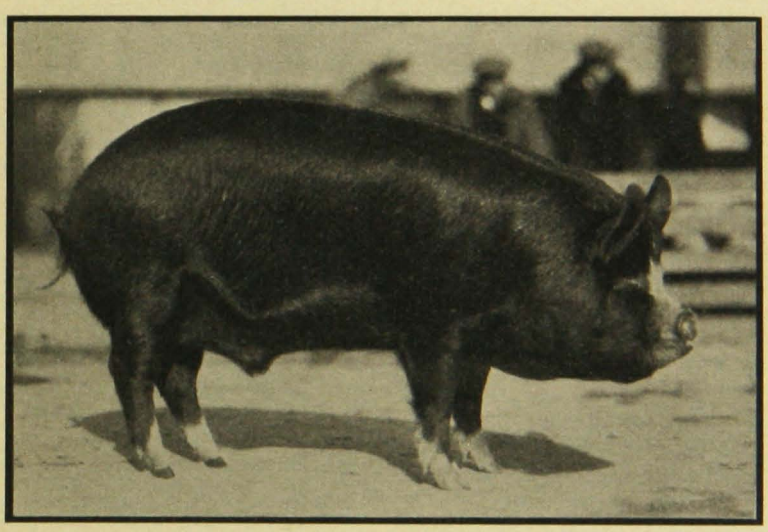
Special Bulletin No. 74 Revised and Reprinted November 1925

Care and Feeding of Swine

by E. F. Ferrin
Division of Animal Husbandry
Agricultural Experiment Station



Berkshire Barrow

Grand champion over all breeds at the 1924 International Livestock Show. Exhibited by University of Minnesota.

UNIVERSITY OF MINNESOTA
AGRICULTURAL EXTENSION DIVISION

Published by the University of Minnesota, College of Agriculture, Extension Division, F. W. Peck, Director, and distributed in furtherance of the purposes of the cooperative agricultural extension work provided for in the Act of Congress of May 8, 1914.

HINTS FOR HOG PRODUCERS

Good breeding is no more than half the essentials of raising hogs profitably. Proper care and feeding are fully 50 per cent of the total requirements.

Corn alone is a high priced feed. Protein and minerals must be added to it to make an economical ration.

Ground barley is nearly as good a feed as corn. In some sections it takes the place of corn.

Skimmilk and buttermilk are high class hog feeds. One hundred pounds is worth about half the value of a bushel of corn.

Alfalfa hay is just as good for brood sows as for cows.

Bluegrass early in the season is a good hog pasture. In the dry summer months it is mostly a gymnasium.

Rape, red clover, and alfalfa are the best forages for swine.

Hogging-off corn is not merely a lazy way of harvesting grain; it is a profitable plan of feeding.

Market the pig crop when the other fellow does not.

Nearly all pigs are infested with worms. This is the most common cause of runts. Worm treatment will reduce the percentage of runty pigs.

The feeding of a mineral mixture is one sign of a successful hog raiser.

CARE AND FEEDING OF SWINE

By E. F. Ferrin

The many conditions favorable to the production of hogs in Minnesota have caused a steady increase in their numbers. The census figures show that in 1900 there were 1,440,806 hogs on Minnesota farms. In 1910 there were 1,520,257, and in 1920 there were 2,380,862. A further increase is shown by the state crop and live stock reporting service in its report for January 1, 1925, showing 3,116,000 hogs on farms.

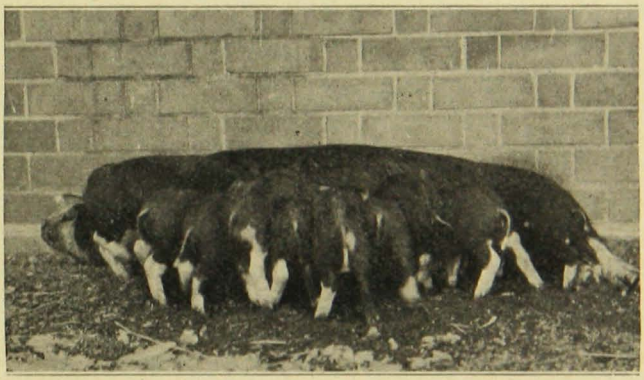


Fig. 1. Poland China Sow with Ten Husky Pigs
Large litters are the most profitable.

Few sections of any state can market corn in the form of pork more profitably than southwestern Minnesota. Varieties of corn are now available that will mature and yield well in the northern half of the state. This fact increases the tendency to include hogs as a part of the farming system in northern Minnesota.

South St. Paul is one of the leading markets in the United States in shipments of stocker and feeder pigs, also one of the leading markets for the sale of finished hogs. The health and thriftiness of Minnesota hogs make them favorites with buyers of feeder stock and packers and butchers purchasing hogs for slaughter.

SELECTING A BROOD SOW

When selecting a brood sow, choose one long in body with a strong back and strong feet and legs. Long-bodied sows usually have larger litters of pigs than short bodied ones. Breeders also like to get a sow that was farrowed in a large litter rather than one from a small litter.

The loss from crippled hogs at any large market amounts to many thousands of dollars yearly. Much of this loss can be prevented by selecting breeding stock with strong feet and pasterns. A good brood sow always has a neat head and neck. This is an indication that the sow will be a good mother and take care of her pigs well. A coarse, staggy head is rare among sows that have demonstrated their value by raising large litters of thrifty pigs. The nipples or teats should be prominent and numerous. When sucking, each pig has his own teat and the number of pigs which a sow can raise is limited by the teats producing milk. Blind teats which do not function or damaged glands on sows which have raised litters are serious objections.

A smooth coat of hair, absence of wrinkles in the skin, neat ears, and clean bone are among the factors making up quality in a hog. High quality is of prime importance. The killer and butcher classes of pigs are constituted largely of light weight barrows and gilts in which this point is outstanding. Coarse, wrinkly, soft fleshed, and flabby jowled hogs sell at a big discount.

A large, thrifty sow will usually transmit these characteristics to her pigs. Growthy pigs which gain rapidly are the most profitable kind to raise; hence a vigorous, active sow, large for her age is a good choice when selecting a brood sow.

FEEDING AND CARE OF BROOD SOWS

A large percentage of the pigs marketed each year are produced by sows approximately one year old at the time the pigs are farrowed. Such sows are immature and are growing and developing their own bodies while they are raising pigs. They need more feed in proportion to their weight than older brood sows and also feed that is richer in body building materials. Skimmilk or buttermilk, tankage, linseed meal, and other protein feeds are more needed in the rations for pregnant gilts than for older sows.

A few satisfactory rations for wintering bred gilts are listed below. These are calculated upon the daily amount of feed for one sow of an average weight of 200 pounds.

1. Shelled corn 2 pounds, ground barley 2 pounds, alfalfa hay 1 pound.
2. Ground oats 2 pounds, ground barley 2 pounds, alfalfa hay unlimited.
3. Shelled corn 4 pounds, meat meal or tankage 0.4 pound.
4. Shelled corn 3 pounds, ground barley or oats 1 pound, skimmilk or buttermilk 3 pounds or more.
5. Shelled corn 3 pounds, skimmilk or buttermilk about 10 pounds.

Other combinations of feed may be equally satisfactory. **It is usually the best plan to make the ration of home-grown feeds if possible.** For this reason grain and either skimmilk or buttermilk, or grain and alfalfa hay usually are preferred. Leafy red clover hay is a good substitute for alfalfa but alsike and sweet clover are not very satisfactory for hogs. It never pays to try to feed pregnant gilts without some good protein in the ration. When rations are lacking in this muscle- and other tissue-making food, smaller and weaker litters of pigs are farrowed than when the feed is balanced. **A little money expended to put the necessary protein in the brood sow ration will bring big returns.** The biggest demand for protein comes during the last six weeks of pregnancy and special care to supply this material ought to be taken.

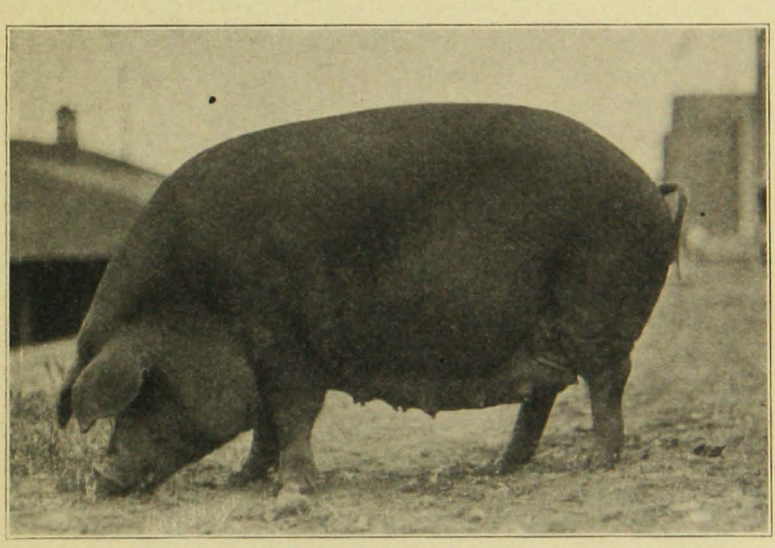


Fig. 2. The Right Type of Brood Sow

Grand champion Duroc Jersey sow shown by the University of Minnesota at the State Fair, 1922.

The best way of determining how much feed a pregnant gilt should have per day is by the gain made and the amount of fat she appears to be putting on. A long-bodied growthy gilt can make an average of about one pound of gain daily during the winter without getting too fat. A reasonable amount of fat is an advantage because it can be used for milk production after the sow farrows. But a fat brood sow is lazy, likely to farrow weak pigs, and to kill more pigs than a sow in moderate flesh.

Yearling sows and older ones have made most of their own body growth and consequently do not need protein to quite the extent that

the bred gilts do. Grain and good alfalfa or clover hay is satisfactory during the winter feeding period. The most logical way of feeding is to give all the hay the sows will eat, governing the amount of grain by the condition of the sows. From one to one and a half pounds of grain daily for each hundred pounds of weight of the sow is an average quantity. Unless the yearling or mature sow is in better than moderate flesh at the beginning of winter she ought to gain from one half to three fourths of a pound per day. As with the gilt, the pregnant sow should be in strong, vigorous condition without carrying a great deal of fat.

Exercise is fully as large a factor in the production of strong, healthy pigs as is good feed. Brood sows usually will not take enough exercise voluntarily, but can be induced to do so if the winter is an open one by giving them the run of a cornfield after the grain has been picked. It is a good arrangement to feed the grain at a distance from the sleeping quarters as this makes them exercise. Feeding alfalfa hay tends to keep the sows on their feet and moving around. Weak pigs are probably more often due to lack of exercise on the part of the sow than to any other factor.

Mineral compounds are needed by hogs of any age but especially by sows carrying pigs. The feeds usually given hogs have too little mineral matter to build the framework of an animal which grows as rapidly as does a hog. A good mixture which has the advantages of being easily put up and of supplying the needed bone building elements is 20 per cent common salt, 40 per cent bone meal, 40 per cent air-slaked lime or ground limestone. The bone meal is obtained from packing concerns and is sold under the name of raw bone meal altho it is thoroly sterilized and will keep for months. Agricultural lime used in liming soils will do for the third ingredient, but some limestone is higher in calcium and lower in magnesium than other kinds. Limestone high in magnesium is not desirable for use in a mineral mixture as it is correspondingly low in calcium.

A mineral mixture which has given good results at the Indiana station is 10 parts wood ashes, 10 parts 16 per cent acid phosphate, and 1 part common salt. As a precaution against hairless pigs, one-half ounce of potassium iodide should be added to every 100 pounds of the mineral mixture unless the iodine is given with the feed. A reasonable allowance of the mixture is 1 pound per month for each sow. The mineral compounds can be kept in a self-feeder where they will be before the hogs at all times, or the mixture can be given with the feed.

More care in keeping the hogs free from lice is necessary in winter than at other seasons. All stock that is to be kept through the winter

should be gone over thoroly late in the fall with crude oil. The best plan, if there are not too many hogs, is to put a few in a small pen and apply the oil with a stiff brush. The crease between the shoulders and jowl is the favorite location of the parasites. Oil drained from auto and tractor crank cases is a substitute for crude oil, but will not last as long and it may be necessary to put it on the hogs every six weeks or two months. At several times during the winter all the brood sows and gilts should be examined to make sure they are free from lice.

Preparation for Farrowing

To know for certain when a sow is due to farrow her litter it is necessary to have the breeding date. Many pigs are lost every season because no breeding dates are kept and the pigs are farrowed unexpectedly in an unfavorable place. Only by having a separate place for each sow are good results secured. Pigs are usually carried 114 days. The sow ought to have several days to get accustomed to the farrowing pen before her litter is born, otherwise she is likely to be restless and kill some of the pigs in the first few days. **A fender placed about ten inches above the floor and eight inches away from the side walls saves many pigs from being crushed by heavy sows.**

In feeding brood sows just before they farrow one of the principal points is to keep the bowels open and avoid a feverish condition. Very little grain should be fed. A slop made of water and a mixture of one-half shorts and one-half bran is the best feed. By keeping the sow a little hungry rather than giving her all the feed she wants, trouble at farrowing time may be avoided.

The disposition a sow shows at this time depends largely upon the methods of feeding and handling employed by the caretaker. A quiet competent feeder is rarely chased out of the pen by the sows he cares for. Of course some sows are naturally cross but rough handling aggravates rather than helps the condition.

In most cases no aid is needed when the sow is about to deliver her pigs. A skillful herdsman is careful not to disturb the sow or let other hogs create a racket near the farrowing pen. If after several hours the sow seems unable to farrow her pigs, an experienced man, veterinarian or layman, should be on hand to remedy the trouble.

In weather cold enough to chill the new born pigs it is a good practice to take each pig as farrowed and after wiping it with an old sack, place it in a barrel or box with some warm bricks or a jug of hot water. Then when all the litter has been born, or earlier if the process requires several hours, they should be helped to nurse,

seeing that each pig gets some milk. A little milk in the pigs' stomachs does wonders to put life and energy into them. Except in very cold weather or in cases where the sow is restless and gets up on her feet often, the pigs should be left with her. Small pigs nurse frequently, so unless they stay in the pen with her they must be put with the sow about every three hours both day and night.

The sow will get along best if she is not fed the first twenty-four hours. A drink of water is all that is needed. Her first feed can well be the bran and shorts which she was getting before she farrowed. "Spare the feed and save the pigs" is a good rule the first two weeks.

CARE OF THE SOW AND SMALL PIGS

A litter of pigs will not be able to take all the milk a good sow will produce until they are two to three weeks old. Up to this time careful feeding of the sow and a determination not to overfeed is necessary. Grain should be given sparingly and then it ought to be as much oats as corn. **The pigs must have exercise to prevent their getting fat.** By the time they are a week old they should be playing around the pen and this is the time a broad alleyway in the farrowing house pays dividends. The pigs need to be put out in the alley every day. If they will not stir around they can be chased by driving them with a sack or cloth of any kind. Pigs often can be made to exercise by giving them old newspapers to play with. Once the pigs get in the habit of frequenting the playground a small door in the pen just large enough to let them go out and in saves the time of the feeder. An objection to this device is that some pigs become robbers, sucking sows that are not their mothers. Whenever the weather is good, the sows and pigs should be out-doors for an hour or more each day.

Fat pigs are subject to thumps. This condition is noted by difficulty in breathing. There is a spasmodic motion of the flanks and the pigs are dumpy. Prevention of this condition is necessary, as treatment is not very effective. At the first symptoms, the feed of the sow should be reduced and a generous handful of Glauber's salts given in the slop once a day. By driving the pigs so that they are compelled to take exercise each morning and afternoon, they will be benefited a little and the trouble may be confined to one or two pigs in the litter, but preventing the over-fat condition is the only sure solution of the problem.

SCOURS

Pigs in the early spring are quite subject to scours. Damp, rainy weather and damp pens are predisposing causes. Over-feeding the sow is a sure way to bring on scours. **Clean dry pens and a sow getting less feed than she wants tend to prevent scours**

in the pigs. Sunshine in the pens is a necessity for raising healthy pigs. At the first sign of scours in the pigs, cut the sow's feed in half and give her a handful of Glauber's salts. If the pen is dry and the sow is fed carefully the pigs will probably stop scouring. If they do not recover, give each pig a few drops of castor oil or mineral oil, by placing the oil well back on the tongue with a medicine dropper or an open glass tube.

WORMS

One of the greatest handicaps to pig raising is the Ascaris or round worm. Small pigs get the eggs of these worms from the udder of the sow or from the floor or walls of the pen probably within a few days after birth. These eggs hatch in the digestive tract and migrate in the blood stream as small parasites of microscopic size, frequently locating in the lungs. Much of the trouble from thumps is probably due to these parasites. **Coughing, so frequently noticed in young pigs, is often caused by these parasites in the lungs.** As the pigs grow, the worms develop and are frequently coughed up to the throat and may be swallowed. When this happens the developing worms locate in the small intestine and cause great loss of flesh and of growth. The part of the small intestine nearest the stomach is the most common location for the worms. The losses from worms are great enough to make it advisable for the pig raiser to spend considerable time and effort in avoiding them.

A system worked out in McLean County, Ill., has given remarkably good results in keeping pigs free from worms. Brood sows are usually infested with the round worm and lots and pastures regularly used by hogs are badly seeded with them. The worms do little damage to swine over six months old but are a serious pest in young pigs. The procedure in the McLean County system is thoroly to clean the farrowing pens, walls, and alleyways to which the pigs have access. Ordinary disinfectants will not kill worm eggs; lye and boiling water are necessary. Before the sow is put in the farrowing pen her udder is thoroly washed with soap and warm water. The pen has previously been well scrubbed with the lye and boiling water and clean bedding provided. For the first two weeks the pigs are kept out of lots surrounding the farrowing house as they are sure sources of worm infestation. At the end of two weeks the sow and her pigs are transferred to a fresh pasture which was not grazed by hogs the preceding year. There is very little trouble from worms if pigs are handled in this way. Hog lots adjoining a permanent house usually cannot be cleaned and disinfected thoroly enough to keep them reasonably free from the eggs of the worms.

In most cases pigs need to be treated for worms either just before or just after weaning. Often two treatments ten days apart are necessary. A wormy pig coughs when he is disturbed from his nest. The hair is harsh and wiry in appearance. Early treatment is the proper plan. The most effective and common treatment for worms is American wormseed oil. About thirty drops, or two cubic centimeters, is given with half an ounce to an ounce of castor oil or mineral oil to a pig weighing between thirty and fifty pounds. The pig should be kept off feed from eighteen to twenty-four hours before the dose is given. After treatment he should be deprived of feed for another twelve hours but should be given water. When giving pigs worm treatment they should be confined to a house or a feeding floor so that the manure can be cleaned up and the place scrubbed clean to avoid reinfesting the premises. Not all the worms will be dislodged but enough of them may be expelled that the pig will show no harmful results.

FEEDING THE SOW AND HER FAMILY

Thrifty active pigs a month old have passed many of their hardest trials. Having pasture for them and their mother simplifies the feeding. They get the exercise it was hard to provide for them earlier. They are past most of the dangers of thumps and scours. The pigs have a never satisfied appetite and the sow begins to show the effects of her hard labor in supplying them milk. By this time the pigs want to eat and should be fed by themselves, in a creep away from the sow. A fairly thick slop made of shorts and skimmilk or buttermilk starts them off well; while shelled corn is the grain they like best. **The gains on young pigs are cheaper than on older ones and it pays to start them well.** There is some danger from scours, especially in rainy cold weather, and care in avoiding this condition is necessary as before. Getting the pigs used to feed so they do not depend entirely upon the sow causes rapid gains and makes weaning a comparatively simple process accomplished without much loss of flesh by the pigs.

The sow needs generous treatment. If she is a good brood sow she is not using the feed to put fat on her back but is putting the nutrients into milk and taking some fat off her body to keep up with the appetites of the pigs. A good rich slop made of shorts and a little (10 per cent) linseed meal or tankage mixed with water if milk is not available, helps in producing milk. Corn is better than any other grain at this time if a good rich slop is fed, as it is not bulky and furnishes many of the nutrients a sow needs in the most concentrated form. She should be fed twice or even three times a day but never any more than she will eat up at once.

CASTRATING

The most favorable time to castrate male pigs is before they are weaned. They shrink less at this time as they have the milk of the sow to depend upon and the operation is accomplished with less shock and loss of blood. Warm sunshiny weather is desirable and quarters free from dust and mudholes will help a great deal in avoiding infection and complications following castration.

WEANING PIGS

Sometimes weaning results in quite a setback for the pigs. To avoid this loss of flesh and keep the pigs gaining steadily is a proof of good management. First of all, the pigs must be eating heartily so that they will not have to learn in a few days to get accustomed to feeds other than milk. Pigs are usually weaned when eight or ten weeks old. **Five days or a week before the litter is to be weaned the feed given the sow should be reduced.** Slop feed stimulates milk production and so does pasture. By gradually cutting off the grain and reducing the slop, the sow will begin to dry up before the pigs are taken away. It is at this time that a creep in which the pigs can be fed away from the sow is most needed. It is best to take the sow away from the pigs and leave the youngsters in the pasture lot and buildings to which they are accustomed. Then they will not worry or run around the fences squealing as they are sure to do if put in a strange place. Oats is the best feed for sows at this time. It is bulky, keeps the bowels open, and is less heating than corn. There is some danger that a part of the udder of the sow may be damaged by the accumulation of milk but this is not probable if a week is taken to prepare the sow for the weaning process. It may be a good plan to let the pigs nurse out the udder once or twice but the pigs will get along better if this can be avoided.

Sometimes a litter is weaned on the installment plan. The big thrifty pigs are taken away and the smaller ones are left until the sow gradually dries up. This is hardly as good a plan as weaning all the pigs at once and can not be followed if the sow is to be rebred for another litter within the same year.

At weaning time the pigs need the same kind of feeds they have been accustomed to. The amount of feed must be greater and the protein increased to take the place of the milk the pigs have had. Generous feeding, especially the first week or two, gets the pigs started right.

PASTURE AND FORAGE CROPS

The most efficient plans for raising pigs always include green feeds. Growing pigs need pasture in order to be thrifty and green feeds greatly reduce the cost of gains. Experiments at several stations have established the fact that a fair average return from good pasture or forage crops is 250 pounds of pork per acre. When on green feed pigs grow faster, getting to market weight from three to four weeks earlier than when raised in a dry lot or on poor pasture. Pigs sold early in the winter nearly always bring a considerably higher price than those marketed in December or January. Being more healthy, pigs having green feed are less subject to disease and parasite infestation. In the spring bluebrass is a fine feed but in the summer it contributes practically nothing to the growth of pigs. If bluegrass is to be used in the spring some other feed is needed for summer. This may be rape, which is a splendid forage crop, or mixtures of crops such as Canada field peas, rape, oats, and possibly clover. Both peas and rape are very well adapted to Minnesota conditions and supplement a permanent pasture very well. From twenty to thirty growing pigs can be carried per acre, if a good grain ration is fed, so the space necessary to grow these crops is limited. A good pasture and forage plan for anyone using bluegrass is as follows:

May 1 to July 1, bluegrass.

July 1 to September 1, rape or a mixture of oats, Canada field peas, and rape.

September 1 to November 1, corn to be hogged off, with rape or soybeans in the same field.

There is a weak spot in this system and it is that bluegrass is not a very good hog pasture during the latter part of June. If rape alone is to be used to supplement the pasture it will furnish feed by the middle of June or earlier, but the oats and peas of the mixture will not be ready before July 1.

Alfalfa outranks all other feeds as a pasture for hogs. More pork per acre and more hay are obtained from alfalfa than from red clover and both these crops give a larger total return per acre than does rape. Each is high in protein and thus reduces the amount of this high priced material to be supplied. Alfalfa will not stand grazing any better than will red clover—this is one of the weak points of both crops. The hog producer in a section in which alfalfa is a success should use it for pasture and the hay for winter feed.

It is not possible to pasture alfalfa close enough to keep it down without killing the plants. Usually two crops of hay are cut. A good way to handle alfalfa when pastured with hogs is to have the field

divided into two parts. The pigs go into one part of the field in the spring when the crop is six or eight inches high. They are left there until after the hay is cut from the other section and the new growth is well started. Then the pigs are put on the fresh feed and the hay crop is cut from the field they were first grazing. By this method the stand of alfalfa is preserved for several years and the pigs have fresh succulent feed without reducing the hay crop as much as if the alfalfa is left in one field.

Dwarf Essex rape is a high class hog forage, ranking below alfalfa and red clover only. The fact that it is not an annual keeps it from going to seed the first year and thus it continues to produce fresh green feed all season unless the rainfall is limited. It grows rapidly, being ready for pasturing within six weeks of the date of seeding and can be sown as early in the spring as the ground can be worked. As it winterkills, it must be sown each season, but the cost of seed is low and a good crop is nearly always secured. Even tho the leaves are eaten off the stalk, the plant will quickly throw out new leaves if the pigs are taken out and there is a good supply of moisture. This is a crop which ought to be grown much more extensively in this state.

Sweet clover is hardly as desirable a forage for hogs as the other plants mentioned. It is not very palatable and soon gets too tough and woody to make good feed. It can be used and will give fair returns in pork but a much more satisfactory plan is to plant some of the better relished forage crops.

HAND FEEDING VS. SELF-FEEDING OF GROWING PIGS

To be thrifty and in best growing condition, pigs need a fairly liberal ration of grain during the summer. **The pig has a small stomach and cannot thrive on bulky feeds alone.** A 2 per cent ration—two pounds of feed daily for each one hundred pounds of pigs fed—is about the least grain it is economical to feed. On less than this, the pigs fail to thrive and may become runty.

Not very efficient use of pasture is made by self-fed pigs. They get all the feed they want without making any more effort than eating it out of the self-feeder, consequently they do not graze much. In order to increase the use of the pasture, the self-feeder can be put at the end of the field farthest from the sleeping quarters, but much more time on the part of the feeder is needed to keep it filled and in working order. If mill feeds are used in a self-feeder, daily attention is necessary to keep the feed from getting clogged or from being wasted. When pigs are self-fed during the summer the gains are costly, as corn

is higher at that time than at any other season. The cheapest gains are made by giving enough grain to keep the pigs growing, not too thin, and thus getting the most value from the pasture or forage crop.

March farrowed pigs which have been raised by the self-fed plan will reach marketable weight, 175 to 200 pounds, in October or early November, while hand-fed pigs will not be ready before December if the grain has been limited. **October prices average from 60 to 75 cents per hundredweight higher than December prices.** The greater return from a two-hundred-pound pig marketed early is from $1.20 to $1.50.

March farrowed pigs, if given a full feed of grain either by hand or in a self-feeder, by the time they are ready for market will have made about three fourths of the gain on old corn high in price and one fourth on new cheaper corn. If kept down to a half feed of grain during the summer about one third of the gain will be made on old corn, and two thirds on new corn.

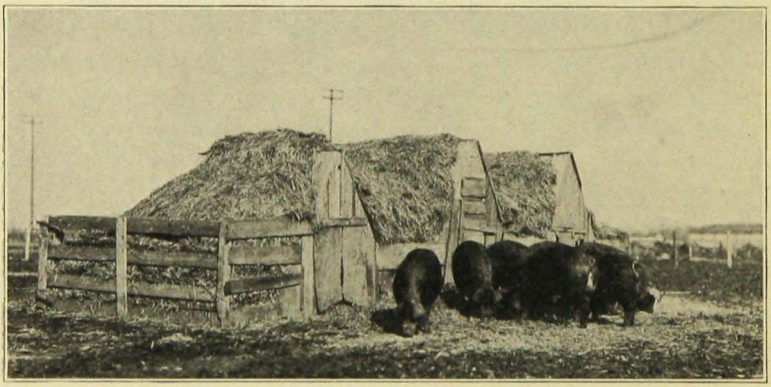


Fig. 3. Movable Houses Make Good Winter Quarters if Banked with Straw

A smaller amount of feed is used in producing a two-hundred-pound pig if he is well fed, because he is fed a shorter time than if he is kept hungry, and the amount of feed saved will nearly balance the higher price of feeds during the summer. As long as most of the pigs are marketed during the winter months and fall prices are appreciably higher than winter prices, self-feeding or full feeding by hand will be profitable.

Hogging-Off Corn

Dent varieties of corn can be grown successfully in most parts of Minnesota. **Turning pigs into the field to harvest the crop is one of the most profitable ways of marketing corn.** Experiments at University Farm show that it is cheaper to let pigs harvest the corn

than it is to pick the grain and feed it to the pigs in dry lots. As the corn should be well matured, an early variety must be selected, as pigs should not be left in the fields after snow covers the ground. This wastes too much of the grain. September and October are the months for the hogging-off plan. Not more than two or three weeks should be spent in clearing up a piece of corn, so it sometimes pays to divide the field with a temporary fence. An acre of corn yielding 40 bushels of grain will feed twenty pigs approximately fourteen days if the pigs average about 125 pounds in weight. More efficient use will be made of the corn if a supplementary crop is planted in the field or near it. This may be rape, soybeans, or pumpkins. These crops may reduce the yield of corn if the supply of moisture is low during the summer, but will help to reduce the amount of feed required to make a hundred pounds of pork. **Tankage fed with the corn will save enough grain to more than pay the cost.** It is a good plan to self-feed the tankage, as the corn is self-fed. Some of the pigs will be ready for market when they come from the corn field, but many will need further feeding in dry lots.

Fattening Hogs in a Dry Lot

Corn is cheaper in the fall and early winter than at any other season. The hog market is on a declining scale. **The quicker the pig gets to market the more profit he will show.** There is no economy, but on the contrary a decided loss, if the feed is limited. Corn alone will not make the most rapid or the cheapest gains. It has too little protein in proportion to the starch and oil to make the best fattening feed. If skimmilk or buttermilk is available at a cheap price it is a good feed and balances corn nicely. Oats are too bulky and usually too high in price to be fed to fattening hogs. Tankage is the protein supplement that in many cases gives highest returns. Keep as much corn before the hogs as they will clean up and the tankage can very well be self-fed.

WHAT IS THE RIGHT MARKET WEIGHT?

The tendency in the last few years on our markets has been to pay the top prices for light weight hogs. Consumers do not want heavy or fat cuts of meat. Consequently the pigs selling at the highest prices weigh from 140 to 190 pounds. It is unwise to attempt to produce an article not in keen demand and the hog raiser should comply with demand by selling his pigs at 200 pounds or a little less. Considering the declining price during the fall months, it sometimes pays even if plenty of corn is available to sell pigs two or three weeks earlier at a weight of 175 pounds than to keep them until they reach

an average weight of 200 pounds. The 100 pounds of feed needed to make the additional 25 pounds' weight may cost more than the gain is worth.

To be desirable the finished hog should not carry too heavy a load of fat. Lean meat and not fat is what the consumer desires. A reasonable degree of finish is necessary to make a firm carcass and palatable meat, but it is a poor policy to feed hogs to the finish required five years ago. Pigs should be marketed even tho they are still making rapid and economical gains because the market objects to a high degree of finish or fat. All our meat animals are most economically marketed at an early age and in less than a fully finished condition. The hog should be so fed and handled that he makes the speediest journey of them all from birth to the finished product.