Those who do not as a rule finish cattle for the spring market will probably find themselves equipped with ample fodder to carry their breeding stock and growing cattle through the winter in fair condition. Plenty of good hay, with a little silage or a few roots, will keep the animals thrifty and growing. If some grain can be spared, the store cattle possibly can be kept in such fit that four to six weeks on good grass would make them acceptable to the butcher.

Again, there will be many who annually finish some few head, which they have reared themselves. The decreased demand from professional cattle feeders this season will enhance the number of farmers who will find themselves obliged to keep the feeder class of animal rather than sell it as has been their custom, unless they should dispose of such stock for less than it is worth. These farmers have two alternatives; they can finish the cattle themselves, perhaps that will necessitate the purchase of some grain, or, they can winter them roughly and finish on grass or carry them over to be fed during the winter of 1917-18. With market conditions such as are likely to obtain next spring and early summer, it is not unlikely that the greatest ultimate profit will accrue from finishing such cattle this winter, even if some grain or millfeed must be purchased. If one has plenty of hay and some silage or roots they will suffice for the first month. Fill the cattle up with this feed, and at the beginning of the second month introduce about two pounds of chop into the ration. If silage is fairly plentiful, cut straw and silage mixed can be fed twice each day at the start, also one good feed of hay. As the winter advances gradually work back to the hay, so by the first of March straw will be entirely replaced. Slowly increase the grain each month until the quantity reaches eight or nine pounds per day, per steer, by the beginning of March. This method will conserve the hay for the cows and young stock, which will no doubt be deprived of other and better feeds.

To the professional feeder who fills his stalls or runs each fall with feeder cattle, little need be said. His position is different from that of the man who already has the cattle. The professional cattle feeder usually takes an inventory of his stores and then puts in enough stock to deplete them by the time grass is ready, or before. He knows that he can make one-hundred pounds of gain on so much fodder and a certain quantity of grain, and after computing the cost of feed and the value per hundredweight of his feeder cattle, he has some idea regarding his profits, provided the price for the finished bullock is not disappointing. Extensive dealers are buying cattle quite freely for distillery feeding purposes, where they are obliged to purchase every ounce of feed. They are in close touch with the market, and are paying good money for the choice kind. This is significant, for they are not new at the game.

What Feeds Shall He Buy?

There has been a good crop of hay, and this obviates the necessity of purchasing several kinds of feed that might have been found necessary. Furthermore, there has been an opportunity of obtaining good alfalfa hay very reasonably, and this class of fodder takes the place to some extent of bran, roots or silage. Corn, which formerly was bought freely, is now quite high, but even at present values it will not cost much more than two cents per pound in large quantities. Bran and shorts are well up, so No. 1 Western feed oats are perhaps as good a buy at 62 to 65 cents, at which they are quoted when writing, as any feed on the market. They are safe, and when ground with a little barley or wheat make excellent chop both for fattening cattle and growing stock. Corn and this class of oats are not yet out of reach when we consider the price of beef and pork. Young pigs will perhaps require some middlings, which, with a little skim milk, will produce good results. Possibly it will be necessary to use some bran if the silage and roots are scarce, but it appears that oats and corn, particularly the former, are as good an investment for the feed lot as there is now in sight.

It is always wise to buy carefully, and only those feeds that will combine well and profitably with the home-grown stuff. Farmers are now fairly well informed regarding the different properties of feeding stuffs, and they should consider this phase of the question. Balance the protein rich feeds, such as alfalfa hay, bran or oil-cake, with the feeds rich in carbohydrates, such as corn or wheat. An excess of either kind will result in waste.

We have made a few suggestions regarding markets and the feeding problem, and they are based entirely upon conditions which exist at this time. Every farmer should take sufficient time off at this season of the year to figure out how he stands with regard to his live stock and available feeding stuffs. Furthermore, he should consider methods whereby he may effect a saving in some department without unfavorably influencing another. Conditions are such that deliberations are necessary. There is a splendid opportunity, for the man who uses his head, to convert an unfavorable situation into something quite remunerative, while he who will not attempt to avoid waste or alter his methods to suit his circumstances may long remember this as a lean year. Estimate as nearly as possible the value of the finished product, then, if after distributing the material at hand to the best advantage, some extra feeds can be used at a profit do not hesitate to obtain them.

Who Can Beat This Grade Cow?

The grade cow illustrated in our issue of October 12, together with her three pairs of twins born in 25 months is certainly a valuable cow for W. E. Johns of Perth Co., Ontario. The cow is 14 years old as stated, and in addition to giving birth to two calves April 15, 1914, two more June 11, 1915, and a third pair May 25, 1916, she gave in her 1913 lactation period 7,885 lbs. of milk, 7,376 lbs. in 1914, 8,988 lbs. in 1915, and 8,367 lbs. in the period ending early in 1916 with an average test of 3.5 per cent. fat. In June of her lactation period she gave 1,605 lbs. milk testing 3.2 per cent. fat. Her highest day's milk was 60 lbs. This is surely a dual-purpose cow. There are few cows young or old, pure-bred or grade which give in four consecutive lactation periods 32,616 lbs. of milk, testing 3.5%, or an average of 8,154 lbs. each period, let alone producing twin calves regularly.

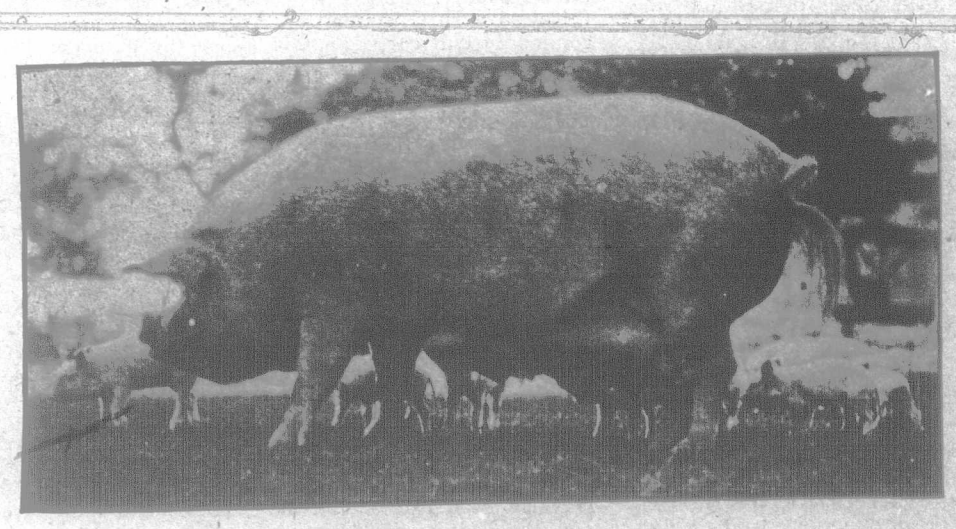
It would seem that the production of twins may be hereditary. This grand old cow's dam gave birth to two pairs of twins in less than eleven months and all were raised. Her heifers, if they show individuality of the right kind, should be kept.

A Hot Bath Saved These Pigs.

EDITOR "THE FARMER'S ADVOCATE":

I have a fine sow which farrowed 12 nice pigs a few days ago, and during the night six of the litter, for some reason, were lying on the only bare spot in the pen, the floor of which is cement. We thought the six would pass out as they were badly chilled and almost lifeless. My man, who lives with his family on the farm, carried these almost lifeless pigs into warm quarters and put them into a warm bath and kept them there until they were warm, then fed them a little warm, new milk with a few drops of whiskey. For eight or ten hours we thought their chances were poor, but one by one they began to revive and were taken back to the sow and at present are doing well.

Waterloo Co., Ont. C. A. RICHARDSON.



Oak Lodge Duchess 312th.

This sow, which her owner, John Warner, of Kohler, Ont., calls a golden investment, farrowed 83 pigs in 5 litters. She weighs 690 lbs.

Feed Value of Roots.

A circular on "Root Growing in Quebec", issued by the Cereal Husbandry Department of Macdonald College, contains the following information about roots and root tops: "The feeding value of roots depends on their content of dry matter, mainly consisting of easily digested carbohydrates. Ten pounds of mangels, carrots or swedes (swede turnips), twelve and one-half pounds of turnips (soft white) contain, on an average, one pound of dry matter and have the same feeding value as one pound of grain. Each amount constitutes one feed unit. Root tops represent a valuable feed and may either be fed fresh or put into the silo. Ten pounds of carrot tops and fifteen pounds of mangel, swede, or turnip tops each constitute one feed unit."

THE FARM.

Putting the Land in Final Condition for Winter.

Were it not for the fact that this has been an unusual season and that farm work has been delayed for various reasons, this would be a rather late date at which to discuss putting the land in final condition for winter. But, owing to the drouth which continued in most sections of Ontario well on into the fall, and partly due to the scarcity of labor, a great deal of the farm work which, as a general thing, would be accomplished in October will have to be done this year in November if the freeze-up does not come too early. By exercising memory a little we are led to hope that winter will not close in before November 20th at least, and probably not until nearer the end of the month. As a general thing the plow is not stopped by frost in the greater part of Ontario before the middle of November, and in open seasons such as is predicted for this year, plowing is done up to November 25 or first of December. It is a safe rule, however, to be pretty well wound up by the fifteenth of this month because the weather is not dependable after that. But during the next two weeks considerable may be accomplished in the way of getting the land ready for an earlier, quicker and better seeding in the spring.

The greater part of the soil will only be plowed once this year as the early after-harvest cultivation was made practically impossible through lack of moisture and scarcity of help. The bulk of the deeper plowing remained to be done after the 20th of October and much of it is still to be done. For the most part a furrow from five to seven inches deep, cut wide enough that the land is well turned over, but not so wide that it is simply cut-and-covered, should be about the right thing. On heavy clay soils, or even those moderately heavy, most farmers prefer to leave the soil turned up rough from the plow so that the frost gets its best chance to pulverize, disintegrate and prepare it for spring cultivation.

Hoed Crop Land.

What should be done with corn ground which has been kept clean and well cultivated throughout the season of the growth of the crop? If the land is in good condition and weeds have been kept down, the soil being anywhere between clay and loam or composed of either one, many believe that it is folly to plow or cultivate in the fall. Some of the best farmers in the province, when they have their hoed crop land clean, including corn and root ground, and they aim to have it so, leave this land as the crop left it until spring, not plowing it then, but simply cultivating well or disking in preparation for the seed. The writer has tried this system for the growth of both spring wheat and barley after the corn and roots with excellent results, and under most conditions where the land is clean enough would favor leaving it without plowing. Where such is done it is generally necessary to roll with a heavy roller after seeding in the spring to put the corn stubs down out of the way of the binder. Where the land is in bad condition and where weeds have thrived during the summer in the corn or root crop, of course plowing would be advisable, and it is well to go about the same depth or a little deeper than that to which the manure was plowed down previous to planting the corn or sowing the roots. This tends to keep the manure up in the surface where it is more accessible to the roots of the shallow-rooted cereals which generally follow the hoed crop. Manure should not be plowed down too deeply.

For Stubble Land.

Most of the stubble land will, this year, get only one plowing and in order to facilitate matters and get the work completed a great many farmers will use the two-furrowed plow. A medium gang set to the depth of about five inches or possibly six will do good work in the fall when the ground is soft as it is now. We would much rather have the fields well turned with this plow than to have them only half completed with the single plow. Of course a great deal depends upon the man who is operating the plow. It should be kept adjusted and in the ground so that an even, fairly straight and well-turned furrow results. Striking out and finishing should be done with a single plow no matter what style of two-furrow implement is used. Some good farmers, when they can get their plowing done fairly early, have found it excellent practice to plow to a fair depth and follow this later on with the cultivator with broad shares attached, or with the disk, leaving the land in this condition over winter. This is all right where the soil is not too heavy and is not liable to run together and become sticky which would delay spring operations and work to the detriment of good tilth next April, when the 1917 crop is going into the ground. For heavy soil or that which is inclined to be wet and rather late at seeding time a good practice is to ridge the land the very last thing in the fall. This is something which might be done to good advantage on considerable of Ontario farm land. After the plowing has been completed, if a few days or weeks remain, the double-mould-board plow could be used to ridge up as is done in making turnip or mangel rows. A good man with a first-class team will put up anywhere between three and four acres a day quite handily and this ridged soil, exposed as it should be to the frost, gets all the benefit from frost action, dries out much more quickly in the spring and a couple of strokes crosswise with harrow and cultivator put it in fine condition for the seed, generally permitting of getting the spring seeding done at least a few days earlier, and every day counts. Many of our readers might well try a field of their heavy soil according to this system this fall if time permits. Where a double-mould-board plow is not at hand very good work may be done with an ordinary single plow cut-and-covering, generally crosswise of the plowing.

The Sod Field.

The sod field is a different proposition. In some