

A FAIR FIELD FOR ALL BREEDS.

Many men have many minds, and doubtless it will be so to the end of time. Every once in a while a subscriber complains that a Percheron horse has no show in our columns, while, on the other hand, there are certain Clydesdale men who find fault because we give so much space to the French drafter, and carry the advertisements of Percheron breeders. Verily, it is hard to please all.

"The Farmer's Advocate" is not run in the exclusive interest of any breed, but in the interests of Canadian farmers. That being the case, we do not feel justified in closing either reading or advertising columns to the advocacy of any meritorious class of stock, and we do not believe it is in the interest of the British draft breeds that others should be debarred from the privileges of the paper. History shows that there is nothing so good for a breed as competition. Moreover, it cannot be denied that a good Percheron is a good horse. There are a considerable number of people in Canada who prefer this to other breeds of heavy horses, and who is to say that there are not in this broad Dominion localities where the Percheron is pre-eminently adapted? Those who would sweepingly disclaim his right to consideration are dogmatists and unsafe advisers. Our columns are open, and we expect they always will be open to legitimate claims on behalf of the Percheron horse, both through our editorial and our business pages.

On the other hand, there is this to be said: The Clydesdale has an emphatic lead in Canadian draft-horse popularity, and, by the bulk of evidence, seems best adapted to prevailing climatic, soil and economic conditions in this country. This is a strong reason for his energetic exploitation. Furthermore, it is agreed by every student of breeding problems, that the mixing and crossing of breeds, although occasionally attended with successful results when skilfully performed, is extremely prejudicial to horse interests, taking it as a general policy. Hence, the particular wisdom of urging Canadian farmers to stick to the breed they have. Constancy is a grand virtue, and systematic, persistent grading up with one breed is the best-paying proposition. For us, however, to attempt to dictate to farmers what breeds they should use, would be foolish and futile in the extreme. This is a free country, and every horse must stand on his own bottom.

Finally, we believe all will admit the justification of our policy of catering especially to the interests of the majority of our readers and patrons. The number of our subscribers interested in the Percheron is small, compared to the proportion interested in Clydesdales and Shires, while the amount of money spent in advertising the Clydesdales in our columns far exceeds that spent in promoting any other breed. Under these circumstances, are we not amply justified in devoting the greater part of our space to the exploitation of the British draft breeds?

As explained above, however, the Percheron breeders are offered a fair field, and it is up to them to uphold their breed with money and printer's ink. Communications are always welcome.

BOILING GRAIN FOR HORSES.

The practice of boiling grain for horses is not so common nowadays as it was formerly. We can remember, some years ago, when grain, especially barley and wheat, were regularly cooked and fed to the working teams. It was considered particularly needful to horses that were working in winter. The practice was, perhaps, commoner in the Old Country than here, but in both it has now fallen into disfavor. In these days, when fed at all, boiled feed is chiefly used for colts, brood mares and stallions. It is also useful to feed once a day to draft horses that are being fitted for exhibitions, or teams which are being prepared for sale. They seem to keep in a thrifty, growing condition, and the coat takes on a gloss and finish which no other feed seems capable of giving it.—[The Farmer's Advocate, Winnipeg, Man.]

SOON BECAME A NECESSITY.

We took "The Farmer's Advocate" a few months on trial, and it soon became a necessity. We would not be without it now.

King's Co., N. B.

GEO. H. STEVENS.

LIVE STOCK.

ECONOMICAL FEEDING OF SWINE.

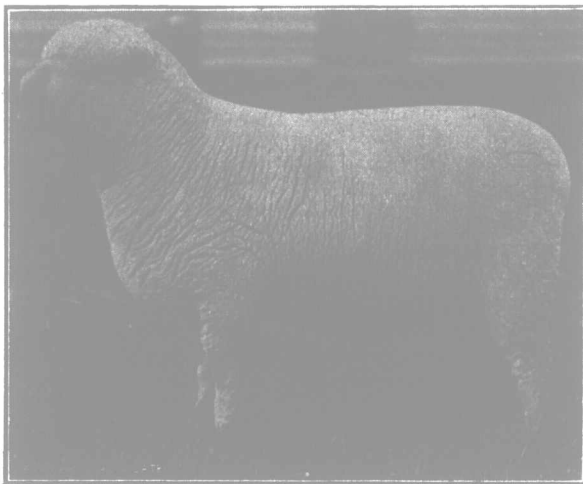
The people of Ontario have been going out of hogs like a flock of sheep over a fence, simply stampeded, said T. H. Mason last month, at the Ontario Winter Fair. Next summer there will be a scarcity.

The first factor in successful feeding is the man, and, while an Irishman is not absolutely essential, the herdsman is better for having some Irish blood in his veins. The feeding of swine is not a chore to be entrusted to the hired man.

Though an advocate of the bacon type of hog, and holding that the thick, short, fat, chunky sort of hog is not the most economical feeder, Mr. Mason pointed out that, in the early days we had an exaggerated idea of what was wanted in the bacon type. The extremely long, coarse-boned, coarse-haired kind of hog is not a profitable feeder; aim for a pig of moderate length. Select a good sire. It is poor policy to pare off a margin of five or ten dollars on the purchase of a boar. The difference in the value of one year's crop of pigs between the get of a good boar and of one not up to the mark may amount to \$100.

In regard to management, he believed a great many farmers lose the profit of feeding at weaning time. They wean their pigs too young. He arranges a creep for his youngsters, and, by the time they are three or four weeks of age he commences feeding a mixture of oil-cake meal, scalded wheat, shorts, and milk. Keep on feeding the sow well, and leave the pigs with her until seven or eight weeks old.

For the summer, he is a strong believer in raising the little pigs out in the open, giving them access to the earth, exercise and green feed. This keeps them always on their feet, and always on their feed. Clover makes an excellent pasture, and, in lieu of clover, a mixture of peas and



Shropshire Shearling Ram.

Winner at prominent English shows in 1907.

oats answers well. For later pasture, rape is excellent. Of course, the grazing hogs should be reasonably well fed on meals at the same time. The meals should be a mixture. What mixture, is largely a matter of quality and market price. During winter months, roots should compose a considerable proportion of the ration for young pigs. Cook the roots and feed warm, especially if the pens are not warm, mixing in shorts or middlings and grain. Do not overfeed. It is a great mistake to allow the troughs to remain partly full of feed. See to it that they are always polished up slick and clean. Keep the pigs' appetites on the sharp side.

The pens should be light, dry, clean, and supplied with dry bedding. Give the pigs wood ashes, charcoal and earth. By all means, give them skim milk if you have it. Nothing lengthens them out like milk.

Q. In the fall, when prices were away up, was the farmer not justified in getting rid of his hogs?

A. No, stay with it. Mr. Mason then recited the case of a man who had been panic-stricken by his neighbors, and got the idea that he was losing money on his hogs. So one day the speaker dropped in, and they went over the swine account together, and found the following figures, expenditure for feed at market valuations: Shorts, \$84.60; corn, \$50; rye, \$42; whey, \$15; pasture, \$15; keep of sows six months, \$40; or a total of \$246.60. The previous week he had received for hogs sold \$199.90, and had 50 well-grown hogs in his pasture, for which he certainly would not take \$50. Mr. Mason was certain he would make a profit, even in the present adverse season, while in the coming year he expects high prices for pork.

THE FUNCTIONS OF PROTEIN.

During recent years there has been no subject more continuously kept before the American stockman than the economic advantage arising from the judicious, liberal use of available nitrogenous nutrients in the rations of practically all classes of live stock. The agricultural experiment stations agree in emphasizing the importance of protein. Numerous bulletins are available to the farmers of nearly every State, giving the cheapest source of this nutrient and the most advantageous proportions in which it may be had. If, however, we might stop for a sufficient time to inquire into the basic reason for this importance of protein in the ration, we would have more indelibly impressed upon us the imperative need for it by all classes of stock.

In the animal body there are two main classes of compounds, viz., the organic and the inorganic or the mineral. Almost the entire portion of the latter enters into the constitution of the bony framework, a little being found in the blood. The organic compounds constitute the flesh, the fat, the viscera, the vital organs; in fact, all parts of the body other than the skeleton. These organic compounds are readily divisible into two quite distinct classes. These classes are the nitrogenous and the non-nitrogenous. The non-nitrogenous compounds, as the name implies, are those organic compounds which do not contain nitrogen. In the animal body, the principal representatives of this class are the fats, which we readily recognize as tallow, lard or butter. There is another very important though relatively scant non-nitrogenous compound found in the animal, known as glycogen, or animal starch. The nitrogenous compounds constitute from one-third to one-half of the total dry matter of the animal, and are thus seen to be relatively of more importance. They are called proteids. They are characterized by always containing nitrogen, and in an approximately constant per cent., which runs close to sixteen in most of the common proteid rich foods. They are usually very complex compounds, and little is known of their exact chemical constitution. Though these compounds form as large a proportion of the animal body, the animal mechanism cannot produce them from less complex bodies. They are found in both the plant and the animal, but the plant alone possesses the power of elaborating them from the elements, and the animal must obtain them fully wrought in the laboratory of the plant before he can transform them into animal proteids. There is to be found in the sap of plants an intermediate nitrogenous compound which is not as fully organized as the true proteids, and which, consequently, the animal cannot use to the same extent.

Proteid matter is absolutely essential to the continuance of the vital functions. No matter how generously an animal is fed upon a proteid-free diet, the animal cannot live. Starches and fats fed in abundance will not sustain the vital activities; gradually the animal will draw upon the proteid tissue in his body, consuming it to maintain life, until the available supply is exhausted, when the animal will die. Such an animal will die full of fat, but his muscular tissue, though not entirely consumed, will be greatly depleted. In the action of the heart and blood vessels, in the muscular contractions in breathing, and in the various activities, there is demanded a supply of proteids.

The proteids of the food are the sole source of the proteid matter of the animal body. The muscular fibre, which constitutes approximately two-fifths of the dry matter of the animal, can be found only from this source. This is one of the most striking things in the animal economy. Although we find a great interchange of functions among the different kinds of matter in the food, this is one place where substitution cannot take place. Starches in the food may replace in function the fats, and vice versa; the proteids of the food, when in excess, may serve all the functions of the fats or the starches, but neither the fats nor the starches of the food can be substituted for the proteids in this important duty of building nitrogenous tissue. If they are not supplied to the animal in sufficient quantities, the body cannot be built up.

On account of this peculiarity, we find in the animal every possible precaution taken to protect and conserve the proteids of the body. The energy and heat required in daily life by the animal is furnished by the fats and starches, if these are furnished in the food. The animal will not draw upon its nitrogenous tissue until compelled by a too sparse ration; likewise, it will utilize a surplus supply of protein food for heat or for storage of fat. Another striking circumstance is the inability of the animal to store surplus quantities of protein in the body to any great extent. There is in the body, especially in the fluids which permeate every part, a form of protein which is readily available, and which may be slightly but not greatly increased. Practically, this is the only storage of surplus nitrogenous