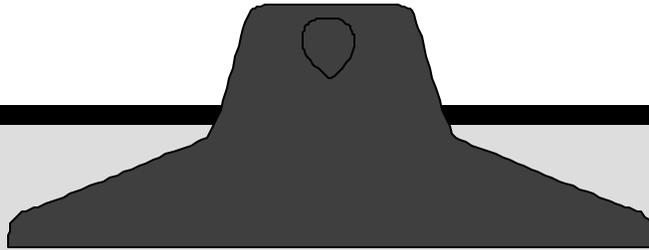


Judging Livestock



Market Hogs

- T The process of visual appraisal and selection involves the weighing of good and bad points of the individual animal.
- T The emphasis which is placed on each characteristic in visual selection depends on specie, breed, sex, age and use.
- T In many instances, more than one trait will be of top priority and you will have to weigh the relative worth of each trait in that animal.
- T You can learn a process to weigh the factors involved in decision making.
- T This process can be beneficial whether you are judging animals, selecting clothing, a college, buying a car or a home.
- T The first step is to set up priorities and select based on those priorities.
- T This handbook will help you in doing exercises that show you how to use this process in your appraisal of livestock.

Livestock Judging General Information

Parts of an Animal

Adequate knowledge of live animal body parts is essential to the evaluation of livestock and participation in the livestock industry. Much of what you will learn about judging relies on this basic knowledge. Some body parts have the same name and location on cattle, swine and dairy.

Other parts indicate a similar location on each of the species, but have differing terminology for each (ie. quarter & ham). Still, other parts are called specie specific parts and are only found on one of the species (ie. snout).

One of the best ways to see the relationship between the live animal and its carcass evaluation is to follow the animal through the slaughter plant and see the end product. This process will enable you to tell where you were right and wrong in your judgment. Visual aids will help you understand the relationship between the live animal and its carcass.

Criteria for Placing Using Visual Appraisal

Criteria with the same numeric value are similar in importance for that type of livestock. These criteria are only guidelines and vary with market demand, breed, age, management scenario and performance data.

MARKET HOGS

1. Muscling
1. Cutability (leanness)
2. Pounds(growth)
3. Structure (soundness)

STRUCTURE = CORRECT

VOLUME = MORE IS BETTER

FRAME = OPTIMAL

MUSCLING = MORE IS BETTER

VIEWING THE LIVESTOCK CLASS

Livestock judging is an art developed through careful study and hours of practice. As you gain experience in judging, try to develop a definite system that fits your needs and helps you to correctly identify and compare the strong and weak points of each animal in the class.

Points to learn in livestock judging before you place a class:

1. Know the major parts of the animal.
2. Know the wholesale cuts and the areas of the high priced cuts for all meat animals
3. Learn the major livestock terms and know their meaning and application.

Tips on placing livestock judging classes:

1. Have a mental picture of the ideal for the class of livestock that you are judging.
2. Know the major points for selection, and then make a quick, logical decision, using only these major points as the criteria.
3. First look at the class from a distance, so you can see all four animals without shifting the position of your head.
4. Change your first impression only if you discover that you failed to see a major point.
5. Do not let finish or condition mislead you. Usually, such errors are made when the contestant is too close to the animal.
6. Make most of your observations either when the animals are walking or as you view them from the side. These views are the most important. However, do not neglect to consider the rear and front views.
7. By observing animals at the walk, you will be able to evaluate good points and defects that never show when they are at rest. Be sure to note the freedom of movement, style, tightness of frame, strength of top, and set of feet and legs.
8. Develop a judging system. Find the most effective method of evaluating the class and stay with it - Such as Side View, Rear View, Front View.

Basic Livestock Terms

Balance or Symmetry - a proper proportion and blending of parts of the animal. Balance or symmetry is evaluated from a side view.

Breed Character - characteristics that separate breeding stock of one breed from other breeds, primarily by differences of the head: shape, length, dish of face, width of muzzle, shape of poll and ears, color markings and wool covering in sheep.

Broodiness - female breeding stock term that means she has a favorable combination of characteristics to be a good mother. Depth, capacity, prominence of teats and/or mammary system, stoutness and correctness of vulva.

Condition, Finish or Covering - all are used to denote fat. The terms finish and covering are used to describe fat on market animals, while condition is used when describing breeding stock.

Femininity - characteristics that distinguish the female from the male. Indicated by refinement of the head, neck and shoulders.

Growthiness - the characteristics of having size and weight at a certain age.

Masculinity - characteristics that distinguish the male from the female. Indicated by boldness or massiveness of head and crest, thickness of the neck and development of the forequarters.

Meatiness/Muscling - having a high proportion of muscle in the areas of the high priced cuts. This is shown primarily by the relative width, length and fullness of the quarter, leg or ham, and by the thickness and fullness through the rib, rack or loin.

Quality - a general term that combines smoothness and refinement. Refinement of hair coat, freedom of wrinkles in hogs and freedom of roughness, patchiness in cattle indicates quality.

Ruggedness, Stoutness - the quality of being heavy or large boned. This is usually determined by the size of the cannon bone (from the knee to the ankle).

Scale - the size of the animal as determined by skeletal structure, independent of weight. The height, length and width of the animal.

Structural Soundness - the desirability or correctness of the skeletal structure, with major emphasis on straightness of top and proper feet and leg structure.

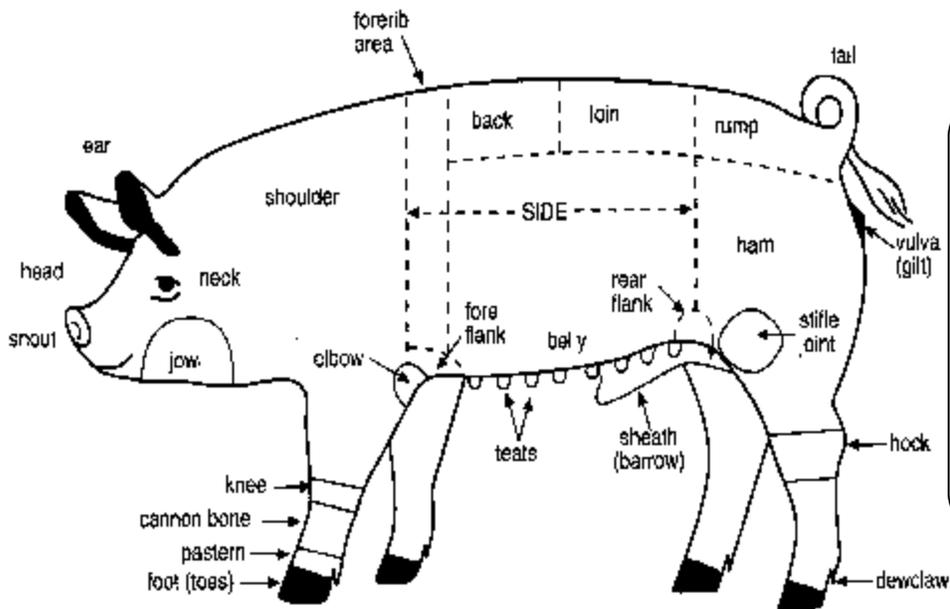
Style - the general eye-appeal or attractiveness of the animal. Includes balance, structural correctness and quality.

Tight Framed - the ability of the animal to hold itself together. Indicated by a strong top (back), tightness of shoulder and squareness of feet and leg placements.

Trimness - freedom from fat or finish.

Type - a combination of characteristics that make an animal useful for a specific purpose. Determined by the general shape and form of an animal. Desirable types are constantly changing.

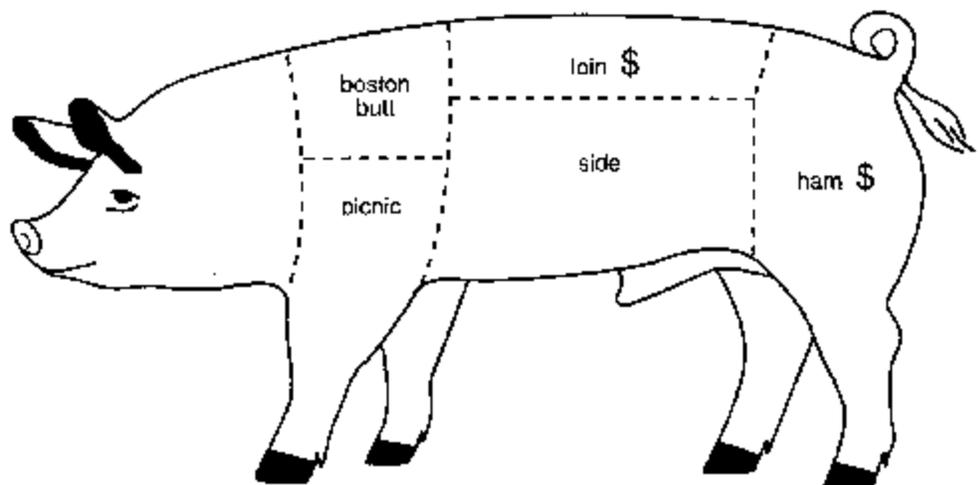
Market Swine



Background Basics

A breed is defined as a group of animals with a common origin which are distinguished by characteristics within a specie. Breed character is defined as the characteristics that allow the breed of the individual animal to be easily determined.

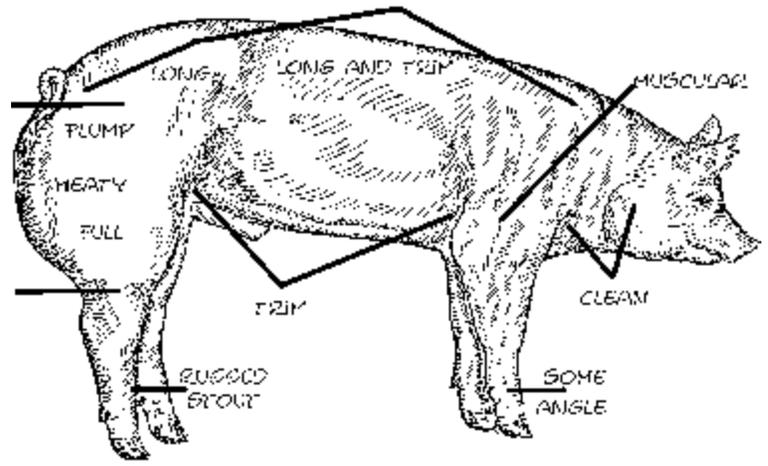
There are eight major breeds of hogs. The three most common are the Yorkshires, Durocs and Hampshires. The **Yorkshires** are the most popular breed and are white with large, erect ears. The **Duroc** breed are red hogs with droopy ears and are known for their fast growth rate. **Hampshires** are meaty black hogs with a white belt around their shoulder and erect ears. The **Berkshire** breed are black hogs with six white points (nose, tail and legs), they have erect ears and a short, dished snout. The **Poland China** breed is marked like the Berkshires (Black with white nose, tail and legs), but they have droopy ears. The **Landrace** breed are white hogs with very large, floppy ears and are known for their mothering ability. The **Chester White** breed are also white and known for mothering potential, but have medium sized, droopy ears. The **Spotted Swine** breed are white hogs with prominent black spots.



\$ = The ham and loin comprise 58% of the hog's value.

Points Of An Ideal Swine

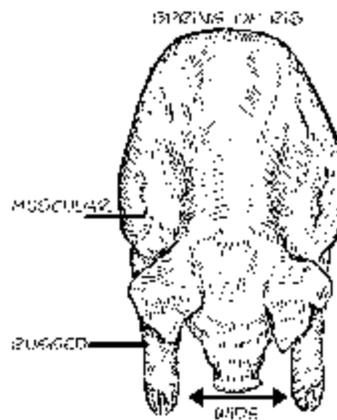
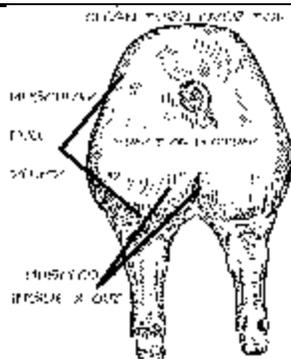
The pig should be muscular, sturdy, and fast growing. He should be long, especially through the loin and rump. The hams should be plump and meaty indicating good muscling throughout. He should move freely, with a long, smooth stride. The pig should be clean through the jowls and trim over his top, side and belly. His bone should be strong and rugged and he should have plenty of room for heart and lungs in his chest. He needs some spring and cushion to his pastern so he will stay sound on his feet.



Conformation

General Appearance - Heavy-muscled; lean; trim; firm; smooth; long bodied; uniform width but ham and rump should be wider than rest of body; moderately deep but not wasty; uniformly arched top; well balanced and stylish with a high degree of development in the valuable region of the ham and loin; adequate size for age.

Hindquarters		Forequarters		Middle and Underline	
Hind Legs:	Set wide apart, out on the corners, giving an indication of abundant muscling; straight and correct.	Back:	Muscular turn; long; clean; uniformly arched; uniform width; full spring of rib.	Side:	Long; moderate depth; smooth; free from wrinkles.
Ham:	Wide; deep; long; full; firm; meaty.	Shoulders:	Smooth; muscular; clean.	Underline (belly):	Trim; firm; no evidence of looseness or wastiness.
Rump:	Long; wide; uniformly turned; high tail setting; meaty.	Neck:	Medium length.		
Loin:	Muscular turn; long; Lean; uniformly arched.	Head:	Clean-cut; refined; clean, firm jawl.		



Finish

Ham: Firm and free from wrinkles-at the base; firm in the crotch.
 Back-Loin: Clean, meaty turn: evidence of abundant muscling accompanied by minimum amount of backfat.
 Shoulders: Fine and smooth; free from fatty creases and wrinkles; no evidence of fat deposit at the elbow.
 Jawl: Trim and firm.
 Belly: Trim and firm.

Quality

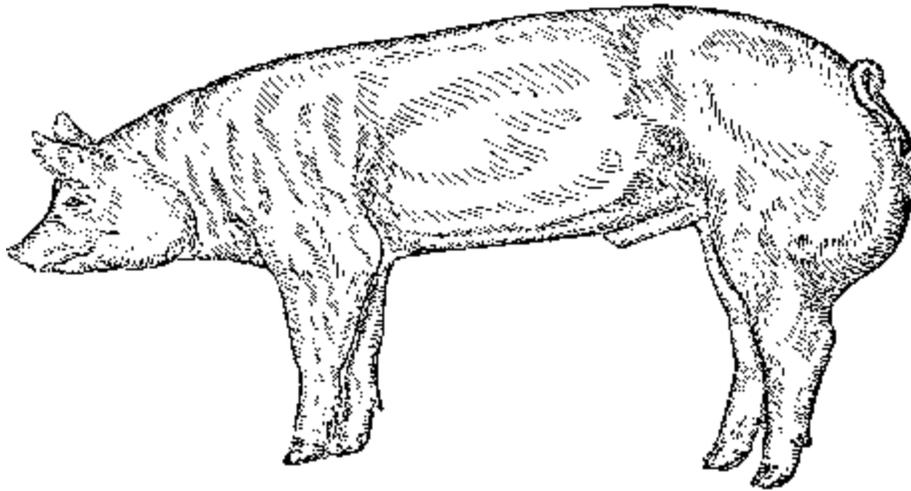
Smooth throughout, not creased or wrinkled. Ample substance of bone; definitely not fine.

Viewing Swine Conformations

Characteristics that should be watched for from each view are listed below:

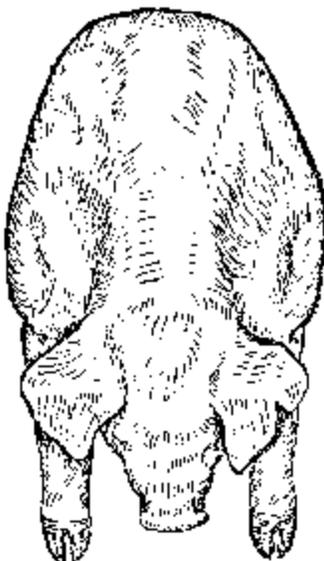
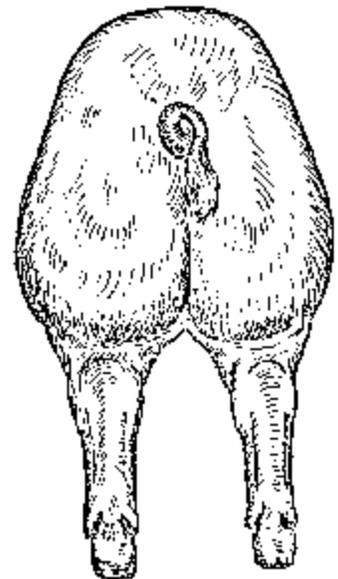
Side View

- i The pig should be muscular, sturdy, and fast growing.
- i He should be long, especially through the loin and rump.
- i The hams should be plump and meaty indicating good muscling throughout.
- i He should move freely, with a long, smooth stride.
- i The pig should be clean through the jowls and trim over his top, side and belly.
- i His bone should be strong and rugged.
- i He should have plenty of room for heart and lungs in his chest.
- i The pig should move freely, with a long, smooth stride.
- i A pig with a short, choppy stride (often called "Peggy") indicates conformation problems, usually being short bodied and rumped, or is unsound on his feet and legs.



Rear View

- i A muscular pig will be wider through his hams than through his shoulders.
- i The hams should be well muscled, both inside and outside the leg.
- i He should stand wide behind, to allow room for muscling in his hams.
- i He needs some spring and cushion to his pastern to stay sound on his feet.



Front View

- i The pig should be plenty wide through his chest between his front legs.
- i Narrow chested pigs are very prone to colds and pneumonia.
- i He needs some spring and cushion to his pastern to stay sound on his feet.

Combining **all** of the characteristics listed in one animal would create an animal with ideal swine conformation.

Judging Market Swine

Major Importance

Secondary Importance

From the side view you should look for the following:

Type
Balance
Length
Length, depth, bulge and firmness of ham
Development and spacing of underline (breeding classes)

Cleanness of jowl and head
Smoothness and meatiness of shoulders
Depth and firmness of side and trim underline
Set of legs and strength of pasterns
Size of bone
Strength of arch

From the rear view look for the following:

Correct turn
Thickness, meatiness and muscling in the ham, loin and rump

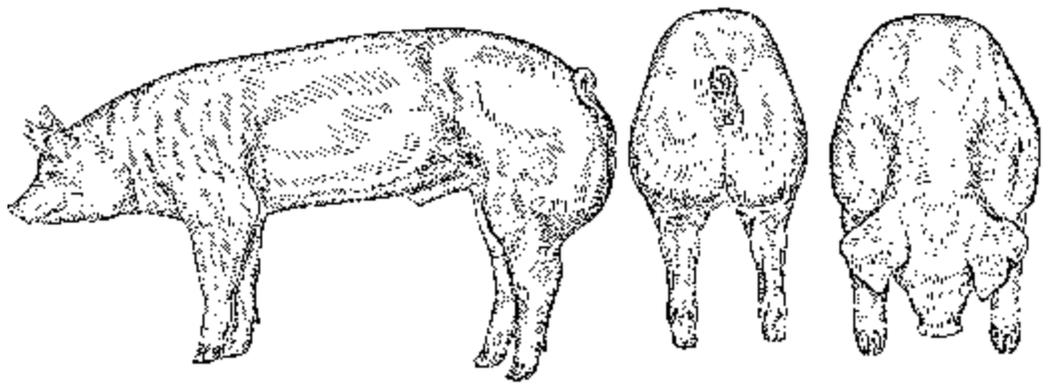
High tall setting
Cleanness of fat around the tail head
Depth, width and firmness of hams
Width between the hind legs
Firmness along loin edge
Spring of rib
Smoothness and fullness behind shoulders
Cleanness and smoothness over shoulders
Short, strong pasterns and well-placed rear legs

From the front view observe the following:

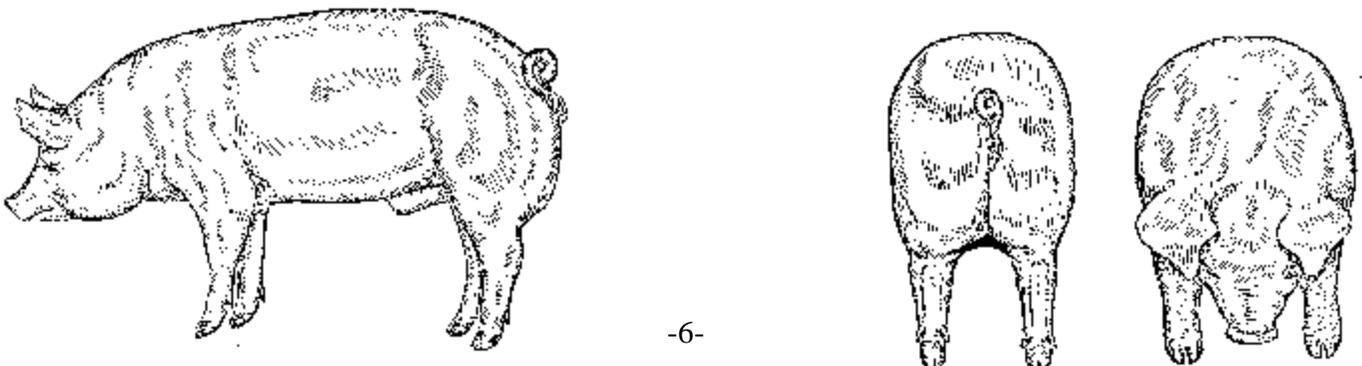
Cleanness over shoulder

Neatness of jowl and head
Width between front legs
Short, strong pasterns; well-placed legs
Size and quality of leg bones

A trim muscular pig will be heavy-muscled, lean, trim, firm, smooth, long bodied and of adequate size for his age. He will have a uniform width that is moderately deep but not wasty. His ham and rump should be wider than rest of his body. He will be uniformly arched over the top, well balanced and stylish with a high degree of development in the valuable region of the ham and loin.



A fat wasty pig will look soft and jiggly. He will be short sided and show lack of muscle. His ham will look flat and he will have puffy fat deposits around his jowls and elbow pockets. He will be round over the top.



Evaluation Of Market Hogs

A market hog should be moderate in height, long bodied, lean, heavy muscled, big volumed and structurally sound. Market hogs should have the same general body conformation as breeding swine. In addition to volume and capacity, size and structural correctness traits such as muscling and fat which affect carcass merit are highly emphasized. The primary purpose of a market animal is for meat production. Frame size and structural soundness are examined but to a slightly lesser degree.

Muscle: The correct muscle structure is long and thick to fit the frame of a hog. An excess of round, tight, bunchy muscle may adversely affect farrowing ease, reproductive efficiency and is related to stress problems.

Traits that are found in the ideal market hog include:

- < long, thick muscular ham
- < wide set to rear legs
- < thick rump
- < muscular top and loin

Fat: Fat in market hogs is undesirable. Presently, a back fat thickness of .7 or less measured at the 10th rib is acceptable. Excess fat is a common fault in market hogs. It reduces the curability (retail value) of market hogs. The amount of back fat on a hog is a reliable measure of overall finish and should be used as a judging tool whenever available. 10th rib back fat thickness on superior hogs should be less than .7 inches. It should also be noted that fat indicates inefficiency of gain. It takes 2.5 times the amount of feed to produce a 1 lb. of fat vs. a 1 lb. of lean.

Desirable traits in regard to leanness include:

- < freedom of fat in elbow pocket
- < trimness in ham seam and crotch area
- < trimness over the loin edge
- < no excessive fullness in jowl

Besides muscling and fat, the overall weight of the market hog is important. Large-scaled, heavy-muscled hogs can be carried to heavier weights. Use weight per day of age if available. Many packers want hogs in the 240-260 pound weights.

Carcass Merit: Muscling and fat are two major factors in carcass merit. Meaty, heavy-muscled hogs are preferred to over-fat or light-muscled hogs. Thickness and firmness through the loin and over the back are indications of overall muscling.

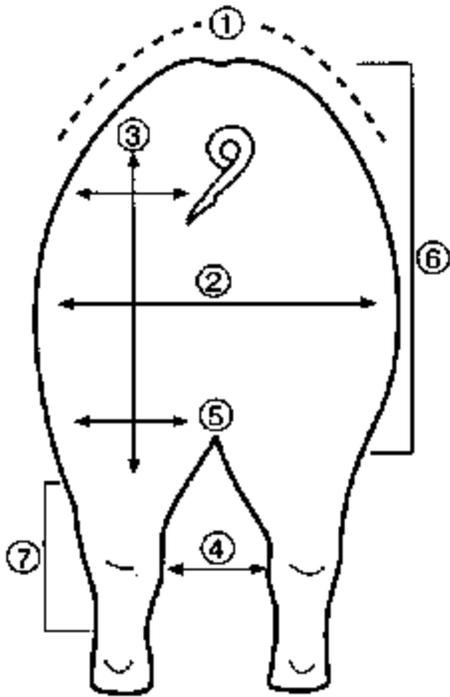
Swine classes are usually different from the other species because the four animals are loose in a pen. Each animal in a class is identified by a number on its back. Since the animals are moving around loose in the pen and you are judging while they walk, it is very important that you see and evaluate each animal and compare it with the others in the class. To make this possible someone drives the pigs while the contestants observe them from outside the pen. To compare the animals, you must analyze them from a distance, not directly above them.

First, examine each pig individually. Set your "sights" on the first one to get out by himself, go over him, evaluating him in comparison to the ideal. Note his good points and his weaknesses. Do this for each pig, individually, before you begin to compare the pigs as this will save time during the comparison stage of your judging.

There are four ways that you can observe swine:

Developing A Swine Evaluation System

Make Every Look Count



Rear View

- When you view hogs from the rear, analyze each animal for:
- Correct turn over top - 1
 - Width through center of ham - 2
 - Uniform muscle thickness from upper to lower ham - 3
 - Width between hind legs - 4
 - Fat deposits in twist (crotch) - 5
 - Muscle pattern - 6
 - Correctness of rear feet and legs - 7



Lean & Heavy Muscled



Fat & Average Muscled

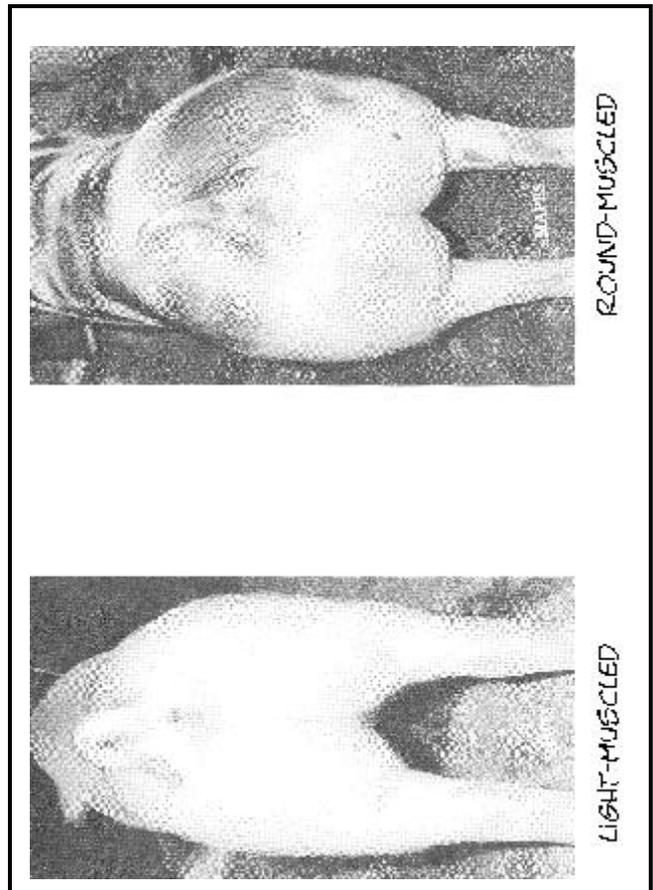
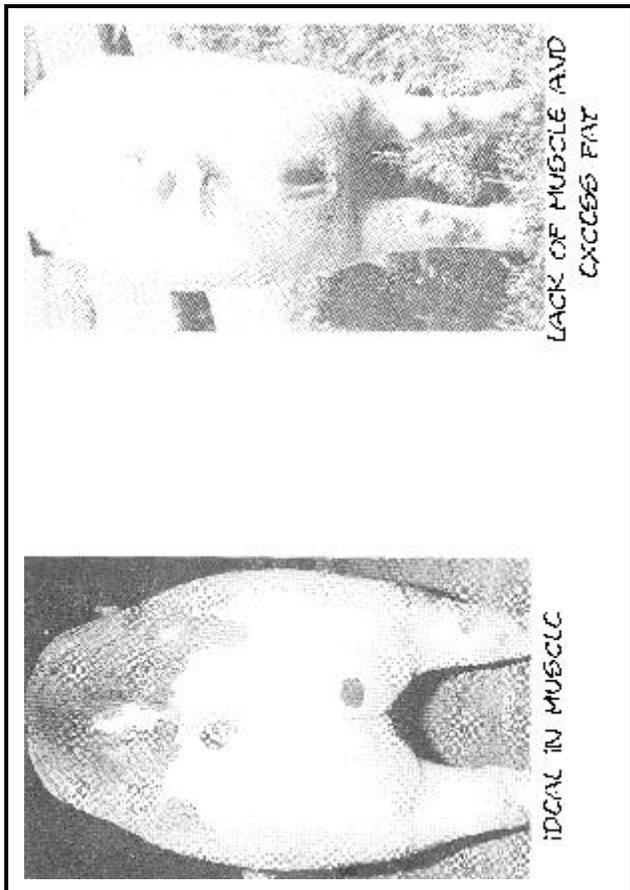


Lean & Light Muscled



Fat & Light Muscled

Notice the inverted V shape of the crotch in trim hogs A & C. Fat hogs have an inverted U shape in their crotch area (B and D).



Make Every Look Count

Side View

From a distance of 12 to 15 feet, analyze each animal for:

Size and scale and general balance - 1

Heaviness of bone - 2

Length of side - 3

Depth of side (rib) - 4

Levelness of top - 5

Set of tail - 6

Length of rump - 7

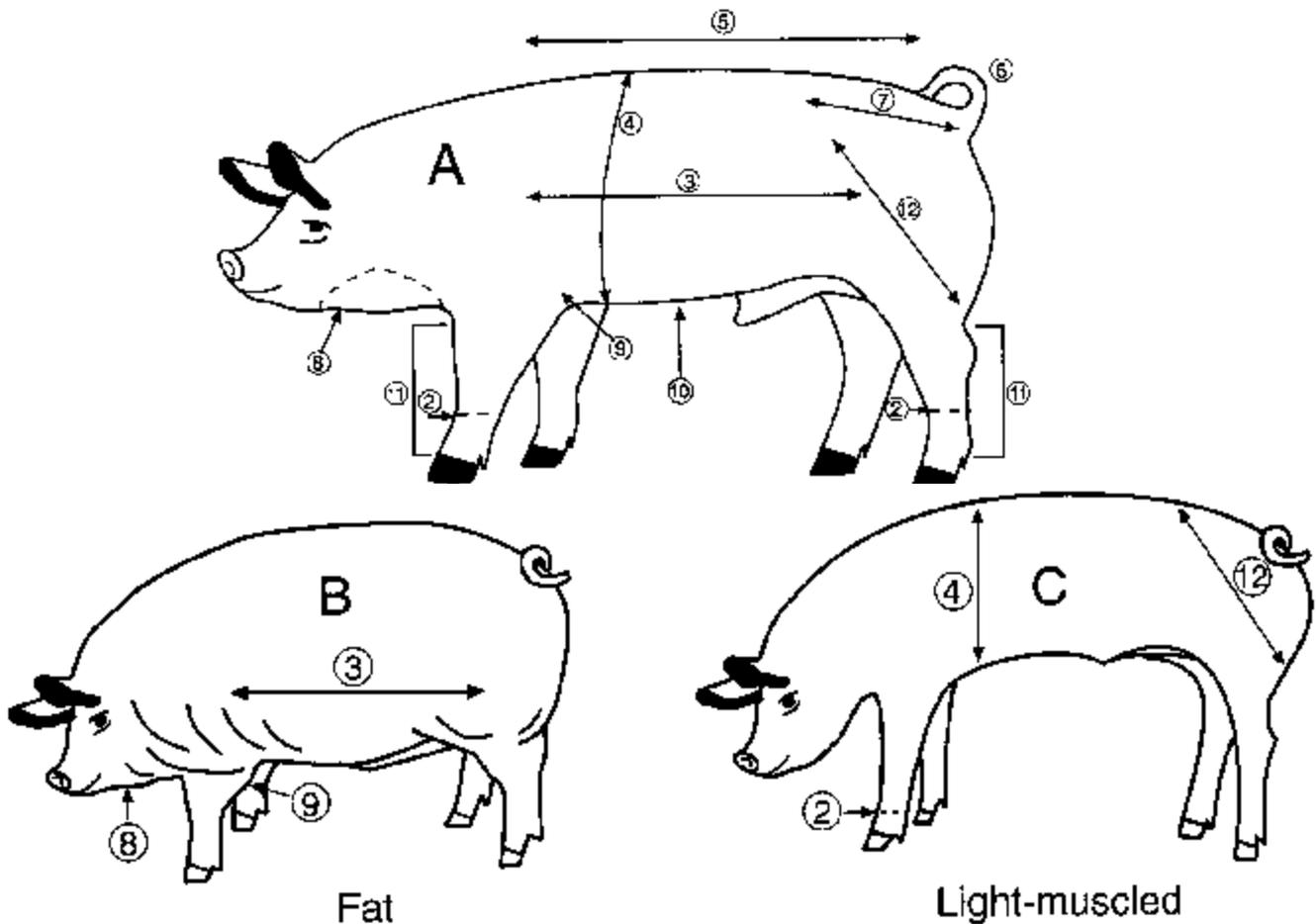
Trimness of jowl - 8

Trimness of elbow pocket - 9 (fore flank area)

Trimness of middle - 10

Correctness of legs and pasterns - 11 (correct slope to shoulder, set to hocks & slope to pasterns)

Depth of ham (muscle length from hip to hock) - 12



Hog "B": Fat

Animal B is shorter sided and too fat.

Short sided - 3

Wasty in jowl - 8

Wasty in elbow pocket - 9

Hog "C": Light-muscled

Animal C is tall, long sided and lean, but is light muscled.

Finer boned - 2

Shallow ribbed - 4

Light-muscled; lacks muscle depth from hip to hock - 12

Make Every Look Count

Front View

Analyze each animal for:

Desirable turn to top - 1

Muscle expression in the shoulder area - 2

Trimness of jowl - 3

Width of chest - 4

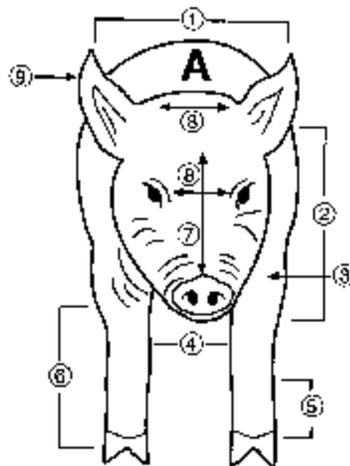
Heaviness of bone (The cannon bone is one of the most accurate indicators of bone size) - 5

Correctness of front feet and legs - 6

Moderate length of head - 7

Adequate width between eyes and ears - 8

Breed character (ear carriage if a breeding class) -9



Animal A
Ideal

Hog "B": Fat and Averaged Muscled

Top is flat in appearance which indicates heavy fat cover.

Undesirable turn to top - 1

Lacks muscle expression in shoulder area - 2

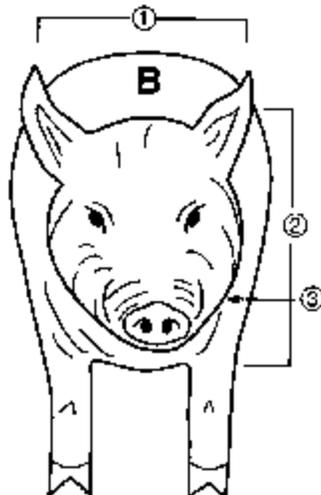
Wasty about jowl - 3

Hog "C": Lean and Light Muscled

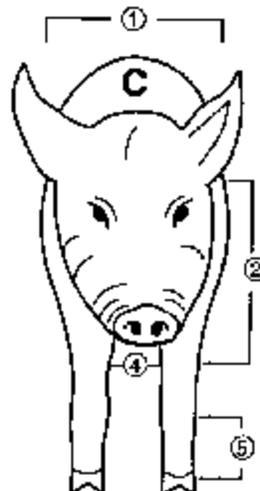
Lacks muscle expression in top - 1

Lacks muscle expression in shoulder area - 2

Narrow in chest floor - 4



Fat and Average
Muscled



Lean and Light
Muscled

Make Every Look Count

Top View

Analyze each animal for:

Thickness and muscle expression of shoulder - 1

Spring of rib - 2

Degree of finish - 3

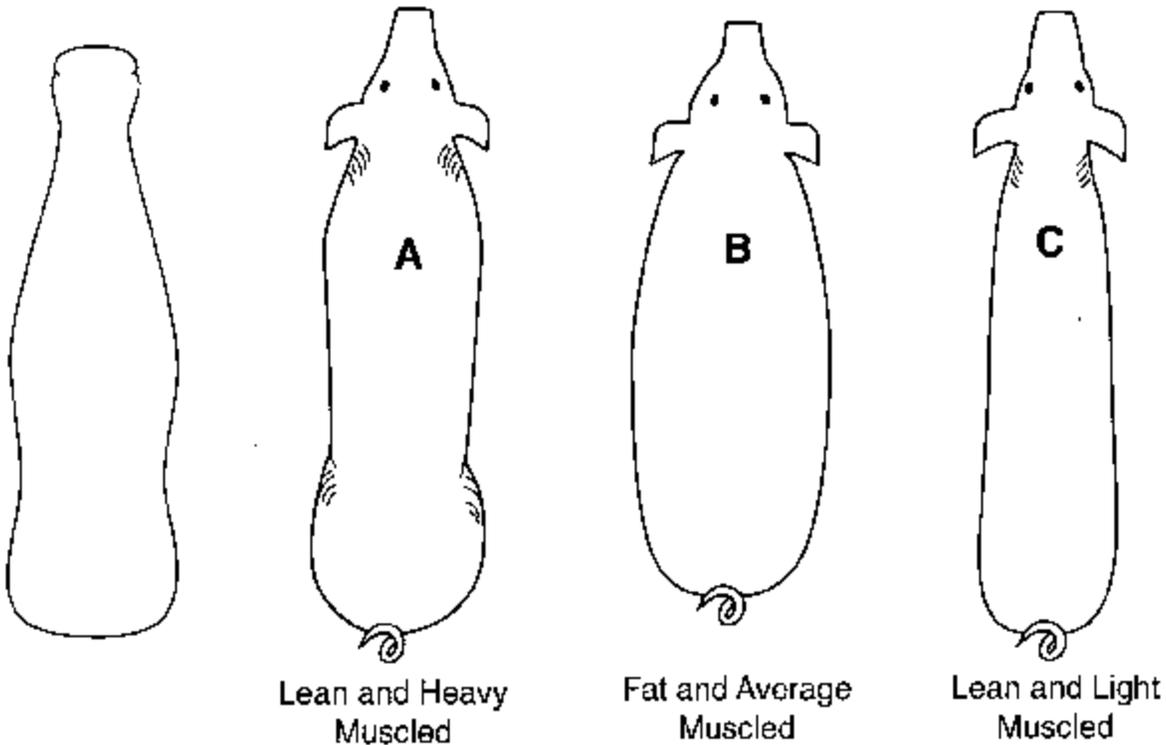
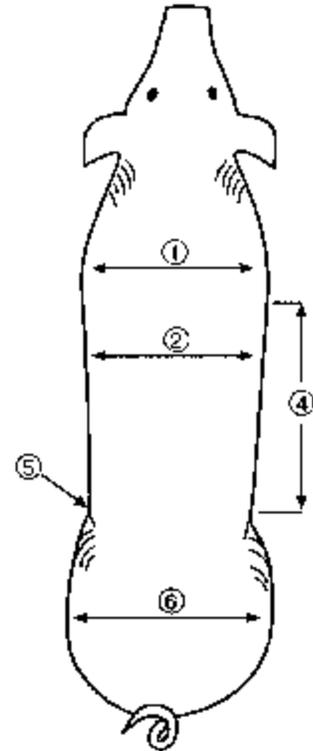
Leanness over loin edge - 4

Leanness of the ham-loin junction - 5

Thickness of rump - 6

Degree of muscle and muscle expression down top - 7

If an animal is meaty and muscular the ham (rump) (#6) area should be the thickest portion of the animal when viewed from the top. Note the "coke bottle shape" displayed by Animal A- He is wider on the ends (#1 and #6) than he is in the middle. Animal A has tremendous length, thickness and muscling through the ham. Note how the ham flares out from the loin (#5). A is leaner over the loin edge than B.



Hog "B": Fat and Averaged Muscled

Note that Animal B is somewhat boat-shaped with the widest part in the middle of the body. This is the area where the least amount of muscling is located. The widest part of a very

Hog "C": Lean and Light Muscled

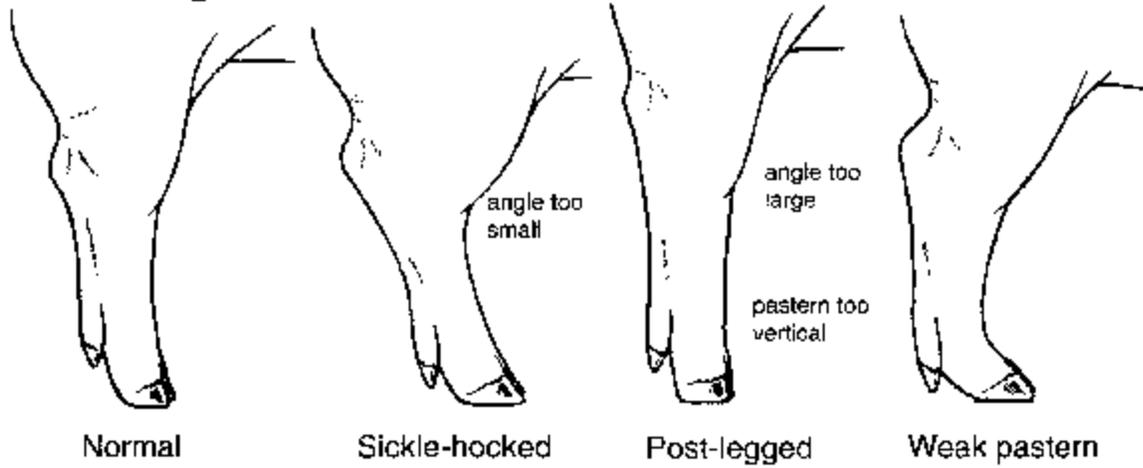
Animal C is very narrow and light-muscled. He exhibits very little, if any tapering effect from the shoulder to the loin-ham connection as does Animal A. He is light-muscled and this is evident by his narrow shoulders,

Structural Differences In Swine

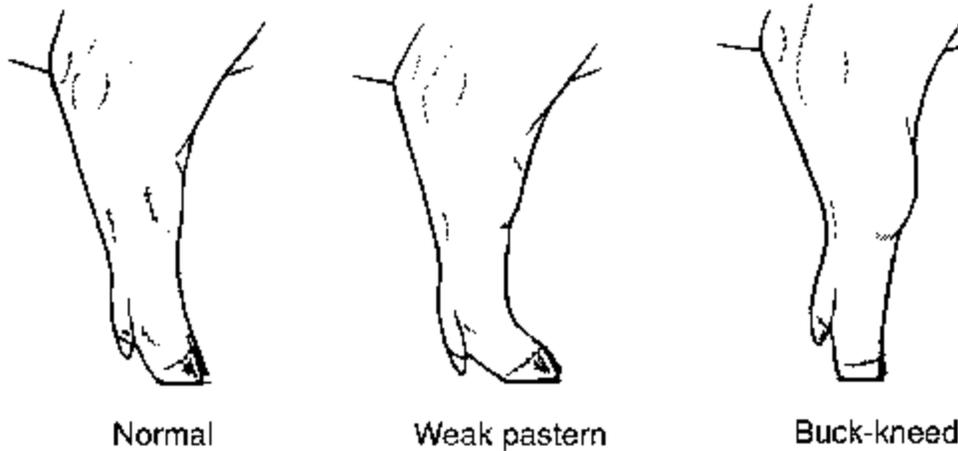
Illustration of Foot and Leg Structural Deficiencies

Adapted from National Pork Producers Council
"Producers to Evaluate Market Hogs"

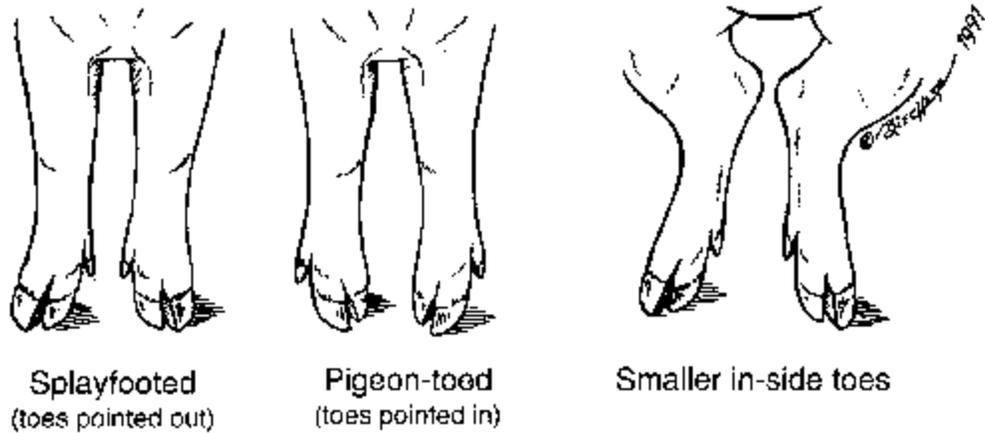
Side view of rear leg



Side view of front leg



Front view



Market Hog Terms

When evaluating market hogs, there are six general things to evaluate. They are expected carcass desirability, size, correctness of finish, muscle, productive type and design. Following each characteristic are appropriate phrases for describing the attribute.

EXPECTED CARCASS DESIRABILITY

GENERAL

higher yielding
meatier
heavier muscled
heavier carcass

DESIRABLE

meatier & less trimable waste
higher yield of loin and ham
larger loineye area
higher percent muscle
more pounds of edible product
more pounds of red meat
higher percentage of the four lean cuts

CRITICISMS

wastier
lighter muscled
lighter weight
least saleable product
fatter

Should go to the rail with a meatier carcass with more pounds of saleable product.

Should send to the rail a cleaner, trimmer carcass with a greater percentage of the four lean cuts.

Should hang a carcass with a higher percent muscle as indicated by his trimness about the jowl, rib and loin edge.

Should kill a more consumer oriented carcass with a higher lean to fat ratio.

Should hang a trimmer, meatier carcass that is more packer preferred.

MUSCLE

GENERAL

thicker made
heavier muscled
meatier
wider made
looser muscled

DESIRABLE

larger and smoother muscle pattern
greater volume of ham
more natural thickness
wider at the stifle & more shape over the top
wider topped & squarer top
fuller rump & wider over the loin
more expression of muscle

CRITICISMS

narrow topped
tight round muscled
light muscle
narrower tracking

Was heavier muscled, displaying more natural thickness down the top, having more dimension to the ham.

Was heavier muscled, having more width over the top, with more width from stifle to stifle.

Was meatier, thicker made, having a wider top, fuller rump and more width through the stifle.

Was thicker made, displaying more natural thickness down the top and a greater volume of ham.

Was thicker made with more volume to the ham, displaying a deeper tying muscle pattern.

CORRECTNESS OF FINISH

GENERAL

higher yielding

DESIRABLE

less trimmable waste
higher yield of loin and ham
greater percent lean cuts
more pounds of red meat

CRITICISMS

wastier
fatter
lighter weight
lowest cutability

Should go to the rail with a meatier carcass, with more pounds of saleable product.

When sent to the rail, should hang a cleaner, trimmer carcass with a greater percent of lean cuts.

Should hang a trimmer carcass yielding more pounds of lean edible product.

Should send to the rail a heavier muscled carcass with more pounds of ham and loin.

Should kill a more consumer oriented carcass with a higher lean to fat ratio.

SIZE

GENERAL

higher performing
growthier
larger
taller

DESIRABLE

heavier weight
longer bodied & longer loin
stretchier
longer rumped
more weight per day of age

CRITICISMS

lower set
shorter bodied
shorter rumped
lighter weight & more compact
less weight per day of age

Was stretchier, longer sided and longer over the loin and rump.
Was a growthier, longer sided, stretchier hog, that was longer over the loin and rump.
Was a growthier, heavier weight hog, with stouter features.
Was a massive hog that overpowered the class in terms of size and scale.
Was a growthier hog that exhibited more weight per day of age.

PRODUCTIVE TYPE

GENERAL

higher capacity
higher volume
more durable
looser designed
broodier

DESIRABLE

stouter headed
more production oriented
wider chested & bolder fronted
stronger featured
inner dimension
more rugged & heavier
constructed
square ribbed
deeper ribbed & deeper bodied

CRITICISMS

tight ribbed
shallow bodied
frail made
fine boned
refined
least durable

She was a broodier, higher volume gilt that had more width through her chest floor and more depth and expansion of rib.
She was a higher volume, roomier middled gilt that was wider at the blades and deeper ribbed.
He was a stouter fronted, stronger featured barrow that was heavier constructed and stood on a larger hoof.
She was a bolder fronted gilt that displayed a wider chest floor and greater depth and spring of rib.
He was a more durable barrow that was greater in his inner dimension with a wider blade and a deeper, squarer rib.
She was a gilt that stood on more substance of bone and displayed greater arch and expansion of rib.
She was a stouter headed gilt that stood on more substance of bone and displayed greater depth and squareness of side.

STRUCTURAL CORRECTNESS AND SKELETAL DESIGN

GENERAL

structurally correct
structurally sound

SPECIFIC

longer striding
freer moving
freer wheeling
more mobile
wider tracking
greater cushion to pastern
larger hoof
more uniform length of toe
more desirable angularity to shoulder

CRITICISMS

restricted movement
stiffer moving & or sore moving
uneven toe length
buck kneed
short striding
toed in or toed out
steep in the shoulder
weak pastern
high top and or steep rump

She was a more mobile, freer wheeling gift that walked on more cushion both front and rear.
She was a freer moving, wider tracking gilt with a more correct set to her hocks and greater cushion to her pasterns.
He was a more flexible, freer moving barrow, with a longer stride both front and rear.
He was a more structurally correct barrow that displayed a more desirable angularity to his shoulder set and more flex and cushion to the pasterns.

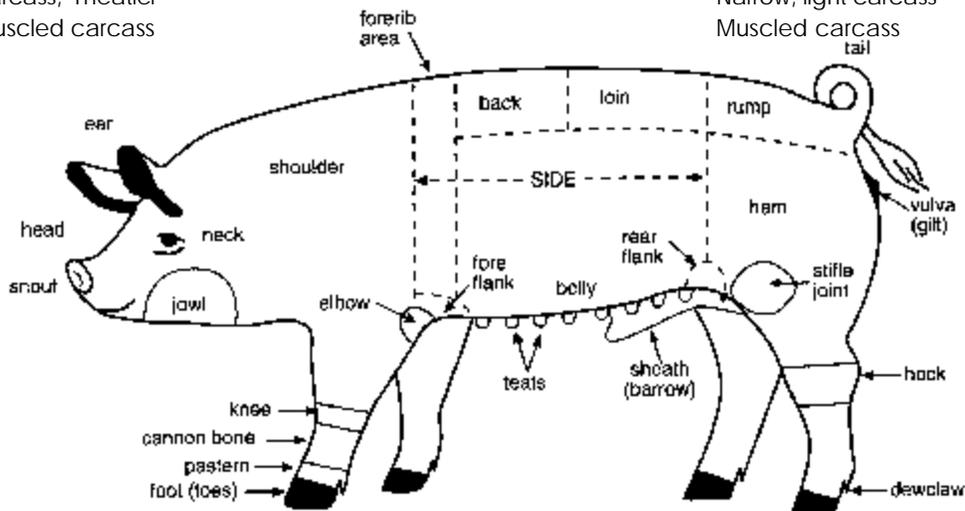
Suggested Terms For Market Swine

Comparative Term

Typier
 Meatier (Heavier muscled)
 Firmer, harder
 Trimmer
 Nicer balanced
 Smoother
 More stylish, more attractive
 Higher quality
 Longer, stretchier side
 Deeper side
 Smoother side
 Deeper flank
 Thicker
 Nicer turned
 More uniform width
 Bolder spring of rib
 Thicker loin, fuller loin, wider loin
 Longer rump
 Higher tail setting
 Deeper ham
 Thicker, wider, plumper ham
 Stronger arch, more uniform
 Tighter frame
 Stronger top
 Smoother shoulders
 Trimmer jowl
 Shorter neck
 Trimmer about base of ham
 Firmer ham
 Stands wider behind
 More desirably finished
 Cleaner top
 Firmer, harder finished
 More correctly finished over shoulder, back, & loin
 Would yield larger % of lean nicer killing barrow
 Trimmer middle, trimmer underline
 Firmer side, firmer flank
 Would Hang up a
 Neater carcass
 Trimmer carcass, meatier
 Heavier muscled carcass

Criticism

Off type
 Lacks meatiness, light muscled
 Soft
 Wasty
 Poorly balanced
 Rough
 Plain
 Coarse
 Short side
 Shallow side
 Wrinkled side
 Cut up in flank, shallow flank
 Narrow
 Poorly turned, too much right-angle spread
 Uneven in width
 Narrow forerib
 Pinched at loin, narrow loin
 Short rump
 Low tail setting
 Shallow ham
 Narrow, flat ham
 Weak top, uneven arch
 Slack, loose frame
 Weak top
 Rough shoulders, coarse shoulders
 Wasty jowl
 Long neck
 Wasty about base of ham or lower ham
 Soft, wasty ham
 Stands too close behind
 Under-finished, over-finished
 Too much finish along top, wasty top barrow
 Soft finished
 Too much finish over shoulder, back, & loin
 Poor yielding, poor cutting, poor killing barrow
 Wasty middle
 Soft side, loose flank
 Would hang up a
 Wasty carcass
 Narrow, light carcass
 Muscled carcass



Notes