Selecting Your Beef Cattle Project

Steven M. Jones
Associate Professor-Animal Science
Why Have a Cattle Project?

- Carrying on in the family tradition
- Raising “home-grown” meat
- Return show animals to herd
- Sale of animal following show
- Perceived as a natural progression from “smaller” project animals
Four Components of the Beef Cattle Project

Market Steer
Commercial Heifer
Registered Beef Cattle
Showmanship
Market Steer

- Terminal project
- Finished weight in Sept. and Oct. Fairs
- Born late March to early May
- Obtain animal in Nov or Dec.
- Shows: Spring as Prospect

Fall as Market Steer
Commercial Heifer

Mixed Beef Breed heifer 6 mos - 2 yrs

Age eligibility determined by mouthing at show

Broken into breed divisions like steers

Shown in classes based on growth characteristics
(Hip height, good muscling, structurally sound, good growth)

Should be 500# at 205 days of age
Registered Beef Cattle

Heifers or bulls registered with a breed registry

Shown by age: 6 mos - 2 yrs

Judged for growth, structural correctness, and potential to pass on desirable beef characteristics to their offspring

Show against others of same breed

Low participation may show in AOB (all other breeds)
• What am I looking for?
• Where do I start?
• What factors should be taken into consideration?
Factors to Consider:

1. Breed
2. Steer or heifer
3. Price
4. Private treaty or auction
5. Quality and disposition of the animal.
Breed

- What breeds do you have access to?
- How competitive do you want to be?
- How much experience do you have feeding, clipping, fitting and showing or do you have a teacher, agent, or breeder to assist you?
Steer or Heifer

- If you select a heifer as your project, do you have access to a AI Tech or a quality bull? Do you have access to a pasture for your heifer when she returns to the “real world?”
- If you select a steer, make sure you have a market or outlet for him when the shows are over.
Price

- What do I pay? Remember that purchasing show cattle is a lot like buying a new car, the more options they have on them the more they cost. Set a limit for yourself before you begin your search and remember, price has nothing to do with where you will place in the show.
Disposition

- This is probably the most overlooked trait of show cattle. If the exhibitor is afraid of the animal or if the steer or heifer refuses to cooperate while on the halter, the judge will never be able to fairly evaluate them.
Quality Traits

- Very few judges will evaluate cattle the same way. Some will put more emphasis on structural correctness while others will favor capacity, muscle volume, or eye appeal. The best rule of thumb is to avoid any extremes. But, the question you need an answer to is what will the judge be looking for?
Traits To Select For:

1. Structural Soundness both front and rear
2. Muscle Volume
3. Volume and rib shape
4. Growth potential and mature size
5. Femininity in heifers
Structural Soundness
What traits are important?

- Muscle
  - Sell meat!
- Fat
  - Want a lean product!
- Volume/capacity
  - Feed Efficiency
  - Production Capabilities
- Structural Design
  - Economic
  - Aesthetic “Looks Good”
The First Step!

- Neck
- Brisket
- Stifle
- Back
- Loin
- Rump
- Round (Quarter)
- Side (Ribs)
- Hip Bone (Hooks)
- Round (Quarter)
- Side (Ribs)
- Hip Bone (Hooks)
- Pin Bone
- Hock
- Tailhead
- Forearm
- Cannon Bone
- Flank
- Knee
- Pastern
- Brisket
- Poll
Evaluating Muscle!

- **LOIN (TOP)**
- **ROUND**
- **STIFLE**
- **FOREARM**
- **WIDTH OF BASE**
Evaluating Fat!

- **TAILHEAD**
- **LOIN (TOP)**
- **RIBS**
- **BRISKET**
- **FLANK**
- **WIDTH OF BASE**
- **COD (steers)**
- **UDDER (heifers)**
Evaluating Volume!

- Length of Body
- Depth of Body
- Rib Shape
- Width of Base
Evaluating Structure!
High Yielding (High cutability)

Low Yielding (Low cutability)
Straight and turns out
Correct Shoulder Structure
A Train Wreck Waiting to Happen
Round, Coarse Muscle Shape
Square Hipped, Flatter Muscle
Volume and Rib
Just the opposite
Front Ends
Avoid the extremes
Happy Medium
### The optimal steer...

<table>
<thead>
<tr>
<th>Trait</th>
<th>Range</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live weight (pounds)</td>
<td>1000-1400</td>
<td>1250-1300</td>
</tr>
<tr>
<td>Dressing percent</td>
<td>60-64</td>
<td>62-63</td>
</tr>
<tr>
<td>Fat Thickness (inches)</td>
<td>0.15-0.80</td>
<td>0.25-0.40</td>
</tr>
<tr>
<td>Ribeye area (inches$^2$)</td>
<td>12.0-17.0</td>
<td>14.0-16.0</td>
</tr>
<tr>
<td>Yield Grade</td>
<td>&lt; 3.5</td>
<td>2</td>
</tr>
<tr>
<td>Quality Grade</td>
<td>Select or &gt;</td>
<td>Choice</td>
</tr>
<tr>
<td>Feed conversion (lbs feed per lb of gain)</td>
<td>5-8</td>
<td>&lt; 6</td>
</tr>
</tbody>
</table>
Problems to Avoid

- Weak/steep pasterns
- Sickled hocks
- Buck-kneed or knock/kneed
- Pigeon toed
- Cow hocked
- Post legged
- Steep shoulders
- Coarse, open shoulders
- Splay-footed
Heifers:
Muscle

- Muscle is the marketable product
- Avoid extremes
  - Narrow framed; narrow loined; flat quartered
  - Coarse; overly defined in quarter and shoulder; double muscle
Frame Size

- Frame size is highly heritable (50%)
- Moderate frame size is 5 – 7
- Frame size dictates carcass size
- Avoid extremes
Mammary System of Heifers
Difficult to Assess but Foolish to Ignore

- Teats barely visible and/or embedded in fatty tissue
- Teats that are too long and/or thick
- Daughters of cows with balloon teats, pendulous udders, blind quarters or mastitis history
### Selecting the Heavier Weaned Heifers

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Tend to be older</td>
<td>• May have extra fat</td>
</tr>
<tr>
<td>• Out of earlier calving cows</td>
<td>• May have hormone imbalance</td>
</tr>
<tr>
<td>• Out of heavier milking cows</td>
<td></td>
</tr>
</tbody>
</table>

- May have extra fat
- May have hormone imbalance
Avoid Heifers Which Have

- Structural flaws or obvious defects
- A high degree of masculinity or too refined
- Been born as a twin to a bull calf (Freemartin)
- Dams with any structural or udder problems or any defects such as cancer eye
Phenotypic selection & the use of Performance Information

- Livestock Evaluation
- Know EPD’s (Expected Progeny Difference)
- Ability to Identify superior genetics
- Plan matings
The 4-H Beef Cattle project is one of the most rewarding activities you will share with your child! Many exciting and educational experiences are waiting for you as you progress through this project.
That’s all folks!

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Arkansas Cooperative Extension Service is implied.

University of Arkansas, United States Department of Agriculture and County Governments Cooperating.

The Arkansas Cooperative Extension Service offers its programs to all eligible persons regardless of race, color, national origin, religion, gender, age, disability, marital or veteran status, or any other legally protected status, and is an Affirmative Action/Equal Opportunity Employer.