

totally than the others, but he made corresponding gains.

As far as I am aware this is the only work that has been done in an experimental way with steers bred from Shorthorns specially intended for both milk and beef. No attempt was made to actually force the steers. They were given a liberal supply of feed and the idea of making the fullest use of the cheaper feeds such as skim milk, silage and roots was always kept in mind, so that any results obtained are certainly no exaggeration of the possibilities of the cattle.

WORK IN MILK PRODUCTION.

It would seem that the merits of Shorthorns for beef were so well known that men working the cattle for combination purposes directed their efforts only to milk. In my opinion, as above intimated, very frequently the attitude has been one of extreme. Be that as it may, there is an abundance of information available to show the possibilities of the Shorthorns for both phenomenal and consistent profitable work. The following herds referred to are a few of the successful ones which will serve to substantiate the above statement.

R. W. Hobbs & Sons, Kelmscott, Gloucestershire, England, 200 cows in herd. Careful milk records taken for years. Rose 26th, maximum record in one year, 13,908 lbs. Blossom 5th, average annual yield for 10 years, 8,049 lbs. 15 cows in 1912 yielded over 10,000 lbs. Total herd average is over 6,000 lbs. per year.

The milk is shipped to London and is the main source of profit to Mr. Hobbs. The herd has been kept for milk since 1878, and almost without an exception every animal has been bred on the place. In general type the cows are extremely uniform. They are thick, attractive and capable of carrying an abundance of flesh in the right places.

Lord Rothschild, Tring Park, England.

	Lbs. milk.
Dorothy in herd eight years, average.....	9,722½
Furbelow Countess 2nd, in herd seven years, average.....	8,675
Happy Gem 5th, in herd 11 years, average.....	7,124
In 1911, 74 cows in herd, average.....	6,068

Glenside dairy Shorthorns.

May & Otis—Graiville Centre, Pa.

& Willoughby, Ohio.—

Rose of Glenside—18,075 lbs. in one year.
... average for 7 years, 9,417 lbs.

Belle Clare—15,215 lbs. in one year.

Mamie Clay 2nd, 13,232 lbs. in one year.

Nearly 100 cows, milk records over 8,000 lbs. per year.

MACDONALD COLLEGE DAIRY SHORTHORN MILK RECORDS.

To date 33 consecutive records under normal conditions and in regular milking periods have been made.

The total milk produced is 214,901 lbs. or an average record of 6,512 lbs.

	Lbs. milk.
Greenleaf 23rd, average for 4 years.....	7,836
Barrington Duchess, average for 4 years...	8,624
Furbelow Countess, average for 5 years...	7,071
Blossom 9th, average for 4 years.....	6,691

The following maximum records have been made in single regular milking periods by four mature cows: 11,821 lbs., 9,756 lbs., 9,768 lbs., and 9,535 lbs. milk. The average test in butterfat for the herd is 3.7 per cent.

The cows, as in the case of steers, have been treated liberally, but no special attempt has been made for records. They have been milked twice each day, and treated exactly as the rest of the herd. The charge has been frequently made that Shorthorns are not persistent milkers. We have seen evidence of this, but our experience with the cattle goes to show that it is by no means a characteristic but very often the result of the handling of the cow. Shorthorns in this country have not been milked long periods, they have an aptitude for fleshing, consequently they tend to dry off quickly.

In regard to feeding we have made no material difference for the breed. Our rations are based on the size of the cow, her condition and the amount of milk she is giving. The Shorthorns are large and require more roughage, which we always supply in cheap form. We have noticed as well that even the best milking cows flesh and increase in weight quickly when dry or nearly so.

As compared with the Ayrshires and Holsteins they, of course, are behind in milk, and when it comes to a matter of production cost, quantity is always an important factor. However, in actual profit over and above the cost of feed alone, and with Montreal prices for milk our mature Shorthorn cows have made an average of \$65.00 per year.

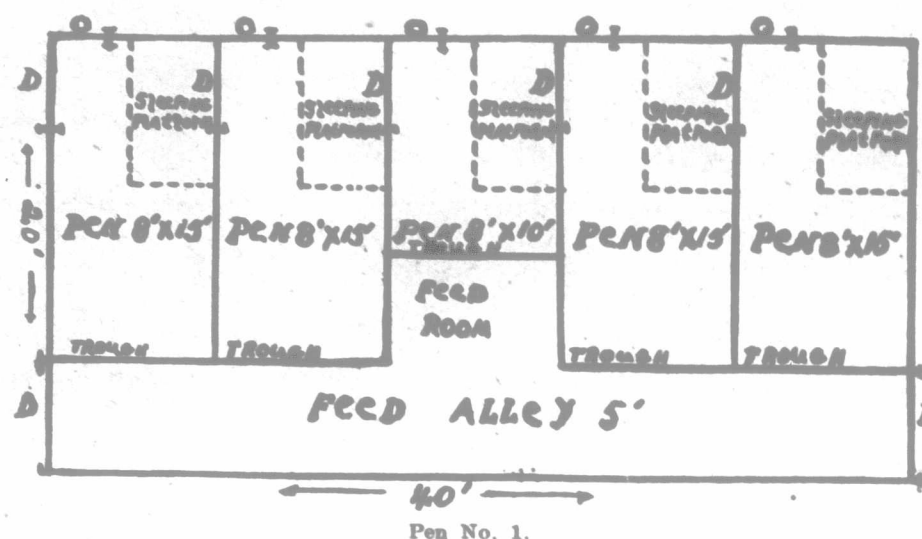
Macdonald College.

H. BARTON.

Two Pig Pen Plans.

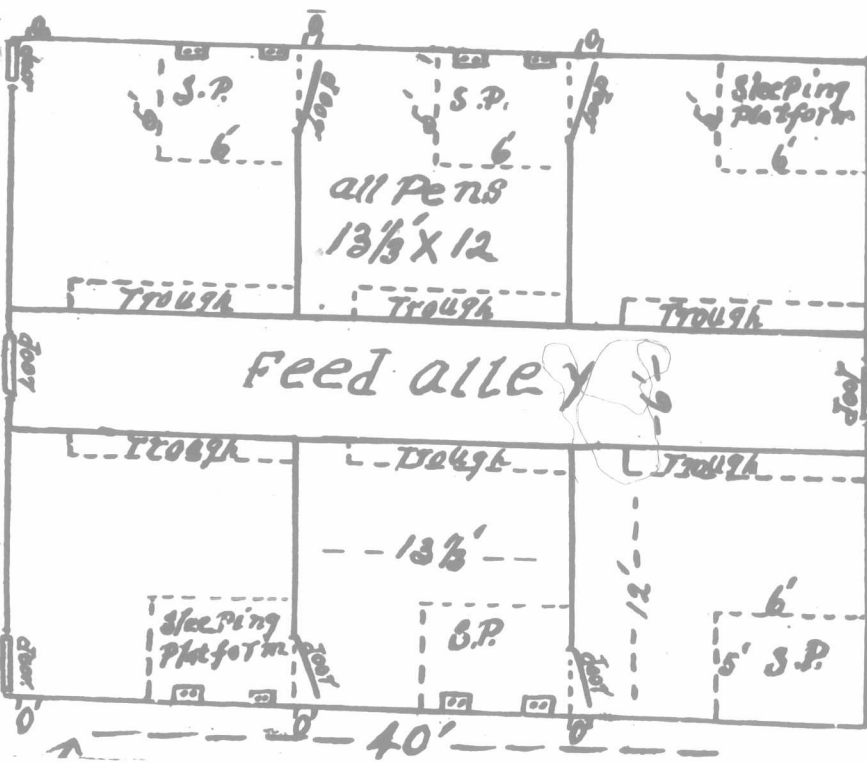
In response to several requests from readers of "The Farmer's Advocate," we are publishing in this issue two pig-pen plans. Either of these plans lends itself to modification and extension, and we hope that our readers may get a few ideas from them which they can put in practice on their farms at home. Neither pen is too elaborate for the average farmer and the size may be made to suit the size of the farm and the number of hogs kept.

Figure 1 is a plan quite suitable for a small or average farm where only a limited number of pigs are kept. Readers will notice that the feed alley is along one side and all the pens along the other. This has one advantage, that the outside yards are all together. We believe that it



Pen No. 1.

is always advisable when erecting a pig pen to choose a location where sunny, dry outside yards may be available. This pen is 40 feet long by 20 feet wide and is divided into four pens, 8 feet by 15 feet, with a smaller pen in the centre, 8 feet by 10 feet, where a breeding sow or a small young litter may be kept. In the centre of the building and off from the feed alley is a small feed room, 5 feet by 8 feet, which is large enough to put in a bin or two for chopped feed. At the back of the pen, doors lead from pen to pen through to the end of the building. If the builder sees fit he may, through this passage, place a litter-carrier track to carry out the manure, or if he does not wish to go to the expense of fitting the pen with track and carriers, these doors, being 4 feet wide, will permit of running a wheelbarrow right through from pen to pen and piling the manure in a yard at the end of the pen, or if it is preferred to do so, the openings at the back of the pens leading to the yards may be used as clean-out openings, the litter being thrown out of these and piled up. Those openings are 30 inches wide.



Pen No. 2.

In the right hand rear corner of each pen is placed a sleeping platform. These platforms are 4 feet by 7½ feet. Of course, this size could be varied to suit conditions. If it is thought advisable to make a larger sleeping platform, there would be plenty of room, or if this was thought to be too large, it would be an easy matter to cut down the size. If the wheelbarrow is to be used to clean out, it would be well to have these platforms, which would be of plank, raised only a few inches off the floor, hinged to the back of the pen, so that during the process of cleaning out they might be raised back against the rear of

the pen and hooked up in place to allow the wheelbarrow running through without bumping over them. In view of this fact, it would be necessary not to get the sleeping platform too long, so that they would not open up on account of coming in contact with the roof. Of course, if litter carriers were used, it would not be necessary to have them hinged at all.

In some modern pens the sleeping portion is partitioned off and arranged so that the door opening from pen to pen when open to permit of cleaning out, closes the entrance to the sleeping apartment, shutting the pigs in out of the way. If this plan were followed, the doors would necessarily require to be through the centre of the pens in place of at the back.

We think this is a very handy little pen for a small farm, and as it may be modified in small particulars, it lends itself very well to the needs of the general pig-raising farmer. If the pens are thought too narrow, it is an easy matter to lay the pens out allowing for an extra foot or two in the width of each.

Pen No. 2 does not possess any distinct advantages over No. 1, with the exception that it is larger and contains more pens. The building is 30 by 40 and the pens are 13-15 feet by 12 feet. The doors and openings are of the same size and arranged in the same manner, as well as the sleeping platforms, which are hinged in order that they may be lifted up and attached to the wall at time of cleaning out the pens. The feed alley in this case is 6 feet wide, and, if it is thought essential, doors may lead from the alley to the pens at the ends of the troughs. A commendable floor would be of cement, mixed in the proportion of one to eight for a base and dressed with a surface layer of one to two and a half or three. The pens should have a slope to the back of about 1½ inches and there should also be a perceptible slope to the end of the building where the cleanings are to be removed.

One of the centre pens can easily be converted into a feed room at any time, when not required for pigs, and make a convenient addition to the accommodations.

Pigs for New Countries.

BRITISH TYPES OF PIGS TO CHOOSE FROM.

There is no foundation stock for successful pig raising like the well-defined breeds of Great Britain which, in their own way, are built to suit both the taste of any neighborhood and the pocket of the farmer who is stepping out of the rut of the grade breeder to a full-fledged pedigree stock-keeper. Told tersely, the varieties of British pigs can be counted upon one hand, but their values are unrealizable. A particular pet of the North of England farmer is the Large White which, originally bred in Yorkshire, is the largest British white breed. It has rather a long white coat on a white skin, which occasionally shows a few blue spots. The head is moderately long, snout broad, face slightly dished and wide between the ears, and jowl not too heavy. The tail is set high, hanging perpendicularly, long, and stout, with a tassel of fine hair. Its chief

characteristics are a strong constitution, immense size, quickness of growth, and a greater proportion of lean flesh to fat. Pigs twelve months old weigh 6 cwt., and when full grown as much as 11 cwt.

The Middle White was originally evolved through mating the large and small Yorkshire breeds. It very much resembles the Large White in size. Its head is shorter, ears more erect, a full jowl, and broad, turned-up snout, and dished face. It is not so prolific as the Large White, but fattens quickly after the age of six months.