

Producing and Marketing High-Value Calves

Jason J. Cleere and Larry L. Boleman*

With production costs increasing and calf prices remaining fairly stable, cow-calf producers are searching for ways to add value to calves and make their operations more profitable. While individual producers can not influence average market prices, they can control some of the price variation at auctions and other market outlets by following sound market-management practices. It is very important to market the types of calves buyers demand. Successful producers develop management and marketing strategies that will ensure premiums for their calf crop.

Breeding Herd Management

Much of the eventual market value of a calf is determined 16 to 19 months before it is marketed. Market acceptance is important when choosing breeds. The prices received for cattle based upon breed, breed combinations or type are not always warranted, but the careful producer always considers the types of calves buyers are demanding. Breeds and mating programs should be planned carefully because short-term market preferences may occur rapidly and cause severe price fluctuations, while breeding programs can not be changed as quickly. It is pointless to produce heavier calves if they will be discounted because of poor market acceptance.

It is important to use cows that fit the environment. If heifers are to be retained for replacements, the bull must also fit that same environment. If heifers are not retained (a terminal cross), then

the producer has the flexibility to select a bull to complement the cow's genetics and produce a calf that the buyers demand.

Calving season

Once the bull is placed with the cow herd, the breeding and calving seasons are determined. The calving season and length of the breeding season determine when to sell a weaned calf. In Texas, there are basically two calving seasons: fall and spring. Calves born in the spring (January through March) generally cost less to produce and will be 25 to 50 pounds heavier than fall calves (September through November). The reason for the lower cost of production is that dry cows have lower nutritional requirements than lactating cows and will need less feed during the winter. The key is to match the time when the cow has the highest nutritional requirement (approximately 2 months after calving) to a time when there is a good supply of forage available (typically in the late spring). However, the disadvantage of a spring calving season is that calves usually are sold during the fall when the market is usually lowest (Fig. 1). Calves born in the fall are usually marketed in the spring when prices are highest, but those calves weigh less (unless winter pasture or supplement is provided) and cost more to produce.

Breed, type, condition, weight and sex

Prices received for stocker and feeder cattle depend on the quality of the animals. Stocker and feeder calf buyers use their knowledge and experience to visually identify calves that will excel in feed efficiency, average daily gain, and carcass quality. Visible traits that affect quality in feeder cattle include breed, color, condition,

* Assistant Professor and Extension Beef Cattle Specialist, and Professor and Extension Beef Cattle Specialist, The Texas A&M University System.

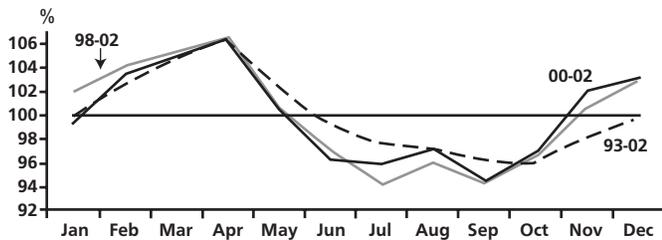


Figure 1. Seasonal price indices (3-, 5- and 10-year) for 400- to 500-pound steers in Amarillo (Davis and Brown, 2003).

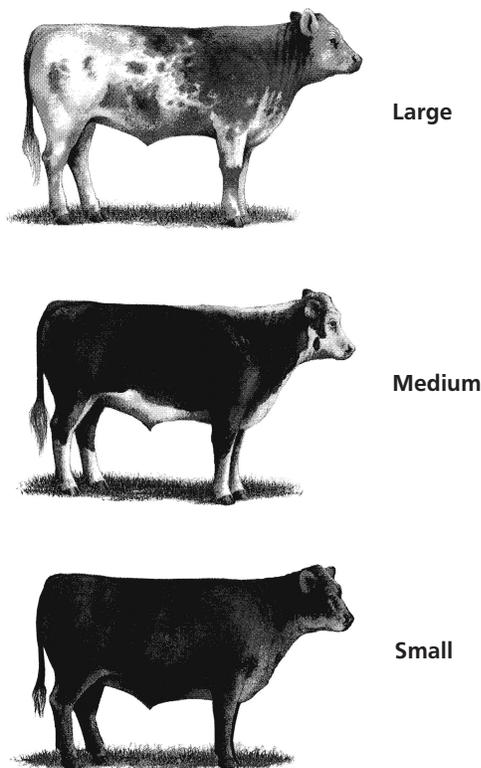
sex, frame and muscling. The level of discounts for cattle that do not meet quality standards will vary depending on the supply of cattle available. If there is an abundant supply of cattle, buyers can be more selective and discount inferior cattle more.

Frame. Feeder cattle are divided into three frame scores as outlined by the U.S. Department of Agriculture (Fig. 2): USDA Small (S), Medium (M), or Large (L). A small-frame steer is expected to be market ready (0.5 inch of fat cover) at a

live weight of less than 1,100 pounds. Medium-frame steers are expected to finish at 1,100 to 1,250 pounds. Large-frame steers are expected to finish at more than 1,250 pounds. Heifers would be expected to finish 100 pounds lighter than steers. Large- and medium-frame cattle will gain faster and possibly more efficiently than small-frame cattle and are not likely to produce price-discounted lightweight or overfinished carcasses. Oklahoma State University (Smith et al., 2000) and University of Arkansas (Troxel et al., 2001) researchers conducted livestock market surveys to determine factors that affect value in feeder cattle. Their data indicate that small-frame cattle bring \$18 to \$19 less per cwt than large-frame cattle and that large-frame cattle bring \$1 to \$4 more per cwt than medium-frame cattle.

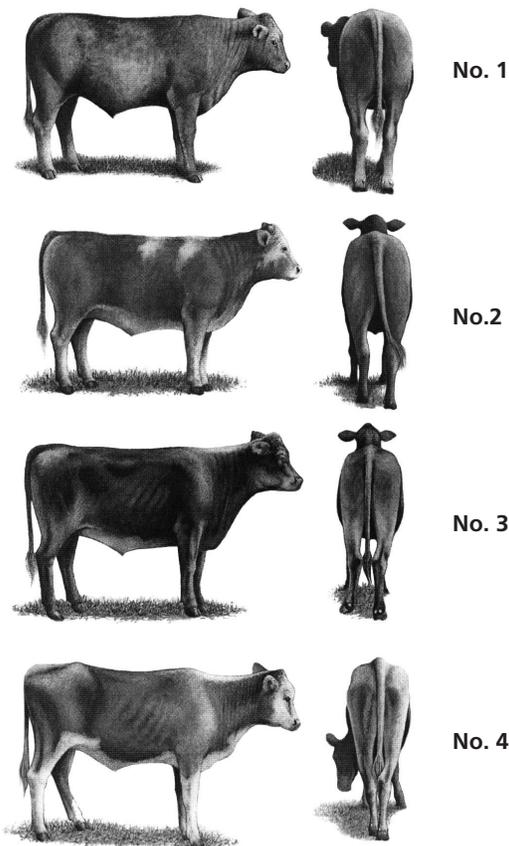
Muscling. The USDA feeder cattle muscle scores are USDA No. 1 (moderately thick), 2 (slightly thick), 3 (thin), and 4 (animal below a No. 3 grade). The Arkansas study revealed that No. 1 steers received a \$4.72 premium over the No. 2 steers and that the No. 2 and No. 3 steers were discounted \$13.40 and \$22.65 when compared

Frame size



Large and medium frame pictures depict minimum grade requirements. The small frame picture represents an animal typical of the grade.

Muscle thickness



No. 1, No. 2 and No. 3 thickness pictures depict minimum grade requirements. The No. 4 picture represents an animal typical of the grade.

Figure 2. U.S. frame and muscle thickness standards for feeder cattle (Adapted from USDA, 2000).

to the No. 1 steers. Muscle is important to the value of feeder cattle and it is important to select breeding cattle that will produce calves with adequate muscling.

Body condition. The Oklahoma study found that thin cattle received discounts of \$9 to \$10 per cwt when compared to cattle of average condition, and that fat cattle received discounts of \$6 to \$11 per cwt. Fat feeders may be discounted because buyers expect their efficiency of gain to be poor. Thin feeders may be discounted because buyers fear they may be more susceptible to health problems and death.

Breed effects. Recognizable breeds and crosses with characteristics reflecting differences in performance (such as maturity, frame size, muscling, condition and ultimate USDA grading standards) generally follow pricing patterns similar to those described. Cattle with a high percentage of dairy breeding, extremes of any kind, and most purebreds (unless purchased for specialized markets) are penalized. Color (red, black, yellow, etc.), which is influenced by breed, has very little effect on feeder prices. However, prices for spotted cattle typically are lower than those for solid-pattern feeders. The Arkansas study indicated a \$10-per-cwt discount for spotted cattle.

Gender. Steers typically command the highest price, followed by bulls and then heifers. Heifers in the 400- to 500-pound range will be priced at \$7 to \$10 less per cwt than steers, while bulls will be discounted \$3 to \$6 per cwt when compared to steers. Discounts for bull calves usually depend on weight. Heavier calves will be discounted more because older, larger bulls experience more stress during castration. Castration is a simple and inexpensive way producers can add value to bull calves. The downside to castration is that steer calves will be 15 to 25 pounds lighter than bull calves at weaning. This can be offset by using growth implants to increase the weaning weights of steer calves.

Calf Crop Management

After producing top-quality calves that will be acceptable in the market, producers must manage those calves properly to avoid any possible discounts. Buyers look for well-managed, healthy, thrifty cattle that have been dehorned, castrated and vaccinated. Producers should also evaluate other cost-effective management practices that can increase weaning weights and, ultimately, the value of calves.

Health and thriftiness

Data from Texas A&M University's "Ranch to Rail" program show that sick cattle in the feedlot are more likely to die than healthy cattle. They also will have higher medical costs, reduced feed efficiency, reduced carcass quality, and lower net returns than cattle that remained healthy during the feeding period. Thus, discounts for sick or "high risk" cattle can be severe.

The demand for preconditioned feeder calves is growing; preconditioned calves typically receive a \$3 to \$6 premium over non-preconditioned calves. A preconditioning program consists of administering recommended vaccinations and carrying out a weaning program that may not pay unless the producer markets in a way that will reward him for the added time and expense. Additional information on preconditioning can be found in Texas A&M University Department of Animal Science publications: ASWEB-120, "Value Added Calf (VAC)-Management Programs" and ASWEB-076, "Value Added Calf (VAC)-Vaccination Programs." Also see Texas Cooperative Extension publication L-5295, "Immunizing Beef Calves: A Preconditioning Immunization Concept."

Dehorning

In the feedlot, horned cattle require more bunk space, can cause bruises that lower carcass values, and are a safety concern for people. Discounts for calves with horns are usually about \$2 per cwt and can be avoided easily. Dehorning is inexpensive and should be done as young as possible to reduce the stress on the calf. Methods and devices used to dehorn calves include polled genetics, hot iron method, Barnes dehorner, dehorning saw, tube dehorner, and dehorning paste.

Castrating

Producers should castrate bull calves because, depending on weight, steers are worth \$3 to \$6 more per cwt. The older and heavier bull calves are, the more they are discounted to allow for shrink and possible death loss from castration. Castrate calves as young as possible, preferably before 4 months of age, to minimize stress and risk. Calves can be castrated as soon as they are nursing. Methods of castration include surgery (knife cut), banding and the burdizzo method.

Growth implants

Producers should strongly consider implanting suckling calves because there is a high net return on this investment. An implant costs about

\$1.00. Implanting suckling calves will increase daily weight gains by 0.10 to 0.14 pounds (Selk, 1997) and weaning weights by 20 to 25 pounds. Implanting heifers intended for replacements does not benefit production or profit, so it is not recommended. For more information on implants and procedures for implanting cattle, see Texas Cooperative Extension publication L-2291, "Beef Cattle Implants."

Parasite control

Calves are more susceptible to internal and external parasites than adult cattle and managing these parasites can add additional pounds of weaning weight. Texas field trials indicate that deworming nursing calves along with their dams in the spring can increase daily weight gains in calves by 0.1 to 0.2 pounds (Wikse et al., 1998). This increases weaning weights by 25 pounds for a cost of only \$3.50 to deworm each cow-calf pair.

Controlling external parasites also improves weaning weights. At an infestation level of more than 250 flies per animal, controlling horn flies on cows and calves has added 15 to 20 pounds of weaning weight.

Creep feeding

Creep feeding is designed to add weight to nursing calves on pastures. It is rarely advantageous under normal conditions because of the high cost per additional pound of gain. Calves on high-energy creep feed will require 9 to 15 pounds of feed per pound of additional gain. Poor feed efficiency, coupled with the declining value of gain, usually makes creep feeding undesirable. Producers should evaluate current market conditions and feed costs to determine if this practice can be profitable. However, if cows and calves are stressed by a lack of forage, extreme temperatures, or other adverse environmental conditions, creep feeding could be advantageous, especially if high-protein feeds are used.

Fill

A small amount of fill variation is tolerated by order buyers, but extremes are discounted. Cattle fill is classified as gaunt, shrunk, average, full or over-filled (also called tanked). The Arkansas study indicated that gaunt or severely shrunken cattle were discounted \$4 per cwt, while over-filled cattle were discounted \$9 per cwt. Keeping cattle within the shrunk-average-full range

should eliminate discounts for fill.

Group size and uniformity

Buyers prefer feeders that are bred alike, managed alike, and sold in truck load lots (90 to 100 head). When determining uniformity among a group of feeder cattle, the traits buyers look for most are weight, color, breed type, frame, muscle and condition. Premiums for selling in group lots range from \$1 to \$7 per cwt depending on the group size.

Marketing Strategies

Successful producers study market opportunities and develop a market strategy months in advance. Producers should study market timing, the prevailing prices, and market trends to determine the best time to market. They should explore marketing alternatives that can help them receive the best price. Auction markets, direct sales, video or internet sales, commingled sales and retained ownership are some marketing alternatives that may be available. These are discussed in detail in the Texas Cooperative Extension publication "L-2225, Beef Cattle Marketing Alternatives."

Auction markets

Auction markets are the most common choice for smaller producers. There are some strategies producers can use to help maximize auction prices.

Markets differ in appearance, facilities, number of cattle handled, type and number of buyers who attend, and the amount of service given to sellers. Prices can vary considerably from market to market and it is up to the seller to research available auctions to determine which one can help you receive the best value for your calves. Producers should alert the market manager in advance if they have cattle that might be marketed better in some special manner. For example, if it is time to sell your weaned set of 20 good quality, uniform steers, then notify the manager. It may be possible for him to sell them as a group or at least give some additional information on the calves to the buyers.

Shrink is another factor that can significantly affect the total value received for calves. Calves begin to shrink soon after they are weaned. Shrink can be as high as 10 percent in calves weaned and shipped the day before the sale

if they do not have access to hay and water. Minimizing shrink begins when cattle are gathered. Be sure to minimize the stress placed on the calves during penning, sorting and hauling. Do not crowd calves. Transport them directly to sales and avoid letting them stand in the hot sun for long periods. Consult with the auction manager about ways to reduce shrink before your calves are sold.

Summary

There is no way to guarantee cattle will always bring top market prices, but with proper management and marketing procedures, discounts can be prevented. Begin by producing the kind of calf that is in demand. Implement management practices that will prevent discounts and spend ample time marketing the calves you worked all year to produce.

For Additional Information

Texas Cooperative Extension publications are available at <http://tcebookstore.org>.

Also see the Texas A&M Animal Science Extension Web site at <http://animalscience.tamu.edu>.

References

- Selk, G. 1997. Implants for Suckling Steer and Heifer Calves and Potential Replacement Heifers. *In: Symposium: Impact of Implants on Performance and Carcass Value of Beef Cattle.* Oklahoma Agr. Exp. St. p. 957.
- Troxel, T. R., S. Gadberry, S. Cline, J. Foley, G. Ford, D. Urell and R. Wiedower. 2001. Improving the Value of Feeder Cattle. University of Arkansas Bulletin.
- Smith, S. C., D. R. Gill, T. R. Evicks and J. Prawl. 2005. Effect of Selected Characteristics on the Sale Price of Feeder Cattle in Eastern Oklahoma: 1997 & 1999 Summary. Oklahoma State University, Anim. Sci. Res. Rep.
- USDA. 2000. U.S. Standards for Grades of Feeder Cattle. Agricultural Marketing Service. AMS-586.
- Wikse, S. E., K. S. Barling and R. W. Field. 1998. Utilization of Doramectin and Ivermectin to Improve the Performance of Cow/Calf Herds in Texas. *In: Proceedings: Parasitism and Productivity.* J. Anim. Sci. Vol. 77 Supplement 2.

Produced by Agricultural Communications, The Texas A&M University System

Extension publications can be found on the Web at: <http://tcebookstore.org>

Visit Texas Cooperative Extension at <http://texasextension.tamu.edu>

Educational programs conducted by Texas Cooperative Extension serve people of all ages regardless of socioeconomic level, race, color, sex, religion, handicap or national origin.

Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914 in cooperation with the United States Department of Agriculture, Edward G. Smith, Director, Texas Cooperative Extension, The Texas A&M University System.

New