

## III-D. **Quality Assurance of Market Cows & Bulls**

### *Economic Value of Market Cows & Bulls*

The sale of market cows and bulls accounts for 25% of all U.S. beef consumption. Beef and dairy producers must realize the important value these animals contribute to the industry -- beyond milk, motherhood and ground beef. Whole muscle products are



fabricated and sold to supermarket and foodservice operators as entrees in family steak houses and “quick-to-fix” supermarket beef products like fajitas. Fast-food roast beef sandwiches and “Philly steak” sandwiches are also examples of products that result from market cow beef.

**The 1999 National Market Cow and Bull Quality Audit showed that producers lost about \$70** in average market value on every beef and dairy cow they sold that year due to product defects like: bruises, injection site lesions, hide damage, poor condition, excess fat, and condemnations. In addition to this average industry loss, individual producers lose much more when their own cull animals produce carcasses that are defective or condemned.

These economics are important at the individual farm level when considering the revenue cull animals provide for both the beef cow/calf and the dairy producer. According to the National Animal Health Monitoring Service (NAHMS), **the income from the sale of cull animals provides 15 to 20% of gross herd revenue**. This means the Best Management Practices found in this BQA Manual are just as important in culling and management for dairy and cow-calf producers as they are in marketing and management for beef feedlot operators. **Today, the stakes are even higher because...**



- ◆ **Public attention is focused on food safety and quality.**
- ◆ **Producers must safeguard the public image of both the beef and dairy industries by portraying a **positive image** with cull animal condition when marketed.**
- ◆ **More potential value is found today in defect-free subprimal cuts from market cows and bulls, which can be utilized as higher-value whole muscle cuts instead of ground beef.**

### Market Cow & Bull Quality Audits

The profit gained from the sale of cull animals is dependent on the quality assurance practices used by producer. Beef and dairy producers must do a quality job of producing, transporting, and marketing their cows and bulls. As part of the NCBA Quality Assurance Program, the impact of both beef and dairy culls was examined through National Market Cow and Bull Quality Audits conducted first in 1994 and then as a follow-up in 1999. The main objective of the first audit was to identify quality problems and the targets for desired quality by the year 2004. The second audit, provided a view of the progress achieved and the information to set targets for 2009. For example, from 1994 to 1999 -- condemnations decreased, while the industry saw a significant increase in trim losses due to arthritic joints (severe lameness) and injection site blemishes (improper injection site and/or technique).

The 1999 audit was conducted in three phases. Phase I consisted of face-to-face interviews with industry experts to identify the most frequent quality problems. In Phase II, researchers examined cows and bulls at packing plants (holding pens, slaughter floor, and chill coolers). In Phase III, researchers, industry leaders, packers, processors, restaurateurs, and cattle producers met to compare the results to the 1994 audit. They also developed strategies to reduce quality defects and improve the quality, consistency and competitiveness of market cows and bulls.

<b>National Market Cow and Bull Quality Audits Losses per Head (1994 vs. 1999)</b>		
<b>DEFECT</b>	<b>VALUE LOSS 1994</b>	<b>VALUE LOSS 1999</b>
INADEQUATE MUSCLING	\$14.43	\$18.70
EXCESS EXTERNAL FAT	\$17.74	\$10.17
TRIM LOSS (ARTHRITIC JOINTS)	\$ 2.13	\$ 9.72
YELLOW EXTERNAL FAT	\$ 2.27	\$ 6.48
HIDE LOSSES: BRANDS, DISEASE, INJURY	\$ 6.92	\$ 6.27
CONDEMNATION OF EDIBLE OFFAL	\$ 3.99	\$ 4.49
WHOLE CATTLE/CARCASS CONDEMNATION	\$11.99	\$ 4.14
TRIM LOSS (BRUISES)	\$ 3.91	\$ 2.24
INJECTION SITE LESIONS	\$ 0.66	\$ 1.46
DARK CUTTER	\$ 0.84	\$ 1.41
LIGHTWEIGHT CARCASSES	\$ 3.12	\$ 1.28
ANTIBIOTIC RESIDUES (COST OF HANDLING/TESTING)	N/A	\$ 0.92
TRIM LOSS (BIRD/BUCKSHOT)	\$ N/A	\$ 0.52
TRIM LOSS (ZERO TOLERANCE)	\$ 1.87	\$ 0.46
<b>TOTAL</b>	<b>\$69.90</b>	<b>\$68.82</b>

Quality assurance must be used in the production, management, and marketing of cows and bulls in order to maintain the highest profits possible for all segments of the beef industry. Quality control guidelines are easy for producers to use and adhere to. Most of the guidelines simply require good common sense. Beef and dairy producers who implement these practices will find they pay dividends in other areas of productivity, herd health, and profitability -- in addition to producing a more valuable market cow or bull for the beef industry.

**Producers must think of their cows and bulls as part of the food supply and treat them accordingly. This is the necessary mindset, which adds value to beef, builds consumer confidence and safeguards the public image of both the beef and the dairy industry.**

**Most Frequently Cited Problems By Packers**

- Bruises
- Antibiotic Residues
- Birdshot / Buckshot
- Arthritic Joints
- Yield (dress %/trim losses)
- Condition / Leanness
- Condemnation Rate

**Most Frequently Cited Emerging Issues by Affiliated Organizations**

- Pricing - Prompt Payment
- Antibiotic Residues
- National ID and Verification
- Pathogen Control
- Injection-Site Lesions
- Birdshot / Buckshot
- Antimicrobial Resistance

These issues all result in economic loss to the industry; however, some of these problems are of greater concern. Antibiotic residues and birdshot; for example, are of extreme importance due to potential food safety implications. These and other issues can be reduced by producers using improved management practices and appropriate culling methods.

## Herd Culling Methods & Management



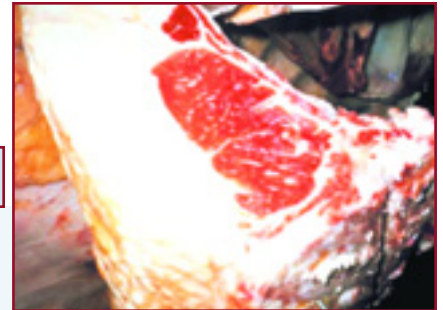
The Beef Improvement Federation defines culling as the process of eliminating less productive or less desirable cattle from a herd. Culling is used by beef and dairy producers to improve herd productivity and efficiency. Once the importance of culling, its revenue to the farm and its contribution of value to the total beef supply are appreciated, cattle producers can use methods to improve culling management and income.

- ▶ First, producers should establish **strategic culling methods** to identify reasons to cull individuals based on production and economics.
- ▶ Second, producers must understand and **consider quality assurance issues**.
- ▶ Third, producers must **establish management practices** for those identified cull cows and bulls.

**What does a “Valued” Quality-Assured Market Cow Look Like?** The photos below show things to be prevented. Understand what determines the **value** of a cull animal, and then decide when and how to market these animals in a manner that captures this value. In the process other aspects of herd productivity and profitability will also benefit.

### **DO/DON'T Strategies for Marketing:**

- ▶ **DON'T** market significantly lame or non-ambulatory animals.
  - ▶ **DON'T** market animals with advanced physical disorders or with terminal conditions.
  - ▶ **DON'T** market animals that are emaciated.
  - ▶ **DON'T** market animals with suspended udders.
  - ▶ **DON'T** market treated animals before the drug withdrawal time for meat has expired -- in many cases this is a longer period of time than required for milk withdrawal.
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- ▶ **DO AVOID CONDEMNATIONS** by marketing animals with physical disorders in a timely way.
  - ▶ **DO EUTHANIZE DISABLED CATTLE** and those with advanced conditions like cancer eye.
  - ▶ **DO PREVENT DRUG RESIDUES** and injection-site lesions by ensuring proper administration and observance of meat withdrawal times for all animal health products.
  - ▶ **DO EVALUATE BODY CONDITION** because better condition means better price. Improve the end-product by marketing before cattle get too lean/fat, too light/heavy, too thinly muscled/emaciated. Consider feeding cull animals for a brief period prior to marketing to improve poor body condition.
  - ▶ **DO PREVENT SEVERE LAMENESS** by promoting foot health, monitoring cattle for early signs of lameness, and addressing conditions promptly before they progress to severe lameness.
  - ▶ **DO IMPROVE BEEF SAFETY** by implementing practices that reduce bacterial condemnations.
  - ▶ **DO PROVIDE DRY-OFF** time before marketing lactating cows.
  - ▶ **DO REDUCE BRUISES** by dehorning cattle, correcting deficiencies in facilities and transportation equipment, and using proper cattle handling techniques.
  - ▶ **DO LIMIT HIDE DAMAGE** with parasite control practices and proper branding methods or permanent identification alternatives to branding.



**Excessive external fat**



**Animals should be culled before advanced disease stages, or in this case, euthanized and rendered.**

## Quality Control

Some quality control points require only slight changes in current management practices, for instance:

- ▶ giving injections in the neck instead of the hip;
- ▶ reading and following meat withdrawal times on product labels;
- ▶ locating brands high on the hip instead of on the rib cage to prevent damage to the more valuable areas of the hide.

**Bruises were the most frequently cited quality problem identified by packers in the 1999 Audit, and there were about five times more bruises on cows than on bulls.** Proper care and nutrition of cattle saves value in terms of saleable meat as well as reduced bruising. Cattle should have enough to eat to maintain a reasonable amount of condition. When producers allow cattle to become emaciated, bruising occurs more easily and more frequently. Bruising can also be greatly reduced by using good dehorning practices.

**The three largest quality losses in market cows and bulls are excess external fat, inadequate muscling, and whole cattle/carcass condemnation.** With an improvement in management techniques, these quality losses can be minimized or even eliminated. Using strategies and Best Management Practices outlined in this BQA Manual and by the National Market Cow and Bull Quality Audit, beef and dairy producers improve beef value, the industry's public image, and their bottom line.



## THE BOTTOM LINE FOR QUALITY ASSURANCE OF MARKET COWS & BULLS...



**MANAGE** cattle to minimize defects and quality deficiencies.

**MONITOR** the health and condition of market cows and bulls to improve herd profitability and produce a better end beef product to get a better price.

**MARKET** in a timely manner and more expeditiously in terms of timing and season to lessen occurrences of disabled cattle, ocular neoplasia, lameness, and emaciation.