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“Beef Production Strategies” article

Managing Market Cows and Bulls

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Returns from sales of market cows and bulls comprise a significant portion of a beef cattle operation's income. Surveys of Mississippi cow-calf operations indicated that mature cows and bulls made up 85 percent and 89 percent of the cattle in breeding herds on operations with fewer than 100 head and greater than 250 head, respectively. Market cow and bull sales generally represent between 10 to 30 percent of the sales receipts from a cow-calf operation. Therefore, optimizing the net return on market cow and bull sales can have a major impact on the overall profitability of the enterprise. In fact, the proceeds from the sale of market cows and bulls can make the difference in whether or not a cow-calf operation is profitable.

Additionally, market cows and bulls are an important food source. Market cows and bulls may be served to beef consumers within a week of leaving the ranch of origin. Traditionally, market cows and bulls were referred to as cull cattle and a by-product of cow-calf operations. However, as the beef produced from cows and bulls is an increasingly important food item in U.S. food retailer offerings, producers must view them as an important food and revenue source instead of viewing them as culls. Beef from market cows and bulls is not only used in hamburger but also in a wide variety of value-added food items including roasts, steaks, and fajitas. This article summarizes key findings of the 2007 National Market Cow and Bull Beef Quality Audit and presents suggestions for improving market cow and bull management and ultimately the beef produced from these cattle.

Market Cow and Bull Quality Assurance

The 2007 National Market Cow and Bull Beef Quality Audit revealed that cattle producers improved herd management techniques, animal welfare and handling, hide damage, injection-site location, and bruises in market cows and bulls from 1999 to 2007. Specific points of improvement were identified in the 2007 audit to achieve the goals of recognizing and optimizing the value of market cows and bulls on individual ranches and enhancing consumer satisfaction of the resulting beef products from these cattle. The top quality challenges identified in the 2007 audit included: 1) food safety, 2) animal welfare/ handling, 3) poor condition/ nutrition, 4) antibiotic residues, 5) bruises, 6) hide damage, 7) lameness/ soundness, 8) condemnation rates/ downers, and 9) injection-site prevalence.

Transportation and Handling

In the 2007 National Market Cow and Bull Beef Quality Audit, cattle surveyed were trucked an average of nine hours and 409 miles. Less than one percent of the audited

cattle traveled more than 28 hours. Compared to previous audits, cattle that were injured and could not walk were virtually eliminated. In addition, all truck and trailer loads met American Meat Institute guidelines for spacing.

Despite these improvements, the cattle industry still needs to address several cattle transportation and handling related issues when shipping market cows and bulls. First, unnecessary use of electric prods and aggressive use of other driving aids in cattle handling is a problem that continues to need improvement. Not overcrowding cattle during movement, slowly moving cattle to and from pens, using properly-designed and well-maintained cattle handling facilities, and improving cattle transportation is essential throughout the beef cattle industry. Beef cattle producers should familiarize themselves with the guidelines outlined in the Master Cattle Transporter program and make sure that persons transporting their market cows and bulls employ cattle management and handling practices consist with these recommendations.

When loading cattle, separate animals by gender to reduce the occurrence of injury or bruising of livestock. The 2007 audit found that 44 percent of beef cattle loads of market cows and bulls arriving at harvest plants were multi-gender. Of these mixed-gender loads, 73 percent were not sorted by gender.

Even though the 2007 audit found fewer carcasses with bruises than the earlier audits, only 47 percent of bulls and 37 percent of cows exhibited no bruises at harvest. Bruising necessitates carcass trimming and results in less saleable product. The round was the most frequent site of bruising in market cow and bull carcasses. This corresponds to the hindquarters on the live animal and suggests that improvements in cattle handling could decrease bruising rates in this location. Reducing bruising starts with management changes on the ranch and extends through cattle management during transportation and at the harvest facility.

Managing to Minimize Cattle Defects

Many common quality defects in market cows and bulls are preventable by beef cattle producers. The beef cattle industry has virtually eliminated carcasses with buckshot or grubs. In addition, 94 percent of carcasses in the 2007 audit showed no signs of injection site lesions suggesting that many beef cattle producers follow recommended Beef Quality Assurance practices. Fewer cattle had brands than in 1999. Brands lower hides values, particularly when located over the ribs.

Market cows pregnant at harvest accounted for 10 percent of beef cows in the 2007 audit, an improvement over previous audits. Producers can bring this figure even lower by stopping breeding exposure for cows headed to terminal markets. While local market premiums for pregnant beef females may exist, cows that are at the end of their productive lives or affected with serious health problems should be left as non-pregnant and marketed for harvest only.

Despite many recent improvements in minimizing cattle defects in market cows and bulls, there are some concerns that require added attention. Liver condemnations are

on the rise though, with nearly half (45 percent) of all livers in market cow and bull carcasses being condemned. Livers contribute to overall carcass value, so progress in liver acceptance rates will improve average carcass values. Liver abscesses can be minimized through proper diet. Liver condemnations as a result of liver flukes can be lessened by implementation of appropriate internal parasite control programs.

Genetic Improvements

Combining genetic improvements and good animal management practices results in better market cow and bull products. The 2007 National Market Cow and Bull Beef Quality Audit found that 21 percent of all cattle audited were inadequately muscled. There were fewer light-muscled beef cows in 2007 as compared to the 1999 audit. Manage genetic improvement through improved individual animal selection and crossbreeding programs to address concerns with inadequate muscling in market cows. In addition, thin cattle can add muscle with added nutrition.

More cattle were polled (without horns) in the 2007 audit than in 1999. Fewer horns reduced the likelihood of bruising and results from both genetic selection for polled cattle and use of dehorning practices. More head condemnations appeared in the 2007 audit. Horn removal can help reduce head condemnations at harvest. Selection against wild or temperamental cattle is another key issue to address through genetic improvement efforts.

Timely Marketing

Cattle should be marketed before becoming too thin or too lame for transport. Incidence of lameness in market bulls and cows received at harvest points fell from 1999 to 2007. In the 2007 audit, 16 percent of market cows and 31 percent of market bulls showed signs of lameness, down from 27 percent and 36 percent, respectively, in 1999. The 2007 audit showed significant improvement in the reduction of downer cattle.

Beef cattle producers must recognize the importance of continuously monitoring herd health and ensuring that cows and bulls are marketed before they become too compromised to ship to market and ultimately harvest facilities. Prompt intervention in herd health problems is critical. Consider marketing cattle showing structural or disease problems rather than holding on to them attempting to get more calves.

In advanced cases of cattle disease or injury, producers should consider euthanasia as the best option for removing these cattle from the herd. In instances where cattle body condition scores fall below three, cattle may not be sound enough for transport. Reconditioning programs where market cows and bulls are placed on nutritional regimens to gain muscle and fat can result in both sounder animals for shipping and profitable returns for the investment by the cattle producer.

Consumer Concerns

Public perception of the beef industry necessitates beef cattle producers actively addressing beef consumer concerns about food safety, antibiotic use, and animal care

and welfare. Adhering to the Quality Assurance Marketing Code of Ethics is an important step beef cattle producers should take to respond to consumer concerns.

Quality Assurance Marketing Code of Ethics

I will only participate in marketing cattle that:

- ☞** Do not pose a known public health threat
- ☞** Have cleared proper withdrawal times
- ☞** Do not have a terminal condition (including advanced lymphosarcoma, septicemia, etc.)
- ☞** Are not disabled
- ☞** Are not severely emaciated
- ☞** Do not have uterine/vaginal prolapses with visible fetal membrane
- ☞** Do not have advanced eye lesions
- ☞** Do not have advanced Lumpy Jaw

Furthermore, I will:

- ☞** Do everything possible to humanely gather, handle, and transport cattle in accordance with accepted animal husbandry practices

Finally, I will:

- ☞** Humanely euthanize cattle when necessary to prevent suffering and to protect public health.

When shipped for harvest, market cows and bulls must be free of chemical and physical hazards. Producers should remove any needles that break off when administering animal health products. Violative residues from applications of drugs, insecticides, or wormers must be avoided. Once decisions on which animals to market are finalized, animal health product withdrawal times must be cleared prior to cattle marketing. It may be much easier to make marketing decisions early and then to schedule animal health product applications accordingly. Recommended guidelines for animal health product administration must be followed including location and method of administration, dosage, and specified withdrawal time.

Maintaining good record-keeping systems and improved animal identification is important to verify Best Management Practices and reduce producer liability for issues resulting after harvest. Documentation of animal health product use is critical to this effort. The key message of the 1999 National Market Cow and Bull Quality Audit (listed below) remains very applicable to current beef cattle production efforts.

To **promote value** in market cows and bulls, producers should

- ☞ manage** their cow herds to minimize quality shortcomings and defects
- ☞ monitor** the health and condition of market cows and bulls, and
- ☞ market** cows and bulls in a timely manner.

For more information on managing market cows and bulls or related topics, contact your local county Extension office.