

not receive in return at least one lamb from each ewe, and it will not do to average up the flock to cover the losses. Every individual should contribute her share, for the overplus is the profit, and it is the profit we are all after in sheep-raising.

Feeding Steers in Manitoba.

[Address by S. A. Bedford, Brandon, at Manitoba Stock-breeders' Association meeting, Feb. 18th.]

I notice that recent English papers complain that Canadian cattle reach there much too thin for the British market, and, owing to this fact, do not bring as much as the United States stock by several cents per pound. This difference arises, no doubt, from the fact that so many steers are sent direct from our ranges without any stall feeding whatever, while the Americans stop theirs on the way from the ranges and stall-feed them in the corn-growing States.

Grass-fed cattle may be in very fair order when loaded on the cars, but the flesh is quite soft and the long journey very trying to them. If these same cattle could be kept over in Manitoba and stall-fed for four months, their condition would be greatly improved, and whatever flesh was put on would, to a large extent, remain on them until they reached the Old Country.

Although we are unable to make a success of corn-growing as a grain crop, I think you will find that the average yield per acre of coarse grain in Manitoba equals that of corn in the United States. This I find by the Washington Government's yearbook to average under 23 bushels per acre for the years 1893 to 1895. Therefore, I see no reason why our range cattle should not be held over long enough in this Province to fit them for the English market. This plan would also have the advantage of giving employment to a large number of working men who now have to go east or to the woods for winter work.

Success in cattle-feeding depends: 1st. On the class of cattle. 2nd. The character and cost of the food used. 3rd. The manner in which it is fed to the stock.

SELECTING THE STEERS.—Although a farmer may not be an expert cattle judge, most of them know a good feeder when they see him, and no doubt the stock-judging classes arranged for here will do much towards increasing knowledge along these lines. The thick, fleshy back, well-developed hind quarters and general square appearance commend themselves to him. This class of stock can only be obtained through the use of pure-bred sires, and the good that the live-stock associations are doing along these lines is incalculable. We also find that a quiet temperament has much to do with quick feeding; the quieter they can be kept the better they lay on flesh. For that reason, early breaking to the halter is recommended.

THE CHARACTER OF THE FOOD.—Perhaps one of the most general mistakes among farmers in the Northwest is the use of a harsh, dry ration, without succulent matter of any kind. Although we have found it possible to fit export cattle with a ration composed exclusively of frozen wheat and wheat straw, without any succulent food, it was a long way from a perfect ration; much trouble was experienced from the cattle bloating, and no doubt considerable loss resulted in other directions, for these cattle never had the soft, silky coat and loose hide generally associated with thrifty feeders. This succulent food can be supplied in the shape of field roots of different kinds, such as turnips, mangels or sugar beets. These all succeed well in this country, and give large returns, the average yield of Purple-top swede on the Experimental Farm being about 700 bushels per acre, and Mammoth Long Red mangels have for the past six years averaged 1,100 bushels per acre. These yields are, of course, the result of good cultivation on well-fertilized soil. As many object to field roots, owing to the large amount of hand work necessary, it is well to know that equally good results can be obtained by using fodder corn, either in the shape of ensilage or, where a silo is not available, as dry fodder, cured by placing in large stooks in the field until required. Since the advent of the corn binder, hand labor is reduced to the minimum in growing this class of feed, and early varieties of flint corn give excellent yields of good fodder here, especially if grown on rich, warm soils with a southern exposure. In some portions of the Province, notably in the Red River Valley, we have large quantities of excellent wild hay, going to waste for want of some one to save it. All of this could be utilized for cattle feed. For several years we have used this class of fodder for fattening purposes. Of course, for the best results, it should be cut early and properly cured. The careless fashion some have of leaving it in the coil until it is partially decayed, is a serious mistake, but an even greater error is to leave the cutting until after fall frosts have driven most of the nutriment out of the grass, making the hay of less value than good wheat straw. In 1895 a lot of steers fed on a

ration the fodder of which was composed of well-cured native marsh hay made an average gain of one pound and eleven ounces per day.

Another excellent fodder for this purpose is green cut oat sheaves. These should be of some bright and stiff strawed variety, sown as early as possible, so as to avoid rust. We have had the best success with them when cut just as the topmost oat in the head is turning brown; the sheaves are made small, bound loosely, and thoroughly cured before stacking. There is much less waste if the sheaves are run through the cutting-box and mixed with the crushed grain. In 1895 the steers fed on a ration composed principally of oat sheaves made an average gain of over two pounds per day, and this fodder was estimated to be worth \$2.50 per ton more than first-class marsh hay.

Last winter we undertook to find the comparative feeding value of Brome grass hay, Western rye hay, and spelt straw. The test was a very successful one, and it was found that the two kinds of hay were practically of the same value: the Brome-fed steers showing an average profit of \$19.84 per steer, while those fed on rye grass hay yielded a profit of \$19.81 each, or a difference of only three cents per steer.

The spelt straw showed very fair feeding qualities, but its value was only one-half as much as either of the varieties of hay, and with a discriminating cattle buyer even this valuation would be too high.

Summary.—I might extend the limits of my paper and speak of the most suitable kinds of grain for feed, and the best way of preparing and mixing the rations, but my address is already long enough. I think that we can fairly conclude that suitable animals are available here; that we have abundance of both grain and fodder suitable for the purpose, and that there is certainly a large field open in this industry for any one of sound judgment, having a taste for the work.

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The Sow at Farrowing.

As the time approaches that the sow will be due to produce her litter, it is good policy to get on unusually good terms with her, coaxing her by means of some grain sprinkled on the ground or floor to submit to be scratched and brushed, so that when the time arrives that she is to be placed in a pen by herself, which should be about ten days before she is due to farrow, there will be no difficulty in persuading her to take to her new quarters. Then the brushing and scratching should be continued, so that, in case of any difficulty in parturition, or of special care being needed in caring for the piglets when they come, the dam will not be nervous or afraid of being approached by her attendant, but will lie down and be quiet when her udder is rubbed with the hand. The food of the sow, prior to farrowing, should be of a kind likely to keep her bowels open, and, if meat of any kind is available, a little of that may serve to avoid an unnatural craving which sometimes leads a sow to eat her young. A mixture of salt and ashes kept in a box in the pen will also help to avoid this trouble. Quietness is best for the sow after farrowing, and it is well not to disturb her for a whole day, and then to give her only a drink of swill, and feed her lightly for the first few days with kitchen swill and bran. After a week the strength and quantity may be increased till she is on full feed.

The Cattle Business: Progress or Retrogression?

The cattle industry of Canada is now in its infancy, as far as the marketing of an edible production is concerned, a statement which may be challenged by the reader of statistics, but which is true all the same. The making of the above statement is, however, proof that there is belief in the ultimate development of the trade, which the "Farmer's Advocate" has undoubtedly tried to hasten. On the other hand, the trade in pure-bred cattle with our Southern neighbors, while not involving many in its mazes, is one of years, and one of some profit to those engaged in it, especially in recent years. Judging, however, from the last report of the United States Dept. of Agriculture, which contains the opinions of such distinguished officials as Hon. Jas. Wilson and Dr. Salmon, small comfort is to be found for the Canadian breeder of pure-breds, who sees in the United States the only market for his pure-bred productions. The opinions of these two prominent officials mentioned are plainly and concisely stated, so that he who runs may read. The statement is made that American herds are nearly perfection, as good as blood from outside can make them, and that it is not advisable to allow the importation of disease, notably tuberculosis. A double-headed protection is thus obtained by the tuberculin test and the regulations looking to its enforcement—protection from foreign competition for the United States breeders of pure-breds, and protection from disease—and he must be blind indeed who cannot read the handwriting on the wall—the ultimate barring of Canadian pure-bred cattle from the United States markets for such stock.

The "only" condition under which any of our pure-breds may enter the United States is by a "satisfactory" passing of the tuberculin test (vide U.S. report, 1902), a fact which all breeders of pure-bred cattle and all objectors in Canada to that test should bear in mind. It should not be forgotten that to ensure a continuance of the confidence shown by the United States authorities in the Chief Veterinary Inspector for Canada and his staff, all tests should be fairly and squarely performed; unless that confidence is maintained, the few crumbs of comfort now falling to the Canadian breeder of pure-breds, in the form of an occasional long price from the Yankee buyer, will disappear at once, and for a long if not for all time.

Such being the case, and all those in the business know it to be plain-spoken truth, is it not advisable for Canadian breeders to have more confidence in their country's future, by turning their faces towards the development of a home demand for pure-breds, and the seizing and holding of the British beef market. As it is, in the attempt to meet the harrassing conditions incident to the pure-bred trade with the United States, the Canadian has practically eaten dirt and has humbled himself to one of his competitors in the world's markets, and has, in the endeavor to capture the shadow, let the substance go by. One of the unfortunate effects of looking to the United States as a market for pure-breds is the continual toadying to United States breeders' fancies, by which, among other things, the Dominion Herdbook has been made to exclude good British cattle, with a consequent loss to the country as a whole, although a few may have profited thereby.

The provident man foresees times of depression, and forestalls them by rendering himself secure. Canadian cattlemen can do as well by preparing to make a stiff fight for the British meat trade by breeding and feeding the right sort and building abattoirs, which propaganda, if followed out, will ensure good home markets for pure-bred stock. Unfortunately, at the present time there exists a slight friction between East and West in pure-bred cattle matters; such must be overcome, and a better feeling established, so that a consolidation of interests may be accomplished, without which we may strive for markets across the seas in vain. It is to be hoped that the Dominion Breeders' Associations will wake up, seize the opportunity of having real representation from all the Provinces, and, if necessary, be not afraid to prune out the old wood and install live, up-to-date men in executive offices. We have the making of a great country and a vast live-stock industry before us, and the Dominion Associations should be prepared to make some sacrifices, if need be, to accomplish what I suggest. For the last few years all the attention of the parent pure-bred association seems to have been riveted on the prospective buyer across the line. While no fault can be found for trying to secure that market, the fault is that for it a far larger, more valuable market has been neglected, and trade that should be quite largely Canada's belongs now, by right of conquest, to the hustling Yankee. It is up to the pure-bred cattle breeders' associations to be more active and broad in their views; to see that trade avenues are widened and well patronized; to further educational effort along animal husbandry lines, and not to think that, in the awarding of money and diplomas to a few of the leading shows, and, possibly, the publication of a re-