has by way of improvement, when put upon the top of a clay road, if the gravel is not too coarse in character. Clay roads would be much better than they usually are if the overseers would cease scooping dirt upon them from the ditches on the sides after they have once been made, unless for the purpose of filling holes. The road scraper which consists of a heavy piece of timber with an old saw or other piece of metal on its front side, and extending slightly below the wood, with a tongue attached, and drawn by two or four horses, should be run over it as often as it is rough. Where this is done, unless in time of much rain or prolonged dampness, it will soon become almost as smooth as a board, making for the time being one of the best roads in the world.

Narrow Leaved Plantain.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL.

DEAR SIR,—I inclose a weed that I found growing in a field where a crop of clover had been cut. I never saw one of this kind before and I would like to know whether it is a bad weed or not.

Yours truly,

Brantford, Ont.

G. B.

The plant to which our correspondent refers is that commonly known as narrow leaved plantain (*Plantago lanceolata*) which may be properly called a

weed inasmuch as it is of very little use, and hence always out of place, yet it is not a very troublesome one, as it does not spread rapidly and is easily killed by cultivation. In our issue of last August we identified the same plant and described its nature fully and to this we would refer our correspondent.—[ED.]

Wood Ashes.

During the coming winter this useful and valuable fertilizer will accumulate on many farms; on some to be neglected and wasted and on others, that should find more imitators, carefully saved and intelligently applied. It is the hope of increasing the number of the latter that has instigated the writing of this article.

With but very little knowledge of chemistry, any one may readily grasp the fact that the ashes that are left after a piece of wood is burnt contain all the mineral matter that was in it, and so we may satisfy ourselves that this fertilizer contains all the mineral constituents that most growing crops require. Of course, ashes will differ greatly in their manurial value as their origin varies; but, as a rule, there is but a small difference in the ashes derived from the various woods, the variation being due largely to the maturity of the wood that is burned, whether young limbs or twigs or heart wood—the former being somewhat richer in potash than the latter. The species, whether hard or soft, influences more or less the fertilizing value also. For instance, one thousand pounds of spruce will yield $\frac{1}{2}$ lb. of potash, poplar wood $\frac{3}{4}$ of a lb., and oak wood $1\frac{1}{2}$ lbs. As a rule the ashes of soft woods are inferior to those of the harder in respect to their quality. As ordinary firewood varies but little in regard to its age and nature, there is great degree of uniformity in wood ashes, so that we may give the following composition as an example from which there will be but little variation: potash 5 to 15%, phosphoric acid 2 to 6%, lime and magnesia 50 to 75%. According to this analysis, estimating the several constituents at the price they may be obtained on the market at present, hard wood ashes have a value of about 20 cents per bushel, or from \$15.00 to \$20.00 per ton. Leached ashes are worth just about one-half the value of those unleached. Soft wood ashes unleached have a value of about three-quarters of that of the hard in a similar condition. From this it must be noted that wood ashes are well worth saving and should not be wastefully and carelessly thrown aside.

The soil that usually responds best to an application of ashes is one that contains plenty of humus or organic matter, and also sandy soils will be much benefitted as a rule by such applications, for the reasons that the first mentioned contains a great deal of nitrogen in a state, owing to its combination, that is of very little use to the plants, but the carbonate of lime that is in the ashes breaks down this combination and then plants are able to make use of it; and in the case of the sandy soil beneficial results follow owing to the fact that invariably light sandy soils are lacking in potash if they have been at all extensively cropped. Not so, however, with the clay soil. The latter, owing to its derivation from granitic rocks (which are made up largely of silicates of potash) is rarely without an abundance of potash, and hence an application of wood ashes to a clay soil will not be found very often to result in good returns; in fact, the effect is more apt to be detrimental than otherwise, as the alkaline carbonate in wood ashes tends to make such soils cohere and hence acts as

binder of the clay particles, making it harder to work and more difficult to secure a fine tilth.

The crops that give the best returns from treatment with an application of wood ashes are in general terms those that are leafy; or more specifically, clovers, cabbages, hops, potatoes, beans, peas, etc. This is shown in the experiments of Lawes and Gilbert, and the latter sums up the action of this and kindred fertilizers concisely as follows: "Use phosphates for turnips, potash for leguminous plants, and active nitrogen for grain." That is, to carry out this principle more fully and to make its application more clear, use superphosphates, bones, apatite, etc., for turnips; wood ashes, sulphate of potash, etc., for clovers, peas, beans, etc., and use well-rotted farmyard manure, guano, nitrate of soda, etc., for grain crops. As a top dressing for pastures, wood ashes are excellent as they encourage the growth of the clovers and some of the best grasses and in this way crowd out the inferior ones and the noxious weeds.

Wood ashes may be used to compost with sod, or bones, but they should never be used as an absorbent or applied to the manure heap, as the lime in this fertilizer is in the form of a carbonate and hence is caustic, and will cause the loss of nitrogen from the manure. Coal ashes, however, which have little value as a manure, may be used with benefit as an absorbent in poultry houses, as the lime in it is in the form of a sulphate.

FOR THE CANADIAN LIVE STOCK AND FARM JOURNAL.

Wild Mustard.

By D. Nicol, Cataraqui, Ont.

While traversing a large portion of Central Ontario last June I was utterly amazed at seeing the large quantity of wild mustard growing in fields which had been sown with spring grain.

A professor of botany with whom I was in company remarked that a stranger would suppose it was the principal crop grown on some farms. If one were to judge from appearance of some fields at a distance he could come to no other conclusion than that mustard was being cultivated to a large extent as a specialty; especially in that district lying between Belleville and Cobourg. Many fields were so yellow that very few green leaves were to be seen. The yield of grain on such fields could not possibly be but very small as compared with that of mustard seed. I cannot help wondering why any intelligent farmer would continue to sow spring grain on land so completely seeded with this pest, and knowing such to be the case.

If it could be used for any good purpose there would be no cause for wonder, but this kind of mustard, botanically known as the "*Sinapis arvensis*," is not only useless as a food plant but is actually injurious when eaten by cattle. An English paper tells us of the poisoning at "Market Deeping" of thirty-seven cattle by rake-cake, containing an admixture of wild mustard or charlock seed.

"The cake was fresh from the mills the evening before, but they had previously consumed a ton of a similar kind, and partook of it readily. About ten o'clock the three cows which had the largest share and were first served, began to show symptoms of uneasiness, lying down and suddenly getting up again, stretching out their heads, and putting their bodies into all kinds of contortions, kicking and moaning occasionally. By twelve o'clock all the herd, without exception, showed symptoms of colic, and the cows were now almost frantic, rushing unrestrainedly through the yard; indeed, so sensible were they to external impressions that one of those first served

threw herself down in a paroxysm against the wall with such force as to fracture the spine. Eight head died, and the rest did not recover for several days."

There are eighteen known distinct species of mustard including the common mustard (*Sinapis nigra*), the seeds of which, when reduced to flour, make the mustard in common use on our tables, and also for medicinal purposes.

Wild mustard is known throughout Europe as one of the worst of weeds. In England it is called Charlock, Garlock, Chadlock and Kedlock, all of which are the same name, differently pronounced in different counties. In Yorkshire it is called Runsh. It is not indigenous to Canada, and there is no doubt it was imported from Europe among seed grain, like many other of our worst weeds. It has doubtless come to stay, and if the propagation of it continues as at present in central Canada, it will soon become one of the greatest enemies to agricultural progress throughout the whole country.

It thrives on all kinds of soil, in wet seasons as well as dry. The seed possesses a wonderful power of vitality, and will lie in the ground in good condition for ages, and will not vegetate until brought near the surface. It multiplies in some instances over a thousand fold. It is perhaps the most persistent of all our weed pests. There is no way in which it can be propagated more freely than by sowing the seed-stocked land with spring grain. Every owner of such land knows this, and also that wherever his grain is sold and used for seed, the weed is to be disseminated. It has already become a very serious evil, and unless some means are adopted to stop the spread of it it will, in course of time, possess all the land in the country. There can be no profit made in raising spring grain where this weed has possession of the land. Continuing to try seems to be the merest folly. It is only reducing the value of land.

I doubt whether any farmer could during his lifetime clear land of this pest after it is fairly seeded; yet it is quite possible to render it comparatively harmless without much extra cost in labor.

In its green leaf state it is readily eaten by sheep, and to them it seems wholesome food. In warm weather it comes up very quickly after the soil is stirred. Three crops of it can be ploughed down in summer fallow before the time for sowing fall grain, and then the crop that comes up along with the grain can be eaten off by sheep, thus destroying four crops in a season without allowing any to go to seed. Next year, if immediately after the crop of fall grain is taken off, the land is ploughed and harrowed, two or three more crops of mustard can be destroyed while the land is being manured and otherwise prepared for a crop of corn the following year, with which crop several more crops of the weed can be destroyed. It is almost needless to say that if one crop of mustard is allowed to seed you are no nearer the eradication of the pest than if no effort had been made towards it, so every succeeding crop must be of something that will not permit of its ripening its seed.

This can be managed by almost any rotation which does not include a crop of spring grain. Here arises the question about seeding for meadow.

Some of the best new meadows I have ever seen were seeded early in the fall with the corn crop, the corn being cultivated on the flat method without any hilling up. The crop being kept clean by cultivation until about the first of September, when the ground between the rows was made smooth with harrow, and seeded with mixed grasses and Alsike clover. This almost insures a good crop of hay the following year. The crop of mustard that comes up along with grass

is killed by the winter's frost, otherwise it may be eaten off with sheep.

Mustard makes no progress in meadows because the hay crop is cut before the seed ripens. In pasture land it is hardly ever seen, because the young plants, if any appear, are quickly eaten off. On old soil it will not grow, although seeds by the million may be lying dormant under it.

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Central Farmers' Institute.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

SIR,—As I have read the JOURNAL since its commencement, I can assure you that it is highly appreciated, and wish it every success.

I wish to say a few words as regards the accommodation furnished the Central Farmers' Institute in the city of Toronto.

I have been a member for the past two sessions, and was to-day appointed by our Institute for the coming one. We were crowded into what is known as the York County Council Chamber. I do not know what the seating capacity is, but I know there was neither sitting or standing accommodation for the meeting. I happened to be one of the members who had to stand the most of the time.

If the city of Toronto cannot find better accommodation I would suggest that the Executive Committee change the place to some other city where they will be suitably accommodated and welcomed.

I know the city of Guelph can furnish a suitable hall, and their hotel accommodation cannot be surpassed.

Pilkington.

W. L. GORDON.

Banner Oats.

ENCOURAGING WORDS AND SOUND PRINCIPLES.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

DEAR SIR,—In your October No. a correspondence appears from Mr. E. J. Hutchison, of Aylmer, Ont., asking for information about the Banner Oat. Through an advertisement in your JOURNAL, I also bought one bushel of these oats from Mr. Miller. I sowed them with a seed drill at the rate of one bushel per acre, but as the drill did not sow correctly, the ground sown was not more than three parts of an acre. I have just measured the bin that they were threshed into, and find they yielded, according to measurement, 43 bushels. I am satisfied that if it were not for the wet weather, the land being a little low, there would have been 50 bushels. I am much pleased with the result, as I think the yield I got is about all that could reasonably be expected under the most favorable circumstances.

Allow me here to state also my good wishes for THE JOURNAL. If I could afford it I would have it sent to all my near neighbors, and by so doing feel that I was performing a service for my country. I will try and send at least one subscriber with my renewal next month. I am sorry to say I live in a community where very little interest is taken in farm literature or live stock; for myself I can say a pure-bred sire stands at the head of all my animals except my horses, and I have used and will use a pure-bred sire there also. Please let us hear something about the *Devons*. Wishing your JOURNAL prosperity.

I am, yours sincerely,

W. J. MOHR.

P. S.—Would you or some of the readers of the JOURNAL kindly give a plan of a feed rack for sheep, and oblige,

W. J. M.

Selected from Letters.

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

The Dairy.

Features of Norman Butter-Making.

Normandy is noted throughout Europe, as well as America, for the high position she has attained to as a maker of dairy products, not only because of the immense quantity of such that she annually exports, but principally due to the high quality of butter and cheese that is made within her boundaries. For this reason a brief resume of the practices followed there may not be out of place. The principal source of our information is a paper prepared by Prof. R. Leye, of the French National College of Agriculture, read before the British Dairy Farmers' Association. According to this authority Normandy is one of the most fertile and most beautiful parts of all France. Vegetation flourishes, being favored with a rich soil and mild uniform climate. Being further a sharer of the benefits of the Gulf Stream the climate is damp and mild, and this in conjunction with a suitable soil, composed of a mixture of lime and clay, encourages the growth of the most luxuriant pastures. Taken all in all it is said that it is not possible to find better conditions for the successful pursuit of cattle breeding and dairying.

In looking into the practices followed by these renowned buttermakers, there is nothing very strikingly original in their methods; but this fact stands out clearly, that they have engrafted into their system most of the many little items that other makers slight through indifference or neglect through carelessness. The first item in their practice worthy of notice is that the butter-making is all done on the farms and not in large central factories, though their farms are small and the country densely settled. Being nearly all followers of the same methods, and these probably the best known at the present day, the butter has a uniformity of excellence, though passing through the hands of so many different makers. However, most of the butter that is sent abroad is made in the farm dairies, taken to the large merchants, who classify it according to quality, and mix it before sending it to foreign markets. It is a wonder that the creamery system is not in vogue in such a favorable country, for it surely should be very successful where the districts are so well settled, and where, on that account, the cream could be so easily gathered. The gathering of the cream from sparsely settled districts has been the chief obstacle in Ontario to the creamery, but in their case it would certainly be better than their present system.

A feature of the butter-making of these people that commends itself is the simplicity of their dairy and the utensils used, and hence the easiness with which they are kept clean. Cleanliness they recognize in their practice as second to nothing, but is placed foremost. The churn used is the barrel-churn, and this is run by horse-power. The fixed dashers in them is certainly a mistake, but being plain laths they are not hard to clean. The writer before mentioned, asserts that it would not be easy to exaggerate the exactness and care which the dairymaid devotes to her work, nor the cleanliness and uniformity which she is careful to look after. This particular and minute attention, he believes, is next to the remarkably good quality of the milk, a prominent reason for the universal fame of Normandy butter. The dairy consists of but one room, around two or three sides of which there is a slow current of pure cold water flowing in a trough covered and cemented to make it water-tight. The jug-shaped milk vessels, made of copper but tin lined, are arranged around the sides of the milk house on a course of two

of brick work raised above the level of the floor. A practice generally followed to make only the highest quality for the Paris market is to skim the milk after it has set twelve hours. In this way a butter of the choicest flavor and quality is made. This may be explained on the principle that only the largest globules of the fat in the milk rise during that time, and these, as is well known, make butter of the highest quality, other things being equal. Of course the skim milk is richer than it would be if the cream was left on longer, but the cream obtained by skimming at the end of the twelve hours is said to be so excellent and delicate in flavor that the loss in quantity is counterbalanced by the good prices the makers obtain.

One of the most prominent of the phases of their butter-making is the great care they take in stopping the churn at the proper moment. The churn being half-filled with cream, at a temperature of about 57° Fahr., it is started, and a pace maintained of about 30 to 40 revolutions per minute, varying with the season. Under this management the butter comes in 20 to 30 minutes, and all the while the churner listens most attentively so as to detect the slightest alteration in the sound of the churning cream, which would indicate the coming of the butter. When once a change is detected the plug or spigot running into the churn is carefully removed, and it is noticed if any particles of butter are adhering to it. This is kept up until the little butter pellets about the size of a pin's head are found on the spigot or against the small window of glass fixed in the churn, when the churning at once ceases. The churn may be stopped fully a dozen times to observe the stage of the churning, so careful are they to stop at the proper time. A writer who has thoroughly looked into their methods is author of the opinion that the quality of the butter depends upon the earlier or later period at which the washing in the churn is commenced.

The price that this Isigny butter commands in the Paris and English markets speaks volumes for the skill of these people. It sells without difficulty in Paris for something slightly over 2s. 10d. per lb., or about 65c. per lb. in our currency. There are many ideas which we have endeavored to emphasize in their methods which should be engrafted into our practice where conditions are favorable.

Warm Water for Milch Cows,

A recent bulletin of the Wisconsin Experimental station written by Prof. F. H. King, deals with this question and the results are so pronounced and interesting, that we make the following extracts from the report:

On the night of January 21, 1889, six cows were placed in stanchions side by side in two groups of three each, upon a daily ration of five pounds of bran mixed with two pounds of ground oats and six pounds of hay, together with what dry cut corn fodder they would eat up clean, and this ration was not changed until after the close of the experiment, March 25. During this time the cows were fed twice and watered once daily; they were allowed the freedom of the barnyard during the middle of each pleasant day and in every way received similar treatment, except that when one group of cows was getting water at 32° F. the other took it at 70° F. The time of the experiment was divided into three periods of 16 days each, having intervals between them. At the close of the first and second periods the temperatures of the water was reversed for each of the cows in order to eliminate, so far as might be, the individual differences of the two groups.

In plan this experiment contemplated, as its chief object, ascertaining whether it is true, as many farmers believe, that warm water, for milch cows, produces a measurable increase in the yield of milk over that of cold water, and if so, whether this

increase affected the volume simply or the weight of the solids contained to an extent which would make it remunerative, in general practice, to warm the water for cows.

The discussion of the results obtained has shown for these six cows, while under experiment, that:

1. While on warm water they gave on the average 1.002 lbs. of milk per cow per day more than while on cold water, or 6.23 per cent. of the general average daily yield of 16.06 lbs.

2. They drank on the average, daily, while on cold water 63 lbs. but while on warm 73 lbs., or 10 lbs. per cow more.

3. They ate more while on warm water than while on cold, and at the rate of .74 lbs. of corn fodder per cow per day.

4. An increase in the amount of water drank was coincident with an increase in the quantity of milk given and this was true irrespective of whether the water was warm or cold, an increase of 10 lbs. in every 100 lbs. of water drank being accompanied by an increase of 1 lb. in every 100 lbs. of milk given, nearly.

5. They consumed solid food, while on warm water, at the rate of 1.44 lbs. for each pound of milk produced, and while on cold water at the rate of 1.54 lbs. for each pound of milk given.

6. An increase in the amount of water drank when the temperature of the water remained the same, was associated with an increase in the amount of water in the milk without a notable increase in the total solids contained.

7. An increase in the temperature of the water drank rather than an increase in the quantity of it, was associated with an increase in the total amount of solids produced.

8. There was a daily fluctuation in the percentage of water in the milk associated with a fluctuation in the amount of water drank.

9. Five cows manifested a strong preference for water at 7° over that of 32°, but one of the cows showed an even stronger liking for the iced water.

10. With one exception, the cows, while they ate less and drank less during the cold water periods, weighed more at their close and, with three exceptions, they weighed less at the close of the warm water periods.

11. With butter at \$20 per pound, skimmed milk at \$.25 per cwt., corn fodder at \$5.00 per ton, and the cost of warming water for forty cows 120 days at \$15, the results obtained from the cows on the experiment indicate that a net gain of \$21.36 would be realized on a herd of forty cows averaging sixteen pounds of milk per cow per day, and at least \$10 on a herd of twenty, and \$5 on a herd of ten cows. Counting corn fodder at \$10 per ton, the net gain on a herd of forty cows would still be \$12.48.

Cooley Cans.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

DEAR SIR,—I have noticed the Cooley cans recommended in THE JOURNAL several times. 1. Will you kindly explain how they are used? 2. Where they could be obtained, and what would be the price? 3. Would they be easily managed?

Lanark.

A LADY WORKER.

1. The Cooley can is certainly commendable. They are cans about 8 inches in diameter, and 20 inches deep, made of tin, and the chief feature about them that has been patented by the Vermont Farm Machine Co., of Bellows Falls, Vt., who control their output, is the cover, which is so constructed that the can may be completely submerged in the water, which protects the milk from becoming tainted by any odors that may be in the milk house. They are used either in cabinet creameries or by setting them in a tank of water kept at a low temperature, 45° Fahr., which necessitates the use of ice in the summer.

2. They might be obtained from the Creamery Supply Co., of Guelph, or the Dominion Dairy Supply Co., the western agency of which Mr. John S. Pearce, of London, Ont., has charge, and the head office is at Quebec. The price we are unable to give with any degree of certainty.

3. There is little difficulty in using them. They are simply filled with the milk, put in the tank or creamer, and in twelve hours or so according to the temperature of the water, they may be taken out and the skim milk first drawn off, and then the cream through a tap in the bottom. If the Cooley cannot easily be procured, we would recommend our correspondent to entrust the nearest tinsmith with the making of a can, say eight inches in diameter and twenty inches in depth, to be provided with an ordinary cover and no outlet at the bottom, the tap in the Cooley not being an advantage, as the other method of skimming by means of a small conical shaped dipper, with which the skimming may be done from the top, is just as good if not better, on account of the fact that none of the sediment becomes mixed with the cream. A wooden tank should be constructed tight enough to hold the water and deep enough to hold the cans nicely. It should be provided with a cover and an outlet pipe at the bottom, so that the water might be easily discharged. The water in the tank should always be kept slightly higher than the milk in the cans to give the best results.—[ED.]

Salt in the Dairy.

FOR FEEDING COWS.

Considering the cheapness of salt in all the markets of Canada it is a wonder that our dairymen and other stockmen do not make more usage of it in feeding cattle, horses, sheep, and swine; that this is not the case, is due more to negligence than any other consideration. In respect to its use in the dairy proper, the usual laxity shown in choosing brands for preserving and flavoring butter is due more to a want of knowledge in regard to the qualities of a good salt for butter making purposes than to any other reason.

It is a fact that will be endorsed by everyone who has much to do with cows, that the latter always when in a state of health, have a strong craving for salt; and it seems that in no other way may their pleasure be contributed to so largely than by seeing that they get their small mess regularly. Experience has determined this, but at the same time any one at all acquainted with the nature of the animal secretions will at once see that there is an urgent demand for salt in the animal system.

In nearly all the secretions of the many organs of the body salt enters largely into their composition, and not simply of these but of other substances as well; as for instance, the blood contains about 3.29 parts in one thousand, and the bone 3.90 parts in one thousand, and so in many other parts of the animal structure.

In the wastes of the animal, however, the greatest quantities of salt occur, as may be seen in the following. The sweat contains 2.3 parts in one thousand, in the secretions of the skin 37.00 parts in one thousand, in the tears of the eye 13 parts in one thousand, and in the saliva 3.90 parts in one thousand, and so on in varying quantities in all the secretions. From this it will be seen that there is a constant demand for salt while the animal machinery is running. It would further seem that salt has important offices to perform in some way in respect to the secretions of the body. Armsby says it is of use in facilitating the passage of the albuminoids (the most valuable portion of any ration) of the food into the blood, and to a certain extent facilitating the circulation and thus increasing the energy of the vital processes. There is not the

least doubt but that the judicious use of salt increases the appetite and adds to the palatability of the food that is fed. It has been calculated that a cow requires, besides that naturally contained in the food, two ounces of salt daily to meet the wants of her system; a horse, one and a half ounces, and a sheep a dram. A quarter of a pound should at least be given a cow each day. When it is given regularly there is no danger of them taking too much as might be the result if lavishly and infrequently given to them. When taken in excess it is to be remembered that salt is an acrid poison. As to whether the common coarse salt should be used for this purpose, or rock salt, is a matter that has given rise to differences of opinion, and these may be mainly accounted for through market influences. The cow will undoubtedly show a silent, though a decided preference for the coarse granular salt; for the reason that it gives more trouble than she is willing to bear and requires more time than she is prepared to take to satisfy her cravings when she is given the rock variety. This much may be said in favor of the rock salt, namely, that it is much handier to use, and keeping the cows supplied with it does not require so much constant attention. Considering the composition of the two as an element in the matter, would not influence one's opinion, as there is not much difference chemically between the two sorts.

(To be continued.)

FOR THE CANADIAN LIVE STOCK AND FARM JOURNAL.
Dairy Husbandry.

By PROF. JAS. W. ROBERTSON, Guelph, Ont.
(SECOND PAPER.)

THE SELECTION OF DAIRY COWS.

As agriculture becomes an occupation requiring the aid of new agencies and the adoption and application of new methods, we look around us to discover what these agencies may be and to observe the needful character of the methods to be applied. As nations have risen in the scale of civilization they have appropriated to themselves and made use of the service of what are now known as domesticated animals. Man in the savage state depends upon his own legs and feet as a means of getting from place to place, but when he becomes a little more civilized the horse is subjugated as a servant for doing work. As he ascends higher in the scale of attainments he enlists in his service the horse, the cow, the pig, the sheep, and poultry, to provide him with food and to perform labor for him. In order to obtain from these animals the best possible service in all respects, he must exercise and apply his judgment, so as to develop to the greatest extent the powers with which nature has endowed those he wishes to use. The dairy cow is essentially an artificial product, modified and qualified by the exercise of human judgment. The common cow is a creature that comes to us as do other animals—a product of the operation of nature's laws. The qualities which give to her value as a modern dairy animal are the outcome of her original inherent functions led out by the exercise of human intelligence and judgment in her breeding, feeding, selection, and management. Accurate observation and careful study must be given to this subject by the farmer who expects to make a success of it.

After an animal has been developed to its utmost capacity, skill and good judgment must be continually exercised, in order to prevent its reversion to the original state. The cow has naturally the power of producing

less than 2,000 pounds of milk per year; but the dairy farmer, by an enlightened and intelligent exercise of his skill, can so develop that power and enlarge the capacity as to increase the yield of milk to 8,000, or even 10,000 pounds, per year. If that augmented capacity be not carefully preserved, the cow will lose her acquired power, and, if altogether neglected, will eventually lapse into the unprofitable 2,000-pounds-a-year cow. There are now in this province cows by the hundred which would produce annually 8,000 pounds of milk of good quality, if their inherent powers were rightly treated and sustained. It is not that we want so many different breeds of cows in our dairies to make them profitable; but we want better judgment in their owners, that directive capacity which will permit and enable the cows to apply their powers to advantage. A cow for the dairy is a valuable animal just in proportion to her ability and capacity to make milk at a profit, to drop valuable calves, and to make beef of good quality at a cost for feed and care less than its selling price. It is of no consequence whether her body be of large, medium, or small size. The quality of her organization is of first importance. Pedigree, showing descent from a milking family with a good record, is of considerable value in the estimation of some men. I would not pay to cents a pound for such pedigrees, unless their claims were supported and justified by the actual performance of the individual animal specified therein. The valuable productive powers of the animal inhere in or arise from what is commonly called constitution. Constitution is not an acquired quality but an inherited property; it is born into the creature. It may be weakened, spoiled, or wasted by treatment or usage during growth or after maturity is reached. A good constitution implies excellent respiration with large breathing capacity, vigorous circulation, with plentiful girth around the heart, active digestion, and thorough assimilation, with large barrel or feed room. One quality of the constitution may be called temperament. The milking or nervous temperament is usually the possession of cows of a spare habit of body, having a tendency to direct the energy derived from their food to the production of milk rather than to the formation of beef. Possession of these desirable powers and qualities will be indicated by external evidences, commonly called "points."

Specifically these might be described in the following order, which begins with the head and follows around the outline of the animal's body as viewed from the side. The ideal cow should have a broad forehead, a wide poll. The seat of nervous power is in the brain and the room for that organ should be ample. Her eyes should be prominent, bright, and mild-looking. All the better is the indication if they stand out so well as to give the face a dished shape—the hollow up and down the face. Such eyes promise nerve power if their owner be well used. A broad muzzle is a good point. Fairly large and open nostrils should be looked for; but a cow with constantly gaping nostrils is a little too expensive to keep. The face should be rather long, lean, and clean cut. An instructive model for comparison is the face of the blood horse. Waxy smooth horns and fine ears usually accompany the delicately yet strongly-strung nervous organization we seek. The head will be small in proportion to the weight of the body and taper in fine lines. The neck should reveal a strong jointure between the backbone (containing the spinal cord) and the skull. There is a large nervous connection from the spine to the uterus and the udder. A fine tapering neck, with no superfluous flesh, is a desirable point. The top of the shoulder had better be sharp than broad. In a young cow a hollow back is often indicative of weakness. A

slightly arched or straight back is preferable. The loin should be wide, flat and thin. The pelvis—the bony frame-work whereby the hind legs are attached to the backbone for locomotion—should be broad, large, and somewhat arched. A hollow pelvis is the omen of danger from milk-fever or an early breakdown. The ham will be in-sloping and in-hollowing, leaving ample udder room. The shape is merely indicative of the tendency of the animal. The pitch or symmetry of the udder's shape may be ignored except in the case of a "fancy" animal. The surface extent of the udder's attachment to the body is all important. It is generally a measure of the arterial and nervous activity in the milk-secreting glands. Take a side view of a cow in full milk, the line of connection or the line of absorption, stretching from the upper to the lower point of attachment between the udder and the body, may be seen. The longer that line is the better is that "point." A fleshy udder is not wanted. The milk veins are usually in size and prominence proportionate to the flow of venous blood from the udder, consequently the larger the better. Large barrel room is required to hold and permit of the proper digestion of abundance of suitable feed. In such a cow the energy of digestion is allied to the energy of milk secretion. The chest should be deep, leaving full play for the heart and lungs, those vital organs for blood-circulation and purification. Good blood promotes the activity and energy of the nervous system, and thus stimulates the secretion of milk.

To further help the ordinary farmer in the selection of good milkers I add these six paragraphs:

1. The cow should have a large udder, which gland is adapted to the yielding of quantities of rich milk in proportion as it is long, broad and deep in size, and of a fine elastic quality. The skin and hair which cover it should be fine and very pliable.
2. The skin of the cow should be mellow, and easily movable on the ribs and rumps; its covering of hair should be soft and silky.
3. The barrel of the dairy cow is required to be large and roomy; the ribs should be broad and wide apart.
4. The cow should be broad across the loins; her rumps should be broad and long; they should also be wide across the head of the tail; the hips of the cow should be thin, and not closely joined behind for a few inches above the udder. That formation is called an open twist.
5. A comparatively long face, with large prominent eyes and a good forehead, are good points; the muzzle should be broad, and the neck should be tapering and fine.
6. The form might be briefly described as tending to the wedge-shape from three points of view: as looked at from the front, rather sharp on the top of the shoulder and widening to the chest; as looked at from behind along the back, broad and wide across the pelvis and narrowing towards the shoulder; as seen from the side, deep from the back to the lower line of the udder and lighter in the forequarters.

The Provincial Dairy Tests.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

DEAR SIR,—As there seems to be a desire on the part of the managers of the above tests to have them conducted on a solid basis, and as they ask for suggestions for modifications or improvements of the regulations, I should like to aid, if possible, by throwing out a few hints on the same. First, then, what is the point aimed at? I take it to be, Which is the best breed of cattle for the practical dairyman? Now, there are three products of the dairy—milk, butter and cheese. Are the experiments or tests to prove which is

the best cow for the majority or minority? If for the majority, then we must keep in view our cheese industry, as it exceeds greatly the other branches of the dairy. It is said to be a good way in judging stock to choose the one "you would most like to take home with you." So also it would be well to keep in view whether quantity and quality of milk would best serve the purpose of the practical dairyman, that is, for producing cheese, because, although there is much in favor of producing butter, yet the main question to make it pay is, where are we to find a market for an extended production, and who are our competitors in that market? What facilities have we for competing in foreign markets with an article that is as perishable as butter, etc.? It is enough to deal with what *is*, not what *might* be. Practical dairymen know that before our cheese factories commence and after they close, that our market for butter is flooded until the prices are as low as lard. On the other hand we know that we can hold our own and more against the world in the production of cheese. This being the case it is not to be wondered that our cheese production is on the increase. What we need for practical purposes is so evident as to leave no room for argument. It is the cow that will give the most milk of good quality for the production of cheese that we are after. Now for quantity, the scales will tell us that. The point on which we want light is the quality; what is a good balanced milk for the production of cheese? Take that for the foundation, then deduct or add a reasonable amount for any of the valuable properties contained in cheese, and found to vary in different samples of milk.

It is also a fact, that by our present system of co-operative dairying, an abnormally rich milk is of no more value than normal, and milk under normal is not to be desired. If then, the true value of the milk taken to the factories is to be given, then again would we need to revolutionize our present system. But the question comes up, Is an abnormally rich milk desirable for producing cheese even if practical, and how much more valuable would the product be than what we have at present? Our reputation for first-class cheese is second to none. Are we to conclude our standard for normal milk is right?

Supposing we view the recent dairy tests at the Provincial. With the production of cheese in view, which cow in the contests would a practical dairyman "want to take home with him" to supply our cheese factories with milk under existing circumstances? Would the Jerseys with their 19 lbs. to 22 lbs. a day of milk be more valuable than the Ayrshires giving 34 to 36 lbs., even when one is determined to have milk abnormally rich in butter-fat? If then the award as placed is right, it would require a great change in our present system of co-operative dairying. But again, is it not enough to look at things as they are? In fact, be practical. In short, the recent dairy tests prove of no practical value; so large a value being placed on "butter fat," as to out balance every other consideration.

If we compare the work of a lawn mower to a field mowing machine, and place, as the owner of the lawn mower might well claim, great value for "cutting close," the mowing machine man might get badly left, although he might claim his machine could cut close enough for practical purposes, and have much more in its favor on other points. Would a farmer be justified in buying a lawn mower to cut a field of hay? Such contrast is ridiculous, but not much more so than the recent dairy tests from a cheeseman's view.

The fact is, there is a use for all breeds as well as implements; and all are well in their place. The most practical solution of the question before us is to offer separate prizes, keeping in view in each contest the production of milk, butter and cheese, and if some more public spirited individuals will not step up and offer prizes, then the societies should provide for it. But if we are to have only one test, then we protest against our greatest of all branches of the dairy receiving the least attention.

And as to whether it was by "accident or design," other breeds were not represented in the recent tests, I would just say that if this fact draws the attention of the managers to flaws in the regulations and leads to the remedying of the same, so practical dairymen will have confidence in, instead of ridiculing, the conclusions arrived at, there will be "nothing to be regretted" that other breeds were not represented. Certainly other breeders have nothing to regret that they did not enter this contest judging by the adverse criticism which the regulations receive.

R. A. G.

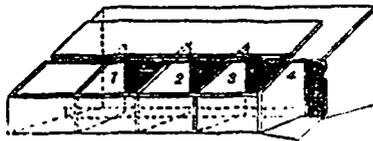
Poultry.

FOR THE CANADIAN LIVE STOCK AND FARM JOURNAL.

Suggestions on Poultry Houses and Winter Feeding.

By D. H. LEAVENS, Belleville, Ont.

The first essential is a good house. This need not be expensive. The site should be dry, and, if possible, be underdrained. Take, for instance, a flock of twenty fowls, as this is about the largest number to keep in one compartment. The house should be 6x12 feet, with 7-foot eaves of tongued and grooved lumber, studding 2x4 inches, sills 4x4 inches, and lined on the inside with tar paper, having a window at the south end 4x5 feet, and 1 foot from the sill. This will throw plenty of sunlight on the floor, which should be composed of sand or gravel. Have a ventilator in the middle of the roof, 4x4 inches, with the top projecting 1 inch. Just under the top bore in holes, and have a slide to close on the inside and an entrance 9x10 inches for fowls to pass in. A single door, 2x6 feet, in the centre of the end opposite the window will do if leading from another building; if not, have two doors, the inner sliding, and both lined with tar paper. The perches may be made of a pole about 2 inches in diameter, of soft wood and with the bark on. They should be 3 feet from the floor, commencing at the door, 1 foot from the side of the house, and running to the second corner of the window, making 8 feet, sufficient for twenty fowls. The nests are put 2 feet above the perch, and placed on the side next the door. I use common inch boards. The whole arrangement is about 5 feet long, 1½ feet high in the rear, 8 inches in front, and the left end-piece is about 20 inches wide



and the height one 10 inches. The partitions 1, 2, 3, and 4, are cut out of a 12-inch board, and reach up to within a few inches of the main roof of the box, thus leaving a walk about 8 inches wide between the nests and the wall. The front board is 8 inches high and 50 inches long, thus allowing about 11½ inches for every partition. The lid is 50 inches long, 10 inches wide, and fastened to the main roof by means of a pair of light strap hinges, to form the nests and steady the partition boards. I use a lath about 3 or 4 inches wide and 40 inches long nailed against the back edge of the nests. The entrance A is about 9 inches wide. On the bottom nail a floor, letting it project over the entrance A, as a step for the hens to rest on before entering the nests. There need be no anxiety about the fowls eating their eggs in these nests. In a sunny corner have a dust-box of sifted coal ashes. A large size fruit-can, with the front part of top edge cut off about 1 inch and back left on, into which a hole is punched to hang it by, makes a good water-dish; this should be filled with tepid water twice a day. The feed must be composed of grain, vegetable, and animal foods. The morning meal, given as soon as they leave their perches, should be made up of either boiled potatoes, carrots, beets, or turnips, mixed into a stiff, dry dough with bran or shorts, and to this can be added at intervals salt, cayenne pepper, and powdered charcoal. Feed this warm, in a trough 4 feet long, 10 inches wide, with ends 6 inches high, the boards on each side being 3 inches high. This makes a double trough, with feed space just wide

enough to keep their feet out of the food. At noon give oat or barley screenings, and at night wheat, buckwheat, or corn. The latter must be fed sparingly, especially to the large breeds. The meat can be given raw or boiled in morning feed. They should also have a turnip or head of cabbage hung up high enough to make them jump for it. The grain ought to be mixed up on the floor, strewn with cut chaff. This will cause them to scratch for it, as exercise is absolutely necessary to obtain eggs.

The Apiary.

FOR THE CANADIAN LIVE STOCK AND FARM JOURNAL.

Dooryards for the Bees.

By R. F. HOLTERMANN, Romney, Ont.

Grass and weeds about the hives often prove very troublesome all the early part of summer, in short, through the growing season they appear to grow with astonishing and annoying rapidity. The warmth from the hive and the moisture about the bottom boards gives them superior advantages, which results in a more than ordinary amount of growth. A mower cannot be run close to the hives, and unless they are moved for a short time, and then returned, all the cutting about the hives must be done by hand. This may be all right for the bee-keeper, but the average farmer will too often allow the weeds to grow, and the bees lose much valuable time through not having free access to the hive.

Of course, grass is cool, and the sun does not strike back on the hives; a very important argument in favor of grass when the July and August sun shines upon a yard of strong colonies. On the other hand, this is an argument in favor of radiating material in the early spring or summer, such as sand, which is often used in the apiary. There is no difficulty in keeping weeds under with it, but it is hot when the sun shines.

Coal ashes or wood ashes after the potash is taken out of them make excellent material for a yard, one that may be easily kept free from weeds. An argument in its favor also is that it is inexpensive. H. R. Boardman, in "Gleanings in Bee Culture," in a lengthy article, states that bees lose much time by dropping, when heavily laden, short of the hive, and crawling over uneven surfaces to the hive. His method is to cut away the grass about the entrance, so deep as to free the soil from the roots, and leave the surface smooth. He says he has tried ashes, sawdust, salt, scalding the grass, and various other methods, but this he thinks the best. Of course, cattle or sheep may be let in at nights to eat away the grass, but this too has its disadvantages.

WHEN TO PUT BEES IN CELLAR.

By this time there is no doubt but that all bees, unless well protected, should be indoors. The question has not yet been settled as to the best time, some favor middle to end of October, others November, but the limits are probably October 15th and November 25th. At the North-Eastern Bee-keepers' Convention held at Chicago, Oct. 11th and 12th last, the greatest number favored about November 25th to get the bees in.

UNFILLED SECTIONS.

Every bee-keeper raising comb honey will find more or less of unfinished sections at the close of the honey season. What to do with these becomes a troublesome question. All sections should be graded; full sections capped put in one grade full sections; but sections capped in another; three-quarters filled in another; and about half in another. These latter do well to

cut up and sell at exhibitions, you get good prices for the sections, and educate the public to consume honey.

Anything filled less than half, however, it will pay better to keep over until next season. The section, half a cent; the foundation in the section another half; and then the labor of putting the section together and the foundation in it are fair estimations. Then there is the work of the bees in fastening and drawing out the foundation. Some argue that the honey put into these sections next spring will not be quite so good, because the cells are deep, and the honey will not evaporate as well as in partially built cells. This in theory is correct, but we doubt very much if the difference will be sufficient to be noticeable by anything but a machine for measuring specific gravity. I believe it pays well to have one or two of these sections in every row in the supers, it will induce the bees to go to work early, and I have seen such sections filled and capped nicely the latter part of April, and as comb honey is scarce then it would find a ready sale. Some argue the bees do not like such sections, and prefer to draw out foundation. This is contrary to my experience, and I fancy such a result must be attributed to other causes.

Now, the care of such sections in winter becomes to many a problem not easy of solution. The honey should not freeze in the sections as it will crack the comb; it should not be put in a damp place as the honey will absorb moisture, swell, and break the cell capping, and even ferment, thus spoiling the honey. The proper place is a dry frost proof room, and even here there is danger, for the mice know a good wholesome food better than some men, and will eat out the honey leaving the empty comb. This latter can be remedied by placing the supers one above another carefully, and covering the top super. The ravages of mice may be prevented to a certain extent by not piling supers too close together on the floor, and allowing space between them and the walls.

ECONOMY.

All hives, frames, honey extractors, knives, smokers, in short, all the implements required in the apiary, should be carefully stored away for use next summer. Honey cans, when not in use, should be emptied carefully, dried, and stored in a dry place. Much loss is occasioned by carelessness in these little matters only felt when they have to be replaced by new and expensive articles, which are for practical purposes no better than those which have been destroyed through carelessness.

Horticultural.

Notes on Tomatoes.

From Cornell University, of New York, are issued the most thorough and practical bulletins of any of the experimental stations, and not the least interesting feature of them is the admirable and thoroughly logical deductions that they make from their data. The present one to hand on tomatoes is an illustration of this. In regard to the culture the bulletin reads: Perhaps the most frequent noteworthy observation made upon the culture of the tomato during several years of experimentation with the plant, is the great increase in vigor and productiveness which comes from careful handling and good tillage. It often appears as if this vigor is not only characteristic of the immediate generation, but that it is hereditary for a time to a prouitable degree. "Handling," or transplanting of young plants, when frequently and properly done, is invaluable,

and so far as the plant is concerned three or four transplantings are better than one. In our own work, in order to get the greatest results from tests, the plants are handled in pots—preferably rose pots—and are transplanted several times. The handling is expeditious, and is not too expensive for the use of any one who grows tomatoes for home use. For market culture we find that two transplantings are usually profitable. Stocky plants, vigorous and growing rapidly, are better than simply early plants, however, and frequency of transplanting in these remarks must not be confounded with early sowing and consequent necessity for several shiftings. Tomato plants—or any plants, in fact—should not be shifted for the simple purpose of preventing crowding or "drawing." Transplanting serves the purpose of maintaining a steady and symmetrical growth, and it should occur before the plant becomes checked from neglect. A good tomato plant, at time of setting in field, is one which is stocky enough to hold the weight of the earth and pot when a number of plants are grasped in the hand by their tops and are carried along the rows. They require no staking when set. A tall and weak plant with a blossom on the top we do not consider worth setting. It is a common mistake to set tomato plants in the field too early. Cold nights, even though several degrees above frost, check the plants, sometimes seriously.

1. Frequent transplanting of the young plant, and good tillage, are necessary to best results in tomato culture.

2. Plants started under glass about ten weeks before transplanting into field gave fruits from a week to ten days earlier than those started two or three weeks later, while there was a much greater difference when the plants were started six weeks later. Productiveness was greatly increased by the early planting.

3. Liberal and even heavy manuring during the present season gave great increase in yield over no fertilizing, although the common notion is quite to the contrary. Heavy manuring does not appear, therefore, to produce vine at the expense of fruit.

4. The tests indicate that poor soil may tend to render fruits more angular.

5. Varieties of tomatoes run out, and ten years perhaps be considered the average life of a variety.

6. The particular points at present in demand in tomatoes are these: Regularity in shape, solidity, large size, productiveness of plant.

7. The ideal tomato would probably conform closely to the following scale of points: Vigor of plant, 5; earliness, 10; color of fruit, 5; solidity of fruit, 20; shape of fruit, 20; size, 10; flavor, 5; cooking qualities, 5; productiveness, 20.

8. Solidity of fruit cannot be accurately measured either by weight or keeping qualities.

9. Cooking qualities appear to be largely individual rather than varietal characteristics.

10. The following varieties appear from the season's work to be among the best market tomatoes: Ignatum, Beauty, Mikado, Perfection, Favorite, Potato Leaf.

11. The following recent introductions appear to possess merits for market: Bay State, Atlantic, Brandywine, Jubilee, Matchless, and perhaps Lorillard, Prelude and Salzer.

12. The following recent introductions are particularly valuable for amateur cultivation: Dwarf Champion, Lorillard, Peach, Prelude.

Edward Kobbin, Secretary and Treasurer of Ameliasburg Agricultural Society, writes:—"Stockmen like the LIVE STOCK JOURNAL, and I think we will take more another year."

Young Stockman's Department.

Prize Essay

CURING PORK FOR HOME USE ON THE FARM.

By HERBERT H. PATTERSON, Jermyn P.O.,
Peterboro Co., Ont.

After the pigs have been killed and strung up until cold, but not allowed to freeze, they should be cut up. First, cut off the head, then split the body up the back, and take out the lard and ribs. Cut each side into four pieces—the ham, shoulder and two side pieces. Saw the feet off the shoulder and hams, and split the head into four pieces.

Then take each piece and rub it well with salt, and pack in a box in layers; sprinkling each layer well with salt. This should be taken out once a week for about a month and all damp places re-rubbed and packed back differently.

When the hams have been in the salt about a week, take them out, cut them into thick slices, and fry until nearly cooked. Then pack it in small crocks, each holding about two hams. Sprinkle each layer over with a little pepper and cover it with gravy. When it is cold put a cloth over it and cover it well with salt to keep out the air. This if put away can be used fresh next summer.

Leave the rest of the pork in the salt until the weather gets hot the next summer, then take it out and put it in a cool dry place until it is needed.

[Though all the essays on the above subject came to hand much later than the 15th, yet owing to the newness of our scheme we have waived this objection in this case. We would remind our young stockmen to send their essays in before the 15th of each month, as those coming later are thrown out of the competition.—E.D.]

Prize Essay.

FEEDING, CARE, AND MANAGEMENT OF FOWL DURING WINTER MONTHS.

By STANLEY EVERALL, Chilliwack, British Columbia.

Get your fowl pen well washed with lime before the frost sets in, so that it will not be falling off the boards. Do not have the pen where your fowl roost for winter too large. If it is too roomy, partition some off to make it warmer. You will find the closer you keep them together the better, as they will huddle together and keep each other warm. Make a feeding house with a few boards, or poles with the sides filled in with small brush, if you can get nothing else. All this may be done at little expense or with little trouble. Let this house lean against the roost-house. Now cut a hole from the roost-house to the feed-shed. Have a trap-door to close at night to keep the fowl in until you have placed them the morning meal. Get some potatoes, Swede mangels, or cabbage, or any of these, and also get some clover hay, and cut these small. Now, get a pot, or, if nothing else, a coal oil tin with the top cut off will do. Boil until tender and mix in a little bran, or in fact any meal, barley preferred. When you think it cool enough, place this in a feed-trough in the feed-house. Let the feed-trough be large enough for all the fowls to get at it at the same time. Now draw the trap-door and you will hear a pretty noise as they leave the roost. The advantage of this feed-pen close to the roost is that on wet or very cold mornings you are able to feed your fowl without their getting wet, or else half frozen, and you may also notice if they are all right and well. They

should be fed at night in this pen with the same food, warm, and if the weather is very cold, a little pepper added. You will now see whether they have all come to roost while they are having their supper, and they will in due time go to their perches contented. Just drop your trap-door and there you have them until morning. Feed at mid-day with wheat, barley, oats, or almost any grain except peas, and change the grain often. Pens are not good for laying hens. Cut some hay or straw, or even saw-dust, if nothing else, for the floor and mix some grain with it, to make them scratch for it. This is good exercise for them. See that they have a dust-bath in the feed-house, where it will keep dry. Feed no more than they will eat up clean, be sure and keep pen clean, and I think you will have healthy fowls and plenty of eggs.

Prize Essay.

THE FEEDING, CARE, AND MANAGEMENT OF A FOAL DURING THE WINTER MONTHS, FROM WEANING TIME UNTIL SPRING.

By R. THORNTON MCGIBBON, Montreal, Que.

We suppose the foal to be in good condition and free from disease when weaned. A warm but thoroughly clean and ventilated loose box must be supplied in which to put him at nights; for as long as the weather remains fine he may spend the greater part of the day in a paddock. This loose box must be free from anything by which he may injure himself, such as a manger into which he may throw himself. He should have a feed of grain, say one quart of oats, in the morning before turning him out, and some good hay. After he is through his feed, he ought to be curried and brushed and his feet picked out before turning him loose. Of course he must be provided with plenty of clean water to drink. When brought in at night, he ought to have a feed of cut carrots, some fresh hay, and a good bed. This feed will be sufficient for the present. If not already halter-broken, he should have a light but strong halter put on him and be led for a few minutes every day, not pulled along but led close, the leader walking at his shoulder. As the weather gets colder, his feed may be increased. He will also require some heating food, such as boiled barley mixed with ground oats, or bran fed about three times a week at night. He may also be given a feed of bran and ground oats, mixed with chaff and a little linseed meal, at noon. If any ground feed is given, it ought to be pure ground oats and not the ordinary "moullée," which is composed of stale flour, etc., enough to poison any animal. Of course the colt will be enclosed most of the time in winter, but he ought to be out for two or three hours every day when the sun is strongest. If any ringbones or curbs appear on the colt, they ought to be removed immediately. The feet ought to be examined for thrush, etc., but if his stall is kept clean he will not be troubled with anything of that nature. The toes must be rasped down occasionally, for if allowed to grow it will cause the colt to stand on his heels. The colt may be trained enough to allow him to be handled with a bit, and to aid in this let him chew an ordinary jointed snaffle for an hour every day. He ought also to have parts of harness put on him, and he may be driven with reins and taught to back. It is a good plan to tie him in a single stall for a while every day, keeping an eye on him. This will accustom him to it before being tied up at night. Colts are best kept in a loose box by themselves than if put two or three together, as one is generally boss, and not only eats his own share, but part, if not all, of the others. As spring approaches, the heating foods ought to be reduced and

root-fed instead. Here is where a good many farmers and horse-breeders make a mistake. Their colts are poorly fed all winter, and when spring comes on they are stuffed with hot mashes, etc. This is a great mistake. It is cooling food that he requires at this time of the year. If a colt is stunted in his first years he will never be of any size.

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 Crops of the Farm*, by Scott & Morton.
3. *The Chemistry of the Farm*, by Warrington.
4. *Hand-book of Agriculture*, by Wrightson.

The conditions to be observed by competitors are:

1. The writer must not be over seventeen 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.

The subjects for the January competition are as follows:

1. The Feeding, Care, and Management of Lambs from Birth until Weaning Time.
2. The Feeding, Care, and Management of Breeding Sows while Carrying their Young.

Subjects for the February competition are as follows:

1. Feeding and Care of Veal Calves for the Spring Market.
2. The Feeding, Care, and Management of Calves intended for the Dairy, from time of Birth until two-and-a-half years old.

Thoughts from the Boys for the Boys.

An excellent essay on the care and management of a foal during the winter months from weaning time until spring, has reached us from the pen of Alex. W. Dewar, Ketch P.O., Ont. Though not treating the subject as fully as some of the others, it is very clearly written and thoroughly practical. Judge of this from the extract we make: "This period of colt life is practically the most critical of his existence, with the exception perhaps, of the first week or two after he is foaled, as the colt is very apt to go back after weaning, unless properly fed and cared for. It is therefore of the most importance that the colt be taught to feed from the hand before he is weaned. We have no trouble in weaning ours as the mare is worked a little or put in at nights when the weather gets chilly; and a colt always wants to put his nose in whatever the mother does, be it water pail or oat box. That is the time the colt should be handled or petted." We can hardly restrain ourselves from giving the whole of it but space forbids us. The advice he gives to handle and fondle the colt when young is sound, and it emphasizes the fact that the colt should be trained and not "broken in." There is a marked difference in the methods and this difference is clearly discernable in the colt in after years.

Stanley Everall, of Chilliwack, British Columbia, also favors us with an essay on the same subject as the above, that shows that he has given much thought to this question. We take the following from his: "When you wean your colt, place him in the best pasture you have and see that he has some kind of shelter to run under in case of heavy storms; it is this that makes the colt grow up ragged and in poor condition for winter. Any kind of water tight hovel will do if you cannot get a better one, and if you have a box or trough placed inside the shed or hovel, here you can give him his first lessons in eating his grain. Take a few oats and place them in a box; he will soon find them out and these will forward him on rapidly, for now is the time to begin to make a fourteen hundred instead of a twelve hundred pound

horse, and the extra two hundred will pay for a lot of grain." The latter part of the last sentence is very nicely put and it contains sterling advice. These two hundred pounds, provided other things are equal, will greatly enhance the price of a matured colt as our essayist says it costs but little more to add it. Again he says, speaking of the colts after they are in the stable: "They will soon get used to the change, especially if gently treated, which must always be the case if you are to make a good tempered colt. We boys like a bit of fun sometimes, but this is the wrong place for it." We would ask every boy who may read this to take this thoroughly to heart. It is sage advice, and not only does it show a kind heart on the part of the writer but good judgment as well. Teasing the colt should never be indulged in. Some boys call it fun but it is a "jug handled" sort of amusement, all on the one side.

Wesley W. Fisher, of Benmiller, Ont., who, by the way, is only fifteen years of age, sends us an essay on the fore mentioned subject which reflects the sound judgment of a close thinker. We take the following from his: "The stable should be well ventilated and cleaned regularly every day, and fresh bedding put in. The foal should be curried and brushed every day. During the winter on very fine days the colt should be let out into a yard for about half a day." The statement we wish to draw particular attention to is that where he says he colt should be curried and brushed every day. Now it is the common practice to never let a curry comb or brush touch the colt until he is about old enough to drive or to sell, as many think that it is not good to do this before that time. What would you think of the boy or girl that had not their face or hands washed once in their lives before they started to go to school for the first time? Now, currying and brushing the colt is exactly similar to washing ourselves. It opens the pores and stimulates the oily secretions of the skin, and it is this that makes a well curried and cared for horse's coat look so smooth and shiny. By all means see that the colt gets his currying or brushing every morning.

Arthur Hunsburger, Tintern, Ont., writes a very concise essay on the same subject of foal raising and we take the following from it: "The colt should be kept in a roomy box stall well lighted and ventilated. It should have plenty of dry bedding and should be kept perfectly warm. I would give it all the hay it would eat and two quarts of oats twice a day and three times a day when it gets older. It should be watered an hour before being fed. I would break it to a halter as soon as possible. A few carrots should be given it once a day." The watering of horses is a question upon which every one has fixed opinions. Some would not let a horse even smell a pail of water if the least bit warm, and others go to the opposite extreme. There is no danger in watering a warm horse if given only in small quantities at a time. Our essayist, however, particularly refers to the time of watering, and his opinion is certainly sound in this matter, but we would go further and say, give the colt a chance to drink just when he wants to, by offering it to him often or having it before him constantly in the box. There is nothing that will secure the friendship of the colt quicker than to give him a few carrots, an apple, or some other little tit-bit. Carrots are splendid for colts and older horses and the writer we quote was one of the few that mentioned them as being so.

We were surprised to find on reading a well written and thoughtful essay by R. F. Howden, of Whitby, Ont., that the writer is only thirteen years old. He writes: "I think a colt should be about four or five months old when weaned. When taken from its mother, I would place it out of her sight, and put it in a box stall with another colt, if I had one, as two colts together will do better than one. I would always keep a good supply of fresh water (preferring milk if I had it) before them. Clover hay with a quantity of ground oats mixed with bran and also a few carrots should be given regularly. Salt should be within the reach of both colts." In the latter sentence the writer draws attention to a matter that has escaped all others. It is very important that the colt should have salt constantly before it for its health and growth. The postscript of our young essayist, however, is what strikes us as a very praiseworthy sentiment. He says: "I am thirteen years of age, and I

intend to follow in the footsteps of my father and be a farmer." This resolve is a good one and one that we would like to hear pass the lips of many more of our farmers' boys.

The extracts given above are taken from a few of the many that we have received. We are pleased to feel that our efforts to enlist the boys in this work have not been useless. We want to have you feel more than ever that this feature of our JOURNAL is solely for your benefit, and the amount you shall receive depends largely upon how you use the privileges we extend to you. Let us hear from you and we shall promise your letter space if not too long. We had an idea that there were many clear thinkers and good writers among our boys, but now we are convinced of it and we are determined to bring all such out of their retreat

Well Done!

A CAPITAL YOUNG HORSEMAN

Editor CANADIAN LIVE STOCK AND FARM JOURNAL.

I saw in your JOURNAL that you would be pleased to hear from any one that had done anything creditable in the way of feeding stock. I had a colt from an eleven hundred pound mare, and before it was five months old it weighed five hundred and fifty seven pounds. I gave it feed three times a day regularly, with only one quart of meal at a time. Regular care is better than stuffing it for a little while, and then giving it but little for another spell.

Yours truly,

OSGOOD MARTEN.

Dresden P.O., Ont.

Excellent Returns from Poultry.

A PROMISING YOUNG POULTRY FARMER GIVES HIS EXPERIENCE.

DEAR EDITOR,—I see you are taking an interest in we farmers' boys, so I am taking an interest in you and am going to give you my experience in poultry keeping in cold weather, though perhaps my first attempt will probably and deservedly find its way to the waste-basket.

My house is 20x30, divided into two apartments, a roosting-room and feeding-room. It is made of pine boards, filled in with saw-dust and lined with tar paper on the inside. Water will not freeze in it in the coldest weather. Of course it has to be warm, for I keep Leghorns, which I think is the best breed for me, eggs being the object. Their feed in the morning consists of bran and wheat middlings, scalded with meat and clover alternately. The clover hay is cut fine and steeped in hot water. A little middlings mixed with this is very much enjoyed by the hens, and it is also very egg-productive. Then, I have a scratching place, where I bury wheat, to keep them working through the day. Then at night they get all the oats and barley they want to eat. A dust-bath and gravel are always handy, with fresh water in a fountain every morning. Two or three times a week I feed them sunflower seed, which they relish very much. Then for a change, to provide them with green, tender food, I take a shallow box, put in some earth and sprinkle some oats over it. Over this I put a thin layer of sand, cover it up, and let it stand. In a few days the oats will be up, and in five or six days all will be a mass of roots and blades, which is greedily devoured by the fowls. This, with removing the droppings every morning and keeping the house clean, free from vermin, is the care that my fowls get. But some would think this would take half a day. It does not take me as long as it did to write it. My fowls made a clear profit of \$100 during the year, and this in the face of the fact that food has been dear and eggs cheap. I have 80 hens. Then the pleasure and knowledge derived have been worth nearly as much to me as the money. Then, again, if the hens be through moulting and in good condition, which I deem of great importance, I will before long have my egg basket filled, as was the case last winter. But it is time I quit my already long letter.

Breslau, Ont.

EDWIN S. SCHNEIDER.

Publishers' Column

Crowded Out.—Our columns this month are so pressed with ordinary reading matter and advertisements that our editors say we can have only a "little corner" in which to say anything about business.

Our Next Number. Our next number—that is, the one for January 1st—will be a special one. We shall print an unusually large edition of it, and it will be well for those desiring to advertise for the first time to take advantage of this and send in their advertisements, so as to get them inserted in this special number. See our advertising columns for rates, etc. Advertisements for that number should reach us not later than the 15th of December.

Specimen Copies.—If at any time our friends want to give specimen copies of THE JOURNAL to friends, for the purpose of inducing them to subscribe, we shall be happy to furnish them on application.

The Journal is Going Ahead.—Never before has THE

Advertisements.

To Advertisers. Advertisements of an appropriate nature will be inserted in the JOURNAL at the following rates: For a single insertion, 18c. per line, nonpareil (12 lines make one inch); for three months, 15c. per line each insertion; for six months, 12c. per line each insertion; for one year, 10c. per line each insertion. Cards in Breeders' Directory, not exceeding five lines, \$1.50 per line per annum. Copy of advertisements should reach us not later than the 25th of each month (earlier if possible). If later, it may be in time for insertion, but often too late for proper classification. Transient advertisements payable in advance. No advertisement inserted for less than 75c. Contracts broken by involency or otherwise will revert to the casual rate of 18c. per line each insertion. Advertisers desiring to obtain extra copies of the JOURNAL may do so at the following rates: Per dozen, \$1.00; per 100, \$7.50 (in lots of not less than 25). A reasonable number of copies will be sent at these rates to any address supplied by an advertiser, with the advertiser's own advertisement marked, and a notice on the wrapper calling attention to it. In this way the advertiser will be saved the trouble and expense of addressing and mailing.

STOCK FOR SALE.

JERSEYS FOR SALE

Several Milk and Heifers; choicest strains. Prices low. Sempe. Write to G. M. BEEMAN, NAPANEE, ONT.

JERSEYS, LAKEHURST HERD OAKVILLE, ONT.

St. Lambert and other noted strains—all registered in the American Jersey Cattle Club Register. Also Berkshire pigs. Stock for sale on inspection invited. Address

T. E. BRAMELD,

Lakehurst Jersey Farm, Oakville, Ont. Oakville station on G. T. R. Midway between Toronto and Hamilton.

AGAIN TO THE FRONT.



Pekin Ducks, Plymouth Rocks, Light Brahmas, Black and Brown Leghorns. The above have won highest honors at the leading shows this fall.

Stock for Sale
W. B. COCKBURN,
novd Aberfoyle, Ont.

AWAY AHEAD AGAIN.



PRIZE-WINNING BIRDS FOR SALE. Light and Dark Brahmas, Plymouth Rocks, Langshans, W. F. Black Spanish, Houdans, Colored Dorkings, Bronze Turkey, Rouen and Pekin Ducks, Toulouse Geese. Upwards of 116 prizes at the recent Poultry Shows.

EGGS FOR HATCHING IN SEASON From the highest-scoring birds in the Dominion. Send three cents for circulars. Birds and prices right.

Wm. Hodgeson, Box 12, Brooklin, Ont.

W. C. G. PETER,

Importer and Breeder of Light Brahmas, Silver-Laced Wyandottes, Barred Plymouth Rocks, Rose-Comb Brown Leghorns, Rose-Comb White Leghorns, Single-Comb White Leghorns, Langshans, Red and Silver Duckwing Game Bantams.

Eggs, \$3.00 per Setting, 2 Settings for \$5.00.

Stock for sale at all times.

Send for Circular.

ST. GEORGE POULTRY YARDS, ANGUS, ONT.

JOURNAL been so prosperous as it is at present. New subscribers are pouring in upon us from every part of Canada, and our advertising patronage is being gradually enlarged by orders from advertisers of the most desirable class.

Our Premium Plans.—Our premium plans have aroused a great deal of interest. We have received enquiries in regard to our *watch premium* from a great many boys and young men, many of whom have written us that they have their clubs of ten or twelve nearly completed.

Names of Our Young Workers.—Among our young friends who are working for us in order to secure new subscribers are the following:

J. F. Pringle, Jr., Chatsworth	W. J. Kennedy Ballymore
A. Pringle, Jr., Chatsworth	Albert Junkin, Fenelon Falls.
S. F. Fraser, Bradford	George Langdon, Kenilworth
W. D. Moore, Georgetown	J. A. Stewart, Menie
Weston Williams, Linwood	James Hay, Midway.
R. M. Hood, Ellesmere	John Robertson, Adelaide.
D. Campbell, Corshin.	T. T. Brown, Tilsonburg.
J. Ballantyne, St. Marys.	Charles Shipman, Kemptville.
I. M. Fawcett, Drayton.	J. P. Ficht, Oniel.
Isaiah Hunsperger, Haysville.	F. Ingram, Menie.
S. A. Ingham, Lemonville.	Alexander Wright, Dutton.
J. Brent, Warwick West.	Johanne Colley, Castreberg
James Riddell, Lara.	Archie Anderson, Anseley.
A. Hughen, St. Marys.	Harry Perry, Lloydtown
G. D. Fortune, Wrovetter	Thomas Young, Erin.
William Lyons, Salmonville.	Charles Stevenson, Wakefield, Q.
Robert Crawford, Canboro	W. H. McCallum, Ravenswood.
S. C. Parke, Berwick, N.S.	Walter Cross, Beeton.
Alexander Reith, Devizes.	Edmund Schaub, Wellesley
Henry Murphy, Strathfordville	Arthur Meigher, St. Marys.
D. C. Smith, Duart	Andrew Mullin, Hillsburg.
G. A. Bone, Paris.	E. S. Miller, Parry Harbor.
James W. Douglas, Wrovetter.	Edwin Harris, Rockwood
W. J. Wilson, Dickenson	E. Cox, Collingwood

The above are some of our co-workers for watches only.

As yet as we go to press, Master D. W. Moore, of Georgetown, Ont., writes us sending in 12 new subscribers, and asks for "an open faced, stem winding watch, which shall be sent to him without delay. Master Moore is the first one to win our watch premium. Next month we trust to be able to chronicle the names of very many winners. We are quite sure no boy will regret having worked to obtain one of these valuable watches.

If You Want Information.—If anyone wants information respecting our *watch premiums*, he will find it fully detailed in the November number. If that be not accessible, let him write to us and we will send him full particulars at once.

For Other Special Inducements. See issue for November, page 309.

For "Our plan of Trial Subscriptions." See issue for November, page 309.

For Our Great "Weekly Newspaper Offer." See issue for November, page 309.

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 be 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 of the picture until the stock is exhausted.

How to address your letters.—Address all correspondence to THE J. E. BRYANT PUBLISHING COMPANY (Limited), 53 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.

Stock Notes.

Matter for these Columns, partaking of the Nature of an Advertisement will not be inserted.

Horses.

See G. Ballache's new card in our directory. On his stock farm at Brantford this gentleman makes a specialty of Percherons, Shorthorns, Shropshires, and Berkshires.

An imported Clydesdale stallion is offered for sale by Mr. E. P. Ball, Lee Farm, Rock Island, Que. He is said to be a prize winner, sure sire, and kind dispositioned. A coach or carriage stallion, or Standard-bred trotting mares, will be taken in exchange. Read his advertisement.

Mr. Burr, Tullford, has purchased two yearling Clydesdale colts for exportation to Mr. Armin Rossier, Brampton, Ontario. One is got by the noted McCamon, and the other by Young Lord Keir. Mr. Burr supplied a pair of colts to the same breeder last year, and they have done so well as to induce Mr. Rossier to come back for more Aberdeenshire Clydesdales.—*Farming World.*

The Clydesdale stallion, Rising Sun (62), owned by Mr. Robert Blair, of Almonte, Ontario, has won the following prizes in the show-ring: in 1884, and at Pakenham Agricultural Society, and at Armprior Agricultural Society, and at the Provincial Exhibition, Ottawa, and 1st at Almonte North Riding of Lanark Agricultural Society. In 1885, 1st at Pakenham Agricultural Society, and 1st at Almonte North Riding of Lanark Agricultural Society. In 1886, 1st at Perth South Riding of Lanark Agricultural Society, 1st at Almonte North Riding of Lanark Agricultural Society, 1st at Pakenham, and 2nd at Renfrew South Riding of Renfrew Agricultural Society. In 1887, 1st at Almonte, also 1st for best stallion and five colts for farmers' use at same. In 1888 and 1889, 1st at Almonte.

Not the least important amongst the many recent shipments of Clydesdales is that of Mr. Angus Mackenzie, of Lucknow, Ontario, who sailed lately with that magnificent three-year-old Clydesdale horse Silver Prince 653, purchased from Mr. James Clews, Woodneuk, Barrhead. This horse is full brother to Mr. Riddle's famous Prince of Avondale, winner of Glasgow prize two years in succession, and twice first at the Highland Society shows. Mr. Mackenzie also took with him a most promising yearling from Mr. Barr, Bannockburn, Eagle-ham, and winner of second prize at Mearns and Eagle-ham shows this season. Mr. Mackenzie deserves every encouragement for his pluck in purchasing such high-class horses, and we heartily wish him a safe and prosperous voyage. These horses will be sure to be heard of on the other side.—*N.B. Agriculturist.*

Mr. R. Auxia-Tureme, the secretary of "The Company of the Haras National," of Montreal, Que., writes us that they have sold a full-blooded four-year-old Percheron stallion Bertrand 1837 to the monastery of Oka, Quebec, for \$1500. The Percheron and Arabian Horse Importing Co., of Fremont, Nebraska, U.S.A., and Buffalo Gap, Dakota, U.S.A., one of the branch houses of their company, has sold six Percheron stallions for \$9840, three French Coach stallions for \$4900, and 50 Western horses for \$5800, all in October last. It will be remembered that this company was well represented by a couple of superior Percheron stallions and two capital French Coach stallions at our late Toronto Industrial. In the past these importations have gone almost altogether to our southern neighbors, but they are now seeking to enlarge their market in Canada. They would direct all our readers to their new advertisement which appears in this issue.

H. H. Spencer, of Brooklyn, writes: In Clydesdales my choice mare, Lady Bett 2779, in the A.C.S.B., gave birth to a fine horse colt, sired by the noted imported stallion Tannie Hill. He promises to be an extra colt. Euston Bess 2780, in the A. C. Association, gave birth to a choice filly, sired by Sawyer's Baron Queen 4594, A.C.S.B., which is something very promising. The yearling filly, Bonny Bess 4595, A.C.S.B., is a very heavy framed, with lots of silky hair on her legs. The superior yearling stallion Prince of Dorset 4473 is getting to be a most stroust colt, with excellent points. In Shorthorns I have a nice lot, most all reds, and all descended from that prolific cow Isabella 3rd, from Campbell stock. She is now 13 years old, and is still a breeding cow; her descendants are all got by imported Cruikshank bulls, and it is just what is sought after for beefing qualities. I have on hand some growthy bull calves, which are about ready for service; one of which took and prize at the Ontario and Durham Exhibitions; I also took 1st prize on three-year-old cow, and first-prize on heifer calf. In Berkshires I have a very choice lot of fall pigs. Dorset Queen the 4th 188 has 7 very fine pigs, 6 weeks old, with very little white, and all marked alike, they are really a very choice lot. Dorset Queen the 6th 545 has a very fine litter, now 6 weeks old; all sired by registered boars. I sold my flock of Shropshires last year, partly on account of fearing the destruction of them by the curd, which destroyed number of flocks in this section of country last year; it's a great pity that a much heavier tax cannot be put on such pests, for sheep-raising would be a source of great wealth to our country; as our climate is so well adapted for that industry. A different system of farming is much required in this section of country, as grain growing for the market is about drawing to a close. Stock raising and dairying must be more adopted. It is considered by many that a creamery would be very beneficial just in this section of country, we think it a rare opening for parties that understand that branch of business.

Cattle.

Young Shorthorn bulls and Berkshire boars are offered for sale by Mr. Edward Jeffs, of Bond Head, in this issue. See his advertisement now, or you will blame yourself for missing this chance after it is too late.

Mr. S. Shunk, jr., of Edgely, Ont., who is giving up farming, will sell by public sale, on the 18th of December, his entire herd of Holsteins, also a few pure-bred Clydesdales, a road horse, and all his farm implements. An excellent opportunity for some one. Be sure and notice his advertisement before it is too late.

Mr. F. C. Sibbald, of "The Briars," Sutton West, writes us: "We have had a very prosperous year. Grainary, large barns, and stables full of feed; too large loads of hay from a 30-acre field, mixed timothy and mammoth red clover; 22 calves from 20 cows, all alive excepting one with 3 mares foaled, and 3 sows (cross between White Suffolks and Berkshires) farrowed, averaging 8 each; sold 17 pure-bred Shorthorns, 8 horses, and 20 pigs; pasture was excellent, so that all the animals were housed early in the month in good condition."

STOCK FOR SALE.

BERKSHIRE BOARS
FIVE IMPORTED BOARS

8 to 12 months old. Will be sold at or under cost. We have also a few good Young Boars, home bred, fit for use. Prices reasonable.

We ship to order and guarantee Satisfaction.

JOHN SNELL'S SONS,

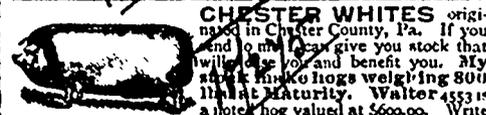
Edmonton, Ont.

CHESTER WHITES FOR SALE. Four choice four months old. Those in want of a first-class boar should not miss this chance. Apply to

R. & J. GURNETT,

Ancaster, Ont.

MR. G. BALLACHEY, BRANTFORD. Has a number of excellent Berkshire Sows and Boars of all ages, and a few young Shorthorn Bulls, which he offers at very low prices.



CHESTER WHITES originated in Chester County, Pa. If you need to make your stock that will give you and benefit you. My stock of hogs weighing 800 lbs. at maturity. Waiter 4553 is a noted hog valued at \$600.00. Write me. I guarantee my stock and satisfaction. **C. E. MORRISON, Londonderry, Pa., U.S.A.**

MERINO SHEEP

Not having room to winter the whole of my flock I desire to dispose of

Ninety Pure Bred Merino Ewes

They are a good lot with heavy first-class fleeces and of excellent breeding. They make rapid sales. I shall offer them cheap. Write at once for prices and full particulars to

ROCK BAILEY,

Oak Grove Farm, UNION, Ont.

Imported and Canadian-bred Shropshire Sheep

For sale, registered pedigree. Agent for Dana's Sheep and Cattle Labels. **J. N. HUNKIN, Brucefield, Ont.**

SOME CHOICE SHROPSHIRE RAM LAMBS,

Superior Milk and Berkshire Pigs For sale from good stock. Address F. J. Ramsey, Dunnville, Ont. Pigs at 6 weeks old \$5.00 each.

DORSET HORNED SHEEP.

YORK & HAZELWELL Importers and breeders. Ewes, ewe lambs and rams of color. Write for particulars and pamphlet which will be forwarded post paid. Address **PORT CREDIT, Ont.**

Shorthorn Bulls.

1 Bull, aged 5 years; 1 Bull, aged 19 months; 1 Bull, aged 12 months; 1 Bull, aged 12 months. All of Dorset and 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.

SHORTHORNS FOR SALE.

We now offer for sale our Stock Bull Rosy Prince the 6th, (3 years old), also good bulls and a few heifers sired by him, and registered in S.H.B. Will sell on easy terms. Come and see us to get the prices and pedigree to

GRAHAM BROS,

Ailsa Craig, Ont.

YOUNG SHORTHORN BULLS

Five young Shorthorn Bulls and a lot of Berkshire Pigs FOR SALE. Will first class and will be sold cheap. Send for catalogue and prices to

EDWARD JEFFS, Bond Head.

MAKE YOUR POULTRY PAY.

SEND SUBSCRIBE FOR THE "POULTRY MONTHLY." The Best Poultry Paper Published. Send One Dollar and get it from now to end of 1890.

CHAS. BONNICK, Toronto, Ont

Mr. Wm. Wilson, Hadden Hill Farm, Brampton, writes us: My herd now numbers twelve head and all doing well, and I have sold all my bull calves of last year's crop at fair prices, and my herd is now headed by the imported Goldfinder Ear and, and he tips the beam at 1,600 lbs. and is two-years old, and I have a white steer ten months old, tips the beam at 800 lbs., sired by Endymion imported.

Enhance the butter making qualities of your herd by buying the Guernsey bull offered for sale in this issue, by Messrs. Wm. Davies & Son, of Kincross Farm, Markham, Ont. This bull, it is stated, is fashionably bred, and is only disposed of to avoid interesting. Two Ayrshire cows are also offered by this firm. They desire to dispose of these as Guernseys are their specialty. Look their advertisement up.

A four-year-old Shorthorn bull, such as Waterloo Duke 16th, that has been used for stock purposes is not very often offered for sale. But owing to frequent and continued use in his owner's herd, he has to be disposed of to avoid too much inbreeding. He will either be exchanged or sold. See the qualities of this bull, as given in the advertisement, and write the owner, Mr. Wm. Temple, Jerseyville P.O., Ont., for further particulars.

Mr. J. B. Ridd, of Santon Court Farm, Rothesay, Ont., writes: "Out of 20 calves I had 17 bull; this spring; 15 of them are registered in the Dominion Shorthorn Herd-book, and a very even lot they are. I have made the following sales this fall: Yearling bull British Sovereign to Mr. B. Smith, Moosejavi, N.W.T.; heifer, Pransy 6, and a bull calf to Mr. R. Wilson, Moosejavi, N.W.T.; young bull, Duke of Gordonville, to Mr. John Johnston, of Gordonville, bull calf, Baron Hope, to Mr. Thomas McManus, Goldstone; bull calf, Grand Duke, to Mr. John Kearns, Palmerston, General Middleton to Mr. Richard Phillips, Bosworth, two 2-year-olds, Rosebud of Rothesay 3rd and Princess, to Mr. J. Jackson, of Palmerston.

Wm. Davies & Son, Kincross Farm, Markham, Ont., writes us: "The delay and expense of quarantine is very annoying but needful, it has at last come to an end, and our Wisconsin Guernseys have reached their new home safely, they numbered to when they started, but are increased to 12. They are greatly admired. Doubtless we shall require to use your advertising columns in the spring to sell the surplus bulls; we found advertising last summer had the desired effect, as our young bulls have found their way to the extreme west and east of the Dominion. Our imported Yorkshires are doing well and increasing. We are also selling them readily, and what is better they are pleasing the purchasers."

A. & G. Rice, of Oxford, writes: We have disposed of our yearling Holstein bull, Althea's Promoter, Netherlands, bred by that celebrated Holstein breeder Dallas B. Whipple, Cuba, and imported by us last spring. This bull is richly bred, combining the blood of Netherlands and Promoter, grand dam Almour, a sweepstakes and prize cow at Dakota and Minneapolis State Fairs. Good results may therefore be looked for from his stock. The purchaser is Mr. Chas. Hulet, of North Norwich (the cradle of co-operative dairying). Mr. Hulet is a large and practical dairyman of many years' experience, and farms 400 acres of fine land. Being progressive he has secured a few Holstein cows to found a herd, and now, desiring to introduce new blood, believes that "the best are the cheapest."

Smith Bros., of Churchville, Ont., write: "On the 6th of next December our eleven head in quarantine will be brought home. The two cows, Jougste Aggie and Marian, are in the Advanced Registry, and have made good milk records. The nine heifers are a uniform lot, and most of them are from imported stock. They give promise of becoming first-class dairy cows. The foundation herd from which these are descended were selected with great care, and are considered as one of the best herds in Michigan. We have six young calves from our Mink's Mercedes Baron, which are the best young lot we have ever had. They are beautifully marked, and of fine appearance every way. Two of their dams are now giving over 50 pounds of milk a day and are still increasing, whilst one three-year-old, Belle of Orchardside and, has already run well into the forties. Intending purchasers will find it to their advantage to look at our stock."

G. F. Ben-on, of Port Cardinal, writes: "I am inserting a short paragraph in your 'stock notes' this month chiefly to announce the sale of nearly all our Shorthorn herd to Mr. W. C. Edwards, of Rockland, Ont. I have had some enquiries about Shorthorns since making this sale, and so I thought it better to give notice at once that I had disposed of the majority of the stock. In fact, I may say all, as I have now only two cows and four bull calves, which I am ready to dispose of when opportunity offers. I had to take this step, as a large portion of the farm was sold this year, and other business in the future will occupy a good deal of my time. The Hereford herd are doing very well and will be reserved for the present, unless a good opportunity offers for disposing of the centre and main portion of the farm. Our hay crop was a little light this year, but hay in this section at present is very cheap. Our crop of turnips was very fine this fall, and as we planted about three acres, we have several hundred bushels to dispose of. We have a fine specimen of a turnip weighing 25 pounds."

A. C. Hallman & Co., of New Dundee, write: The summer is now over, and our Holstein-Friesians have taken up their winter abode. We are pleased to say that we are in better shape than ever to suit our customers. Our herd now numbers 51 head of different ages and sexes, and representing the choicest families of the breed. Our young herd bull, Netherlands Statesman Cornelius H.F.H.B. 6337, is going to prove a valuable addition to our herd; we have three calves sired by him, one bull and two heifers, they are excellent quality and very choice. Prof. Robertson, Ontario Agricultural College, Guelph, some time ago carefully examined him, and very highly commended his fine dairy qualities. We have just made a sale which we consider of more than ordinary importance, we sold a young Artis bull, Artis Loraine H.F.H.B. 13869, son of Prince of Artis, of Smiths, Powells & Lamb's fame, dam Lady Loraine H.F.H.B. 1091; she made 12 lbs., 5 oz. butter in a week as a two-year-old, imported last summer. Messrs. Quickfall, Snyder

A Co., Waterloo, are the purchasers. This young bull has gone right amongst the Shorthorn breeders, which have won many a "laurel" for our noble country. We just received a letter stating that they are well pleased with their bull, and that the neighbors have been in to see him and like him well; and that he is well pleased that they are making inquiries with the intention of purchasing females. There have been some Holstein grades in that section which has no doubt led to this important sale; proving again where Holstein-Friesians have once gained a foothold they are bound to stay. Parties desiring choice stock will find it to their benefit to examine our herd carefully in point of rich breeding and individual merit.

Sheep.

Messrs D. G. Hamner & Sons, of Mount Vernon, Ont., who always have stock for sale, make a change that should be seen in their breeders' card.

Mr. Rock Bailey, well-known as a successful breeder of Merino sheep, is forced by want of room to sell ninety of his Merino ewes. Here is a chance for bargains. Look up his advertisement and write him at once, if you want the first choice of a fine lot.

Mr. Robert Douglas, of Aberfoyle, P.O., Ont., who lately called in to see us, has been very successful as a breeder of Cotswolds, having won the diploma for the best pen three successive years at Guelph fair, where the Cotswold is always strongly represented, as there are, perhaps, more breeders of this breed just in this district than in any other in Ontario. Mr. Douglas reports the demand for Cotswolds good, which is due largely to the market in the Western States.

John Campbell, jr., of Woodville, writes: From Fairview Farm several shipments of ewes bred to the prize-winning rams of this year's importation have been sent out. An extra good lot of ewe lambs has been sold to Mr. Seth Silsby, New York State, and a fine ram lamb, to Mr. C. H. Rowe, Orillia, Ont. No shearing rams are left, all ram lambs but one sold, and quotations asked for the pick of next season's lambs by a party from across the line, are evidences of how the Fairview Shropshires are suiting the market. During the past two months the demand for rams has been altogether for real good ones for pure breeding, as large lots for ranching are secured earlier in the season.

Mr. Henry Arkell, Arkell, Ont., writes us: "Mr. George McKerron, of Sussex, Wisconsin, writes me that he has been very successful in the showing at the leading fairs in the United States with his sheep. The Oxford Downs were all purchased from my flocks, and were fortunate in gaining first-prizes over some imported from England. I have lately sold out all my Cotswolds to T. W. Jackson and Jos. Karn, of South Bend, Indiana, and intend going more extensively into Oxford Downs. Have sold one Oxford ram and ewe to B. R. Marsh, Thornbury, Ont.; and one ram to John Taylor, Ancaster; one Berkshire boar to Wm. Watson, Arkell; and one boar to Jas. Porter, Linwood, Waterloo Co.

Smith Evans, of Gourock, Ont., writes: "I have recently sold the following Oxford Down sheep to Geo. Mackerrow, Sussex, Wisconsin, three shearing ewes, two ram lambs, and two ewe lambs; to James Hislop, Wingham, one ram lamb; to Archie McDonald, St. Marys, one ram lamb; to J. G. Campbell, Simcoe, one shearing ram; to S. A. Lyon, Kingston, two shearing ewes; to Edwin Edwards, North Wilshire, Prince Edward Island, one ram lamb weighing 16 lbs., and two ewe lambs; to S. S. DeArman, Frankland, Pa., two ewe lambs. All are recorded in A.O.D.R.A. I find the demand for Oxford's increasing every year. I cannot begin to supply all my orders. My last importation of one ram, and three ewe lambs are doing excellently."

John Snell's Sons, Edmonton, Ont., write: "Since the close of the fair there has been a very steady demand for Cotswolds, and our orders have come in thick and fast, from a dozen or more States and nearly all the Provinces. Sheep have been in perfect health this summer and are in fine condition for winter. Our imported rams, Magna Charta, and Royal Seal, in service seem to have made sure work, and we ought to have a good crop of lambs. A healthy feature of the trade has been the increasing demand among the farmers for ram lambs to grade up their sheep. All can afford to do this and it is the surest paying investment the farmer can make. "Blood will tell" on grades, as well as through breeds, and well-bred sheep don't eat any more or need any more attention than scrub, but will make a vastly better return for what they get."

Geo. A. B. Deo, of Newsaram F.O., writes: Many of your readers doubtless know by this time that we make a specialty of breeding pure-bred American Merino sheep, and sell them too. We shipped two pairs of breeding ewes on the 1st of November to Joseph D. Seaman, of Charlottetown, Prince Edward Island. Mr. Seaman is the first to introduce Merino sheep on the Island, and it is a satisfaction to us to have bred and owned such sheep as form the pioneer flock of Prince Edward Island. The one pair of two-year old ewes have been shown in all the principal fairs of Ontario, and have secured more awards of merit than any other pair of Canadian-bred ewes of their age in Canada; and the pair of yearlings were not much behind in merit. They are all from our noted stock ram Chance, bred by A. D. Taylor, Romeo, Mich. We boast of having some of the finest specimens of the breed in Ontario. Mr. Seaman is pleased with his shipment, and he has given his order for six ewes and a ram for next fall's shipment.

Messrs D. G. Hamner & Sons, Hill Home Farm, Mount Vernon P.O., Ont., report the following sales for the months of September and October: Messrs. Parker & Allen, Ohio, eleven ewes, one shear ram, and six ram lambs; F. H. Hubbs, Prince Edward two shearing ewes, and shearing ram; George Hall, Haverhill, shearing ram; Joseph Bowers, Lockport, N.Y., ram lamb; Richard Shire, Cannington, ram lamb; D. M. Ranney, Harrisburg, ram lamb; H. C. Gifford, Forestville, ram lamb; Thomas Muir, Grimby, ram lamb; H. Daniels, Ancaster, ram lamb; John Dymont, West Flamborough, ram

STOCK FOR SALE.

FOR SALE.

PURE BRED

IMPORTED CLYDESDALE STALLION,

BEN LEE 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 Lofty (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.

BROOKSIDE FARM,

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



Standard-Bred Trotters,

AMERICAN

CATTLE-CLUB JERSEYS.

FOR SALE!

IMPORTED CLYDESDALE STALLION

9 years, 1600 lbs, sound, kind,

Sure Feal Getter and Prize Winner.

CHEAP FOR CASH

Or would exchange for Coach or Carriage Stallion or Standard bred trotting mares.

E. PHILPS BALL,

dece

LEE FARM, ROCK ISLAND, QUE.

FOR SALE.

Thoroughbred Stallion

"JACK FROST,"

By Jack Malone, out of Kitty Purgear. This horse is registered and is a sure feal getter and his stock are very promising. Price very low and terms very easy, as the owner has no use for him. Apply to

G. BUNBURY,

Suffolk Lodge,

OAKVILLE, Ont.

THE MAPLE GROVE FARM HERD

OF HOLSTEIN CATTLE

A fine lot and doing well, including registered Clydesdale Horses, Hackney, and Hambletonian Road Horses. Also farm implements.

WILL BE SOLD

On the 15th day of December, 1889

Proprietor giving up farming.

S. SHUNK, JR.,

decem

Maple Grove Farm, Edgeley, Ont

PURE BRED

HOLSTEIN FRIESIAN

BULL.

Eighteen months old, from imported parents. Price very reasonable. Time given for payment. Apply to

G. BUNBURY,

Suffolk Lodge,

OAKVILLE, Ont.

amb; J. P. Ryder, Delhi, ram lamb; John Fairgrievs, Galt, ram lamb; P. Newstead, Mount Vernon, ram lamb. They say that their flock of Shropshires, after winning 65 prizes at the recent fall fairs, are going into winter quarters in better shape than ever before. They state that sales have been good and enquiries many, and also "we are satisfied advertising in the JOURNAL pays."

Mr. Rock Bailey, Oak Grove Farm, Union, Ont., writes as follows: "My sales have been very satisfactory this fall. Mr. H. Chisholm, of Paris, bought four fine ewes, a pair of yearlings that took first prize at the late Provincial, and a pair of 2-year-olds that were prize-winners, together with a pair I sold him last spring. With these he makes a good start, as they are very finely bred ewes. Mr. George Deo, of New Sarum, bought a fine pair of ewes, bred by Gayer Brothers, Michigan. Mr. R. Shaw, breeder of Southdowns, is dabbling in Merinos a little. I sold him a fine yearling ram, sired by Climax, from a Gayer ewe sired by Jack Chandler. He will use him on that pair of yearlings with which he captured the 'red' at Toronto. Perhaps he intends converting his Southdowns into Merinos. I also sold a number of rams to go to Salt Lake City, Utah. While at the Detroit Exposition I bought of I. E. Shattuck, Stanbury, Mo., the first prize ram lamb both at Buffalo and Detroit. He is a fine, large fellow. On the 6th of November I attended the sale of thoroughbred Merinos of Mr. Adam Diehls, Michigan, and bought fourteen head of ewes, the pick of his flock. There was a large number of breeders from all parts of the State at the sale. This was one of the most noted flocks of Michigan, and registered in the Vermont register. My Jerseys are all doing well. Beauty of St. Lambert has just dropped a beautiful heifer calf sired by King Hugo of St. Annes. Beauty of St. Annes is a very rich milking cow." Mr. Bailey places an advertisement with us this month which we advise all to see, as he is prepared to supply something good in Merinos.

Swine.

Five imported Berkshire boars, fit for service, are offered for sale by John Snell's Sons in an advertisement in this issue. Read it.

Berkshires of all ages and sexes and a few Shorthorn bulls are advertised for sale in this issue by Mr. G. Ballachy, Branford, Ont. Look it up.

Do you want a Chester white boar? If you do, be sure and see the new advertisement of Messrs. R. & J. Gurnett, of Ancaster, Ont., in this issue.

If you want any Improved Yorkshire White pigs, do not fail to see the breeders' card of Levi Pike, Locust Hill, Ont., that appears in our JOURNAL for the first time.

Mr. Edmund Jarvis, of Ontario Lodge Stock Farm, Clarkson's P.O., Ont., writes: "I wish to report the following sales of Improved Yorkshire pigs: boar and sow, to E. Jackson, Oakville; boar to J. Curtis, Camilla, Ont.; boar to F. W. Elliott, Toronto; boar and two sows to Messrs. Ormsby & Chapman, Springfield-on-Credit; boar and sow to Mr. Tazewell, Port Credit."

Daniel DeCourcy, Perth County, Ont., writes:—"My herd of Ohio Improved Chester Whites are going into winter quarters in good shape, and I have added three more imported ones to my herd during the last month. Ed Morris, 973, the first prize and sweepstakes boar at Detroit International Fair of 1889, is at the head of my herd; also King D. 1127, and Jolly Boy, 1095, all prize animals. I have some nice young pigs Chester bred yet on hand from two to four weeks old.

John Snell's Sons, Edmonton, Ont., write:—"The demand for Berkshires this year has been greater than ever before, and comes from all the Provinces, and most of the States. It is not a 'boom' but a steadily increasing volume of trade, evidently the result of a just appreciation of the merits of the breed in meeting the wants of the people and supplying the requirements for early maturity and meat well mixed and marbled, the lean with the fat. The demand for young boars by the farmers for grading purposes is a hopeful feature of the trade, while not a few are ordering pairs and starting new herds with good foundation stock. There are a few of the young imported boars yet for sale, as well as a few imported sows, and young boars and sows home-bred, from first-class importations."

E. E. Martin, Canning, writes:—"My stock are all going into winter quarters in good condition. I have been to three shows, and taken 20 prizes on my Berkshires and have made some good sales. I disposed of one Shropshire boar to A. McGill, Falkland P.O.; R. Carrick, Galt, one ram, Chas. Night, Roseville, one boar, A. Crozier, Princeton, one boar, R. L. Birch, Brantford, one sow; E. A. Carver, Colpo's Bay, one crate of Silver Gray Dorkings. I have bought a fine young stock boar from G. Hill, Delaware, also a trio of imported Silver Gray Dorkings from Mr. J. Hope, of Bow Park. I have a number of young Berkshire sows fit for service, and also a lot of young pigs just weaned for sale from registered sires and dams. My card in THE JOURNAL has sent me a lot of enquiries for stock and some sales already. I wish you every success with THE JOURNAL."

R. & J. Gurnett, Ancaster, write:—"We have to report the following sales made recently: boar to H. Heatherington, Wheatley; boar and sow to S. Porter, Mount Vernon; boar and sow to E. A. Cox, Tyneside; boar to J. Steele, Port Stanley; imported sow in pig to A. J. Hubbard, Ancaster; imported sow in pig to R. Walker, Carlisle; boar and sow to Wm. Woodley, Dundas; boar to S. L. Dunkin, Norwich; boar to J. H. Hanes, Dunbar; boar and sow to M. A. McNaughton, Dewittville, Que.; boar to Wm. Emmons, Mountsberg; boar to James Hunter, Carlhove; boar and sow to R. C. Powell, Holland Landing; two sows to R. E. Hammill, Ancaster; sow to C. E. Whidden, Antigonish, N. S.; boar to James Fear, Elmira; boar and sow to Thos. Galloway, Carlisle. We have four boars left for sale, the choice of a litter of eleven. These boars are four months old and very fine ones. We also have three in quarantine, two boar and sow from the herd of J. H. Eaton, Bucyrus, Ohio, and a boar eight months old from the herd of McDonald Bros., Marshall, Mich. We find the sale of

STOCK FOR SALE.

OUR STOCK BULL, WATERLOO DUKE 16TH

ROAN color, four years old, bred at Bow Park and a first-class bull in every respect...

WM. TEMPLER, Jerseyville P.O., Ont

GUERNSEY BULL FOR SALE.

PROFESSOR BROWN

said of this bull that it was

THE FINEST HE EVER SAW

It is five years old, and we sell it to avoid in-breeding. We have also for sale two AYRSHIRE COWS and a heifer...

WM. DAVIES & SON, Kinc Croft Farm, MARKHAM, Ont

MISCELLANEOUS.

NOTICE TO IMPORTERS!

CHARLES CHABOUDEZ,

Hotel de France, et de Suisse, 1 Rue du St. Hubert, Paris, France,

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

CHARLES CHABOUDEZ, Proprietor.

FOR SALE!

A GOOD BUSINESS BLOCK in PAISLEY, Ontario.

Splendid Location. Would trade for Registered Heavy Draft Stallions or Mares, any breed.

E. F. BLACK, Raymond, Neb., U.S.A.

FARM FOR SALE

195 Acres, 40 acres bush, good Buildings and fences, in good state of cultivation.

S. C. MARTIN, Preston P.O., Ont.

To sell lambs or sheep, or any other species of live stock at the highest obtainable prices should be the aim of every farmer.

C. W. Pigs on the increase, and have decided to increase our breeding stock.

Poultry.

R. J. Gracey, of Wellandport, Ont., has just been importing some fine White Wyandotts and R. C. B. Leghorns...

Now is your chance to secure Bronze turkeys, as Mr. W. J. Bell, of Banda, Ont., has a collection of no less than 30 to make a choice from.

Remedy for Barrenness. Part of having barren mares, or cows, irregular breeders, with horns contributing to their advantage by addressing H. W. Campbell, Racine, Wis.—[Adv't.

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ONTARIO CREAMERIES

CONVENTION I

The fourth Annual Convention of the Ontario Creameries Association will be held at

SEAFORTH, ONT.

Tuesday and Wednesday, Jan. 13 and 14, 1890

The Association are making an extra effort to make this the best and most practical convention ever held in Canada for those interested in the Cow and her products, especially the mode of manufacturing the choicest Creamery Butter.

PROMINENT AND LEADING SPEAKERS

on the Butter Industry from the United States and our own country have been secured to address the Convention, among them are

GOVERNOR HOARD

Proprietor of Hoard's Dairyman and Governor of the State of Illinois, and

PROFESSOR ROBERTSON,

of the Ontario Agricultural College. Our two Instructors will also be present and give a practical illustration of how to make choice butter by churning the cream and preparing the butter for market before the audience.

THE GRAND TRUNK RAILWAY and C. P. R. will issue return tickets at a Fare and One Third, by securing certificates before starting from the Secretary of this Association. Full information regarding the Convention can be obtained from

R. J. GRAHAM, Sec, - BELLEVILLE, Ont. decm

FARMS FOR SALE,

1. About two hundred acres in the township of Fenelon, in good order, having good farm buildings upon it, and well fenced and well drained. Timber on it sufficient for firewood for all time to come, also a never failing creek running through it.

APPLY TO H. R., Live Stock Journal Office, Toronto.

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 Milk in shortest notice. Reference by permission of Mr. JAMES VANCE, New Hamburg, Ont., and other Canadian Importers. novm.

English Pedigree Live Stock

To Importers and Breeders Hereford and Shorthorn Cattle, Shropshire, Dorset-Horn and Other Sheep.

E. G. FREEMAN, Live Stock Agent and Exporter, Shrewsbury, England. Has choice Selections of these breeds, of full registered pedigree, always on sale at moderate prices. He has the privilege of special appointment, of selecting from Noted Flocks and Herds, the best types of English Live-Stock, and will be glad to assist importers in their selections. The purchase and shipment of any pedigree stock executed on commission, on personal responsibility. Special facilities for freight and transit. Correspondence invited. Highest English and foreign references. Extensive trade with N. and S. America, the Colonies, S. Africa, etc.

ALL IMPORTERS SHOULD COMMUNICATE.

KNABE

PIANO FORTES UNEQUALLED IN Tone, Touch, Workmanship and Durability WILLIAM KNABE & CO.,

BALTIMORE, 22 and 24 East Baltimore Street. New York, 148 Fifth Ave. WASHINGTON, 817 Market Space decd

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WE MAKE A SPECIALTY OF

PIANO BOX TOP BUGGIES

SPECIALLY ADAPTED FOR FARMERS' USE.

Our Annual Output is over 1,000.

Agricultural Agents will find it to their advantage to send for Catalogue and Price List.

ALL WORK IS GUARANTEED.

B. J. NASH & CO.,

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111½ YORK ST., London, Ont.

WELLS, RICHARDSON & CO'S

IMPROVED

Butter Color.

EXCELS IN STRENGTH
PURITY
BRIGHTNESS

Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color.

Three sizes, 25c. 50c. \$1.00. For sale everywhere
WELLS, RICHARDSON & CO., Montreal, Que.

CANADIAN PACIFIC RAILWAY.

Another SERIES OF CALLAWAY'S EXCURSIONS

To BRITISH COLUMBIA

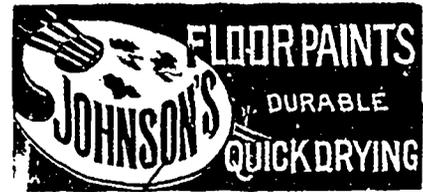
WASHINGTON TERRITORY, OREGON AND

CALIFORNIA

Dec. 3rd, 17th and 31st.

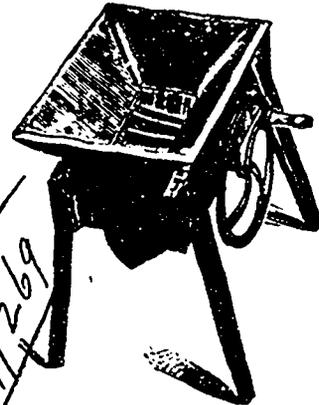
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W. R. CALLAWAY, 118 King St., West, Toronto.



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TO STOCKMEN!



The "Speed" Root Cutter,

THE SIMPLEST, FASTEST CUTTING, AND EASIEST RUNNING CUTTER

In the Market.

CEDAR GROVE, Ont. May 27, 1887.

DEAR SIR - Your Speed Root Cutter that I got from you last fall is the best Root Cutter I ever saw. It works to perfection. I cut roots for seventy head of Jersey cattle last winter and I have never seen any cutter that is its equal for FAST CUTTING, and EASY WORKING. I sold the one I used last winter and I shall have another from you this fall.

Yours truly,

ROBERT REESOR,
Breeder of Jersey Cattle.

Write for circulars and prices. Liberal terms to dealers.

J. F. MILLAR & SON,
MORRISBURG, Ont.

SHEEP

CRUICKSHANK SHORTHORNS,

Clydesdales and

Shropshire Sheep

IMPORTED AND BRED BY

JOHN DRYDEN,
BROOKLIN, ONT.

Show and Store Ewes, choice Rams, and Lambs for sale at moderate prices

Inspection invited. Price Catalogues on application.



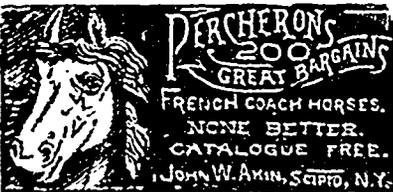
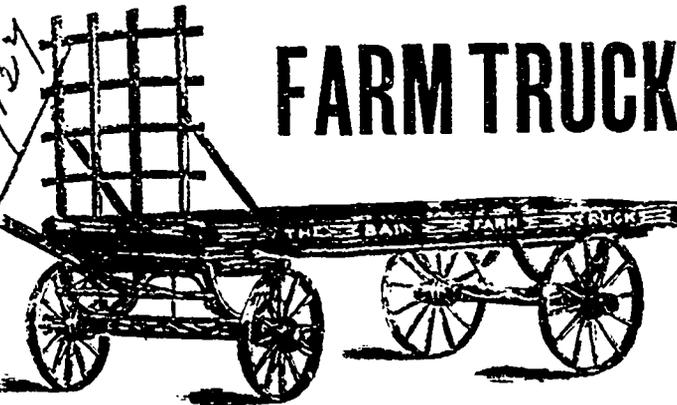
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FARM TRUCK

THIS Cut represents the most convenient Wagon ever put on the farm, because it is suitable for all kinds of work, and always ready for change being necessary. This wagon was invented and first introduced in Mich., U.S., and is very extensively used by leading farmers in the United States. Every wagon made and sold by us in Canada is a long entire construction. For further particulars and prices address

BAIN WAGON CO'Y,
WOODSTOCK, ONT.

BAIN WAGON CO., WOODSTOCK, ONT.



LORRIDGE FARM.

SOUTHDOWN SHEEP.

Flock first established 1857. Commenced exhibiting 1869. Since then have taken over 200 prizes, including a large number of medals and diplomas.



Imported Rams used only. Stock for Sale.

ROBERT MARSH, PROPRIETOR. Richmond Hill, Ont.

CATTLE.

J. & W. B. WATT,
BREEDERS OF SHORTHORNS
CLYDESDALES AND
OXFORD DOWN SHEEP and
BERKSHIRE PIGS.

A number of Choice Young Bulls for sale spec. SALEM, Ont.

Arthur Johnston
GREENWOOD, ONT., CAN.



I HAVE still on hand and for sale an excellent lot of imported Bulls, Heifers and young Cows, besides an exceedingly good lot of home-bred Heifers and Bulls—all by imported sires and mostly from imported dams.

I can supply intending exhibitors with first-class show animals of either sex and of various ages, from calves upward.

I have also a good lot of imported Clydesdale Stallions and Mares for sale.

Claremont Sta'n, C.P.R., or Pickering Sta'n, G.T.R.

Write or wire me, when and at which station to meet you. Send for Catalogue. No business, no harm. jame.

D. ALEXANDER,

Bridgen Lambton Co., Ont.

My Shorthorn herd now consists chiefly of imp. Lady Violet Lustre and seven of her daughters, and two daughters of imp. Beauty 1st, almost all sired by one bull, and of one character, thick and fine quality. Can furnish a splendid young herd, including an imported bull. Trains twice daily. Station one mile. jame.

CLAREVILLE STOCK FARM

Lying between Canada Southern Railway, and Grand Trunk Air Line, Cayuga Station.

I breed and have FOR SALE

A-1 SHORTHORNS

Bron Constance 10th, heads the herd.

Leicester and Cotswold Sheep, Berkshire Pigs, Thorough-bred and Heavy Horses of all kinds.

Young Bulls a specialty. Supply always on hand. Come and see.

J. R. MARTIN CAYUGA, ONT.

THE BRIARS FARM
SUTTON WEST, ONT.

Choices of 60 head of

SHORTHORNS

Including three yearling bulls, by Butterfly Duke 6th, he by 4th Duke of Clarence of Bow Park fame; all from the best strains, and registered in the Dominion Herd Book. Also young Horses and pigs. Inspection invited. jame. F. C. SIBBALD.

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Pure-Bred Shorthorns.



The latest portion of herd is headed by imported 8th Duke of Leicester—9279—and consists of the following families.

Waterloo Princes
Darlington Garlands
Constance Charms
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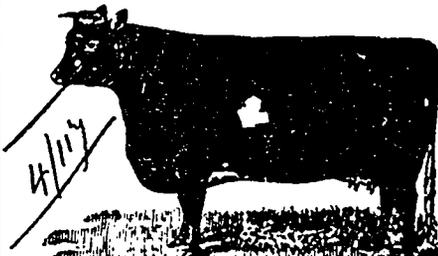
There are some imported Booth Cattle, and Scotch strains are also included.

Purchasers can depend upon fair treatment and liberal usage.

KOMOKA STATION
3 MILES

Richard Gibson - Delaware P.O.

FRANK R. SHORE & BROTHERS,
R. R. Station, London, White Oak P.O.



SHORTHORNS AND SHROPSHIRE

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

MAPLE LODGE STOCK FARM.

We breed and have FOR SALE

Shorthorn Cattle,
Leicester Sheep
AND
Berkshire Pigs,

Herd established in 1857 and flock in 1854.

Our stables are one mile west of Lucan Crossing, on Grand Trunk (main line) and London, Huron and Bruce Railways.

Several females and young Bulls, sired by Duke

of Colonus—9282—can be purchased now at very moderate prices. Also a few choice ram lambs, sired by the First Prize ram at London and Toronto Exhibitions 1879.

We are always pleased to show our stock. JAS. S. SMITH, Maple Lodge P. O., Ont.

JOSEPH REDMOND

PETERBOROUGH P.O., ONT., CANADA.



I have still on hand and for sale an excellent lot of imported bulls, heifers, and young cows, besides an exceedingly good lot of home-bred heifers and bulls, all by imported sires and mostly from imported dams. I can supply intending exhibitors with first-class show animals of either sex and of various ages, from calves upward. Of my last imported, ten were from Bruce and Cruickshank breeding, all show animals.

Peterborough is on the C. P. R. and G. T. R. Six trains daily. Write or wire me when to meet you. Will be pleased to show the stock, whether you purchase or not. jame.

JOSEPH REDMOND.

BOW PARK HERD
OF



PURE-BRED SHORTHORNS

Have at all times a number of both sexes for sale. Catalogue of young bulls, recently issued. Address, JOHN HOPE, Manager, Bow Park, Brantford, Ont.

J. Y. REID, HILLSIDE FARM,
2 1/2 miles south from Paris, on the G. T. R.



WE have on hand and for sale a superior lot of show cows, heifers, and young bulls. This season's calves being mostly from the imported Scotch Bull,

EARL OF ROSEBERRY.

Intending purchasers will be met at Paris station. Apply jame. JAMES GEDDIE, MANAGER, PARIS, ONT.

JAMES HUNTER, ALMA, ONT.,



BREEDER AND IMPORTER OF
SHORTHORN CATTLE,
CLYDESDALE HORSES,
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Stock of both sexes for sale. jame

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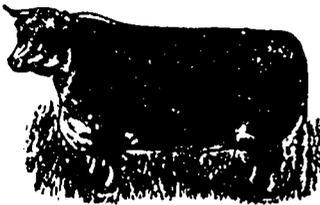
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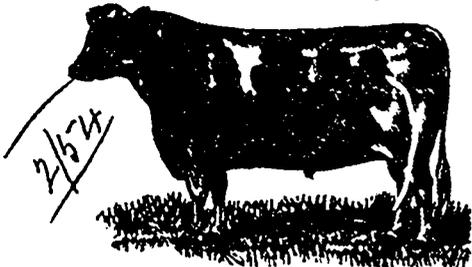


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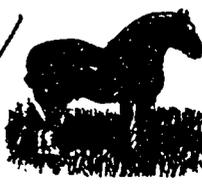
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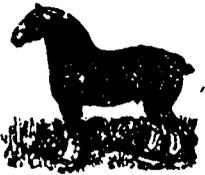
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And the gets of famous sires, such as Lord Erskine, Darnley, Old Times, MacCommon, Garnet Cross, Prince Edward, Prince Henry, Sir Winham, Good Hope, Fireaway, and Macgregor. Prices reasonable. Catalogues furnished on application.

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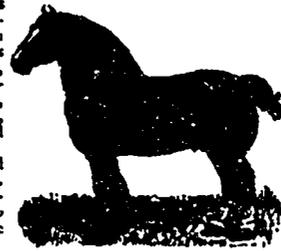
including gets of the following sires: Lord Lyon (487), What-Care-1 (912), Belted Knight (1395), Goldenberry (2828), Corsewall (1420), Prince Charlie (629), Sir Michael (1530), Scott-Wha-Hae (4006), Macpherson (3825), Good Hope (1679), Lord Erskine, (1744), Macneilage (2992), Golden Treasure (4417), Gallant Lad (2781); of which 13 are Stallions and Colts. Several of our mares are supposed to be in foal to our well-known Boydston Boy, (121), sire of the celebrated Lord Erskine (1744). fenc



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Cattle under this head inserted in the year at the rate of \$1.50 per line when not exceeding 100 words. Stock for sale at all times.

Directing the names of the various breeders in Canada.

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A. & J. BELL, Sarnia, Ont., breeders of pure bred...

R. BLAIR, Sarnia, Ont., breeder of pure bred...

THOS. BLANCHARD, Appleton, Ont., breeder of pure bred...

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W.M. CRAWFORD, Sarnia, Ont., breeder of pure bred...

CEO. F. DYER & SON, Sarnia, Ont., breeder of pure bred...

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JOHN L. HOWARD, Sarnia, Ont., breeder of pure bred...

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JAS. LEASE & CO., Sarnia, Ont., breeder of pure bred...

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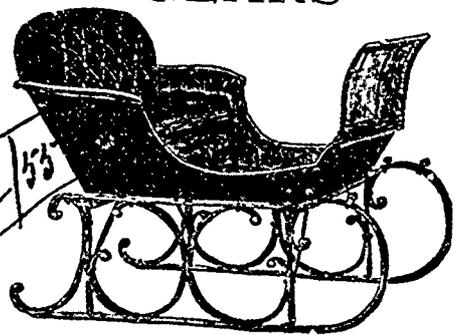
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