

# Beef Cattle Evaluation

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# Breeding Heifer Priorities

## 1. Functionality

- Structure
- Body

## 2. Balance/ Eye Appeal

## 3. Optimal Condition/ Fleshing Ability

## 4. Muscle

# Producer goals for females in production

- Main purpose:
  - **Positively impact the next generation**
- How is this accomplished?
  - Longevity within herd
    - Remain in good condition with limited supplementation
    - Stay in cowherd longer than six years
  - Reproductively
    - Calve by two years of age
    - Breed back during first cycle as a first calf heifer



# Functionality= Structural Correctness + Body

Most economically important trait in breeding livestock production. A female needs to be structurally sound and maintain appropriate condition through the production cycle while being able to re-breed, calve, and raise offspring





# Structure

- Starts at the ground
- Longevity and durability starts with the hoof
- Ideal hoof: Square shape
  - Allows animals to put even pressure to the surface

**Foot Angle: 5 is ideal**

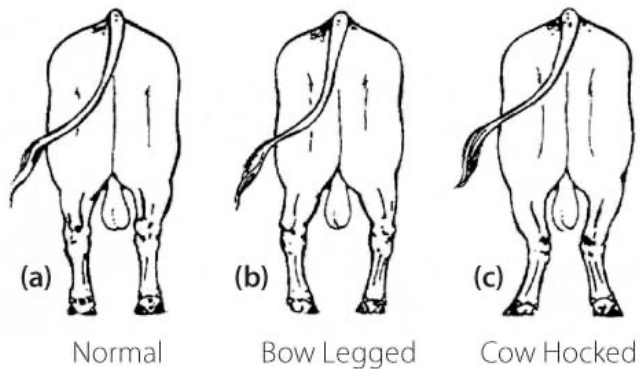


**Claw Set: 5 is ideal**

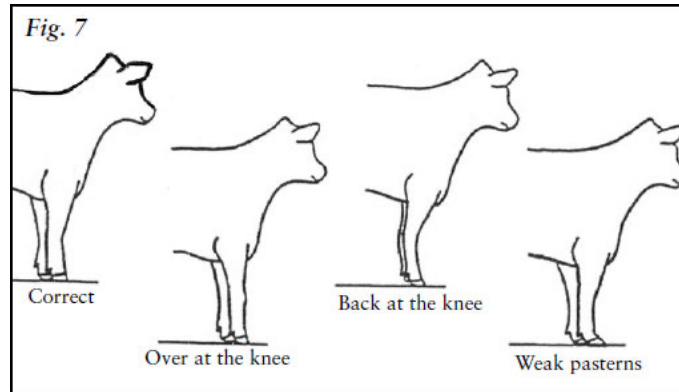


Angus Newsroom, 2019

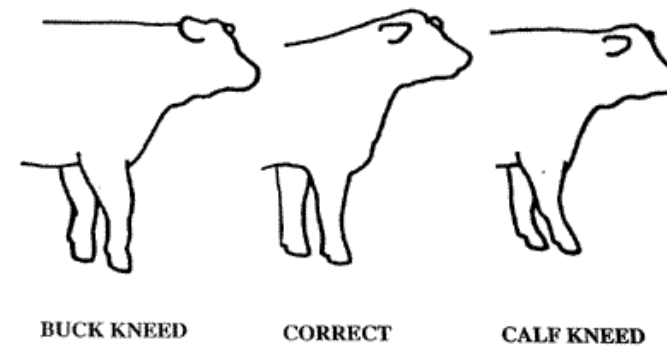


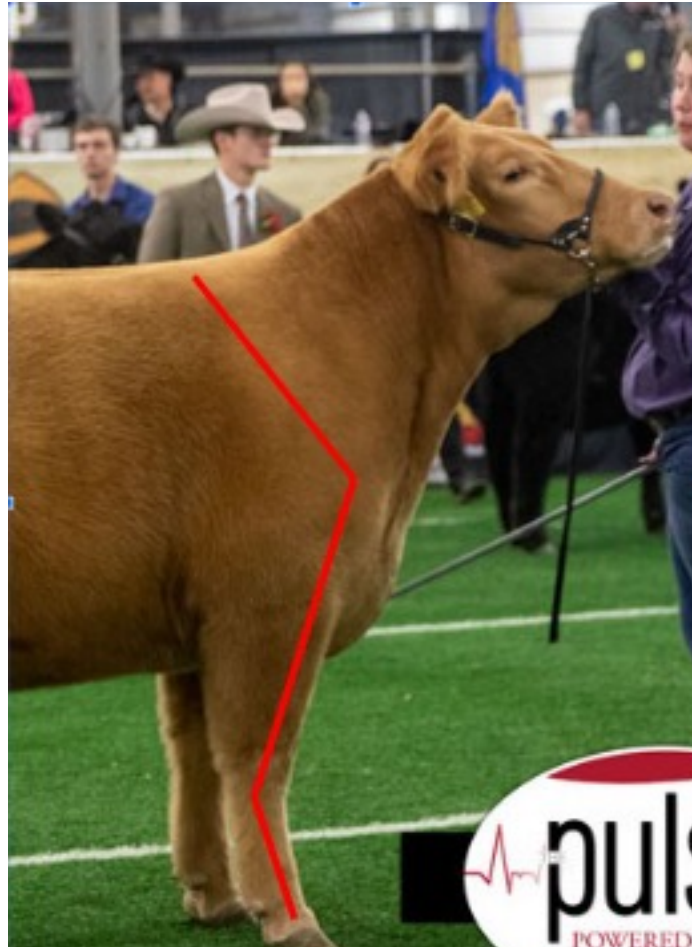


Angles of different pastern joints



Side view of back legs





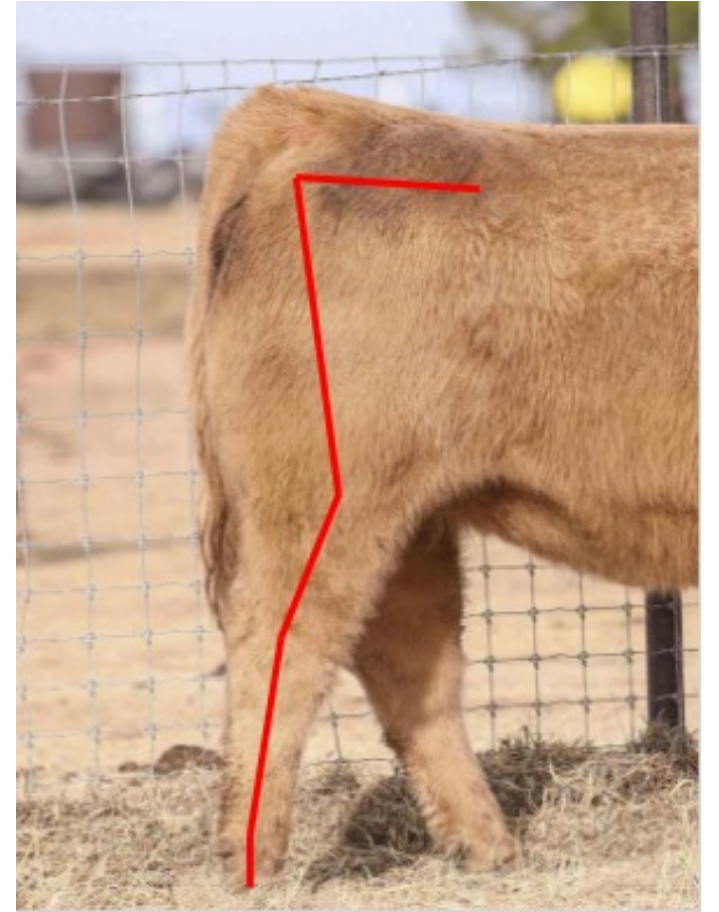
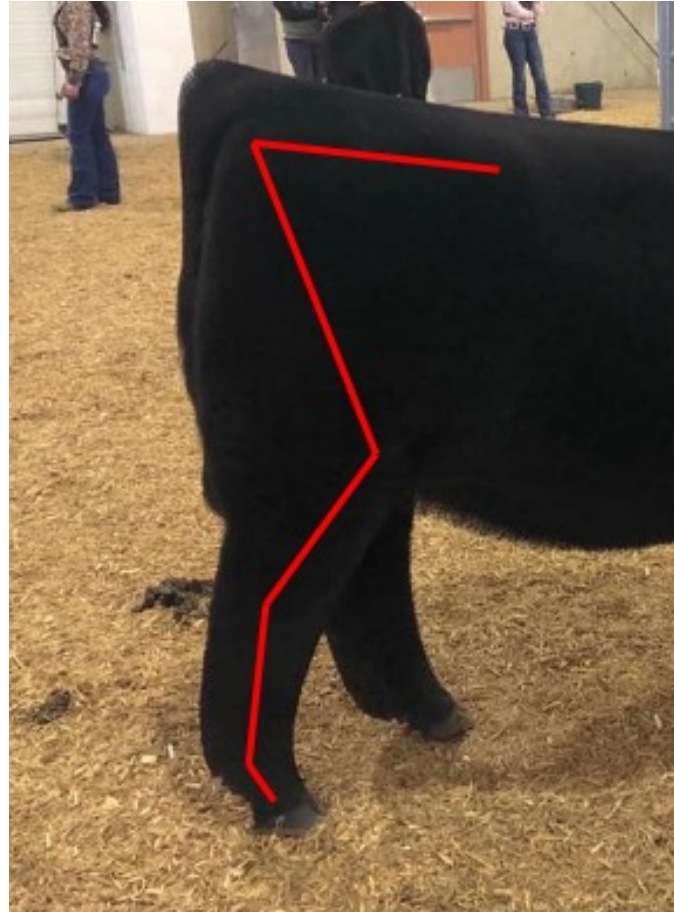
Pulse, Sullivan Supply

## Front End Skeleton:

- Shoulder angle 45°
- Laid back in their knee

# Hind leg:

- Long and level hiped
- Appropriate set to hock
- Cushion to pastern



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# Ideal Cattle Structure



Google Images





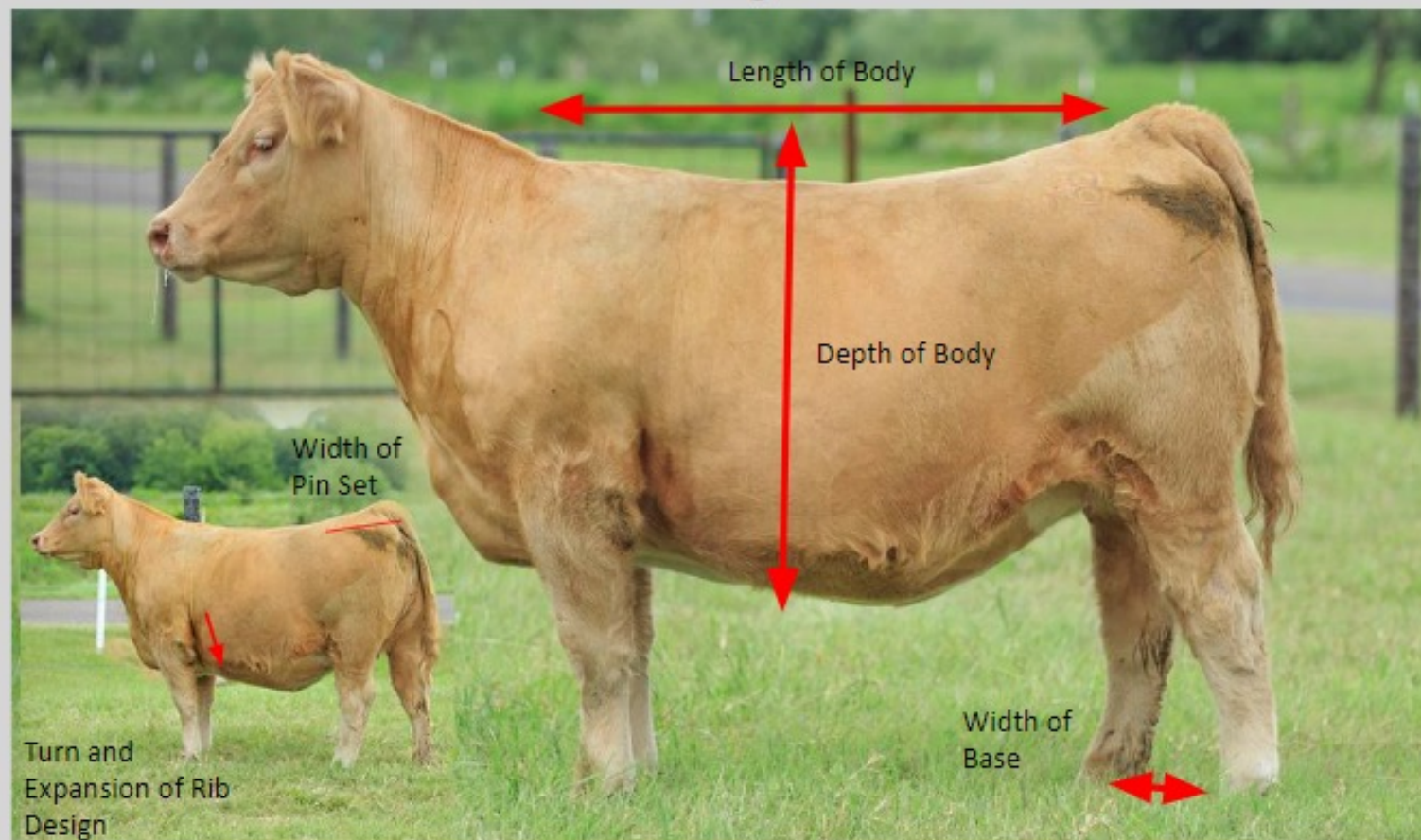
# Body

Think in a 3-D mindset....

1. Turn and boldness of body
2. Depth of body
3. Length of body



## Evaluating Dimension

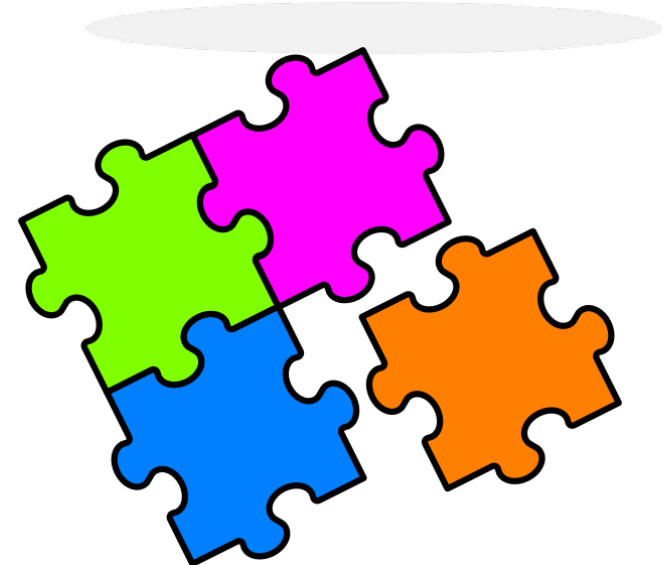


# Balance & Eye Appeal



# Balance

- Refers to animal's proportionality from the side
- Think of pieces of a puzzle....
  - Does that animal's front end match the animal's rear end?
  - Does that female's chest look proportional to her flank?
- Break the animal into thirds...
  - Front third
  - Middle Third
  - Rear Third
- Then ask yourself.... Does her "puzzle" pieces fit and work together?



# Balance

- Do all the parts and pieces fit and blend together?



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**Eye Appeal-  
Added extras  
after covering  
the basics**

Think of eye appeal as what catches your eye and draws your attention to that animal

**Aspects of eye appeal:**

Length of neck

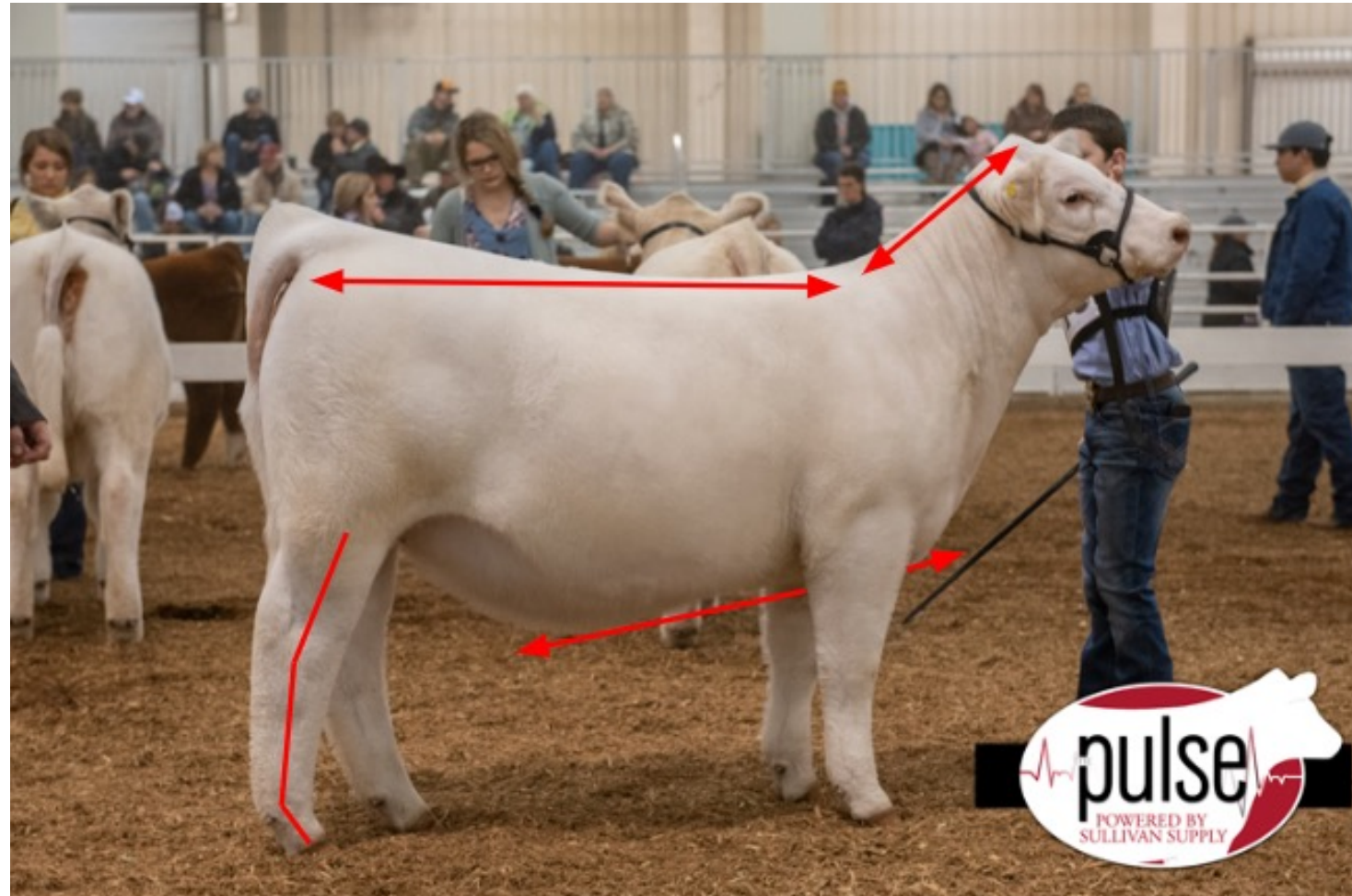
Cleanliness of chest

Levelness of design

Attractive hip and hind leg

# Eye Appeal

- How attractive is that female designed?



# Femininity & Maternal Look

- Evaluators and producers want their females to look like females
- Present with a maternal and cow-like look
- Areas to evaluate
  - Head
  - Shape of neck
  - Design and smoothness of shoulder
  - Muscle pattern
  - Teat size/udder development





**Which female is more maternal and feminine?**





# Femininity and Udder Development

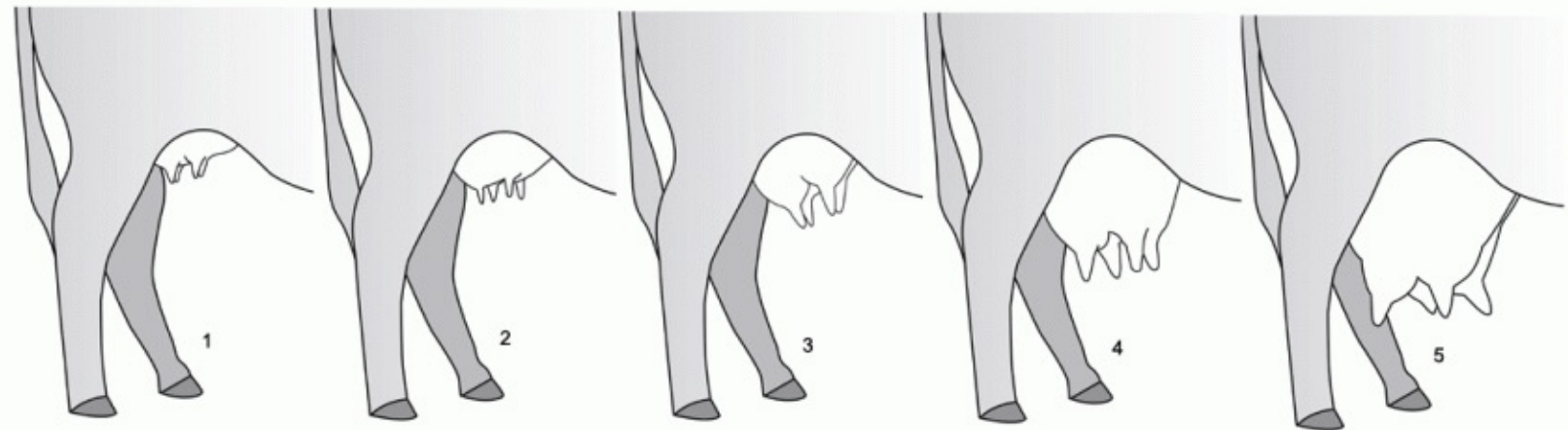
- Along functionality, a female's mammary system is one of the most important economic factors in production
- Evaluate
  - Udder Suspension
  - Teat Size and Shape





# Udder Suspension

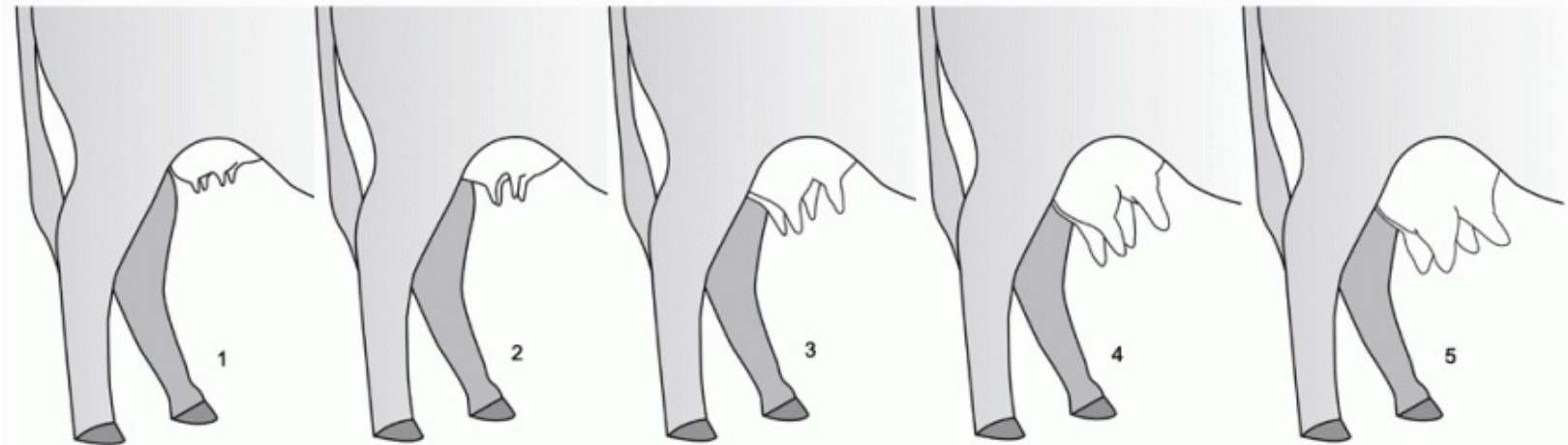
- The tighter to the body cavity that the udder is placed, the more desirable
  - Allows calf to more easily locate teats and less likely to drag in the mud



Drawing 1: Udder suspension - Very Tight, very pronounced median suspensory ligament. Udder suspension score = 9.  
Drawing 2: Udder suspension - Tight attachment, pronounced median suspensory ligament. Udder suspension score = 7.  
Drawing 3: Udder suspension - Intermediate attachment. Udder suspension score = 5.  
Drawing 4: Udder suspension - Loose attachment, weak median suspensory ligament. Udder suspension score = 3.  
Drawing 5: Udder suspension - Very loose and pendulous attachment, very weak median suspensory ligament. Udder suspension score = 1.

# Teat Size and Shape

- Ideal for teats to be small and symmetrical
- Larger teat size makes it harder for new born calf's to latch and nurse



Drawing 1: Teat size - very small and symmetrical. Teat size score = 9.

Drawing 2: Teat size - small and symmetrical. Teat size score = 7.

Drawing 3: Teat size - Intermediate in length; still have symmetry. Teat size score = 5.

Drawing 4: Teat size - Large, variable in length and symmetry. Teat size score = 3.

Drawing 5: Teat size - Very large, variable length and symmetry. Teats appear to be thick. Teat size score = 1.



# **Fleshing Ability & Optimal Condition**



# Fleshing Ability- maintaining body condition

- Factors that contribute to fleshing ability
  - Natural ability
    - Throat
    - Heart
    - Flank
    - Ribs
    - Hook bones
    - Pones
  - Breed
    - British Cattle= typically more maternal and easier fleshing
    - European or Continental cattle=- more terminal, sometimes can be harder doing





# Why Optimal Condition?

- Want females that are appropriate in their flesh
  - Too skinny = appears hard bodied, problems with reproduction, and typically lower in milk production
  - Excessively fat= appears wasty, problems with reproduction





# Optimal Condition





**Muscle**



# Muscularity in Females

- When judging females... **Enough is enough**
- How she lays her muscle onto her skeleton is more important
  - Long and smooth= Maternal in her muscle system
- Females should be
  - Wide made
  - Bold sprung
  - Big pinned
- **Not...** the most expressive, shapely, round, and bunched





**Which female is more maternal in her muscle pattern?**



# Bull Selection



# Breeding Bull Priorities

## 1. Functionality

- Structure
- Body

## 2. Muscle/Power

## 3. Balance/Eye Appeal

## 4. Optimal Condition/Fleshing Ability

# Bull's Role

- Complement a maternal and feminine cow base with growth and muscle
- Service and breed for 2-3 months → covering cows
  - Must be structurally correct to stay with the herd and cover ground while maintaining body condition
  - Has to stay in good condition to be able to produce semen





# Structure

- Appropriate set and cushion to feet and legs
- Flexible
- “Built to last”
  - Durability



Google images







Which bull do you think is easier fleshing and should hold up better in production?

Why???





# Power and Masculinity

- Bull's should be equipped with large amounts of muscle
  - Stout head
  - Powerful jaw
  - Rugged foot and bone
  - Stout Hipped
  - Bold bodied
  - Testicles
    - Should be even in size and descend



University of Georgia- Extension



# Scrotal Circumference Chart

Age	Minimum Scrotal Circumference
15 Months	30 cm
15-18 Months	31 cm
18-21 Months	32 cm
21-24 Months	33 cm
>24 Months	34 cm

- Correlation between a sire's yearling scrotal circumference and the age at which his daughter reach puberty
- 1 cm (up to 40 cm) of increased scrotal circumference = 4 days earlier in estrus





**Which bull is more masculine????**



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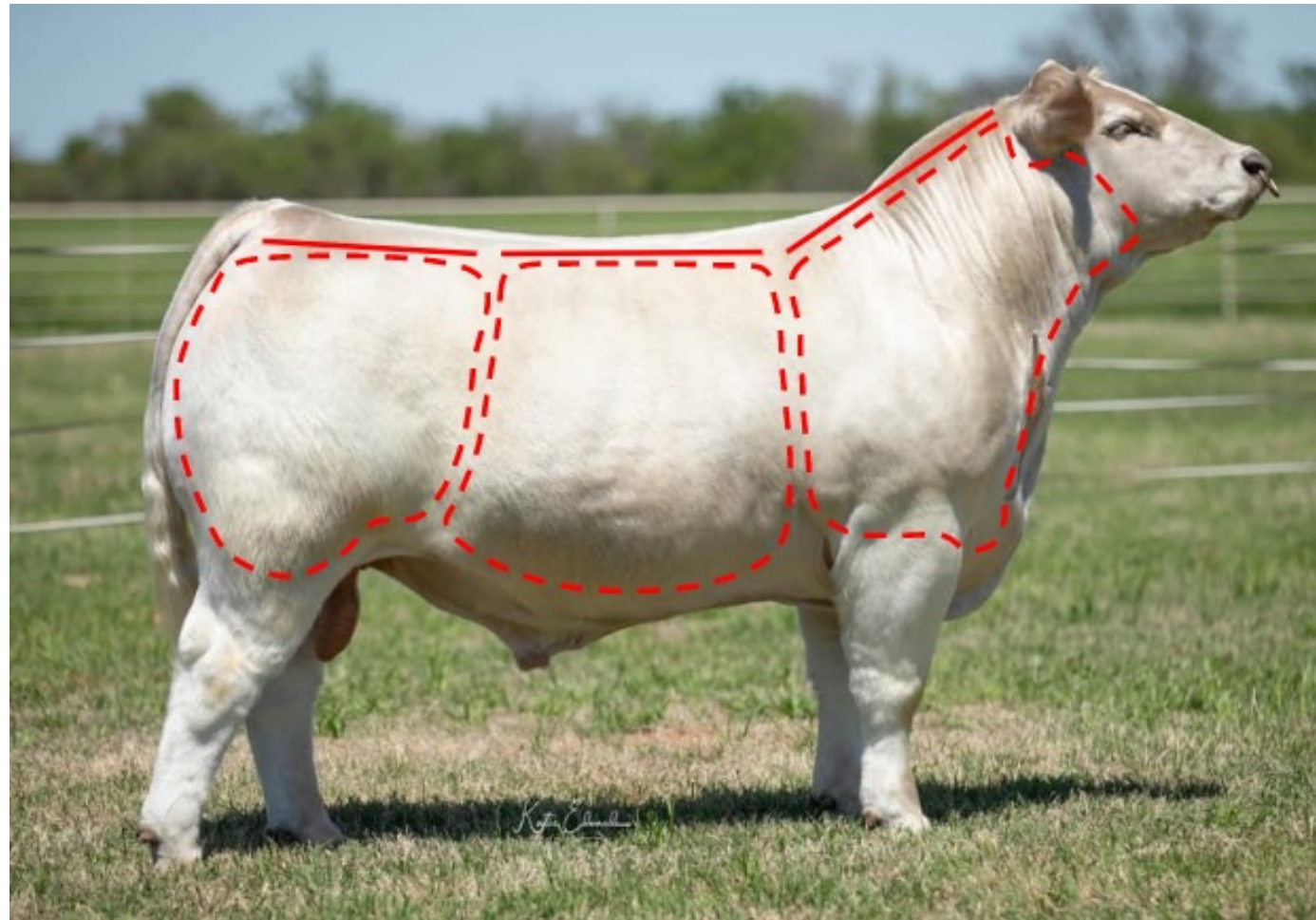


# Balance and Eye Appeal

An added bonus in bull selection



# Balance



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# Eye Appeal



Google Images





A photograph of a brown market steer standing on a gravel surface. The steer is facing left and has a yellow ear tag on its left ear. The text "Market Steer Selection" is overlaid in white, bold font across the middle of the image.

# Market Steer Selection



# Market Cattle Priorities

## 1. Carcass Value/Composition

- Muscle
- Finish

## 2. Practicality (Body and Structure)

## 3. Balance and Eye Appeal

# Carcass Value/Composition

Appropriate blend of muscle and fat



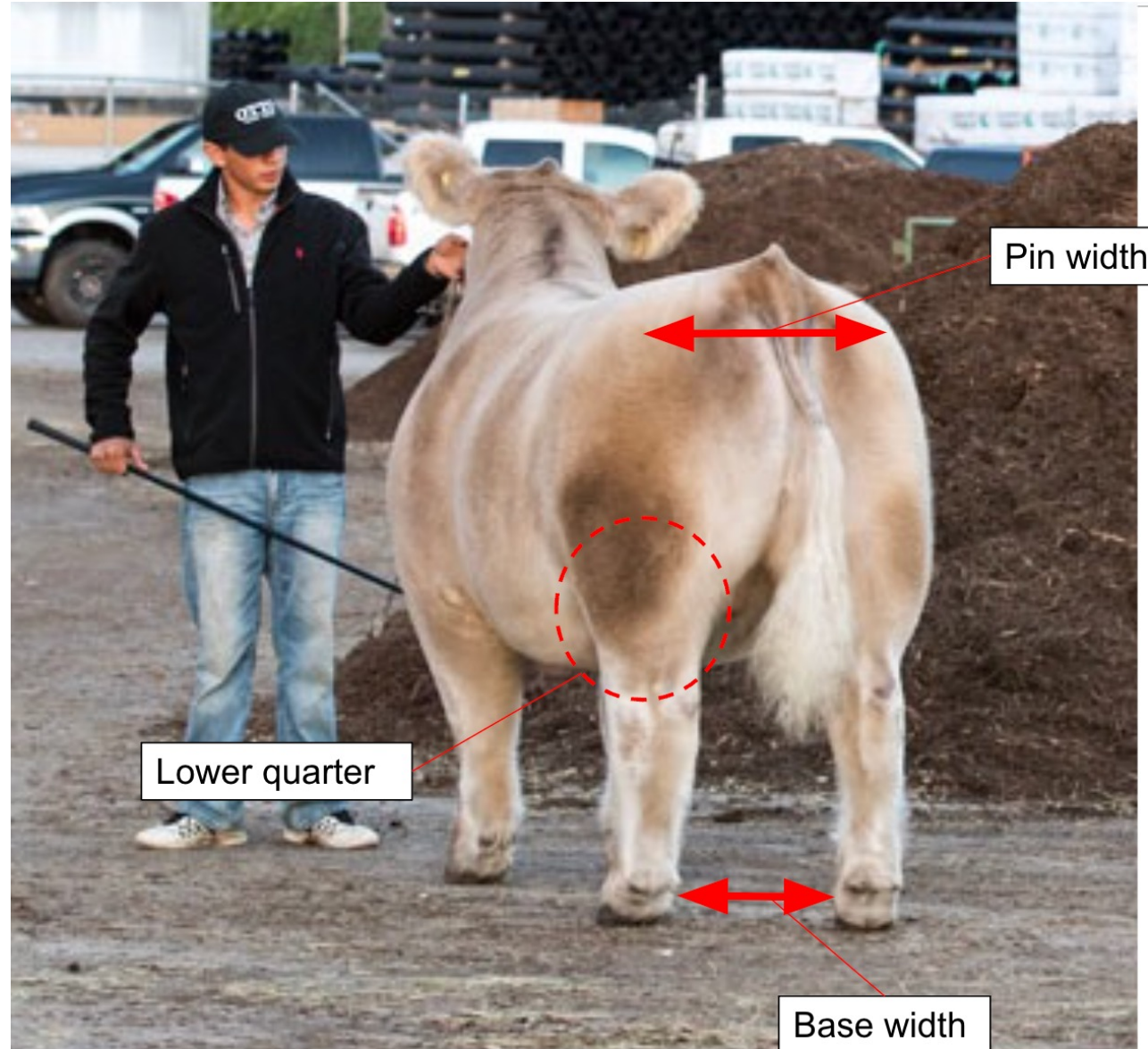
# Muscle: Areas to evaluate

- Rear View
  - Width of skeleton
  - Upper hip and pin set
  - Lower quarter
- Over top
  - Directly behind their shoulder
  - Over rib and loin
    - Loin is primary indicator of overall muscularity of cattle on the rail
- Front view:
  - Width of chest





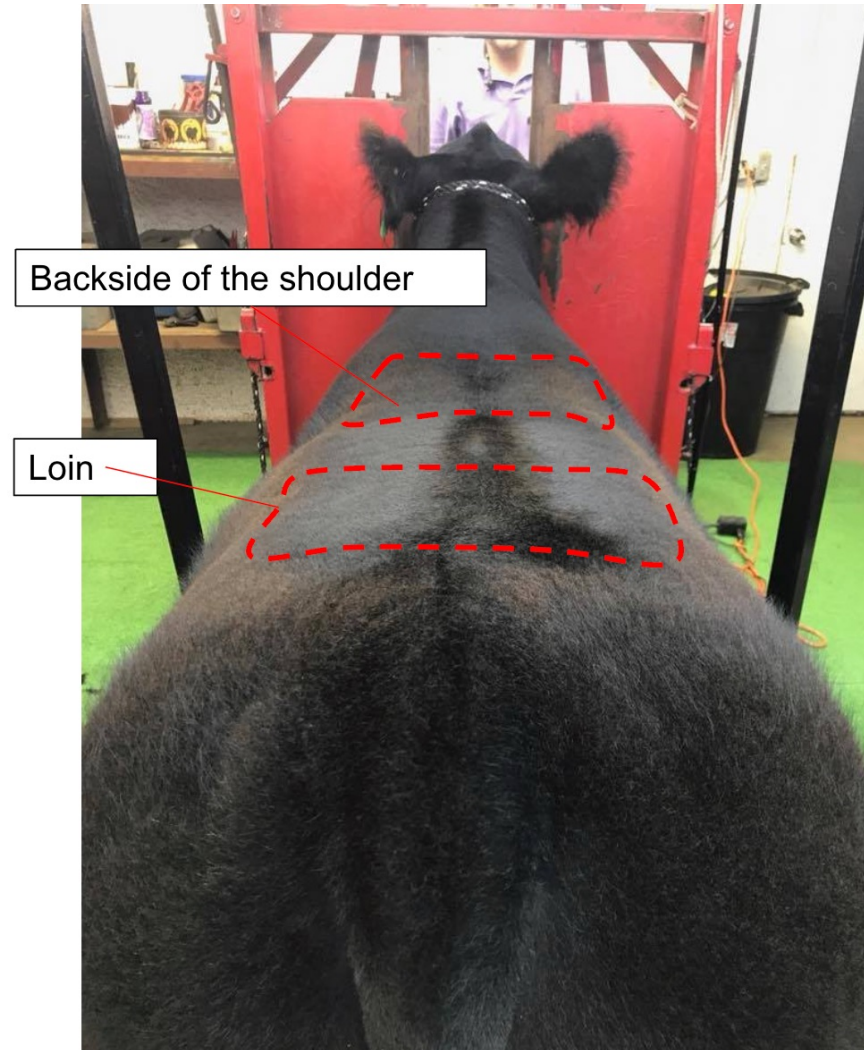
# Rear View



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# Rear View and Top View

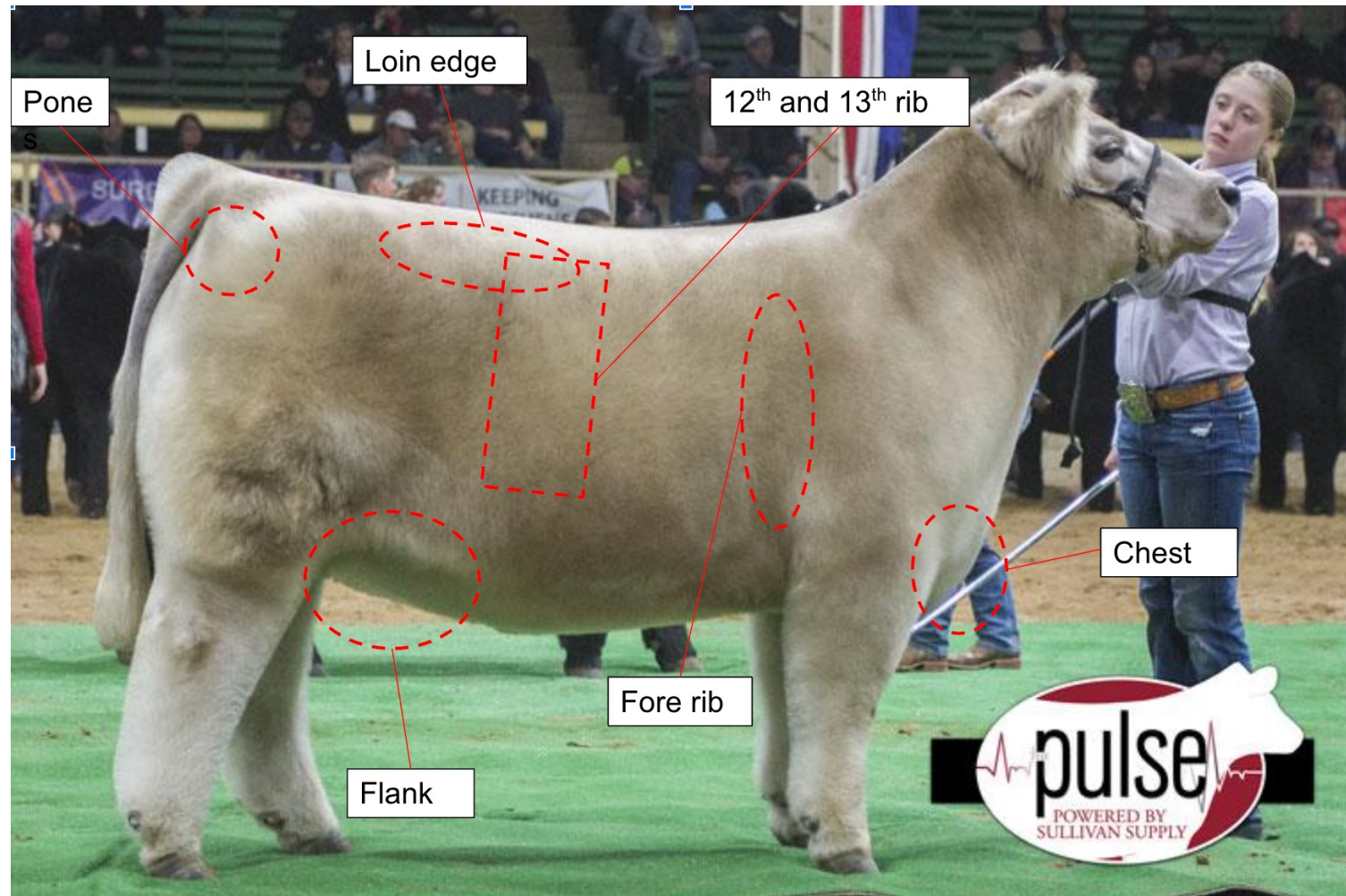


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# Correctness of Finish- Areas to Evaluate



Pulse, Sullivan Supply



# Correctness of finish

- Refers to the finish of the fat that an animal has put on is the external indicator that tells us the expected quality of that carcass
- Ideal 12<sup>th</sup>-13<sup>th</sup> rib backfat thickness is 0.4" - 0.5"





# Correctly finished or under finished?



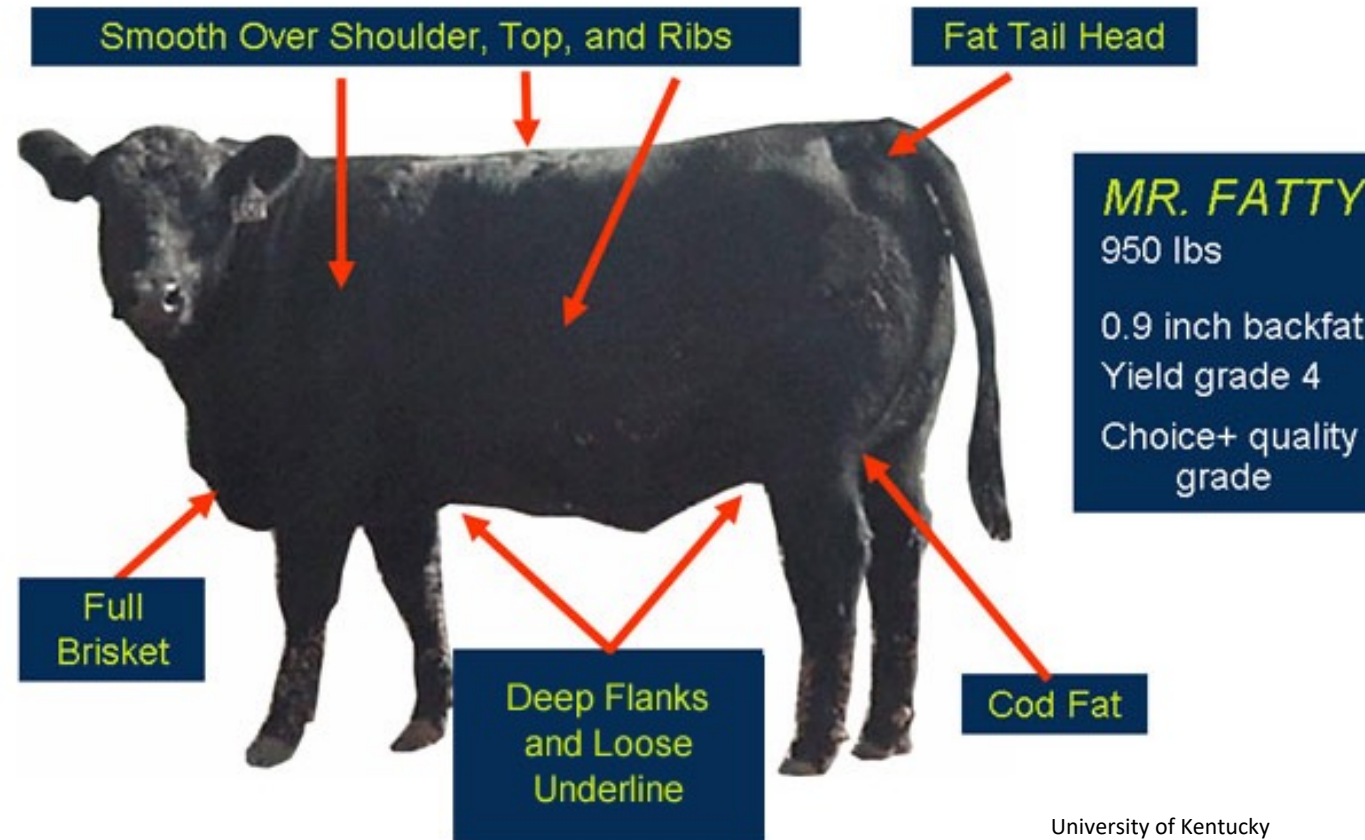
judging 

LivestockJudging.Com



# Over finished market steer

## Evaluating Degree of Finish





# Appropriately finished market steer



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# Practicality

Body and Structure





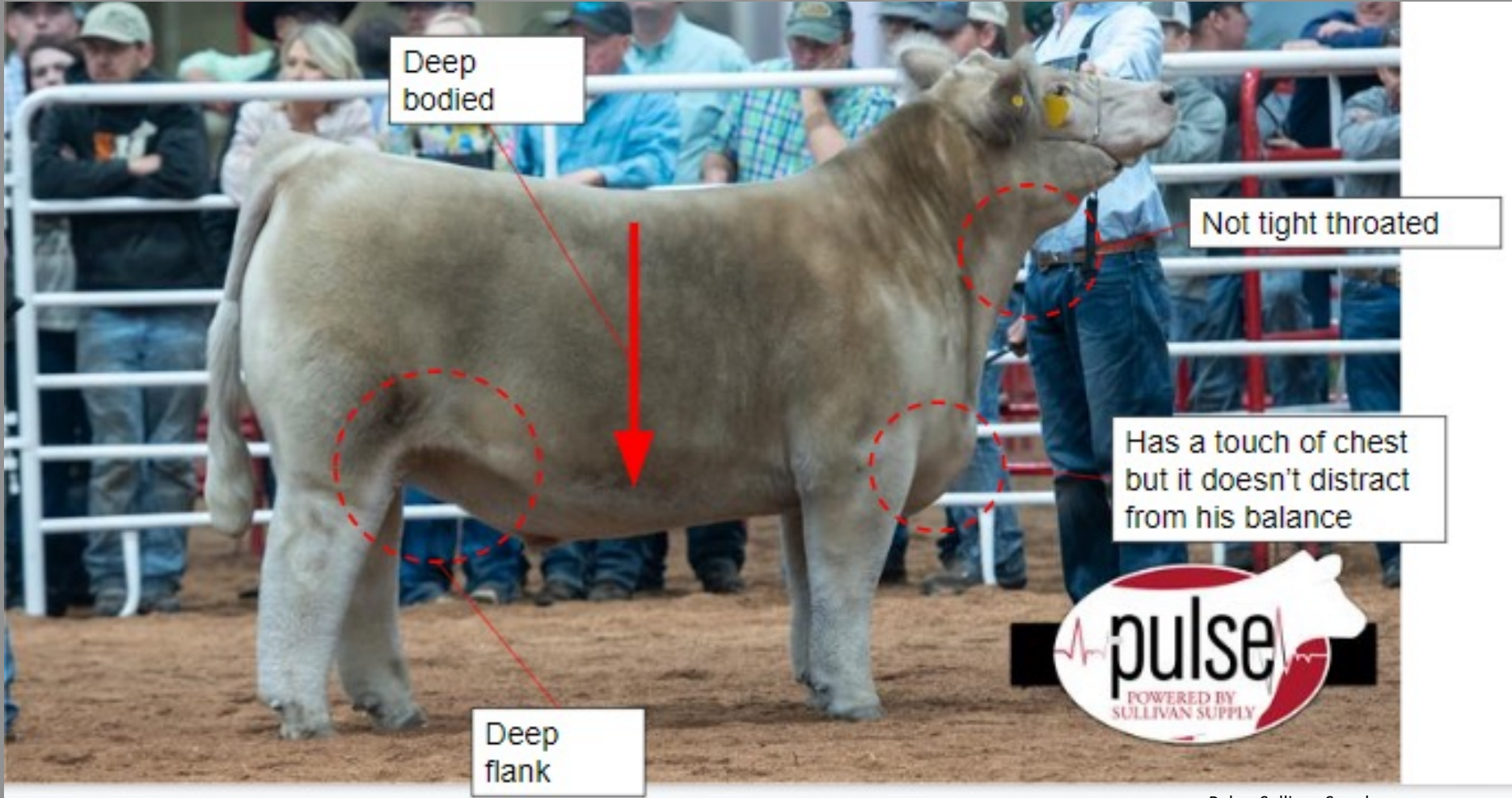
# Body

- Three components:
  - Boldness of rib
  - Softness (depth) of center
  - Length of body



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# Practical or unpractical body design?

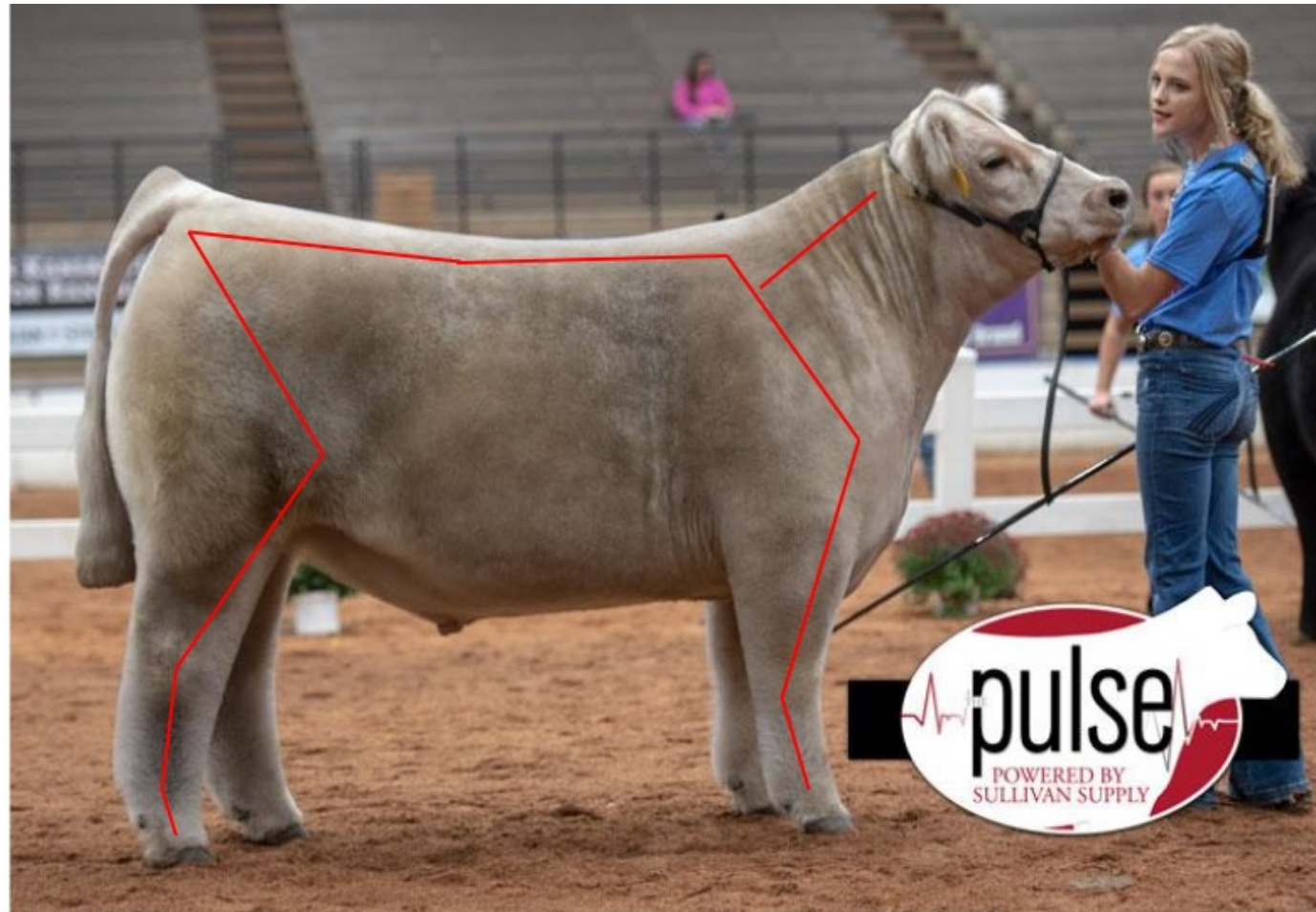


LivestockJudging.Com



# Structure

- Good structured animals look **comfortable**



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# Evaluating structure differences..



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# Balance & Eye Appeal

Little production value.. Only sort of balance and eye appeal when cattle have passed the muscle, carcass merit, and structure test.



# Balance

Does everything match with this steer?



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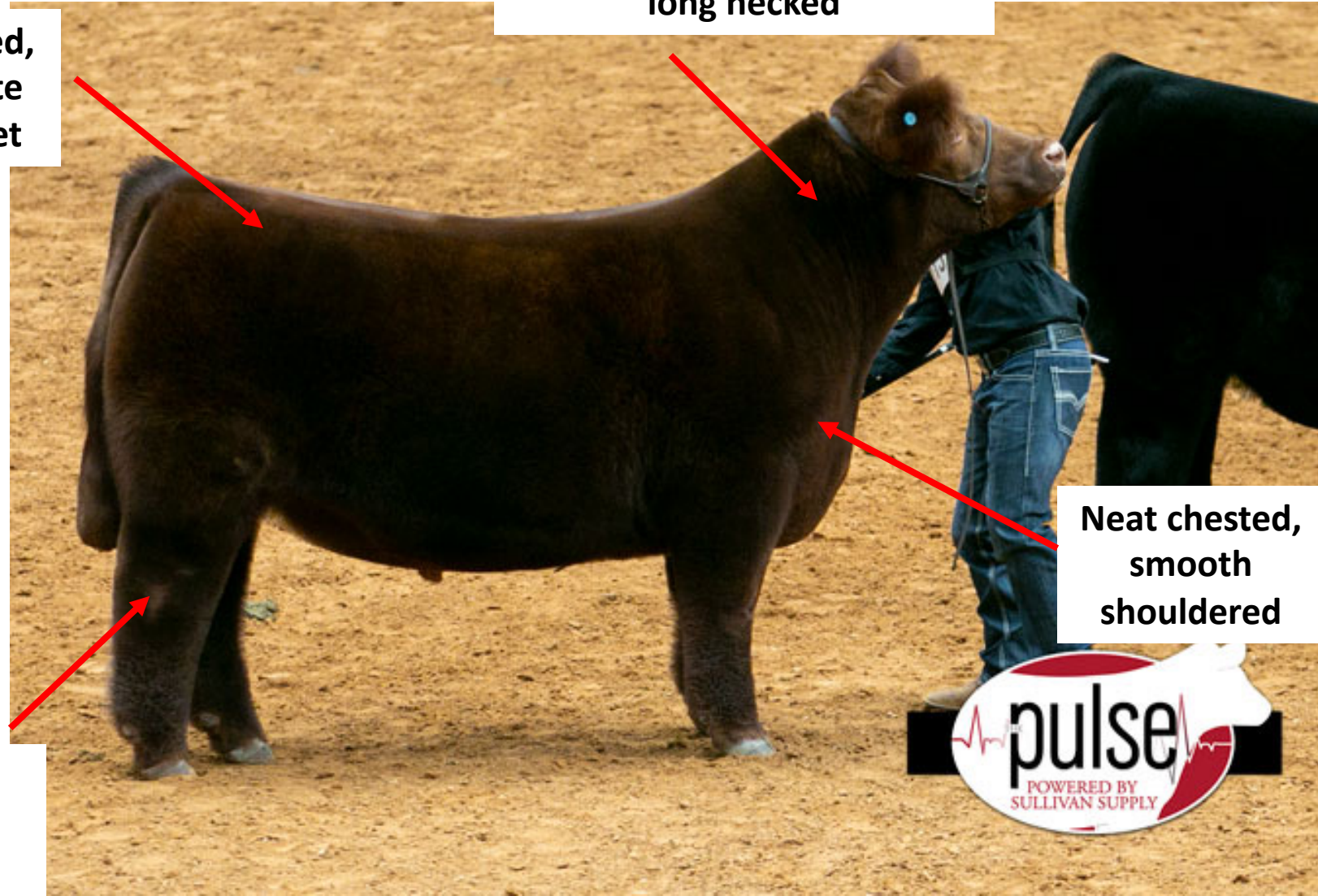


# Eye Appeal

High neck attachment and long necked

Pulse Sullivan Supply

Level hiped, appropriate tailhead set



Neat chested, smooth shouldered

Stout, attractive hindleg



# Photo Resources

- Angus Newsroom, 2019. <https://www.angus.org/media/news/fullarticle?aiid=1030&ltitle=new-foot-structure-epds-claw-set-and-foot-angle>
- Troy Walz, <https://beef.unl.edu/beefwatch/2021/managing-summer-calving-herds-during-breeding-season>
- Pulse, Sullivan Supply, <https://pulse.sullivansupply.com/>
- Livestock Judging. Com, <https://www.livestockjudging.com/> (from Google Images)
- University of Kentucky, Department of Animal and Food Sciences, <https://afs.ca.uky.edu/livestock/presentation/judging-market-steers>
- Dover's Daily, <https://www.drovers.com/markets/carcass-weights-increase-beef-quality-improving>
- Dr. Rick Rasby, A Guide to Udder and Teat Scoring Beef Cows, University of Nebraska-Lincoln, [https://beef.unl.edu/learning/udder\\_score.shtml](https://beef.unl.edu/learning/udder_score.shtml).
- Google Images

