Management to Improve Quality for Cull Cows and Bulls

The sale of cull animals (cows and bulls) for slaughter accounts for 15 to 20 percent of a producer’s revenue.

Economic Impact of Cull Cows and Bulls

- 30% of the ground beef needs are supplied by imports.
- 70% are from U.S. production.
- 50% of the “cow beef” comes from dairy cows.
- Cows generate 70% to 75% of non-fed beef.

What Problems Affect Cull Cows and Bulls?

Hide Damage

Brands, insect damage, ringworm, warts and latent defects such as scratches and scars cause hide damage. Hide damage costs the industry $6.27 per head for every cull bull and cow slaughtered in 1999. Hide damage from hot iron branding can be minimized by eliminating rib brands and by reducing multiple brands. The New Mexico Livestock Board has indicated a willingness to change the brand location away from ribs. Keep brands as simple and as small as possible. Maintenance of an effective external parasite control program is important to minimize lice and grub damage and to maintain cattle performance.

Horns

How many brands can you find on this cow (Figure 12)? (The answer is 5.)

Figure 12

Horned cattle have twice as many bruises as groups of hornless cattle. Most bruises from horns occur when animals are crowded or confined. Horns should be removed by dehorning or by selecting for genetically polled cattle (Figure 13).

Figure 13

Bruises

Cull cows and bulls possess less protective fat cover than their fed-beef counterparts (heifers and steers), making them more susceptible to bruising. In 1999, the frequency of carcass bruising was alarmingly high – 53 percent of bulls and 88 percent of cows. The removal of bruised tissue cost the cull cow and bull industry $2.24 per head.

Arthritic Joints—Arthritic joints, which must be removed from carcasses, resulted in a significant amount of trim loss per carcass. Across all regions, 7.37% of carcasses had one arthritic joint that had to be removed and 3.97% of carcasses had two arthritic joints that required removal. On average, each arthritic joint required removal of 39.4 pounds of carcass product.
Arthritic joints cost the cull cow and bull industry $9.72 per head slaughtered in 1999.

**Lameness**

Lameness represents a major cost to producers, packers and others involved in the production, marketing and slaughter of cull cattle. Lame cows become weak and more susceptible to injury during transportation. Carcass yield is severely reduced when packers trim around and through infected joints. Trim loss for this infected joint shown in Figure 14 was 14.4 pounds.

![Figure 15](image15.png)

Lame cattle usually spend more time laying down. This increases the amount of manure on the legs, sides, etc., which could increase the probability of *E. coli* 0157:H7 becoming attached to the animal. Culling these cattle in a timely manner should reduce the amount of manure and reduce the probability of *E. coli* 0157:H7 entering processing facilities. Cleaner animals carry the least contamination. Holding cull animals in a manure-covered barn lot prior to selling is not advisable.

**Cancer Eye**

About 5 percent of the beef cows (approximately 310,000 head) had signs of cancer eye. Treat cancer eye immediately. Cull cattle when cancer eye is in its earliest stages (Figure 15).

**Knots and Abscesses**

In 1994 over 1.4 percent of the cull cows and bulls had knots or abscesses.

**Injection-Site Lesions**

Proper injection-site techniques must be followed when administering animal health products to all cattle.

**Prolapses**

Prolapses must be dealt with immediately.

**Udder Infections**

More dairy cows experience udder infections than beef cows. Because of the way beef cattle are managed (compared to dairy cattle), udder infections are harder to detect.

**Sheath Defects**

Approximately 10 percent of beef bulls had pendulous sheaths to the point where injury occurred.

**Table 16**

<table>
<thead>
<tr>
<th>Defect</th>
<th>Dollars/Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Cattle/Carcass Condemnation</td>
<td>$11.99</td>
</tr>
<tr>
<td>Carcasses Cooking and Parts Removed</td>
<td>$ 2.16</td>
</tr>
<tr>
<td>Carcass Loss to “Zero Tolerance” Standards</td>
<td>$ 1.87</td>
</tr>
<tr>
<td>Condemnation of Edible Offal</td>
<td>$ 3.99</td>
</tr>
<tr>
<td>Hide Losses</td>
<td>$ 6.92</td>
</tr>
<tr>
<td>Injection-Site Lesions in Top Butts and Rounds</td>
<td>$ 0.66</td>
</tr>
<tr>
<td>Bruises Causing Primal Devaluation from Bruise Trim</td>
<td>$ 3.91</td>
</tr>
<tr>
<td>Handling of Disabled Cattle and Dark Cutters</td>
<td>$ 0.84</td>
</tr>
<tr>
<td>Yellow Carcass Fat</td>
<td>$ 2.27</td>
</tr>
<tr>
<td>Inadequate Muscling</td>
<td>$14.43</td>
</tr>
<tr>
<td>Excess External Fat</td>
<td>$17.74</td>
</tr>
<tr>
<td>Lightweight Carcasses</td>
<td>$ 3.12</td>
</tr>
</tbody>
</table>

**Total**                                              $69.90

**Excess Fat**

Cows that don’t produce calves get fat. By keeping good production records and culling non-breeders, cattle producers can go a long way to eliminate “fat” cows.

**Emaciation**

Emaciation is an unnatural thinness from loss of body conditioning. This condition cannot be tolerated in the beef cattle industry (Figure 17).
The Cattle Producer Must:

**Manage** to minimize defects and quality deficiencies.

**Monitor** health and condition.

**Market** in a timely manner.

- Assure equity in salvage-value by requesting improved consistency of interpretation and application of federal meat inspection criteria among cattle slaughter establishments.
- Improve beef safety by encouraging practices that reduce bacterial contamination of carcasses.
- Prevent residues and injection-site lesions in cattle by ensuring responsible administrations and withdrawal of all animal-health products.
- Enhance price discovery by encouraging development of effective live and carcass grade standards for cull cattle.
- Encourage on-farm euthanasia of disabled cattle and those with advanced bovine ocular neoplasia (cancer eye).
Cow Herd Consistency—Narrowing the Window

How do we shape cow herds to answer the beef industry demand for more consistency and uniformity?

We all know turnaround time is measured in years in the beef cattle business. By the time we are able to progeny test cattle to find out what they are capable of producing, they are six years old and we have produced a significant amount of beef for U.S. consumers that may have missed the targets.

We look at our competition in the poultry and pork industries and envy the fact that they can make faster changes in response to changing consumer demand. The advantage held by our competition and the lack of factual data upon which we can base change cause many cow-calf producers to throw up their hands and say, “What is the use?”

Too often, producers do not look at their calf crop closely enough to determine how they could have made that calf crop more uniform through management and common sense genetic selection. Opportunities exist to narrow the window and improve consistency of the nation’s cow herd.

Management

- Decrease the length of the calving season.

  If we cull cows that are either open or habitually late in the calving season and only put the bulls out for 60 days, we can narrow the calving season in a cow herd dramatically in one year. The decreased calving season not only makes sense in terms of labor and other costs, it will produce a set of calves that are more uniform for weight at weaning. If we then select our early-born heifers, we will be selecting for females that will breed early and continue to fit the window.

- Implant the youngest one-half of your heifer calves with a calf implant.

  If you are only selecting heifers from the oldest one-half of your calf crop, then you can implant the remaining heifers and cause them to catch up with the rest of your calf crop for weight. Since they will not be held for breeding, there is no issue of delayed fertility to be concerned about. In addition, castrate early and implant all of your steers.

- Stimulate immune system by vaccinating calves while on the cow.

  This will allow calves with mothers that provide either a few maternal antibodies or a large amount of maternal antibodies to react more the same to postweaning vaccinations.

Genetics

- Use visual selection.

  Use visual selection to remove the very largest frame size cows and the smallest frame size cows so as to even out the herd with females that are more uniform. This will allow your bulls to produce calves from matings where the females are more similar and the calves will also be more similar.

- Stimulate immune system by vaccinating calves while on the cow.

  This will allow calves with mothers that provide either a few maternal antibodies or a large amount of maternal antibodies to react more the same to postweaning vaccinations.
• **Use one type or one breed of bulls.**

Many producers commonly use two or three breeds of bulls on a given set of cows. These random matings produce very nonuniform calf crops. A single breed of bulls will also produce calves with differences. If you have selected bulls of similar types, you will move toward uniformity more rapidly.

• **Select the type of bull based on frame size and muscling.**

To use just one type of bull in your herd, use the visual indicators of frame size and muscling. If you have EPD information or carcass data available, you should obviously use it as well. The majority of commercial producers are not able to find enough sires with data so they need to do the next best thing – visual selection for correctness, frame and muscle. The appropriate frame size and muscle needed will vary depending on the characteristics of your cows.

• **Try to get the color of the calves uniform.**

If calves are all one color or color pattern, they look more uniform than they really are. Since perception and appearance sell feeder cattle, it is important to have the calves colored as much alike as possible. **One note:** It is also harder for you to sort and select for the various traits if they are all the same color. Each cattleman must study his calf crop with an eye to creating greater uniformity.

• **Gather as much data as possible on calf performance in feedlots and the packing house.**

The ultimate decisions concerning consistency and uniformity can only be made with data. Producers may obtain this data through opportunities made available to them through steer feeding tests with their universities or state cattle associations. This information as to the level of performance and carcass value will help producers narrow the window of consistency and uniformity.

The suggestions made are for things that can be accomplished gathering the data you will need for the long term. If we use good management and common sense genetic selection, we will narrow the window and make beef more

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**Management:**
- Decrease the length of the calving season.
- Implant the youngest one-half of your heifers with a calf implant.
- Creep feed calves.
- Stimulate immune system by vaccinating calves while on the cow.

**Genetics:**
- Use visual selection.
- Use one type or one breed of bulls.
- Select the type of bull based on frame size and muscling.
- Try to get the color of the calves uniform.
- Gather as much data as possible on calf performance in feedlots and the packing house.

“Cow Herd Consistency – Narrowing the Window” was written by Dr. William L. Mies, Texas A&M University.