Judging Market Cattle

Selection Criteria for Steers
- Muscling
- Correctness of finish
- Volume: Rib/feeding ability
- Structural Correctness
- Balance & Eye appeal

Muscle Content
- Muscle Indicators
  - Forearm
  - Rib
  - Loin
  - Hip
  - Stifle
  - Quarter
  - Base width

Muscle
- Base width and circumference of forearm are key indicators of total muscul arity
- Dimension and expression of muscle are also evaluated from two primary areas:
  - Down a steer's topline
  - Through his quarter
- An enhanced degree of muscling in one area indicates greater muscle mass overall
  - Muscles are proportional

Muscle
- Thick hip, wide base, and a deep, full quarter
- Narrow base, flat quarter

Muscle
- Thick, heavy muscled top
- Narrow, light muscled top
Correctness of Finish

- Unlike other livestock species, an optimum degree of finish is desired
- Along with sufficient muscling, an optimum degree of fat cover will enable a steer to obtain a desirable combination of Quality and Yield grades
- Degree of cover can be estimated by:
  - External indicators – Brisket; cod; flank; tailhead
  - Handling indicators – Loin; rear and lower rib; flank

Correctness of Finish

- Excessive fat cover
  - 0.9 inches at the 12th rib
- Insufficient fat cover
  - 0.20 inches at the 12th rib

Correctness of Finish

- Fat is always deposited onto the body from front to rear
- Fat animals are smoother in appearance
- Fat animals develop a wider, flatter, shape to their topline

Handling Steers

- Step 1. Handle the edge of the loin to determine fat thickness and muscle shape
- Step 2. Move your hand gently along the topline from the loin edge toward the forerib, then move to the lower rib
- Step 3. Gently handle the flank to determine uniformity and degree of finish

Volume

- Volume is an indicator of how "easy feeding" a steer is and is related to his ability to convert feed efficiently and reach his carcass endpoint
- Steers should possess dimensions to their skeleton in terms of chest width and center body shape to ensure efficiency in feedlot setting and the ability to deposit fat
  - Width of chest
  - Depth of body
  - Rib shape
  - Uniformity of body depth

Structural Correctness

*Evaluated in the same fashion as described in breeding cattle

- Shoulder Angle
- Front foot alignment
- Strength of topline
- Levelness and length of hip
- Set to hock
- Set to pastern
- Heaviness of structure
Balance

- Can be generally thought of as overall eye appeal or "how well pieces fit together."
- Is many times the most complicated trait to evaluate
- Many pieces to the puzzle
- Many of the traits previously discussed are needed for an animal to balance, such as structural correctness, adequate volume, and sufficient muscularity
- However, the evaluation of balance also includes:
  - Profiler/general attractiveness
  - Correctness of topline and feet & leg set
  - Uniformity of lines/Depth of flank
  - Smoothness of shoulders and cleanliness/length of front end
  - Extension and bone work
Market Cattle Evaluation

Dressing Percent
- Proportion of live weight that becomes carcass
- DP = (Carcass weight/live weight) x 100
- Range: 55 – 67%
- Avg: 63% - Choice steers, bullocks, and heifers

Factors Affecting Dressing Percent
- Amount of fill (contents of stomach and intestines)
  - DP is as fill
- Degree of muscling
  - DP is as muscling
- Weight of hide, head, and feet
  - Most variable
  - DP is as hide weight
- Degree of fatness (finish)
  - Little effect with same fill
  - DP is as fat

12th Rib Fat Thickness
- Highly correlated with retail yield
- As fat increases, retail yield decreases
- Best predictor of total external carcass fat
- Range: 0.15 – 0.8 in (steers and heifers)
  - Avg: 0.48 in (Choice steers and heifers)
- Minimum of 0.2 in. necessary
- Target endpoint between 0.4 – 0.5 in fed cattle
Ribeye Area

- Longissimus muscle at 12th rib interface
- Highly correlated with lean yield
  - As REA increases, yield grade decreases in numeric value (toward 1.0)
- Best predictor of total carcass muscle
- Range: 10.0 – 18.0 sq. in.
- Avg: 12.8 sq. in. for 1200 lb steer
  - Bullcows: larger
  - Heifers: smaller

Kidney, Pelvic, and Heart Fat

- Internal fat as percentage of carcass weight
- Continental cattle have less than British cattle
- As KPH increases, yield grade increases (toward 5.0)
- Range: 1.0 – 4.5%
- Avg: 2.0-2.5% (1200 lb steer, intermediate size)
  - Heifers: 1% more
  - Bullocks: 1% less
  - Large framed: 1% less
  - Small framed, short bodied cattle: 1% more
  - Dairy type: 1.5% more

Yield Grades of Beef

- Numerical score that equates to the % boneless, closely trimmed retail cuts (BCTRC).
  - Yield grades are 1, 2, 3, 4, 5
    - Yield Grade 1: very lean
    - Yield Grade 5: very fat
- A 700 lb. carcass with a yield grade of 3.0 (50% BCTRC) would yield 350 lbs. of BCTRC of beef.

Quality Grade

- Assigned according to amount of 1. marbling and 2. maturity
- Most influential component of pricing
- Live quality grade largely based on fatness
  - Only moderate amount of external fat needed for Choice or Prime grading cattle
  - Greatest percentage of cattle in U.S. are CH+ and Se+
Ideal Market Steer

- Long level rump
- Bold spring of rib
- Clean neck & chest
- Smooth shoulder
- Uniform condition over ribs
- Long bodied
- Trim neat dewlap & brisket
- Muscular arm & forearm
- Deep wide chest floor
- Rugged bone
- Correct set of front legs
- Naturally thick muscular top
- Full & wide through rump
- Deep ribbed
- Deep bodied
- Natural depth & thickness through center & lower round
- Long, deep stifles
- Correct set of hocks
- Legs set wide apart
- Correct set of front legs
- Correct set of rear legs
- Deep muscular bulging quarter
- Long muscular stifles
- Clean fronted
- Smooth shoulder
- Deep, wide chest floor
- Rugged bone
Handling market steers

There are no pre-determined guidelines for handling steers. The primary objectives when handling steers are to estimate accurately the amount and uniformity of finish, and to determine the quantity of muscle in the loin, and maybe rump or quarter, as an indicator of total muscle volume.

With fingers extended and together, place the palm of your hand and finger tips on the steer at the top of his shoulders (step 1) and estimate the width and thickness of muscle directly behind his shoulders. Heavily muscled steers will be wide and full; lightly muscled steers will be narrow and angular.

To determine the quantity of muscle in the loin, move your hand down his topline and toward his loin, or examine his loin and move forward toward his last rib (step 2). Cup your hand and place the palm of your hand on the loin of the steer and evaluate the depth and width of his loin. The loin should be wide and deep with muscle.

Next, determine the amount of finish over his last rib and along the edge of his topline, progressing toward the top of his shoulder (step 3).
Determine the finish near the elbow of the steer (step 4).

Move your hand toward his last rib (steps 5 and 6).

Analyze the amount and uniformity of finish over the various areas of the steer's rib region. Press firmly to detect the differences between fat, muscle, and bone. Fat will feel soft, like jelly, muscle will feel firm, and bone will feel hard.
Relationship Between Differences in Degree of Finish and Differences in Body Shape

Very Lean

Lean

Intermediate

Fat

Very Fat
Relationship Between Differences in Degree of Muscling and Differences in Body Shape

Very Thin

Thin

Average

Thick

Very Thick