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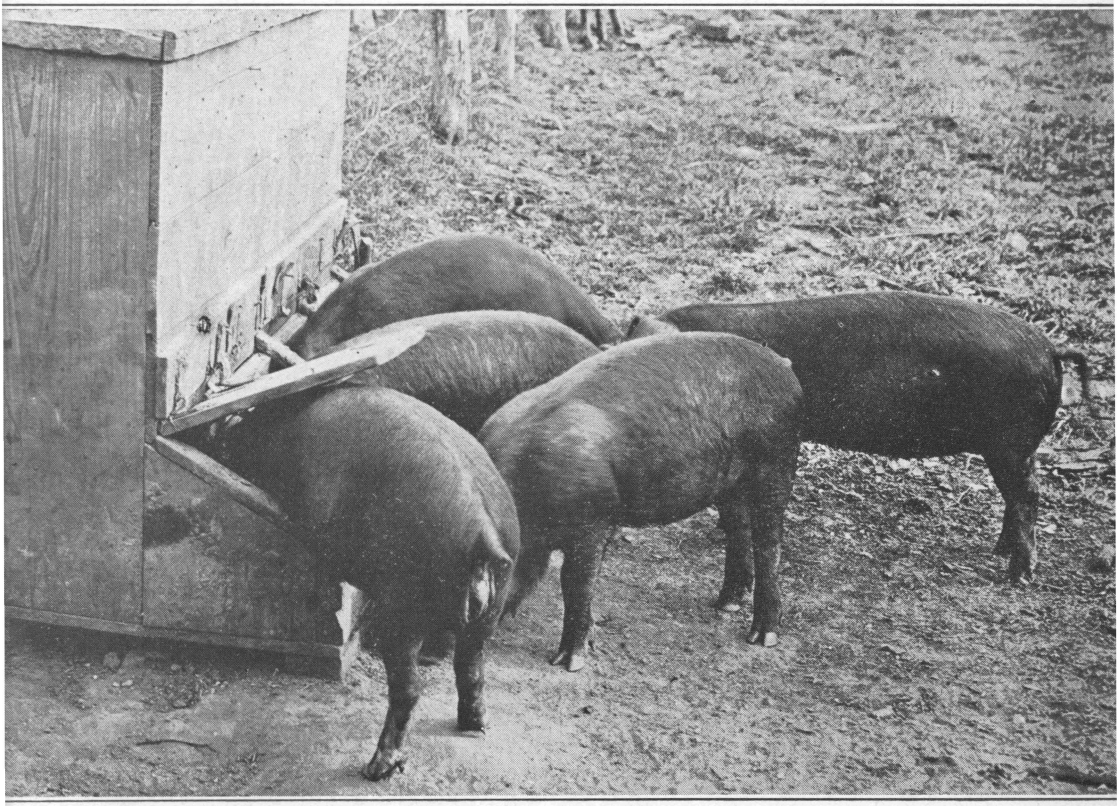
Successful Hog Feeding



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Successful Hog Feeding

By

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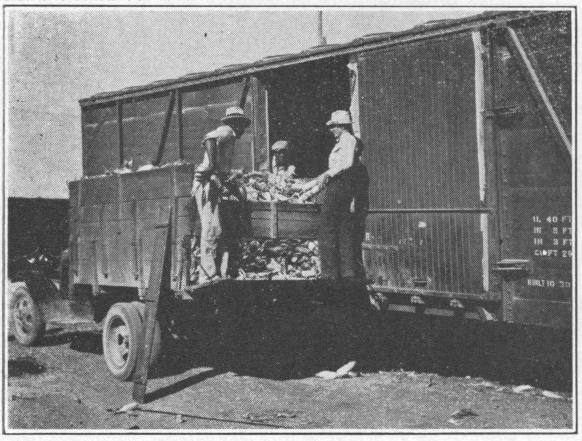
A HOG is an efficient machine for changing farm grain into pork. Whether this machine pays depends on a number of things such as quality of stock, comfortable clean quarters with plenty of pure water and shade, freedom from disease, pasturage, skill in marketing, the price of hogs and of feed, having a surplus of grain on hand, and not least, skill and methods in feeding. Granted good hogs and good management, about 400 pounds of feed will make 100 pounds of pork.



Farm grown grains sold on the open market usually do not bring big profits, but marketing home grown grains through livestock, as shown on the opposite page, is a recommended practice.

A sow and two 6-pig litters per year raised to 200-pound market size will require about 230 bushels of corn or its equivalent per year, or the product of about 11 average Texas acres. Ordinarily such a transaction pays better than selling the feed for cash.

They Must Have Pasture

The success of hog raising hinges on feeding. A number of things other than just the feed itself or the feeding method may make the enterprise much more profitable. Chief among these is pasture. Green pasture furnishes the vitamins that are deficient in most concentrated feeds, and also furnishes much of the needed protein. Good quality pasture will reduce the amount of protein supplement required by 50%. Pasture also supplies some minerals. Additionally pastures will supply the needed exercise, will make sanitation possible, will stimulate appetite, and will keep hogs in the best of physical condition.

Farm grown grains marketed through livestock bring the best price.

There is not a wide difference in the feeding value of the various grazing crops provided the crops are grazed while they are young and tender. Legumes, such as alfalfa, sweet clover and the various peas, are slightly superior to other crops. The important thing is to provide pastures of some sort at all times so that young and tender grazing is available at all seasons of the year.

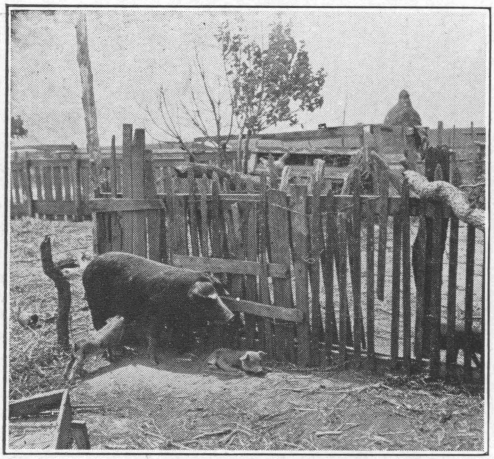
Alfalfa Hay Can Be Substituted for Pasture

Alfalfa leaf meal or alfalfa meal if made from a good quality pea green alfalfa hay, can be used as a substitute for pasture. Use about 5% of the ration. If either of the above is not available a good grade of alfalfa hay can be fed in racks.

Pigs that have had access to good pastures until they weigh 100 pounds can be finished to the 200 pound weight without pasturage. Hogs can do without pastures for a short time but should not be compelled to do without for long periods.

Minerals Are Needed

Numerous hogs in Texas suffer and die annually from mineral and vitamin deficiency diseases to say nothing of the losses in gains and growth and the losses in pigs due to weakness.



Large thrifty litters are seldom produced on a farm such as is shown above where grazing is not available. A good pasture is shown on the opposite page.

One of the most common deficiency diseases in pigs is leg weakness, down in the back, paralysis of the rear parts or rickets. Some people believe this trouble is caused by kidney worms. This is not at all the case. The trouble is purely a deficiency disease and can be entirely prevented by proper feeding.

It is a good practice always to keep a good mineral mixture before hogs of all ages, kinds, and sorts at all times. The cost of minerals will remain a negligible sum because hogs eat only a small amount of this material. The small amount they do eat, however, does lots of good and repays the owner many fold.

Almost all grain feeds are deficient in salt. Many of the grains contain a small supply of phosphorus. Most of the feeds high in protein have an abundance of phosphorus but all except milk and tankage are markedly deficient in lime. Pigs require the proper balance between lime and phosphorus. If a large amount of phosphorus and no lime is available it is just as bad as to have no mineral at all. If the pig does not receive the proper vitamins along with the minerals he cannot completely assimilate the minerals. Therefore, it is not only necessary to supply the minerals in the proper proportions and amounts but it is also necessary to see that the hogs get the needed vitamins.

Recommended Mineral Mixtures

Common sources of lime are limestone flour, oyster shell flour and bone meal. Bone meal is high in both lime and phosphorus. A mixture consisting of two pounds of limestone flour or oyster shell flour and one pound of salt will take care of the mineral needs when fed with most rations. Of this mixture feed about two pounds with every 100 pounds of feed. This mineral mixture should be mixed with the feed as hogs do not

like it alone and often refuse to eat it freely. If the mineral mixture is made of one pound oyster shell flour or limestone flour, one pound bone meal and one pound salt it can be placed before the hogs in an open trough or in a mineral box and the hogs will usually take care of their mineral needs by the free choice method. Two pounds of this mixture can likewise be mixed with 100 pounds of feed. In some localities neither limestone flour nor oyster shell flour is obtainable. In this case use two pounds of bone meal and one pound of salt.

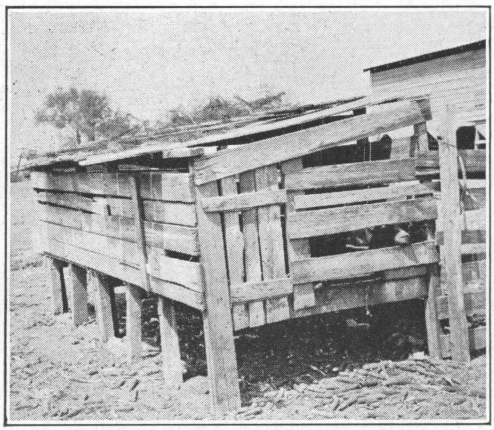
Hardwood ashes have some value in supplying minerals and should be used wherever available. They can be mixed with the above mineral mixtures or can be furnished alone. Charcoal has no value whatsoever as a mineral feed.

Consider Self Feeders and Other Feeding Methods

Self Feeders: The practice of feeding hogs by the self feeder method has gained in favor by leaps and bounds in recent years. If properly constructed and managed, self feeders are great labor saving devices. In most cases self feeders do a better job of feeding than can be done by hand. Hogs on self feeders make frequent trips to the feeder during the day and night and eat slowly. They consequently chew their feed thoroughly. Hard grains that should be ground if hand fed need not be ground if fed in a self feeder, barley excepted.

The self feeder also allows the feeding of grain and pro-

A good pasture helps to balance a ration and cheapens the feed cost in producing pork.



These hogs are in prison—life-termers through no fault of their own. They deserve the same freedom as the hogs shown on the next page.

tein supplement by the free choice method. In the free choice method the grain is placed in one compartment and the protein supplement in a second compartment of the same feeder. This method permits the hogs liberty to eat of either feed at will. If fed by this method hogs will usually balance their own rations perfectly. In starting hogs that have not been fed a balanced ration previously on the free choice method of feeding, it is a good practice to put out only one week's allowance in the protein compartment. If the hogs consume their week's allowance in a few days do not refill this compartment until the next week begins. By doing this the hogs will soon overcome their extreme appetite for protein feed and then the protein compartment can be kept constantly full without any danger of the hogs eating too much of the expensive supplement.

When self feeders first came into use it was thought that they were useful only for fattening hogs. Later they were tried with brood sows that were suckling pigs, with splendid results. Sows and their litters can be put on self feeders containing grain and a concentrated protein supplement when the pigs are from two to three weeks old. By that time the pigs are old enough to consume all the milk that the average sow can give without danger of scours. Occasionally an extremely heavy milk producing sow or a sow with a very few pigs, if fed this way will give too much milk and cause the pigs to scour when only two weeks old. In cases of this sort it is necessary to wait a little longer before the sow can be put on a feeder or the grain can be ground and mixed with the protein supplement and a bulky feed such as alfalfa meal or ground oats added.

Recently experiments were conducted in the keeping of hogs of any age on self feeders at all times. The results promise excellent possibilities. In feeding dry brood sows and open gilts

by the self feeder method it is necessary that the feed contain sufficient bulk (crude fiber) to keep the hogs from getting too fat.

The Fast Feeding Method: In areas where a surplus of grain is produced the fast feeding method is usually the best. In the fast feeding method the sows are fed all they care to eat from the time the pigs are two weeks old until weaning time. This is done so they will produce an abundance of milk for the pigs. The pigs are fed in a creep or on a self feeder when they are two weeks old and from then on they receive all they care to eat at all times. At the same time they are provided with fresh clean water, good shade and an abundance of tender grazing. By this method of production pigs of good breeding that are free from worms and lice will weigh 200 pounds or more when six months of age. This method of production saves time, reduces death losses, requires less pasture and equipment and makes it possible to get the hogs to market before the sows farrow again.

Good shade, cool and sanitary hog wallows combined with good pasture are essentials in profitable hog production.

The Slow Feeding Method: This method is sometimes suitable in areas where an abundance of grazing is available and a shortage of grain feed exists. The sows and pigs are run on excellent cultivated pastures and are fed a limited concentrate. After

weaning the pigs are handled by this same method until they reach a weight of about 125 pounds. At this time they are placed on full feed and finished for market. This method has the advantage of making greater use of grazing crops and a resulting saving of grain.

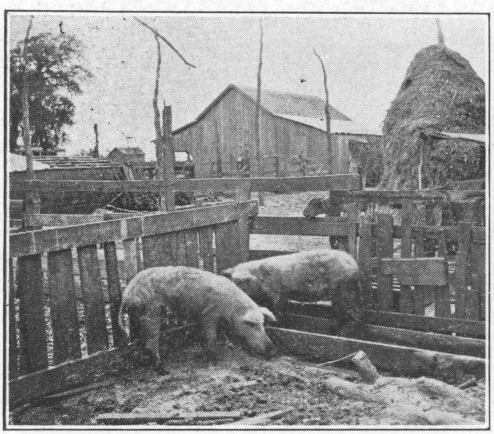
Rations Are Important

There are an endless number of rations that could be made from the available Texas feed, all of them equally good, but to simplify matters only one ration will be given. This ration, with minor variations, can be used for all hogs on the farm with good results.

Corn, grain sorghum, brewers' rice, wheat, or barley	90 pounds
Cottonseed meal (43% protein)	5 pounds
Tankage (60% protein)	5 pounds

This ration can be hand fed or fed in self feeder. The protein feeds can be mixed with the grain or can be fed separate. In hand feeding, the ration can be fed as thick slop or can be fed dry.

Pastures along with this ration are necessary for best results. If no green pastures are available use alfalfa meal (see page 3).



Profits cannot be expected from scrub hogs kept in dirty pens. The hogs need pasture as shown on page 9.

A mineral mixture should be fed with this ration (see pages 4 and 5).

If skim milk is available it may be substituted for cottonseed meal and tankage (see page 15).

If oats are available and the owner wishes to feed them they may be included (see page 14).

If rice milling by products such as rice bran, rice polish or brewers' rice are available at a relatively low price, they may be included. (See pages 12 and 13).

Brood sows can be maintained on good pasture with very little additional grain feed.

If flour milling by-products such as wheat shorts or wheat bran are available at a relatively low price they may be included (see page 16).

If peanut meal is available at a relatively low price it may be substituted for cottonseed meal (see page 15).

Feeding Dry Pregnant Brood Sows and Aged Boars: Feed the above ration in amounts to keep the sows and boars thrifty, vigorous, and sows gaining slightly. Do not feed enough to get them very fat. Good pastures will greatly reduce the amount of feed required.

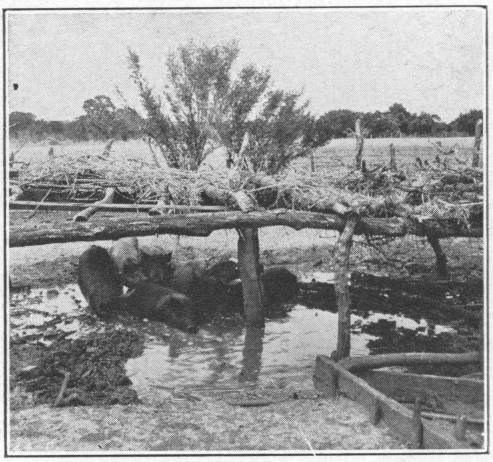
Feeding Bred Gilts and Young Boars: Feed the above ration in amounts to keep gilts and young boars thrifty and growing. Pastures will save a good deal of feed.

Feeding Suckling Sows and Pigs: Feed suckling sows and pigs all they care to eat. If sows with young pigs give enough milk to cause the pigs to scour, reduce the amount of feed materially and after a day or two again increase the feed allowance. Tender grazing helps produce cheap pork in young pigs.

Feeding Pigs After Weaning: Feed all the feed they care to eat. The liberal feeder usually makes the greatest profit. Good pastures will save one-half the protein supplement required.

Cooking and Soaking Feeds Not Recommended

Cooking Feeds: A large number of experiments have proven conclusively that, instead of a gain from cooking, with the exception of irish potatoes, there is in nearly every case a loss from cooking. The loss from cooking is usually about 10% of the feeding value of the feed. Raw meats and raw by-products from slaughter houses should be cooked, not to make them more digestible but to prevent the spread of diseases. Milk from a herd of cows that is infected with contagious abortion or tuberculosis should also be pasteurized or cooked to prevent the spread of these diseases.



Hogs that are grown in a mud hole such as this are seldom thrifty. A concrete hog wallow such as the one shown on the next page is excellent.

Soaking Feeds: It rarely, if ever, pays to soak grain. With young pigs soaking grain has no advantage. Soaking grain may improve its feeding value slightly for hogs weighing 150 pounds and over if the grain is hand fed, but the saving is usually not enough to pay. In no case should grain be soaked sufficiently to cause it to sour. Wetting the feed before it is fed has no effect on its feeding value, but does keep the wind from blowing it out of the trough.

Feeding Floors Are Needed

Feeding floors made of concrete or wood furnish an economical place for feeding ear corn or grain sorghum heads. In feeding by this method it is important that a self feeder containing a protein supplement be located on the feeding floor so that the hogs can eat the grain and the supplement by the free choice method. The floor should also be kept clean of rubbish and cobs.

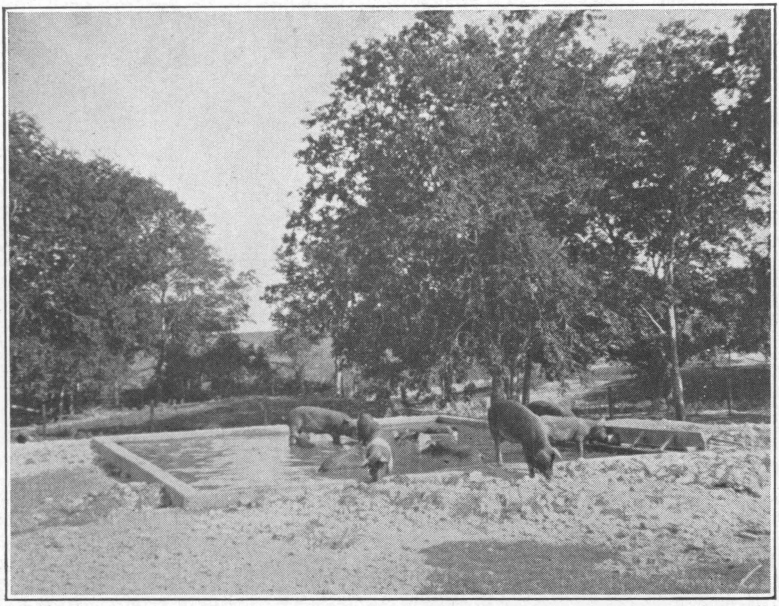
Water and Shade and Shelter Are Necessary

Fresh, clean water and good shade and shelter are of great importance. The feed and water should be located under the shade or shelter. Hogs will stay in the shelter when the weather is extremely hot or cold and will eat all hours of the day or night if the equipment is properly located. Good gains are thereby made possible.

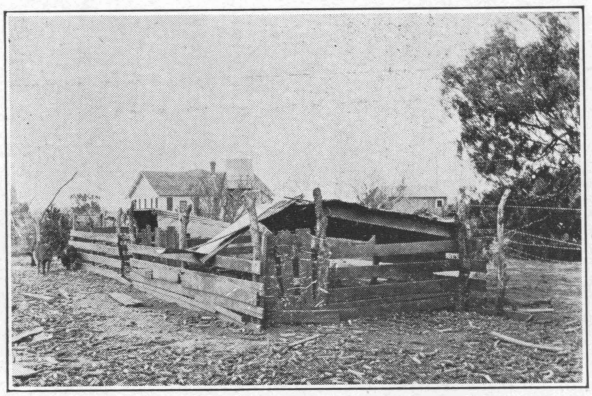
Here Is a List of Basic Energy and Fat Producing Feeds

Common hog feeds that primarily produce energy and fat are corn, grain sorghum, sweet sorghum seed, brewers' rice, rice bran, rice polish, wheat, oats and barley. All of the above feeds are low in protein, vitamins and minerals but are high in nutrients that produce energy and fat. They require that a protein supplement and green grazing be furnished with them so as to make it possible for the hogs to make normal growth while they fatten. If these grains are fed alone the growth of the hogs will be materially stunted, great inefficiency will result and frequently deficiency diseases will occur.

Corn: Corn is very high in starches and fats (energy and fat



A concrete hog wallow keeps hogs cool. It is easy to keep hogs clean with good equipment.



Much of the corn fed on the ground is wasted. The proper way of feeding ear corn or grain sorghum heads is shown on the next page.

producing nutrients) but is very low in proteins. White corn is also very low in certain vitamins while yellow corn has a fair supply of vitamins. Corn is also very low in minerals, particularly lime. It should always be fed with a protein supplement and with pasture. Corn, if properly balanced produces firm pork.

Grain Sorghums: This classification includes kafir, milo, feterita, hegari and all the less commonly grown grain sorghums. Their feeding values are similar to corn, high in energy and fat producing nutrients and low in proteins, minerals and vitamins. They can be substituted in rations for corn, pound for pound, without materially changing the rations.

Sweet Sorghum Seed: This feed is very similar to grain sorghums but has a considerably lower feeding value—approximately 70% of the value of corn. For best results it should be ground.

Brewers' Rice: Brewers' rice is a by-product of the rice milling industry. It consists of broken grains of polished rice. Like corn it is very high in energy and fat producing nutrients but low in proteins, minerals and vitamins. It produces firm pork and can be substituted in rations for corn, pound for pound, without materially changing the ration.

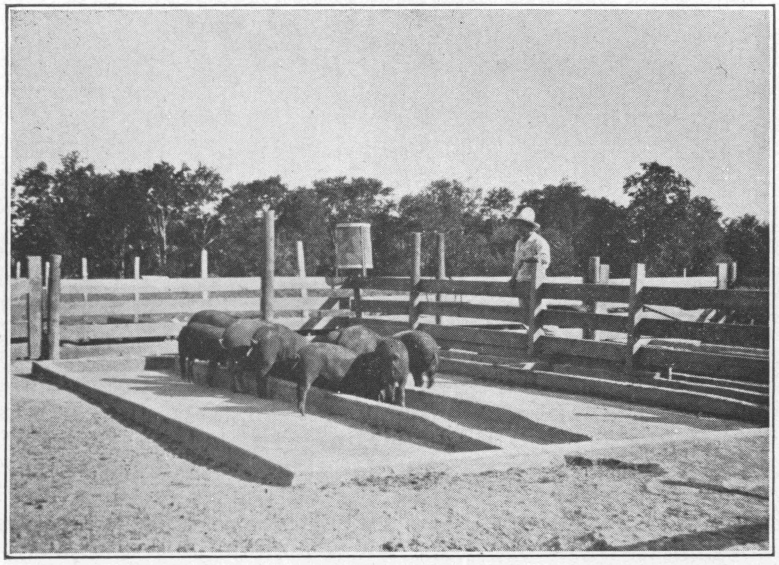
Rice Bran: Rice bran is a by-product of the rice milling industry and consists of the outer layer of the rice kernel, the gum and a small amount of rice hulls. If rice bran does not contain over 12% fiber the hulls will not be injurious. As a feed it is high in fats and starches (energy and fat producing nutrients). While it is slightly higher in protein than corn, the amount is insufficient to balance a ration. It is also deficient in minerals (principally lime) and vitamins. Rice bran may soon become rancid in summer and rancid bran is distaste-

ful to hogs. Rice bran, when fed in large amounts, tends to produce soft pork. For best results it should not constitute over 40% of the ration.

Rice Polish: This feed is another by-product of the rice milling industry. It consists of the resulting floury particles in the polishing process of the rice kernel after the bran has been removed. It is high in energy and fat producing nutrients, but is deficient in proteins, minerals (particularly lime) and vitamins. It is slightly unpalatable to hogs. If fed in large quantities over a long period of time it tends to cause hogs to go off feed and sometimes causes scours. For best results it should constitute only about half of the ration and should be fed with a protein supplement.

Wheat: When low in price wheat can economically be fed to hogs. Like corn it is high in energy and fat producing nutrients but is somewhat higher in protein than corn. It is low in minerals (particularly lime) and certain vitamins. It can be substituted (pound for pound) for corn in rations without materially changing the ration.

Oats: Oats, like wheat, are higher in protein than corn. Oats are lower than corn in energy and fat producing nutrients and are considerably higher in fiber. They contain a fair supply of phosphorus but are deficient in lime. They are low in vita-



Concrete feeding floors are desirable if ear corn or grain sorghum heads are to be fed.

mins. Oats are a splendid grain feed for breeding stock but are too high in fiber to be used as the sole grain for fattening pigs and feeder hogs. If fed for fattening purposes they should not constitute more than one-half of the grain ration. Oats should always be balanced with minerals (particularly lime), protein supplements and pasture. For best results oats should be ground.

Barley: Barley, like corn, is high in energy and fat producing nutrients. It is deficient in proteins, minerals (particularly lime), and certain vitamins. It can be substituted for corn in rations (pound for pound) without materially changing the ration. For best results barley should be ground.

Garbage: Garbage varies greatly in composition and feeding value. A ton of average municipal garbage may be expected to produce 40 pounds of gain while garbage of excellent quality has yielded as high as 150 pounds gain per ton. It is not necessary to supplement with grain unless the supply of garbage is limited. The pork is firm and of as good quality as that produced by other feeds. Do not feed garbage containing lye, soap, washing powder, broken glass, or cans. In small operations the garbage may be fed on portable platforms, but concrete platforms are preferred. Swine on garbage should always be vaccinated against hog cholera.

These Are Feeds High in Proteins

Common hog feeds that primarily furnish protein (the nutrient that produces growth) are skim milk, tankage, cottonseed meal, peanut meal, wheat shorts and wheat bran.

Skim milk is the best protein feed that can be produced on the farm. It is very high in proteins of animal origin and the quality of proteins is excellent. About one gallon of skim milk per head per day when fed with the proper amount of grain, will balance the protein requirement. Skim milk is high in minerals, particularly lime, but is deficient in vitamins. Hogs fed on skim milk and grain should always have access to pasture or receive a substitute for pasture.

Tankage: Tankage is a by-product of the packing house industry. It is made from meat and bone. The tankage made by different manufacturers may vary in the protein content. The 60% protein tankage and the 50% protein tankage are most common. The feed tag on the sack always gives the protein content. Tankage is high in protein of excellent quality. It is also high in minerals both calcium and phosphorus. Tankage can be mixed with grain or can be fed by the free choice method.

Cottonseed Meal: Cottonseed meal is a by-product of the cotton oil industry. The protein content of cottonseed meal varies with the amount of hulls and fat present. Meal containing 43% protein is the best to use for feeding hogs. Meals with a low protein content should be avoided. Cottonseed meal is high in protein and one of the minerals, phosphorus; it is deficient in lime and vitamin "A". If properly fed cottonseed meal gives excellent results and the cost of protein supplements can usually be reduced by its use. Cottonseed meal should not constitute more than 9% of the entire ration. For best results hogs fed cottonseed meal should also have access to additional source of lime and should have access to green pasture to balance the vitamin deficiency of the meal.

Peanut Meal: Peanut meal is a by-product of the peanut oil industry. Peanut meal like cottonseed meal varies in protein content with the amount of hulls and oil present and of course the meal with a high fiber content is less valuable. For best results hogs fed peanut meal should have access to some additional source of lime and should also have access to pasture. Peanut meal has given excellent results as a protein supplement for hogs. Excessive feeding of peanut meal or the feeding of meal with a very high oil content will result in the production of soft pork. Peanut meal can constitute 15 percent of the total ration with good results.

Soybean Meal: Soybean meal is made from soybeans from which the fat has been extracted. It is a very good protein feed for hogs and does not have the objectionable features that soybeans have. If fed in a properly balanced ration it produces a desirable firm pork. It contains from 40 to 50% crude protein and has approximately the same feeding value as cottonseed meal. Soybean meal with an excessively high oil content should be avoided. It is very low in lime content and, therefore, should always be supplemented by a mineral mixture which contains limestone flour, oyster shell flour or bone meal. This meal can be substituted pound for pound for the cottonseed meal suggested in the standard ration of this bulletin.

Wheat Shorts: Wheat shorts is a by-product of the flour milling industry. The protein content varies with the amount of flour and fiber present. Wheat shorts is a very safe feed for hogs but as a protein supplement when fed with grain it is insufficient in protein, lime and vitamins. If fed for a long period of time wheat shorts should be fed with some feed high in protein of animal origin such as milk or tankage. The hogs should also have access to some additional source of lime and should have access to green grazing.

Wheat Bran: Wheat bran is a by-product of the flour milling industry. It is fairly high in protein and fiber and relatively low in total digestible nutrients. It is an excellent feed to be fed to brood sows at farrowing time and to sick hogs because of its laxative effects. It is too high in fiber to give best results when fed to fattening hogs. If fed over a long period of time the hogs should have access to an additional source of lime and to green pasture. Under these conditions it should also be supplemented with a protein feed of animal origin such as milk or tankage.

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