

"I must say that it is difficult to credit the claims put forward by the writer. At the same time, I am not in a position to say that he is incorrect, for the reason that I have never known any person to investigate the matter. I know that it is possible to injure pigs by feeding too much salt, but never knew it to act in the direction which he describes. I can easily understand, however, that when pigs have not had any salt for a long time, and were then given a mixture containing salt, they might easily take too much, and be injured by it. If, however, the pigs had been regularly salted, or the mixture kept before them regularly, I do not think any injurious results would have followed. It is possible that the same conditions might apply to other classes of stock. Many people salt their live stock irregularly, and when animals have not had any salt for a long time, they are apt to eat it greedily, and it is not hard to believe that under such conditions the salt might prove injurious. It would be a difficult point to investigate, for the reason that a person would never be sure whether good results were due to the presence or absence of salt, as the case might be. I am of the opinion, however, that salt administered with intelligence would not prove injurious."

It would be interesting to learn whether, among our stockmen, there are those who have had or observed experience confirmatory of that related by Mr. Hyde, or whether it is altogether favorable to the use of salt. A well-known Holstein breeder, H. Bollert, of Oxford County, informs us that he intends to give the theory a trial on a few shy breeders. Perhaps some others may like to do the same.

### Practical Points in Pork Production.

Editor "The Farmer's Advocate":

1. In hog-feeding experiments, what is the greatest gain made on a barley ration under ideal conditions, and what is considered an average gain?

2. What is the best grain ration for hogs, and what is considered a fair gain? A neighboring farmer claims to have made \$1.10 per bushel out of barley by feeding it to his hogs. At 7 cents per pound, the hog would have to make a gain of almost 1 pound from 3 pounds of barley.

A. N.

Ans.—To state what are the highest gains made by pigs on a barley ration is beyond us. To do this, we would have to be able to lay our hand on a statement of results of all experiments which have been conducted with this grain as a basis of the ration. This we cannot do, but we will endeavor to give some information on the subject from data at hand.

The rate of gain which an animal makes depends largely upon the individuality of that animal. Stockmen know, no matter what breed of horses, sheep or swine they are feeding, that there are always some individuals which will make larger gains than others when all are getting the very same amount of the same kind of feed, prepared and fed in exactly the same manner, in the same stable or pen, and at the same time. This capacity for laying on flesh is what our stock-breeders are trying to promote in their animals. Well-bred stock usually makes cheaper gains than scrubs. Yet, with animals of the best breeding, there can be no hard-and-fast rule as to how much it will take to make a pound of animal increase.

Barley, as a hog food, has given very good results in practical as well as experimental hog-feeding in this and other countries. Excellent results have been obtained both in amount of grain and in quality of bacon. It however generally gives better results when mixed with some other grain, and when some succulent forage, such as roots or green stuff, is fed with it. Skim milk makes a great improvement when added to a barley ration. Prof. Henry, in "Feeds and Feeding," states that, from experiments conducted, barley fed alone has about ten per cent. less value than corn for fattening swine. In some experiments conducted, the barley-fed pigs made just as rapid gains as did the corn-fed pigs, but it usually required a little more barley than corn to make a given gain. An experiment carried on at the Central Experimental Farm, Ottawa, showed that barley meal, fed in a ration of 4.3 pounds for 112 days, to pigs weighing 73 pounds in the beginning, caused the pigs to gain one pound each per day, and 435 pounds of the meal made 100 pounds gain. At the Ontario Agricultural College, barley was fed for 77 days, to pigs weighing 121 pounds when the experiment commenced, with the result that they gained 1.2 pounds daily, and 456 pounds of the meal were required to make 100 pounds of gain. At the South Dakota Station, barley fed in a ration of 7 pounds for 56 days, to pigs weighing 100 pounds when the experiment commenced, caused the pigs to gain 1.5 pounds per day, and 456 pounds of the meal were required to make 100 pounds of gain. At the Wisconsin Station, the same ration was 10.1 pounds for 56 days, to pigs weighing 100 pounds when the

ginning, the daily gain being 2.1 pounds, and the amount of barley required for 100 pounds of gain, 471 pounds.

It has been proven by carefully-conducted experiments that, as the weight of the pig increases, so does the amount of food required to produce a given increase become larger. The young pig is in the growing state, and is more able to utilize a greater proportion of those food constituents which go to build up the animal frame, while the more matured pig can only increase its weight by the utilization of those food constituents which go to form fat.

Experiments carried on at the Danish State Exp. Station showed that pigs weighing from 75 to 115 pounds required 4.37 pounds of food to produce 1 pound of increase; from 115 to 155 pounds, 4.67 pounds of food; from 155 to 195 pounds, 4.99 pounds of food; from 195 to 235

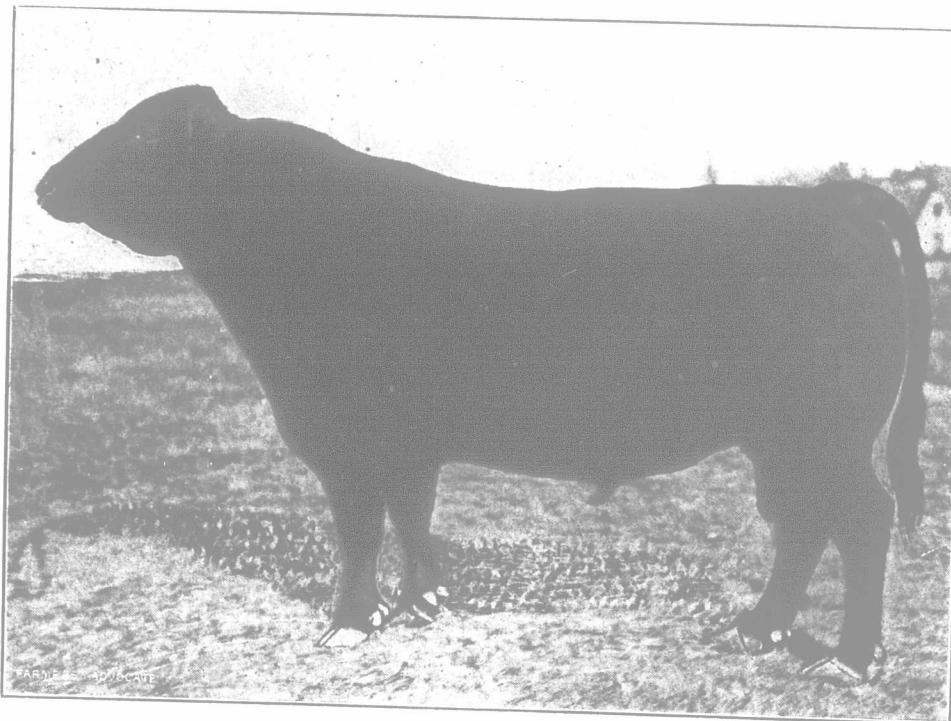


"Dinner Time."

On the farm of Jacob M. Garlough, Gravel Hill Stock Farm, Dundas Co., Ont.

pounds, 5.43 pounds of food; and from 235 to 275 pounds, 6.42 pounds of food. It will be seen from this that, the younger the pigs, the greater the economy of feeding, whether the ration is barley or any other grain.

Now, from the first four experiments quoted, where barley was fed alone, it will be noticed that the best returns were made in the Ottawa experiment, where the youngest pigs were fed, and here it took 435 pounds of meal to make 100 pounds of increase. It is generally believed that about 400 lbs. of meal will make 100 lbs. of pork under favorable conditions, and as these pigs would likely make more rapid gains for a short time previous to the experiment, because of their age, it looks reasonable that for the first six months of their age they would make about 100 pounds of gain for 400 pounds of meal fed. Taking the four



Ballytine King.

Aberdeen-Angus bull. First in class and champion at Sherbrooke and Ottawa Exhibitions, 1911. Owner J. A. McLeod, Plainville, Ont.

experiments mentioned, the average required was 455 pounds of barley meal to make 100 pounds of increase. It must be remembered, however, that these are only a few cases, and that it is quite possible to get better returns than some of these, because some of the experiments were conducted with hogs that were too heavy to make the most economical gains.

In the particular case mentioned in the foregoing question, the feeder likely used milk in some form to start the pigs, and probably did not place any value on it. If barley was the sole feed, his pigs certainly did well, and even if milk was used, his returns were very satisfactory. It is often

surprising what a certain strain of pigs will do in the way of economical gains. In some experiments carried on at the Ontario Agricultural College, Guelph, it was found that the following prices were obtained for feed when the pigs were sold at 7 cents per pound live weight: Meal, \$42.16 per ton; skim milk, figured at 20 cents per hundred, and green feed at \$3 per ton. At 5 cents per pound, the return from the meal would be \$20.45; at 6 cents per pound, \$31.30, and at 8 cents per pound, \$53. So, at prices quoted in the question, barley, according to the returns from this experiment, would bring \$1.01 per bushel. Of course, in these experiments, milk, green feed and mixed clover were used, but the milk and green feed were each valued, though not at a very high rate, and the amount was deducted from the returns before the actual returns from the meal were reckoned. It is seen from this that the estimate in question, while high, is not out of reason. It is seldom, however, that such high returns result from barley alone; but where green food and milk are fed with it, or where it is used in conjunction with other grain, it makes an excellent hog feed.

Just what is the best grain ration for hog feeding, we are not prepared to say. Mixtures usually give the best returns, and there are few better rations than mixed grain chop, with skim milk, and green feed, in the form of alfalfa, clover, rape or roots.

Skim milk, mixed meal and alfalfa gave the largest returns in experiments carried on at Guelph. Skim milk and meal also gave high returns. It was proved in these experiments that, for the most economical increase, a variety in the ration is necessary. In these particular experiments, five lots were fed, and the food consumed for 100 pounds of increase was: Lot 1—Meal, 355 pounds. Lot 2—Meal, 370.3 pounds, and pasture. Lot 3—Meal, 331.16 pounds; alfalfa, 102.6 pounds. Lot 4—Meal, 273.2 pounds; milk, 555.8 pounds. Lot 5—Meal, 250.5 pounds; alfalfa, 64.2 pounds; milk, 547.3 pounds. These figures show clearly the effect of pasturing, and of the different foods, and show a wonderfully low amount of feed required to make a pound of increase.

### Breeding Back.

Editor "The Farmer's Advocate":

This statement, "It is a case of breeding back," is quite common among breeders of live stock, many of whom believe that there is a tendency to inferior stock being left from the purest breeds which are to be found. This, of course, is very annoying to the ambitious stock-raiser who prides himself in having the purest strain of cattle, horses, sheep or swine, and it sometimes happens that progeny from the best pedigreed types could not be passed as pure by anyone acquainted with the requirements of that particular breed.

Whether there is a tendency to revert back to some ancestor many generations ago, I will not discuss at present, but will draw attention to a neglect in the art of breeding which I have never seen debated in print, nor have I yet heard it discussed by the laity. To make my idea clear to your readers, I may say that I have often seen pure-bred cows, which had failed to conceive when bred to a pure-bred sire, taken to a mongrel, or a sire of another breed, from which a calf was raised. Of course, all breeders will agree that this calf would not be eligible for registration. I go further, and assert that such a pure-bred is

not capable afterwards of breeding pure-bred stock. I see hands raised in amazement at such an idea; for, if the sire and the dam are registered, the progeny may be registered, also, by paying fees and making the required affidavits.

Now, here is a condition, underlying conception and growth, which, as far as I am aware, has never been studied. It is said by some writers that the germ has within it every organ for development of every part of the body, and that, if no untoward accident occurs, or injury to the electric lines (we call nerves) pervading every part of the system, the progeny will be a counterpart of sire and dam; but here, as I have said, is a