The use of self-feeders in swine production has been greatly extended in recent years. Experimental data and experience indicate that self-feeders have a use in one form or another on all farms from which any considerable number of hogs are marketed. To secure the best results, intelligent choice of feeds to be fed from them, as well as the exercise of good judgment in selecting the time and place of use, is essential.

Most types of self-feeders will give a continuous supply of shelled corn, but there are only a few types which will operate successfully with tankage, oil meal, middlings, or ground grain.
THE SELF-FEEDER IN PORK PRODUCTION
BY W. J. CARMICHAEL, ASSOCIATE IN ANIMAL HUSBANDRY

The self-feeder is utilized primarily to save labor by permitting the hogs to help themselves to the feed as frequently as they choose, rather than giving them their ration in one or more feeds daily. It is also of much value in increasing the rate of gains and consequently shortening the feeding period for market hogs.

The feeder may be made for any number of feeds and may be of any desired size. However, care must be taken in the construction of the opening thru which the feed passes from the hopper into the trough. The size of this opening should be adjustable, in order to regulate the flow of feeds of different kinds for different bunches of hogs and for various weather conditions. An opening which can be either entirely closed or opened about three inches is adapted to most feeds. If the adjustment is not properly made, either so little feed passes into the trough that the pigs cannot satisfy their appetites or there is so much that a great deal is thrown out and wasted by them. Unless the feeder is properly constructed, more time will be consumed in its care than would be required for hand-feeding the same swine.

The prospective user of the self-feeder should carefully consider the purpose of his hog production. If the animals are to be developed for breeding purposes, they should be well grown rather than fattened, lest they become so fat that their future usefulness is impaired. On the other hand, market hogs should be so fed that they are in high condition when weighing about 225 pounds and are then ready for the market. The self-feeder furnishes the feeds in such quantities that maximum condition is acquired in a minimum of time. It is, therefore, primarily suitable for fattening hogs and with caution may be used in feeding breeding stock.

Many beginners have failed in starting pigs on the self-feeder. Too often they do not consider the detrimental effect of a sudden change from light to full feed or of changes in the feeds used when an unlimited quantity is being fed. The best method seems to be either to get the pigs on almost a full feed before the self-feeders are used or to put into the feeders an increasing amount of feed each day until there is some left at night, and then fill them. Care should be taken to see that the different compartments contain at all times their respective feeds (unless the supplementary feeds are hand-fed), and furthermore, that they are available in the troughs; otherwise the pigs will fill up on the obtainable ingredients of the ration. Such a "no-choice" system may not be economical. In any event, a sudden change from light to full feed should be guarded against when beginning the use of the self-feeder.
FEEDS

Any feeds ordinarily used for hogs can be fed from a self-feeder. Shelled corn, oats, middlings, oil meal, tankage, and other dry feeds are commonly used. Ear corn can be self-fed, altho it is not well suited for such a method of handling. A few hog raisers have fed buttermilk or skim milk from especially constructed feeders resembling automatic waterers, or "hog fountains," and others have used legume hay in racks built for that particular purpose. Two or more feeds should be used at one time, altho it is not necessary to have all of them self-fed. In fact, many successful stockmen prefer to use corn in the feeder and hand-feed the supplements; others keep a high-protein feed, such as tankage, in the feeder at all times and regulate the amount of carbonaceous feed, such as corn, by hand-feeding. In

FIG. 1.—THE ILLINOIS SELF-FEEDER

The feed passes from the two compartments of the hopper into the trough under the hinged doors. These doors can be pushed into the hopper by the pigs, thus preventing the caking of feed. This type is the most satisfactory yet found by this station.
almost any self-feeding system in the corn belt, corn should be the main grain used in the feeder. If corn is to be turned into pork with profit, some supplementary feed must accompany it. For this purpose tankage, dairy by-products, middlings, or oil meal may be used.

**Balancing the Ration**

The pig will balance his own ration if given an opportunity, and he will probably do it better than most people do it for him. This station has found that various bunches of pigs will eat different proportions of the same feeds, which is an indication that they have different tastes, or desires. On account of the difference in appetite, it is impossible to predict in advance just what ration should be given for the best gains.

In addition to the variation in food requirements for different bunches of pigs, results at this station indicate that the same pigs will eat varying amounts of the same ingredients as they become older and heavier. In tests recently conducted at this station in which pigs were fed corn and tankage in the feeders, the daily consumption per head by periods, beginning when the average individual weight was 47 pounds, was as follows:

<table>
<thead>
<tr>
<th></th>
<th>Shelled corn</th>
<th>Tankage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st period (four weeks)</td>
<td>2.1</td>
<td>.40</td>
</tr>
<tr>
<td>2nd</td>
<td>2.7</td>
<td>.47</td>
</tr>
<tr>
<td>3rd</td>
<td>3.8</td>
<td>.54</td>
</tr>
<tr>
<td>4th</td>
<td>5.6</td>
<td>.44</td>
</tr>
<tr>
<td>5th</td>
<td>7.2</td>
<td>.36</td>
</tr>
<tr>
<td>6th (24 days)</td>
<td>7.3</td>
<td>.26</td>
</tr>
</tbody>
</table>

At the end of the test the pigs weighed 259 pounds each, as an average, and had made daily gains of 1.30 pounds per head.

In a second lot, in which middlings were fed with corn and tankage, the pigs ate practically the same amounts of corn and tankage as those in the first lot, and in addition, more than twice as much middlings as tankage. In the second lot, however, the gains were more rapid, being at the rate of 1.40 pounds per day, giving a final weight of 277 pounds. It seems, therefore, that the addition of middlings increased the rate of gains.

**Economy of Gains**

The economy of gains depends, of course, upon the relative cost of the feeds. Many people are of the opinion that with the self-feeder the gains will be made on less feed than with other methods of feeding. Results obtained at this station will not warrant such a conclusion. In fact, in the various tests in which the hogs have been carried on to the same weight, the amount of feed required for a given amount of gain was slightly less for the hand-fed hogs than for those
which were self-fed. Some tests at other stations indicate a slight saving of feed due to the use of the self-feeder.

**SELF-FEEDERS AND PASTURE**

Self-feeders for grain and supplementary feeds may be used satisfactorily with pigs on pasture. Where the pigs are allowed all the feeds they will consume, they will eat a smaller amount of forage than where a limited ration is fed; consequently, more pigs can be pastured per acre. These full-fed pigs will be nearly, if not quite, ready for market when the forage is gone, but they will have consumed a larger amount of grain or feed other than forage than those given a limited ration. Light rations in connection with pasture save little, if any, grain as compared with self-feeding, but they do save supplementary feeds; however, the gains are slow and it is necessary to finish the hogs after the forage is gone. When pigs on forage are fed lightly, the gains made will appear cheaper than those made by pigs on a full feed, but it must be borne in mind that the light-fed pigs are not ready for market when the forage is gone, but must

![Self-feeder used in experiments at the Illinois Experiment Station](image)

This is a common type of self-feeder, with compartments, adjustable sides, and an inverted trough deflector in the hopper.
be subsequently fattened. They will ultimately require slightly more feed per pound of gain than the pigs that are self-fed. In case there is a shortage of grain, or if the feed is high in price during the summer, it is nevertheless an economical system to grow pigs slowly on pasture with a small amount of grain and then finish them on self-feeders with corn and tankage or other suitable feeds as they become more available. If pigs on forage are self-fed, corn alone is insufficient to furnish a balanced ration. Some feed of high-protein content, such as tankage, buttermilk, or linseed meal, is needed to supplement the corn and forage under such conditions.

Where "hogging-down" corn is practiced (which is really self-feeding), the supplementary feeds should be self-fed in order to insure the most rapid and economical use of the corn. Likewise, with pigs following steers the self-feeding of supplementary feeds is conducive to more rapid gains and increased economy of production.

**Miscellaneous Uses of Self-Feeders**

Pigs will begin to eat corn or other feeds when four to six weeks old, and for supplying fresh feeds for them, there is probably no other device which is as satisfactory as the self-feeder. It furnishes a continuous supply of clean, palatable feed. Middlings, oats, corn, or other desirable feeds can be used. For young pigs it is best to supply a growing ration rather than one that is too fattening, as corn alone would be.

Brood sows may be self-fed for limited periods, but in the continuance of the practice care should be exercised to avoid getting them too fat for their future usefulness. If bulky feeds are used, they may be self-fed with safety. Alfalfa, bran, or oats can thus be given alone in the feeder, or may be used to dilute the corn and tankage ration or other feeds which are being fed. Sows will not normally over-eat of a bulky ration even tho they may be self-fed.

Even when swine are not to be pushed for market, the self-feeder may be used as a receptacle for their feeds. The allowance of feed for the day may be put in the hopper of the feeder daily and the hogs permitted to eat as they choose until the feed is gone. This provides the feed in a clean, sanitary form and eliminates the necessity of mixing the dry feeds and feeding in the form of slop or swill.

Even tho the self-feeder may not be used for grain, there is a definite use for it with every bunch of swine. Hogs of all ages need more minerals than they are fed or can find under most conditions, and to supply this need, a suitable mixture should be kept before them continually. A self-feeder is the best sort of container, and its use will give excellent results if some mixture such as slack coal, charcoal, or wood ashes, 3 parts, ground limestone or air-slaked lime, 2 parts, and salt, 1 part, is kept in it at all times.
Water can also be self-fed and should be available constantly for all hogs under all conditions.

**Type and Finish with the Self-Feeder**

There is no doubt but that healthy pigs given a suitable variety of good feeds in the self-feeder will get ready for market about as rapidly as is possible under any system of finishing. To be sure, some shotes which are predisposed to early fattening will be "done" sooner than the others if the feeds are available for their maximum development. Ordinarily, hogs of a squatty, easily fattened type are ready for market first and may even be ready to go when weighing 150 pounds, if self-fed from weaning time. If they are active and good on their feet, it is probable that they can be successfully continued on the feeders and sold with the remainder of the bunch; but if they are poor-footed or inclined to be sluggish and inactive, it is best to let them go as soon as they are finished, regardless of their weight. Occasionally shotes become so fat, when weighing 125 pounds or more, that they develop the thumps, as do very fat suckling pigs. When individuals are found in that condition, they should either be slaughtered or be fed a lighter ration and given an abundance of exercise until they recover. However, very little trouble is experienced if the shotes attain a weight of 90 to 120 pounds before being given access to the self-feeder. Pigs of a stretchy or rangy type, even tho self-fed from the time they are weaned, very seldom fatten to an undesirable degree before they have attained a good market weight.

![Fig. 3.—A Cheap but Satisfactory Type of Self-Feeder for Minerals](image)
TEN DON'TS FOR THE USE OF THE SELF-FEEDER

1. Don't feed corn in the feeder without some good supplement. Pigs need additional protein and minerals.

2. Don't forget the water and minerals—self-feed them both.

3. Don't start the pigs on the feeder without working them up to a full feed gradually.

4. Don't let the feed sour in the bottom of the hopper.

5. Don't use the feeder unless you want the pigs to get ready for market at the rate of about 1.25 pounds gain per day.

6. Don't feed breeding animals from the self-feeder unless they are very thin or unless a sufficiently bulky feed is used.

7. Don't expect to self-feed pigs to as great a weight as you can carry them when hand-feeding; they finish at a lighter weight.

8. Don't confine the self-fed pigs to such a small lot that they do not get the proper amount of exercise.

9. Don't set the feeder in a mud-hole. Put it on a platform at least, and under a roof if possible.

10. Don't trust the feeder to do it all. You must fill it when empty and inspect it daily to see that it is working properly.