

A Pertinent Criticism and Suggestion.

It seems to me that there is a good deal of dissatisfaction in the way that the Shorthorn Society's grants are divided out. There is no doubt that it would be folly to grant small exhibitions premiums for the breed where competition is lacking, as I have noticed time and again, when specimens of no individual merit have carried off the prize money without any competition whatever. I should suggest that there should be separate classes for bona fide farmers at our Provincial Fairs. It hardly seems reasonable to think that a bona fide farmer could compete successfully with the money men, or even have a chance of making expenses, when the latter can well afford to pay well up into the four figures for animals to carry away the cream of the premiums. I should also suggest that any prize winning male animal should be open to serve females belonging to any member of the Society at a nominal charge well within the means of an ordinary farmer which I think would add a great deal to the interests of the breed.

WESTERNER.

Must Fence Up Cattle to Control Weeds.

EDITOR FARMER'S ADVOCATE:

I wish to say, hear! hear! to Mr. Casey's article on stock running at large in the winter, thus distributing all kinds of foul weed seeds, besides being a continual nuisance in the community. Every farmer knows that it is one of the most prolific ways of starting these weeds, and right now, while the subject is being prominently brought to public notice by the "Seed Special", is the time to bring these matters up in the local Grain Growers' meetings, so that an expression of opinion may be secured, and the trouble remedied at the earliest possible moment, as the longer it is let go, the harder it will be to cope with these worst of all enemies of the Western farmer,—noxious weeds. I can say from my own observation in this neighborhood, that it is simply scandalous the way some farmers have their places already polluted with all kinds of dirty weeds, and still go on sowing their inferior seed, year after year, and probably when their farms have become infested with all kinds of weed trash, they will sell for what they can get, and leave the task of disposing of this menace to some one else, whom we will hope may prove more worthy of the name of farmer. There are numbers of farmers to-day who would rather sow inferior seed than pay a price four or five cents higher than what they get for the weedy stuff they sell at the local elevator.

Verily, we would need a Seed Special every week to keep some of us alive to the importance of sowing nothing but the best seed. No doubt it will take a long while to educate some of the foreign element in this matter, but if our local weed inspectors were more strict in the discharge of their duties, such would soon find their standing in regard to the weed question, as where the law is concerned, they are usually pretty careful.

In conclusion, Mr. Editor, I must express my appreciation of your publication, which I think is the best farmer's paper in the country to-day.

H. N. BINGHAM.

DAIRYING

The Economical Production of Milk.

(Continued from last week)

FEEDING. The question of feeding dairy animals in such a way that the greatest possible benefit may be realized from the animals employed and the food consumed, is of vital importance in these days when the margin of profit between the product and the food consumed is ever decreasing. First of all, to feed economically, the animal should be supplied with the nutrients necessary for the production of milk, in the right proportion. All foods are divided into two classes: first, concentrates, including grain and mill feeds; second, roughage, which includes hay, straw, corn, roots, etc. Concentrates are necessary to be fed in connection with roughage. Cows are not as nature intended them, to only supply their young with milk, but have been developed into artificial animals supplying the human race with their products. So it is easily understood why a more concentrated food has to be fed in order to increase the production of milk and butterfat. A large amount, or percentage of digestible matter is found in concentrated foods. In formulating a ration, the different classes of substances which make up the food must be considered. They are known as protein, carbohydrates and fat. Protein is the name given to the compounds which contain nitrogen. Protein is necessary for the production of lean

meat, tendons, blood, bone, etc., and casein and albumen in milk. It is necessary therefore that an animal receive a certain amount of this nutrient for its daily maintenance and a similar amount for the production of milk. Carbohydrates are divided into two classes: first, crude fibre; second, nitrogen free extract, including sugar, starch and gums. They are converted into fat or burned in the system to produce heat. Fat includes the fat, wax and green coloring matter of plants, and is stored in the system or burned to produce heat. A pound of fat is equal to approximately 2.5 lbs. of carbohydrates, and a cow can only consume one pound of protein to six pounds of carbohydrates. If we feed more carbohydrates without increasing the protein there will be a shrinkage in the amount of milk and the cow will have a tendency to lay on fat. What is needed, therefore, is to compound the ration so as to furnish the needed elements for both maintenance and production in the right proportion and then feed freely. The character of the food has much to do with the ability to digest and assimilate, and to do her best any cow must have food adapted to the making of milk. Succulence is an element of food that aids digestion wonderfully. To illustrate:—Ninety pounds of lawn clippings given fresh to a cow each day will enable her to give a nice flow of milk besides keeping her in splendid condition. Dry the same in the best manner before feeding and it would not long support her, even though giving no milk. Succulence adds also to the palatability of foods, and this has much to do with the ability of the cow to eat and digest.

Good blood and right conformation are only half the essentials, for with these and a poor system of feeding, only partial success will be attained. A cow should be looked upon as a machine for the conversion of cheap, coarse products into high priced animal products, and in operating this machine the effort should be to see how much of the cheap products can be consumed and converted into these high priced products, instead of striving to see how little the cow will consume. Too many dairymen are keeping cows without any results, just as you would keep the water warm in the boiler without adding enough fuel to produce steam. The point of animal maintenance must be passed before any production can take place, and the more food a cow will consume and assimilate over and above that which she requires for her own functions, the greater will be the production of milk or butterfat. In other words, it is a very bad practice to see how little a cow will get along on, but rather we should see how much she can be induced to consume and return in the milk pail.

WATER. We now come to that in the needs of cows which, while of the greatest importance, receives the least attention. We many times see where horses and cows standing side by side in the stable, the cows producing milk, the horses standing idle, the rule is to water the horse three times a day, while the cows are lucky to get it once regularly. When we consider the fact that milk contains 87½ per cent of water, it will readily be understood that no cow can do her best when so watered. If in full flow of milk she requires from 90 to 120 lbs. of water or about 12 to 12 gallons per day. It is simply impossible for her to drink that amount at one time. A cow having water always accessible, never drinks because she is thirsty, she never gets up in the morning and drinks on an empty stomach, horses do, but the cow drinks to keep the contents of her stomach in the best condition for rumination. She wants to drink a little and often. If she can have water accessible she will drink many times each day. When we say a cow is eating, she is doing nothing of the kind, she is simply gathering a supply into her storehouse, the first stomach, and then she gets into some quiet corner and with eyes half closed she does her eating—ruminating. Then is when she wants the water. Hence we see how very important it is that a supply of pure, wholesome water be always within reach.

CARE. No matter what the breed may be, nor what the individual merit, nor the food, the dairy cow can not be profitable unless she is made thoroughly comfortable. Above all things she should be kept in a quiet, contented frame of mind. Anything and everything that in any way disturbs or annoys her—loud talking, swearing, a stranger in the stable, or milking by a new hand—any and all of these have a tendency to diminish the milk in both quantity and quality, and anything that does this is surely not favorable to the economic production of milk.

MILKING. The matter of milking is the most important link in the chain of circumstances

that make good butter possible. After the matter of feed and health the making of good milk is rather a matter of cleanliness than anything else. We do not generally take into consideration the very great extent to which milk is exposed to bad odors during the process of milking. We are apt to think of this milk as being exposed only a little in the case of any stable. But let us consider that the milk is drawn in a stream ragged and rimmed with minute beads of liquid. Suppose all the milk in a pail strung out in one long thread and exposed to the foul air for only a moment of time. How much bad smell would it then absorb? We know that the amount would be very large; moreover, millions of bacteria would be brought into contact with it at the same time. Before milking the cow should be brushed and cleaned, especially such parts from which dirt might fall into the pail. It does not require much time to brush off the cows and to wipe the udder and flanks with a damp cloth before milking. Prof. Fraser, of the Illinois State College, reports that twenty-two times as much dirt will fall from an udder slightly soiled as from one that has been washed, and when the udder is muddy the quantity is ninety times as great.

Persons who milk and handle milk should be in good health, and under no circumstances come in contact with a person suffering from a contagious disease. The dress and hands of the milker should be thoroughly clean, and milking always done with dry hands. If the hands could simply be moistened, the practice might be allowable, but the practice of moistening the hands is apt to degenerate into the habit of making them wet—so wet, in fact, that there is a drip from the hands into the pail, which means filth and which cannot be too strongly condemned. Owing to the marvellous rapidity with which it absorbs while cooling, the milk should be removed from the stable as soon as it is drawn. While the aim should be to keep the stables free from odors, the result can seldom be so perfectly attained as to make it desirable that the milk should stand in the stable, or in an atmosphere polluted with stable odors, or such as are too often manifest near stables.

T. A. F. WIANCKO.

A Needed Increase in Wolf Bounty.

The decision of the provincial government to increase the bounty on prairie wolves to \$3.00 and on timber wolves to \$10.00 is one that will meet with the approbation of the majority of farmers, the people who are directly interested, although as pointed in the discussion, the consumers of poultry and mutton have had to pay dearly for the apparent saving made by the small bounty heretofore paid. Sheep and poultry raising have in many localities been practically stopped owing to these pests, and as pointed out by the Deputy Minister one great help to the suppression of noxious weeds by means of the golden hoofed sheep, was debarred by practically allowing the wolves full play. There will be an increase in the sale of guns and ammunition, an increase in sheep and poultry raising, which will far outweigh the slight increase in taxation, which by the way we believe should be met largely from game licenses to pay the bounty.

Institute Meetings in Saskatchewan.

We are informed that the Provincial Department of Agriculture of Saskatchewan is arranging for a series of Institute meetings to be held in cooperation with the various local Agricultural Societies, between February 20th and April 1st.

The meetings will be addressed by practical and experienced men each one an expert in his own particular line. Talks upon horse-breeding and management; cattle and swine breeding and feeding; and the raising and fattening of poultry for market, are only a few of the many subjects that will be touched upon.

Stock judging schools, at which score cards will be explained and used, will also be held at convenient centres.

In the newer districts the meetings will be specially designed for the benefit of new settlers.

Arrangements are being made with the various lecturers and demonstrators, and due notice will be given later as to places and dates.

The intellectual menu prepared for the farmers at the horticultural, dairy, livestock and grain growers' convention is a rich one, and it is to be hoped that a diet of such rich concentrates will not induce mental dyspepsia in anybody.