

Contributed by Byron Hunter of the Board of Plant Industry, United States Department of Agriculture.

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THE MORE humid portions of the wheat belt are generally situated near the mountains. The annual rainfall is usually sufficient to grow alfalfa successfully without irrigation.

Excellent summer and autumn pasture is provided by sowing winter wheat early in May on a well-prepared seed bed. If not pastured very closely during the autumn, wheat that is sown during May can be used during much of the winter.

If sown just before the last cultivation in corn that has been well cultivated, wheat generally furnishes an abundance of green feed during the autumn when corn is being hogged off.

Red clover is adapted to the wheat-growing districts having a claylike subsoil and the maximum precipitation. While alfalfa is adapted to the same territory it has a much wider range of usefulness, for it succeeds with less rainfall and on lighter soils than clover. Clover begins to grow earlier in the spring and continues to grow later in the fall than alfalfa. The young tender growth of clover is not so easily injured by severe frosts as that of alfalfa. Red clover fits nicely into short rotations because it is short lived and so easily killed by plowing. Where the land is to be used continuously for hog pasture for a number of years alfalfa easily stands first.

The carrying capacity of both clover and alfalfa is greatly reduced by the summer drought, and it is usually necessary to provide additional feed during this time.

The essentials in successfully growing both of these crops are given in detail in Popular Bulletin 31 and Bulletin 80 of the Washington Agricultural Experiment Station, Pullman, Wash.

Thousand-headed kale and Dwarf Essex rape are very closely related. The mature individual kale plants are generally larger than those of rape. In the more humid portions of the wheat belt of Idaho, Oregon and Washington few crops are more satisfactory for pasture during the summer and autumn than kale and rape. The green aphid sometimes attacks both of these crops during the last of August. While kale is seldom injured very much, rape is frequently damaged considerably. For this reason kale is the preferable crop.

the seed is planted. This makes it much easier to keep the crop free from weeds.

While kale and rape may be sown broadcast, the best results are secured by planting in rows about 32 inches apart. Kale is thinned until the plants stand 12 to 14 inches apart in the rows. Rape can be left a little thicker in the row.

By pasturing and cultivating two or three times, the crop may be kept green all summer. After the fall rains come both rape and kale make a much better growth than clover or alfalfa. They stand a great deal of severe frost and can generally be used until about December 15. If used only during the late summer and autumn, better results are secured by cutting and feeding kale instead of turning the hogs into the field. When the plants are allowed to become large, the hogs break down and waste many of the leaves.

Summer pasture is provided and a stand of clover established at the same time by sowing 3 pounds of rape seed and 8 to 10 pounds of red-clover seed per acre about May 1. The seed is mixed and sown together according to the methods described for sowing clover in Popular Bulletin 31 of the Washington Agricultural Experiment Station. If sown May 1, the rape and clover should be large enough to pasture by July 1 to 10. Rape makes excellent green forage, while wheat, peas and corn are being hogged off.

Wheat farmers who raise hogs give them the run of the stubble fields from the time the grain is harvested until the land is plowed the following spring. They feed upon the heads that are dropped in harvesting and also on the volunteer grain.

It is frequently supposed that the combined harvester and thrasher will leave so little grain in the field, especially on level ground, that there is nothing to be gained by gleaning the stubble with hogs. It is also supposed that in gleaning a large stubble field hogs will do so much traveling that they make no gains. To show that neither of these assumptions is well founded, the experience of W. H. Steen, Umatilla county, Oregon, in gleaning the stubble field with hogs may be cited.

On August 24, 1910, 90 head of hogs, weighing 6,261 pounds, were turned into 178 acres of wheat stubble. They were in the field without other feed until November 1, when they weighed 8,350

pounds. The gain in live weight per acre was 11.73 pounds. The value of the gain per acre (11.73 pounds) at 6, 7 and 8 cents per pound amounts to 70.4, 82.1 and 93.8 cents, respectively. The stubble land gleaned by the hogs is comparatively level, and a good job had been done in cutting the grain with a combined harvester. On steep land the waste in harvesting is always much greater than on level land, and the gain in gleaning the stubble with hogs should be correspondingly greater.

Alfalfa hay is probably the most satisfactory winter roughage that may be provided for hogs in the subhumid wheat districts. If intended for hogs, it is cut green a little before the appearance of the first blossoms. It is also best to take it from a portion of the field where the stand is thick. The hay will then be fine, palatable and rich in protein.

Alfalfa hay is usually fed in one of two ways, whole or cut. Whole hay is generally fed in racks. Hay is also fed on the surface of the ground. By either of these methods there is considerable waste, especially if the hay is coarse. One of the most popular and satisfactory ways of feeding alfalfa hay to hogs is to run it through a hay cutter, chopping it into lengths of about one-half inch. The hay is then mixed with chopped or rolled wheat or barley. The mixture is moistened with all of the water that it will absorb, and allowed to stand for 12 hours before it is fed. Some soak the hay and add the grain just before feeding. During very cold weather the hay may be wet with hot water and fed immediately. Where it is not necessary to hasten the growth of the hogs alfalfa hay may form one-half of the ration by weight. Where a rapid gain is desired a ration consisting of one-fourth alfalfa hay and three-fourths grain is more satisfactory.

The sugar beet, the white French sugar beet, mangels, carrots and rutabagas are all used for fall and winter hog feed. The success of root crops largely depends upon the preparation of the seed bed. In growing sugar beets in the vicinity of Waverly, Wash., the following has been found a very satisfactory way of preparing land for this crop. Stubble land is disked or plowed shallow in the autumn. As soon as in condition to work in the early spring it is plowed 7 or 8 inches deep and then harrowed, planked and rolled.

again and again until a firm, mellow seed bed is formed. The time of planting depends on the season. In localities whose altitude is from 2,000 to 2,500 feet, root crops are usually planted the last of April or early in May. For winter use roots are stored either in cellars or pits. Roots are generally fed in connection with a grain ration. The hogs usually receive all of the roots that they will clean up and sufficient grain to make them thrive and grow as desired.

A GOOD way to feed shelled corn to fattening hogs is to soak it in water in the troughs.

Clean hog troughs these days.
Breeding from immature stock always
lessens stamina.

Don't forget shade and cool, clean water during warm days.

To make the pigs grow, skim-milk, mill feed and clover or alfalfa pasture are what is needed. Feed very little corn.

Pigs in clover is an ideal condition. A good alfalfa pasture meets the same end.

When pasturing rape employ hurdles, giving hogs a small strip at a time to feed on. This plan means less waste and aids in obtaining a second growth of the plants.

Each pig should be looked after individually; a general look will not do; each animal has its individual needs, and these needs should be studied.

When your hogs are growing fast and their hind legs become weak, feed them a little bone meal daily.

Have a feeding trough for the hog where they can eat independent of the mother. It teaches them to eat and prevents shrinkage during weaning.

IT DOES not pay to dispose of a good boar as soon as the season is over. The constant getting of young breeding stock is not considered wise. Give him attention.

He needs a separate yard that is fenced so securely that he must stay in. He needs a yard because he must have exercise.

Give him the same feed and care you would give a dry sow. Enough protein to maintain vigor of nature, and enough to promote growth if he is young. If he gets good pasture he can be fed a little corn or any cheap grain just enough to keep him in good condition.

