



The Veterinary Link

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Castration considerations

Castration is an ancient practice used primarily to produce an animal that will have a higher quality carcass and that is easier to manage due to decreased aggressive and sexual behavior. A variety of simple techniques can be used.

Techniques differ by age

Young bull calves weighing less than 250 pounds (lb.) are usually castrated lying down or in a calf cradle. Older and larger bull calves are generally castrated in the standing position in a squeeze chute. Although not common, infection and excessive bleeding are complications that can occur after castration, particularly with older animals. Proper castration technique and good sanitation are important to minimize problems following castration.

Castration studies

Just less than 20% of all male feeder calves showing up at U.S. sale barns are still bulls. Depending on your perspective, that could indicate that the industry has made a lot of progress, or, that it still has a lot of inefficiency.

According to survey work in

Oklahoma and Arkansas, the average price discount is just more than \$3.50 per hundredweight (cwt.) for bull calves compared to steer calves.

Some cattlemen leave bull calves intact until weaning, thinking they will gain additional sale weight. However, research findings from Kansas State University (K-State) and Iowa State University (ISU) indicate otherwise. K-State researchers found that intact bulls gained 2.12 lb. per day of age, while steers that were castrated at 2-3 months (mo.) of age and implanted with growth-promoting implants gained 2.13 lb. per day of age until time of weaning.

ISU looked at data throughout a seven-year time span, where they compared sale weights of calves that were castrated at birth vs. castrated later. They found that calves that were castrated at birth (and implanted) were 19 lb. heavier at weaning than bulls castrated at 5 mo. of age, and 30 lb. heavier than bulls castrated at weaning.

Although the data would indicate that cow-calf producers who choose not to castrate male feeder calves are decreasing their income potentials, one

could think that by purchasing bulls at an average of \$3.50 per cwt. cheaper than steers, backgrounders and feeders have an opportunity to regain that value for the beef industry by doing the castrations themselves and upgrading the value of the calves.

However, several recent research reports have indicated that a loss in performance (3% reduction in daily gain and feed conversion) and a 30% increase in sickness and death loss of bulls castrated after purchase outweighs a cheaper purchase price. K-State research indicated that for the first 33 days after arrival, lightweight steer calves gained 1.85 lb. per day while bull calves that were knife-cut at arrival gained 1.63 lb. per day. Bulls that were banded at arrival gained 1.47 lb. per day. In addition to decreased gain, castrated bulls had higher drug costs and more sick days compared to steers.

An Oklahoma State University (OSU) research report also showed decreased gain in bulls castrated by banding or surgery at arrival compared to steers of the same weight. When heavier calves (at about 660 lb.) were studied during a

110-day period in Kansas, banded bulls gained 1.58 lb. per day, knife-cut bulls gained 1.78 lb. per day, and steers gained 2.05 lb. per day.

The number of sick days per animal was greatest for banded calves (2.20 days), followed by knife-cut calves (1.45 days) and steers (0.35 days). After 110 days, the calves purchased as steers would have been 88 lb. heavier than those banded and 30 lb. heavier than those surgically castrated.

If the average treatment cost for sick animals is \$12 per head, the difference between the steers and banded calves would be \$22.20 per head. The surgically castrated animals would be at a \$13.20 disadvantage. If the value of gain were 50¢ per pound, the calves purchased as steers would have been worth \$10 per cwt. more than banded calves.

Earlier equals healthier

The take-home message is that calves that are castrated at birth or by 2-3 mo. of age (and implanted) have less risk of postsurgical complications and less negative impact of castration on growth compared to calves castrated at an older age. Although cow-calf producers suffer a price discount when selling bull calves rather than steers, recent research indicates that the purchase price discounts are not great enough to provide an economic incentive for backgrounders and feeders to purchase bull calves rather than steers.