

# PIG PROJECTS

## for 4-H Clubs

By E. J. Wilford and F. E. Fish



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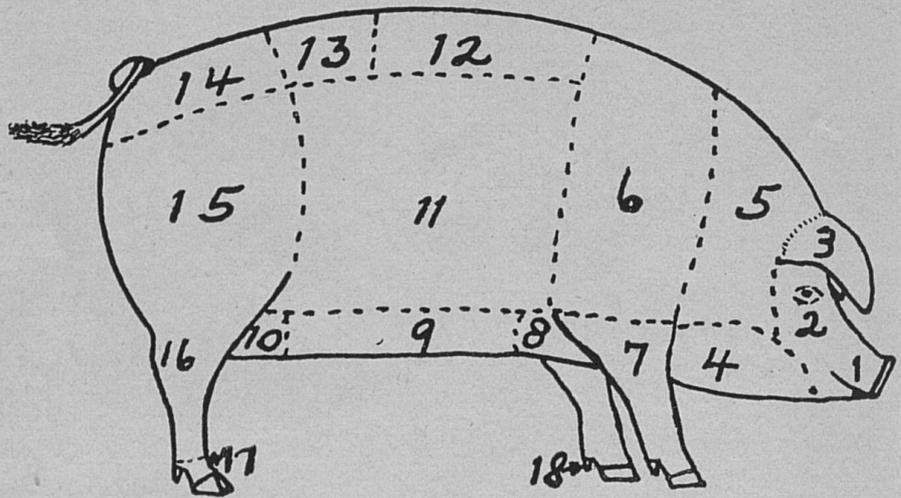


Fig. 1.— Parts of the hog

1. Snout. 2. Face. 3. Ear. 4. Jowl. 5. Neck. 6. Shoulder. 7. Fore leg. 8. Fore flank. 9. Belly  
 10. Flank. 11. Side. 12. Back. 13. Loin. 14. Rump. 15. Ham. 16. Hock. 17. Pastern. 18. Dew  
 claw.

# Pig Projects for 4-H Clubs

By E. J. WILFORD and E. E. FISH

TWO PROJECTS are described in this circular; one for raising a pig for the breeding herd, and the other for fattening a pig for market. The object of these projects is to teach farm boys and girls the proper method of feeding, care, and management in raising pigs.

## REQUIREMENTS OF THE PROJECTS

1. Each member must be enrolled before June 1.
2. Each member shall raise at least one pig from about weaning age to 6 or 7 months. Pigs should have been farrowed on or after March 1.
3. Each member shall feed, care for and manage the pig alone. He may use help for hauling and weighing.
4. Each member shall keep a record of all expenses of the project. These records will be used in judging the contest.
5. Each member shall complete his record and send it to the County Agent or local club leader, as soon as the project is closed.
6. Each member should attend all meetings of his club and take part in its activities, to get the most development out of 4-H Club work.

## BREEDING-PIG PROJECT

The pig should be a well-grown purebred weanling farrowed on or after March 1. This farrowing date is important if the pig is to be shown in the open classes at fairs, because most show-ring classifications have March 1 as one of the base dates.

### Shelter for the Pig

Before selecting your pig, build a shelter for it unless you have a suitable one already. Several different kinds of shelter may be built by the club member: the A-type house, the box-type house, the straw shade, or a large box. The A-type and box-type houses will probably be the most satisfactory. If neither of these is used a very practical shade and shelter may be built by using some old boards or straw supported by poles. Perhaps a large box will be easiest obtained. Be sure, however, that the box meets the requirements of a good hog house. A good hog house must be dry, well lighted, well ventilated, cheap in construction, free from dust, of suitable size, warm in winter, and cool in summer.<sup>1</sup>

<sup>1</sup> Plans for hog houses can be had from the College of Agriculture and Home Economics, University of Kentucky, Lexington. Order the following blueprints at 10 cents each. No. C-6-28-1, an 8-ft. A-type house; No. C-6-39-1, an 8-ft. x 8-ft. shed-roof house; No. C-6-74-1, a double-pen, shed-roof house; No. C-6-94-1, an 8-ft. x 8-ft. sunlight movable house. Leaflet AI-3, containing directions for building a straw hog house, is free.

### Selecting the Pig

Select your pig carefully, choosing a breed well represented in the neighborhood. Choosing a popular breed and an extra good pig of that breed may be very important in aiding you to sell the produce. By starting with an inferior animal the club member will handicap himself, even though the pig is registered. A good breeding pig has the following characteristics:

**Symmetry.**— Well balanced, smooth, uniform in width and depth with straight legs well placed; head and neck neat, and smoothly joined.

**Vitality.**— Bright, expressive eyes; broad deep chest; active and alert.

**Feet and Legs.**— Legs of medium length and size, straight, and placed wide apart; pasterns short and strong (Fig. 2).

**Quality.**— Fine, soft, glossy hair; smooth, pliable skin, free from wrinkles, and medium strong bones. A swirl (sometimes misnamed roach) is a tuft of hair, usually along the topline, where the hairs grow in all directions. This is considered a lack of quality and is objectionable in all breeds.

**Breed characteristics.**— Each breed has its own specific characteristics. These appear in color marking, set of ear, shape and dish of face, and general physical conformation. Base the selection of breeding animals on trueness to type.

**Femininity and masculinity.**— These characteristics are not pronounced in weanling pigs. The character of the boar pig's sire is the best guide to its masculinity. The gilt should have not less than 10 well-developed teats uniformly placed on a neat, nearly straight underline.

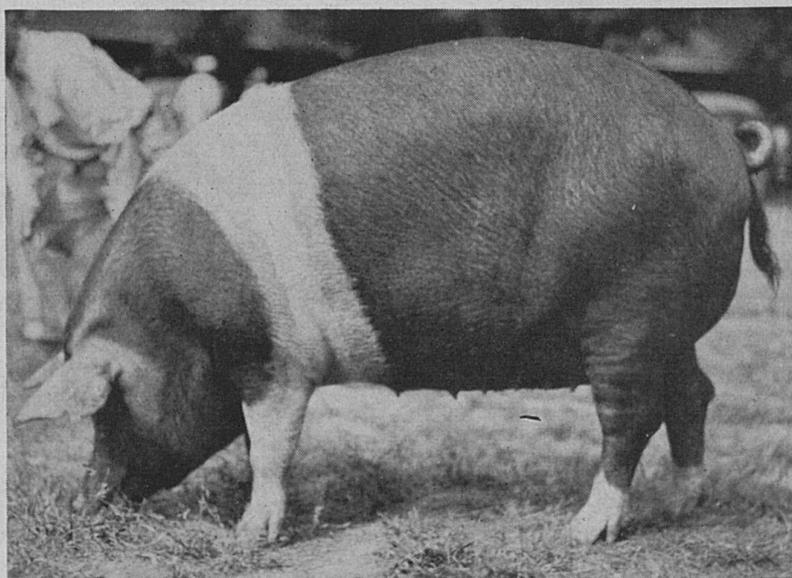


Fig. 2.— A good type of gilt

### Quarantine

If the pig is bought from another farm, quarantine it for 3 weeks to guard against the spread of any contagious disease. In addition dip or hand-scrub it with a good disinfectant such as a 2-percent solution of creolin.

### Sanitation

To control parasites and many diseases keep your pig and his house and surroundings clean and dry. Keep the surroundings free of boards, cobs, and trash, as these provide good places for the development of disease germs. If the pig does not have plenty of clean range, spade or plow the ground around the house once or twice during the summer.

**Lice.**—Sprinkle the pig with crude oil, or with crank case oil if it is not too saturated with gasoline. During hot weather treat the pig late in the day. Do not turn the pig out immediately after oiling because the hot sun will cause blistering. Oiling hogs on extremely cold days is unwise, as it seems to make them more susceptible to colds. Treat pigs 3 times at 10-day intervals.

**Roundworm Protection.**—In choosing pigs for the project, get them, if possible, from a litter that has been raised under a strict swine-sanitation program (See Kentucky Extension Circulars 84 and 368). Then continue the sanitation program by the following practices:

1. If possible put your pig or pigs in a house and a lot that have not been used by hogs for 3 years.
2. If the house has been used for pigs within 3 years, wash it thoroughly with boiling water and lye (a 13-ounce can to 5 gallons of water) before placing your pig in it.
3. Keep the pig or pigs away from other hogs.

### Feeding

Proper selection of the pig is only a start toward success. The continuous growth of the pig is very important. Feed the pig regularly a liberal allowance of a variety of feeds. Improper feeding limits the development of any animal no matter how well it is bred for growth.

**Grain.**—The kind of grain to feed depends upon price. However the lowest priced grains are not always the most economical, when the weight per bushel and the relative merit of the grain are considered.

For best results with small grains, grind them for feeding. Taking corn at a value of 100, ground small grains have about the following value, pound for pound, when fed with a proper protein supplement: ground wheat 107, ground barley 86, and ground rye 68. Ground oats are seldom used in Kentucky, but are given a value of 72. Pigs soon lose their appetite for ground rye; therefore its value soon goes down. The above values are influenced by (1) the quality of the grain, (2) whether fed on drylot or pasture, and (3) whether fed alone or with other feeds.

The table below will help club members to select grain according to feed value and price.

	Feed Value	Price per Bushel			
If corn is worth.....	100	.56c	.70c	.84c	.98c
ground wheat is worth.....	107	.64	.80	.96	1.12
ground barley is worth.....	86	.41	.51	.61	.72
ground rye* is worth.....	68	.38	.48	.57	.67
ground oats is worth.....	72	.40	.50	.60	.71

\* Toxic after 40 days

#### MIXTURES FOR GROWING PIGS UP TO 100 POUNDS AND FOR BREEDING STOCK OVER 100 POUNDS

Mixture	Parts by Weight	Parts by Measure	Weight of Mixture per Quart <sup>1</sup>
Mixture 1			
Shelled corn .....	9	9	1.68 lb
Tankage .....	1	1	
Mixture 2			
Shelled corn .....	6	6	
Middlings .....	3	6	1.26 lb
Tankage .....	1	1	
Mixture 3			
Shelled corn .....	8	8	1.70 lb
Ground soybeans .....	1	1	
Mixture 4			
Cornmeal .....	5	5	
Middlings .....	1	2	1.09 lb
Ground oats .....	3	6	
Tankage .....	1	1	
Mixture 5			
Corn (ground) .....	1	1	
Skimmilk .....	3	3	

<sup>1</sup>These weights were taken with the quart measure level full without shaking, tamping, or pressing the feed down in the measure.

These mixtures can also be used as guides in making other mixtures. Instead of corn, wheat, barley, rye, or hominy meal can be used. Or 1 pound of tankage can be replaced by 3 or 4 pounds skimmilk or buttermilk. Two pounds of linseed oilmeal or soybean oilmeal may replace 1 pound of tankage. The oilmeals do not contain as much mineral as tankage does, so it is important that the pig be given mineral in addition to oilmeal feed. Protein feeds may be cut  $\frac{1}{3}$  to  $\frac{1}{2}$  if the pig is on good pasture.

**Protein supplement.**— The next step is to select the feed to supply protein. The standard protein supplements have about the following values when fed with corn valued at 1 cent a pound.

100 pounds of tankage (60%) is equal in value to  
160 pounds of linseed oilmeal; *or*  
160 pounds of ground soybeans; *or*  
250 pounds of wheat shorts or middlings; *or*  
1,134 pounds of skimmilk or buttermilk (142 gallons).

Based on these figures, tankage at \$60 a ton is as cheap as skimmilk or buttermilk at 26.45 cents a hundred pounds (2.27 cents a gallon), soybean oilmeal at \$39.96 or ground soybeans at \$37.50 a ton, or wheat middlings at \$24 a ton. Experiments show that soybean oilmeal has a greater feeding value than linseed oilmeal.

**Amount to feed.**— All pigs do not have the same eating capacity, therefore the amount of feed to use cannot be stated definitely. The

best plan is to give the pig all it will eat in about 30 minutes twice daily.

**Water.**—Usually pigs suffer more from lack of water than from lack of feed. Keep plenty of fresh, clean water where the pig can get it.

**Pasture.**—Cost of raising a pig is reduced if the pig has abundant pasture or a good cut forage. These crops are a source of nutrients, and they help to keep the digestive tract in good condition, making the pig resistant to disease. Cut clover, grass, or weeds, and give to the pig, if it is kept in drylot. Several kinds of pasture and forage such as young rye (not over 12 inches high), clover, rape, alfalfa, bluegrass, sudan grass, and sweet clover should be given to the pig. A movable pen is convenient for pigs on pasture.

**Minerals.**—Be sure your pig has enough salt. Keep salt where the pig can get it whenever he wants it. However, if he has not been accustomed to salt, begin by hand-feeding small amounts daily. When the pig's craving for salt has been somewhat satisfied, use the free-choice method. The usual standard is  $\frac{1}{8}$  to  $\frac{1}{4}$  of an ounce of salt per day per pig, depending upon the kind of feed given the hog. When tankage is used instead of a vegetable protein supplement, less salt is needed. A pound would thus last 2 to 4 months for one pig, if none were wasted.

A lack of calcium in the pig's feed may cause serious nutritional disorders, possibly rickets. Give your pig a calcium supplement if the protein supplement fed is of vegetable origin. It is unwise to depend on grains for calcium because all grains are low in calcium. Fine-ground limestone is a good calcium supplement, plentiful and cheap in most localities. Bonemeal is another source of calcium and a good source of phosphorus. Pigs get enough phosphorus in grain, however, and so the only need is to supply calcium. Calcium in fine-ground limestone costs much less than in bonemeal and experiments have proved that pigs can make good use of calcium from the fine-ground limestone. The best method of feeding limestone or bonemeal is to place it in a strong wooden box, well protected from the weather, where the pig may eat as much as he needs.

### Handling

Get on good terms with your pig at once by treating it kindly. The best time to get acquainted is while the pig is eating. After you are on good terms with it, urge it along with a stick, cane, or buggy whip, and teach it to respond readily to your directions. Study its characteristics and learn to handle the pig so that it will show at its best.

**Trimming the ears and the tail.**—About 2 weeks before the show, trim the ears and tail. Using livestock clippers or a small pair of scissors, clip close all the hair on the inside and outside of the ears. Do a good, smooth job as it adds greatly to the appearance of the pig. Clip the hair on the upper part of the tail close, leaving a large bush on the end. Careful clipping at the base of the tail blends the hair at this place with that on the rump.

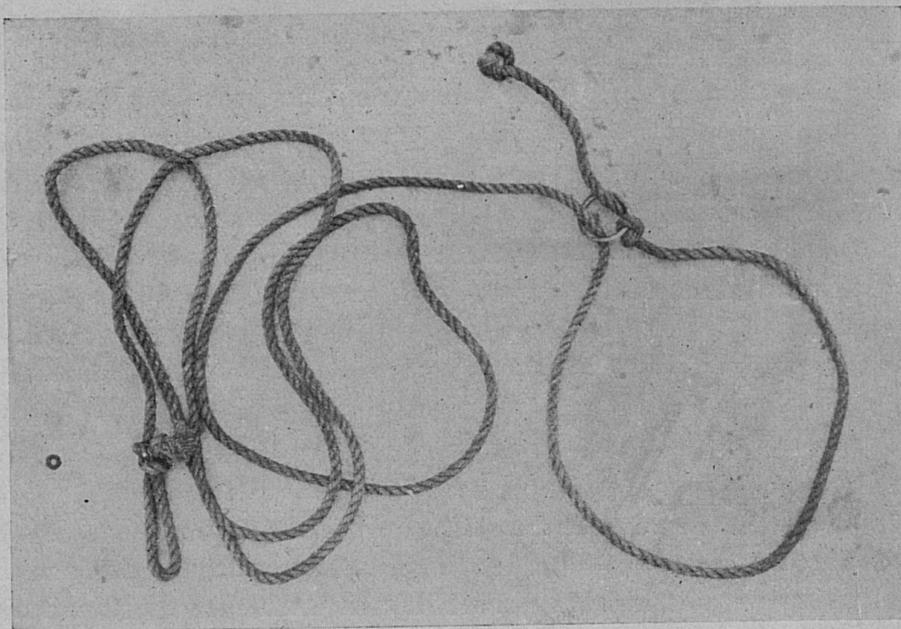


Fig. 3.— A rope noose used for holding pigs

**Trimming the feet.**— Trim the feet about 3 weeks before showing, because if the toes are trimmed too close, the pig may be lame for a short time. Trimming early gives the feet a chance to get well before show time. A lame pig never shows well. Often the pig's feet may be trimmed while he is lying down. It is best, however, to put the pig into a crate which has had the lowest slat removed (Fig. 4). Place a piece of two-by-four under the pig's foot so that the rasp or pruning shears can be used to cut off the surplus hoof. Trim as close as possible all the way around the outer edge of the foot, but do not trim either between the toes next to the foot, or the bottom inner wall of each toe. The object is to level the foot by shortening and evening the toes. Trimming too close will cause the foot to become sore, because the weight of the pig will then be supported mainly by the cushions. If a little blood is drawn by too close trimming the foot may be sore temporarily. Shortening of the toes improves the appearance of the foot, and makes the pig stand straighter upon its pasterns. Use fine sandpaper to polish the hoofs on the day of the show.

**Washing.**— Wash the pig thoroughly with tar soap and lukewarm water at least twice before, and once after reaching the show grounds. A clean pig has a much better chance of winning than a dirty and ill-kept one. Wet the pig, rub soap into its hair, then with a brush and water wash the pig clean. Don't rub too hard as it may make the skin tender and sore. Rinse thoroughly to remove all soap.

**Oiling.**— After the hair is thoroughly dry, apply oil lightly to all pigs except white-haired breeds. Powder white pigs with talcum powder, or with powdered soapstone alone or with a little ultramarine added. Apply it with a sifter top can or with a muslin bag. For black or red pigs, use one of the following dressing oils:

$\frac{2}{3}$  linseed oil and  $\frac{1}{3}$  gasoline

or

$\frac{2}{3}$  light mineral oil and  $\frac{1}{3}$  gasoline or kerosene (or  $\frac{1}{6}$  each of gasoline and kerosene)

Sometimes 1 pint of linseed oil added to about 1 gallon of water gives good results. The oil and water do not mix, but the water serves to prevent too much oil being applied. Be careful not to put on too much oil as this will make the pig's hair sticky and gummy. Some showmen never use oil, but sprinkle the hogs with water just before entering the show ring. Pigs treated in this way, however, do not make as good a showing as those that have been treated with oil.

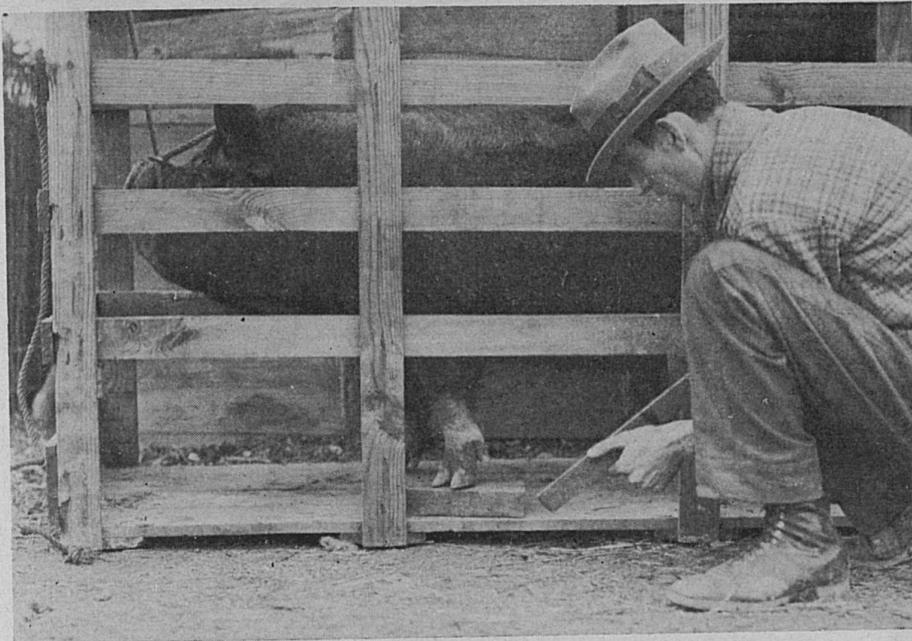


Fig. 4.— A trimming crate in use. Note the 2x4 under the foot and the snubbing rope in use.

### Showing

Decide on a way of showing your pig that will make him look his best. A pig with a sway back shows better with its head down. One with a very steep rump shows better with its head up. Most pigs look best when moving. Instead of using a stick or cane, you might want to use a buggy whip. If you still have trouble controlling the pig, a small hurdle will solve the problem (Fig. 5).

### THE FATTENING-PIG PROJECT

In selecting pigs for fattening not so much emphasis is put on femininity, masculinity, and breed characteristics as when selecting them for the breeding project. Aside from this, however, the foregoing suggestions for the breeding project apply also to the fattening-pig project. Any well-formed pig of good quality will do. Start this project with spring-farrowed pigs, as pigs farrowed in March or early April are most suited for the project.

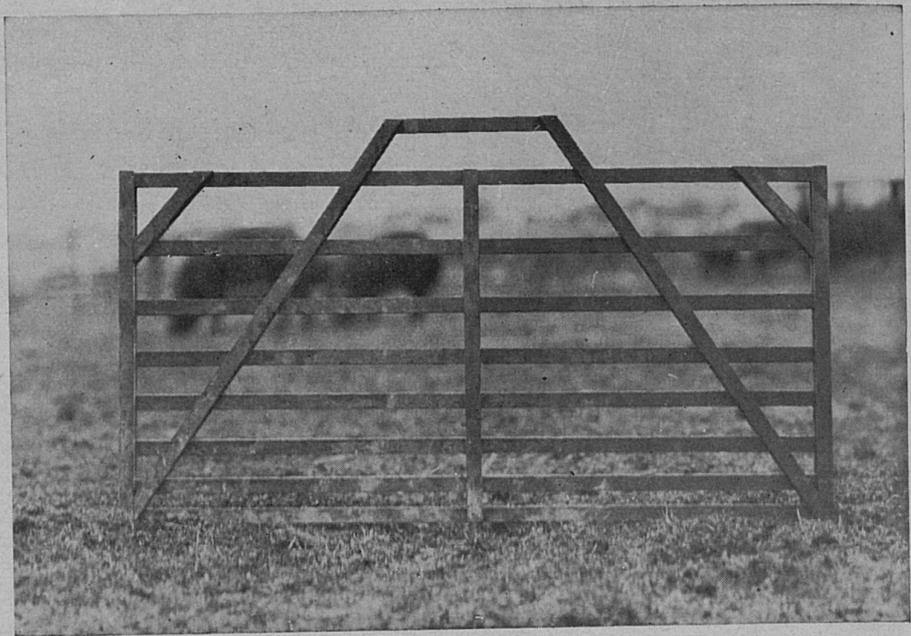


Fig. 5.— A light, well-constructed hurdle

**Castration**

Castrate pigs selected for fattening before weaning or soon after. At this age there will be less shock, possibly less check in growth, and the pig will develop into a smoother barrow with more quality than if castrated later (Ky. Ext. Cir. 84).

**Feeding**

When the pig reaches 90 pounds, change from the feed recommended on page 6 to a more fattening ration. The following grain mixtures are recommended:

	<i>Parts by Weight</i>	<i>Parts by Measure</i>	<i>Weight of Mixture per Quart</i>
Mixture 1			
Corn .....	12	12	1.45 lb
Tankage .....	1	1	
Mixture 2			
Corn .....	20	20	
Middlings .....	6	12	1.45 lb
Oats .....	3	6	
Tankage .....	1	1	
Mixture 3			
Corn .....			
Tankage .....		Self-fed separately	
Minerals .....			

Feed some sun-cured legume hay, especially alfalfa, in drylot feeding, or in an extremely cold winter when the pig has less chance of getting enough vitamins and minerals from forage.

**SCORING**

The score cards on pages 11 and 12, used by the University of Kentucky, show the standards for scoring hogs. Careful study of these score cards will aid club members in selecting pigs and help members of judging teams to make decisions.

**SCORE CARD FOR LARD TYPE HOGS—BREEDING**

	<i>Perfect score</i>	<i>Score made</i>
<b>A. General Appearance—41 points</b>		
<b>Weight:</b> 6 months, 200 lbs.; 1 year, 400 lbs.; 2 years, 700 lbs. ....	8	.....
<b>Form:</b> deep, broad, long, symmetrical, compact, standing squarely on legs .....	7	.....
<b>Quality:</b> hair fine; bone straight not coarse; skin smooth, even covering of flesh, free from lumps and wrinkles, features refined but not delicate .....	6	.....
<b>Condition:</b> thrifty, well fleshed, but not excessively fat .....	4	.....
<b>Constitution:</b> chest capacious; brisket advanced and low; flanks full and well let down .....	8	.....
<b>Disposition:</b> quiet, gentle .....	1	.....
<b>Breed type:</b> having all characteristics of breed .....	5	.....
<b>Coat:</b> fine straight, bright, smooth, evenly distributed, lying close to body—no swirls .....	2	.....
<b>B. Head and Neck—10 points</b>		
<b>Eyes:</b> full, mild, bright, not obscured by wrinkles .....	2	.....
<b>Face:</b> short, broad between eyes; dished according to breed; cheeks smooth .....	2	.....
<b>Ears:</b> fine texture, medium size, neatly but firmly attached, carriage according to breed .....	2	.....
<b>Jowl:</b> smooth, firm, medium size .....	2	.....
<b>Neck:</b> short, deep, thick, narrow at nape, thickening toward and joining smoothly to shoulder .....	2	.....
<b>C. Forequarters—10 points</b>		
<b>Shoulders:</b> broad, deep, full but not heavy, on a line with sides	5	.....
<b>Legs:</b> straight, short, strong, tapering, set well apart, bones smooth, joints clean, pasterns upright, feet medium size, not sprawling, squarely placed .....	5	.....
<b>D. Body—20 points</b>		
<b>Back and loin:</b> broad, strong, long, even width, thickly and evenly fleshed .....	9	.....
<b>Sides:</b> deep, long, full, free from wrinkles; ribs long and well sprung .....	7	.....
<b>Belly:</b> straight, even, not flabby, proportionate in width .....	2	.....
<b>Flank:</b> full and even with body, not cut up .....	2	.....
<b>E. Hindquarters—19 points</b>		
<b>Rump:</b> long, wide, evenly fleshed, rounding from loin to root of tail, neat, high tail setting .....	3	.....
<b>Hams:</b> plump, full, deep, broad, no roughness, not cut up, well fleshed to hock .....	10	.....
<b>Legs:</b> straight, short, strong, tapering, set well apart, bones smooth, joints clean, pasterns upright, feet medium size, not sprawling, squarely placed .....	5	.....
<b>Tail:</b> medium size and length, smooth and tapering .....	1	.....
<b>Total</b> .....	100	.....

## SCORE CARD FOR LARD TYPE HOGS—MARKET

	<i>Perfect score</i>	<i>Score made</i>
<b>A. General Appearance—40 points</b>		
<b>Weight:</b> ..... lbs according to age .....	8	.....
<b>Form:</b> deep long symmetrical, compact, standing squarely on legs .....	10	.....
<b>Condition:</b> thrifty, well fleshed, fat but firm .....	10	.....
<b>Quality:</b> hair fine, bone strong but not coarse, skin smooth, even covering of firm flesh, free from lumps and wrinkles.....	10	.....
<b>Style:</b> attractive .....	1	.....
<b>Action:</b> spirited, straightforward, regular, free and easy .....	1	.....
<b>B. Head and Neck—7 points</b>		
<b>Snout:</b> medium length, not coarse .....	1	.....
<b>Eyes:</b> full bright, not obscured by wrinkles .....	1	.....
<b>Face:</b> broad between eyes and ears, smooth .....	1	.....
<b>Ears:</b> fine texture, medium size, neatly attached .....	1	.....
<b>Jowl:</b> smooth, firm, medium size, not pendulous .....	1	.....
<b>Neck:</b> short, deep, thick, joining head to shoulder smoothly ....	2	.....
<b>C. Forequarters—7 points</b>		
<b>Shoulders:</b> deep, full, compact, smooth, not too heavy .....	4	.....
<b>Legs:</b> straight, strong, tapering, medium length, set well apart, bones smooth, joints clean, pasterns upright, feet medium size, not sprawling, squarely placed .....	2	.....
<b>Breast:</b> full, smooth, neat .....	1	.....
<b>D. Body—29 points</b>		
<b>Chest:</b> deep, wide, large girth .....	2	.....
<b>Back and loin:</b> long, broad, strong, even width, thickly and evenly fleshed .....	15	.....
<b>Sides:</b> long, deep, full, even width, free from wrinkles and flabbiness; ribs long, carrying fullness well down .....	10	.....
<b>Belly:</b> straight, even, not flabby; proportionate in width .....	2	.....
<b>E. Hindquarters—17 points</b>		
<b>Rump:</b> long, wide, even in width, thickly and evenly fleshed, rounding from loin to root of tail, not too drooping .....	3	.....
<b>Hams:</b> broad, especially at upper end, deep, full, well fleshed and plump, not flabby .....	12	.....
<b>Legs:</b> straight, strong, tapering, medium length, set well apart, bones smooth, joints clean, pasterns upright, feet medium size, not sprawling, squarely placed .....	2	.....
<b>Total</b> .....	100	.....

## RECORDS OF THE PROJECT

Keep records of your project in the "Pig Project Record Book," and turn the record book in to the leader or county agent at the close of the project. The project is not complete without an accurate record and a story of your experience.

Lexington, Kentucky

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