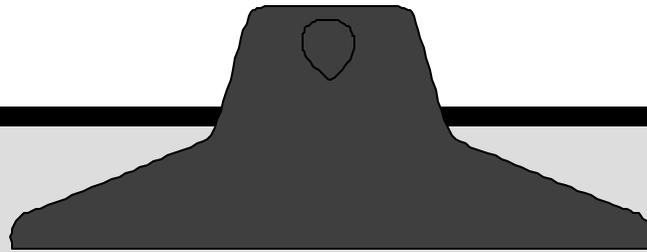


Judging Livestock



Market Steers

- 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 STEERS

1. Muscling
1. Optimal fat
2. Optimal weight
3. Volume
4. Structure

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.

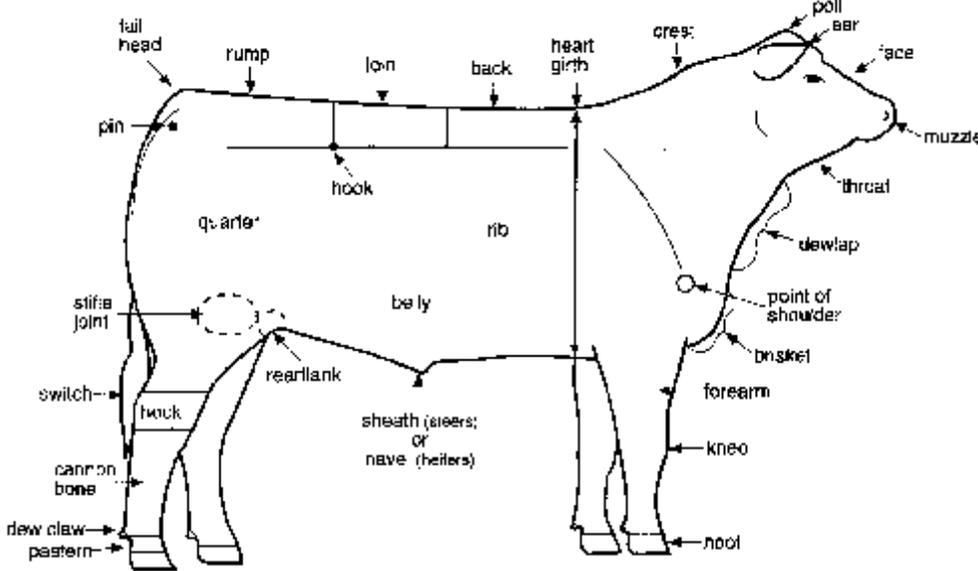
Style - the general eye-appeal or attractiveness of the animal. Includes balance, structural correctness and quality.

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 Beef



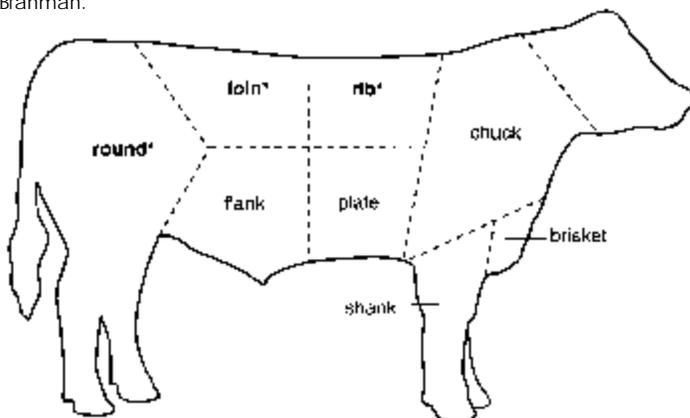
Background Basics

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 is a vast array of cattle breeds that are officially recognized in the United States. They are broken into the three distinct groups of British, Continental and American breeds. There are a great many breeds that we will not discuss in this section.

American breeds are known for adapting well to tropical environments, resistance to parasite populations, poor marbling ability, nervous temperament and good milk production. Breeds in this category are often a combination of two or more breeds. Crossbreeding is done in an effort to combine the favorable traits of each breed in their offspring. Hybrid vigor is the ability of the crossbred offspring to excel over the parents. The **American Brahman** is distinguished by their large hump and drooping ears and are usually grey to red in color. The **Santa Gertrudis** breed are usually deep red in color and are 5/8 Shorthorn and 3/8 Brahman. **Beefmaster** can be any color and are composed of 1/2 Brahman, 1/4 Hereford and 1/4 Shorthorn. **Braford** cattle are usually brindle and are 5/8 Hereford and 3/8 Brahman. The **Brangus** breed are black and 5/8 Angus and 3/8 Brahman.

British breeds are known for their high reproductive rate, high marbling score (amount of fat within the muscle tissue), average mature size and early sexual maturity. **Shorthorn** is the oldest breed of beef cattle and their color pattern can be red, white or roan. The **Hereford and Polled Hereford** breed is distinguished by a red body with white face, underline and switch. **Angus** cattle are black and polled and **Red Angus** cattle are similar except they are red in color.

Continental breeds generally possess a large mature size, rapid growth rate, heavy muscling, low reproductive rate and low marbling ability. The **Simmental** breed are usually red and white and are known for their high milk production. **Limousin** cattle are red to tan in color with lighter circles around the eye and muzzle area. **Charolais** cattle are cream to light colored. The **Chianina** breed are white with black pigmented skin (nose and around eyes) and are known as the world's largest breed of cattle.

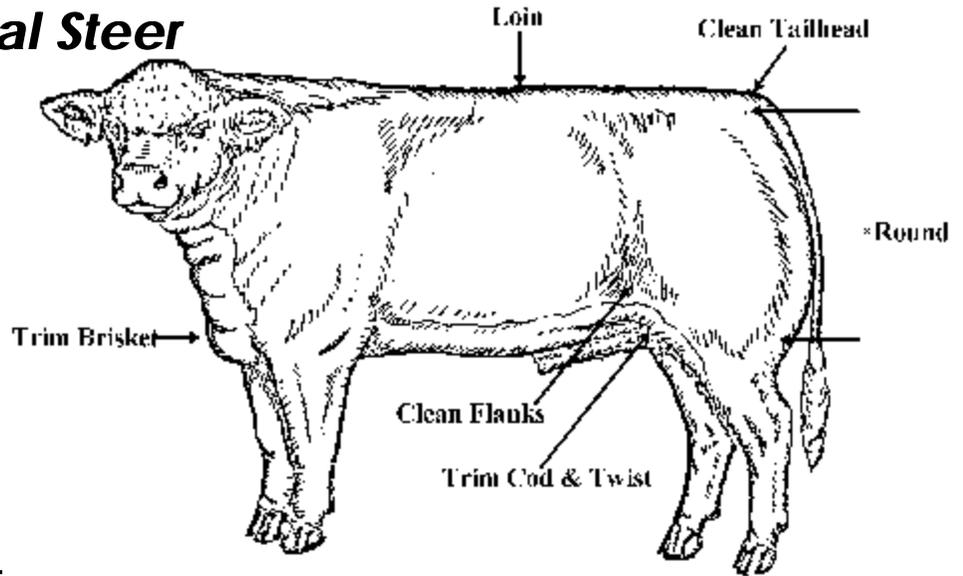


High Priced Cuts*		Low Priced Cuts	
T	Loin	T	Brisket
T	Rib	T	Chuck
T	Round	T	Flank
		T	Plate
		T	Shank

*The loin, rib and round together account for about 50% of carcass weight and about 70% of carcass value.

Points Of An Ideal Steer

A trim muscular steer will have lots of muscling in his hindquarters. His rounds will be long, deep and bulging, when viewed from the side and rear. The forearm is also a good indicator of muscling. He will be trim and tight in his flanks and twist, and will not have large fat deposits in his brisket, cod, and tailhead. His muscles will bulge and move as he walks.



Conformation

General Appearance - Heavy muscled; trim, stretchy; relatively straight-lined; stylish and well balanced with a great degree of development in the high priced cuts; namely, the hindquarters; adequate size for age; adequate length of body and length of leg.

Hindquarters		Forequarters		Middle and Underline	
Hind legs:	Set wide apart, out under the corners; straight	Back:	Broad, straight and strong; Uniform in width.	Middle:	Trim; Ample depth of rib but not too deep.
Twist:	Moderately deep; extreme depth not desirable	Ribs:	Well strung, both fore and rear.	Underline:	Reasonably straight but slightly cut up in rear flank.
Round:	Wide; plump as viewed from side and rear; Long; Deep; Especially wide through the stifle.	Shoulders:	Muscular arm and forearm but not coarse or open in skeletal makeup; Long; Sloping.		
Pins:	Wide apart; not narrow.	Chest:	Wide; front legs well apart.		
Loin:	Meaty; strong and level, neither too weak nor too high; Deep; Smooth; Muscular to the touch.	Brisket:	Neat, trim; Not large and wasty.		
Rump:	Long, wide, square, level; Tail-head square and smooth with tail coming neatly out of body on a line with the back; not rough or patchy.	Neck:	Medium length; Trim throat and dewlap.		

Finish

Uniformly covered with the correct amount of smooth, firm finish.
 Correctly finished over back, loin and rump.
 Correctly finished over ribs (fore and rear).
 Smoothly finished throughout, particularly the loin edge, rump and tailhead.
 Clean in flanks, both fore and rear.

Quality

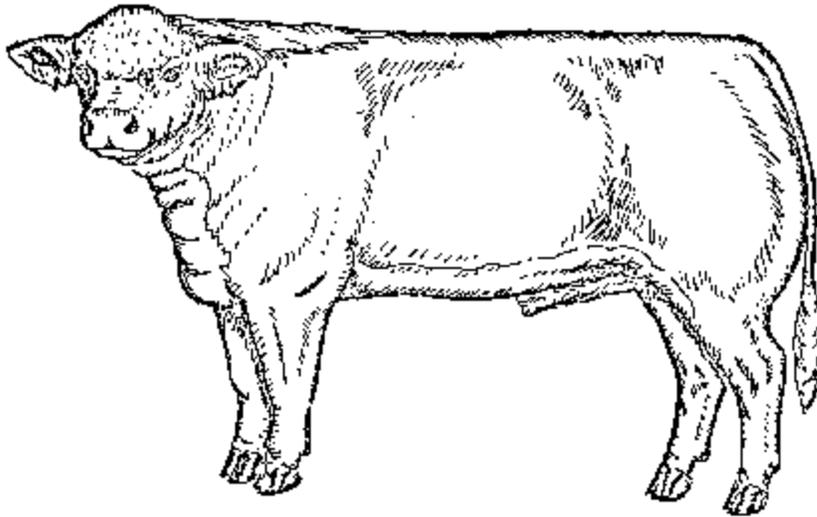
Bone: Ample substance.
 Head: Clean-cup and stylish; not coarse or staggy.
 Hide & hair: Thin, pliable hide; Bloomy hair coat.

Viewing Beef Conformations

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

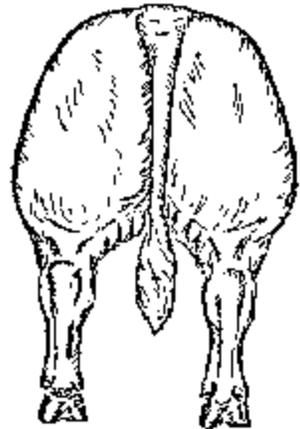
Side View

- i Neck should be moderately long and trim.
- i Topline should be long and level from top of the shoulders extending through the rump.
- i Round should be deep, wide, and thick through the stifle.
- i Rear flank and underline should be trim.
- i Forequarter should be well-muscled with a large forearm.
- i Brisket should be clean and trim.
- i Legs should be ample and correctly placed under the body.



Rear View

- i Back and loin should be oval over the top.
- i Fullness should be present in foreribs, across the loin & back, and over the rump.
- i Animal should stand squarely on its rear legs and walk with ease.
- i Hindquarters should be well-muscled, with maximum width in the thighs



Front View

- i Arm and forearm should be well-muscled.
- i Shoulders should taper slightly toward the top.
- i Shoulders should exhibit balance, fullness, and good muscling.
- i Brisket should be clean and trim legs should be correctly set.

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

Judging Market Beef Cattle

Major Importance

Secondary Importance

From the side view you should look for the following:

Size of Frame
 Length of Body (Type)
 Balance and Style
 Straightness of lines
 Length, Depth and Fullness of Quarter

Length and levelness of rump
 Depth of body
 Uniformity of depth of body
 Straightness of legs
 Size of bone
 Strength of top
 Trimness about the middle, brisket, tail setting, etc.

From the rear view look for the following:

Thickness across Rump, Loin and Back
 Depth, Width, Fullness and Thickness of Quarter

Smoothness of fleshing and uniformity of width
 Squareness (fullness) of rump
 Width between hind legs
 Muscling in the inner and outer gaskin
 Straightness of rear legs and size of bone in rear cannon
 Spring of rib
 Trimness of middle (steers only)

From the front view observe the following:

Width and Depth of chest

Shape of head as well as breed & sex character exhibited
 Spring and fullness of forerib
 Smoothness of shoulders
 Strength and straightness of front legs
 Size of bone in fore cannon

While handling a judging class you should determine the following (market cattle)

You may not be allowed to handle all classes.

Amount and uniformity of finish over rump and around the tail head.

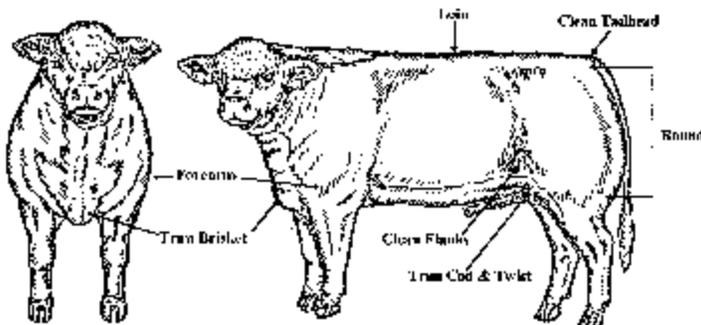
Smoothness of the loin edge.
 Amount & smoothness of finish over the crops & shoulder.
 Refinement of hide and hair coat.

Amount and firmness of fleshing and depth of muscling over the loin.

The length of rump, fullness of lower quarter and fullness of fore rib for cattle with a long hair coat.

Smoothness and amount of finish over the back & ribs.

A trim muscular steer will have lots of muscling in his hindquarters. His rounds will be long, deep and bulging, when viewed from the side and rear. The forearm is also a good indicator of muscling. He will be trim and tight in his flanks and twist, and will not have large fat deposits in his brisket, cod, and tailhead. His muscles will bulge and move as he walks.



A fat wasty steer will look soft and jiggle. He will be deep in his flanks and twist. He will have puffy fat deposits around his tailhead. A heavy deep brisket is one of the best indications of a overfinished steer.

Evaluation Of Market Cattle

When selecting and evaluating market cattle, the 4-H member must keep in mind the purpose of these animals. The primary function of market animals is meat production. Therefore, traits such as muscling and finish are emphasized. Frame size and structural correctness are examined but to a slightly lesser than in breeding cattle.

Muscling: Modern market cattle should exhibit extra muscling down their top and through their hind quarters. These are the areas for which the high-priced cuts come.

Traits that are found in the ideal market steer include:

- < more natural thickness down the top
- < more muscular loin
- < long, level rump
- < thicker through the center of the quarter
- < wider deeper stifle

Finish: Finish refers to the amount of fat cover a market animal possesses. An ideal market animal should have the minimal amount of body fat and still be able to reach the Choice quality grade.

Desirable traits in regard to finish include:

- < smooth and uniform fat cover over ribs
- < uniform depth of body
- < freedom from fat patches about tailhead
- < no excessive fullness in brisket

Frame Size: Current trends in market cattle frame size have shifted toward moderation. Market cattle should have enough frame to enable them to reach an acceptable market weight (1100 - 1350 lbs.) at an age of 12 - 18 mos.

Acceptable traits for today's frame size include:

- < moderate hip height (frame size 5.0 - 7.0)
- < extra length of body
- < longer rump

Structural Correctness: While it is not emphasized as greatly as it is with breeding cattle, structural correctness is an important selection criteria when judging market animals.

As with breeding cattle, look for animals that are:

- < standing squarely on front and rear legs
- < heavier boned
- < Moving with a long, reaching stride
- < more nearly level from hooks to pins
- < possessing adequate set to the hocks
- < displaying slope to the shoulder

Developing A Beef Evaluation System

Make Every Look Count

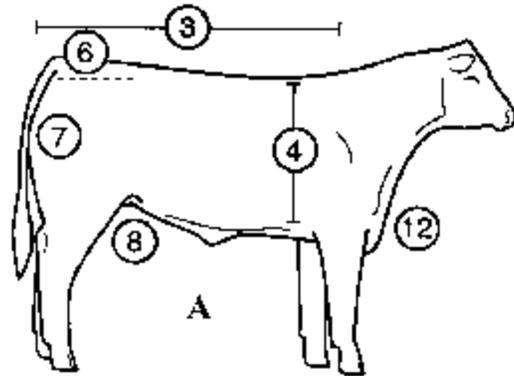
Side View

When you view the class of cattle from the side, compare them for:

- | | |
|----------------------|----------------------------------|
| 1. Balance | 7. Depth and fullness of quarter |
| 2. Height | 8. Trimness of flank |
| 3. Length of body | 9. Trimness of middle |
| 4. Depth of rib | 10. Correctness of feet and legs |
| 5. Levelness of rump | 11. Length of head and neck |
| 6. Length of rump | 12. Trimness of brisket |

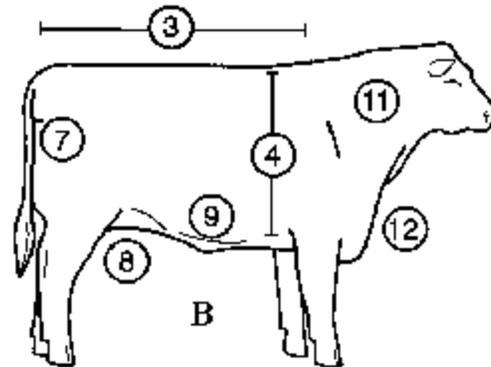
Steer "A": Ideal

Extra length of body - 3
 Adequate depth of rib - 4
 Adequate length of rump - 6
 Deep, muscular quarter - 7
 Trim flank - 8
 Trim brisket - 12



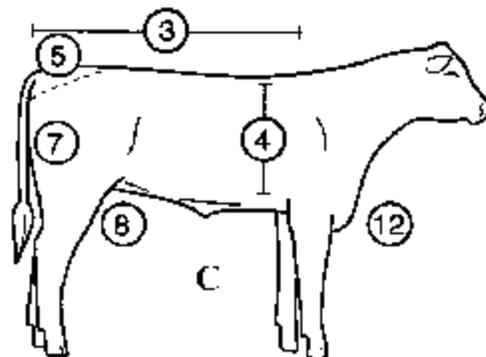
Steer "B": Inferior

Short bodied - 3
 Excessively deep ribbed - 4
 Flat soft quarter - 7
 Full flanks - 8
 Wasty, middled - 9
 Shorter, thicker neck - 11
 Deep, full brisket - 12



Steer "C": Inferior

Average length of body - 3
 Shallow ribbed - 4
 Steep rumped - 5
 Flat shallow quarter - 7
 Cut up in flank - 8
 Extremely trim brisket - 12

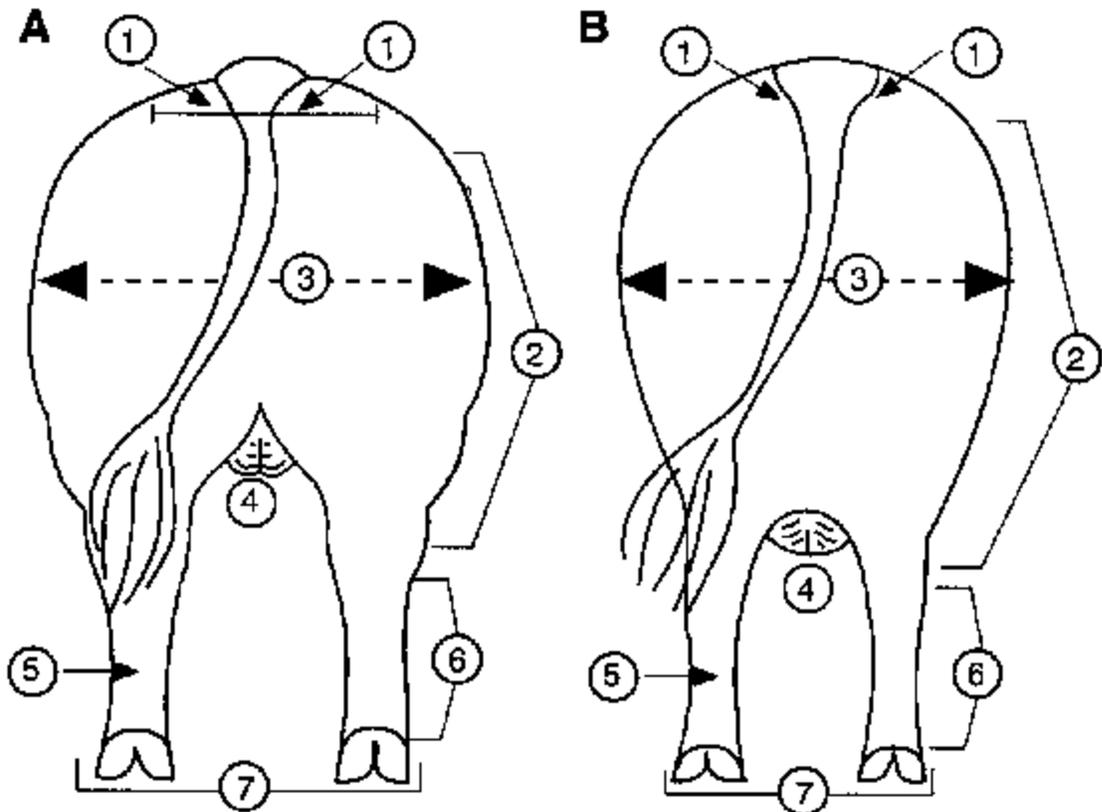


Make Every Look Count

Rear View

When you view a class of cattle from the rear, compare them for:

1. Fat deposits at tailhead
2. Depth of quarter (length of muscle)
3. Width through center of quarter
4. Depth of twist - inverted "U shape (fat) or V shape (trim) in crotch
5. Heaviness of bone
6. Structural correctness
7. Width between hind legs
8. Squareness of rump



Steer "A": Ideal

- No excessive fat about tailhead - 1
- Thick, deep bulging quarter - 2
- Extra width of quarter - 3
- Neat and trim in cod and twist - 4
- Heavy boned - 5
- Correct feet and legs - 6
- Feet set wide apart - 7

Steer "B": Inferior

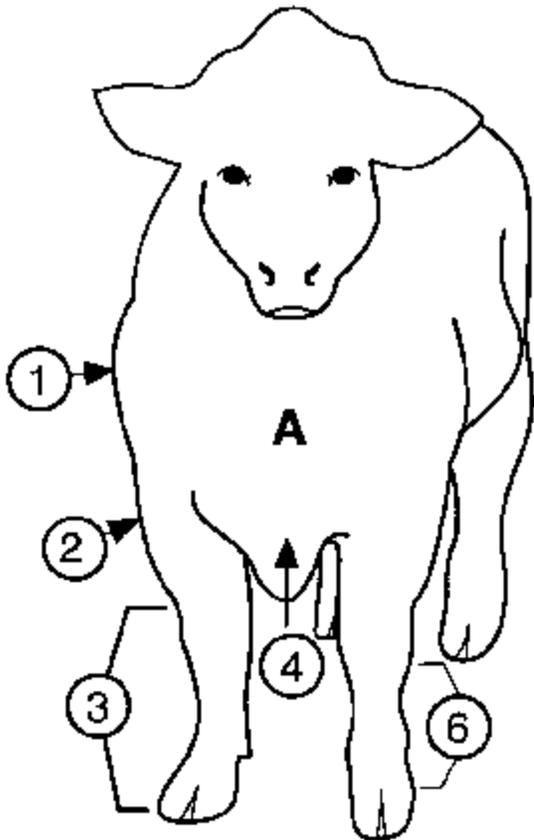
- Excessive fat deposits about tailhead-1
- Shallow, flat quarter - 2
- Narrower through center of quarter (lighter muscled) - 3
- Deep and full in cod and twist - 4
- Lighter boned - 5

Make Every Look Count

Front View

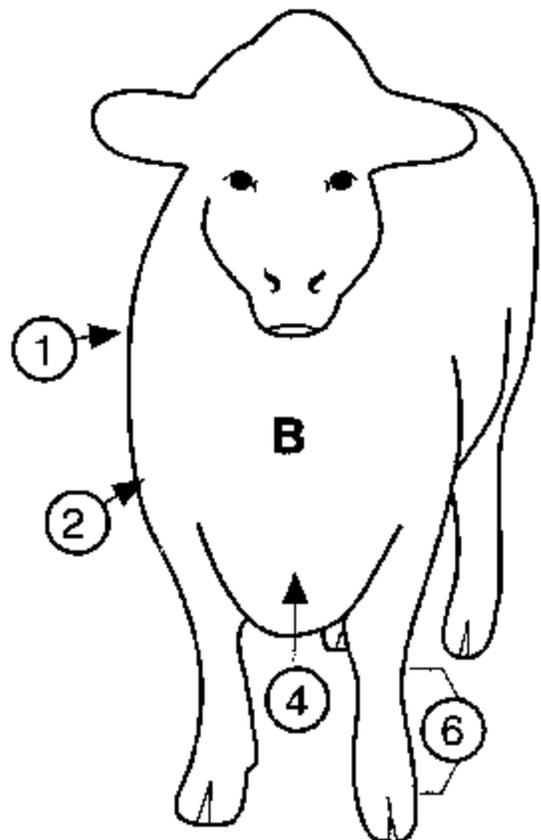
When you view a class of cattle from the front, compare them for:

1. Smoothness of shoulder
2. Forearm muscling
3. Structural correctness
4. Trimness of brisket
5. Width of chest
6. Heaviness of bone



Steer "A": Ideal

Muscular shoulder - 1
Muscular forearm - 2
Correct leg structure - 3
Trim brisket - 4
Heavy boned - 6



Steer "B": Inferior

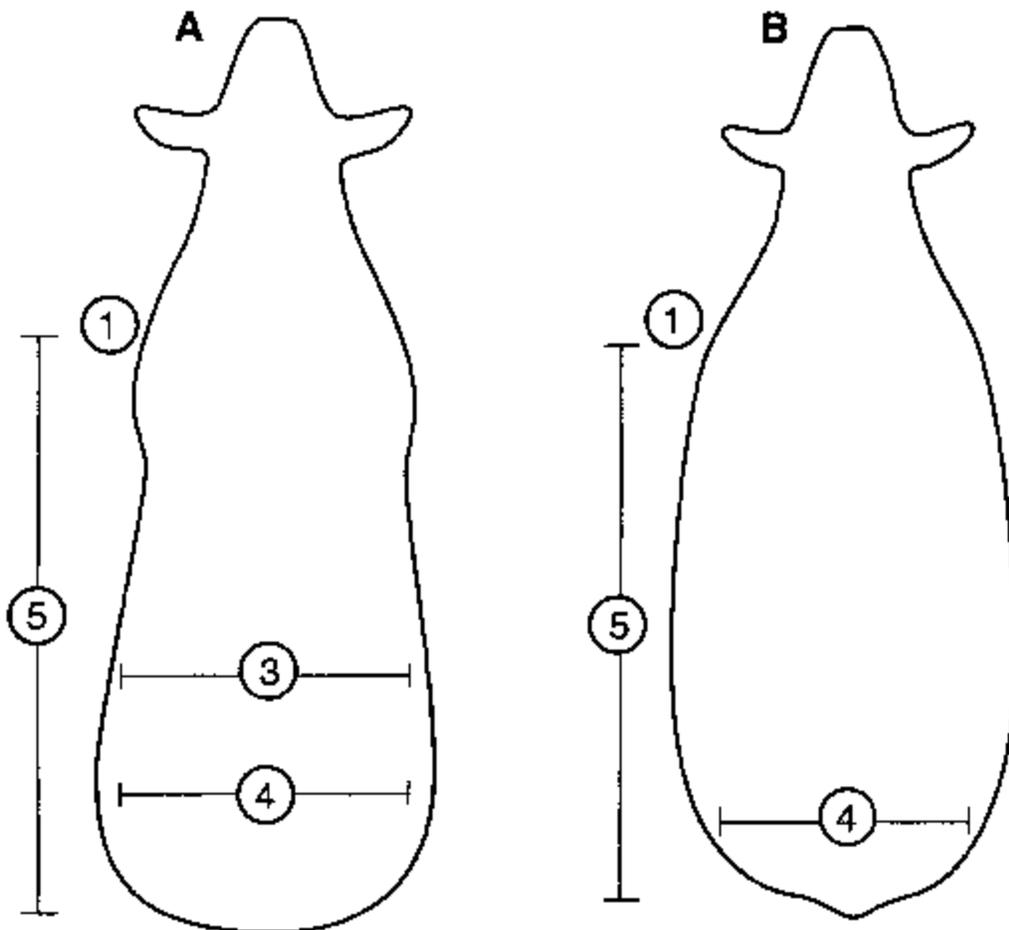
Light muscled shoulder - 1
Light muscled forearm - 2
Extremely full brisket - 4
Lighter boned - 6

Make Every Look Count

Top View

When you view cattle from the top view (up close), compare them for:

1. Smoothness of shoulder
2. Rib cage capacity (spring of rib)
3. Width of loin
4. Thickness of rump
5. Shape of top - Look for the "coke bottle" shape; a slim, clean neck that blends into muscular shoulders. A heavy muscled lean calf should be wider on the ends than in the middle.
6. Degree of finish



Steer "A": Ideal

Muscular shoulder - 1
Extra width of loin - 3
Thick rump - 4
Heavy muscled, trim calf exhibiting "coke bottle" shape - 5

Steer "B": Inferior

Light muscled shoulder - 1
Narrow rump - 4
The widest part of the body is the middle, indicating a light muscled, wasty calf lacking definition of shape - 5

Structural Differences in Beef Cattle

Splayfooted and Knock Kneed - When viewed from the front, the front knees are close together and the feet toe out away from each other. This problem is often seen in extremely light-muscled, narrow-chested cattle where the legs are naturally set too close together.



correct



knock kneed
or splayfooted



bowlegged or
pigeon toed

Pigeon Toed and Bowlegged - When viewed from the front or rear, the knees set too far out, causing the toes to turn in toward each other in a pigeon-toed manner.

Cow Hocked - When viewing the rear legs from the rear, the hocks are turned in or placed too close together.

Buck Kneed - When the calf is "over at the knees," or buck kneed, full extension of the knee cannot occur when observed from the side. This is usually seen in cattle that are also too straight in their shoulder.

Calf Kneed - This is the other extreme where the calf stands "back at the knees" when viewed from the side.

Sickle Hocked - When viewing the rear legs from the side, the hock has too much angle or set, causing the steer to stand too far underneath himself. Often these calves also will droop excessively from hocks to pins.

Postlegged - The hock has too little angle or set. The calf is too straight through the joint resulting in very stiff, constricted movement because of the lack of flexibility. More cattle become unsound because of being postlegged than sickle hocked.



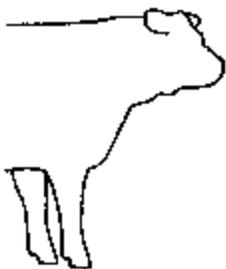
correct



cow hocked or
splayfooted



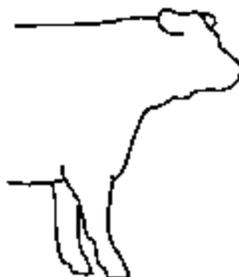
bowlegged or
pigeon toed



correct



buck kneed



calf kneed



correct



sickle hocked



postlegged

Market Steer Terms

In judging market steers, there are six general things to look for. These are size, muscle, correctness of finish, balance, capacity, and expected carcass desirability. Following each character are appropriate phrases for describing the attribute.

SIZE

GENERAL

larger framed
growthier
higher performing

DESIRABLE

more upstanding
taller fronted
more elevated
longer bodied
easy keeping

CRITICISMS

smaller framed
shorter bodied
harder keeping

He was a larger framed, longer sided steer that had a particular advantage in length from hooks to pins.

He was a taller fronted, later maturing steer that had a greater distance from eye to muzzle and hock to ground, .

He was a more elevated, longer bodied steer that displayed a more desirable length of cannon.

He was a larger outlined, cleaner featured steer that exhibited more skeletal extension when viewed from the side.

MUSCLE

GENERAL

heavier muscled
thicker
wider

DESIRABLE

natural thickness
thicker topped
fuller rumped
longer, deeper, more dimensional
quarter
wider through stifle
meatier topped
stronger topped
wider tracking

CRITICISMS

lighter muscled
narrower topped
lighter quartered
narrower at the stifle

He was a heavier muscled steer that had more natural thickness down his top, carrying to a deeper, thicker quarter.

He displayed more expression of muscle through the forearm with more depth and dimension of quarter.

He was a heavier muscled steer that displayed more expression of muscle through the stifle and forearm.

He was a thicker topped steer with more width at the stifle and more dimension of quarter.

He was a thicker steer that was wider down the top with a more dimensional quarter.

CORRECTNESS OF FINISH

GENERAL

more desirably finished
more ideally finished
more optimally finished

DESIRABLE

trimmer, cleaner
smoother, more uniformly finished
trimmer in fore-rib
cleaner brisket
cleaner over loin edge
firmer handling
more advanced in finish or cover

CRITICISMS

over finished
under finished
wastier made
softer handling
bare handling
patchy finished
wasty over fore-rib and loin edge

A steer that best combined the economic variables of frame, muscle and finish to reach the most ideal end product.

A smoother, more evenly covered steer that was more optimum in his degree of finish.

He should be safer into the choice grade due to his greater evidence of fat deposition in the brisket, flank and fore-rib.

He was a nicer finished steer that was smoother down his top and more correctly finished over the last rib.

Because he was more advanced in his finish, he should hang a carcass more apt to grade choice.

BALANCE

GENERAL

nicer balanced
flashier
eye appealing
better designed

DESIRABLE

stronger topped
straighter lined
cleaner fronted
leveler rumped
smoother shouldered
cleaner middled
square set feet & legs

CRITICISMS

poorest balanced
steeper rumped
wastier middled
coarser shouldered
weaker topped

He was a flashier, more eye appealing steer that was stronger down his top and straighter in his lines.

He was a cleaner fronted steer that carried his depth and thickness more uniformly from front to rear.

He was a cleaner fronted, smoother shouldered steer that was tighter and trimmer about his middle.

He was a nicer balanced steer he was more eye appealing since he was stronger over the top & more level through the rump.

CAPACITY

GENERAL

more capacious
higher capacity
higher volume
broodier
roomier middled
stouter made

DESIRABLE

larger heart girth
wider chest floor
deeper ribbed
bolder sprung
greater arch of rib
more expansion of rib
deeper bodied
wider based

CRITICISMS

shallower bodied
lower capacity
lower volume
flatter ribbed
narrower chested

He was a higher volume steer that was wider chested, deeper bodied and bolder sprung.

He was a more capacious steer as indicated by his arch and expansion of rib.

He had more internal dimension due to his length of body and spring and depth of rib.

He was more capacious with a larger heart girth and wider chest floor.

He was a stouter made steer who had a bolder rib cage and a thicker muscle pattern.

EXPECTED CARCASS DESIRABILITY

GENERAL

more desirably yielding
higher yielding carcass
more desirable yield grade
higher quality carcass
lower numerical yield grade

DESIRABLE

less trimmable waste
higher cutability carcass
meatier carcass
larger ribeye area
uniformly finished
heavier muscled carcass
more pounds of red meat
more pounds of edible product
higher percentage of retail cuts or
higher priced cuts

CRITICISMS

over finished
under finished
lightest muscled
smallest ribeye
wastiest
lowest yielding carcass
lowest quality carcass
lower cutability
fatter

He should produce a carcass with more pounds of red meat and a higher volume of saleable retail product.

He should send to the rail a trimmer, heavier muscled carcass.

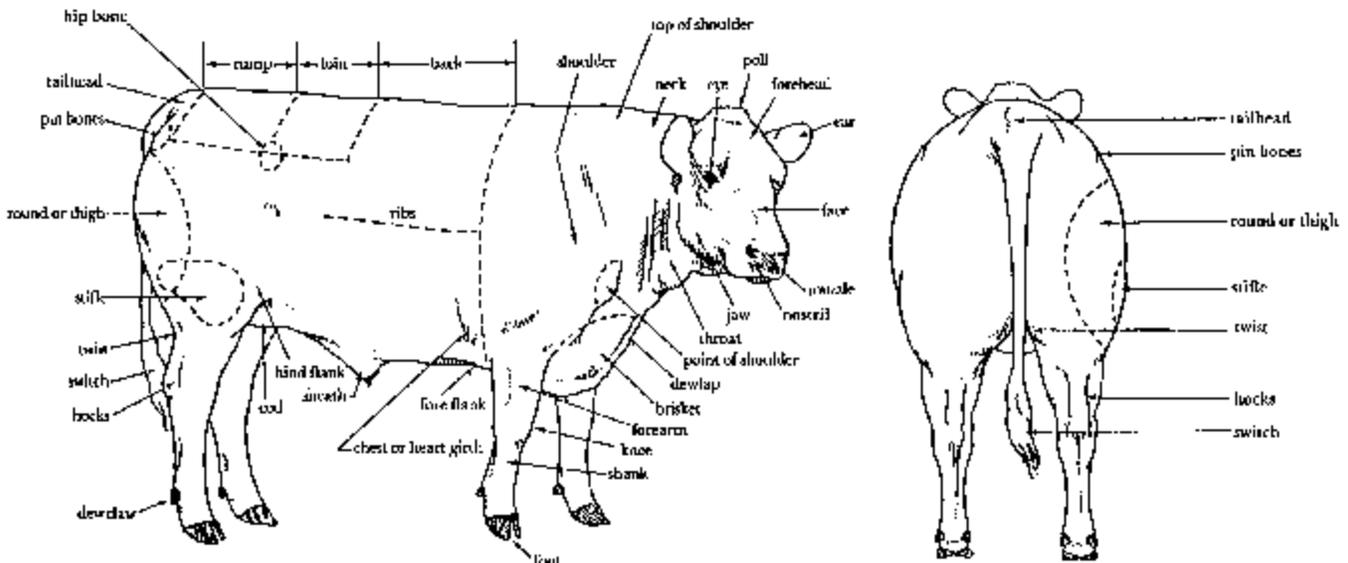
He was a trimmer made, tighter middled steer that should kill a more desirably yielding carcass.

When sent to the rail, he should yield a trimmer, cleaner made carcass requiring less fat trim.

He should kill a heavier muscled, heavier weight carcass with a larger ribeye area.

Suggested Terms For Beef Cattle

Comparative Terms	Criticisms
Typier	Off type
Thicker (beefier)	Narrow
Heavier muscled (meatier)	Lacks muscling (meatiness)
Nicer balanced	Poorly balanced
Smoother	Rough, patchy
Higher quality	Coarse, plain
Larger framed	Small framed
More growthy	Small, lacks growthiness
More stylish	Plain
More bone and substance	Light boned, refined
Shorter legged	Upstanding, leggy
Shorter, deeper bodied	Long bodied, rangy
Deeper body (rib)	Shallow body (rib)
Deeper flank	Cut up in flank
Shorter neck	Long, thin neck
Smoother shoulders	Rough, coarse, open at shoulders
Greater spring of rib, fuller behind shoulders	Flat ribbed, tied in fore rib, pinched behind shoulders
Wider, broader, thicker back	Narrow back
Thicker, fuller loin (wider, nicer turned)	Narrow, flat loin
Longer rump	Short rump



Notes