

continue giving milk when the feed is taken from them. Usually the pigs will not try to nurse after three or four days from the time the sows are shut off their feed. The sows can then be driven away and the pigs allowed to remain on the feeders as they have been during the whole suckling period. This plan has produced fewer runts than any other system tried.

E. Z. RUSSELL.

HOG Raising by One or Two Litter System Is Feed Supply Problem

The production of either one or two litters from a sow during the year are fundamentally the only two systems of hog production, although many variations and combinations of these two systems are used. Usually the one-litter system employs young gilts as breeding animals in the production of spring pigs, the time of farrowing coming early or late, as desired. After weaning time the sows are usually fattened and sold and a new breeding herd is selected from their offspring. The two-litter system usually employs old sows and gilts as breeding animals, and the spring farrow must be early so that fall litters may be weaned before cold weather. As old sows pass their usefulness for breeding purposes, they are replaced by gilts from the stock hogs.

A variation from these systems is the production of one litter from gilts the first year and two litters from the sows, or the entire herd may be carried over without the production of fall pigs. Three litters may be produced during the year by keeping two distinct breeding herds—one of tried sows under the regular two-litter system and another of gilts producing late spring pigs under the one-litter system. This one-litter herd then becomes the regular two-litter herd for the following year.

The distribution of the one and two litter systems in the Corn Belt follows closely the production of corn, the one-litter system being used most extensively where corn production is high and the two-litter system where it is lower.

Iowa, eastern Nebraska, northwestern Illinois, and States on the north of the Corn Belt follow more generally the one-litter system. Ohio, Indiana, central and southern Illinois, Missouri, southern Iowa, and Kansas follow more generally the two-litter system. The quantity of corn produced on a farm is the result of three factors: (1) The yield of corn per acre, (2) the percentage of the farm area in corn, and (3) the size of the farm. Thus a small farm with a high yield may have as much corn to market as a larger farm with a lower yield. As the quantity of corn to be marketed per farm changes, the method of marketing it through hog production, cattle feeding, or cash sale changes.

Reasons for the Two Systems

There are good economic reasons for these systems of hog production. A given quantity of feed is most efficiently utilized in pork production when the two-litter system is followed and the pigs are fattened to lightweights. This system is followed most extensively where there is a relatively small quantity of corn per farm. The farmers are short on corn and the system must be economical with the supply. Under such conditions the quantity of corn and other feed grains is the limiting factor to increased hog production.

Many Corn Belt farmers are long on corn. Apparently they can not raise hogs in sufficient number to consume the quantity produced. They dispose of their corn less economically by following the one-litter system, growing heavyweight hogs, producing beef, and selling corn for cash. With them corn is not the limiting factor to increased hog production; it is the equipment and labor available on the farm for raising more hogs. Specialized hog farms represent attempts to overcome this limiting factor. On the general run of farms the spring pigs are grown to heavyweight by winter feeding. If the two-litter system is followed, three groups of hogs must be housed and otherwise cared for—the fattening spring pigs, the recently weaned fall pigs, and the breeding herd for the next spring crop. A much greater investment in housing, equipment, hog lots, and pasture than is found on general Corn Belt farms would be necessary to care for these groups of hogs.

The one-litter system has some advantages under the conditions found on the large farms of the Corn Belt. The spring farrowing may be later when more sows may be cared for with less labor and equipment because of more favorable weather. The pigs need not be fed full rations of high-priced corn during the summer. Large quantities of corn may be hogged down. The corn crop may be marketed from six to eight months sooner than if fed to early spring pigs raised for the early fall market. Because of the lower seasonal price of corn, the late spring pigs may be fed to heavier weights before the point of diminishing return in feeding is reached. If steers are fed, late spring pigs are usually well fitted to follow them in the feed lot.

The price relationships of corn and hogs in different phases of the hog cycle and in different seasons of the year must be considered in following any system of production. Adjustments in spring and fall production should be made according to the price which will probably prevail when the hogs come to market. These adjustments should affect only temporarily the system of production. Every hog producer should keep clearly in mind that the greatest quantity of pork can be produced from a given quantity of feed by following the two-litter system of production and fattening the pigs to light-weights.

OSCAR STEANSON.

HOLLY from China Suited to Wide Area in the United States

Nearly 20 years ago an elderly missionary stationed at Shanghai, China, collected a few seeds of a red-berried evergreen shrub about 100 miles northwest of that city. He sent these seeds to the Department of Agriculture at Washington, where they were identified as a kind of holly (*Ilex cornuta*) and assigned a plant introduction number (24638). From these seeds a number of plants were raised, constituting the first successful introduction of this holly into the United States, although it had been grown to a limited extent in European gardens for a number of years.

It is an evergreen shrub, attaining under favorable conditions a height of 8 to 15 feet, with a dense, compact, bushy habit, sometimes wider than high. The dark glossy green leaves are of variable size and shape, ranging from 1 to 4 inches in length and from 1 to 3 inches in width. In shape the leaves are mostly oblong, with four