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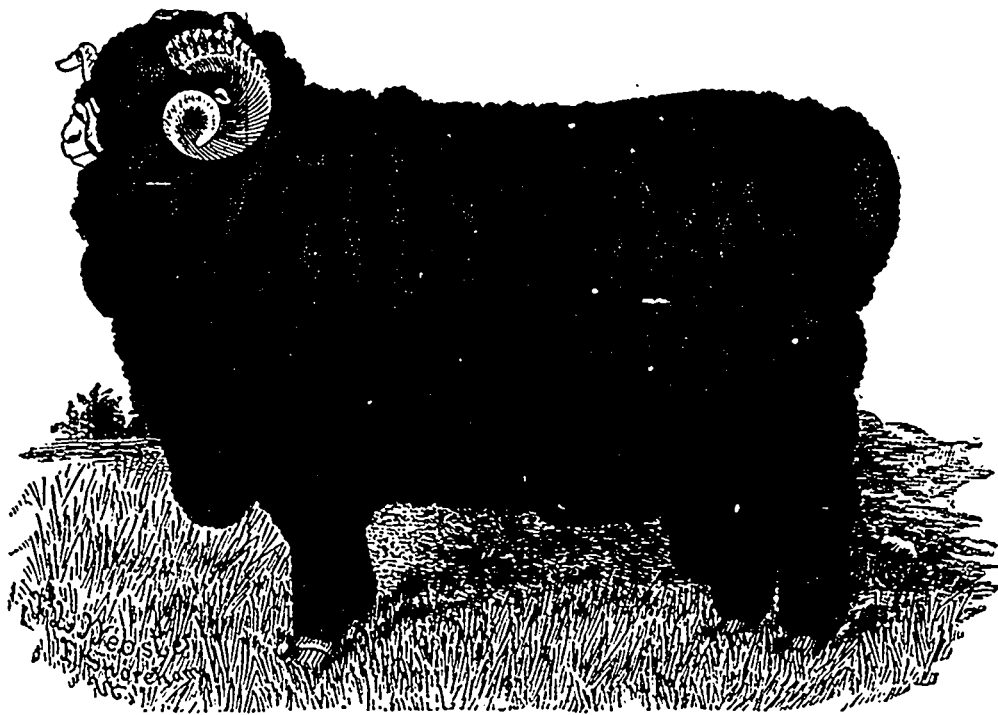
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CANADIAN BREEDER and AGRICULTURAL REVIEW.

Vol. II.

TORONTO, JUNE 26, 1885.

No. 26.



Merino Ram "VENGEANCE," No. 33. Missouri Register. Owned by H. V. Pugsley, Plattsburg, Mo.

CREAM SETTING.

The following are the results of investigations made by Prof. Ford as to the effects of the ordinary methods of cream setting in England as reported in the *Agricultural Gazette*:—

1. Shaking of the milk before setting is detrimental to a rapid separation of the cream. Of two samples of milk, one being shaken before set aside, the latter required eight hours to separate seven per cent. of cream, the time required by the other to separate the same quantity being only three hours.

2. Premature cooling of the milk before setting is more serious in its effect upon a thorough separation than the first mentioned point. When milk conveyed to a creamery in a common vehicle by centrifugal separation gave 100 pounds of butter, a sample of milk of the same quantity and quality conveyed in the same manner, and set in ice water, gave 90 8 pounds, while another sample, that had been cooled, transported as before, and then set in ice water, gave only 87 9 pounds.

As a general rule, Prof. Ford found that the yield of butter grew less the lower the temperature of the milk before setting. When milk set in ice water directly after milking gave 100 pounds, milk that had been previously cooled

to 68 deg. gave 95 7 pounds, 54 deg. gave 91 pounds, 48 deg. gave 86 3 pounds. A means of restoring the original qualities of such milk was found in warming the milk to about 104 deg. before setting.

QUANTITY OF WHEAT TO THE ACRE.

In D. S. Curtis's pamphlet on wheat culture we find the following upon sowing and the quantity of wheat to the acre:—"As in many other farm matters, there is diversity of opinion as to the quantity of seed it is best to sow, but judgment and circumstances must determine the point in different situations. Different preparation of both seed and soil will render more or less seed necessary. Climate and season have much to do with it, kind of soil and variety of wheat also have a bearing upon the question. Wheats which tiller largely, like Clawson, Fultz, Gold Medal, etc., need less seed to the acre. Rich, fertile soil requires less than poor land. A long season and warm climate require less, as affording better conditions for spreading and growing. Fine, deep, pulverization of the soil, which gives heavier growth to each plant, needs less seed, and well cleaned, sound grain requires less seed than otherwise. Then, more seed is required when

sown in the spring than in the fall on the same land. Many circumstances enter into the determination of the question, so that careful discretion should be exercised by each grower for his own special case. The manner of planting, whether by drill or broadcast, and the style of drill used, make more or less seed necessary. If seed is well screened and brined, with all light, foul seed skimmed off, of course less will be necessary. From three to six pecks per acre is about right, as a general rule.

Broadcast sowing is hardly safe with less than six pecks to the acre of good seed, to secure full seeding to all parts of the ground, as some spots will get too much and some will not be covered. With drill planting the seed is more evenly distributed, and more completely covered, with none too much in any one place, hence less is needed. Some styles of drills distribute the seed better than others, some of them making four pecks necessary, while, with the others, three pecks will be sufficient. If every kernel were properly planted, and all perfectly distributed and germinated, even much less than the above quantity would be needed to fully seed the ground. Yet, if the planting be not done in the very best manner, to secure the growth of all the seed, we would recommend too much rather than too little—say six to eight pecks to the acre."

THE CANADIAN BREEDER

AND AGRICULTURAL REVIEW.

Weekly Paper published in the Stock and Farming interests of Canada.

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CANADIAN BREEDER,

COR. CHURCH AND FRONT STS.
TORONTO.

S. BEATTY, MANAGER.

Toronto, Friday, June 26th, 1885.

Advertisements of an objectionable or questionable character will not be received for insertion in this paper.

THIS PAPER may be found on file at GEO. P. ROWELL & Co.'s Newspaper Advertising Bureau (10 Spruce Street) where advertising contracts may be made for it in **NEW YORK.**

OUR ILLUSTRATION.

The Merino Ram Vengeance, the subject of our illustration, is the property of H. V. Pugsley, Plattsburg, Mo., and was bred by H. T. Brookins, of Richville, Vermont, is of the Atwood and Robinson blood, sheared 37½ lbs. this year.

MR. DOUGLAS ON THE CLYDESDALE CROSS.

Last week Mr. Douglas replied to our criticisms on his presumed newly discovered cross for the production of carriage horses and heavy weight hunters. Notwithstanding what he says to the contrary, we still maintain that the experiment has been tried many times both here and in the United States. Speaking as a dealer, of course Mr. Douglas, like other dealers, is apt to attach undue importance to his individual judgment as to what is good and bad among draught horses. Now THE CANADIAN BREEDER is not the mouthpiece of any clique of breeders and importers, and occupying such a position it cannot permit such attacks as Mr. Douglas makes upon the Normans or Percherons and the Suffolk Punches to go unchallenged. As a dealer in Shires and Clydesdales, he may think it wise to attack the wares of other dealers, though his "say so" may not altogether wipe the Suffolk Punch and Percheron men from off the face of the earth.

Without wishing to injure anybody's business, we will state our views once for all on this question of big horses. Extremely heavy horses are fashionable for certain services on both sides of the Atlantic, and for the purposes to which they are usually devoted they are doubtless all right, though for anything except show there are very many of them unnecessarily heavy and clumsy. So long as these animals are kept by themselves and in their own class the breeding of them may prove an

important and profitable industry, but the breeding of Clydesdale stallions on common mares has given rise to a lot of ungainly brutes that are in every way objectionable. They have all the dullness, all the coarseness of coat and tissue, the flat "brashy" feet and the sluggish action of the draught horse without the redeeming features of size and substance. Such crossing we shall always do our best to prevent. It is unnatural and can only be productive of evil. What Mr. Douglas proposes certainly looks better on paper, but it would be much more promising if he would for the time drop the prejudices of the dealer and look at the subject as one who had no axe to grind rather than as one who could see no good outside of his own shop. The experiment involved in such a violent cross is risky enough under any circumstances, but it becomes doubly so when hampered by a prejudice likely to warp his judgment. If this cross must be tried, the mare should be of a type no more widely different from the male than is necessary to impart the required size and substance, and this was why we were inclined to recommend either Percherons or Suffolk Punches. As regards Mr. Douglas' supposed descriptions of what he deems the leading characteristics of these breeds, they may be very amusing, but they can only be regarded as the prejudiced expressions of a dealer, and can carry no weight with men who really desire to breed good horses regardless of the cross that produces them. Any one who had an opportunity of comparing Mr. Walker's little band of Percherons, and the Suffolk stallions of Mr. Sadler and Mr. Carson, which were shown at the Industrial Exhibition last fall, with the other heavy horses on the grounds could not attach the slightest importance to the descriptions already alluded to.

There are good and bad individuals in every breed of horses, and some wretched specimens have been sold in this country from time to time. Not long ago breeders must have size regardless of everything else, and in those days many ill-shapen, unsound, worthless brutes were imported that have done very great injury to the draught horse interest in this country. Among the Clydesdales now in the country there are many gummy-legged, loosely coupled, flat-footed, ragged hipped animals, the progeny of which any good horseman must be sorry to see perpetuated; but at the same time we are happy to say that there also some excellent animals in the country, including native as well as foreign-bred Clydesdales. To compare the breeds of big horses, fairly the Percherons or the best specimens of them that have been shown here are not extravagantly heavy. While they have plenty of bone for the proposed cross, they have also good action, strong coupling, good feet, handsome crests, and a certain compactness and smartness of outline that is just what is wanted under a thoroughbred cross. Now, we do not pretend that these smallish Percheron mares would be as good for producing heavy draught horses as the "wide" Clydesdales which Mr. Douglas so greatly ad-

mires, but any horseman of common sense, not blinded by prejudice, can see that such mares being nearer to the character of the thoroughbred sires must make a less violent cross, and consequently they will be less liable to produce monstrosities. In the produce of such mares as we have seen among the Percherons there is not the cleft rump, the hairy legs, the very large flat feet, the slack loin, and the sluggish action usually found among what would be regarded as average horses of the very heavy draught class.

We commended the Suffolks for similar reasons, though, owing to their great size, many of them might be found too heavy for the purpose.

Mr. Douglas' objection on the ground of color is another which would carry but little weight save with a breeder. Let people discover that they could find the best form, action, style, and substance among the greys, and the silly prejudices against that color would rapidly disappear.

HIGH KNEE ACTION.

Writing from London, England, on June 4th, "C. I. D." takes us to task for differing from what he terms the prevailing fashion. We wrote condemning excessively high knee action, but our correspondent rather illogically finds fault with us for condemning, as he supposes, a wholly different thing. We never found fault with "action," and the more graceful it is the better, but what we criticised was the folly of those who on this side of the Atlantic were striving to ape the follies of English flats. It is very probable that true horsemen are much the same the world over, and that which is ungraceful and awkward is not likely to find favor with them, either here or in England. We were striking, not at graceful action and horses showing plenty of quality, but at just such coarse-headed chuckle-throated, awkward-gaited brutes as we described, and which were being picked up here very eagerly a few years ago by "flats" who "knew all about the home market you know" for shipment to England. There were many such buyers in our market a few years ago, but though they were in their own estimation connoisseurs as to the tastes of English horsemen, they soon found their efforts at cultivating untutored Canadians and Americans as to the style of horses "gentlemen" should drive much too costly to be maintained on the means within their reach, while several unpretentious but practical horsemen made a very good thing out of sending over the much-abused long-tailed trotters. It was at the follies introduced here by those who talked the slang and aped the general style of English horse-dealers that we aimed our arrow, and we are not without hope that it may have landed somewhere near the mark. On the other hand, we cannot see why "C. I. D." should ask us to champion the cause of "overchecks," toe weights, "knee boots," and "brutes blundering along" because we regard "docking,"

"gingering," "bishoping" and other cruel or dishonest practices, unworthy of any respectable breeder, owner, or dealer. As to the pace at which "gentlemen" care to drive, we are not sure that anybody has authorized "J.I.D." to draw the line. We are quite aware that while there are many "gentlemen" in this country who pay very little attention to either speed or style, there are some who like horses that will show a first class trotting gait. These latter would of course be set down by "C.I.D." as "no gentlemen." The youthful dude who comes to this country with two or three hundred pounds in his pocket, buys a worn-out hack for seventy-five dollars, cuts his tail shorter than ever, fits him out with a big lumbering dog cart and brass-mounted harness costing perhaps \$400 more, and then manages to get rid of the rest of his means by a series of equally useful and profitable investments, would perhaps meet "C. I. D.'s" views as to what a gentleman should be; while some of the best and most enterprising citizens both in Canada and the United States cannot be regarded as gentlemen because they drive trotters, and long-tailed trotters at that.

THE Missouri Merino Sheep-Breeders' Association will send Vol. 1st of their Register, bound in heavy paper free to any wool-grower who will send his address to the Secretary; bound in cloth \$2.00. Blank applications for membership and flock reports furnished free, by addressing the Secretary and Treasurer, H. V. Pugsley, Clinton County, Plattsburg, Mo.

Correspondence.

THOROUGHBRED CROSSES WITH CLYDESDALE MARES.

To the Editor of THE CANADIAN BREEDER.

DEAR SIR,—In my last letter recommending a cross of the thoroughbred stallion and Clyde mare, I said that crosses were not objectionable as they are generally more healthy and strong than the offspring of parents both belonging to the same variety. I also said that I expected, as a rule, to get the locomotive system from the sire and the nutritive from the dam, by using as a sire the male of the oldest and best established breed as the most prepotent, and I promised to support these notions by some illustrations. The first I will notice is the mule as the most striking. The mule is the offspring of a horse, *equus caballus* and an ass, *equus asinus*. Naturalists look upon them as one species derived from some remote original ancestor. But they have so long diverged that they may now be classed as distinct species, which is proved by the fact that although they couple freely together, the produce is no longer a mongrel, but a hybrid sterile. In support of my theory that the oldest and best established breed is the most prepotent, I will say that the ass has been for centuries a fixed breed without varieties—at least in Europe, for in Asia I believe there are varieties, whereas in Europe the horse has been allowed to run into endless varieties, from the Shetland pony to the Clyde,

Shire, and Flemish giants. In pairing the ass with the horse it was soon noticed that the ass was the most prepotent, and the object of such a cross being an increase of size and strength, in Spain and other Mediterranean countries where the mule is so generally used, the practice is invariably to use a jack as a stallion and a large mare as a dam. The result is an animal who in general appearance resembles the ass a great deal more than the horse short stiff; neck, long ears, skin and hair rough, generally black, mane and tail very thin and short, hoofs apparently contracted, but hard and free from disease. In temper the mule is almost identical with the ass, obstinate, patient, thriving on food on which a horse would starve. At the same time, from the large mare it attains a much larger size than the ass.

In sheep I find some invaluable crosses which may now be called established varieties by the Southdown ram and ewes of larger breeds. The sire of a well-established breed being the most prepotent, communicates the locomotive system, which carries with it the skin, the finer wool, the dark color of face and legs, and most valuable crosses from the ewes larger than himself have thus been obtained, and are now classed as distinct varieties, the Shropshires, the Oxfords, and Hampshires. Reasoning by analogy, could we not try to get, by judicious crossing of thoroughbred stallions and larger mares a variety such as we know is now in great demand, a carriage horse large and stylish, looking to the sire for quality and for size to the dam? Should the first cross of a thoroughbred and Clyde be too heavy and not stylish enough, the thoroughbred stallion might be used again, and their second cross would probably answer our purpose and establish a variety of very stylish big carriage horses. The Cleveland bay, once so celebrated, was, I believe, created in that way, but the original type has unfortunately been lost by too great an admixture of thoroughbred blood. The Orloff breed of trotters, so celebrated in Russia, was the result of a cross very similar to the one I advocate. Smetanka, a thoroughbred Arab, and a Danish mare produced Polkan. Polkan out of a large Dutch mare produced Bars, who combined the blood, muscle, power of endurance, and temper of Smetanka with the size of the Danish mare. There evidently the prepotency of the thoroughbred, owing to his long pedigree, had given the locomotive system, the organs of will, and general appearance, and the mare had given the size and somewhat modified the action. Prince Orloff's object was not the carriage horse but the trotter, and he subsequently introduced a great deal of thoroughbred blood in his stock, and succeeded in establishing a remarkably good breed of trotters, although not to be compared to the best American ones, but perhaps the superior intelligence of American trainers might account for the difference. I believe I have said enough to show that my theory of crossing the thoroughbred and Clydes is not altogether visionary, and as I have no doubt there are amongst those who read your paper

some men intelligent and observant, I would be most happy to hear what remarks or suggestions they may have to offer on this most interesting subject.

Yours, &c.,

H. Q. ST. GEORGE.

Oakridges, June 22, 1885.

INTERVIEWS WITH HORSEMEN.

The *Daily News* has recently been giving, under the heading of "Workers and their Work," reports of interviews with leading men in the horse world.

Mr. Edmund Tattersall referred to the condition of the Turf, and we report some of his remarks on the wider subject of horse-breeding:—

"You think, then, that good two-year-olds are unlikely to undergo depreciation?"

"This is an exceptional year, and I cannot say; but for the last two seasons Mr. Chaplin's two-year-olds sold during the July meeting have averaged about a thousand guineas apiece."

"Touching hunters and other horses, are they in demand?"

"Taking the average of the last two or three years, everything that is good, from a first-class weight-carrying hunter to a polo pony, brings a full price. The demand greatly exceeds the supply, for horse-breeding is no longer pursued here as it is abroad. The mares have been sold out of the country at a high price, and we are now importing foreign horses descended from our own."

"If it is impossible to breed any but race-horses and cart-horses at a profit, is this result to be deplored?"

THE EXPORT OF HORSES.

"Foreigners would think so if it happened to them that they could not get a thousand horses for the army at a week's notice, as you certainly could not in England at the Government price, £40, and probably not at £60. It is not entirely a question of price with us, for the animals are not to be had. The hackney or roadster has vanished before the railway, which has brought a different class of horse forward. The late M. Cavaliero, who used to buy largely here for the Austrian Government, frequently said to me, 'What fools you are to let this fine business of horse-breeding go out of your country!' The Austrians and Germans have made extraordinary attempts to improve the breed of their horses, and have gone about the matter very cleverly. First of all they secured a large number of English mares, and from time to time buy first-class sires in order to keep up and improve the quality of their horses. Count Lehndorff frequently buys a fine stud horse here and takes him over for the benefit of his great breeding establishment at Graditz."

"These large purchases for abroad must have enriched our English breeders and dealers?"

"Not so much as you think, for the Germans know when and how to buy to advantage. And if it were so, the goose with the golden eggs is soon killed. When the Germans have once improved their breed of horses up to the necessary standard for army and other work, an occasional fresh sire, to breed other sires from, is all that they want to keep up a good head of stock."

"I gather from you that the business of raising horses is very largely carried on abroad?"

"On so large a scale that Englishmen, not in the trade, have not the slightest idea of it. The largest horse-breeder whom I know of in the world is Mr. Oppenheimer of Hanover,

who has commonly 600 horses in his yard. Not only have the Germans and Austrians great establishments for breeding purposes, but in some of these they actually breed for color, one stud farm being devoted to chestnuts, another to browns, and so on. Foreign horses are so largely imported here for draught that I should think about half of those you see about London come from across sea. They do not come much in the way of our business, being mostly sold by private contract, but the import of horses into England is very great. Germany sends a large number, so does Belgium, machiners and draught horses generally. American horses come over in great force, and France sends her grey Percherons to draw our omnibuses."

"We then appear to be driven as breeders to the two extremes, the race-horse and the cart-horse?"

"They are the most valuable in actual money and turn it over more quickly than hunters and carriage horses. There has been a great improvement in cart-horses. The heavy Lincolnshire blacks seem to be disappearing before the Clydesdales and the variety now known as the Shire-horse, both of which, as well as the Suffolk Punch, have their stud-books. All this is well enough, but what seems worthy of regret is that every other kind of animal is no longer remunerative to breed in this country."

NATIONAL ENCOURAGEMENT TO BREEDERS.

"Do you attribute this unfortunate result to Free Trade?"

"Rather to the want of national encouragement to breeders."

"Surely, all matters of business are better left to private enterprise?"

"I am not sure that the breeding of animals is not an exception to what may be a good rough rule, although it has been severely broken of late, for the Post Office has taken up the losing game of telegraphy and interfered with the business of common carriers with the Parcels Post. I am not saying this is wrongly done, but merely as an exception to the doctrine of private enterprise. Now, the recent improvement in English live stock is hardly due to private enterprise. Taking the United Kingdom altogether, it may be fairly said that nearly all such improvement has been effected by the liberality of persons not actuated by immediate commercial considerations. There have been herds and strains of blood, of course, but the benefit of these has been distributed over the country by people who kept sires, bulls, and boars for the benefit of their neighborhood, and not with the hope of instant profit. The 'fancy' home farms and breeding establishments kept in various parts of the country by public-spirited residents have vastly improved our domestic animals, but they have hardly increased the store of their proprietors. I should like to know how much money Mr. Crosbie, of Arfert, has made by taking prime Shorthorn blood into the wild west of Kerry, where it was wanted badly enough."

"What remedy, if any, do you propose for this state of things?"

"Do you recollect Lord Rosebery's courageous attempt to get the whole subject gone into and taken up by Parliament? It had occurred to Lord Rosebery that it was absurd that in a horse-loving country like this it should be found impossible to mount the few cavalry we have. It is actually the case that there is a kind of scramble to mount half a dozen regiments whenever they are wanted. Our cavalry is insufficiently mounted, for several reasons, one being that it is absurd to expect a person, except under very favorable conditions, to breed a charger, as nearly as may be, to take the risk of what kind of beast he will turn out, keep

him four years, and then take £40 for him. Another reason is that no assistance or encouragement is given by the nation to breeders of middle class horses. In the great majority of important countries, excepting England, there is a national stud—an establishment which costs much money to start it, but which, when once started, taxes Prussia, for instance, for no more than £100,000 a year, a mere trifle in our Budget of ironclads."

"You think, then, a national stud and a higher price for cavalry horses would stimulate breeding in this country?"

"There is a national stud with a great breeding establishment and centres for stud-horses in France, Germany, Austria, and Russia. There would be about 2,000 such sires in each of the countries I have mentioned. The conditions are various. In France I think the Government has a claim on the produce of such sires for military purposes at a fixed price for first and second-class on passing inspection. All these sires have certificates of soundness, and cost little to the country and less to the horse-breeders. And the Minister of War has a first claim. This may appear a lop-sided arrangement to you, but you must recollect that in disregarding all such considerations we English are in a minority."

"Granted that such a scheme would answer here, what place would you find for your central *haras* for producing sires?"

"Ireland. It has a charming climate for horses, and the scheme would be popular. Every Irishman loves a good horse!"

EARLY DEVELOPMENT IN HORSES.

Mr. Matthew Dawson, in conversation with the representative of the *Daily News*, said he considered the subject of early development a most important point in these days, because "Everything now depends upon getting a quick return for your money. You will not, for instance, wait even a year and a half or three-quarters to sell your sheep. You would rather sell them as lambs. You get nearly as much money and get it without delay. In the same way cattle and pigs are bred to put on flesh while young, and yet in the face of this there are people who wonder why we race two-year-olds, and why we do not breed hunters and carriage horses and wait five years to turn our money over. There is no possible reason why these animals should not be bred, a few on a farm, but the practice would never pay on a large scale. The general principles of feeding and exercising young horses are fairly well understood; but some judgment and discretion are required in applying them. Horses vary in their constitutions like men, and large animals require different treatment from small, light-fleshed ones. They are very well fed on the best oats that can be got, beans, hay carefully selected and of prime quality, occasional bran-mashes and roots, especially carrots. If they seem a little used-up, stale, or weary, we give them a little green meat in the stable. Within the last few years we have taken to giving them the artificial grass called sainfoin, cut up and mixed with oats. It is too strong to be given alone. Weaning him from his mother is a very critical business, seriously affecting his growth, and often making all the difference between a good and a bad animal. This over, we turn him out into a paddock with some young companions, for a colt is a social beast, and feed him on oats and carrots. Of course, he is only turned into the paddock by day. No race-horse is left out at night. When the winter months are over the yearlings are separated, and when, about the first of September, they are perhaps 16 to 18 months old, they are taken up, put into breaking, and used very tenderly and gently till they get used to the bit

and go with a boy. Then they are sent short canters, gradually increasing in speed and distance until they are handy, and learn the use of their legs. About the first of January they are tried with a view to the spring two-year-old races."

RULES FOR PIG FEEDING.

(English) Farm and Home.

In considering the values of foods for making growth we cannot do better than to keep in mind that the food for growth and health should contain all the elements demanded in the growth of frame and muscle. The mill feeds contain enough of the heat formers. Nature furnishes in the food for young the very best combination of elements, and if we imitate that we shall make no mistake. Maize alone is a very incomplete ration. It is too rich in starch and fat, and too poor in nitrogenous and mineral elements needed to make bone and muscle. If pigs at the start be fed mostly on maize, be it meal or soaked maize, says a contemporary, they make fat rather than bone and muscle, and lack size and vigor. Clover and grass are such grand correctives that when the pigs run on grass they can make fair growth on maize as the grain ration. Maize is the best feed we know of for fattening a hog, but our aim now is to grow a hog—to build up the largest frame, heaviest muscles, and strongest constitution at least cost. When we get the frame and constitution we can readily clothe it and stuff it with fat by means of maize, which gives a feed that is about two-thirds starch, or, to express it in terms of fat, contains about twenty-six pounds of fat in every hundred pounds of maize.

Maize is not a substitute for milk. It is rather the complement-of-skim milk. It is rich in heat-forming elements, while skim milk is poor therein. They stand as about 8 to 3 in such values. Stewart says: "Maize is quite too heating and fattening, and too poor in muscle-forming and bone-building food, to be given alone to young animals—in fact, it is much better to discard it altogether in feeding animals under six months old." From this and what we have said, it will be seen that maize alone, or mainly, is not to be relied on for making best growth in young pigs. In fact, until they are old enough to consume a large amount of grass or clover, of which they should have all they will eat after they are weaned, maize should be given sparingly, unless with skimmed milk or oats. The heat-forming elements in maize, compared with the same in oats, are as 60 to 40. The nutritive ratio of oats is nearly 8, while that of maize is only 6. For pigs under six months oats makes a better grain ration than maize. Professor Sandhorn has made several valuable experiments in giving pigs middlings in comparison with maize. In every case the pigs fed on middlings alone made the most muscle and bone, and kept in better form. Wheat bran is richer in bone material than middlings, and not so rich in heat formers, but it has so large a per cent. of crude fibre that it is not so easily digested, and is likely to scour young pigs if given alone. In cases of constipation on long feeding of maize, or too rich feed and too little coarse feed, there is no better feed to correct the evil. In feeding on skim milk alone, its digestibility and nutritive ratio are improved by adding a part of oil-cake meal. It has a large per cent. of crude fibre and oil. We do well to use this regularly with any of our grain feeds. It is a corrective, nutritious, and a specific for tendency to inflammation of the bowels. The best bunch of six months' pigs the writer saw last year was fed on wheat middlings, without

maize. It was given dry, morning and evening, and the pigs had the run of a clover field all day, with pure running water. Until weaned, they and the sows had slop made of middlings. The sows were fed on corn in the ear also. If middlings be white and show a large per cent. of starch, they will be improved for making growth of bone and muscle by adding one part of bran to two of middlings.

There can be no hard and fast rules about the quantity of food. That must vary to suit the weather, quality of the feed, and condition of the stock, along with the end aimed at. Never feed to repletion. Stock will keep in better condition, have more uniform appetite, and more completely digest the feed, if the amount be about what will be eaten up clean. There is no reason why a pig at eight months should have different feed from one at four or five months. They will need more feed, and will have stronger digestive powers, and can do well on coarser feed. Yet they will pay for the same care given the younger stock. Pigs will need all the grass and clover they will eat. The grasses help to make bone and fibre, and distend the stomach, which is of great benefit, since it enables the animal to digest more food. The value of the pork-making machine depends on its capacity to convert grain, grass, and milk into pork. In winter care should be taken that the slop be of such a temperature that the pig will be induced to drink freely of it. It must not be ice cold, since it takes too much heat to warm it up to blood heat, and that heat will cost you food. Hence, tepid drink in winter is a saving of grain food. No man can feed even hogs successfully who is not regular in his times of feeding, watchful of the comfort of his stock, ready to anticipate their wants, and quick to see their needs. If he like his stock, and use good judgment, he may succeed.

FOOD AND FECUNDITY IN STOCK.

Chicago National Live Stock Journal.

The precise effect of food upon fecundity has not been determined as carefully as it should have been, by any series of experiments. This omission will probably be supplied at the experimental farms of our agricultural colleges, when the time comes that the directors understand their mission. By a series of experiments with heifers of the same strain of blood, that should be allowed to breed at different periods—say at twelve, sixteen, twenty-four, and thirty months, and all the facts noted for some four generations—the precise effect would be established. It is likely that precocious breeding, when the heifer is most rapidly growing, would prove injudicious. She would not be able to digest and assimilate sufficient nutriment to keep up her own growth and produce the full development of the fetus. But that good feeding hastens fecundity there can be no doubt. Darwin says: "We can see in a vague manner that, when the organised and nutrient fluids of the body are not used during growth, or by the wear and tear of the tissues, they will be in excess; and as growth, nutrition, and reproduction are intimately allied processes, this superfluity might disturb the due and proper action of the reproductive organs, and consequently affect the future offspring." And in this way he argues that variation in animals is produced. Professor Tanner, in his essay on the reproductive powers of animals, says: "The general system of diet must be looked upon as taking its share in influencing the reproductive functions." He mentions instances where even the condition in which the food is given influences the breeding powers. Another writer of very careful observation,

Herbert Spencer, in discussing the effects of food upon the fertility of animals, says: "Among the barren hills of the west of Scotland two lambs will be borne by about one ewe in twenty, whereas in England something like one ewe in three will bear two lambs." We know that domesticated swine are much more prolific than those in the wild state. Spencer says: "The wild rabbit is said generally to breed four times yearly, and to produce from four to eight young; the tame rabbit breeds six or seven times yearly, and produces from four to eleven young." We may say that this is true of all wild birds after domestication; a generous supply of food increases fecundity. And we must conclude that the reproductive organs are dependent upon the nutritive function for the stimulus to activity.

The time of first coming in heat in the heifer is quite dependent upon how generously she is fed; but it also seems to become fixed in the character of a breed, as appears in the Jersey. On the island this fine butter breed almost universally come into milk at two years old; and to do this they must come into the "first heat" at or before sixteen months. They are not fed high, in the sense of that term as applied to Shorthorns, but yet are uniformly fed well, and have established this early breeding as a characteristic. The feeding that produces early maturity also produces early maternity, yet insufficient nutrition will soon change this characteristic of early breeding, so that it must still be considered dependent upon the nutritive function. The writer had a heifer calf dropped on the last of January, 1879, that came very strongly in heat on the 15th of the following October, at eight and a half months old. She weighed five hundred pounds, but was only in good growing condition—not fat. She would evidently have bred had she been served, but this was not permitted, as she was growing too fast to render breeding proper. It must also be remembered that the food which tends to early breeding is such as strengthens the vital functions, not laying on fat. Too much fat tends to sterility. The reproductive organs are stimulated by food rich in nitrogen; and it is this kind of food that develops the muscles and bones—as nearly all foods rich in albuminoids are also rich in phosphate of lime, to grow the bones.

If heifers be fed too largely with fattening food, or food containing an excess of heat formers, such as starch, sugar, and fat, the breeding function is weakened. Maize meal in excess is not good food for developing early maternity, as it contains too much starch. Tests have been made by feeding sugar to breeding animals, thus rendering them temporarily barren. Too much heat-forming food will produce a fatty degeneration of the ovaries in the female, or render the male animal impotent. It is related of the negroes in the West Indies, that they did not breed during the sugar harvest, because they ate too much sugar. We have known cows to go barren for a year from drinking the sweet skimmings of sorghum in boiling down molasses. It will be seen that food has a direct effect upon fecundity, and that it is important that breeders should understand this effect of food, and learn to feed properly for the best development of breeding animals.

NOT CANADIAN FARMERS.

American Exchange.

A man need not necessarily be a farmer to read agricultural papers. Indeed, we sometimes think farmers least of all men, appreciate the papers devoted to their interests.

ORCHARD SITES AND SOILS.

Some years ago Mr. B. F. Johnson of Champaign, Ill., a well-known agricultural writer, somewhat startled the horticulturists of the country by stating as facts that the thrifty, healthy, productive apple orchards of central Illinois were, as a rule, if not invariably, found growing on the low flat moist, if not wet lands, while those on the high dry land and slopes had either died out or were in process of dissolution. From these facts, which observation over a wide extent of country confirmed, he advanced the theory that abundant moisture in the soil is essential to orchard growth, and that while in an early day orchards succeeded well on the high ground (which was then regarded as the only suitable location for orchards), it was because such grounds then furnished abundant moisture. But under the effects of cultivation, of drainage, and perhaps change of climate, these have now become *too dry*, and the low flat lands, formerly too wet, are now just *dry enough*. In a call at the office of the *Farmers' Review* recently Mr. Johnson stated that further observation continued to the present time fully confirms him in the correctness of his theories. In planting an orchard now he would plant it in the *mud*. While it is probable that he takes rather an extreme view of the matter, it is yet probable that his theory is the correct one as applied to the prairie region of Illinois and other localities where similar conditions exist, elsewhere under other conditions his theories might not be applicable. While with the present light on the subject advice to those planting out new orchards would be to plant on the moist land with deep soil, a very practical question arises as to the application of this theory to orchards already out on high land or slopes. Accepting the theory of abundant moisture as a necessity, the treatment evidently should be such as to conserve for the use of the tree, to as great an extent as possible, the moisture existing in the soil and that furnished by rainfall and melting snows. To this end no water courses should be formed by ditches or dead furrows to carry off the water in a wet time. If on a slope, slight ditches, like dead furrows, across, instead of down, the slope, will help to retain the water and also to prevent the washing away of the soil. Heavy mulching is one of the best methods of preserving moisture in the soil. Where there is an abundance of straw or slough grass, it can be profitably utilized for this purpose, covering the entire surface instead of a small circle simply about the trunk of the tree, which would be of little use.

Or the plan suggested by D. B. Wier, in one of his articles in the *Review*, last winter, of seeding the entire orchard to clover, and instead of cutting it for hay, letting it die and rot on the surface, forming a heavy mulch to retain moisture and at the same time enriching the soil. The only objection we can see to such method is that it looks slovenly. But this shouldn't weigh against really beneficial results. Any orchardist can easily test this plan on a small part of his orchard if doubtful of its utility, and if results prove favorable accept it as a whole. Mr. Johnson is not the only person who attributes the disasters which have overtaken our orchards to the deficiency of moisture in the soil. Last summer the writer visited A. R. Whitney, of Franklin Grove, Ill., one of the largest orchardists in the west. In looking over his extensive orchards, in which he had suffered heavy losses of bearing trees, in answer to an inquiry as to the cause of their dying, he attributed it to excessive drouth in summer followed by a dry fall

and cold winter. The trees were enfeebled by drouth and not able to withstand the strain of the severe cold. His orchard soil when winter set in had not sufficient moisture in it to freeze solid, but remained loose like dry sand. The theories of Mr. Johnson before alluded to, with the facts he has presented to substantiate them, have had an effect to stir up our horticulturists and set them to thinking and discussing, and in this sense he has been a public benefactor. The whole subject shows the importance of an intelligent observation of facts and a change of methods to meet changed or changing conditions.

CANADA SHORTHORN HERD BOOK.

Transfers from May 20 to June 20.

- b. Orpheus 16th [12939], by 4th Duke of Clarence [4988] (33597), Canada West Farm Stock Association; Eben Camero. and others, Port.
- b. Rob Roy [12940], by Lord Beaconsfield [10142], A. G. Pettit, Grimsby; Beverly Book, Grimsby.
- b. Duke of Normanby [12941], by Prince of Wales [9168], Henry Menser, Elmwood; Henry Lippert, Neustadt.
- b. Sir John A. [12943], by Garfield [10964], Geo. Stewart, Valentia; R. Suggitt, Caesarea.
- b. Bingo Boy [12942], by Garfield [10964], Geo. Stewart, Valentia; Wm. Stewart, Little Britain.
- f. Pride of Scugog [14723], by Garfield [10964], Geo. Stewart, Valentia; Alex. Earle, Scugog.
- b. Halton Hero [12946], by Hanlan [8679], Robert Aikens, Knatchbull; H. W. Henders, Yelverton.
- b. Lord Haddo [12947], by Rose Duke [9276], Wm. Watson, Nassagaweya; Robt. Aikens, Knatchbull.
- b. Darby [12948], by Lord Beaconsfield [10142], J. A. Pettit, Grimsby; J. B. Carpenter, Simcoe.
- b. Champion of Louth [12949], by Baron Cambria [6002], Jas. R. R. Secord, Homer; Samuel Gladwell, St. Catharines.
- c. Duchess of Berlin [11802], by Elderridge Duke [7049], Rev. Alex. Campbell, Stonewall, Man.; Alex. Matheson, Stonewall.
- b. King John [12951], by The Grange Duke [10779], Mark Ashman, London; John Webb, Masonville.
- b. Blake [12952], by Earl of Lobo [11054], James McAuley, Strathroy; Joseph Burns, Warwick.
- b. Sir John [12953], by Royal John [10443], Jas. McAuley, Strathroy; S. D. Barns, Warwick.
- b. Duke of Venice [12954], by General Grant [12453], E. H. Moran, Stanbridge Station, Que.; Thos. Hunter, Venice, Que.
- b. Earl Grey [12933], by Royal Duke [10438], John Hislop, Brussels; John Johnston, Brussels.
- h. Lily 3rd [14729], by Erin Chief [12102], Robert Henderson, Orangeville; Wm. Harkins, Alton.
- c. Lily 2nd [11567], by Prince Bloom [9129], Robt. Henderson, Orangeville; Wm. Harkins, Alton.
- b. Earl of Lambton [12959], by Victor Emanuel, [11866], Noah Bricker, Roseville; Albert Duncan, Osborne.
- b. Oxford Duke 8th [12961], by Earl of Airdie [5158], Alex. Robertson, Alton; James Hills, Hanover.
- b. Prince Royal [12962], by Lieutenant [7286], John B. Berg, Arculra; Henry Berg, Philipsburg.
- b. Duke of Marigold [12955], by Christopher, [12534], Geo. Keith, Toronto; Joseph Orr, Clarkson.
- b. Royal Butterfly [12963], by Nonsuch [7522], John Routledge, Hyde Park; John Burns, Westminster.
- f. Maud Languish [14735], by Harwich Duke [10059], B. S. Seaman, Blenheim; W. J. Devereux, Ridgetown.
- f. Annie Languish [14736], by Joe Languish [10103], B. S. Seaman, Blenheim; W. J. Devereux, Ridgetown.
- b. Lord Ashley [12967], by Commodore [9773], B. S. Seaman, Blenheim; Wm. Nichols, Blenheim.
- b. Halton Pride [12969], by Prairie King [10293], Henry Robinson, Omagh; Amos Kinder, Omagh.
- b. Sir Rodger [12968], by Prairie King [10293], Henry Robinson, Omagh; Joseph Watson, Boyne.
- b. Dollar King [12971], by Prince of Goodness [10342], W. F. Nichols, Buttonville; Peter Boynton, Dollar.
- b. Delta Chief [12973], by Guelph Baron [7158], Alex. Acheson, Philipsville; J. E. Brown, Delta.
- b. General Garfield [12974], by High Sheriff 3rd [7189], Rowland B. Orr, Milton; J. S. Williams, Knowlton, Que.
- b. Prince of Bolton [12975], by Earl of Stafford [11432], C. W. Bancroft, Knowlton, Que.; J. F. Bryant, Millington, Que.
- c. Beauty [14751], by Lord Dufferin 3rd [5579], Henry Robinson, Omagh; John Wales, Omagh.
- b. Premature [12978], by Prairie King [10293], Henry Robinson, Omagh; John Miller, Hornby.
- c. Lady Huron [14755], by Crusade 2nd [8291], Wm. Barbour, Crosshill; Samuel Rannie, Zurich.
- b. General Gordon [12982], by Beaconsfield 4th [12832], James Carnochan, jr., Seaforth; John McKinley, Blake.
- b. John Collins [12981], by Beaconsfield 4th [12832], James Carnochan, jr., Seaforth; W. N. Johnston, Belgrave.
- b. Kenmore [12984], by Marquis of Lorne [8965], J. Hawkens, V.S., Detroit, Mich.; H. G. Arnold, Maidstone Cross.
- b. Harlequin [12983], by Marquis of Lorne [8965], J. Hawkens, V.S., Detroit, Mich.; H. G. Arnold, Maidstone Cross.
- b. Barnpton Champion 2nd [12985], by Young Ned of Rosedale [10657], J. S. Robson, Archibald, Man.; W. Bedford, Call Mountain, Man.
- b. 5th Duke of Huntley [12986], by Lorne [7392], Hugh Gourlay, Huntly; Hiram Blackman, Huntly.
- b. British Crown [12991], by Sir Leonard [10500] (45613), Thos. McCullough, Erasmus; John Colo, Mitchell.
- b. Duke of Cumberland 2nd [12992], by Duke of Cumberland [9852], James McCutcheon, Seeley's Bay; J. C. Stafford, Lyndhurst.
- c. Daisy Duchess 3rd [14767], by Franklin Duke [9977], James McCutcheon, Seeley's Bay; J. C. Stafford, Lyndhurst.
- c. Lady Kate [14766], by Duke of Cumberland [9852], James McCutcheon, Seeley's Bay; J. C. Stafford, Lyndhurst.
- b. Duke of Chicopee [12995], by Manitoba [11661], Joseph Sanders, jr., Preston; J. S. Frain, Walker.
- b. Duke of Fairmount [12996], by 2nd Duke of Fairview [8398] D. Mackenzie, Hyde Park; John Bell, Crumlin.
- b. Village Major [12996], by Butterfly's Athelstane [4719], G. B. Bristow, Rob Roy; David Reid, Bognor.

- b. Drum Major [12999], by Sir Richard Booth [11358], G. B. Bristow, Rob Roy; Robert Hamill, Chatsworth.
- b. McNab [13002], by Statesman 1st [9420] (44096), S. C. Isaac, Baltimore; A. H. Rosevear, Cold Springs.
- b. Joe Smith [13001], by McNab [13002], A. H. Rosevear, Cold Springs; James II. Rosevear, Cobourg.
- b. Pride of Peel [13003], by Young Canada [12221], Robert Fasken, Elora; Rhodes Letson, Alma.
- b. Grey Duke [12193], by Torrington [10560], Andrew Gilmore, Huntingdon, Que.; S. McGerrigle & Bros., Ormstown, Que.

TRANSFERS OF THOROUGHBRED STOCK.

American Berkshire Record.

- Prospect IX., 13575, Springer Bros., Springfield, Ill., to Isaac Haines, Sergeantsville, N. Y.
- Royal Britton, 10487, John Snell's Sons, Edmonton, Ont., Can., to W. W. Tiffin, Hibbard, Mo.
- Cardiff Sunbeam, 11299, A. H. Davinport, Lexington, Ky., to James White, Cerulean Springs, Ky.
- Rosette, 12193, and Admiration II., 12195, A. H. Lackey, Peabody, Kan., to J. B. Avery, Clifton, Kan.
- Louisville Prince, 13595, C. C. Cline, Louisville, Ky., to J. Sitzer, Crescent Hill, Ky.
- Louisville Belle, 13596, C. C. Cline, to G. W. Yancey, Louisville, Ky.
- Berkshire Boy, 10179, W. Warren Morton, Russellville, Ky., to Edward Drane, Clarksville, Tenn.
- May, 8906, Whiteface Rose, 9420, Duchess of Liverpool IV., 9604, and Princess of Minglewood, 10395, Edward Drane, to R. M. Hall, Clarksville, Tenn.
- Minton, 13604, and Christie Gem, 13605, Wib. F. Clements, Agency, Iowa, to John A. Elliott, Des Moines, Iowa.
- Laco, 13661, G. W. Clarke, Woodstock, Ohio, to John A. Diltz, Cable, Ohio.
- Stumpy Chief, 13625, N. H. Gentry, Sedalia, Mo., to Wm. Arbuckle, Boston, Tex.
- Duchess XXVII., 12931, N. H. Gentry, to Harry McCullough, Fayette, Mo.

LAW ON SELLING LIVE STOCK.

The *National Live Stock Journal* has some observations on the subject of the liability of the seller in the purchase of horses, cattle, etc. Among them are the following—

If one says his animal is sound, when it is not, and knowing that it is subject to any of those diseases that are not at all times, and, to a careful observer, fully apparent, and that it is balky, or breachy, or vicious, the purchaser may likewise avoid the contract on the ground of fraud. Further than this, if the animal possesses any defects that would be matters material to the purchaser, which he, with ordinary care and judgment, cannot perceive, these too must be disclosed, or the contract is null and void.

If one is selling you an animal which he knows to be unfit for the use intended, according to your avowed purposes, he cannot enforce the contract unless the defects were open to your observation, for the law binds him to disclose hidden defects which made the animal unsuitable to your express purposes.

Every farmer should have sweet corn on his table until fall frosts. Plant a small plot every ten days from this time until late July.

FLOWER FARMING.

Farm and Flosids.

All the natural scents now used in this country are imported at high prices, but within a year the cultivation of flowers for perfumery has been started in Santa Barbara and Alameda counties, California, and as the climate of that state is well adapted to the raising of flowers, there is a good prospect that a large share of the scents consumed in this country will soon be produced at home. In Europe 150,000 gallons of handkerchief perfume are annually distilled. The profits of flower farming in some portions of the Old World are shown in the following figures:—An acre of jessamine plants, 80,000 in number, will produce 5,000 pounds of flowers, valued at \$1,250; an acre of rose trees, 10,000 in number, will yield 2,000 pounds, worth \$375; 300 orange trees, growing on one acre, will yield at ten years of age 2,000 pounds of flowers, valued at \$220; an acre of violets, producing 1,600 pounds of flowers, is worth \$800; an acre of acacia trees of 360 will, at three years of age, yield 800 pounds of flowers, worth \$450; an acre of geranium plants will yield something over 2,000 ounces of distilled attar, worth \$4,000; an acre of lavender, giving over 3,500 pounds of flowers for distillation, will yield a value of \$1,500.

TILE FENCES FOR PRAIRIE FARMS

Fargo North-Western Farmer.

The problem of fences on the north-western prairie may eventually be solved by the use of clay as the cheapest and most durable substitute for regulation timber posts.

Galvanized wire on glazed tile fence posts would last for generations if clay can be burned so that fence posts made of it will not be easily broken by shocks.

There are now three forms of invention being tried, which are found described thus:—

“Sheldon’s post” is merely a common tile 4-inch moulded six feet long, small slots punched for staple keys, and burned hard. “Hedges’ post” is made of six one-foot tiles, fastened together by means of plates between the tiles, which have a hole in the centre for the passage of a small iron rod with a head on lower end and a bur on upper end. “Schwart’s post” is a bar iron post set into a two-foot tile which goes in the ground. The first post is open to no very serious objection as a post for barb wire, except that sudden shocks will break it. As it can be replaced very easily, and can be made for a few cents, experience may prove that it is the post. The second can be mended easily by putting a new tile in the broken place, unless the bolt break—but it costs too much. The third, no doubt, will be popular for lawn fences, but looks expensive to the farmer for line fences.

WOMEN AND HORSES.

A Texas paper says:—“Is it not a little remarkable that handsome women and handsome horses so generally go together? But it is a fact. Take the blue grass region of Kentucky, for instance. There you will find the women remarkable for their beauty and fine physical points. The same is the case with their horses, which are widely celebrated. Take also Baltimore. That city is said to be one of the most remarkable in the world for the beauty of its women. It is equally noticeable for its splendid horses. Take, also, Arabia. The Arab man is not a ‘beauty spot,’ but many of the women are of such wondrous beauty that they are called ‘houris,’ that is to say, angels that

live on earth. The Arab horse is as distinguished for beauty and fine points as the Arab woman. And so you can go on indefinitely, finding beautiful women the rule wherever you find fine horses the rule. The only exception probably is the island of Jersey, which is somewhat remarkable for the beauty of its women, while its horses are not remarkable for any fine points. Its cows, though, are thought to top the world for milking and also for a certain exquisite sort of beauty in the eyes of cow fanciers. Its ladies, therefore, seem to run more after the cow than the horse.

“It seems to be well established, then, that if a community would improve the beauty of its women it must begin the good work with its horses, and in some localities with its cows. It would be easy to explain this, but I am only calling attention to fact, and not explaining anything.”

WARBLES ON CATTLE.

A correspondent writing to *Bell's Messenger* relates the following experience of warbles:—

“I had each cow dusted along the back with sulphur. The result is that only two cows had one solitary deposit each, the others are perfectly free, whilst there are several in the backs of their calves. To those deposits I have used carbolic acid mixed with hog’s lard, in the proportion of 1 to 20, with excellent effect. I may add that that mixture is also a safe and effectual cure for ringworm, which is often so troublesome with young cattle. The use of mercurial ointment as recommended in Miss Ormerod’s remedy for the warble is one that requires great caution in using, or the remedy will be worse than the disease. A few years ago a neighbor of mine dressed his young cattle for lice with a mercurial preparation; they licked it off and were poisoned. Such a result cannot follow my remedy, and I have proved its efficacy.”

HOW TO PREVENT DISEASE IN SWINE.

Abram Brown, in Chicago Tribune.

It is much easier to prevent than to cure disease in swine. After the system of the animal becomes thoroughly impregnated with the germs of disease a cure is usually difficult. The spores of disease may be taken in and lie in the system for a long time, awaiting favorable conditions before germinating and manifesting themselves. Farmers may raise large herds of hogs, which may fatten, prosper, and yield a large profit to the feeder. Then the seasons change, water becomes scarce; only polluted pools or sloughs are accessible where the hog may drink or wallow. All at once the hogs become sick, refuse to eat, tremble, have the “thumps,” swell up under the neck, or have the so-called hog cholera and die. The farmer cannot see any apparent cause. He calls the veterinarian, who, after viewing the premises, says that it is only a matter of surprise to him that the people living in close proximity to that filthy, polluted cesspool in the hog-yard, which has become the receptacle of all the wash from the animal offal, and those feeding and taking care of the hogs, are not sick with typhus-fever. Yet these cesspools are, in many cases, all the hogs have to drink from and wallow in. Looking over the pool yonder one will see a countless swarm of insects; they are busily depositing their eggs in the mud and filth; the hog while drinking swallows the spores, which hatch in their stomachs and intestines, and are distributed all through the animal’s system, causing great irritation, pain, and fever. The animal is sick, has the cholera, and dies. The pork of swine drinking or wal-

lowing in such pools is no more fit to eat than the mud they wallow in; the meat will look dark and dingy and smell and taste like the mud.

“Well, now,” says the farmer, “you have told me the cause of disease, also that my pork is nasty and unhealthy; now tell me how to remedy all this trouble.” Take up the hog yards; carry the material upon a knoll or rise of ground, excavate a shallow cellar, build pens over it; use this in summer only for shade and sleeping place. Do not put any straw or other nesting in it; build the pens opening to the south to let in the winter sunshine. A hog wants sunshine in winter and spring; in hot summer he wants shade, not a wallowing place of filthy mud. Give him pure air, pure water, and pure feed in summer, and let him have a nice pasture range with but little strong feed. When you shut him up to fatten, put him on a good board or plank floor, with clean bedding. Change often; keep his pen cleaned every day; feed him sound, clean corn or chop of corn and oats, with lime and salt, in a trough, and grass during summer and fall. In winter put second-growth clover hay where he can always have free access to it. Never butcher him except while growing, and I will guarantee you the tenderest, sweetest, and healthiest meat in the world.

I have been a close observer of the habits and wants of swine for the last thirty years. I never have had a sick hog, nor lost one, within that time. It is a grand mistake to suppose that it is a necessity for swine to have a wallow. Let them range in the pasture during a warm rain, to wash them, but during cold storms keep them housed. Do not allow too many to nest together—not over six or eight in each bunch. While my neighbors have lost heavily, some all of their hogs, mine have been healthy.

A “REFORMED” SOW.

A correspondent of an English contemporary furnishes the following:—“A few years since I had a sow which would have worried all her young had I not been with her. She did worry two. I expected, after all the young pigs had come, and she became composed, that she would begin to take kindly to the little ones. But no. She had plenty of milk, and would allow them to suckle; but immediately on one coming in her sight, or touching her about the head, she would rush up, bounce upon, and mouth them like a dog. When she was not giving them suck she would not have them with her at all. I had never had, or heard of, a case of this kind before, and did not know how to proceed, but concluded that it was necessary, in order to win the affections of the sow for the young, that they be always kept with her. How to do this safely I did not know, but hit upon the plan of having a little space across one end of the cote boarded off, and here I put the little ones. I arranged it so that the sow and little ones could see and smell each other. It was painful to watch the sow’s actions towards the young. She would set on them like a dog, and when one came near her would spring at it with awful fury. I never expected her to take to them. However, I persevered. I continually let her wear a short cord in her mouth; and every now and again caught her and got her down by rubbing her udders; then I let out the little ones, being always careful to keep them from near her face. About the third or fourth day I noticed quite a change in her, and during the day mother and young were left together alone; and from then till the little ones were ready for market they lived happily together.”

MILK PRODUCTION.

The following law has been passed by the New York Legislature and signed by the Governor:—Whoever shall with intent to defraud, sell supply, or bring to be manufactured to any butter or cheese manufactory in this State, any milk diluted with water, or in any way adulterated, uncleanly, or impure, or milk from which any cream has been taken, or milk commonly known as skim milk, or whoever shall keep back any part of the milk as strippings, or whoever shall knowingly bring or supply milk to any butter or cheese manufactory that is tainted or sour, or whoever shall knowingly bring or supply to any butter or cheese manufactory milk drawn from cows within 15 days before parturition, or within three days after parturition, or any butter or cheese manufacturers who shall knowingly use or allow any of his or her employees or any other person to use for his or her benefit, or for their own individual benefit, any milk or cream from the milk brought to said butter or cheese manufacturer without the consent of all the owners thereof, or any butter or cheese manufacturer who shall refuse or neglect to keep or cause to be kept a correct account open to the inspection of any one furnishing milk to such manufacturer, of the amount of milk daily received, or of the number of pounds of butter and the number of cheese made each day, or of the number cut or otherwise disposed of, and the weight of each, shall for each and every offence forfeit and pay a sum not less than twenty-five dollars nor more than one hundred dollars, with costs of suit, to be sued for in any court of competent jurisdiction for the benefit of the person or persons, firm or association, or corporation or their assigns upon whom such fraud or neglect shall be committed. This act shall take effect immediately.

NEW BREED OF FOWLS.

A novelty has been introduced from Germany by Mr. John Cundale, of Market Rasen, called the Thuringian Beard Fowl. It is of German origin, but confined principally to the small district of Thuringia, where it is bred very carefully. In size it resembles the black Hamburg—short and compact in body, good in carriage, and lively in movements. The principal characteristic is the strong beard on cheeks and throat, by which the small, round head is almost covered, as well as the pinkish-white ear-lobes. The comb is small, single, evenly serrated, and upright. Wattles are dislodged by beard. Beak ordinary size and black; neck short and stout; breast well rounded and full; shoulders broad; back short, growing wider on saddle; out of the light cushion rises the abundantly-furnished tail, which is adorned (cock's) with immense sickles, and carried well over the back. Legs short, strong, clean, and of dark slate color. Plumage is of a brilliant black, with an extraordinary lustre, not seen so bright on any other fowl. It is very hardy; a good table fowl, having very full breast; an extra good layer of beautiful white eggs, and rarely wants to sit.

CHICK REARING.

Mr. Tegetmeier, writing to the *Field* upon the losses in chick rearing, says:—"Coarse, dry, whole corn, like barley, is not adapted for young chicks; they require the worms, grubs, grass seeds, green vegetables, that would naturally be obtained for them by the hen, and if we place them in situations where she cannot obtain such food we must do our best to supply

it artificially. This may be done by using egg and milk with canary seed for a few days, then sweet fresh meal and milk, small tail wheat, or millet (*amila*), and, if the birds are in a position where no animal food can be obtained, some must be supplied, as is done by the rearers of young pheasants, who give a small amount of boiled rabbit or some well-scoured flesh maggots, &c. Now that the weather has become warm, maggots are plentiful, but their production is not pleasant. The least objectionable plan that I know is to hang up some animal substance until it is thoroughly fly-blown, and then to bury it about ten or twelve inches deep in the ground. This absorbs all the disagreeable odor, which is at once oxidised and destroyed. The maggots grow, and when they are of full size work their way to the surface preparatory to changing into chrysalids. The hens with chicks soon discover the locality, and, by scratching, obtain an abundant supply of animal food for their young broods. In France, where so many chicks are reared by the peasants, fifty or sixty will be put under the care of a turkey hen, which will be driven with her charges to some coppice or road side, where the young can obtain the food that is essential to their well-doing, both turkey mother and young chicks being in custody of some old peasant man past hard work, or some young girl whose services cannot be more profitably utilised."

A FLY PREVENTIVE.

An Iowa lady writes:—"For three years I have lived in town, and during that time my sitting room has been free from flies, three only walking about my breakfast table, while all my neighbors' rooms are crowded. I often congratulated myself on my escape, but never knew the reason of it until a few days ago. I then had occasion to remove my goods to another house, while I remained on a few days longer. Among other things removed were two boxes of geraniums and calceolarias, which stood in my window, being open to its full extent, top and bottom. The boxes were not gone half an hour before my room was as full of flies as those of my neighbors around me. This, to me, was a new discovery, and perhaps it may serve to encourage others in that which is always a source of pleasure, namely, window gardening. Mignonette, planted in long, shallow boxes, placed on the window sill, will be found excellent for this purpose."

CANADIAN TRADE.

London Live Stock Journal.

Mr. Dyke's endeavors to extend Canadian trade in this country should be heartily appreciated by producers and exporters in the Dominion. His communications through the Canadian and English press stimulated and encouraged traffic in cattle, sheep, dairy produce, and horses; and competitors in Canada, who shared nothing of the initial expense, took advantage of the enterprise in regard to horses. Mr. Dyke remarks that a few fine animals were sent to England which sold well; and he impresses on Canadian breeders the fact that only the better class of carriage-horses will obtain a market on this side. The traffic in dairy cows was not properly managed, as Canadian cows said to be within one or two days of calving proved in some cases to be months. A valuable trade in dairy cows could be carried on, but Mr. Dyke warns Canadian shippers and exporters that confidence can only be restored by the removal of the suspicion at present attached to so-called in-calf dairy cows.

BUTTERMILK AS A DRINK.

In warm summer weather many persons feel an irresistible craving for something sour, and often gratify this desire by a free indulgence in pickles, or vegetables made acid with vinegar. This demand for acids indicates a deficiency in the acid secretions of the stomach, and the demand for an artificial supply is a natural one; but vinegar is not the best substitute. Lactic acid is one of the chief agents that give acidity to the gastric juice of the stomach in health. This is the acid of sour milk, and therefore one of the best summer diet drinks that we can use is buttermilk. It satisfies the craving for acids by giving to the stomach a natural supply, and at the same time furnishing in its cheesy matter a good supply of wholesome nutrition. A man will endure fatigue in hot weather better on buttermilk than on any diet drink he can use.

GROUND OYSTER SHELLS FOR LAYING FOWLS.

Chemically speaking, the shell of an egg consists chiefly of carbonate of lime, similar to chalk, with a very small quantity of phosphate of lime and animal mucus. The white of an egg (albumen) is without taste or smell, composed of eight parts of water, 15½ parts of albumen, and 4½ parts of mucus, besides giving traces of soda, benzoic acid, and sulphurated hydrogen gas. The yolk has an insipid, bland, oily taste. It consists, chemically, of water, oil, albumen, and gelatine. Now, there must be something to form the shell. Oyster shells head the list. Nothing furnishes so easily and successfully the requisite material for egg shells as these natural productions of the sea. Albumen, the white of the egg, is found almost in its pure state in fresh, sweet milk, and wheat, oats, rye, buckwheat, barley, and corn in the order as named. Now, this makes plain what we are to feed. It matters not what we have to feed, if our hens lay eggs they must have the wherewith to produce the eggs.

WHAT AN ENGLISH GROOM SAID TO A YANKEE HOSTLER.

When a horse comes in all wet with perspiration you let him stand in the stable and dry with all the dirt on. In England we take the horse as he comes in from a drive and sprinkle blood-warm water all over him, from his head to his feet. Then we scrape him down and blanket him, rubbing his legs and face dry. Thus, in an hour he is clean and dry and ready to take a good feed, while with your way he will stand and swelter for hours, and finally dry sticky and dirty. Our horses never founder and never take cold. We never use a currycomb. You scratch your horses too hard. The only care necessary is to have the water not very cold, then bathe them instantly, while you are rubbing their legs.

THINGS TO DO AND TO KNOW.

No potato can take the place of the Early Rose.
The Wealthy apple is one of the best for winter.
Now scatter a lot of sifted coal ashes over the roots of currants and gooseberries.

SALE OF THE EARL OF DURHAM'S FAT STOCK.—The annual sale of fat cattle and sheep on the Earl of Durham's Bowes-House farm took place on Monday. Ninety-one fat cattle, representing various breeds, realised nearly 20l a head; while fat sheep ranged from 48s. to 64s. each. The total proceeds of the sale were 3,300l.

Live Stock Notes.

The Canadian cow Mary Anne of St. Lamberts made thirty-six pounds in a week. The American cow Princess made forty six pounds twelve and a half ounces in a week. Both were Jerseys. Great milk and butter records are hard on the digestion and unprofitable to the owner's pocket.—*Colorado Live Stock Record.*

The other day a farmer in the vicinity of Grantown-on-Spey, while going amongst his sheep, observed a golden eagle dart down among the sheep and carry off in its talons a ewe lamb, which it managed to carry to a height of some 60 feet, when it lost its hold. The lamb was none the worse of its aerial descent, and the eagle, after hovering about for some time, soared away, not venturing another descent.—*Bell's Weekly Messenger.*

BARB FENCES.—We have received a marked copy of an Ashtabula paper containing the following notice:—"Farmers will do well to make a note of the fact that the courts have decided that boundary fences cannot be made of barbed wire without the consent of the parties owning the adjacent land, and any man who puts a barbed wire fence along the highway renders himself liable for injuries resulting to stock passing along said highway." We suppose this refers to a decision in some special case that has been tried, and is based upon the common law for damages, as there is no special law covering the case.—*Ohio Farmer.*

The *North British Agriculturist* of June 10th has the following:—"A conference was held in Aberdeen on Friday between a sub-committee of the New Works Committee of the Aberdeen Harbor Commissioners and the local importers of Canadian cattle, to ascertain whether, in connection with the cattle trade, there would be any likelihood of a direct import trade in Canadian produce being established with the port of Aberdeen, where it is proposed to erect a landing-stage for foreign cattle. In the course of the conference the opinion was expressed that the support the Harbor Commissioners might expect from the importers of Canadian produce was very trifling, and that the Commissioners would have to decide the matter of the erection of a landing-stage entirely on the basis of the importation of cattle. The exigencies of the trade, it was pointed out, would prevent importers patronizing a direct line, the sailings being on an average of only once in two months."

Dairy Notes.

Since the introduction of cream testing, we find creamery patrons are not willing to sell cream by measure, with here and there an exception. We do not hear much of it since we have been working on the test plan, but while purchasing cream by the inch we used to hear, week after week, of the farmers' tests over-running the inch measure. Those who now complain are those who have a low per cent., and they frequently labor under an error, and are really getting pay for a pound of butter to an inch of cream, although the per cent. is much less than a 100. When the cream is measured for the test it includes all the milk taken off with the cream, and as milk will not make butter, an inch of the mixture will not make a pound of butter, and the more milk the lower will be the per cent.—*The Ohio Dairy and Farm Journal.*

The Kennel.

NOTES.

Mr. Clow, of Colborne street, has one of "Jessie's" puppies for sale. See advertisement.

FATTENING STEERS.

Hon. Columbus Delano, of Ohio, has a model farm near Mt. Vernon. The *Michigan Farmer* says: "It is his system to buy steers two years old past, in the summer or fall of the year, and as there is a large amount of straw from the grain grown on the farm, the steers are wintered at the straw stack until about the middle of March, when they are fed cut hay and meal until grass gets a good start. During the summer they get a good growth, are stall-fed until the next mid-winter, and sold, usually weighing 1,600 to 1,700 pounds per head, and bringing from \$50 to \$75 per head more than first cost. Stall-feeding of cattle is not the business here: this is mentioned to show their method of converting their straw and coarse feed into manure."

UNSALTED BUTTER.

How many persons are there who would not turn up their noses at mention of unsalted butter? Isn't fit to eat! exclaims the opinionated person who does not know what he is talking about. Well, it is a matter of taste. But travellers from Europe have the greatest difficulty in becoming accustomed to our strong, old, briny butter. They cannot eat it at first, any more than the American can endure the pretty, tiny pellets of fresh butter that meet him at every hotel in Europe. But again, so accommodating is human nature, that, once forced to accustom himself to the unsalted article in Europe, he, too, finds American butter briny and flavorless.

The truth is that the most delicious butter is that which is left unsalted. For market, of course, it will not keep many days in the fresh state, but even then twice as much salt as is necessary is often put into it. The salt makes it acrid, and destroys wholly the exquisite cream and grass flavor. For use in æsthetic homes, sets of tiny separate moulds, in the shape of a strawberry or something else pretty, should be had. Take the butter unsalted, work the milk out, mould it in rich-colored little gems in these, and put it upon the table in that shape. It is as attractive to the eye as flower or fruit, and the taste of it upon warm biscuit or snowflake light bread—well, try it, that is all.

Live Stock & Kindred Markets.

OFFICE OF THE CANADIAN BREEDER AND AGRICULTURAL REVIEW, TORONTO, June 25th, 1885.

There has been a material improvement in the condition of the British live stock trade during the past week and Monday's cables chronicle an advance of about one cent per pound as compared with a week ago. The improvement has been due chiefly to a considerable falling off in the receipts, which has reduced the supply sufficiently to give sellers a decided advantage. Receipts from Canada and the United States have been light, while the supplies from Ireland and the Continent have continued small. Buyers were more anx-

ious to operate, which strengthened the market, and Monday the tone was firm under a steady demand, which effected a good clearance at the advance. A Liverpool cable reported the market firm and demand satisfactory, the offerings being light. Prices were 1. per lb. higher than a week ago.

Quotations at Liverpool on Monday, being calculated at \$4.80 in the £, were:—

Cattle—	\$ c.	\$ c.
Prime Canadian steers.....	0 14½	to 0 00
Fair to choice.....	0 14	to 0 00
Poor to medium.....	0 13	to 0 00
Inferior and bulls.....	0 10	to 0 11½

TORONTO.

About thirty loads of live stock have been received at the Western Cattle Market here this week so far, against about the same number the same time last week. The offerings show a decrease in the number of shipping cattle for sale, but an increase in butchers' cattle, sheep, and hogs. Prices show but little change since Friday last excepting for butchers' cattle, which are quotably ¼c. per lb. lower.

CATTLE.—Very few shippers have been offered this week. About 100 head were on the market, but nearly all of these were on through shipment. The demand is good, and choice cattle would have sold readily. A scarcity is expected for a short time hence. Prices are nominally unchanged. There has been a largely increased run of butchers' cattle; of these a good part are of inferior quality, being thin grass-fed animals. They have met with a slow sale, many going as low as 3c. per lb. The market is easier, showing a decline of ¼c. per lb. Choice stall-fed are wanted, and will sell readily at 4½ to 4¾c. per lb. The general run of grassers have been selling at 3 to 4c. per lb. Among the sales yesterday were 9 cattle, 975 lbs. each, at \$42.70; 6 do. 1,050 lbs. at 4½c per lb.; 2 do. 1,000 lbs., at \$41 each; 4 do. 850 lbs., at 3¾c. per lb.; 4 do. grass-fed, 1,000 lbs., \$36 each; 19 do. rough cows, 3¾c. per lb.; 10 stall-fed, 1,200 lbs., \$49 each; 5 do 1,000 lbs., at \$37.50 each. Milk cows are in plentiful supply, but the demand has been light, and generally easier prices have prevailed.

SHEEP.—A pretty fair demand for shippers is springing up and supplies are increasing. About 50 head, averaging 150 lbs. each, of fair good quality, were bought yesterday at 4½c. per lb., with a few at 4c. The demand for butchers' sheep is getting easier. A few bunches sold yesterday at \$4.50 to \$4.75 per head.

LAMBS.—Are easier owing to pretty large supplies. Sales have been made at \$3.15 to \$3.75 per head.

CALVES.—Continue plentiful and are somewhat easier than they were at the close of last week.

HOGS.—The market continues about the same. Supplies are pretty fair. A few stores are offering, but the receipts are nearly all fat hogs. The latter have been selling at \$4.50 to \$4.65 per 100 lbs. A few stores sold at 4¾c.

The following are the receipts of live stock at the cattle market here for last week and to date, with comparisons:—

	Cattle.	Sheep and Lambs.	Hogs.
Week ending June 26.....	884	751	119
Week ending June 13.....	1,266	350	187
Cor. week, 1884.....	598	325	158
Cor. week, 1883.....	555	278	54

Total to date	22,482	4,509	2,672
To same date 1884.....	15,157	5,653	2,927
To same date 1883.....	14,404	4,983	2,085

Quotations are as follows:—

Cattle, export choice.....	5½	to 5¾	per lb.
" mixed.....	5	to 5¼	"
" bulls.....	4	to 4½	"
" butchers', choice.....	4½	to 4¾	"
" good.....	4¼		"
" common grass fed.....	3	to 4¼	"
Milch cows.....	\$30		
" stockers.....	3¾	to 4½	"
Sheep, export, per lb.....	4	to 4½	
" butchers' per head.....	4	00	to 4 75
Spring lambs, per head.....	3	00	to 3 75
Hogs, fat, off the car.....	4½	to 4¾	per lb.
store.....	5	to 5½	"
Calves, choice, per head.....	\$6	00	to \$8 50
" common.....	2	upwards.	

MONTREAL.

The exports of cattle from Montreal continue to keep ahead of all previous years. The exports to date reach 18,325 head an increase of 4,265 head over 1884, an increase of 2,925 over 1883, and an increase of 6,304 over 1882. There has been a fair trade in export cattle since our last, and the market has been well cleared out at firm prices. The receipts during the week have included some grass fed cattle, and the movement of such next week is expected to show a large increase. At Point St. Charles on Monday exporters were good buyers and the bulk of the offerings was absorbed, with the tone of the market firm, transactions being effected at 5 1/4 to 5 3/4 c. per lb. live weight. Last year at this date export cattle sold at 5 1/2 to 6 1/4, and in 1883 at 6 1/2 to 7 1/8 c. There was a good demand for butchers' cattle at 5 to 5 1/4 c. per lb live weight. Hogs were in light supply and fair demand, with prices higher at 5 1/2 to 5 3/4 c. per lb. At Viger market the receipts of cattle were moderate and prices ruled firm under a good demand. There were 200 head offered, and good to choice heaves brought from 4 1/2 to 5 1/2 c., and common to fair 3 1/2 to 4 1/4 c. per lb. live weight. The receipts of sheep and lambs were 300 head, the best of which sold at \$4 50, while inferior brought \$2 50 each. Lambs sold at \$3 75 to \$4 as to quality. Calves were in good demand at easier prices, there being 200 head offered, and choice sold at \$10, while inferior sold down as low as \$1 50 each. Hogs were active at steady prices and brought from \$3 50 to \$8 50 according to quality. One bull, weighing 1,965 lbs., sold at \$4 c.

THE HORSE MARKET.

TORONTO.

The weekly sale of horses at Grand's yesterday was largely attended, buyers being present from all parts of Canada. About fifty horses were sold. Prices ranged from \$80 to \$210 each. About fifteen of the fire hall horses were sold at good prices. The demand at the Repository for horses of all classes is exceptionally good at present.

MONTREAL.

There has been a good demand for horses lately, but it is impossible to obtain animals owing to the scarcity. The best enquiry is for good working horses, which could be sold for high prices had there been any in the market. During the past week Mr. Maguire, of College street, sold the following:—One brown horse, 9 years old, \$72 50; one brown horse, 6 years old, \$100; one bay do., 5 years, \$110; one bay do., 7 years, \$180; one bay mare, 6 years, \$100; one grey horse, 5 years, \$130; one bay mare, 4 years, \$160; one bay mare, 8 years, \$125.

PRODUCE

There would seem to have been some slight improvement in the local market during the week. There has, at last, been some little enquiry heard for flour; and the obstinacy of holders appears to have averted grief in the case of wheat. Crop prospects in our own neighborhood are generally reported favorably; but we have some time yet to traverse before harvest, particularly when prophets of it are all agreed in predicting a late one. Stocks in store have been decreasing and stood on Monday as follows:—Flour, 3,375 barrel; fall wheat, 107,783 bushels; spring wheat, 109,851; oats, 20,003; barley, 11,565; peas, 10,497; rye, nil. Wheat in transit for England shows a decrease on the week, standing on the 19th inst. at 2,750,000 quarters, against 2,844,000 on the 12th inst. In the States the visible supply of wheat stood at 37,330,000 bushels, against 37,799,000 in the preceding week, and 14,993,000 last year.

PRICES AT LIVERPOOL ON DATES INDICATED.

Table with columns for commodity (Flour, Wheat, R. Winter, No. 1 Cal., No. 2 Cal., Corn, Barley, Oats, Peas, Pork, Lard, Bacon, Tallow, Cheese) and rows for dates June 16 and June 23.

Flour.—There has been a slight improvement in the enquiry, at firm prices. Sales were made toward

the close of last week at equal to \$4.05 for superior extra and equal to \$3.90 for extra; and on Monday extra again changed hands at equal to \$3 87 1/2. Market closed with a relapse towards dulness and sellers as before.

BRAN.—Seems inactive and rather unsettled with values closing, as well as we can judge, at about \$10 50.

OATMEAL.—Cans inactive and weak with sellers at about \$4 20, but no sales quoted; small lots quiet at \$4 50 to \$4 75.

WHEAT.—Sales have been small but any sold has brought steady prices, holders having firmly refused to make concessions. No. 2 fall sold on Thur day at 89c. f.o.c., and on Friday and Monday at 90c. f.o.c., or prices equal to this figure; No. 3 fall brought 86c. on track last week; spring scarce and steady; No. 2 sold at 89c. f.o.c. on Friday, and at 90c. on Saturday. At the close there was nothing doing but there seemed no disposition prevalent to make concessions. On street fall and spring sold at 87 to 89c. and goose at 75 to 76 1/2 c.

OATS.—In sufficient supply and rather easy in price. Cars on track sold at 34c. on Thursday and Friday for feeding, and at 35c. for white for milling. The market closed dull with mixed unchanged in value at about 34c. Street receipts small and 37c. paid.

BARLEY.—Cars neither offered nor wanted; prices of them purely nominal. Street receipts very small; one sale was made at 56c.

PEAS.—In good demand and firm; several cars sold towards the close of last week at 67c. f.o.c., and on Monday one car brought 68c. Street price 64c.

RYE.—None offered; prices nominal.

HAY.—Present in car-lots has been steady at \$16 50 to \$17. Market receipts small until the close when they showed an increase, but all wanted at steady prices; closing at \$12 to \$14 for clover and \$15 to \$18 for timothy.

STRAW.—In good supply but all taken at firm prices; loose has sold at \$7 to \$8 and sheaf closed at \$10 to \$12.

POTATOES.—Cars rather better with some sales at 25c., which seemed about the value at close. On street firmness has prevailed; but loads have usually sold at 25 to 30c. per bag.

APPLES.—Increasingly scarce and prices firm at from \$2 to \$3 to \$3 50, the latter for really choice winter fruit.

POULTRY.—None offered and prices somewhat easy at 35 to 60c. for spring chickens, the former for small; and 60 to 75c. per pair for fowl.

TORONTO MARKET.

Table listing various commodities and their prices: Flour, p. brl., f.o.c. Sup. extra... \$4 00 to \$4 05; Extra... 3 87 1/2 to 3 90; Strong Bakers'... 0 00 to 0 00; S. W. Extra... 0 00 to 0 00; Superfine... 0 00 to 0 00; Oatmeal... 4 20 to 0 00; Cornmeal... 0 00 to 3 50; Bran, per ton... 10 50 to 11 00; Fall wheat, No. 1... 0 00 to 0 00; No. 2... 0 90 to 0 00; No. 3... 0 87 to 0 00; Spring Wheat, No. 1... 0 91 to 0 00; No. 2... 0 89 to 0 00; No. 3... 0 00 to 0 00; Barley, No. 1... 0 00 to 0 00; No. 2... 0 60 to 0 00; No. 3 Extra... 0 55 to 0 00; No. 3... 0 50 to 0 00; Oats... 0 34 to 0 00; Peas... 0 67 to 0 68; Rye... 0 70 to 0 00; Corn... 0 00 to 0 00; Timothy Seed, per bush... 2 00 to 2 15; Clover... 6 75 to 0 00; Flax, screened, 100 lbs... 0 00 to 0 00.

PROVISIONS.

BUTTER.—New has been selling fairly well for local consumption and at steady prices, or 12 1/2 to 13c. for good qualities, whether tub or roll; receipts seem to have been on the increase and rather improving in quality. Old, however, has been increasingly dull; lots have been offered freely at 6c. without finding a sale, and some little, we believe, has gone off at 4c. Street receipts of pound rolls have been large and sales at low prices, but closing rather better at 13 to 15c.

CHEESE.—Old almost finished, and new has sold fairly well in small lots at 8 to 8 1/2 c.; but the feeling at the factories seems improving.

EGGS.—Receipts have been rather on the decrease, and all offered have been wanted; prices firm but un-

changed at 12c. for round lots. On street 13 to 14c. has been the range.

PORK.—Quiet but steady, with small lots going at \$15 50.

BACON.—Dull and in some cases weak. Long-clear has sold in cases usually at 7 1/4 c., but the range has been from 7 1/4 for tons to 8 1/4 c. for the smallest lots. Cumberland inactive at 7 to 7 1/4 c., but some newly-cured is held at 8c. Rolls have been moving freely at 9 1/4 c. for trade-lots and 10 c. for small lots, and bellies at 11 to 11 1/2 c. Hams in good demand and steady at 11 1/2 to 12c.

LARD.—Dull and weak at 9 to 9 1/2 c. for tinnets and pails in small lots; tierces nominal.

HOGS.—Offered slowly and nearly all offered bringing \$6 50.

SALT.—Liverpool coarse in small lots selling at 70 to 75c.; new dairy to arrive this week offered at 45c. for 50-lb. bags. Canadian quiet and unchanged.

DRIED APPLES.—Inactive and easy; trade-lots not selling and dealers letting them off at 4 1/2 to 5c., with evaporated at 7 1/2 to 8c.

WHITE BEANS.—Choice have been selling in small lots at \$1 00 to \$1 10; these seem steady and rather scarce but nothing else stirring.

HOPS.—There have been a few single bales of choice sold at 12 to 15c., but no movement is reported in trade-lots, and the disposition seems to be to hold these over.

TORONTO MARKETS.

Table listing various commodities and their prices: Butter, choice dairy, new... 0 12 to 0 13; good shipping lots... 0 05 to 0 06; inferior, &c... 0 04 to 0 00; Cheese, in small lots... 0 08 to 0 10; Pork, mess, per brl... 15 00 to 15 50; Bacon, long clear... 0 07 1/2 to 0 08; Cumberland cut... 0 07 1/2 to 0 08; smoked... 0 00 to 0 00; Hams, smoked... 0 11 1/2 to 0 12; cured and canvassed... 0 00 to 0 00; in pickle... 0 10 to 0 10 1/2; Lard, in tinnets and pails... 0 09 to 0 09 1/2; in tierces... 0 09 to 0 00; Eggs... 0 12 to 0 00; Dressed hogs... 6 50 to 0 00; Hops... 0 10 to 0 15; Dried apples... 0 04 to 0 05; White beans... 0 75 to 1 10; Liverpool coarse salt... 0 65 to 0 75; dairy, per bag 56 lbs... 0 50 to 0 00; fine... 1 45 to 1 50; Goderich, per barrel... 0 95 to 0 00; per car lot... 0 90 to 0 00.

HIDES, SKINS, AND WOOL.

HIDES.—Green have been in fairly good supply and of fair quality, and readily taken at former prices; cured firm with sales of cars at 8 1/2 c.

CALFSKINS.—Abundant, and readily taken at former prices.

PELTS.—Receipts have been on the increase, but prices have remained unchanged at 20c.

LAMBSKINS.—Offerings increasing, but all selling, when holders are content to let them go, as before at 30 to 35c. for good to choice green.

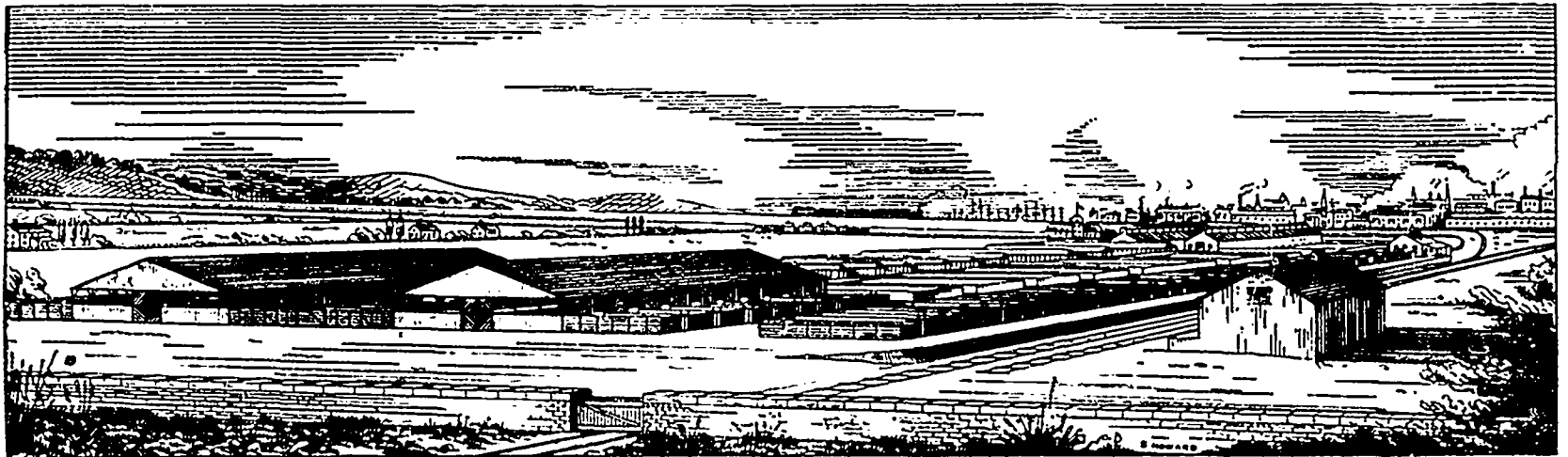
WOOL.—There has been rather more offered on the street and country dealers have been bringing forward a few small lots, but the sum total yet in is limited. Prices have been steady but unchanged at from 16c. for coarse to 18c. for good lots of average quality with Southdown at 22c. for the little of it offered; old is of just the same value as new. Nothing reported in pulled and no enquiry from factories, as these seem to have been trying to buy on their own account from farmers.

TALLOW.—Abundant but firm at 6 1/2 c. for rendered and 3 1/2 c. for rough, with round lots going at 6 1/2 to 7c.

Table listing various commodities and their prices: Hides and Skins, Steers, 60 to 90 lbs... \$0 08 1/2 to \$0 00; Cows... 0 07 1/2 to 0 00; Cured and inspected... 0 08 1/2 to 0 08 1/2; Calfskins, green... 0 11 to 0 13; cured... 0 13 to 0 15; Sheepskins... 1 00 to 1 40; Lambskins... 0 20 to 0 35; Pelts... 0 20 to 0 00; Tallow, rough... 0 03 1/2 to 0 00; rendered... 0 06 1/2 to 0 00.

Table listing various commodities and their prices: Wool, Fleece, comb'd ord... 0 16 to 0 18; Southdown... 0 21 to 0 22; Pulled combing... 0 17 to 0 18; super... 0 21 to 0 22; Extra... 0 25 to 0 27.

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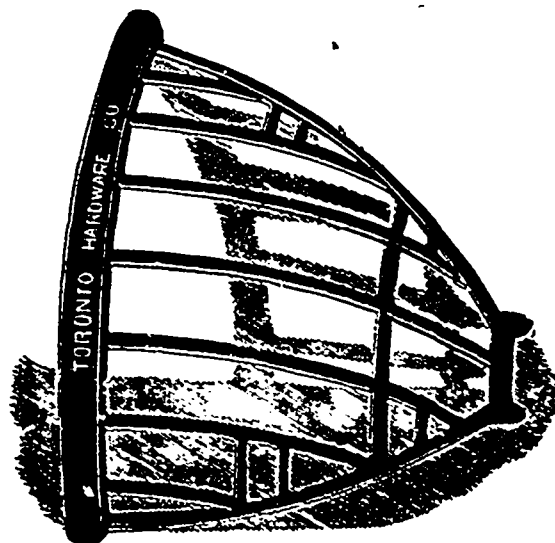
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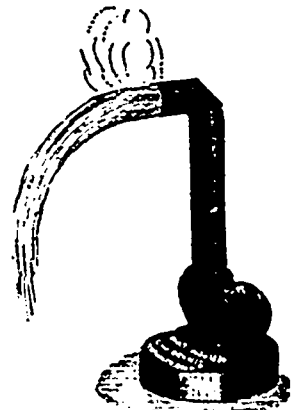
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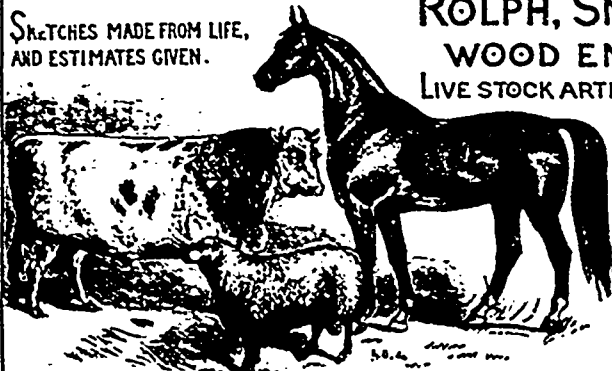
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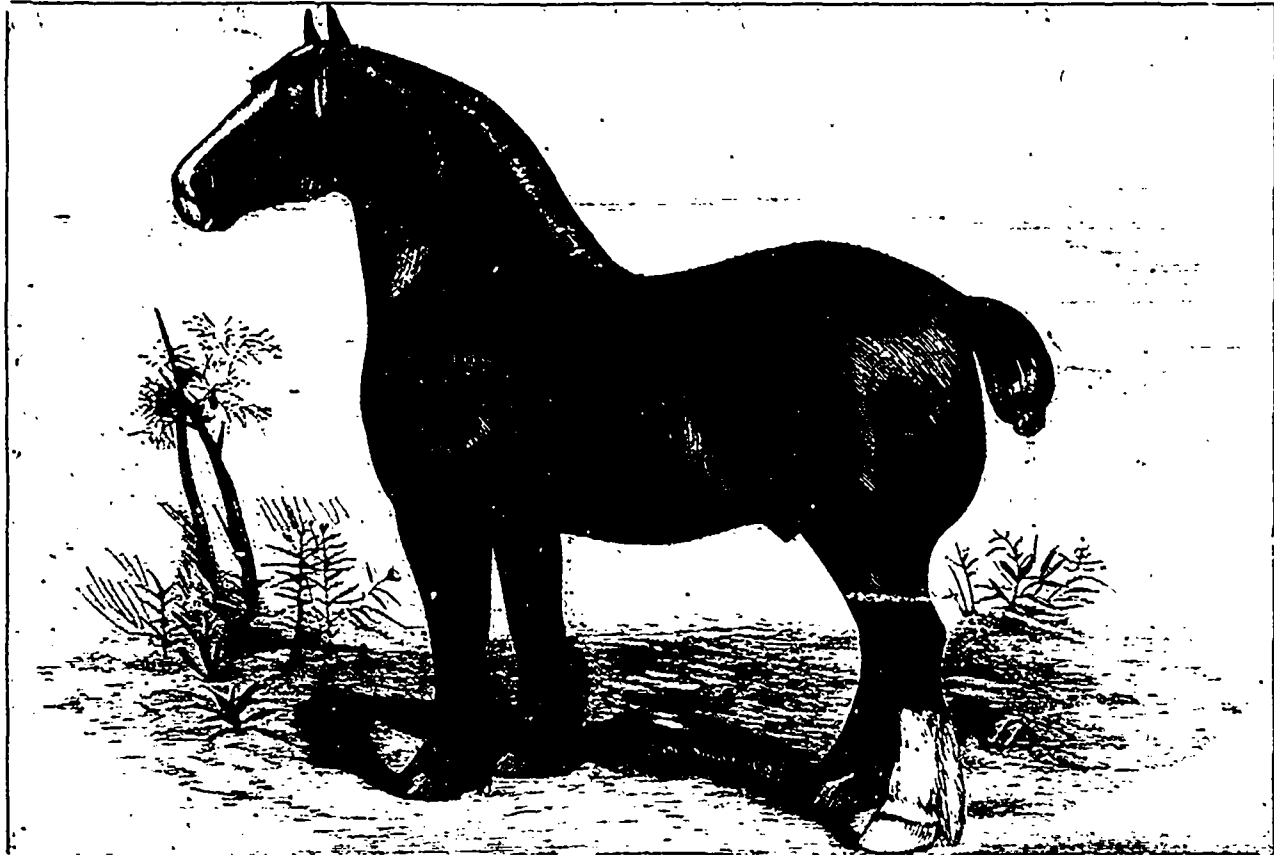


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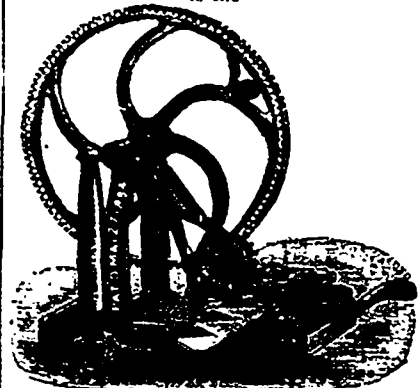
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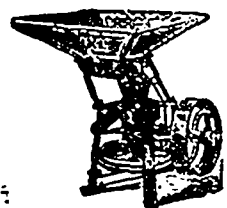
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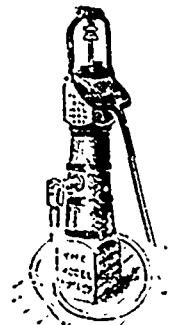
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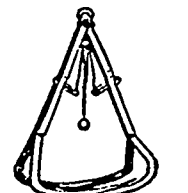
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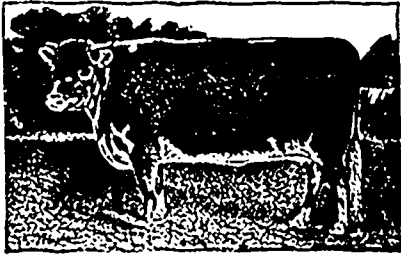
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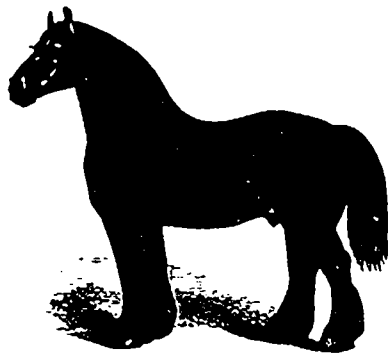
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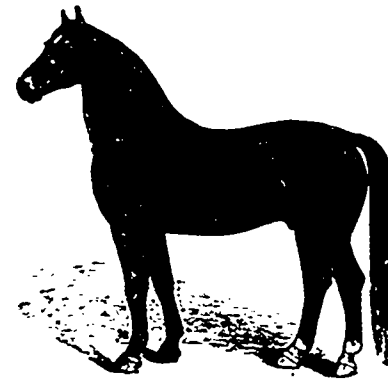
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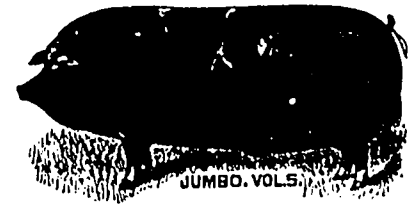
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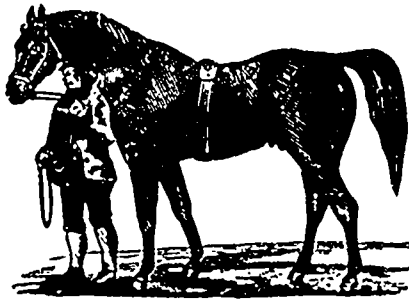
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MILESIAIAN AND ORIOLE

WILL STAND FOR MARES AT THEIR OWN STABLES.

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ORIOLE, now 5 yrs. old, by "Erin Chief," dam thoroughbred mare "MORONA" by imported "THE TESTER" grand dam by "VALPARAISO"...

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THE CANADIAN BREEDER

OPINIONS OF THE PRESS.

THE CANADIAN BREEDER has a large circulation in the United States and is a valuable paper to all farmers.—Democrat, Washington, D. C.—Feb. 11, 1885.

THE CANADIAN BREEDER AND AGRICULTURAL REVIEW is a new journal published in Toronto. The destiny of Ontario is to become a stockyard for England, and a journal in the special interest of stock breeders must be of great use.—Tobacco Independent—Sept. 25, 1884.

One of the very best live stock publications that comes to our table is the CANADIAN BREEDER, of Toronto. It is printed neatly, and contains matter of great interest, written with much thought and ability.—Colorado Live Stock Record—Feb. 18, 1885.

AGRICULTURAL PAPER.—THE CANADIAN BREEDER AND AGRICULTURAL REVIEW, published weekly in Toronto at \$2 a year, is a well printed and high class agricultural paper. A thorough making a specialty of cattle breeding, it covers as well every department of agriculture, and its articles are crisp, plain and useful.—St. John, N. B., Globe—Dec. 5, 1884.

THE CANADIAN BREEDER is the title of a new journal published in Toronto. S. Beatty is the manager of this paper and it makes its visits weekly for the small sum of \$2 a year. We like it well, and send our kind regards to its worthy manager. May it live long to help on the stock and farming interests of Canada.—Law and Order Advocate, Belleville—Sept., 1884.

A new candidate for public patronage appears in the CANADIAN BREEDER, a sixteen page paper devoted to the interests of the farmer and stockbreeder. The editor evidently is thoroughly conversant with his duties, and every issue contains instructive and interesting matter. It is published weekly at Toronto, Can. da. for \$2 per annum.—Spirit of the Farm, Nashville, Tenn.—Oct. 22, 1884.

THE CANADIAN BREEDER comes to hand looking bright and promising for the new year. It contains a large amount of good reading put up in a style calculated to commend the sym pathies of the class for whom it is intended. The BREEDER was wanted, which fact, combined with the business-like way in which it is conducted, would seem to indicate that our contemporary has "come to stay."—The Week, Toronto—Jan. 8, 1884.

THE CANADIAN BREEDER AND AGRICULTURAL REVIEW, published at Toronto, Canada, is one of the best papers of its class published in Canada, or any other country. Its live stock department especially, is ably edited and the low price of \$2 per year for a sixteen page weekly should insure for it an immense circulation.—Western Sportsman and Live Stock News, Indianapolis, Ind.—Nov. 1, 1884.

THE CANADIAN BREEDER AND AGRICULTURAL REVIEW, Toronto, Vol. 1, No. 7. The artistic and mechanical appearance of the paper are excellent, and evidence of ability is seen throughout the editorials and elections. We believe it to be just such a paper as the live-stock breeders of Ontario need, and it should meet their favorable acceptance. It is a weekly paper, \$2.00 per annum.—Directory, Norwalk, Ohio—Nov. 1884.

Farmers and breeders throughout the country will find in the new publication called THE CANADIAN BREEDER AND AGRICULTURAL REVIEW, information especially designed for them. The journal is issued under the management of Mr. Samuel Beatty. It has been most favorably noticed by the press, and has met with general acceptance at the hands of the agricultural community.—Toronto Telegram—Sept. 24, 1884.

THE CANADIAN BREEDER AND AGRICULTURAL REVIEW is a new applicant for favor among farmers and breeders of all kinds of stock. The initial number, which has reached our table, is a bright, 16 page weekly, full of live matter pertaining to stock. The journal is published at Toronto, and if future numbers fulfill the energetic promise of the first, it should meet with success.—Farmer and Dairyman, Syracuse, N.Y.—Sept. 19, 1884.

THE CANADIAN BREEDER is the title of a new weekly periodical published in Toronto, and sustained by the capital and editorial ability of men prominent in live stock circles. In typographical style and in general appearance the paper is surpassed by few stock journals either on this continent or in Europe, and the character of the contents of the initial number promises that the journal will occupy a good position among its competitors.—Toronto Globe—13th Sept., 1884.

THE CANADIAN BREEDER is the title of a new weekly Live Stock Journal which has found its way to our table. It is a sixteen page quarto in form is well made up, finely printed, and judging from its selections and contributions, lacks no editorial ability or experience to make it a success. It takes at once the front rank with the best of its class of journals on this side of the border. The publication office is Toronto, and the subscription price is \$2.00 per year.—Empire State Agriculturist, Rochester Oct., 1884.

THE CANADIAN BREEDER AND AGRICULTURAL REVIEW is the name of a new publication issued weekly at Toronto under the management of Mr. S. Beatty, a veteran in journalism. The numbers before us are neatly printed on good paper, and the articles, original and selected, are vigorous and ably written. It is published at \$2 per annum, and should have a wide circulation. Copies may be seen at this office, where subscriptions may be left.—Haldimand Advocate—Jan. 30, 1885.

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