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Canundot be erop than ured Artichokes.—This crop has been tried here several times and given very satisfactory returns indeed for the outlay. The artichokes should be planted much as are potatoes early in the spring. The erop is not usually ready for use till about the end of September. The best method of using them is to turn the pigs right into the lot and let them root. Frost does not injure the artichokes and any roots left in the ground may be pastured off the next spring or left as seed for another erop. The most economical and rapid gains ever recorded at this farm were made with pigs pastured on artichokes and receiving a fairly liberal meal ration. They are somewhat superior to potatoes. The chief objections to the crop are the difficulty in securing seed and the rather short period during which they may be fed. They may be harvested and fed in winter but the harvesting is an expensive operation.

Roots.—Mangels, earrot or turnips may be used as pasture in October or earlier. They are probably quite as economical when so fed off as though fed to pigs in pers.

## ROOTS AND GREEN FEEDS FOR WINTER FEEDING.

Just as pasture or soiling crops are valuable in summer, so are roots or some form of succellent feed almost indispensable in winter where successful bacon production operations are to be earried on. These feeds are valuable not only on account of economy, but also because of the good effect they have upon the health and digestion of the animals fed. Many experiments have been conducted here to gain some information as to the best green feeds for winter, as to their value compared with grain or meal, as to the best way to feed them, and as to the quantity to feed to get the best results. In a general way it may be stated that our experiments rank succulent feeds available for winter in the following order according to palatability, and value as flesh producers: Artrichokes, potatoes, sugar beets, mangels, carrots, turnips, small apples, pumpkins, kohl rabi, cabbage and ensilage. According to the method of preparation and the kind of succulent feed, 100 pounds of mixed meal is worth from 500 to 700 or 800 p unds or even more of the succulent feed.

Some of these green feets may be fed best one way, and some in other ways, as indicated below, and generally speaking from 3 to 4 pounds of succulent feed to 1 pound of meal gives the most economical gains of the best quality of meat.

Apples.—Refuse apples of all kinds have been fed to pigs here in large quantities. They are not particularly valuable as a feed for fattening pigs, but seem to do very well along with a small quantity of meal for dry brood sows.

Cabbage.—Generally speaking, cabbage are too expensive to feed to swine, but occasionally they are available and seem to be quite polatable. Some feeders report them to be rather constipating than laxative in effect.

Carrots.—These roots have been fed here to a limited extent for pork production. They are not quite so palatable as are mangels and sugar beets. They do not keep so well in winter as do most other roots, hence are not to be very highly recommended.

Clover Leaves.—Clover leaves and small stems gathered from the unloading floor in haying time, stored in sacks and steamed in winter or at any time, make a most excellent drink and feed for swine of any age. Such a drink seems as valuable and quite as palatable as skim milk. Especially is this the ease if it be fed warm.

Ensilage.—Corn. clover, aifalfa, corn and clover, and alfalfa and corn ensilage have all been fed here to a greater or less extent. Ensilage containing clover or alfalfa has invariably proven welcome to swine, while pure corn ensilage also has been eaten fairly well. The addition of some dry meal to the ensilage causes it to be eaten quite readily.