



# Master Cattleman Quarterly

June 2023 Vol 59

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If you don't think fear can control you, then you've never been chased by a mad mama cow.

## OKLAHOMA QUALITY BEEF NETWORK



EXTENSION



LOCATION	SALE DATE	45-DAY WEAN DATE	60-DAY WEAN DATE
OKC West Livestock (El Reno)	November 7, 2023	September 23, 2023	September 9, 2023
	November 28, 2023	October 14, 2023	September 29, 2023
	December 12, 2023	October 28, 2023	October 13, 2023
	January 23, 2024	December 9, 2023	November 24, 2023
McAlester Stockyards	November 14, 2023	September 30, 2023	September 15, 2023
	February 6, 2024	December 23, 2023	December 8, 2023
	April 9, 2024	February 24, 2024	February 9, 2024
Payne County Stockyards	November 15, 2023	October 1, 2023	September 16, 2023
Southern Plains Livestock (Blackwell)	November 20, 2023	October 6, 2023	September 21, 2023
LeFlore County Livestock (Wister)	December 9, 2023	October 25, 2023	October 10, 2023

FOR MORE INFORMATION OR TO SIGN UP | Paul Vining • 405-744-4268

## Late Summer Supplementation of Grazing Stocker Calves

Paul Beck, State Extension Beef Nutrition Specialist

Forage quality of native range in Oklahoma and the Southern Great Plains declines during the mid to late summer. Research conducted at OSU shows the dramatic decline in the protein and digestibility of native range as the summer progresses in Central Oklahoma.

Performance of stocker calves on native range declines from highs of around 2 pounds per day or more during the spring and early summer to less than one pound per day through the late summer. Deficiency in dietary protein causes dramatic reductions in forage intake and digestibility. A small amount of high protein feed will correct the protein deficiency increasing both forage intake and forage digestibility when adequate forage is available.

This is the foundation of the Oklahoma Gold and Oklahoma SuperGold supplementation programs. Experiments at Oklahoma State University discovered that feeding 1 pound per day of a high protein supplement (proteins meals

such as cottonseed meal or soybean meal) increased average daily gains from 1.13 pounds per day to 1.51 pounds per day. This 0.37 pound per day increase in average daily gain (ADG) required only 2.7 pounds of feed per pound of added gain. Oklahoma Gold Program supplements are at least 38% crude protein and contain 1% phosphorus to offset mineral deficiencies in our summer grass and an ionophore such as monensin or lasalocid to further increase gains. This supplement package increased ADG by 0.55 pounds per day with a supplemental efficiency of 1.8 pounds of supplement for each pound of added gain.

This supplementation program can be fed daily (1 pound of supplement per calf), but it has been found that feeding 3 days per week (2.3 pounds of supplement per calf

each feeding) is equally effective and may allow calves better access to supplement due to crowding and the low amount of supplement being fed.

The Oklahoma SuperGold Program is similar in concept but was designed to be a better match with grain milling byproduct based supplements. In this program 2.5 pounds of 25% protein supplement including an ionophore is fed per day (or 5.8 pounds fed per feeding 3-days per week), to increase gains by about 0.7 pounds per day requiring 3.5 pounds of feed per pound of added gain.

Recently an extruded distiller's grains cube has come available in the region. Research conducted at the USDA

Southern Plains Range Research Station near Fort Supply on native grass prairie investigated using these cubes in a supplementation program for growing steers. Feeding 2 pounds per day (4.7 pound per feeding, 3 days per week) of this extruded DDGS cube during the late summer in-

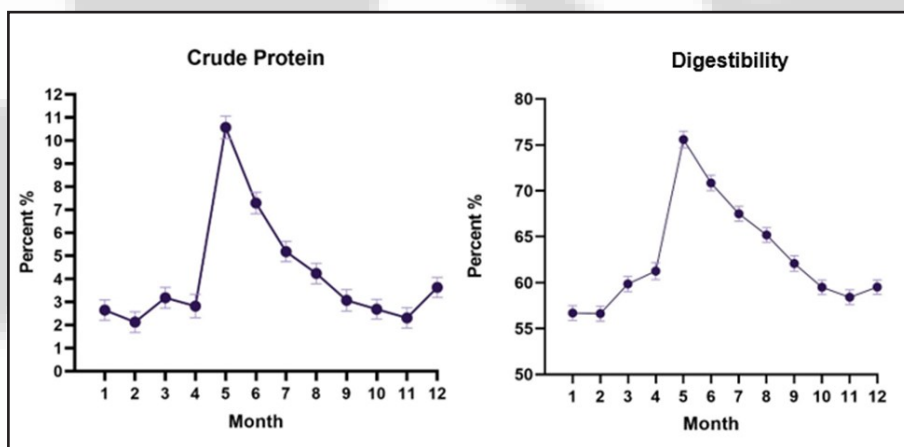


Figure 1. Typical Udder Scoring System (Source: Red Angus Association)

creased ADG by 0.86 pounds per day, requiring only 2.3 pounds of feed per pound of added gain. Free-choice mineral supplements containing ionophores were offered to all calves.

Supplementation of grazing calves during the late summer can be highly profitable even in years with high input costs. There are alternatives available that do not require daily feeding. If supplements containing the mineral and ionophores are not available, feeding the mineral and supplements separately can be equally effective.

## Sustainable Internal Parasite Control In Cattle

Rosslyn Biggs, DVM, John Gilliam, DVM

Parasites represent a major challenge to livestock production throughout the world. Internal parasites cause a variety of clinical signs, including weight loss, diarrhea, and death. Other, less obvious parasitic signs, (often referred to as subclinical signs), significantly impact producers. The subclinical signs may include things like decreased weaning weights and lower rates of reproduction.

Although the use of anthelmintic products, commonly called dewormers, has limited the incidence of clinical disease in cattle, the subclinical impact and subsequent economic loss continue to impact the industry. The widespread use of anthelmintics has also raised concerns about the development of parasite resistance leading to loss of product effectiveness.

To address parasite resistance and maintain product efficacy, sustainable parasite control programs must be developed. Effective programs are built upon knowledge of parasite life cycles, sound grazing strategies, and proper product use. It's important to note that sustainable parasite control aims to suppress parasite population below the threshold for economic loss, not completely eliminate parasite populations.

Researchers at Oklahoma State University are currently investigating Oklahoma cattle herds for parasite resistance. A recent study by Drs. John Gilliam, Jared Taylor, and Ruth Scimeca of the OSU College of Veterinary Medicine evaluating Oklahoma beef cattle herds provided evidence that internal parasite resistance is indeed present in the state.

Beginning in 2020, beef cow-calf producers submitted fecal samples for fecal egg count reduction tests (FECRT). Seventeen herds participated and all major classes of dewormers were represented. Anthelmintic administration practices were not controlled, and producers were encouraged to follow their standard procedures. Fecal egg counts (FEC) were determined using the Wisconsin method with a limit of detection of one egg per gram (EPG). Three herds were excluded from the final analysis as the FEC in those groups were too low.

Of the sixteen groups of cattle included in the final analysis, 13 exhibited resistance based on the average of

individual FECRT. Based on the results of this small survey, anthelmintic resistance appears to be widespread in beef cow-calf herds in Oklahoma.

Currently the OSU beef cattle extension and veterinary teams are continuing work in this area. Drs. John Gilliam, Dave Lalman, Paul Beck, and Rosslyn Biggs are conducting a larger survey of Oklahoma herds to determine parasite resistance to different dewormers. Recruitment of beef cattle producers is ongoing and interested herds can contact their extension county agricultural educator, area extension livestock specialist, or Dr. Rosslyn Biggs, [rosslyn.biggs@okstate.edu](mailto:rosslyn.biggs@okstate.edu) for more information on the sign-up.

The current study plans to collect data from at least 50 different groups of cattle dispersed around the state. Samples can be collected from now through first killing frost (generally early November) and then again through spring and summer 2024. Fecal samples will be collected from twenty to thirty animals within the same stage of production. For example, classes of cattle may be mature cows, weaned calves, or replacement heifers. Good handling facilities must be available for safe restraint of all animals and personnel collecting the samples.

The first collection occurs at initial processing/deworming or within seven days prior to that initial processing/deworming. The second collection occurs ten to seventeen days post-deworming. Samples will be shipped to the laboratory for evaluation and results provided at no cost to participants. Multiple classes of cattle from the same operation can be included in the research study if different anthelmintic products are used. Animals must not have been treated with an anthelmintic product within 60 days of initial sampling.

Anthelmintic resistance is a growing concern in many species and OSU researchers hope to evaluate levels of resistance in Oklahoma beef cattle herds through ongoing studies. Producers and veterinarians are encouraged to participate and reach out with questions. This research is important for the cattle industry in developing parasite management strategies that preserve the effectiveness of dewormers while maintaining cattle production levels for the future.



## Reminder: Over-The-Counter Antibiotics Moving to Prescription Antibiotics

Barry Whitworth, DVM, Area Food/Animal Quality and Health, Specialist for Eastern Oklahoma

The development of antimicrobial drug resistance in human medicine is a serious public health concern. For this reason, the United States Food and Drug Administration (FDA) promotes the judicious use of antimicrobial drugs in human medicine (CDC, 2021). As well as promoting the judicious use of antibiotics in human medicine, the FDA also promotes the judicious use of antibiotics in animals. The *Guidance for the Industry # 209 (GFI #209)* outlines the FDA's thoughts on how to use antimicrobial drugs in food/animals in a judicious way. Two concepts of *GFI #209* are that antimicrobial drugs should only be used for animal health and that these drugs should be used under veterinary supervision.

Following *GFI # 209*, the FDA finalized *GFI # 213*. This guidance led to the Veterinary Feed Directive. This document stated that antimicrobial drugs used in feed or water for animals should only be used for prevention, control, and treatment of disease. This resulted in several antimicrobial drugs switching from over-the-counter (OTC) drugs (note: as the name implies, OTC drugs can be purchased without a prescription) to veterinary feed directive drugs (VFD) or prescription drugs (Rx). In keeping with the FDA's thoughts, this required veterinary oversight.

With the implementation of the Veterinary Feed Directive in January 2017, the majority of food/animal antimicrobial drugs are now being used for prevention, control, and treatment of disease under the supervision of a veterinarian. To address the few remaining OTC food/animal antimicrobial drugs, the FDA finalized the *GFI # 263* in June of 2021. This document provided the framework for the pharmaceutical industry to voluntarily change the remaining medically important food/animal OTC antimicrobial drugs to Rx drugs. This continues the FDA's policy of using medically important antimicrobial drugs for animal health and under the supervision of a veterinarian. This change will take effect in June of 2023.

Livestock producers need to be aware that injectable OTC antibiotics, oral forms of OTC antibiotics, and intramammary OTC antibiotics will no longer be available without a prescription from a veterinarian. Many of these products such as tetracycline, penicillin, and sulfur drugs are commonly used on farms and ranches. To obtain these products after June 2023, livestock producers will need a veterinary prescription. This will require a rela-

tionship with a veterinarian. A veterinarian-client-patient relationship (VCPR) is defined by the Oklahoma Board of Veterinary Medical Examiners as:

- The veterinarian assumes responsibility for making medical judgments regarding the health of the animal based on a current thorough medical knowledge of the animal(s).
- Such knowledge is gained by recently seeing or being personally acquainted with the keeping and care of the animal to the extent necessary to properly make appropriate medical decisions.
- The veterinarian must keep readily accessible, written medical records of his/her knowledge and treatment of the animal with sufficient detail to clearly explain the initial exam and enable another veterinarian to take over treatment of the animal based on such records.
- The veterinarian must provide for some form of after care in case an emergency occurs after said care is provided; and the veterinarian's actions would conform to applicable federal law and regulations.

Now is the time for producers to begin to prepare for the changes in status of the OTC drugs. In preparing for the changes, a producer should have a good working relationship with their veterinarian. Producers should take an inventory of the antimicrobials that they are currently using. Producers should take that list to their veterinarian and learn what information will be needed to get a Rx for that product or products. Producers need to prepare early to avoid any interruptions in getting those products.

For livestock producers that have a relationship with a veterinarian, very little will change in June. However, for livestock producer who do not use a veterinarian, obtaining antibiotics for their animals after June 2023 will require the establishment of a VCPR. For more information about the change in status of OTC food/animal antibiotics, livestock producers should consult with their veterinarian and/or their Oklahoma State University Cooperative County Agriculture Extension Educator.

### References

CDC. Core Elements of Antibiotic Stewardship. <https://www.cdc.gov/antibiotic-use/core-elements/index.html>

## Reminder: Over-The-Counter Antibiotics Moving to Prescription Antibiotics (cont.)

Guidance for Industry # 209. <https://www.fda.gov/media/79140/download>

Guidance for Industry #263. <https://www.fda.gov/animal-veterinary/cvm-updates/fda-finalizes-guidance-bring-remaining-approved-over-counter-medically-important-antimicrobial-drugs>

Guidance for Industry # 213. <https://www.fda.gov/>

regulatory-information/search-fda-guidance-documents/cvm-gfi-213-new-animal-drug-combinatio-products-administered-or-medicated-feed

VCPR. Oklahoma Board of Veterinary Medical Examiners. FAQs. <https://okvetboard.com/client-information/62-vcpr>.

## What Causes Poor Teat and Udder Quality in Beef Cows?

Brian Freking, SE District, Area Extension Livestock Specialist

A variety of environmental and genetic factors affect udder quality in cows under six years of age. There are substantial differences between breeds for udder conformation. Likewise, there is much variation within breeds. The quality of udders in beef cows is under a moderate amount of genetic control. Estimates indicate that 20 to 30% of variation in udder quality is due to genetic heritability, while the balance is environmental.

Some producers may have experienced more udder problems in cows that calve in summer (May-June-July) versus winter or spring calving. The increased incidence of teat and udder problems in summer calving cows is likely due to a high plane of nutrition after calving. This higher level of nutrition enables the cows to divert more energy to lactation, which increases milk volume and places additional stress on udder conformation. The high plane of nutrition can be compounded by having cows in high body condition scores at calving. This effect has been noted in summer calving season but could also be associated with supplementation strategies that dramatically increase energy intake in cattle after calving or with cows that are in high body condition at calving.

We often refer to “bad bags” or “udder score”, but actually the most important component is 1) teat size and shape, followed by 2) udder suspen-











sion. A 1 to 5 udder score (5 = best, 3 = average, 1 = cull) is simple and can be quickly taught. Several breeds have different systems for reporting seedstock data and many use a 1 to 9 scoring system. Figure 1 from the Red Angus Association illustrates some of these principles. The American Angus Association’s *Angus University* also has a useful video tutorial titled *How To: Udder Scoring Cows*. The video can be viewed at this link: <https://www.youtube.com/watch?v=Ixy2mygTePM>.

The major emphasis should be on teat size and shape. Not nearly enough seedstock breeders score their cows at calving for “udder score” and use that information to subsequently castrate bulls from bad udder cows. Commercial producers should at least note cows with bad udders and avoid saving replacement heifers from such cows. If replacement heifers are raised, a “bad mark” system of identification (flag on paper record or notch on tag/ear) should allow you to avoid daughters of cows with bad udders. If replacements are purchased, investing some time in locating supplier herds that have a program to enhance udder function might pay dividends over the long haul.

Deliberate, annual evaluation of udder quality is an essential component of cow-calf production. The Beef Improvement Federation recommends

## What Causes Poor Teat and Udder Quality in Beef Cows?

Brian Freking, SE District, Area Extension Livestock Specialist

Udder Suspension			Teat Size		
Score	Description	Example	Score	Description	Example
9	Very Tight		9	Very small	
7	Tight		7	Small	
5	Intermediate/moderate		5	Intermediate/moderate	
3	Pendulous		3	Large	
1	Very pendulous, broken floor		1	Very large, balloon-shaped	

scoring udder suspension and teat size annually on cows within 24 hours of the cow giving birth. These subjective numerical scores (see table below) can easily be assigned in the pasture. Scores should be assigned according to the worst quarter of the cow’s udder. To ensure consistency and facilitate comparison of records, preferably one person should evaluate all cows each year and across years. Written notes about abnormal shapes or characteristics other than udder suspension and teat size may be useful.

For more resources on udder scoring, contact your local OSU Cooperative Extension Office.

### References

Red Angus Association. *Udder Scoring*. Available at <https://redangus.org/genetics/udder-scoring/>

American Angus Association. *How To: Udder Scoring Cows*. Angus TV. Available at : <https://www.youtube.com/watch?v=Ixy2mygTePM>.

## Pastureland Values in Oklahoma

Roger Sahs, *Extension Specialist, Agricultural Economics*

The latest trends and patterns in Oklahoma's agricultural real estate market have been updated through 2022 and can be found at: <https://extension.okstate.edu/programs/farm-management-and-finance/oklahoma-land-values/> The Farm Credit Associations of Oklahoma provided sample data representative of the 2022 land transfer market of which just over 1,500 sales tracts were examined. Statewide statistics, regional comparisons, and county summaries are shown in chart and tabular form. This information offers a perspective into the characteristics of recent sales as well as benchmark indicators when studying trends over time. We hope you will find it useful as a go-to source of information related to the farmland markets in Oklahoma.

The recent performance by the livestock economy (namely cattle) and future earnings expectations carry a great deal of weight on the pastureland market in Oklahoma. Pastureland values have shown consistent growth since the 2009 recession and 2022 carried the day once again. Values grew 9% last year on top of a rather impressive 21% in 2021 when the land markets were extremely active. The land markets faced headwinds over the past year from higher interest rates, elevated production expenses (specifically hay), and drought concerns. Fortunately, higher cattle prices offset some of these negative effects and kept profit opportunities within reach at least for some producers not seriously impacted by drought conditions. Pastureland values have also benefited from strong recreational demand from both active producers and outside

investor interests.

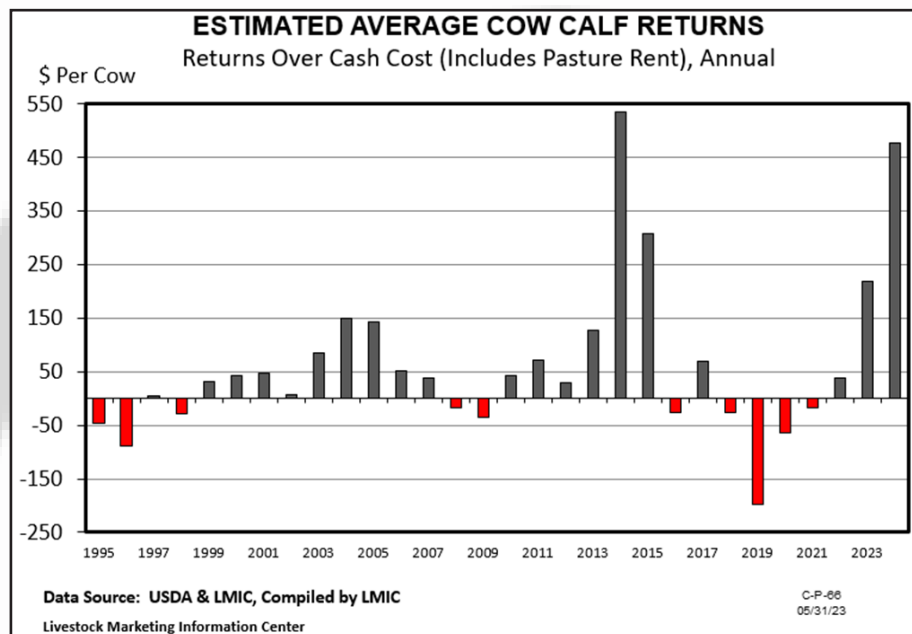
As already mentioned, future earnings factor into many pastureland purchase decisions. Returns in the cow-calf sector in the beef cattle economy are expected to improve substantially, according to the Livestock Marketing Information Center (See Figure 1). However, any lingering drought conditions in Oklahoma will pressure returns given adverse impacts on forage conditions and hay supplies. For example, there are a number of producers who liquidated a substantial portion of

their cow herd that implies lower earnings in the near-term. A recovery from drought takes time and may temper the pace of growth in the pastureland markets for the remainder of 2023.

There are additional sources of land value information available that provide further perspectives into the markets. Reports by USDA

- NASS (<https://www.nass.usda.gov>) and the Federal Reserve Bank of Kansas City (<http://www.kc.frb.org>) are survey-based impressions of the market. They complement our study by presenting insightful comparisons and contrasts when exploring the dynamics of the land markets.

In conclusion, a good understanding of the land markets can help active and potential participants make sound decisions grounded on reality and not just emotion. Should you have questions, contact Roger Sahs at [roger.sahs@okstate.edu](mailto:roger.sahs@okstate.edu) for additional information.





## Join us at the Women in Ag Conference

*Courtney Bir, State Extension Specialist*

The 2023 Women in Ag Conference will be hosted August 3<sup>rd</sup> at the Hilton Garden Inn & Conference Center in Edmond Oklahoma. Registration will begin at 8:00am and the conference adjourns at 4:45pm. This one-day action packed conference will have five general sessions and 20 concurrent workshops. There will be something of interest to producers of all types and experience levels. Of particular interest to cow-calf producers may be our sessions covering farm transition planning, animal health, business planning and loans, reducing beef production costs, and marketing using photography.

Our keynote speaker this year is Katie Dilse. Katie is a North Dakota farmer who was named as one of the Top 40 under 40 business leaders in the Midwest. The Business Watch magazine recognized Katie for professional development, community contributions, and her influen-

tial voice. Her motto is to awaken the genuine in people and in business.

As always this is a great opportunity to network and meet other producers from across the state! Early registration is \$65. More information including registration can be found at: <https://extension.okstate.edu/events/women-in-ag/>. If you are traveling from afar, special rates are available through the Women in Ag conference at the Hilton Garden Inn. If you are interested in having a booth at the trade show, please visit our sponsorship page on the website.

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OSU EXTENSION  
**MASTER CATTLEMAN**

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