Cull Cow Considerations

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### Normal culling (100 head herd example)

- **Old**: 5 hd  
- **Broken Mouth**: 5-10 hd  
- **Smooth Mouth**: 5-10 hd  
- **Open**: 5-10 hd  
- **Udder Issues**: 1 hd  
- **Sorry Calf/Lost calf**: 1 hd  
- **Feet and Leg Issues**: 1 hd  
- **Eye Issues**: 1 hd  
- **Disposition Issues**: 1 hd  
- **Disease**: 1 hd

15-20% culled per year

### Normal culling (15-20% of herd annually)

- **Old**: 32%  
- **Broken Mouth**: 33%  
- **Smooth Mouth**: 33%  
- **Open**: 33%  
- **Udder Issues**: 2.7%  
- **Sorry Calf**: 3.6%  
- **Disease**: 0.3%  
- **Eye Issues**: 1.8%  
- **Feet and Leg Issues**: 2.9%  
- **Disposition Issues**: 3.6%  
- **Need Money**: 14.6%

Reason for culling %, adapted from USDA 2008
Cow Age - No cookbook on when to cull cows.

- Examples
  - Cull any open cow over the age of 7
  - Cull any cow over the age of 10
  - Cull any cow over the age of 14

- Case by case basis
- Ranch by ranch basis

- I propose a CULL and PROBATION designation

Cow Age Distribution

Typical 100-cow Herd

[Bar chart showing the age distribution of cows in a typical 100-cow herd]

https://www.ag.ndsu.edu/news/columns/beeftalk
Cow Age - Value of longevity on cow herd

- Shortening the generation interval drives the purebred business
- Generation interval turnover is way overrated in commercial beef production
- The breakeven age on a cow is generally between age 6-7
- A cow that will be productive till she is 15 will make me money!
  - Heifers are expensive
  - Heifers are less productive

Cow Longevity

<table>
<thead>
<tr>
<th>Breed</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angus</td>
<td>10.3</td>
</tr>
<tr>
<td>Hereford</td>
<td>9.8</td>
</tr>
<tr>
<td>Brahman</td>
<td>9.7</td>
</tr>
<tr>
<td>Angus x Hereford</td>
<td>11.7</td>
</tr>
<tr>
<td>Brahman x Angus</td>
<td>14.7</td>
</tr>
<tr>
<td>Brahman x Hereford</td>
<td>13.2</td>
</tr>
</tbody>
</table>

Texas - Rohrer et al., 1988a

In my observation some of the smallest calves come from old cows....

she needs to raise a calf significantly larger than a heifer will or be gone!
Cow Longevity- Are they really productive to an OLD AGE?

Brahman x Hereford Cows Mated to Simmental Bulls

<table>
<thead>
<tr>
<th>Age</th>
<th>Weaning Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-12 years</td>
<td>565</td>
</tr>
<tr>
<td>12-17 years</td>
<td>569</td>
</tr>
</tbody>
</table>

Texas - Gaertner et al., 1992

Open - Should you cull a cow for being open?

- Might not be her fault
  - Late calf
  - Bull fertility?
  - Poor BCS as a result of bad winter
  - Parasite load?
- Reproduction is lowly heritable
- Generally I will give her one free skip and say it was my fault.
  - But she is now on PROBATION
- The second time she is open it is her fault!
Should you cull a cow for raising a sorry calf?

• Might not be her fault
  • Calf got sick
  • Calf had poor sire
  • Calf was late born
  • Calf had difficult birth and slow start

• Don’t have to weigh calves to know this
  • Leave sorry calves in the pen overnight.
  • Dam will be at the pen in the morning.
  • Identify her and put her on PROBATION

Udder issues-Does cow udder quality affect calf growth?

<table>
<thead>
<tr>
<th></th>
<th>Good Udder</th>
<th>Bad Udder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaning weight</td>
<td>446</td>
<td>451</td>
</tr>
<tr>
<td># cows</td>
<td>1742</td>
<td>223</td>
</tr>
</tbody>
</table>

This is true as long as a calf can nurse unassisted within 6 hours. Cows with udder issues should be on PROBATION.

The decision to cull a cow is not always identical to the decision on when to market a cull cow

• She may go on your short list to cull but the market may not be right to sell her. What are your options?
• Depends a little on reason for culling.....IF that reason is OPEN then
  • Keep her till spring and sell her to the packer/market
  • Feed her to improve condition
  • Move her to a terminal herd/group with all cows for sale immediately
Cull cows don’t always have to go to slaughter

- Place with a bull for 60-120 days
- Sell bred cows in spring in higher market

Thoughts on Marketing Cull Cows

- Straight to the packer
  - You stand the condemnations, trim loss, bruise loss, downers etc
  - Paid on carcass value
  - Different standards for different plants

- Livestock market
  - Commission
  - Probably the best bet for most producers

Seasonal cow prices

Adapted from OSU Extension Peel and Doye 2017
Other considerations

• Tax implications to moving income to next year if you hold cows over

• A second calving season with cows on PROBATION can simplify management.
  • She gets an ear notch and a Charolais bull the rest of her productive life

Flip This Cow!
Dr. Matt Hersom

Used Pickup
Flip this Cow

<table>
<thead>
<tr>
<th></th>
<th>In wt, lbs</th>
<th>In BCS</th>
<th>Out wt, lbs</th>
<th>Out BCS</th>
<th>DOF</th>
<th>Gain, lbs</th>
<th>ADG lb/d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>985</td>
<td>3.1</td>
<td>1229</td>
<td>5.3</td>
<td>93</td>
<td>244</td>
<td>2.6</td>
</tr>
<tr>
<td>Fall</td>
<td>951</td>
<td>2.7</td>
<td>1147</td>
<td>4.8</td>
<td>84</td>
<td>196</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Adapted from Hersom personal communication

Flip this Cow

<table>
<thead>
<tr>
<th></th>
<th>In value, $</th>
<th>In $/lb</th>
<th>Out value, $</th>
<th>Out $/lb</th>
<th>COG $/lb</th>
<th>Feed Cost $</th>
<th>Profit $/hd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>593</td>
<td>.60</td>
<td>738</td>
<td>.60</td>
<td>.46</td>
<td>108</td>
<td>37</td>
</tr>
<tr>
<td>Fall</td>
<td>464</td>
<td>.49</td>
<td>721</td>
<td>.63</td>
<td>.49</td>
<td>94</td>
<td>164</td>
</tr>
</tbody>
</table>

Adapted from Hersom personal communication

Does cow age affect feeding performance?

<table>
<thead>
<tr>
<th></th>
<th>3-4 yr old</th>
<th>5-6 yr old</th>
<th>7-8 yr old</th>
<th>9+ yr old</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG d 0-14</td>
<td>.04</td>
<td>-1.46</td>
<td>-4.41</td>
<td>-3.92</td>
</tr>
<tr>
<td>ADG d 15-28</td>
<td>6.6</td>
<td>6.3</td>
<td>6.9</td>
<td>5.2</td>
</tr>
<tr>
<td>ADG d 0-54</td>
<td>4.3</td>
<td>3.7</td>
<td>2.9</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Sawyer et al., 2004
Effects of feeding cows on carcass traits

<table>
<thead>
<tr>
<th></th>
<th>0 days</th>
<th>42 days</th>
<th>84 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG lb/d</td>
<td>0.0</td>
<td>.81</td>
<td>2.2</td>
</tr>
<tr>
<td>BCS</td>
<td>4.9</td>
<td>5.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Carcass wt, lb</td>
<td>505</td>
<td>576</td>
<td>684</td>
</tr>
<tr>
<td>DP, %</td>
<td>47.7</td>
<td>53.4</td>
<td>54.8</td>
</tr>
<tr>
<td>REA, sq in</td>
<td>10.0</td>
<td>11.2</td>
<td>12.2</td>
</tr>
<tr>
<td>Fat, in</td>
<td>.09</td>
<td>.16</td>
<td>.37</td>
</tr>
<tr>
<td>Fat color</td>
<td>5.0</td>
<td>3.9</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Stevens et al., 2006

Can you feed/flip cows on hay and supplement?

<table>
<thead>
<tr>
<th></th>
<th>Hay</th>
<th>Hay plus molasses</th>
<th>Hay plus citrus pulp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hay intake</td>
<td>35</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>Supplement</td>
<td>0</td>
<td>6.4</td>
<td>5.0</td>
</tr>
<tr>
<td>ADG, lb/d</td>
<td>1.0</td>
<td>1.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Weight gain</td>
<td>114</td>
<td>182</td>
<td>171</td>
</tr>
<tr>
<td>Cost, $/hd</td>
<td>173</td>
<td>228</td>
<td>202</td>
</tr>
<tr>
<td>COG, $/lb</td>
<td>1.52</td>
<td>1.25</td>
<td>1.18</td>
</tr>
</tbody>
</table>

Need roughly a 10$/cwt gain in cow value just to breakeven

Adapted from Brown, updated with current prices, 1988

Feeding/Flipping Cows

• Requires cheap forage that you have no other use for
  • Still need supplement
  • Longer duration of time

• Cheap, dependable feedsorce to put them on full feed

• Consider test weighing cows at 28 days and selling non performers
Pitfalls to feeding cull cows

• Disease
• Underlying issues that are not visible
• Previous toxic plant
• Parasite load
• Really old cows
• Death loss (can be 10%)
• Social structure

Feeding Cull Cows Suggestions

• Short feeding periods (45-60d) optimize feed conversion and body weight gain
• Younger thin cows may have better gain
• Cheapest weight gain occurs from BCS 2.5 to 4.5
• Open cows have fairly low maintenance requirements
• Older cows may have greater mortality (5-10%)
• Profit is highly dependent on upward shifts in market (fall to spring)
• Profit is also highly tied to cheap and underutilized feed resources
• Consider implanting cows with growth implant
• To capitalize on improved carcass traits sell direct to packer

Current uptick in feed prices will likely not make feeding/flipping cull cows profitable in the short term!

Corn at $5.67/bu
Will the Central Beef Plant reopening affect any of this?

- Might be more demand for FL cows?
- Might have more demand for fed cows?

Current market conditions

- Arcadia Market Report
  - Boner cows 1100-1900 lbs $75/cwt
  - Lean cows 850-1200 lbs $57/cwt
  - Low DP cows 800-1100 lbs $47/cwt

Example one

- 3 year old preg checked in the fall
  - Open
  - Raised an acceptable calf
  - BCS 3.5
  - Wt 1000 lbs
  - Value in November $57/cwt = $570/hd
  - ADG 3 lbs/d x 60d= 180 lbs weight gain
  - BCS 4.5
  - Wt 1180 lbs
  - Value in February $75/cwt = $885/hd
  - Increase in value $315/hd / 180 lbs = $1.75/lb value of gain
Example two

- 6 year old preg checked in the fall
  - Open
  - Never missed
  - Raised an acceptable calf
  - BCS 4.0 barely
  - Sound mouth
  - No defects

Example three

- 13 year old preg checked in the fall
  - Open
  - Never missed
  - Raised an acceptable calf
  - BCS 3.5
  - Missing two teeth
  - No defects

Example four

- 14 year old preg checked in the fall
  - Bred
  - Missed once as a 4 year old
  - Raised an acceptable calf
  - BCS 4.5
  - Short solid mouth
  - No defects
Example five

- 16 year old preg checked in the fall
- Bred
- Missed once as a 8 year old
- Raised a below average calf
- BCS 3.0
- Broke mouth
- Arthritis

A good record keeping system is going to be essential to make culling work

- Cows identified
- Individual cow history
- Like the idea that she will carry that history with her
- Ear mark
- Brand

- A good culling program will
  - Simplify management
  - Improve cowherd productivity
  - Improve fertility
  - Over time find the cattle that work best for your operation

Retail meat markets, steak cutting companies, family restaurants, airlines and commissaries

Pre-cooked entrees, jerky, marinated fajita meat, corned beef, roast beef, pastrami and other products

National Market Cow and Bull Beef Quality Audit (NCBA/CSU, 1999)
Not All Packing Plants Are Created Equal

• Some packers will market as much as 75% of the carcass as whole muscle cuts
• Other packers will specialize in producing only boneless manufacturing beef

<table>
<thead>
<tr>
<th>Price/Value</th>
<th>90% lean, 10% fat (90/10)</th>
<th>$217/cwt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>85% lean, 15% fat (85/15)</td>
<td>$182/cwt</td>
</tr>
<tr>
<td></td>
<td>65% lean, 35% fat (65/35)</td>
<td>$92/cwt</td>
</tr>
<tr>
<td></td>
<td>50% lean, 50% fat (50/50)</td>
<td>$45/cwt</td>
</tr>
</tbody>
</table>

Ideal cull cow BCS is 4.0. All the muscle with minimal fat.

Percent of Plants Fabricating Subprimals from Cow and Bull

<table>
<thead>
<tr>
<th>Primal Region</th>
<th>% of Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rib</td>
<td>100</td>
</tr>
<tr>
<td>Loin</td>
<td>100</td>
</tr>
<tr>
<td>Round</td>
<td>85.7</td>
</tr>
<tr>
<td>Flank</td>
<td>85.7</td>
</tr>
<tr>
<td>Chuck</td>
<td>57.1</td>
</tr>
<tr>
<td>Brisket</td>
<td>14.3</td>
</tr>
</tbody>
</table>

Reported as % of plants that submitted fabrication information.

What’s the defect?
If you wouldn’t want your kids or grandkids to eat it, don’t sell it!

Culling and Marketing Considerations

• Smooth Mouth CULL
• Feets and Leg Issues CULL*
• Eye Issues CULL*
• Disease CULL*
• Very Thin CULL*
• Unthrifty CULL*
• Disposition Issues CULL
• Open second time CULL

*Sell directly to the packer

SELL PROBATION COWS WHEN

• Market is elevated
• Drought forces herd liquidation
• To someone that wants them worse than you
• Need Money