

THE 4-H PIG CLUB

- I—Market Pig
- II—Purebred Gilt
- III—Sow and Litter

4-H CLUB CIRCULAR 29

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COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

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*The 4-H Pig Club Leader's Guide is to be used with this circular.

THE 4-H PIG CLUB*

I. INTRODUCTION

Any boy or girl who carries out pig club work as it should be done will be greatly benefited by the experience. The association with other enthusiastic members, the growing, feeding and care of pigs which are their own personal property, and the keeping of accurate, businesslike records of feed costs, gains and profits—all assist in laying the foundation for successful lives.

It is hoped that the material in this circular will be of benefit to pig club members by giving them some of the basic facts in pork production which should enable them to produce pork more efficiently and economically.

In this circular will be found the essential information needed by members with projects in:

- (1). Market Pig
- (2). Purebred Gilt, and
- (3). Sow and Litter

Members desiring additional or more detailed information should consult their leader or county agent. A list of reference bulletins is included in the back of this circular. See page 36.

II. INFORMATION FOR PIG CLUB MEMBERS

1. Selection of the Sow or Gilt

Breed.—There is no *best* breed of hogs. As a rule, the boy will make the most progress, who selects a sow of the breed he likes best. It is usually preferable to select a sow of the breed most extensively raised in the home community. By doing this it is easier to buy good breeding stock close at home. There will also be a market for breeding stock produced later on. It is desirable, when possible, for the entire club to use sows of the same breed, as this makes it easier to secure the services of a good boar at a reasonable cost.

Individuality.—The club member in selecting a gilt or sow for the Sow and Litter Club, should select one that is growthy with plenty of size and smoothness. The best brood sow is usually one with plenty of length, a strong well arched back, good depth of body, smooth shoulders and neck of medium length. The sow should be broad between the eyes, the ears of medium size, and the face and snout broad rather than pointed. The hams should

*Prepared by T. A. Ewing and E. S. Matteson, Extension Animal Husbandmen in collaboration with T. T. Martin and E. T. Itschner, State Club Agents.

be deep and broad, and the width should be the same from shoulder to hams.

It is very important that the sow have a good set of feet and legs. The legs should be squarely placed under each corner of the body and show plenty of bone development. The sow should stand well upon her toes with fairly short straight pasterns.

The club member should avoid the short "chuffy" gilt, as well as one that is too leggy and shallow bodied. He should avoid the gilts with weak backs, fine bone and weak pasterns, as these defects practically always get worse as the sow grows older.

Time of Breeding.—A gilt that has been properly grown may be bred when eight to ten months old. Most hog men consider a gilt weighing from 180 to 200 pounds, and not fat, as large enough to breed.

If the club member wishes to have his litter ready for market in early September the sow should farrow during the first week in March and she must be bred the second week in November, as the average period between breeding and farrowing time is 112 to 114 days. This period is called the gestation period. It is very necessary to keep a record of the breeding date so that the club member can figure when the sow is to farrow and take care of her accordingly.

Selecting the Boar.—The greatest care should be observed in selecting a boar with which to mate the gilt. The very best purebred boar that can be found in the community should be used. The boar should be well developed and at least eight to ten months old.

The desirable conformation of the boar shows him to be stronger in the head and to possess a more muscular neck (that is, relatively short), more massive shoulders, and heavier bone than a sow or barrow. He should conform to the best type of the breed to which he belongs and should have a bold, impressive carriage and general appearance. There should be nothing effeminate about his appearance and general make-up. Symmetry and balance should be evidenced by proportionate depth of chest, side and ham to body width and length. Constitution is associated with deep chests of good width. Strong and straight feet and legs are desirable. Good quality is of first importance. Boars that possess these desirable qualities are more apt to sire pigs that are "good doers."

2. Feeds for Swine

In the production of pork it has been found that about 85% of the total cost is for feed, so this affords the best place for economy in this business. Experiments show that by a proper understand-

ing and usage of the various feeds that better than average results may be expected.

Composition of Feeds.—The value of a feed depends upon what it is made up of, how much of it is digested, and its palatability, or how well it is liked by an animal. All feeds contain carbohydrates, protein, fats, fiber and mineral matter or ash, but the amounts of each in a feed largely determines its value. All of these nutrients are essential and ordinarily no one feed contains them in just the right amounts to produce the most economical gains. Therefore, a combination of several feeds is necessary to balance these nutrients, so that an under supply of any one is not given, and a source of vitamins is supplied.

Carbohydrates.—Carbohydrates furnish the material for heat and energy for work. Sugar and starch are called carbohydrates. When an extra amount of carbohydrate is eaten by an animal it is stored as fat.

Protein.—This is the part of the feeding stuffs which helps to build blood, tissues, muscles, vital organs, skin, hair, milk, etc.

Fats.—These furnish heat and energy and are stored as fat.

Fiber.—Fiber is the woody and less digestible part of a feed. Its value is to give bulk to a feed.

Mineral Matter or Ash.—Mineral matter forms the larger part of the bony skeleton, and is valuable in the development of other parts of the body.

Vitamins.—Vitamins are essential for normal growth and reproduction in all livestock. Good pasture is an adequate source of vitamins. Leafy legume hay is satisfactory in the absence of pasture.

Vitamin A deficiency may cause lameness and even death among swine.

Corn is the most palatable, the richest in fuel value, and generally is the cheapest of any of the farm grains in the Corn Belt. The make-up of the hog is such that concentrates as grain are the chief feed used in their production, so corn is the basal ration around which hog feeding methods are built.

Corn, in some form, should make up the main part of the ration, but being low in protein and mineral, some feeds high in these two nutrients should be fed along with it. Rapid and economical gains cannot be made on corn alone.

Barley as a feed for hogs is worth about 90 per cent as much as shelled corn pound for pound. It should be ground as grinding improves its feeding value about 25 per cent. Soaking whole barley does not seem to add to its feeding value and soaking does not take the place of grinding. Barley is higher in protein than corn and

slightly less tankage or protein supplement is required when feeding barley. Barley is best used as a substitute for part of the corn in the ration.

Oats have a special value in giving bulk to a ration. When fed in large quantities to young pigs they have a feeding value of one-half that of corn, bushel for bushel. They are best used in limited amounts to take the place of shorts, along with corn and tankage or milk fed on pasture. They should be fed ground and are very desirable for growing gilts and boars to prevent too rapid fattening at an early age. They are higher in protein and ash than corn.

Wheat should be fed ground and is very well liked by hogs. In some seasons wheat is cheap in comparison with corn and when fed with tankage has a slightly higher feeding value. Coarse grinding increases its value from 16 to 22 per cent while soaking improves it but little.

Wheat Middlings or Shorts are fairly high in protein and are best used to make up about one-third of a ration of corn, shorts, and tankage or milk. When fed with corn alone, to pigs not on pasture, they do not generally give as good gains as the same amount of money invested in tankage. However, corn and shorts on good alfalfa or clover pasture will give fairly good results.

Wheat Bran is high in protein, but due to its bulk is better suited to breeding stock, than to growing or fattening pigs. Its bulk and laxative properties make it especially valuable when used as a part of the winter ration, for the brood sow and for boars. For young pigs it is too bulky to be economical or productive of rapid gains when fed in too large amounts.

Tankage or Meat Meal is a packing house by-product and the best grades contain 60 per cent of protein. Due to its high protein content it is an excellent feed to use with corn for hogs, and a small amount will make up for the lack of protein and mineral in the corn. One-third to one-half pound daily per pig is usually sufficient. The younger the pig the more tankage should be used in proportion to corn. The standard corn belt fattening ration is corn ten parts and tankage one part.

Milk has no superior in furnishing protein and mineral when fed with corn. Skimmilk and undiluted buttermilk have the same feeding value and the amount required decreases in proportion as the pigs mature, and require less protein. Just after weaning, 4 to 6 pounds of milk to each pound of corn will give the best results. For pigs 50 to 100 pounds, $2\frac{1}{2}$ to 3 pounds of milk to 1 pound of corn, from 100 to 150 pounds, 2 to $2\frac{1}{2}$ pounds, and for pigs weighing

150 to 200 pounds, $1\frac{1}{2}$ to 2 pounds for each pound of corn is recommended.

Linseed Oil Meal may be used in place of a part of the tankage or milk. It contains about one-half as much protein as tankage, so almost twice as much is required to balance a given ration. It is best suited to hogs weighing over 100 pounds, but in general is not so satisfactory for feeding with corn as tankage or milk as it is relatively low in mineral content. If used, it is best to use two parts tankage and one part linseed oil meal.

Soybean Oil Meal—Cottonseed Meal. Soybean oil meal and cottonseed meal may be used in place of linseed oil meal when the price is such that it will make a more economical ration. As in the case of linseed oil meal, these feeds are used in combination with tankage or milk for best results.

Feeding.—In the above, we have considered the feeds most commonly used in this section of the country and those which will probably be available on your farm. Remember that by giving variety you will get best results, so several feeds in the proper combination should be used. In addition to the ordinary feeds it is a good plan to furnish a mineral for hogs, as the grains which are their chief food are low in this nutrient. Of the many mineral mixtures now in use, the following simple one is satisfactory, "Equal parts of wood ashes or ground limestone, salt, and bone-meal. One-half to one pound of the mineral to each 100 pounds of grain is sufficient or may be fed in a box for this purpose. The mixture should be kept under shelter.

Forage Crops.—Pasture in pork production is valuable for all swine, but for young pigs its benefits are outstanding. Pastures are rich in the body building materials so important to young growing animals. The succulent feed and exercise keep them thrifty and in good condition.

During the growing period, it is very necessary that pigs be kept on ground that is not infested with eggs of the roundworm and other parasites. By proper use of forage crops, this serious trouble may largely be prevented. This is a more satisfactory method than to treat the pigs after they are infested.

Due to the excellent character of the feed of forage crops, greater gains are made on a given amount of grain when fed on pasture, than when pasture is not provided. The amount of expensive protein rich feeds such as milk, tankage, or linseed meal required, is only about half as much on good pasture as in dry lot, therefore, the gains made are usually more economical.

Of the forages that are grown on Missouri farms, it is recommended as the result of experimental work that alfalfa, clover, rape, bluegrass or small grain be used. These, with the exception of bluegrass, furnish good succulent feed during the hot summer months and up until frost. Bluegrass makes excellent spring and fall forage. Shelter from the hot sun should be provided, as well as an abundance of fresh, pure water.

Small Grain Pastures.—The increased acreages of small grains on Missouri farms often permit the using of these crops for hog pasture in the late fall and early spring. Wheat, barley and rye

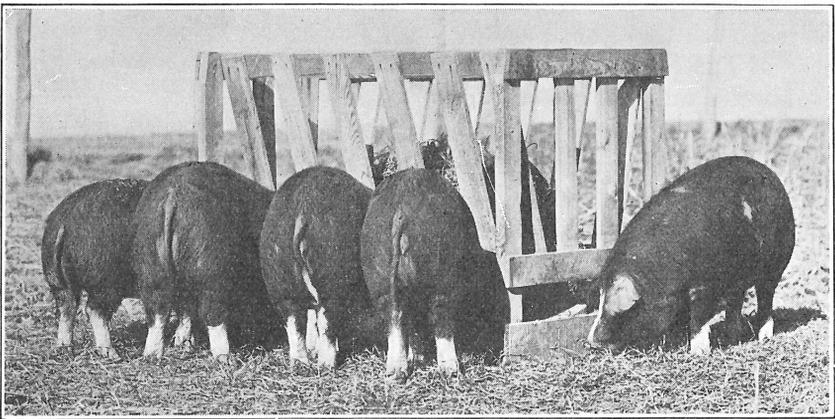


Fig. 2.—A good forage cuts down feed costs for the club litter.

fields are usually clean ground. The green forage provides succulence for rapid growth of young pigs and increases the milk production of the sows.

3. Feed and Care of Sow From Breeding to Farrowing

After the sow is bred there are three essentials to bear in mind in caring for her. She must have proper feed, plenty of exercise, and good shelter. The most common fault with feeds given brood sows is that they are made up too largely of corn with not enough protein feed, such as milk and tankage, and not enough bulky feed, such as wheat, bran, alfalfa, clover hay or pasture.

The bred sow needs plenty of protein and mineral matter because these elements are needed in the development of the unborn pigs in addition to that required by the sow herself. Young sows need more protein and mineral than older brood sows, if they are to complete their growth, in addition to nourishing the embryo pigs.

Brood sows fed corn alone cannot be expected to produce large thrifty litters. At the Iowa Experiment Station it was found that pigs from gilts fed ear corn alone weighed 1.74 pounds at

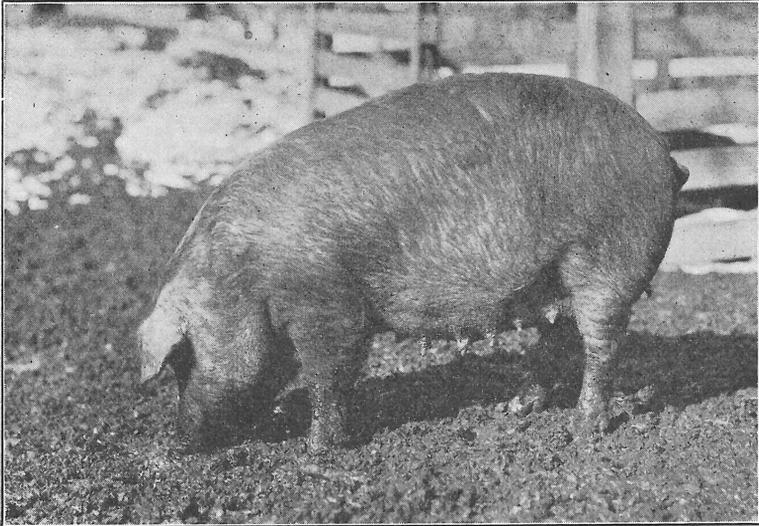


Fig. 3.—Proper amount of fat for sow to carry before farrowing.

birth only 68 per cent strong, while the pigs from gilts fed tankage and clover hay with corn averaged 2.18 pounds at birth and 92 per cent were strong.

SUGGESTED RATION FOR BRED SOW

Ration 1

Corn, 10 parts by weight;
Tankage, 1 part;
Fine legume hay, fed in rack.

Ration 3

Ear corn, 1 bushel;
Protein supplement—(5 pounds*)

*Tankage, 2 parts Linseed oil meal, Soybean oil meal or Cottonseed oil meal, 1 part;
Alfalfa meal, 1 part.

Ration 5

Corn, 2 parts by weight;
Shorts, 1 part;
Skimmilk, 2 parts.

Ration 7

Corn, 6 parts by weight;
Ground soybeans, 1 part;
Legume hay, fed in rack.

Ration 2

Corn, 8 parts by weight;
Shorts, 4 parts;
Bran, 1 part;
Tankage, 1 part.

Ration 4

Corn, 1 part by weight;
Skimmilk, 3 parts.

Ration 6

Corn, 8 parts by weight;
Oats, 3 parts;
Tankage, 1 part.

Ration 8

Corn, 3 parts by weight;
Ground wheat, 3 parts;
Oats, 3 parts;
Tankage, 1 part.

Amount to Feed.—The bred sow should be fed enough to keep her in good condition, but not too fat. A sow that is too fat will be sluggish and apt to kill her pigs by lying down on them. On the other hand, if she is too thin, she will not give enough milk to properly feed the young pigs.

About $1\frac{1}{2}$ pounds of grain per 100 pounds live weight will give good results for the bred sow if she has access to good legume hay or pasture.

Bred gilts should be fed so that they will gain $1\frac{1}{4}$ to $1\frac{1}{2}$ pounds per day during the gestation period.

Exercise.—A sow to produce strong healthy pigs must take plenty of exercise. She should by all means have access to good bluegrass or rye, wheat or barley pasture in winter. She can be induced to take exercise by feeding her some distance from the sleeping quarters.

The club member will want to keep his sow separate from the rest of the breeding herd at feeding time so that he can keep record of feed, but should turn her out during the day and allow her to get plenty of exercise.

About one week before farrowing the grain ration should be cut down nearly one-half. A little more laxative, as well as a more bulky ration should be provided at this time. When corn forms the major portion of the ration, wheat bran can be substituted for most of the corn and thus provide a cooling and laxative ration, that is very much to be desired.

4. Care of Sow and Litter from Farrowing to Weaning

Sanitation.—The use of the same field and lots for hog production, year after year, has caused such an accumulation of worm eggs and filth-born bacteria that it is difficult to raise a good thrifty bunch of pigs, unless some precautions are taken to prevent infestation.

One of the pig's worst enemies is the common roundworm (*Ascaris Lumbricoides*). It infests the intestines, causing digestive and other disorders, and so lessens the vitality that the pig becomes readily susceptible to other diseases. The greatest damage is usually done to the pigs while they are small. They may become infested within a few days or even a few hours after birth. The old hog lots become so infested with worm eggs that a handful of the dirt, under a microscope, would be seen to contain thousands of the eggs. The pigs may pick up these eggs while eating corn with the sow or if the lots are muddy they may take this worm infested dirt off the sow's teats when they nurse.

Much of the injury to the infested pig is done by the irritation caused by worms passing through the lungs, with pneumonia following in many cases. Since the pigs become infested early in life and no treatment can reach the worms in the lungs, the only

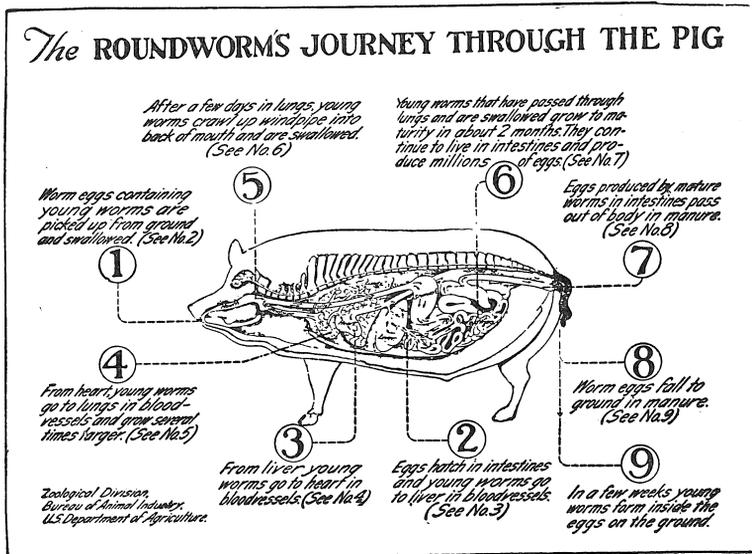


Fig. 4.—Courtesy, the United States Department of Agriculture.

practical control measure is prevention. In this case the proverbial "ounce of prevention" is certainly worth a pound of cure. The McLean County System as worked out by the U. S. Department of Agriculture, if properly used, is not only effective in preventing round worms but is also the best known method for the prevention of other parasites, as well as many filth-born diseases such as necrotic-enteritis, bull nose, sore mouth, etc. The system is as follows:

1. Clean farrowing pens thoroughly, and scrub them out with scalding water and lye. Use one pound of lye to ten gallons of boiling water. The lye helps remove the dirt and assists in penetrating the egg so that the boiling water can kill the immature worm inside. Disinfectants have little or no effect on the worm eggs, but help in ridding the pens of lice and mites.

2. Wash the sides and udders of the sows, with warm water and soap, before placing them in the clean pens. Care should be taken to brush them dry in extremely cold weather.

3. Move the sows and pigs out to clean pasture, two weeks after farrowing. It will be best to haul the sows and pigs when it is necessary to cross infested areas.

4. Keep the young pigs on the clean ground until they are four months old. After that they do not seem to be harmed by the worms, and may be put back in the bluegrass lots, if the shade and water are better there than in the clean fields.

The round worm's journey through the pig is shown very clearly by the chart on page 11, prepared by the United States Department of Agriculture.

The Farrowing House.—The movable, individual hog house is very practical for club members. It can be used as a farrowing house and also as a shelter on the clean pasture. The house can be moved to some protected spot, in case of bad weather, or for

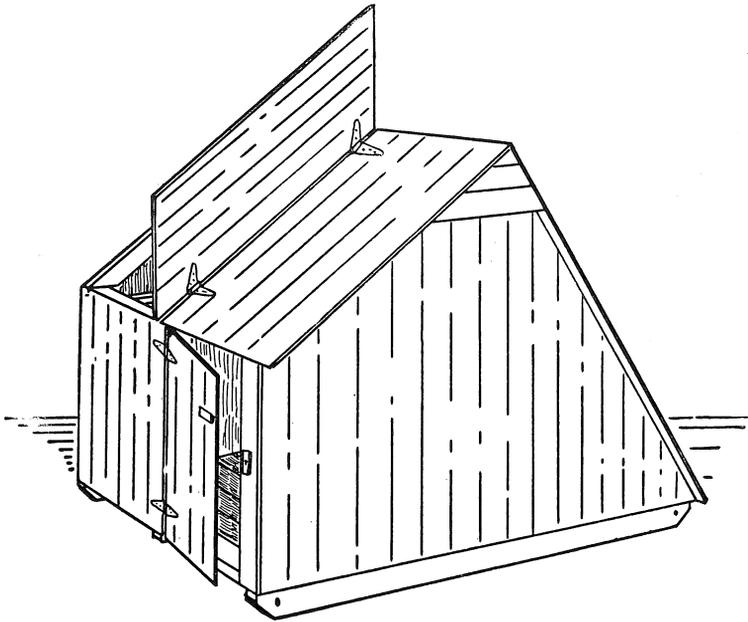


Fig. 5.—Modified A type movable hog house.

greater accessibility, during farrowing time; or it can be left on the clean ground and the sow allowed to farrow there. The house should be swept out and all trash and dirt carefully collected and hauled out to a distant field for manure or else burned to get the infestation away from the surroundings. It should then be thoroughly scrubbed out with boiling lye water, care being taken to scrub walls and cracks out well. An old broom should be used for this purpose as the hot lye water will ruin a good broom or brush. The cleaning should be done in time so that the sow can be placed in the dry, clean house about one week before farrowing. The Missouri Modified A type house shown in Fig 5 is recommended.

Plans for building these with a bill of material will be furnished, upon request, by the Missouri College of Agriculture, or your county extension agent. The material for a 6x8 movable house will probably cost from \$15 to \$20. Larger houses are preferable for big sows. Native lumber can be used to good advantage for floors, runners and dimension material. Creosoting floors, runners and dimension material that touch the ground will add to the life of the house.

Before the sow farrows, a guard rail should be constructed inside the hog house. A 2x4 raised 8 inches from the floor and held 8 inches from the wall will prevent the sow from smashing the pigs when she lies down next to the wall. See picture below.

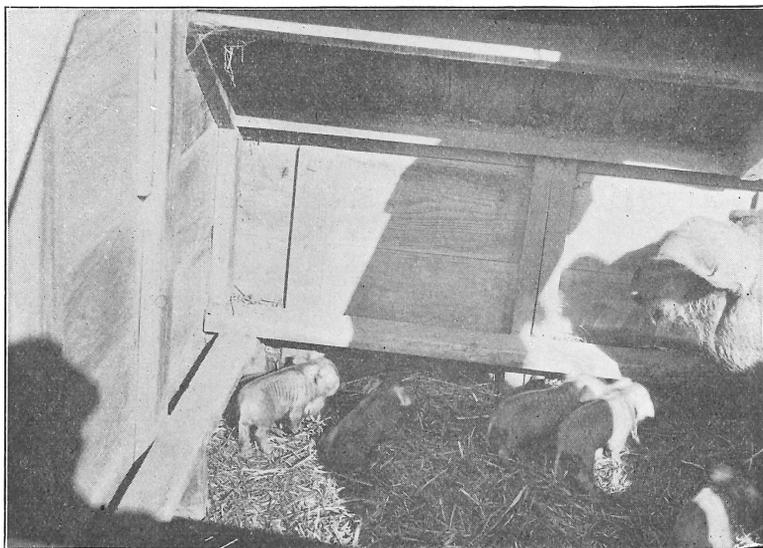


Fig. 6.—Interior of farrowing house, showing guard rail and small amount of bedding—both of which prevent losses at farrowing time.

The amount and kind of bedding to use is rather important. Fine straw that will lay close to the floor should be used. Only enough to make a thin covering over the floor is needed. About a bushel of wheat chaff or cut straw will be enough. If too much coarse straw is used the young pigs may get tangled up and lost and never find their way to the sow's udder to nurse. After the pigs are about two weeks old the amount of bedding may be increased. The bedding must at all times be kept perfectly dry. This will require that it be changed every few days in good weather and probably every day in rainy or snowy weather.

The Sow.—Before the sow is placed in the farrowing house her sides and udder should be washed with warm water and soap. This can be done in a regular loading crate if the sow is not gentle enough to do it in the open. Especial care should be taken to get the udder clean in order to prevent infestation of the pigs when nursing.

Moving to Clean Ground.—As soon as the pigs are strong enough, the sow and pigs should be moved to clean ground. If it is necessary to cross infested fields or lots it is best to haul the sow and pigs. The sow can be hauled in a loading crate and the pigs in a basket, if desired. They should be moved by the time that the pigs are two weeks old if possible, because worm eggs passed by the sow have become matured enough at the end of that time to develop, if eaten by the little pigs. On the clean ground the eggs passed by the sow will be scattered enough to keep the infestation down to a negligible point in the pigs.

Pasture.—Clean pasture is defined as pasture which has not had hogs on it for several years or has been plowed since having had hogs on it. An ideal pasture is an alfalfa or clover field. Where this kind of pasture is not available, oats, oats and rape, sudan or clean bluegrass, or any of the small grains, are suitable. The pigs should be kept on the clean pasture until they are at least four months of age. After reaching this age the pigs seem to have resistance enough to withstand worm infestation without serious effects. After four months of age the pigs can be moved back to the dry lot or onto one of the old fields or lots. Undoubtedly the pigs are better off out on the clean pasture until marketing time.

Care After Farrowing.—Great care should be taken in feeding the sow immediately after farrowing. On the first day give her plenty of water with the chill taken off, but no feed. On the second day give her a thin slop made of a double handful of bran and shorts. Increase this feed very gradually until by the time the pigs are two to three weeks old the sow will be getting all the feed she wants.

Pig Eating.—Sometimes a sow that has not had sufficient protein feed before farrowing will eat her pigs. Poor rations, lack of exercise and bad management seem to contribute toward the acquiring of this habit. Feeding salt pork may stop this, or a little dip or coal oil applied lightly to the pigs may prevent it. Do not allow the sow to eat her afterbirth as this may cause the pig-eating habit. Once the habit is acquired, the fattening pen is the best solution of the problem unless the sow is very valuable.

Care of the Litter.—While the pigs are young, proper care, feed, and attention will mean success with the growing pigs and help a great deal in making quick growing hogs.

Wolf Teeth.—Soon after the sow is through farrowing, examine the mouths of the pigs and you may find some long, sharp, tusklike teeth well back in the pig's mouth. These may be broken off even with the gums with a pair of nippers. These needle or wolf teeth sometimes cut the sow's teats and the noses of the other pigs, causing sores.

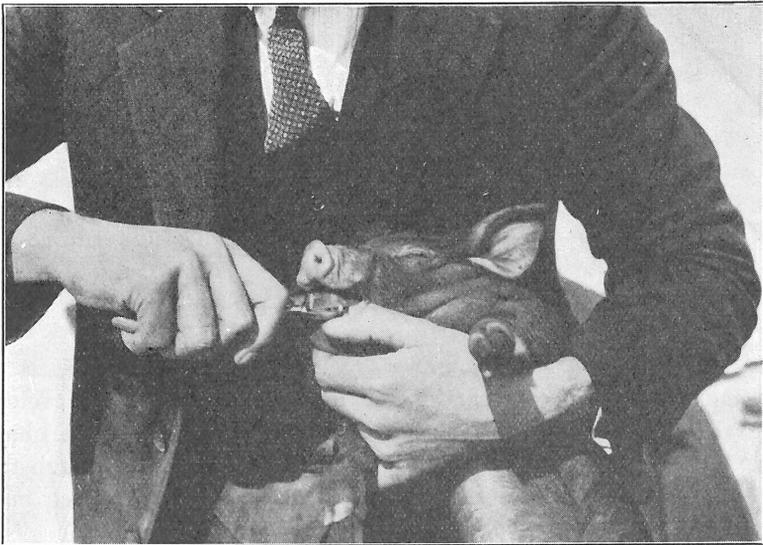


Fig. 7.—Removing the young pig's wolf teeth.

Marking the Pigs.—All breeders of purebred hogs must have some plan of marking the pigs before they are weaned so that they can be accurately identified later on, when they are old enough to be recorded. It is not practical to use metal ear tags on young pigs, so a simple method of marking the ear is used:

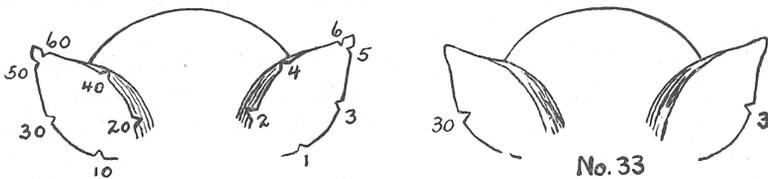


Fig. 8.—At your left: position value of notches in pig's right and left ears. At your right: notches for No. 33.

	Left Ear	Right Ear
Lower side, next head-----	1	10
Lower side, midway between head and tip	3	30
Lower side, tip-----	5	50
Upper side, next to head -----	2	20
Upper side, midway-----	4	40
Upper side, tip-----	6	60

Two notches would mean addition of the two numbers represented. Thus a notch midway between head and tip of lower side of right ear and another notch midway between head and tip on lower side of left ear would indicate $30+3=33$, the number of the pig.

Scours.—While the pigs are small watch them closely for scours. This trouble is caused by indigestion due to changing the sow’s fed or giving her too rich feed, or too much feed. It may also be caused by damp, dirty, living quarters and by using, sour and unsanitary feeding troughs or buckets.

You can prevent scours by sanitation and careful feeding. If scours develop, cut down the feed of sow and pigs; give sow 2 teaspoonfuls of copperas in her feed for a few days and if necessary give the little pigs a small tablespoonful of castor oil each.

Thumps.—Thumps in young pigs may be due to a heavy infestation of roundworms. (*Ascaris Lumbricoides*). During the development of the roundworm it passes through the lungs. (See chart page 11.) When a large number of worms are passing through the lungs at the same time a severe inflammation is set up which may result in thumps, a verminous pneumonia and quite often death. The McLean County System of raising pigs is the only method that will eliminate losses.

Thumps may occur in pigs that are affected with anemia. Anemia means either a reduction of the number of red corpuscles in the blood or the amount of hemoglobin in the red corpuscles. Hemoglobin is the chemical compound in the red corpuscles or blood cells that makes it possible for the blood to carry oxygen. When there is a reduction of this compound in the blood the pigs thump or cough due to an oxygen shortage.

The favorable effect of the out-of-doors in preventing anemia lies in the fact that the pig roots in the soil thereby getting substances which supplement the sow’s milk such as more iron and copper.

Feeding iron and copper salts to sows does not prevent the anemia in the pigs. The best way to prevent anemia in young pigs

in the suckling stage is to swab the sow's udder twice daily with a solution of 1 to 1½ pounds of copperas (ferrous sulphate) and 4 oz. of bluestone (copper sulphate) dissolved in a gallon of water, beginning when the pigs are one week of age.

Feeding Sow and Litter

Creep.—When the pigs are about three weeks old they begin to try to eat with the sow. At this time, it is a good plan to build a creep for them to eat in, separate from the sow. The creep is merely a small feeding pen built so that the pigs can enter and the sow cannot. A square pen 8 feet by 8 feet will be large enough.

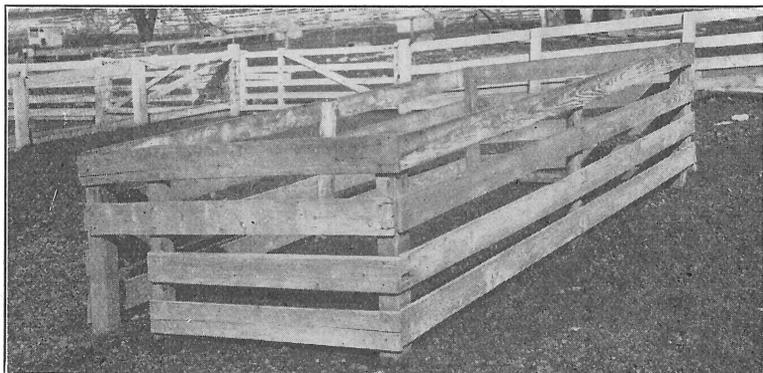


Fig. 9.—Creep where suckling pigs may be given additional feed.

Shelled corn and sweet skimmilk can be used to feed the pigs at first. They should be fed three to four times daily and only what they will clean up promptly. As the pigs grow older, corn, shorts, and tankage can be mixed together and placed in a feeder for them. There is nothing so good as milk for them, but they should have only what they clean up and it should not vary in the degree of sourness or they are apt to have indigestion. Sweet milk direct from the separator is preferable.

Feed for Sow.—After the pigs are two weeks old, the sow should have all the feed she will clean up. If she loses weight too rapidly it is best to feed her three times a day. A good milker will loose around twenty to thirty pounds while nursing her pigs.

Rations for sows suckling pigs must be relatively high in protein and mineral. Protein in the sow's ration stimulates milk production which is essential in producing good growth in young pigs.

Ration 1

Corn, 8 parts by weight;
Shorts, 4 parts;
Tankage, 1 part, or skimmilk 15 parts.

Ration 2

Corn, 6 parts by weight;
Ground wheat, 4 parts;
Tankage, 1 part.

Ration 3		Ration 4	
Corn, 1 bushel;		Corn, 1 bushel;	
Supplement (5 pounds)	{ Tankage, 3 parts; Linseed oil meal, Soybean oil meal or Cottonseed meal, 1 part; Alfalfa meal, 1 part.	Supplement (4 pounds)	{ Tankage, 3 parts; Linseed oil meal, Soybean oil meal or Cottonseed meal, 1 part.
		Pasture or legume hay, self fed.	

Castration.—The best time to castrate boar pigs, is before they are weaned when they are between 3 and 4 weeks old. At this age there is less shock to the pig and, while suckling its dam, the chances are that it will be more thrifty and in better condition and will recover more quickly than when the operation is performed after weaning.

Select a clear, dry day for the work. Carry the pig out to the clean sod and be as clean as possible with knife and hands. Use freely of some disinfectant, as a 3 per cent solution of compound cresol or lysol. Keep the castrated pigs away from mud wallows and dusty beds until the wounds have healed.

Unless you have an exceptionally good individual in the litter, do not save any of the pigs for boars. They are a good deal of trouble to grow out and as a rule are hard to sell. It is best to leave the production of boars to breeders with necessary pastures and equipment and long years of experience.

5. Care of Pigs from Weaning Until Marketing or Breeding

Weaning.—Pigs should be weaned when 8 to 10 weeks of age. If they have been creep-fed they will not miss the sow's milk very much. If they can have plenty of skim milk at weaning time it is of great help. A few days before the pigs are weaned the sow's ration should be cut in half. The sow should be removed from the pigs, leaving the pigs where they are accustomed to be. The sow should be placed in dry lot and scantily fed until the udder is practically dried up.

At the time the club member weans his pigs they should weigh around forty pounds apiece. From this time until they weigh about 100 pounds they should continue to have a ration containing a large amount of protein feed to build the frame-work for the fat that the finished hog should carry.

Feed on Pasture.—In order to make the most economical gains the pigs should be fed on some food forage crop as alfalfa clover, or rape. Good forage will cut down the grain needed for 100 pounds gain by 15%. The early litter should, however, be given about all the feed they will use on this forage, in order to make them gain

fast enough to be ready for the early fall market, which, as a rule, is better than later on when the heavy runs of spring pigs begin.

Some good rations for shoats on pasture are as follows:

Ration 1

Shelled corn, 1 part by weight;
Skimmed milk, 3 parts.

Ration 2

Shelled corn, 6 to 9 parts by weight;
Wheat short, 2 parts;
Tankage, 1 part.

Ration 3

Shelled corn, 9 to 12 parts by weight;
Tankage, 1 part.

Ration 4

(For shoats not on pasture)

Corn, 1 bushel;	} {	Tankage, 3 parts;
Supplement		Linseed oil meal,
(6 pounds or 1¼ gallons)		1 part; Alfalfa meal, ½ part.



Fig. 10.—A clean grassy lot, with individual houses, providing exercise and sunshine, aids in keeping pigs thrifty.

Amount of Feed.—After the feed has been mixed the amount to give the pig each day should be measured, giving half in the morning and half in the evening. A heaping quart cup of Rations 2 and 3 will weight about 1.7 pounds. The pigs should have 3½ to 4 pounds of feed per day, for each 100 pounds of live weight, when on pasture.

Self-feeder.—When the club litter has reached the weight of 100 pounds or thereabouts per hog they are ready to be pushed as rapidly as possible. From this time on a wider ration or one containing a larger proportion of fattening feed, as corn, and less tankage or milk may be fed.

The self-feeder is often a valuable asset at this time, especially if you do not have good forage. If you have good forage it will be best to hand-feed and thus get the pigs to graze more. Pigs on self-feeders are inclined to lie around the feeder and not make use of the forage. The self-feeder will give the maximum finish in the minimum time. When pigs are put on a self-feeder too young they are apt to become finished too soon. At the weight of 100 pounds they are about the right size. As the pig matures the amount of protein necessary decreases. By offering free choice in a self-feeder the pig will consume about the amount of protein he needs.



Fig. 11.—Self-feeder suitable for feeding 125-pound shoats.

Pigs on self-feeder should be watched and if they begin to get too fat the feed will have to be mixed so as to force them to eat more protein feed. The self-feeder saves labor if properly built. The pigs must be on full feed before they are put on the self-feeder. Missouri Experiment Station Circular 118 will give you plans for building the feeder.

In case you do not care to build a self-feeder, it will probably pay you to feed three times daily, feeding slightly less at noon in hot weather than at morning and night. By feeding three times daily, the gain will be a little faster and paunchiness may be avoided in the pig. When hand-feeding do not give more at one feed than

the pigs will clean up. By all means feed at the same time each day if you expect good results.

Average Gains for Different Weight Pigs.—The following table is based on a large number of feeding trials with fattening hogs. By studying it carefully you can have an idea what to expect from your pigs. By using purebred pigs and feeding properly the club member ought to beat these averages. You will note in the last column that as the hog gets larger it takes more feed for 100 pounds gain, so it will probably pay you to sell when your pigs reach 200 pounds or thereabouts.

AVERAGE DAILY GAIN BY PIGS AT DIFFERENT WEIGHTS
(All amounts are in pounds)

Wt. of pigs	Average feed eaten per day	Feed eaten daily per 100 lbs. live wt.	Average daily gain	Feed for 100 lbs. gain
15-50	2.2	6.0	.8	293
50-100	3.4	4.3	.8	400
100-150	4.8	3.8	1.1	437
150-200	5.9	3.5	1.2	482
200-250	6.6	2.9	1.3	498
250-300	7.4	2.7	1.5	511
300-350	7.5	2.4	1.4	535

Rations for Fattening Period.—The following rations may be used on pasture:

I. Corn, 9 parts; Shorts, 2 parts; Tankage, 1 part.	II. Corn, 12 parts; Tankage, 1 part.	III. Corn, 2 parts; Shorts, 1 part; Skimmilk, 4 parts.
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IV.

(In dry lot, use this ration for fattening period.)

Corn, 1 bushel; Supplement (6 pounds or 1¼ gallons by measure.)	} { Tankage, 2 parts; Linseed oil meal, soybean oil meal or cottonseed meal, 1 part; Alfalfa meal, 1½ parts.
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Shade.—When pigs are fed on pasture during the summer they should by all means have shade and water close to the forage plot if good results are to be expected. An individual hog house with sides that open out can be used. Anything that will keep off the sun and allow full sweep of the breeze under the shade may be used.

When your litter reaches the 100-pound mark, if you have an unusually good gilt in the judgment of your Local Leader and

County Agent, you had better take her away from the rest of the litter before she gets too fat, and grow her out rather than fatten her. She can be forced to graze more and thereby cut down the cost of her feed. Use the same ration for her that was given the pigs after weaning, as you want her to go on developing framework.

6. Diseases and Parasites

Worms are probably the worst enemy of the growing pig. By proper sanitation, that is, providing clean quarters for farrowing, and clean pastures, the young pigs may escape infestation with worms. Moreover, they will not be so liable to become infested with bacterial diseases, which cause sore mouth and diarrhea.

Within a few weeks after farrowing move your sow and her litter to a clean lot or pasture; and, after weaning, still keep pigs away from old hog lots. The worm embryos which cause worms in pigs are picked up by the young pigs while rooting around in infested lots. All old hog lots contain many of these embryonic worms.

Young pigs suffer much more from worms than older ones. Besides the actual damage that the worms do, the pigs are left in such a weakened condition that they are more likely to suffer from other troubles and diseases. By keeping your pigs in clean places as suggested, you can largely avoid this trouble, but if your pigs are not doing well, consult your County Leader to see if your pigs are suffering from worms. If so, they may be treated at a reasonable cost.

According to Dr. O. S. Crisler of the Veterinary Department, University of Missouri, College of Agriculture, the following treatment for round worms in pigs has been found to be satisfactory:

Eight ounces of castor oil

One ounce of oil of American worm seed

The dosage of the above mixture is at the rate of one ounce for a hundred pound hog or one-half ounce for a fifty pound pig. A tablespoonful is one-half ounce.

In treating for worms with any remedy it is important that the pigs should not be allowed any feed for at least 24 hours before the medicine is given (except water). One of the nicest ways to administer the medicine is with a one-ounce metal dose syringe. Syringes can be purchased from most any veterinary supply house.

If the medicine is heated it will make the administration easier also will save time as more animals can be treated in the same length of time, due to the fact that it flows easier when being warm. The medicine should be injected well back of the animal's

tongue so he cannot get it out of his mouth.

When the medicine is being administered to a hog by means of a syringe, hold the animal up by the fore-legs and as the assistant injects the medicine, the pig's mouth should be held closed, which will prevent squealing, with the attending danger that the medicine might be drawn onto the lungs. Properly done, this method of treatment is safe, and satisfactory.

If a dose syringe is not available, a tablespoon can be used. The pig is handled in the same way as when the dose syringe is used except that when the mouth is being held it should be allowed to partially open, then place spoon with medicine into mouth, then close mouth, withdraw spoon with upward movement, wiping on roof of mouth and snout. This method is not as fast as the syringe but with a little practice it can be done very satisfactorily.

After the medicine has been given no feed should be allowed for about six hours.

Oil of American worm seed should not be given to animals suffering from fever, constipation, intestinal cataub, or nerotic enteritis, and the treatment should not be given to very young animals or to pregnant sows.

Lice on Hogs.—How may hogs be rid of lice? During warm weather the animals may be dipped or sprayed with a 2% solution of some commercial preparation such as Liquor-Cresolis Compound, Creolin, Kreso. Three ounces to one gallon makes about a two-per-cent solution.

An emulsion dip may be prepared as follows:

Kerosene oil	2 gallons
Soap	8 ounces
Water	1 gallon

Directions.—Make the water hot to dissolve the soap and while it is hot add to the kerosene, stirring the mixture rapidly for ten minutes. One gallon of this mixture is then mixed with nine gallons of water. The preparation may be used in a dipping tank or may be sprinkled over the hogs with a spray pump.

The dip should be used toward evening or on cloudy days as the hot sun may blister the animal's skin if the oil has not evaporated.

The emulsion dip is probably more efficient in destroying the nits than the commercial dip. In either case the treatment should be repeated in a week or ten days to destroy any lice which may have hatched since the previous treatment.

During cool weather, sprinkling the hogs with crude oil is very effective. If this is used in summer, the hogs may blister if turned out in the sunshine.

After treating hogs for either worms or lice the yards should be cleaned of litter.

Hog Cholera.—If any pig in the herd shows symptoms of sickness, such as loss of appetite, vomiting, or diarrhea, no matter if cholera is not near, confine them in a building where no infection carriers can reach them. These sick hogs should be handled as cholera sick until the cause of the disease can be definitely established. There are good reasons for not allowing these animals to run with healthy pigs. In the first place, if the disease should be cholera, these animals giving off the germs of the disease in their excretions and secretions, would supply abundant infection for the healthy pigs. In the second place, even if the disease does not prove to be cholera, the sick hogs should be given a quiet and comfortable place in which they will have a better chance to recover. Some pigs have a very low natural resistance, while others have a strong resistance to hog cholera. The pig that has a low resistance is usually the first to take hog cholera, and if it is promptly isolated, there is a possibility that the rest of the herd may remain healthy. If the sick pig continues to grow worse or if others become sick, it is advisable to employ the best trained veterinarian within reach to make an investigation of the disease.

Hog Tonic.—The health of the pig is more dependent upon proper feed, care and management than upon any hog tonics or stock food. If the pigs are healthy and are getting protein supplements as tankage, skim milk, or alfalfa, about the only extra mineral feed necessary is salt.

If the feed given the pigs is made up entirely of grains, then calcium and phosphate are needed and can be supplied as described in the paragraph on minerals. Wood ashes or ground limestone furnish calcium and bone meal will furnish phosphorus.

If any serious question arises concerning the health of the club member's hogs, information may be obtained by writing direct to the Department of Veterinary Science, Missouri College of Agriculture, Columbia, Missouri.

III. GETTING THE MOST OUT OF THE PIG CLUB

1. Record and Reports

Each 4-H Pig Club member will keep a record of his project work throughout the year and submit it to the local leader, on the report blank provided, in the middle of this circular, for approval when the club work is completed in the fall but before the achievement club program is held.

The local leader will include the reports of each member in his report to the county extension agent. When both the local club leader and the county extension agent approve a member's report, that member is eligible to receive an achievement club pin, if awarded in the county.



Fig. 12.—A healthy litter belonging to a Missouri 4-H pig club member.

2. The Pig Club Tour

It is recommended that the county extension agent and the local club leaders conduct a pig club tour at least once during the year. At a time of the year, when the project work is far enough along to show results and farm people are not too busy.

Usually, one all-day automobile tour is conducted for all the pig clubs of a county. The pig club members, parents, livestock men and other interested persons of the community represented should be invited to take part in the tour.

The program generally consists of making a visit to one or more farms on which good hogs are produced and to the home farms of as many of the club members as possible. The tour will be made more interesting, if each pig club member shows his livestock to the visitors and tells them about his project work when they arrive at his home farm to observe his livestock. When visited, it is suggested that each club member give at least the following facts regarding his project work:

1. State the exact age of pigs, when farrowed, etc.
2. Give exact rations being fed and amounts.
3. Be prepared to explain how much feed has been consumed per pig and cost of same.

Special training should be given the club members in judging hogs while on the club tour, which training should help to prepare them for taking part in the livestock judging contests in the county and at the State 4-H Club Round-up, which will be held at the Missouri College of Agriculture.

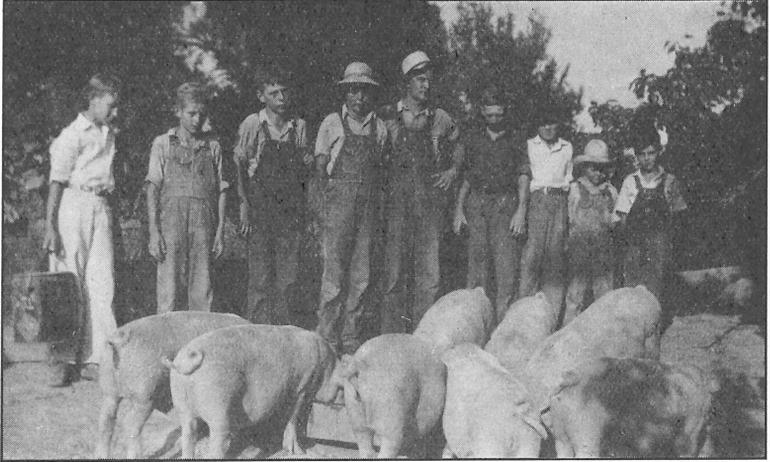


Fig. 13.—The 4-H club tour enables members to compare their projects with those of other members.

3. Preparing for the Pig Club Show

The club member must begin making preparations at least a month before the show if he hopes to have his exhibit in the best show condition. The pig must be in the very best of health if it is to stand any chance. The fat barrow should carry all the covering that can be put on smoothly. This fat must be smooth and firm. This calls for careful feeding and for plenty of exercise. Exercise is also necessary to keep the barrow upon his feet and pasterns.

The gilt or boar to be shown in the breeding classes should not carry so much fat as the barrow; only enough to make them look smooth. To win with the gilt or boar, the boy must feed for stretch and growthiness.

Trimming the Toes.—Work on the pig's feet should be started a month before the show. If the pig is to stand up well on its pasterns, the toes must be kept trimmed back. Stand the pig on a level floor and, with a rasp and sharp knife, trim back the toes and sides of feet until the weight is even on the base of the foot when the leg is placed properly.

It will be necessary to give attention to the feet at least twice before showing, for if too much is taken off at once, the pig will be made lame. For this reason, the last trimming of the feet should

be about ten days before the show. Unless the pig is very gentle, he will probably have to be put in a crate while his feet are being trimmed. By removing the lower board on either side, one can work conveniently through an ordinary shipping crate.

Washing.—At least one week before the show the pigs should be thoroughly washed with soap and water and brushed with a stiff brush. This will loosen up the scurf which another washing may remove. After washing the last time, dry the pig with a towel and bed him down with clean straw.

Oiling.—Practically all breeders who make a practice of showing hogs use oil on the hog's hair. A good oil to use is one composed to two-thirds raw linseed oil and one-third gasoline. This should be put on sparingly with a soft brush or cloth. The oil softens the skin and adds luster to the coat. Only enough oil should be used to brighten up the hair. Before showing, if the pig is rubbed over with a woolen cloth it will add to the shine the oil has given his coat.

Training the Pig.—Considerable time should be spent training the pig before the show. The boy should have a short cane and a light hurdle about 2 feet wide at bottom, 2 feet high, and 1 foot wide at the top. The boards should only be one-half inch thick so that the hurdle may be light. The pig must be absolutely gentle, but not a pet, to show well. The club member should work with the pig until he can easily take it any place around the barn lot and yard, and make it stop and stand where and when he wants it to stand. It takes a great deal of practice and patience for the boy to learn how to show as well as for him to teach the pig how to be shown. The cane is used to guide the pig around the ring; but never to strike or punch.

Trimming Hair.—It is a good plan to clip off the long rough hair around the ears and any long, coarse hair on the face or jowls. The tail should also be clipped excepting the hair that makes the brush at the tip.

Showing the Pig.—When the time comes to show your pig, be ready to show. Be prompt about getting in the ring but always keep the pig under perfect control. Do not try to get the pig on top of the judge, but keep in front of him 8 or 10 feet away. Keep your pig out of the corners, away from the other pigs a little, if possible. Keep the head of the pig down and the back held well up. Keep in a good humor, as any judge admires a good sport and dislikes a poor one. Never stop showing the pig until the ribbons are given out, as you do not know what the judge has in his mind.

4. Judging Hogs

Any boy who hopes to be a successful breeder or feeder of hogs must first know what a good hog looks like. If you learn to be a good judge of hogs while young it will help all through life.

The following is a description of what a good market hog of the lard type should look like.

The General Appearance of the lard-type hog fattened for the market embodies a long, deep, and reasonably wide conformation, together with great smoothness. The legs should be of a medium length, so as to give a rather upstanding, but not leggy appearance. He should be tall as measured from his back to the ground, rather upstanding as measured from his belly to the ground, yet deep from back to underline. The top line should be arched, showing

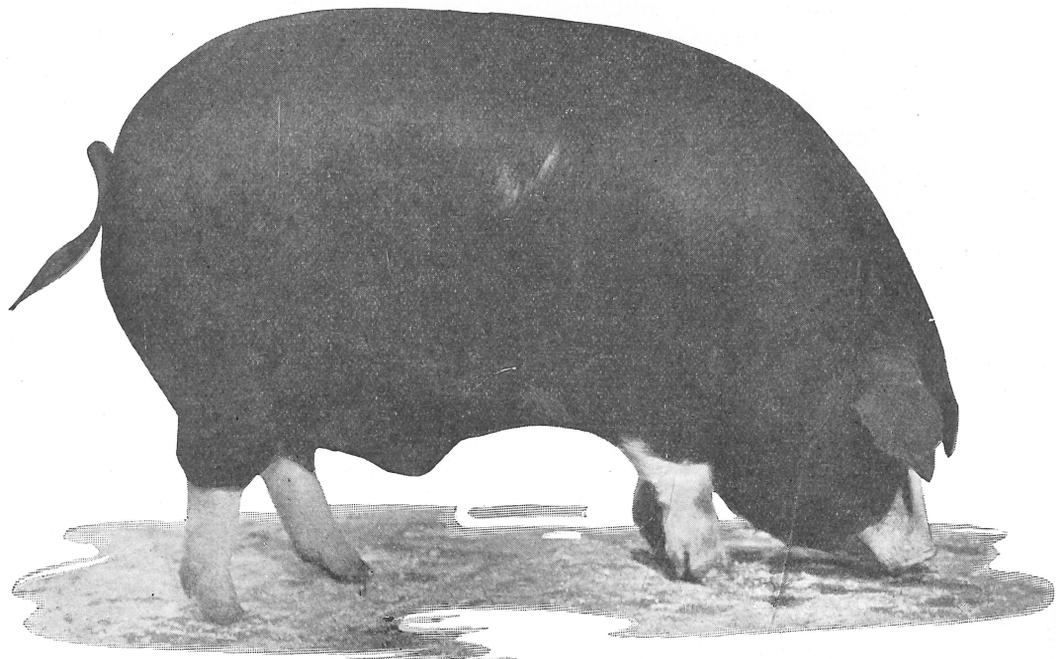


Fig. 14.—Grand champion barrow at International Livestock Show at Chicago, bred, fed and exhibited by the Missouri College of Agriculture.

an even curvature from shoulders to tail, insuring against weakness of back and loin. The hips should have about the same height as the tops of the shoulders, and the rump should round off rather gradually. The underline should be straight, trim, and level, insuring against paunchiness and against flabbiness in fleshing along the belly. The flanks should be well let down. The hog should be uniform in his width and uniform in his depth, showing no ten-

dency to taper in width and to be heavy in shoulders and light in hams. He should be very smooth in both form and fleshing, and should show refinement of head, ear, coat, and skin. He should have bone of medium size, free from any roughness and coarseness and also free from over-refinement and weakness. His legs should be straight and he should be active and should show good style. The lard hog is more quiet in disposition than the bacon hog, but a sluggish, inactive hog is objectionable. Lard hogs should be fairly active. This makes them better grazers, insures exercise, and helps to develop heart and lung capacity and strength of feet and legs. Too frequently the fat, finished pig is short-winded and is weak in underpinning, so that it becomes a difficult matter and perhaps impossible to get him safely to market.

The **Head** is of medium size, medium length, broad between the eyes, and short of snout. A narrow head and finely pointed snout are indications of a poor feeder. The shape and length of head vary according to the breed, but in none of the lard breeds is much length or narrowness desirable. The eyes should be as large, prominent, and clear as possible, a small sunken eye obscured by rolls of fat around the socket being objectionable. The carriage of the ear varies according to the breed, being erect in some and drooping or broken in others. In all breeds, however, a fine and medium sized ear, neatly attached to the head, is desirable. The jawl should be neat and trim.

The **Neck** should be of medium length, slightly arched, and medium broad on top. A neck that is narrow or peaked on top is not often associated with a body of the desired conformation, and it also denotes lack of condition.

The **Shoulders** are very frequently too open and prominent, so that as one looks down at the top of the hog the shoulders are found to be much the widest part of the animal. They should be well laid in, very smooth, and have no greater width than the rest of the body.

The **Front Legs** should be of medium length, this being a somewhat variable feature, depending on the breed, and they should also be straight. It is especially important that the pasterns shall be short, upright, and very strong, and that the feet be strong also. These points should be particularly emphasized, for it is a fact that the weak, brokendown pasterns and weak, spreading toes are among the most common and most serious faults in hogs of the lard type. Weak legs may be due to a natural or inherited weakness, or to improper feeding during the growing period. If growing pigs are fed on corn exclusively, they are liable to develop weak-

ness of the legs, because corn does not carry sufficient bone and muscle-building constituents to satisfy the demands of the animals during the growing period. The bone of the market hog should be medium size, free from coarseness, and amply sufficient to carry the weight of the hog and to provide strength of feet, pasterns, and legs.

The **Chest** is an evidence of the constitutional vigor possessed by the animal. It should be deep and wide, and should be well filled out behind the shoulders and elbows, affording a large heart-girth. The underline should not cut up between the fore legs, but carry straight forward so as to give as much depth through the chest as through the middle of the body.

The **Back and Loin** of the lard hog are very important parts. They should be rather long and of good but not excessive width, and, as the animal is viewed from the side, they should be arched. The top of the hog should be thickly fleshed and smooth. There should be no marked roundness off from the middle line, but instead a slight arch over the top from side to side and good width of top due to well sprung ribs and thick but not excessive fleshing. A dip in the back, or sway-back conformation, greatly detracts from the appearance of the animal and may indicate weakness of muscling; hence the cuts from the back and loin may be lacking in lean meat.

The **Sides** of the hog should be long from shoulder to ham and should carry down straight and deep from back to loin to belly and flanks. Very short hogs raised and fed for market are open to objection because such a type does not grow rapidly. On the other hand, extreme length is often secured at the expense of constitution and feeding qualities. Extremes are to be avoided. When fattened for the market, the sides should be thickly and smoothly fleshed so that every point along the sides fills out to meet the same straight line from shoulder to ham. Wrinkles in the skin along the side are objectionable because they injure the smoothness of appearance which is so desirable, and if the wrinkles are very deep and are permanent, that is, do not disappear when the hog changes position, they are called "creases" and are highly undesirable.

The **Belly** should be straight, not paunchy, insuring a good dressing percentage when the hog is killed. The belly should be trim, not flabby, and should be wide rather than narrow or V-shaped.

The **Rump** should be long and as wide as the rest of the top, and it should carry out from the hips to end of body with a slight

curve downward to coincide with the arch of the entire top from head to tail. Very often the rump will be found very steep or drooping, the higs being carried too high and the tail set too low. Accompanying this kind of a rump and to a certain extent causing it, is a faulty position of the high legs, the feet being set too far under the body. This constitutes a weak conformation of the hindquarters, and gives the animal an ungainly appearance. The rump should not taper in width from hips to end of body, but be uniform in width throughout.

The **Hams** really include the rump as well as the thighs and twist. They should be large and well developed, being deep and of good width, with the thickness and fullness carried well down toward the hocks. They should be reasonably firm in flesh and should be neat in form.

The **Hind Legs** should be of medium length and should carry down straight and vertical from the hocks to the ground. The pasterns should be short, upright, and very strong, the feet well formed, and the toes strong. The bone of the market hog should be of medium size and free from coarseness.

The **Hair** should be straight rather than curly, and should be fine. A harsh, bristly coat is an evidence of coarseness. A curly coat is objectionable because the curly hair is usually coarser than straight hair, and curly coated hogs do not shed their coats properly, which injures the appearance. A swirl or rose in the hair on the back of the rump detracts from the appearance, and is objectionable for that reason. The hair should be abundant, straight, and fine, and should lie close to the skin. Such a coat affords the most protection and adds to the attractiveness of appearance.

The **Quality** of the lard-hog is determined by the refinement of the head, and bone, smoothness of finish, and freedom from wrinkles and creases. The hog with quality has a clean-cut, well-bred appearance that pleases not only the producer and hog fancier, but also the butcher, because such a hog yields a neat, tidy carcass that attracts buyers, and the cuts of meat show a refined texture that is not to be found in the cuts from a coarse, rough hog.

The proper **Finish** of a lard-hog is secured by a fairly high degree of fattening. When handled along the top, below the shoulders, and at the lower border of the hams, the fleshing should be firm instead of soft as is often the case, especially in some breeds. Some hogs become lumpy in their covering of fat, which is objectionable. When the fattening has proceeded far enough to round out the lines of the animal and give him a smooth, springy, mellow covering of flesh, he is in the right condition to meet with most

favor from the butcher, and, as a rule, this degree of finish is most profitable to the producer.

The **Temperament** of the lard-hog is quite different from that of the bacon hog, being less active and more inclined to quietness, lying down, and taking on of fat. Most producers believe that better results are secured if the hog is disposed by temperament to take considerable exercise, especially during the growing period; they are selecting more active hogs for breeding, and are managing their young stock in such a way as to induce them to take a large amount of exercise. This results in growthy pigs of robust constitution and lessens the danger of disease. Exercise also develops the muscles and strengthens the pasterns and legs. Notwithstanding this present-day tendency to select a more active hog than in the past, there must always be considerable difference between the lard type and bacon type in this respect, the former being more quiet, slower in movements, and having greater natural aptitude to fatten.

The **Weight** for age is an important consideration because it is a measure of profit-making ability of the hog. Pigs weighing over 150 pounds, fattened for the market, should have at least one pound of weight for every day of their age. On this basis, a pig six months old should weigh not less than 180 pounds. It is not unreasonable to fix the standard weight for lard hogs six months old at 200 pounds; nine months, 300 pounds; twelve months, 400 pounds. Hogs are matured at about thirty months of age. Mature boars in good condition should weigh 800 pounds or over; sows, 600 pounds or over. The average weight of hogs received at the large markets at the present time is about 225 pounds. Hog growers are agreed that weights from 200 to 225 pounds for market hogs are usually most profitable.

Bearing this description in mind the club members will be able to use the score card intelligently.

SCORE CARD FOR LARD HOGS—FAT BARROWS

SCALE OF POINTS	Possible Score	Member's Score
Age—estimated-----yrs. actual-----yrs.		
GENERAL APPEARANCE—26 Points.		
Weight—estimated-----lbs., actual-----lbs. score according to age -----	6	-----
Form, arched back, straight underline; deep, broad, medium length, symmetrical, com- pact, standing squarely on legs -----	8	-----
Quality, bone of firm texture, fine skin, silky hair, clearly defined features and joints, mellow touch -----	6	-----
Condition, thick, even, covering of firm flesh, especially in regions of valuable cuts; in- dicating finish; light in offal -----	6	-----
HEAD AND NECK—8 Points.		
Snout, short, not coarse -----	1	-----
Face, short, broad, cheeks full -----	1	-----
Eyes, large, full, clear, bright, wide apart, not obscured by wrinkles -----	1	-----
Forehead, broad -----	1	-----
Ears, well carried, fine, medium size -----	1	-----
Jowls, full, firm, broad, neat -----	1	-----
Neck, thick, medium length, somewhat arched, neatly joined to shoulders -----	2	-----
FOREQUARTERS—10 Points.		
Shoulders, broad, deep, full, compact, covered with firm flesh -----	6	-----
Breadth, wide, deep, breast bone advanced --	2	-----
Legs, straight, strong, wide apart, pasterns short and strong, feet strong -----	2	-----
BODY—33 Points.		
Chest, deep, broad, girth large, foreflank full	4	-----
Back, broad, slightly arched, medium length, thickly, evenly and firmly fleshed -----	8	-----
Sides, deep, medium length, closely ribbed, thickly, evenly and firmly fleshed -----	8	-----
Loin, broad, strong, medium length, thickly, evenly and firmly fleshed -----	8	-----
Belly, straight, proportionate width, firmly fleshed -----	3	-----
Flanks, full, low -----	2	-----
HINDQUARTERS—23 Points.		
Hips, smoothly covered, proportionate width	3	-----
Rump, long, rounding slightly from loin to root of tail, width well carried back, thickly, evenly and firmly fleshed -----	8	-----
Hams, deep, wide, thickly, evenly and firmly fleshed -----	10	-----
Legs, straight, strong; pasterns short and strong, feet strong -----	2	-----
Total -----	100	-----

Disqualifications -----

Animal----- Date-----

Club Member----- Standing-----

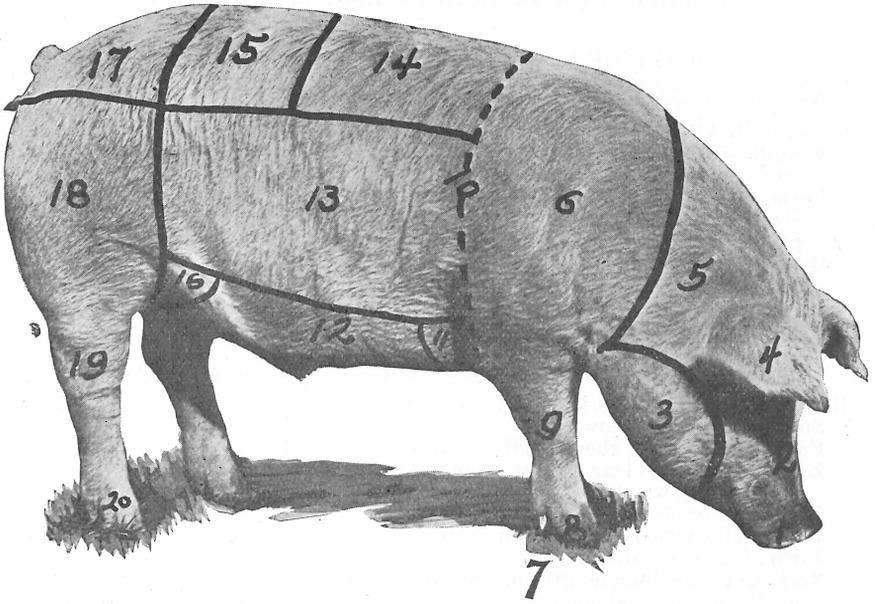


Figure 15.

- | | | | |
|----------|-----------------|----------------|----------------|
| 1. Snout | 6. Shoulder | 11. Fore Flank | 16. Hind Flank |
| 2. Face | 7. Dewclaw | 12. Belly | 17. Rump |
| 3. Jowl | 8. Foot | 13. Side | 18. Ham |
| 4. Ear | 9. Foreleg | 14. Back | 19. Hind Leg |
| 5. Neck | 10. Heart Girth | 15. Loin | 20. Pastern |

5. Suggested Procedure in the Judging of Live Stock

Essentials in Judging Livestock.—The good judge of livestock has learned the following:

1. To know and recognize essentials,
2. To observe details,
3. To properly evaluate what is seen.

Knowledge of the fundamentals of animal form and functions is the basis for the first consideration. Ample practice with the score card is the surest method of teaching students to observe. In this connection, the problem of evaluation should receive further consideration. The use of these cards may be followed by practice in writing reasons for placing without their use as a guide.

Most persons who become proficient as livestock judges, use a definite scheme for examining animals. Such scheme may not be evident to the observer, and perhaps not realized by the person involved; but exists nevertheless. It involves not only the mechanics of examining animals but the mental processes used. No one scheme may be said to be best. Any satisfactory plan must be logical, convenient, and complete.

Students are inclined to spend too much time in handling animals or observing them at very close range. This tends to over-emphasize details. In examining an animal, a general view at a distance of 15 to 20 feet is worthwhile at the outset. It gives one an idea of proportion and general character. This may be followed by a front, side, and rear view of the animal, and by the necessary handling of the animal. In case of horses, if possible, the action then should be observed. All of these activities should be conducted with the idea of careful observation at all times of both details and general characteristics. If a class of animals is being studied, each should be observed in this manner. If students are unable to arrive at a decision after such procedure, close comparison of the two animals concerning which uncertainty exists may be made. If proper observation has been made, a decision may be reached and reasons for it kept clearly in mind.

In writing or stating why a class of animals has been placed in a given way, reasons should take the form of comparison and contrast of the animals, telling why the first excels the second, why the second excels the third and the third the fourth.

In placing animals, there are usually a few more important differences upon which decision is based. If possible, these differences should usually be mentioned in order of the weight that they have had in forming the opinion.

If in any class one animal is clearly the best or the poorest, the fact should be so stated. If there is a pronounced difference between two animals, it should be so stated. Essential differences between animals or disqualifications of animals should be mentioned when first comparing two animals. Arguments should be presented logically, convincingly, and with only sufficient length to cover the subject under discussion. It is worse than useless to draw out such statements.

IV. REFERENCES

The following are publications of the Missouri College of Agriculture, and may be secured through your county agent or by writing to the Mailing Room, Missouri College of Agriculture, Columbia, Mo.

- | | |
|----------------------------------------------------------------------|----------------------------|
| (1). Pastures for Hogs | B 247 |
| (2). Soybeans and Soybean Oil Meal in Swine Rations | B 266 |
| (3). Rations for Weanling Pigs | B 376 |
| (4). Self Feeders for Fattening Swine | C 118 |
| (5). Brood Sow and Litter | E 220 |
| (6). Various Grains and Other Corn Substitutes as Hog
Feeds | E 321 |
| (7). Missouri Plan of Growing Thrifty Pigs | E 388 |
| From the U. S. Department of Agriculture, Washington, D. C. | |
| (8). The Prevention of Roundworms in Pigs | Leaflet No. 5—U.S.D.A. |
| (9). Hog Cholera | Farmers' Bulletin No. 834 |
| (10). Hog Lice and Hog Mange | Farmers' Bulletin No. 1085 |
| (11). Diseases, Ailments, and Abnormal Conditions of
Swine | Farmers' Bulletin No. 1244 |
| (12). Internal Parasites of Swine | Farmers' Bulletin No. 1787 |
| (13). Controlling Lungworms of Swine | Leaflet No. 118 |

V. THE PIG CLUB MEMBER'S OBJECTIVES

Sow and Litter Project.—Each member will feed and care for one or more sows from at least two weeks before farrowing, through the farrowing period; and to feed, care for and develop the litter of pigs up to marketing time or up to breeding age, when a show, or round-up is usually held. The sow may be grade or purebred and may be a gilt or mature sow. A project record to include breeding and farrowing record, feed record and a financial record is an essential part of the project work. Sow and litter projects should be started so as to secure desirable breeding stock, in time to produce early spring litters, or early fall litters, if fall litters are to be produced.

Market Pig Project.—Each member will feed and care for one or more pigs, (usually three barrows) from weaning time until ready for market, keeping a complete feed, marketing and financial record of the project. Spring or fall pigs may be fed.

Purebred Gilt Project.—Each member will feed and care for a purebred weanling sow pig in such a manner as to develop her into a breeding gilt, keeping a complete feed and breeding record as well as a financial record.

Some Things Pig Club Members Should Try to Learn About Hogs

1. How to know and select good breeding animals, sows, gilts and boars.
2. How to feed and manage hogs to produce a market animal or a breeding hog as desired.
3. How to know what feeds to use and how to combine feeds to secure the desired results.
4. How to house and care for hogs.
5. How to handle breeding hogs from breeding through farrowing and up to weaning time.
6. How to prevent diseases and parasites in hogs by sanitation and other measures.
7. How to keep a practical feed record which will tell accurately how much feed has been fed, the amount of gain in weight obtained, and the cost of the gain.
8. How and when to market hogs.
9. How to complete the pig club project.

My Responsibilities As a 4-H Club Member

1. To be a good citizen of my Club, Community and County.
2. To attend project group meetings.
3. To attend community club meetings.
4. To carry a worth while project and keep an accurate and complete record.
5. To demonstrate before the community club as a team member or as an individual.
6. To exhibit club products at the community or county achievement day or fair.
7. To participate in judging work.
8. To complete the project work and turn in the project record.

**RECORD AND REPORT BLANK FOR THE 4-H
PIG CLUB MEMBER**

Name----- Address-----

Project----- County-----

Name of Club-----

Project Leader-----

Date Started----- Date Completed-----

(1). Number Project Meetings Attended -----

(2). Number Community Club Meetings Attended -----

(3). Number Demonstrations Given, Individual -----

Team Member -----

(4). Where did you exhibit your animals?-----

Prize Won -----

(5). Did you take part in livestock judging work? -----

(6). What special club events did you attend, such as club camp,

State Round-up, etc? -----

----- Club Member

Table 1.—ANIMALS USED

Project	Breed							
	Number and Kind	Date of	At Start of Project		At End of Project		Gain or Loss	
			Wt.	Value	Wt.	Value	Wt.	Value
			\$		\$		\$	
1.								
2.								
3.								
4.								
5.								

Table 2.—FEEDS FED

Kind of Feed	Total Amount Fed—lbs.	Average Price Per Pound	Total Cost	Feed per 100 lbs. gain
Corn			\$	Bu.
Oats				Bu.
Wheat				Bu.
Barley				Bu.
Shorts				Lbs.
Bran				Lbs.
Oilmeal				Lbs.
Tankage				Lbs.
Skim Milk				Gals.
Hay—Kind				Lbs.
Pasture	No. Head ---- No. Days----	Price Per Head Per Day-----		Feed Cost Per Pig, Sheep or Calf
Total Fed Cost			\$	
Gain in Weight	Original Animals	Young Animals	Total	Feed Cost Per 100 lbs. gain

Table 3.—YOUNG ANIMALS PRODUCED AND OTHER PRODUCTS

Date Born	No. born		No. raised		Sold or Used			On Hand at end of Project		
	Male	Female	Male	Female	No.	Wt. lbs.	Value	No.	Wt. lbs.	Value
							\$			\$
Totals										
Other Products	Kind				Amount			Value		
Sold					lbs.			\$		
On Hand					lbs.			\$		

Table 4.—FINANCIAL SUMMARY

Receipts:—			
1.	Original Animals—Sold	\$-----	
	(From Table 1.)—On Hand	\$-----	
2.	Young Animals —Sold	\$-----	
	(From Table 3.)—On Hand	\$-----	
3.	Other Products —Sold	\$-----	
	Wool, Meat, Etc. (From Table 3.)—On Hand	\$-----	
4.	Total Receipts (Add above items)		\$-----
Expenses:—			
5.	Cost or Value of Original Animals at Beginning	\$-----	
6.	Cost or Value of all Feeds Fed (From Table 2.)	\$-----	
7.	Other Expenses	\$-----	
8.	Total Expenses (Add items 5, 6 and 7)		\$-----
9.	Receipts Less Expenses (Line 4 - Line 8)		\$-----
10.	Cash Value of Any Prizes Won		\$-----

Use this page for your 4-H club story and any other club records.

