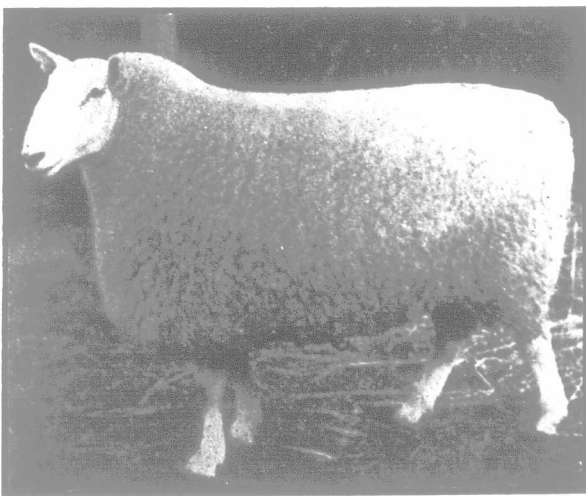


Feeding Cows Bone Meal.

Editor "The Farmer's Advocate":

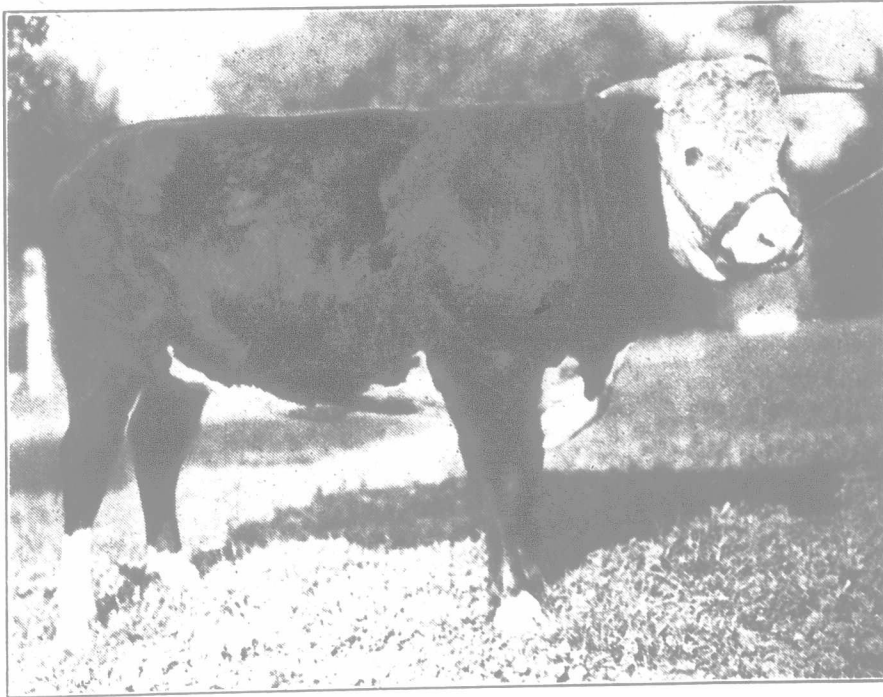
We frequently see inquiries in "The Farmer's Advocate" and other farm journals for advice about cows eating bones, wood, etc. Having had some experience, we give it for the benefit of others. We tried to satisfy our cows by saving up the bones, from house and breaking them up so they could chew them, but last spring the cattle were so craving for something which they were not getting that they were eating the pig manure, chewing fences, and any board or stick laying around, and after they were out to grass they were no better satisfied. Having a price-list of a fertilizer firm we saw where they had pure bone meal for sale for poultry. As an ex-



Half-bred Shearling Tup.

Winner of the President's medal for half-bred animal at the Highland Show, Scotland, 1914.

periment we sent for 50 pounds to see if cattle would eat it. We put some in a box where the cattle could help themselves, and two or three of them made hogs of themselves, eating it down like grain meal. This was only for a time or two, when they seemed to settle down more contented. Before this they made use of very little salt although it was where they could help themselves, but with the addition of meal they used considerably more. As we got good results from that we got 100 pounds more, which they made use of during summer and fall. We always kept a supply of meal and salt handy for them. This winter we were feeding heavily with turnips; the cattle were taking no salt and drinking very little water, and a few weeks ago began nibbling the fences again, so we got another bag of meal.



A Canadian-bred Hereford.

and once more all is well. The cattle are taking more salt, drinking more water on the same feed. Bone meal at present is \$2.20 per 100 pounds.

Ontario Co., Ont.

HENRY BURTON.

The calves of to-day may be the saving of the farming situation two or three years from now. Live stock must go up in price compared with that of grain, and the calves will be maturing just in the boom. We cannot hope to maintain soil fertility unless the live stock is retained, and while too many poor calves are kept altogether too many good ones are vealed, and go to market when they should be well fed and kept in the breeding herd.

THE FARM.

A Little of Everything.

By Peter McArthur.

Last week I read in a local paper of a man who had picked up perfectly sound apples under the trees in his orchard after the snow had melted away. A couple of days later the children brought in some from our own orchard, culls that had been left on the ground and that I thought had been cooked by frost even before the snow fell. They brought in a few Baldwins that were quite sound, though a trifle mealy. To-day I took a walk through the orchard to see what I could find, and under the Ben Davis trees I found a few that looked as bright a red and as sound as they did last fall. To my surprise they were quite good to eat, much better than any Ben Davises I had ever tried before. Under the Wagener tree I found one sound apple that was as crisp and juicy as any apple I have ever eaten. All this leads me to believe that there are a few tricks to be learned about keeping apples through the winter if some scientist would get to work and figure them out. It seems as if apples that are covered with snow and allowed to lie until they thaw with the snow, do not suffer the same injury as if exposed to the frost in other ways. I remember that a couple of years ago a neighbor told me that on the previous fall when he was picking up his apples he filled a hole in a sand knoll with the culls and covered them with straw. The snow drifted over them and lay there all winter. Along in the following June he happened to feel apple hungry, and remembered the apples he had put in the hole. When he went to investigate he found that he had a good supply of apples that were perfectly sound and in good condition. The Ben Davises especially were in excellent condition. Perhaps if we were to look into it we could invent some farm process of cold storage that would be cheaper and as effective as any now in use.

For the past three or four days I have been on the point of tapping the maples, but I could not believe that we were to have our sugar weather in February. Although the days were warm it did not seem possible that the mild weather could last. Besides, the east wind has been blowing steadily, and, according to my recollection, the sap does not run well when it is blowing. If we were going in for sugar-making for profit I would probably have tapped at the beginning of the mild spell so as not to lose any, but as we intend to make only enough for ourselves I guess I will wait until I am more sure of the weather.

This year I hope to find out for sure if the soil on which the maples grow in any way affects the quality of the syrup. In the past we have always made syrup from trees that grew on sandy loam, and the syrup was amber colored and of superior flavor. Last year we made it from trees that grew on heavy clay loam, on another farm, and by no process of refining could we get anything but dark, unattractive syrup of poor flavor. This year we are going back to the sandy loam for our home syrup, and the other bush will be tapped by someone else. With syrup made from the two woods we can compare them and see if, when treated in the same way, we get different results. I know that some people always get credit for making better maple syrup than others, and possibly the difference in quality is due to the land and not altogether to the care with which the syrup is made.

A correspondent who is interested in guinea-fowl has written to tell me that among their other virtues they scare away the rats and mice with their constant rasping. I hope it is true, for I would be glad to think that their interminable noise has some value. It sounds as if it might get on the nerves of the rats. Anyway, we have no rats on the place, but I am inclined to give the credit to the fact that last year and the year before we took the trouble to kill every rat we rooted out of the corn shocks and the bottoms of the stacks. In addition we have a couple of sleek cats said to be of an excellent mousing and ratting strain. But if the guinea-

quantity of by-products and convert a probable waste into a certain profit. Whether they follow corn-fed steers in the feeding lot, manufacture the skim-milk or whey of the dairy into pork or the scraps of the ordinary farm table, clean up the scraps of the ordinary farm table, their function is the same and most farmers should consider them first in that light. More extensive operations should be based upon a minute knowledge of the cost of production, both of feeding stuffs and pork as well as a pretty accurate forecast of market conditions. All farms should have at least one brood sow. More are often warranted, but that depends upon conditions that cannot be discussed in a general way.

The vital question of to-day is how can pork be produced at the least possible cost to the farmer. Grain commands a price that attracts it to the elevator and the city, while land is valuable upon which grain can be produced at present prices yet many farmers have a bunch of present prices yet many farmers have a bunch of shoats to finish, or brood sows that will litter pigs that must be reared. How is it to be done at a profit?

Under present conditions the breeder is justified in spending a good half day in figuring out how to rear and finish a litter of pigs. In the first place it will require all the way from 3½ to 5 pounds of grain to produce a pound of pork, depending upon the age of the swine in question and the amount of milk, whey, rape, clover or alfalfa that may be fed in conjunction with it. Generally speaking, the required amount of concentrates will be decreased as the proportions of these roughages mentioned are increased. Yet to offset this advantage young pigs make better gains on a certain amount of grain than older ones, but they will not consume the same amount of roughage, and the cost of the season will probably average up nearly equal for each month. In a Danish experiment pigs weighing from 115 to 155 pounds required 466 pounds of grain to produce 100 pounds of gain while results of experiments at the Ontario Agricultural College reported in Bulletin 225, by Prof. G. E. Day, point to the fact that from 331 to 468 pounds of meal are required to produce 100 pounds of gain in all breeds of hogs. In this experiment dairy by-products or green feed are not considered in the cost. It is for the meal alone. Speaking from the knowledge of farm operations it would be safe to say that from 4 to 4½ pounds of meal or grain are required to produce one pound of gain on the general run of farm hogs in this country. Let us then see how the grain ration may be reduced without decreasing gains, for that is the problem that confronts every wide-awake farmer during the season of 1915.

Alfalfa is probably one of the best substitutes for meal that swinemens can resort to. At the Colorado Station, Cottrell found that alfalfa makes the best hog pasture, and that hogs fed some grain daily will make from 500 to 1,000 pounds of gain during the pasture season from an acre of good alfalfa after deducting the gain which the grain would make if fed alone. The Kansas Experiment Station publish the results of an experiment in the following table, which also sets forth the value of rape as a substitute for grain:

	Daily gain.	Grain consumed per 100 pounds gain.
Lot 1. No pasture	1.04 pounds	371 pounds
Lot 2. Rape pasture	1.09 pounds	301 pounds
Lot 3. Alfalfa pasture	1.10 pounds	200 pounds

By way of explanation the Station reports that:

An acre of rape was required for ten pigs, but half an acre of alfalfa was sufficient for the same number.

An acre of rape pasture produced 202 pounds of pork, and an acre of alfalfa pasture produced 198 pounds of pork.

This experiment emphasizes the superior value of alfalfa, and likewise emphasizes the value of dwarf Essex rape, which can be seeded in the feed lots that would otherwise go to waste, or grow up to weeds, and be made to pay a handsome profit on the investment.

Carlyle of the Wisconsin Station concludes from investigations carried on at that place that with pigs from 1 to 10 months old an acre of good rape has a feeding value equal to 2,436 pounds of mixed corn meal and wheat shorts when grazed in combination with those feeds. Red clover is also good pasturage for young pigs, but the results of experiments have usually been in favor of rape.

Peas and oats form a mixture that might be resorted to for an early soiling crop to augment the grain hay, while roots, potatoes, apples, pumpkins and dairy by products are all available at certain seasons of the year. The domestic hog has not the internal mechanism capable of utilizing all kinds and quantities of roughage, but swine will thrive on rough feeds and pasture to a certain extent, and if pork is to be produced this coming summer at a living profit the breeder should plan how he is to do it and courageously translate his plans into crops as soon as the season will allow.