

## Pasture For Hogs

This is the first of a series of articles dealing with crops and systems of cropping for pork production, prepared by Mr. Byron Hunter, who is now state leader in charge of farm-management field studies and demonstrations in the State of Washington, and employed cooperatively by the United States Department of Agriculture and the State College of Washington.

**T**HIS bulletin deals specifically with crops and systems of cropping that may be used in economical pork production in the Pacific Northwest. Scattered here and there throughout the Northwest are men who are successfully producing pork. They have been visited, and their methods, crops and feeding systems have been studied. This bulletin makes the practices of these successful men available to all.

Owing to the rapid growth in population of this section during the last decade, the demand for pork has increased faster than the supply, and there is little reason why hog raising should not become a more important industry in the Pacific Northwest. Although there have been some outbreaks of hog cholera, the Northwest has been remarkably free from this disease. The larger cities have well-equipped packing houses, and modern union stockyards are in operation at Portland, Oregon. During recent years a large percentage of the hogs slaughtered in the cities of Portland, Tacoma, Seattle and Spokane have been shipped from east of the Rocky Mountains. In addition to this, enormous quantities of Eastern bacon and lard are annually consumed by the Pacific Coast cities.

### Management of Pastures.

Since economical pork production depends largely upon the consumption of a great deal of cheaply grown feed, the pasture should be so managed that the food produced will be clean, tender and palatable. In practice, hog pastures are generally managed in one of three ways: (1) Continuous close grazing, (2) alternate pasturing of equal areas, and (3) pasturing the meadow.

The method in most common use is to turn in all the hogs the pasture will support, leaving them in the field during the entire season. Usually the pasture is kept closely grazed. Too often it is overgrazed, the plants being cropped so closely that the stand is soon ruined. The pasture then becomes little better than a dry lot, and the hogs make unsatisfactory gains. When the feed in the pasture becomes scarce, either the number of hogs per acre should be reduced or other forage provided.

### Alternate Pasturing of Equal Areas.

One of the most satisfactory ways of managing a pasture is to divide it into two or more fields of equal area. These fields are then used alternately, the hogs remaining in each about a week or 10 days. In the case of clover and alfalfa the growth is allowed to become 3 to 4 inches high before the hogs are turned in to eat it off quickly. When the pasture consists of such crops as rape, kale and vetch, which will not stand close grazing, the growth is permitted to reach a height of 8 or 10 inches before the hogs are turned in.

Changing the hogs from field to field gives the pasture a period of rest, during which the plants recuperate and grow rapidly. When the stock is returned to the field the forage is clean, tender and palatable and large quantities are consumed. Owing to the rapid growth made while at rest, a pasture that is subdivided and the areas grazed alternately is capable of carrying a much larger number of hogs per acre, other conditions being equal, than one that is continuously pastured.

Hogs usually graze a pasture somewhat unevenly, some areas being eaten off much more closely than others. To keep down the weeds and make the growth come on evenly, the pasture is clipped with a mower immediately after the hogs are removed. Hogs are inclined to root when the surface of the ground is wet or damp. For this rea-

son the pasture, if under irrigation, is irrigated just after the hogs are changed from one pasture lot to the next. This gives the surface of the ground time to dry before the forage is large enough to be grazed.

### Pasturing the Meadow.

Many successful hog raisers prefer to use such crops as clover and alfalfa for both pasture and hay at the same time. The number of hogs turned into the field is so limited that the usual crops of hay are made. The chief advantages of this method are (1) the presence of an abundance of feed, (2) the meadow is not grazed closely enough for the stand to be injured, (3) it is not necessary to subdivide the pasture into smaller areas for alternate pasturing, and (4) the changing of the hogs from one inclosure to another is obviated.

When the number of animals pastured is so limited that the usual hay crops are made, the growth becomes so coarse and woody that they do not consume as much forage as is desirable for economical gains, as the hogs relish the young shoots best. When the forage becomes too large to furnish desirable feed, an area near the watering place is clipped with a mower. This should be large enough to furnish the desired amount of pasture. In a few days the clipped area produces a vigorous growth of new shoots, upon which the hogs feed without materially disturbing the rest of the meadow. If the area first mowed is not sufficient to furnish the required feed, more of the meadow is clipped, as necessity may demand. To prevent the stand of these clipped areas from becoming injured by overgrazing, different portions of the meadow are used in this way from year to year.

### Grain Ration While on Pasture.

While the cost of producing pork may be reduced materially by the use of such roughage as alfalfa hay, roots, or green-pasture forage, it is desirable to feed grain or other concentrated feed in addition. Mature, dry brood sows are sometimes maintained in an apparently satisfactory condition on good pasture alone. Young growing hogs, on the other hand, usually become ungainly in shape, big bellied and thin in flesh or stunted when compelled to subsist on pasture alone.

Hog growers differ quite widely regarding the quantity of grain that should be fed while on pasture. Some feed a full grain ration, i. e., all the grain the hog will consume. Others feed a medium ration, one that is equal to about 2 to 3 per cent of the live weight of the hog. Still others prefer a light grain ration, one that is equal to only about 1 per cent of the live weight of the hog. Occasionally men are found who run young shoters on pasture without other feed. This is a mistake, for it almost invariably results in a stunted hog. No fixed and fast rule can be laid down, for the supplemental grain ration which should be fed in conjunction with green pasture depends upon a number of factors, the more important of which are (1) the age at which the hogs are to be marketed, (2) the price of grain, and (3) the plentifulness and quality of the pasture.

### Rations for Hogs of Various Conditions and Market Ages.

If hogs are to be marketed when 7 to 9 months old, it is necessary to feed them about all the grain they will consume, in addition to the pasture, in order to make them reach the weight demanded by the market, 170 to 225 pounds. Hogs that are marketed when 10 to 12 months old are usually maintained on pasture alone during the grazing season. If fed at all, the grain ration is very light. This results in a slow daily gain, but a greater percentage of the growth is made from the cheaply grown forage. The added cost of maintaining a hog until 10 to 12 months old, however, usually more than equals the saving of the grain ration.

Mature breeding stock that is not expected to make any gain in weight requires but little, if any, additional feed when on good pasture. Hogs that are thin in flesh and nearly grown may be expected to make small daily gains without other feed when on the best of pasture. Pigs and small shoters usually become stunted when on pasture unless given a liberal quantity of additional feed. Young hogs should be so fed that they grow rapidly instead of

becoming stunted. During the fattening period, hogs on pasture should be fed all the grain they will eat up clean three times a day.

### The Price of Grain.

Owing to the fluctuation in the price of hogs and of grain, the supplemental grain ration is sometimes expensive. Under such circumstances there is great temptation to place the hogs upon an exclusive pasture ration. This seldom pays, for it usually takes approximately as much concentrated feed in the end, and much more time, to fit for market hogs which have been on an exclusive pasture diet as is required for hogs fed liberally while on pasture. Under extreme circumstances mature breeding stock or hogs which are nearly grown may be carried on good pasture until cheaper concentrated feed can be obtained.

### Quality and Abundance of Pasture.

The composition of pasture forage is quite variable. Alfalfa, clover, vetch, peas, etc., furnish feed that is much richer in protein than most other crops. Generally, therefore, hogs which are feeding upon leguminous pasture require slightly less concentrated feed than when grazing upon non-leguminous pasture, such as timothy, orchard grass, blue grass or the cereals.

It frequently happens that a farmer has more hogs than his pasture is capable of supporting. When such is the case the pasture will go much farther if a full grain ration is fed. The more grain a hog consumes the less he will feed upon the pasture.

In general, pigs and shoters should be kept in a thrifty, growing condition at all times. It never pays to allow them to cease growing and become stunted. Brood sows, likewise, must be kept in good flesh (not fat) if large litters of strong, healthy pigs are to be expected.

In gathering the material for this bulletin it was quite generally observed, on the one hand, that the men who are enthusiastic pork producers feed a liberal supplemental grain ration to young, growing hogs when on pasture. On the other hand, those who think there is little profit in raising hogs run them very largely on pasture without other feed during the grazing season.

### Hogging Off Crops.

Turning hogs into a standing field of mature or nearly mature wheat, barley, peas or corn and allowing them

to feed at will until the crop is consumed is called "hogging off" or "hogging down" the crop. To some this may appear to be a wasteful practice. Under good management, however, it is a very satisfactory and economical method of utilizing limited areas of these crops.

### Advantages in Hogging off Crops.

Some of the advantages in hogging off crops are (1) the cost of harvesting and marketing the crop is saved, (2) the labor of caring for hogs is greatly reduced, (3) the vegetable matter in the soil is increased, (4) the droppings of the animals are distributed quite evenly, and (5) the hogs are given exercise. It costs from 15 to 25 cents per bushel to harvest and market wheat in the greater part of the wheat belt of the Pacific Northwest, the cost varying with the yield, the method of harvesting and thrashing and the distance the wheat is hauled to market. In some of the more arid wheat-growing districts of both Oregon and Washington the yield of wheat is frequently as low as 6 to 8 bushels per acre. The cost of harvesting and marketing such crops runs from 35 to 40 cents per bushel. The cost of harvesting and marketing barley is approximately the same as that of wheat. When the hogs are so managed that the crop is thoroughly cleaned up, hogging off the crop practically saves the cost of harvesting and marketing. In the case of light-yielding crops this saving is considerable.

Most of the crops that are suitable for hogging off are utilized during the busiest season of the year, i. e., at a time when it is very desirable that the hogs require as little attention as possible. If turned into a mature field of wheat, peas or corn and provided with water, shade and salt, the hogs require very little other attention.

Most of the arable lands of the Pacific Northwest would be materially benefited by the addition of more organic matter. When the crop is hogged off, the straw, pea vines or cornstalks, as the case may be, are left on the ground. By cutting this material thoroughly in the fall of the year with a sharp disk harrow and plowing it under, the soil is enriched in vegetable matter. This, in turn, greatly reduces the tendency of the soil to wash.

In hogging off the crop, the droppings of the animals are scattered quite evenly over the field.

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