

Cool Season Options

Josh Bushong, West Area Extension Crops Specialist

Fall planting is upon us. Some farmers are still unsure of what to plant especially now if their summer crops were harvested as a forage. While the option to leave it fallow is always an option, most will likely be eager to get another crop going as soon as possible. In addition to wheat for either pasture or grain, there are some other small grain options such as triticale, rye, barley and oats and winter canola is still a viable option especially for farms with a known weed issue.

Cereal rye can be a good option for a fall grazing pasture with some early spring pasture but will typically hit first hollow stem sooner than wheat. It performs well in sandy or slightly more acidic soils when compared to wheat. In addition to good fall forage potential, rye will also continue to grow more in the winter months compared to wheat. Feral rye is a major weed risk for wheat rotations because there are not any herbicide control options in conventional wheat.

Triticale is a cross between wheat and rye. Therefore, it's a good balance of fall and spring forage potential. Triticale can be a little more sporadic when it hits first hollow stem, but usually it will be later than wheat in my experience. It can be a little harder to find seed, but it's getting better as acres have increased. It can get fairly tall as it matures, and lodging has been a small concern for some that grow it.



Most producers are familiar with spring oats, but most varieties can also be planted in early fall to achieve a high yielding forage before a killing freeze. There are some winter oat varieties that can survive most winters in this region, but a harsh winter can greatly reduce stands and potential spring forage growth. Both spring and winter oats typically perform better on good ground with favorable growing conditions, as they can be more drought sensitive compared to other small grains.

Winter barley is another option to achieve good fall pasture. Barley can produce a great palatable and high quality forage, while having some drought and heat tolerance. If planted too late in the fall, other small grains like rye, triticale, and wheat will have a higher probability to produce more overall forage the rest of the season.

Another cool-season option is winter canola. It has been well documented by Oklahoma State University that rotating to canola for just one year can greatly reduce grassy weed infestations by 85-95%, increase the following wheat grain yields by 10-20%, as well as increase the following wheat crop forage yield by more than 20%. When it was first introduced into the region, about 19 years ago, the main reason to consider it was to clean up wheat fields. Seed wheat producers also like it, as it gives them a crop to grow when switching to a new wheat variety.

As some producers are starting to shift their focus on other options like cover crops, canola fits well in that train of thought too. It is a great tool to use as it can be a cover crop with a good chance of being a cash crop.

Being a large taprooted winter broadleaf crop, it can assist in improving soil health and rain infiltration into the soil. There are also different herbicide modes of action that can be used to control grass weeds. Even though there isn't a canola crush plant in Oklahoma anymore, there are still many local delivery points across the region. Crop rotations between a grass crop like wheat and a broadleaf crop like canola helps reduce pest pressures. Many issues, including insects and diseases, we often combat in wheat can be reduced if canola is planted.

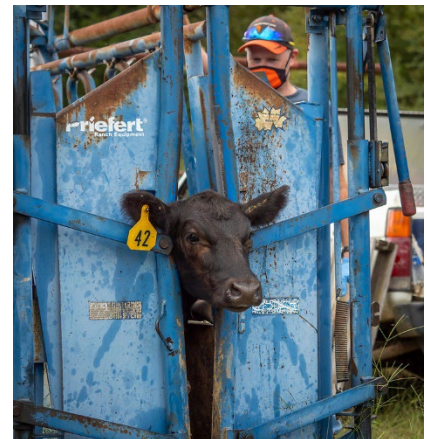
When is the Right Time to Castrate Bulls?

Written by Jeff Robe, Oklahoma Quality Beef Network Coordinator, OSU

Shared by Dana Zook, West Area Extension Livestock Specialist

The practice of castrating animals goes back to ancient times. Egyptian farmers found castrating bovine bulls made the animal much easier to handle. It's doubtful the Egyptians were concerned about the value-added components of their animals. But today, adding value to market cattle is the name of the game and castration is a key component to any preconditioning program that can greatly influence market price premiums or discounts, especially in older bull calves.

Castrating bull calves has become common practice in U.S. beef herds. In 2017, the USDA-APHIS NAHMS Beef Cow Calf study indicated that 62% of commercial cow-calf herds used castration methods in their management practices. Castration has provided economic benefits to both the cow-calf producer and feedlot operators through increased market prices and meat quality. Castration also decreases unwanted pregnancy and increases the safety of workers and other animals.



There is a perceived notion that intact bulls have an advantage in body weight gains during the preweaning period and post greater weaning weights than calves castrated at or near birth. However, numerous studies have shown the weaning weights are similar for bulls and steers (approx. 600 lbs.). Advantages in calf weight gain due to testosterone production are presumably realized at a time following average weaning dates closer to puberty.

The timing of castration can influence weight gain and stress management. Studies examining how timing of castration effects average daily gains (ADG) in cattle castrated either in early life (birth to 2 mo.) or those castrated at weaning or postweaning (6-10 mo.) demonstrated higher ADG during the post-weaning period in the early castrated calves (approx. 0.30 lbs./day greater) than those castrated at or after. The period calves experience weight loss post-castration increases with age as does risk of disease susceptibility. The stress experienced is also related to the time of castration as the level of discomfort and trauma increases with the size of testicles. Calves castrated at 5 ½ months of age or later experienced a greater duration of stress than those castrated at birth or at branding.

Bull calves entering the stocker or feedlot segments of the industry have numerous health and performance factors associated with late life castration such as increased risk or morbidity and mortality, sick treatments and decreased ADG. Therefore, price discounts for bull calves being sold at market can be substantial when compared to steers marketed in the same weight class. Lighter weight bulls (300-400 lbs.) are viewed as less risky, and discounts are generally minimal if any. As the weight of a bull increases, so does the risk. Discounts can average \$6-12/cwt or \$30-60 per head.

A herd management practice that dates to ancient times and still used today has clearly proven beneficial. Utilizing the practice and with a timing that makes sense may be the difference between dollars made or dollars lost.

Castration is an important part of adding value to your calves through preconditioning. For more details and to enroll in the OQBN program go to www.oqbn.okstate.edu

Understand the Value of Hay

Trent Milacek, West Area Extension Ag Econ Specialist

Did you have to mow your lawn much this year? I'm not talking to people irrigating their yard; those of us who rely on mother nature have not spent much time in the mower seat. The same thing is influencing the amount of forage available to our livestock.

I have witnessed more than a few grumblings about the price of hay from buyers. Comments that they cannot make money at current prices is an honest concern. Those of you producing hay see the other side. Fertilizer costs over 150% higher than previous

years, higher chemical costs, increased machinery expense and fuel price increases all factor into the cost of growing forage.

Hay stocks in Oklahoma have gone down 48% year-over-year and we started last year below average supplies. The cost of a product is not linear as supply decreases and prices can skyrocket as the reality sets in that some producers will not be able to purchase the hay they need to make it through winter.

What is the cost of a bale of hay? First, we need land to produce hay so let's assume a feasible rental rate for pasture that can also be hayed is \$25/acre. The cost to create a bale of hay from swathing to baling a 5x6 round bale in this example is \$35/bale if the ground produced 2 bales/acre. A 50 lb. of nitrogen/acre fertilizer rate cost \$45/acre so we split that between two bales for a \$22.50/bale nitrogen cost. So far, we have \$70/5x6 round bale in expenses. You could add \$5/bale hauling cost to the side of the field, but I omitted it here.

This is for our typical native grass hay. I have heard of anecdotal observations for alfalfa hay that is bringing \$300/ton or more. Our native grass example would cost \$165/ton.

When we drill down on the expense of production the expense of procurement makes sense. My caution to producers is that they should never buy hay that has not been tested. There is too much variability in hay



quality and prices are too high to take that risk. Nitrates have been a concern in many hay fields as well which could render hay worthless if levels are too high. It seems to be a common theme where quality hay is undervalued and poor hay is overvalued as the market tries to discover value. Consider purchasing hay that is of higher quality due to the cost of supplemental protein sources. A dollar of hay with good quality will far outweigh the value of poor hay that must be supplemented with protein and labor to deliver that supplement.

Also consider that producers may face a longer feeding season. Pastures are stressed, moisture prospects are still low and a wet spring has not been forecast. We may have to consider a feeding season that stretches more than half the year for some producers. Current prices may seem cheap once the snow starts to fly.

Weaning Management to Reduce Stress

Britt Hicks, Ph.D., Area Extension Livestock Specialist

For spring-calving herds, weaning season is right around the corner. Weaning is one of the most stressful events in a calf's life. Minimizing weaning stress should improve calf health and weight gain. Beef calves are traditionally weaned by abrupt remote separation from their dams, kept in a lot and fed. Fence-line weaning has gained popularity in recent years over traditional methods because calves show less behavioral stress, vocalize less (bawling), spend more time eating and gain more weight following weaning. With fence-line weaning, calves are separated from their mothers but are allowed to see, hear, and smell their mothers. Depending on the fencing used, physical contact may also be possible (place in adjacent pastures).

University of Arkansas research from 2012 evaluated the effects of weaning method (fence-line vs. traditional) and time of day (morning vs. evening) on behavior and performance of fall-born calves. In this study, crossbred fall-born calves were allotted to the following weaning treatments: 1) fence-lined weaned in morning, 2) fence-lined weaned in evening, 3) traditional weaned in morning, and 4) traditional weaned in evening. The calves assigned to the morning weaning treatments were gathered at 7:30 am, separated from their dams, weighed, and either placed in 4-acre paddocks adjacent to their dams (fence-line weaning) or in 1-acre drylots away from their dams for 14 days (traditional weaning). The calves assigned to the evening weaning treatments were gathered at 5:30 pm and handled the same as the morning treatment groups. During the weaning period, all groups had ad libitum access to water, trace mineral salt, and were offered 2 lb per head per day of dried distiller's grains. In addition, the traditional weaned groups were offered medium quality hay. Each treatment group was evaluated for vocalization and behavior (walking rapidly, running, standing, or lying down) at approximately 12, 24, 48, and 72 hours after weaning. After the 14-day weaning period, the calves were gathered and reweighed.

These researchers reported that the percentage of calves walking rapidly, standing, or lying down did not differ across treatments. However, the percentage of calves vocalizing were greater for morning weaning compared with evening weaning (67 vs. 42%) and for traditional weaning compared with fence-line weaning (62.5 vs. 46.5%). In addition, during the 14-day weaning period, evening weaned calves gained 86% faster than morning weaned calves (2.70 vs. 1.45 lb/day and fence-lined weaned calves gained 59% faster than traditional weaned calves (2.55 vs. 1.60 lb/day).

The results of this study suggest that weaning fall-born calves in the evening may reduce the number of calves vocalizing and may increase calf gains over the weaning period. These researchers suggested that this might benefit producers that sell calves to a cash market shortly after weaning. Fence-line weaning might also result in fewer calves vocalizing during the weaning period and improve performance compared with traditional weaning. Virginia (2008) and California (2003) research showed that fence-line contact between mother and calf for seven days after weaning resulted in less stress on calves than that associated with the traditional abrupt separation of the calves from their mothers which minimized reductions in weight gain associated with weaning.

Fence-line weaning takes good, well maintained fences and adequate water supplies for both sides of the fence since a large number of cattle are going to be congregated in a small area for several days. Even though fence-line weaning is not always possible or feasible, minimizing stress is still important. Tips to minimize stress from weaning to shipping include.

- Provide calves access to the weaning area (pen, trap, or pasture) a few weeks prior to weaning so calves do not undergo the stress of an environment change at weaning.
- Allow fence-line contact between calf and dam for four to seven days following weaning. Fences should be sturdy and allow nose to nose contact while preventing nursing.
- If fence-line contact is not practical, move cows far enough away that they cannot hear the calves bawling.
- Move the cows to a new location when cows and calves are separated at weaning. Do not move the calves.
- If weaning in a drylot or corral, place feed bunks, hay, or water troughs along the fence to minimize perimeter walking.
- Do not castrate, dehorn, or brand calves at weaning. These practices should be completed at least three weeks before weaning and preferably prior to three months of age.



Extension Experience – Insights into Oklahoma Agriculture

The Northwest Area Extension Staff would like to announce the creation of our new podcast *Extension Experience*. The *Extension Experience* podcast is brought to you by Josh Bushong, Trent Milacek, and Dana Zook. Each week they provide perspective on Agriculture topics and offer insight from our experience working with Extension Educators and Producers across Oklahoma.

The *Extension Experience* podcast is available on Spotify, Google Podcasts, and Apple Podcast platforms. You can also access the episodes on spotlight, <http://spotlight.okstate.edu/experience/>.

We hope you consider listening to Extension Experience.



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