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## EDITORIAL.

### Spare the Heifers.

steers suitable for feeding for the export trade is well known and is deplored by feeders who seek for them and find all too few of the sort they would like to secure. Owing to this scarcity, we find in the feeding stables not a few heifers of breeding age and of good beef type, which if retained on the farms and bred to good bulls would produce the kind of calves which would by good treatment grow into cattle of the class that is needed to raise the standard of our exports and secure for us the best prices. The slaughter of this class of heifers tends to perpetuate the scarcity of the right kind of steers, and drives feeders to the necessity of putting in an inferior class, many of them showing their relationship to the dairy breeds by their color and form, a form which fails to furnish the best quality of flesh in abundance on the most valuable parts, fails to furnish an attractive and quick-selling beast and fails to make a profitable return for the food it consumes.

We plead for the sparing of the heifers that have some beef breeding; for the mating of them with good pure-bred bulls of the beef breeds, and for the retention of their heifer calves, to be bred in turn to the same class of sircs, in order to grade up the rank and file of our cattle to a higher standard. Dairymen long ago recognized the vital importance of selecting and retaining in their herds for breeding purposes heifers of approved milk-producing type and capability, and those who are now looking to the profitable extension of the beef industry should be as wise in their day and generation. There is an urgent need for more good beef cattle in the country, and all the indications point to a steady demand and good prices for the better class. The cheerful prospect of the opening at an early day at principal points in the Dominion of abattoirs for the prosecution of the dressed meat business in our rapidly growing cities, and for export, will inevitably improve the markets for the best class of cattle, and the only possible cause of failing to realize the full benefit of this is the possible scarcity of suitable stock to keep these establishments supplied so that they can be profitably operated. To do this, and sustain our present profitable export trade in live beeves, cannot be done without more good cattle. And there is no reasonable excuse for failing to rise to the requirements of the situation, for Canadian farmers have at their hand all the necessary facilities for meeting it. They have a healthful climate, good and roots in abundance, and have the advantages of experience in feeding and easy opportunities to improve the breeding of their cattle by the use of pure-bred bulls, which can be bought at reasonable prices or their services secured for a moderate fee.

The sooner a commencement in improvement is made, the sooner will benefit be realized. Personal interests as well as public prosperity depend largely upon prompt action by the farmers in this matter.

When you make a mistake and discover it, face about and admit it. There is no sense in trying to overshadow wrongdoing; it will quickly come to light. The simplest way is the safest and most manly.

### Feeding Balanced Rations.

After all that has been said about balanced rations, little weight seems to be attached to the subject by our feeders, and few of them make any The shortness of the supply in this country of specific attempt at a balance in the fooders being fed. To the ordinary feeder, the subject appears too vague and too much laden with theoretical associations to permit of practical application in, cattle feeding. To him the mention of balanced rations conveys the idea of weighing feeds and of a long list of figures in the hands of a professor. This is not as we should like to see it. Among our feeders are to be found many of the most intelligent of men, and if the advantages of forming a balance in the rations could be made clear they would be willing to give it a trial.

In the first place, a ration is the combination of hay, straw, silage, grain, etc., fed an animal during the day. If the moisture or water were all evaporated from it, what would be left is called "dry matter," and this is composed of certain chemical constituents. What the feeder wants to get at is the composition and quality of foods (ration) that will feed his cows or fatten his steers to greatest profit.

Everyone recognizes the importance of having a model in mind when undertaking any constructive work. In cattle-feeding, the feeding standard or the proper balance between flesh-formers (protein) and fat and force producers (carbohydrates and fat), all of which the animal requires, in the ration is the model, and any rations having a composition similar to the standards are balanced rations. In scientific parlance, the proportion between the flesh-formers and the fat and force or heat formers is called the nutritive ratio. In some foods this ratio is wide, in others narrow. Oat straw is 1 to 33.6, and wheat straw 1 to 93, both wide; bran 1 to 3.7, and oil cake 1 to 1.7, both narrow. A ratio over

Now, the feeding standards in America are not purely theoretical ones, but are the average of more than 100 different rations, which were being used throughout Canada and the States, and which were found to give the best results in milk production or cattle fattening. These feeding standards then, or these rations having a certain chemical relation between their vital constituents, are the models by which rations are balanced. It is at once seen that models secured by such practical methods should have a practical value. What is this value?

Feeding standards are not rules laid, down to be followed implicitly and mechanically, but are valuable simply as guides. By making up a land, good grass and water, and can raise grain zration according to a standard, a man has the satisfaction of knowing that the chemical composition of his cattle food is such as has given the best results in all experiments that have been conducted to determine the comparative value of rations. And further, these satisfactory results are obtained because the cattle have been supplied with just sufficient of the several chemical constituents of the food, or, in other words, with a balanced ration. This, therefore, is the value of feeding standards, that they serve as models by which to form other rations.

Now we believe there is a practical value in feeding a balanced ration, but the problem of working out such rations with the feed stuffs on the ordinary farm is regarded as too complicated for the average feeder. Our own conviction is that skilful feeders, by the process of experience and close observation, learn to compound or let

us say "balance" their rations in such a way as to get the best results, though the learning of it may be tedious. Furthermore, the feeder is governed largely by what foods he has on hand or can procure to advantage; but he does find it wise, for example, to mix bran or oats with corn instead of feeding the latter alone. It occurs to the "Farmer's Advocate," and we throw out the suggestion for consideration, that some of our experiment stations and farmers' institutes might do some work in this direction, after the manner of Prof. Robertson's illustration stations for the cool curing of cheese or fattening chickens. Let them select a stable in a district where cattle are fed extensively, and there compound a balanced ration of the foods on hand as an object lesson, and in the hands of a competent feeder the results would be of interest and value, removing the subject from the realm of text-book technicalities. We say competent feeder advisedly, because the ration might be technically "balanced," and yet if it were not palatable to the animals and fed in proper quantities, individually and with proper regularity, the results would be disappointing and progress hindered rather than helped.

# Coming Events.

The announcement elsewhere in this issue of the annual meetings of various Live Stock Breeders' Associations, and the Canadian Spring Stallion Show, to be held in Toronto the last week of January and first week of February, will be of interest to many of our readers. The continued active demand for good horses and cattle at remunerative prices should serve to encourage stockmen and enthuse breeders with the determination to go on improving their stock and preparing to meet the demand for the best with a steady supply of the right sort. The holding of these meetings at dates which will enable stockmen from distant points east and west to take them in on one trip will prove a great convenience to many, giving time between events for visiting herds, studs and flocks within easy distance of the places of meeting. 'The success of the various Breeders' Associations, and of the breeders in their business operations, depends in no small degree on the interest taken in the annual meetings. The Spring Stallion Show, to be held at the early date fixed, Feb. 4th to 6th, is a new departure, which it is hoped will meet the felt need of horsemen throughout the Dominion for a show which will enable them to place before the public horses from which selections may be made for the coming breeding season. This show does not necessarily conflict with the Horse Show held in a later month in the spring, at which light horses are a specialty. The Shorthorn sale at Hamilton, being held on the day following the annual meeting of the Dominion Shorthorn Breeders' Association, will afford breeders the opportunity to participate in a rich treat, the disposal of an exceptionally good lot of cattle. The train service to Hamilton is first-class, and the run less than an hour, by several trains.

One good rule, which if followed will help lead to the goal of happiness, is "live within your income." Raise as much of the necessities and comforts of life as possible, and waste not.

Now is the right time to prepare for the ice needed next summer. The advantages are many; see to it now.