



Ag Insights

From the Desks of Your Northwest Area Ag Specialists

Oklahoma Cooperative Extension Service - Division of Agricultural Sciences and Natural Resources - Oklahoma State University

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Stocker Cattle Purchasing Decisions

Trent T. Milacek, NW Area Ag Econ Specialist

Spring brings the opportunity for another year of summer grass pasture. Stocker producers will soon be making decisions on the type and weight of cattle to purchase to harvest this forage. While it may be typical to purchase lightweight cattle for this purpose, it can be beneficial to analyze the entire feeder cattle complex to evaluate value of gain potential.

Utilizing historic basis information and current auction prices can help a producer make the most profitable decision for their operation. To complete the analysis, prices in the Oklahoma Combined Weekly Auction Summary from the week ending March 16, 2018 with reported sales of 38,824 head are used. This exercise will only focus on medium/large frame class 1 steers.

Using only current auction data, the feeder cattle price slide favors purchasing lightweight calves. For example, a 400lb. calf sold for \$798/hd. and 650 lb. calves sold for \$1050/head. The value of gain for the additional 250 lbs. between 400lbs. and 650lbs. is \$1.01/lb.

The value of gain calculated above does not take into account the actual price cattle will be sold for in the future. In order to make a meaningful prediction of the value of gain, a producer must attempt to predict future prices and basis. The historical basis of 650lb. calves sold in August is \$10.69/lb. The feeder cattle futures price for August is trading near \$144/cwt. Therefore, an estimate of 650lb. cattle prices in August would be \$154.69/lb. or \$1005.49/hd. Using this number gives the producer an estimated value of gain at \$0.83/lb., which is lower than the previous estimate of \$1.01/lb.

On the heavy side of the price slide, producers purchasing 550lb. cattle today will pay \$961/hd. or \$174.78/lb. Expected basis for 800lb. calves in August is -\$3.36/lb. Therefore, the estimated selling price is \$140.64/lb. or \$1125.12/hd. The estimated value of gain on the heavier calves is \$0.66/lb.

While current market conditions suggest lightweight cattle would be more profitable, it takes further analysis to come to an educated estimate. Using current August feeder cattle futures prices and historical basis averages from beefbasis.com confirms that assumption. The 400lb. calves continue to have an opportunity to capture a larger value of gain than 550lb. calves on grass pasture. These estimates are subject to price changes and fluctuations in supply and demand. Price hedging strategies in the futures market, livestock risk protection insurance or forward contracting can help reduce price risk in the beef stocker enterprise.

For more information on budgeting and price forecasting please visit agecon.okstate.edu/budgets/ and contact your local county extension educator.

When is the Best Time (Age) to Castrate Bull Calves?

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

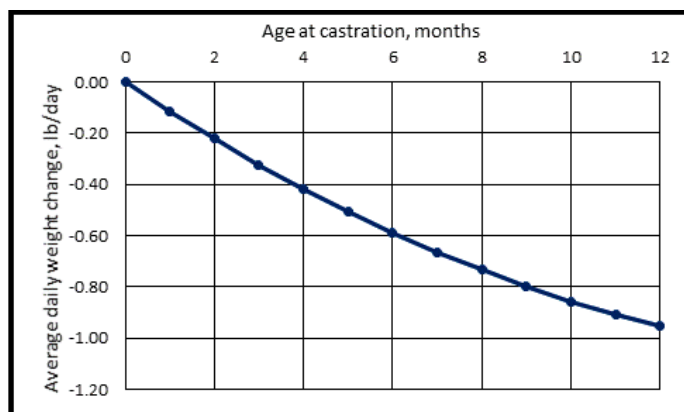


Figure 1. Average daily weight change of calves castrated by elastic band and surgical castration for the first 30 days post-castration.

Beef Quality Assurance Guidelines recommend that bull calves that are not herd sire prospects be castrated as early in life as possible (preferably, between birth and four months of age). It has been speculated that delaying castration until weaning may improve performance since intact bull calves may grow more rapidly than steer calves. However, several studies suggest that there is no lifetime performance advantage to waiting to castrate calves until weaning. In fact, most research show that late castration (at weaning) decreases feedlot arrival gains and increases morbidity (sickness).

In 2011, University of Florida research investigated whether timing of castration in nursing calves affected calf performance and weaning weight. In this study, 93 Angus and Brangus calves were either surgically castrated early (average age of 36 days) or late

(average age of 131 days). The age of the early castrated calves ranged from 3 to 73 days and the age of the late castrated calves ranged from 84 to 180 days. At the time of castration, the average body weight of the late castrated calves was 356 lb. Actual weaning weight (456 vs. 452 lb), adjusted 205-day weaning weight (512 vs. 504 lb), and average daily gain from birth to weaning (2.00 vs. 1.92 lb) were all similar between early and late castrate treatments, respectively. These researchers concluded that this data indicates that producers have some degree of flexibility in determining when to implement castration. The data showed that castration at or near birth did not have a detrimental effect on calf performance or weaning weight. These authors also suggested that producers should realize that delaying castration until calves are approximately 131 days old will not bring added weight at weaning despite some producer philosophies and marketing claims that endorse such management practices.

In 2015, joint research between the University of Arkansas and West Texas A&M University (WTAMU) evaluated the effect of castration timing (near birth or at weaning) on lifetime growth performance and carcass quality of beef calves. In this study, calves were surgically castrated near birth or at weaning. All calves were weaned at day 214 of the study to undergo a 56-day weaning period. For the first 28 days after weaning, the calves were fed hay ad libitum and a supplemental ration intended to achieve approximately 1.5 lb of gain per day. After 28 days, the calves were moved to a mixed-grass pasture to be maintained for an additional 28-day period to complete the 56-day weaning phase of the study. After this weaning phase, the calves were shipped 480 miles to the WTAMU Nance Ranch and grazed on native grass and sorghum-Sudan grass for a 111-day backgrounding period until entry into the adjacent WTAMU Research Feedlot. The calves were fed a common feedlot ration throughout the finishing period (average length of 128 days) and harvested at a commercial processing plant.

These researchers reported that average daily gain from birth to weaning (214 days) was similar between treatments (1.81 vs. 1.85 lb/day for steers and bull calves, respectively). Furthermore, there was no difference in weaning weight between the bulls left intact (483 lb) or the non-implanted steers castrated near birth (475 lb). These authors suggest that this observation indicates that testosterone-enhanced growth in bulls vs. steer cohorts is not realized until bulls reach ages beyond the typical weaning age. However, during the 56 day weaning period, calves castrated near birth gained faster than calves castrate at weaning (2.25 vs. 2.04 lb/day, $P = 0.04$). Summer grazing and feedlot finishing performance and carcass measurements did not differ between treatments. These researchers concluded that the results of this study indicate that castration procedures should be performed as early in life as possible to minimize performance loss.

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Research from Nebraska (2005) has shown that as age of castration increases, weight loss resulting from the procedure increases (Figure 1). In addition, reviews of marketing data show that bull calves marketed through conventional channels have historically suffered a price discount of ~5% compared to steer calves (~\$5.00 to \$7.00/cwt discounts) since surgical castration of calves after arrival at a feedlot decreases daily gains and increases morbidity.

Research conducted at the University of California, Davis (2017) assessed the effect of age on healing and pain sensitivity after surgical castration of beef calves. In this study, beef calves were surgically castrated at 3 days of age (range of 0 to 8 days) or 73 days of age (range of 69 to 80 days). The results of this study showed that calves castrated soon after birth experienced more tissue swelling and showed more signs of pain, but their incisions healed sooner (39 vs. 61 days) and their weight gain 77 days after castration was greater (1.54 vs. 0.66 lb/day), when compared to animals castrated around 73 days of age.

Collectively, these studies suggest that there is no lifetime performance advantage to waiting to castrate calves until weaning, but there is a high probability of receiving lower prices when marketing intact calves through conventional channels. When considering how age at castration affects animal welfare, the consensus is that the younger the calf is at time of castration, the less impact castration has on its welfare and performance.

Access Farm Management Resources Online

The Oklahoma Cooperative Extension Service developed and catalogued farm management resources on a variety of financial, production, marketing, and risk management topics. These resources can help producers strengthen their financial management skills. Resources include a series of videos, publications, software tools and webinars organized by topic covering multiple financial management and production topics.

One current example of these resources is the Financial Stress Testing video. This video explains measures that can be monitored to reveal position and performance in each of the five categories of liquidity, solvency, profitability, financial efficiency, and debt repayment ability. It shows how these measures can be used to evaluate and manage through a financially stressful situation. To find this video and additional resources on farm stress, visit: <http://agecon.okstate.edu/efarmmanagement/stress.asp>.

More information on this and other farm management resources may be accessed three ways: 1) visit the e-farm management website (<http://agecon.okstate.edu/efarmmanagement/index.asp>) 2) visit the OSU AgEcon YouTube Channel (<https://www.youtube.com/user/OkStateAgEcon>) or 3) contact your nearest OSU County Extension Educator.

Timing Application of Fly Tags Tested in Local Demonstration

Dana Zook, Area Livestock Specialist, Enid Area Office

In the spring, it is easy to think that flies aren't an issue. Your to-do list is long enough and there isn't any more room in the budget for tags or spray. Cattle on pasture aren't really bothered by flies, right? Wrong!

Horn flies are sucking insects that feed on the side, back, belly and legs of cattle taking small blood meals 20-30 times a day. Economic losses begin to occur when fly populations reach 200 insects per animal; populations can easily exceed 300 flies per animal without measures of control. As you would expect, this causes cattle substantial stress which reduces cattle performance in all stages of production.

Each year, cattle producers utilize a variety of techniques to control horn fly populations. Fly control use will vary from one operation to the next due to the availability of cattle handling facilities. Ear tags are one popular and proven horn fly control method. The period of time a fly tag is effective will vary depending on brand, but in Oklahoma, fly tags will provide approximately 90 days of control. It is common practice for producers to apply fly tags in conjunction with spring vaccination and castration measures. While this conveniently takes care of all work in one trip through the chute, producers may be jumping the gun. Considering 90 days of control, tagging cattle in April may cause the tags chemical to run out before horn fly population's peak in August and September.

To test the timing of tag application, three Alfalfa County cattle herds were used in a fly control demonstration during the summer of 2016. Tags were applied to one group of cows in late April and then another group a month later in May. An untreated control group was also utilized to document the natural fly pressure. Prior to tag application and in each month following, side profile pictures were taken of randomly selected cows within each group. These pictures were then sent to OSU for fly count determination.

Unsurprisingly, April tagged cattle were affected by horn fly populations above the threshold during the peak period for horn flies (August and September). Horn fly populations in the May tagged cattle were successfully controlled under 200 flies per side through the 90 day active control period, which lasted through August. Fly populations then increased in September due to the natural breakdown of the chemical. As we had predicted, May tagging proved to successfully provide control during part of the peak time when horn flies are most prolific.

Some lack of control in the April tagged group during the 90 day active control period could be contributed to resistance to the tags synergized pyrethroid chemical. Factors of pasture type, cattle breed, previous fly treatment, and cattle age all play a role in the efficacy in the fly control chemical and potential resistance that can occur resistance. Horn flies are most resistant to pyrethroids which makes it crucial to utilize proper chemical rotation.

For any questions regarding control options and chemical rotations for the upcoming horn fly season, contact your County OSU Extension Educator.

Woods County Cedar Rodeo

May 12, 2018

McMurphy Farms Headquarters

32162 US Highway 64 - Alva, Oklahoma

11 miles West of Alva – South Side

Intersection of Highways 64/14 – ¼ East

10:30 a.m. – 1:00 p.m.

Lunch Following Program



Mechanical Control

Cedar Control Demonstrations

Myer Saw

Marshall Saw

Turbo Saw

Shearer & Grapple

Grinder

Tree Mulching

& More

Presentations:

Herbicide Control Measures

Laura Goodman, OSU Range Specialist

Prescribed Burning

*Justin Barr & Greg Highfill, Extension Educators
also, OSU Range Specialist & CRPA Members*

- Proper Planning for a Prescribed Burn
- Essential Elements for Cedar Control
- Grazing Management Before/After Burn

Program Sponsor

Woods County



Partnership Sponsors

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What About Teff?

Josh Bushong, Area Extension Agronomy Specialist

Teff is a warm season annual grass crop that has started to gain a little ground in Oklahoma. Some producers over the past few years have seeded the crop in northwest Oklahoma and have been able to produce some high quality forage tonnage out of the grass crop. Teff can be utilized as a short season hay crop following wheat, summer annual cover crop, or high quality hay or forage crop and it fits well in crop rotations.

Teff originated and is still produced in Ethiopia. It is utilized there mainly as a source of flour and is a dietary staple with about two thirds of the population consuming it. Also known as the world's smallest grain, one pound of Teff seed can contain about 1.3 million seeds. To put that in perspective, about 150 Teff seeds is about the size of a single wheat kernel.

Originating from Eastern Africa, Teff is naturally drought tolerant and can handle seasonal floods very well. In comparison, Teff is more drought tolerant than Bermudagrass. It is also very efficient with nitrogen, meaning it does not require as much nitrogen to produce a ton of forage compared to some other forage crops.

Teff can produce a very high quality forage for grazing or hay production. Depending on rainfall, soil fertility, and other environmental factors, Teff has been found to produce between one and a half to five tons of dry forage per acre in OSU field trials. If grazed, it is better to wait four to five weeks after emergence to allow the plants to develop roots strong enough to prevent up-rooting. If adequately fertilized, crude protein in OSU field trial samples have typically been between 10 and 18 percent with total digestible nutrient (TDN) values between 63 and 65 percent.

As a warm season annual, Teff will need to be seeded after the last freeze date, usually early May to July, and will have to be seeded every year. Germination of the seed is usually very quick if seeded into a shallow firm seedbed. Seedlings start off a little slow, but usually after three weeks the secondary roots develop and forage growth is greatly accelerated.

The first hay cutting is often achieved 45 days after germination. It is best to wait until the head starts to emerge to maximize both tonnage and quality. Leaving three to four inches of stubble will hasten crop recovery for additional cuttings. Subsequent cuttings can occur every 30-40 days depending on environmental growing conditions. If harvest is delayed too long, the crop can have a tendency to lodge since the plants are very fine stemmed.

Establishing a crop of Teff can be challenging. Since the seed size is very small and seeding rates are low, typically 5 pounds of pure live seed per acre, it will be critical to properly calibrate seeding equipment. Ideal seeding depth would be an eighth of an inch, but usually no deeper than a quarter of an inch.

Soil preparation is critical when seeding into conventionally tilled fields. It is best to seed into a smooth, firm, stale seedbed while maintaining soil moisture to seeding depth. Cultipacker type seeders and broadcast seeding with a light tillage incorporation are preferred, but if used properly a double disc grain drill can also

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be successful. Seeding into no-till conditions is often more successful when there is not a heavy cover of previous crop residues. In order to get good germination and fast emergence the small seed needs good seed to soil contact.

Soil fertility recommendations will follow standard Bermudagrass requirements for soil pH, phosphorus, and potassium. OSU research has shown that 100 pounds of nitrogen should be enough for 8,800 pounds of dry forage production. It is recommended to start with about 50 pounds of nitrogen at planting and to apply another 50 pounds in season either after the first hay harvest or around the first of July if grazed.

Teff is another forage crop option for producers looking for a quick forage that is nitrogen efficient, drought tolerant, high yielding, and high quality with very limited nitrate concerns. Producers will have to reseed annually, be diligent about how to plant the small seed properly, be cautious about early grazing for uprooting plants, and harvest for hay on time to prevent lodging. Although there are not many herbicides labeled for this crop, there have not been many reports of weed infestations when Teff stands have decent.

For more information about Teff, please visit your county OSU Extension Office.



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