Being “In the Know” about Cow Weights
Dana Zook, NW Area Livestock Specialist

Information is Power. Technology has allowed cattle producers to collect more information giving insight into areas where the operation could be improved. In beef production, powerful information comes in the form of cow body weight.

Most cattle producers understand that weighing cows annually is ideal, but equipment limitations can keep producers from it. I grew up on an operation where vaccinations were given to cows and calves in an alley and most treatments were done by our local veterinarian. Our herd wasn’t large enough to justify a full working chute and scale, but we did the best with what we had. While taking cow weight adds some difficulty, it shines light on other aspects of beef production. Let’s look at a couple of ways cow weights can improve the operation’s overall efficiency.

Knowledge of cow weight improves feeding accuracy. Knowing a cow’s weight gives us an idea of how much she will eat. This is crucial when cows are being full fed concentrate feeds or silage. It also helps during winter supplementation of cubes or cake. Weights paired with body condition score (BCS) and knowledge of production stage take us from a snapshot to a full-scale view of cow nutrient needs. Improved reproductive status can also be targeted with the knowledge of cow weight and body condition. Questions like “How much weight do these cows need to gain by calving season?” and “How many pounds of cake does this group need?” are more easily answered when we know individual cow weights.

Forage resources are the foundation for any beef enterprise. Cow weights help producers determine how well their cow herd is matched to their forage resource. Recommended stocking rates are based on animal units (AU) from which body weight plays a key role. Most animal unit equivalents (AUE) are based on a 1,000 pound cow. Adjustments should be made to account for larger animals. Maintaining larger cows takes more pounds of daily forage and more acres of land. The assumption that cow herds average body weight is 1200 pounds is out of date. Currently, many beef breeds now tip the scales at 1300 to 1400 pounds. If additional weight is not accounted for, producers may realize that additional nutrients (hay and supplements) are required to maintain cow condition throughout the year.

Animal body weight often provides the basis for accurate diagnosis, prevention, and treatment. Animal health specialists and veterinarians will be the first to say that cow weight is essential in selecting both preventative and treatment protocols. Most antimicrobials and other drugs are labeled according to body weight. Underdosing medications such as anthelmintics (dewormers) and antibiotics leads to parasite resistance and bacteria. Insufficient doses of medications to address pain and inflammation can lengthen recovery times and negatively impact animal welfare. Overdosing may lead to toxicities and more importantly wastes money.

What can you do if you don’t have a scale on your operation? Producers can catch the weights of cull cows when they are sold, get weights on any cows that visit the vet, or take a trailer weight when moving cows to pasture. All these things will give you a better idea of cow weights in your herd. Every producer will look at this subject differently, but knowledge is power. With the constant pressure of increasing input prices, there has never been a more important time to improve efficiency in beef production.
Dehorning: Updated Recommendations
Rosslyn Biggs, DVM, Assistant Clinical Prof., Beef Cattle Ext. Spec., OSU Vet Med

In late 2019, the American Association of Bovine Practitioners (AABP) updated their guidance for dehorning practices. The major changes separate dehorning recommendations from those for castration and add pain mitigation strategies to improve animal welfare.

The 2017 USDA National Animal Health Monitoring Beef Cow-Calf Study, released earlier this year, reports that only 7.8% of US beef cattle are horned. This study shows a significant downward trend from previous reports. This trend is undoubtedly due to genetic selection, as the vast majority of beef cattle producers have embraced the opportunity to incorporate polled genetics. This trend will also likely continue in many dairy breeds as genomics and selection create options in that segment.

Producers with horned cattle may find that a dehorning plan improves efficiencies and animal welfare. A successful plan involves the use of a written protocol, skilled personnel, as well as adequate restraint and appropriate pain management.

The use of a written protocol, developed with a veterinarian, will establish the best age and dehorning technique, minimize stress and promote healing. A well-designed protocol addresses: calf age, personnel training, animal restraint, and pain management. The protocol should be reviewed yearly.

It is recommended that dehorning takes place as early as practically possible. There are two common forms of horn removal, disbudding, and mechanical removal of the horns. Disbudding involves the removal or destruction of the horn-producing corium in young calves. This can occur as early as 24 hours of life. Care must be taken to prevent calf injury. Disbudding is preferable over dehorning, but is not often practical for beef producers. Dehorning prior to three months of age is recommended, but again, producers should follow the plan established by their veterinarian.

The chances of a successful dehorning improve when the protocol is executed by trained personnel. The use of appropriate, well designed training for personnel also improves safety and animal welfare. In addition to insuring personnel understand safe techniques, training prepares personnel to address wound management to avoid infection, flies and pain for older calves and those with prominent horns.

Another way to improve dehorning practices, involves the consideration of both physical and chemical restraint. Recommended restraint techniques maintain both human and animal safety and minimize stress. Facilities should be in good working order and safely secure the head of the calf. Chemical restraint may be considered in conjunction with physical restraint. Sedatives should be used only on the order of a veterinarian. Although some sedatives may offer pain control, many do not, and pain management should be employed to improve animal welfare following the procedure.

Dehorning is inherently painful. The AABP now considers pain management strategies basic standard of care for all disbudding and dehorning procedures. Local anesthesia can provide immediate relief for up to five hours following the procedure. Longer term pain control can be achieved using non-steroidal anti-inflammatory drugs (NSAIDs).

It is important to recognize that there is no NSAID currently labeled for pain relief after dehorning. The NSAID chosen must be prescribed by a licensed veterinarian for this extra-label drug use. The Animal Medicinal Drug Use Clarification Act (AMDUCA) requires the use of an extra-label drug only with a valid Veterinary-Client-Patient-Relationship, documented drug selection process, records maintenance and observance of AMDUCA defined withholding times.

Dehorning processes, and ultimately the producers return on investment, can be improved by implementation of these techniques and regular communication with your veterinarian.

Preconditioning programs for calves on the ranch prior to marketing improves calf health and may also improve your bottom line. In Oklahoma, one such program is the Oklahoma Quality Beef Network (OQBN). In addition to providing education regarding calf management practices, OQBN is a certified calf health program that is third-party verified by OSU Extension educators and holds special value-added sales at various livestock markets across the state. Sale locations and dates for Fall 2021 OQBN sales are being finalized and should be posted at http://oqbn.okstate.edu soon. If you are interested in more information, visit the OQBN website and keep checking back for more information about sale dates, weaning dates and sale locations!
The scientific name for horn flies is *Haematobia irritans*. As the name implies, the flies are very irritating to cattle. Physiological changes occur in cattle with horn fly infestations such as increase in heart rates, increase in respiration rates, increase in rectal temperatures, and increase in water consumption. If the flies are not controlled, the cattle waste energy licking their backs, twitching their flanks, switching their tails, and stomping their feet. Spending all this energy on combating this pest and less time eating results in weight loss and lower milk production. The economic loss to producers can be very high. The horn fly is a costly parasite to the cattle industry with estimates of $1 billion in lost production. In addition to lost production cost, producers spend an additional $60 million in horn fly control.

The life cycle of the horn fly is simple. Horn flies, which are about ½ the size of a house fly, spend most of their time on cattle. Horn flies are distinguishable from other flies because they congregate with their heads pointed down. They are usually seen in groups on the backs and shoulders of cattle. They migrate to the belly when it is hot. The flies may take up to 40 blood meals a day. The female fly must have a blood meal to reproduce. The only time the female leaves the cow is to lay eggs in a fresh manure pile. The eggs will hatch, and the larvae will live on the material in the manure pile. In a few days the larvae move into the soil to pupate and emerge as adults. The life cycle from egg to adult takes 2 to 4 weeks. For a more detailed description of the horn fly life cycle go to http://livestockbugs.okstate.edu/horn-flies.

One of the most common methods of controlling horn flies is the use of insecticides. The insecticide comes in many forms such as an organophosphate, pyrethroid, pyrazole, and macrocyclic lactone which can be applied in a spray, pour-on, dust bag, back rubber, insecticide tags, breakable capsules from a modified paint gun, or oiler. Insecticide impregnated ear tags are a commonly used method to control horn flies. Since the tags will protect for a limited amount of time, producers should not place the tags in the animal until flies become a problem. Ear tags should not be left in the animal year-round. It is important to remove the tags by fall to reduce resistance problems. Since resistance is a problem with fly tags, producers need to rotate classes of insecticides every year. Recent research has shown that once pyrethroid resistance is established in horn fly populations then it remains in the subsequent populations for up to 3 years without any pyrethroid use. For more information about rotating fly tags go to http://livestockbugs.okstate.edu/horn-flies/insecticide-ear-tags.

Other methods of fly control are larvicides, non-insecticidal, and biological. Larvicides such as Insect Growth Regulators (IRG) are fed to cows in a feed or mineral supplement. The IGR passes through the animal and kills the immature horn fly. An example of a non-insecticidal control method is the use of an insect trap. They work when a cow walks through the trap and the fly attaches to a sticky strip. Another type of a trap that was specifically designed for dairies and horn flies is the CowVac which sucks the horn flies off the animals which is good for those dairies in a certified organic program (https://spalding-labs.com/products/fly_control_products/cow_vac/default.aspx ). Traps can destroy large numbers of horn flies quickly. Biological methods of control use some type of predator insect such as dung beetles which eat the immature stages of the fly such as eggs. Producers should never forget how important sanitation is in controlling horn flies. Simply breaking up fecal piles will help because this allows the manure to dry out. Dry manure is not a favorable environment for development of the immature horn fly. The best horn fly control programs will take an integrated pest management (IPM) approach using a variety of control methods for long-term success.

Horn flies are irritating to beef and dairy cattle and a costly nuisance for cattle producers. For this reason, a strategy to control horn flies needs to be developed for the cattle operation. Producers need to keep in mind that one control method will not be enough to keep horn flies away. Producers will need to use a variety of control methods to successfully manage horn flies for the long term. If a producer would like more information about horn fly control, they need to visit with their local veterinarian or Oklahoma State University Cooperative Extension Agriculture Educator.
Pastureland rental rates remain a hot topic around Oklahoma and for good reason. According to the 2017 Agricultural Census, around 40% of the farmland in Oklahoma is leased and that number has held fairly steady over the past 20 years. Results from the OSU farmland leasing survey conducted with the assistance of the USDA-NASS, Oklahoma Field Office in late 2020 were released earlier this spring in Current Report -216, Oklahoma Pasture Rental Rates 2020-21. Researching cash rents provides a needed background of what is going in the farm economy and how that translates into the ability to pay for rentals.

Results from the leasing survey are shown in Table 1 and illustrate differences in pastureland rates by region and type of forage. Averages are shown in bold with median values below. Median values provide an additional measure of the central tendency of the survey response distribution. Comparable 2018 average rates are shown in red italics.

Rentals have been mixed over the past two years. The state average rental rate for native pasture was $15.42 per acre per year and has been holding steady. The state average rental rate for Bermudagrass pasture was $20.22 per acre, down 13%. Rates were lowest in northwest Oklahoma and highest in eastern Oklahoma. Pasture rates of other improved/introduced forage types declined 17% statewide. Forage-based gains have added value especially as the productivity of the forage base grows when traveling north and east across the state. Over the past two growing seasons, tight operating margins in the cow-calf sector pressured pasture rentals in many areas around the state. Rental rates reflect tenant and land owner expectations concerning feed supplies, pasture conditions, water availability, and overall profit margins. These ticket items will all influence pasture rents as we go forward.

<table>
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<th>Type</th>
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<td>Other Pasture</td>
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<td>16.00</td>
<td>20.00</td>
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*KMedian values are shown in blue.

Summary

Whether you are renting land for yourself or renting pasture to others, knowing the market rates for your area is a good place to start the ball rolling concerning lease negotiations. However, the “going market rate” as quoted by OSU should only be used as a guide. There is considerable personalized information that needs to be factored into the lease rate. It is best that both parties agree to keep their negotiated rates current and flexible enough to move appropriately as economic and forage production conditions change. Tenants are encouraged to use budgets that can estimate how much can be paid for cash rents. These budget tools are available at: [https://extension.okstate.edu/programs/farm-management-and-finance/budgets/index.html](https://extension.okstate.edu/programs/farm-management-and-finance/budgets/index.html).

Finally, it is important to remember that written agreements are an asset to all parties since they help identify relevant issues and clarify specific terms of the lease. So get those provisions down in writing!

Additional pastureland rental rate information can be found at:

- Kansas City Federal Reserve Bank: [https://www.kansascityfed.org/](https://www.kansascityfed.org/)
When is the Best Time (Age) to Castrate Bull Calves?

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

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). Some cattlemen believe that delayed castration improves growth in nursing calves due to a “testosterone effect” in intact bull calves. However, bull calves do not have significantly high levels of testosterone until they reach about 8 to 9 months of age. In addition, 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 2003, Kansas State University research determined the effect of castration age and growth implants (Synovex C) on weaning and preconditioning weights. Calves were early castrated at 90 days of age with no implant, early castrated and implanted, or late castrated at weaning (226 days of age). Steers that were early castrated and implanted had weaning weights similar to those of bull calves, and both of these groups weighed 15 lb more than the early castrated non-implanted steers. However, 28 days after weaning the early castrated implanted steers weighed 20 lb more than the early castrated non-implanted or late castrated steers. These results indicate that early castration paired with growth promoting implants may yield more total pounds than either early or late castration alone when using a backgrounding program.

In a 2006 Oklahoma State University study, 2 to 3 month old bull calves were left intact or were castrated (surgically or banded) and all calves were implanted with Ralgro. At weaning (7 to 8 months), intact bulls were castrated (banded) and all calves were re-implanted with Ralgro. Weaning weights did not differ between intact bulls and castrated bulls. However, during a 50-day period following weaning bulls that were castrated at weaning gained 11.3% slower (0.12 lb/day less) than bulls that had been castrated at 2 to 3 months of age.

In 2011, University of Florida research investigated whether timing of castration in nursing calves affected calf performance and weaning weight. In this study, calves were either surgically castrated early (average age of 36 days) or late (average age of 131 days). Actual weaning weight (456 vs. 452 lb) and adjusted 205-day weaning weight (512 vs. 504 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 also showed that castration at or near birth did not have a detrimental effect on calf performance or weaning weight.

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.

Research from Nebraska (2005) has shown that as age of castration increases, weight loss resulting from the procedure increases. 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 (~$6.00 to $11.00/cwt discounts) since surgical castration of calves after arrival at a feedlot decreases daily gains and increases morbidity.

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.

Calf Facts from the 2017 Oklahoma Beef Management and Marketing Survey

- 58% of Oklahoma’s calf crop is born in the months of February, March and April.
- 26% of the calf crop is born from September - November
Drought May Change the Cattle Cycle
Derrell S. Peel, Breedlove Professor of Agribusiness and Extension Livestock Marketing Specialist

The U.S. is starting the 2021 growing season with historic levels of drought, much of it centered in areas of pasture/range and hay production. Pasture and range conditions begin the reporting period in May with record levels of poor and very poor conditions. The figure below shows percent of poor and very poor pasture and range conditions in early May including the national average and the regional indexes for the West (AZ, CA, ID, NM, NV, OR, UT, WA); the Great Plains (CO, KS, MT, NE, ND, SD, WY) and the Southern Plains (OK and TX) compared to national levels for 2020 and the 2015-2019 average.

The level of drought at this time of year is particularly concerning and has the potential to severely limit pasture and hay production for the year. This may lead to significant beef cow herd liquidation which appears to have already started. Spikes in weekly beef cow slaughter in late April and into May suggest additional beef cow liquidation and correspond to reports from severe drought regions, such as North Dakota, about additional sales of bred cows, cow-calf pairs, replacement heifers and early weaned calves.

Although Oklahoma has no serious drought impacts at the current time, cattle producers should monitor drought conditions because impacts in other regions may have implications, both short term and longer term, for the broader cattle market and Oklahoma cattle production. Drought could modify cow-calf producers’ short term production and marketing plans and might alter strategic plans for the coming years.

As a review, the U.S. beef cow herd increased from a cyclical low of 28.96 million head in 2014 to a 2019 peak of 31.69 million head. Beef cow inventories have drifted lower since 2019 to a 2021 January 1 total of 31.16 million head. The slow pace of herd liquidation the past two years sets up the idea of tighter cattle numbers and modestly higher cattle prices in late 2021 and beyond. It also leaves open the question of whether cattle inventories will continue to drift lower, stabilize or resume expansion in the coming years.

The 2021 drought could accelerate herd liquidation leading to short run increases in cow slaughter and lower cull cow prices. Drought will not change feeder supplies in the short run but may change the timing of feedlot placements and marketings going forward. Unplanned herd liquidation could lead to increased prospects of higher cattle prices after 2021 and may result in increased interest in herd rebuilding at a later time.

Oklahoma started 2021 with a beef cow herd of 2.189 million head, up 3.8 percent year over year and the largest cow herd since 1982. The inventory of beef replacement heifers in 2021 was up 10.8 percent year over year and suggests the potential for additional herd expansion in 2021. Oklahoma may be well positioned to take advantage of longer term drought impacts though it is important to monitor potential market dynamics in the short term. Producers will want to monitor drought conditions in the next few weeks and evaluate whether the impacts in other regions suggest any revision or modifications to strategic herd plans for the coming years.
Cattle markets have moved in interesting ways in the last 12 months, to say the least. Many cattle producers were exposed to market price volatility, and in response a new federal program was launched—the Coronavirus Food Assistance Program or CFAP. CFAP has been one of the largest single-year relief programs for cattle producers. Unlike other programs that trigger when isolated incidents occur, such as natural disasters, eligibility was nationwide. To date, over $23 Billion has been distributed to all producers across the US according to USDA Farm Service Agency data [1]. Many cattlemen in Oklahoma participated in the 3-part program.

The first round of per head payments, CFAP 1, were based on cattle sold and inventory. This round was made in 2 installments, and in total $10.6 Billion were distributed. Of that, $4.4 Billion went to cattle owners.

The second round of payments, CFAP 2, made late in 2020 were made in 1 installment, but the program was extended for additional applications in 2021. CFAP eligibility was extended to new types of producers and additional payments were made to cattle producers that received a payment under prior rounds of CFAP. CFAP 2 sign up is still open as of this article date, and anyone who has not signed up may still be able to do so. Contact your local USDA Farm Service Agency office for more information. Although the program is ongoing, as of mid-May, a total of $13.6 Billion were distributed. Of that, $2.8 Billion went to cattle owners.

Here in Oklahoma, $347 Million in CFAP 1 funds were distributed, and to date $318.7 Million in CFAP 2 funds have been distributed. Almost 81% of CFAP payments have been to cattle producers in the state.

Cow-calf and stocker producers who planted winter wheat may have received an additional payment on wheat ground. Winter wheat was not included in CFAP 1; however, CFAP 2 extended the eligible crops to include all wheat types. As of mid-May, $717 Million in CFAP funds went to wheat producers nationally. These changes reflected ongoing supply chain and market challenges for crop producers in 2020.

By my calculations, about 60% of cattle operations and about 80% of wheat producers in the state applied for and received a CFAP payment. Not all cattle producers had experience with these types of federal disaster programs prior to COVID-19, and not every eligible cattle producer chose to participate in the program. Some may have had other means of managing market risk in 2020, including participation in federally subsidized price risk insurance like Livestock Risk Protection.
Large ad hoc programs like CFAP in 2020 and the Market Facilitation Program (MFP) in 2018 and 2019 aren’t that common. Rather, most disaster programs are in regular Farm Bill funding. Discussions are already underway for the next Farm Bill in 2023. The Farm Bill includes funding for Livestock Risk Protection as well as most ongoing disaster programs cattle producers are familiar with—Livestock Forage Program and the Livestock Indemnity Program as examples. MFP made up 64% of farm program payments in 2019. Final payments for 2020 are still in projections, but ad hoc programs like CFAP, the paycheck protection program (PPP) and the Wildfires and Hurricanes Indemnity Program (WHIP++) made up 70% of farm program payments. Although numbers aren’t yet final, CFAP likely was the largest portion of 2020 ad hoc program payments, contributing about 50% of project payments in 2020. After the experiences of 2020 and CFAP, livestock programs may well come under greater discussion in the next Farm Bill. For more information on existing disaster programs, contact your local USDA representative.

[1] Data available through the CFAP 1 and CFAP 2 dashboards on www.farmers.gov/cfap

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