

pound of meal. This is a very much higher feeding value for whey, however, than can be expected when it is fed in large quantity.

Its influence upon the firmness of bacon was very satisfactory; and it appeared to correct the bad influence of lack of exercise.

**Sugar Beets.** Hogs seem to prefer sugar beets to almost any other kind of roots. Some difference of opinion exists regarding the amount of roots that may be fed with profit to hogs. They should be fed in limited quantity to small pigs; but pigs weighing over 100 pounds live weight, will, in some cases, take five or six times as much roots as meal, by weight, and make very good gains. We have obtained our best results, however, from feeding equal parts by weight of roots and meal. The proportion of roots may be increased considerably, if thought advisable, as the hogs advance in weight.

In all our experiments, we have obtained very satisfactory results from root feeding, so far as firmness of bacon is concerned.

**Mangels.** Though not quite so high in feeding value, mangels compare very favorably with sugar beets for hog feeding. If the hogs have not been fed sugar beets, they will eat mangels very readily. Their influence upon the firmness of bacon is the same as that of sugar beets.

**Turnips.** Hogs are not so fond of turnips as of mangels and sugar beets; but if they do not know the taste of either mangels or sugar beets, they will eat a considerable quantity of turnips. Turnips are made more palatable by cooking, though it is doubtful whether cooking increases their actual feeding value, which is very similar to that of mangels. We have found the feeding of turnips along with a meal ration to give a firmer quality of bacon than when meal is fed alone.

**Potatoes.** Cooking is essential in order to get the best results from potatoes. If they can be cooked so as to leave them dry and mealy, hogs will eat them much more readily. They make a very palatable food when mashed and mixed with meal. Their influence upon the quality of bacon is also beneficial.

**Artichokes.** In some sections, this crop is very popular as a hog food. It is suitable, however, only for somewhat light, sandy soils. Artichokes may be planted in the late fall or early spring, in rows 21 to 24 inches apart, and from 12 to 18 inches apart in the rows. They are usually ready to feed about September 15th, and the hogs are turned in to dig them for themselves. Frost does not injure them, and usually enough are left in the ground for another crop, if it is thought advisable to leave them. When it is desired to eradicate them, the hogs may be turned on them again in the spring, and the plot subsequently sown with turnips.

Artichokes have a little higher feeding value than potatoes, and hogs are very fond of them.

**Feeding Value of Roots.** As has already been intimated, much of the feeding value of roots consists in their action upon the general health of the animal. They tend to prevent indigestion and constipation, and to promote general thrift. The results of our experiments, and of those conducted by other experiment stations, indicate that from 6 to 8 pounds of sugar beets, mangels, or turnips, are equivalent in feeding value to one pound of mixed meal; and that 4 to 4½ pounds of potatoes are equivalent to one pound of mixed meal. The meal equivalent of roots varies considerably, depending upon circumstances; but the figures given will serve as a general guide.

**Rape.** This is an exceptionally valuable food for swine, and may be pastured, or cut and fed to the pigs in pens. For fattening hogs, we have obtained best results from feeding about a two-thirds meal ration, and all the rape the hogs will eat. The hogs were kept in pens with small outside yards, and the