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Cow-Calf Producers Facing Poor Forage Conditions May Want to Consider Early Weaning

Brian Freking, SE District, Area Livestock Specialist

Late summer conditions are once again leading many cattle producers to manage for diminished pasture resources and a possible lack of harvested forage resources.

Producers who still own spring-calving cows that are nursing calves should consider the option of early weaning. The purpose of early weaning is to give the cows the best opportunity to maintain body condition going into winter.

South Dakota State University scientists examined this scenario using mature cows and comparing the effect of weaning date on performance of the beef cows. They weaned half of the cows at the time of the first cool spell in their case Sept. 14, and weaned the other half at the more traditional time of Oct. 23. The scientists then monitored body condition and rebreeding performance of the cows.

Be aware that this study included two different nutritional levels: a low group to mimic an early winter or a dry summer and a moderate group to mimic more ideal summer and early winter seasons.

The data for the low group reflects the expected performance of cows in drought conditions similar to what Oklahoma producers have experienced, and indicates that 40 days earlier weaning allow cows to maintain a better body condition score going into winter. More of the early-weaned cows should be cycling at the start of the breeding season, conceive early in the breeding season and should wean heavier, older calves the following year.

In addition, a small amount of high protein supplement such as cottonseed meal or soybean meal will enhance the cow's ability to utilize the declining quality of the late summer forage or low-quality grass hay, thereby allowing more body condition to remain on young cows before frost arrives.

This combination of management techniques should be a cost effective way to slow the decline in rebreeding rates of forage limited, spring-calving cows. Of course, taking care of the early-weaned calves becomes another challenge that must be met, if the calves are not sold immediately. If properly vaccinated, the early-weaned calves will be ready for any of the special value-added calf sales that require 45-day weaned-calves. Fence-line weaning would be a recommended practice for these light calves. If a producer chooses to wean in hot weather, ample supplies of fresh water must be provided on both sides of the fence.

Feeding programs for light, early-weaned calves need to be carefully planned and implemented. Suggested rations for these calves can be found in the OSU Extension Fact Sheet ANSI 3031, "Nutrition and Management Considerations for Pre-conditioning Home Raised Beef Calves," available online at <http://osufacts.okstate.edu> via the OSU Division of Agricultural Sciences and Natural Resources.



Breeding Bull Management

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

For most cow/calf operations, bulls are a substantial investment. In fact, some experts believe in actual dollars, bulls represent the largest investment in cow/calf operations. They also have a dramatic impact on the future genetics in the herd. For these reasons, producers should manage bulls for optimal production.

A breeding bull should be considered an elite athlete. To perform at his best, the bull must be in top physical condition. A bull needs to be on a good nutrition program that meets his energy, protein, vitamin, and mineral needs. At the beginning of the breeding season, a bull should be in a body condition score of 6 to 7 on a scale of 9. Producers should avoid overfeeding a bull since an overweight bull is more prone to lameness issues as well as accumulating fat in the neck of the scrotum which has a negative association with spermatogenesis. A bull generally loses weight during the breeding season, so a light-weight bull may have trouble completing the breeding season. Also, excessive weight loss is associated with decrease sperm production and sperm abnormalities.

A good nutrition program will promote good health; however, bulls still should be vaccinated for diseases. At the very least, bulls should be given the same vaccinations as the cow herd. Emphasis should be placed on reproductive diseases such as Bovine Diarrhea Virus, Infectious Bovine Rhinotracheitis Virus, Leptospirosis, and Campylobacteriosis. Producers might want to give a Clostridial vaccine (blackleg) since fighting injuries may be a problem in bulls. Although there is debate about the effectiveness of Anaplasmosis vaccine, a producer might want to consider bulls as candidates for the vaccine since bulls may not consume enough medicated mineral to protect them from the disease.

Parasite management is a must for bulls. Some studies indicate that bulls have more issues with parasites and will require more treatments to control internal and external parasites than cows. Bulls may need to be dewormed more like young cattle than the cow herd. Horn flies tend to be more problematic with bulls which will require additional treatments.

When practical, bulls should be housed in individual pens when not being used for breeding. When this is not an option, bulls should be placed in pens with plenty of room. Bulls of the same age may be housed together, but

operations should avoid placing young bulls with old bulls. Also, following the breeding season, bulls in poor body condition should be placed together to optimize nutrition and weight gain.

According to Dr. Mark Johnson, PhD, Professor and Extension Specialist with Oklahoma State University, two- to six-year-old bulls should be in their prime. This group should be able to breed 25 to 35 cows in a timely fashion. Younger bulls will need to be placed with fewer cows. Producers can base the number of cows that a young bull can breed by using his age in months. A 12-month-old bull should be able to handle 12 cows and 13-month-old should be fine with 13 cows and so on.

Bull Breeding Soundness Evaluation (BBSE) should be conducted on all bulls that will be used during the breeding season. A BBSE is a procedure performed by a veterinarian that ensures a bull has met a minimal set of standards that reflect his reproductive potential. The exam is not a guarantee that the bull will breed cows because some bulls are not aggressive breeders. The veterinarian will do a physical exam, reproductive exam, and sperm evaluation. Once the exam is completed, the bull will be classified as a “satisfactory potential breeder”, “unsatisfactory potential breeder”, or “deferred”. Deferred bulls should be rechecked at a later date.

Cattle operations should maintain biosecurity protocols when adding bulls to the herd. Bulls should be purchased from reputable breeders. All purchased bulls should be isolated for 30 days prior to having any contact with the cow herd. During the isolation period, bulls should be vaccinated for the above-mentioned diseases. Bulls need to be dewormed with at least two or three different classes of dewormers and treated for external parasites. A producer should consult with their veterinarian about testing for certain diseases such as Trichomoniasis, Bovine Diarrhea Virus, Bovine Leukemia Virus, Johne’s Disease, etc. Lastly, bulls should be observed for any signs of disease and/or physical issues. Any issues noted should be addressed by treatment or by returning the bull to the breeder.

Bulls play an important role in cow/calf operations and their genetics will influence the cow herd for years to come. Producers should manage this important resource properly. For more information about bull management,

Breeding Bull Management (cont.)

producers may want to view SUNUP Cow-Calf Corner episode March 18, 2023 (SUNUP.okstate.edu) or visit with their local veterinarian and/or their Oklahoma State University Cooperative County Agriculture Extension Educator.

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Late Summer Forage Quality a Factor in Protein Supplementation

Laney Reasner, OSU Ag Media interview with Dave Lalman, Beef Cattle Specialist

STILLWATER, Okla. – As summer comes to an end, cow-calf producers should get ahead of declining forage quality.

Extreme heat and dry conditions accelerate the decline in forage quality during late summer and early fall. In many situations, protein supplementation during this period can improve forage intake and digestibility. This is vital for fall-calving herds that will be at peak lactation during calving and the weeks ahead of the breeding season.

David Lalman, Oklahoma State University Extension beef cattle specialist, said the average lactating beef cow requires 11% crude protein to maintain adequate body condition. However, native grass species like big bluestem, switchgrass and Indian grass only offer roughly 6% crude protein in late summer. If pastures have already had some grazing pressure, less leaf material will be available and therefore, consumed forage could be in the 3 to 5% protein range.

A fall-calving cow grazing native rangeland this time of year will be at peak lactation within just a few weeks after calving. The added nutrient requirements for milk production means she will require around 3.3 pounds of protein per day but may only receive half of that from the forage base due to low forage quality. Without supplementation, a protein deficiency will result in more rapid weight loss.

In a spring-calving operation, weaning calves and providing a small package of protein supplement during this period can result in cows gaining weight and body

condition before cold weather arrives.

“There’s a lot of moving targets when it comes to making efficient supplementation decisions this time of year,” Lalman said. “Your Extension Educator can assist you in making these decisions and accessing tools that will help. For example, the OSU Cowculator nutrition evaluation program is designed to assist producers in nutritional management of the beef cow herd. This Excel-based decision tool is user-friendly and available free of charge at beef.okstate.edu.”

The amount of required supplementation varies depending on forage quality and the cow’s stage of production. Changing the timing of calving season, weaning spring-born calves early, grazing high quality forage types during this period, and adjusting supplementation to match animal needs will improve breed back and overall herd health.

Lalman discusses late summer forage and protein requirements in a segment of SUNUP, OSU Agriculture’s production agriculture television show. The August 23, 2023 segment can be viewed on SUNUP TV on YouTube. Watch SUNUP Saturdays at 7:30 a.m. and Sundays at 6 a.m. on OETA.

OSU Extension uses research-based information to help all Oklahomans solve local issues and concerns, promote leadership and manage resources wisely throughout the state’s 77 counties. Most information is available at little to no cost.

MEDIA CONTACT: Gail Ellis | Office of Communications & Marketing, OSU Agriculture | 405-744-9152.

Multiple Stressors Contribute to Weaning Duress

Paul Vining, Program Coordinator, Oklahoma Quality Beef Network

Oklahoma Quality Beef Network (OQBN) Vac-45 sales will continue, beginning in November. Like many certified calf preconditioning programs, the OQBN Vac-45 program requires that calves be weaned a minimum of 45 days before sale. This 45-day period provides calves an opportunity to overcome the stress associated with weaning, bolsters immune function, and provides proper nutrition, allowing for maintained health and performance upon entering the next phase of the beef supply chain. Weaning stressors include removal from the dam, nutritional changes, a new environment, and altered social structure. These stressors are often referred to collectively as “weaning stress”, however, each is unique and provides its own challenge to calf welfare. The intention of this article is not to evaluate weaning methods, but simply tease apart these individual challenges to view the weaning period through the eyes of a calf. Understanding this critical time will allow a better understanding of the importance of a 45-day weaning period.

A university study evaluated natural weaning in cattle and concluded there was much variation in the age at which calves were naturally weaned by the dam, ranging from 7 to 14 months. In cow-calf production systems, it is necessary to wean calves, usually between 6 and 8 months of age to increase cow reproductive performance and herd economic efficiency. A “mother-young” bond is formed between the dam and calf immediately following birth. A cow preparing to give birth will often isolate herself from the herd and this seclusion is thought to provide an enhanced bonding opportunity between dam and offspring. This mother-young bond is reinforced via hormone cascades initiated by physical actions such as licking by the dam and nursing by the calf. A university study concluded that though it may be difficult for human ears to discern, each cow and calf have their own unique voice and recognize each other based on the frequency and duration of their individual vocalizations. It goes without saying that this bond becomes very strong and is vital to the survival of the offspring.

Some weaning strategies such as fence-line weaning or the use of nose flaps to prevent nursing seek to mitigate stress caused by removal from the dam. While these methods provide the benefit of maintained contact with the dam, a university study indicated that calves fitted with nose flaps to prevent suckling still exhibit stress-

related behavior such as increased vocalization, decreased time playing, and decreased rumination indicating that access to the udder is a critical component of calf contentment. Many cow-calf production systems involve abrupt weaning, in which the calf is transitioned to a new environment away from the dam. While it is a necessary part of life, breaking the maternal bond by removing access to the udder and/or dam is a major stressor for a calf.

Calves experience nutritional changes as they transition away from access to the udder. Milk is a protein and energy-dense food source and can account for up to 30% of a six to seven-month-old calf’s caloric intake. Prior to weaning a calf’s primary source of social interaction is the dam. Following weaning calves must learn to interact with their peers, which leads to brief social stress as each calf seeks to find its place within the group. Calves are usually transitioned to an unfamiliar pasture or dry lot during the weaning process. Unfamiliar environments result in environmental stress, as calves seek to orientate to new surroundings.

A weaning period of 45 days or more ensures calves can cope with weaning stressors and remain healthy. An article written by Dr. Glenn Selk for an August 2018 edition of the Oklahoma State Cow-Calf Corner Newsletter, supported a 45-day weaning period referencing data from an Iowa State University study that evaluated the effect of days weaned on feedlot calf health, evaluating over 2000 calves during a 9-year period. Researchers found that calves that had been weaned for a minimum of 30 days had a 15% lesser incidence of bovine respiratory disease compared to calves that had been weaned for less than 30 days.

It is important to remember that weaning stress cannot be attributed to a single stressor, but involves multiple stressors including severing the maternal bond, loss of access to the udder, altered diet and available nutrients, social challenges, and environmental changes. A weaning period of at least 45 days, lays the foundation to maintain and improve calf health. Evaluating the weaning period through the eyes of a calf provides understanding regarding this unique period of life.

Multiple Stressors Contribute to Weaning Duress (cont.)

OSU Video Resources:

Follow this link to an OSU SUNUP TV clip to listen to Dr. Glenn Selk discuss the importance of a 45-day weaning period:

[Cow-Calf Corner - 45-day weaning basics \(9/1/18\) - YouTube](#)

Follow this link to an OSU SUNUP TV clip to listen to Dr. Mark Johnson discuss weaning strategies: [Cow-Calf Corner - Fence Line Weaning \(8/21/21\) - YouTube](#)

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Cows Are Good Swimmers!!



Three cows made headlines when they were discovered on Cape Lookout National Seashore on the Outer Banks of North Carolina. Several cows had been swept out to sea by Hurricane Dorian months earlier, and it's believed they swam about 4 or 5 miles to find safety at Cape Lookout. The cows had been living on Cedar Island when the hurricane generated a "mini tsunami," sweeping much of the wildlife off the island, [reports The Herald-Sun](#) of Durham, North Carolina. (Sept. 2019)

Planning for High Cattle Prices

Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

What To Expect

Cattle prices are sharply higher in 2023 and expected to go higher still for the foreseeable future. The latest cattle price forecasts from the Livestock Marketing Information Center (LMIC) indicate that cattle prices are likely to be, on average, higher through 2024 and 2025 (Figure 1). High cattle prices will provoke herd rebuilding (which has not started yet) and multiple years of heifer retention as beef cow inventories recover from the liquidation of recent years. Cattle prices will remain elevated and will peak somewhere in this process. High cattle prices will present opportunities (selling cattle) and challenges (buying cattle) for the next 2-4 years.

Fully stocked producers

The beef cattle industry is smaller than it needs to be, and the market focus is on rebuilding the herd. That translates into high calf prices to incentivize cow-calf producers to expand production. The market signal is

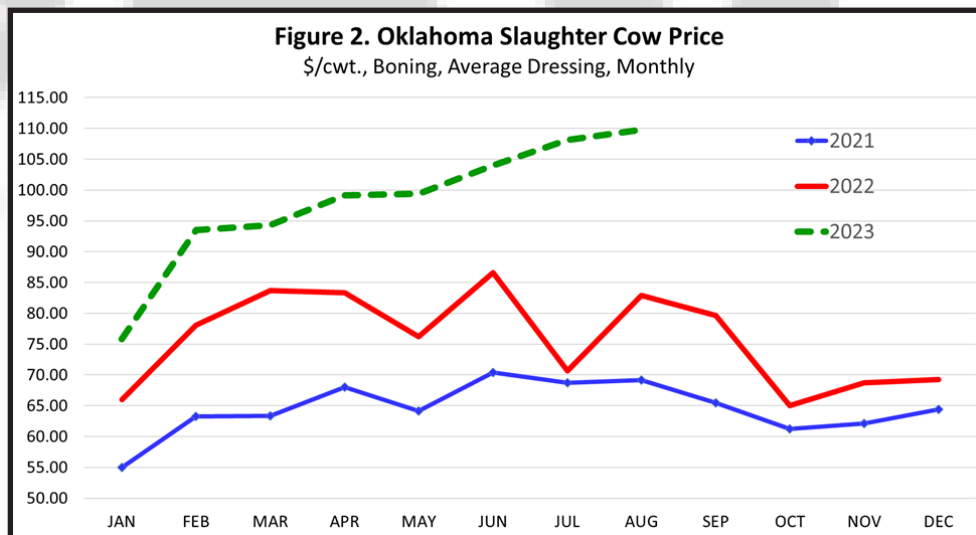
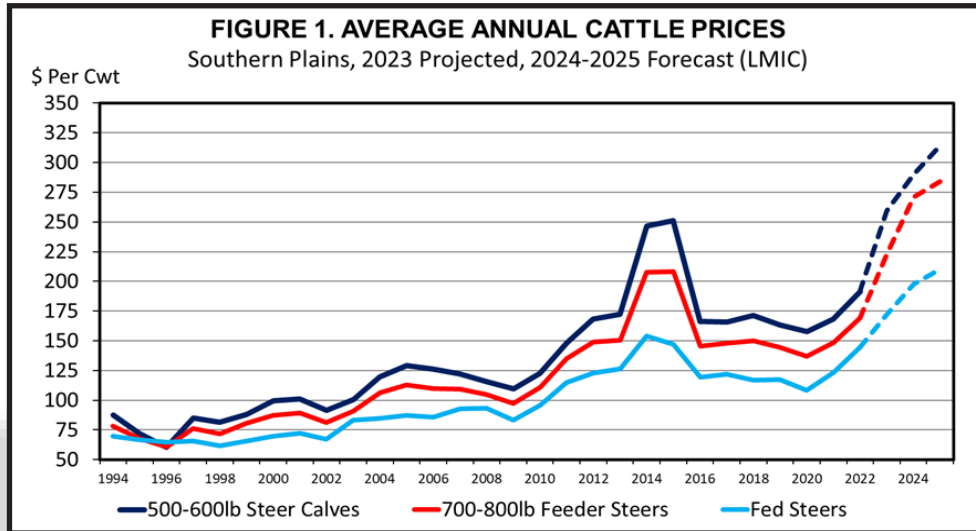
straightforward: produce and sell as many calves as possible. There are several things producers can do to take advantage of the current market situation.

First is to keep cow culling to a minimum. Any cow that can have another calf is more valuable and any heifer

er you do not need to keep as a replacement enhances revenues.

Cows that do have to be culled are quite valuable now and are likely to go even higher. In late August, slaughter cows in Oklahoma were bringing \$1350-\$1600/head depending on flesh and dressing percentage (Figure 2). Any open cows that do not have a specific defect that would prevent breeding (bad feet, broken mouth, etc.) might be worth running with a bull for a while to see if they

will conceive. If they are out of sync with your herd and management so that you do not want to keep them, they will be worth even more if you sell them as bred cows. In this market, one man's culled cow is another man's new cow. You might as well capture the additional value of any old cow that will breed.



Planning for High Cattle Prices (cont.)

Some producers routinely reserve a portion of their forage to retain calves as stockers and sell as bigger feeders. This is a good risk management strategy from a forage risk perspective and marketing perspective in many years. However, the current market favors selling as many weaned calves as possible. It might make sense to run a few extra cows and maximize the number of calves for sale at weaning.

Need to Rebuild

Some producers have destocked due to drought and will need additional breeding animals to be at full production. This will be a trickier proposition as replacement heifers and breeding cows are starting to get more expensive and are likely to get extremely expensive in the next 1-2 years. Long term management of the forage resources is critical. Forages that have suffered abuse as a result of drought must have time to recover, otherwise long-term ranch productivity may be compromised.

Obviously, producers would like to be able to benefit from the current and future high calf prices. If the condition, quantity and quality of forage will permit, restocking sooner rather than later is indicated. Mature bred cows will produce high valued calves sooner but may be hard to find and more expensive sooner. Heifers take longer to get into production but may be more af-

fordable initially. A mix of mature cows and heifers may make sense for some producers. Lingering drought in parts of the central and southern plains may limit demand for breeding females for a few months allowing a window of opportunity for some producers to invest now in heifers or cows.

Breeding female prices are expected to get extremely high in 2024 and beyond. As producers try to get in on the current market, it is important not to get caught up in chasing the market too high for too long. It's not clear yet when that will be, but probably not before 2025. It is important not to be the last one to purchase expensive cows before the market breaks. It will break at some point, but it appears now that will not happen before 2026.



Wheat Pasture Grazing Prospects

Roger Sahs, Extension Specialist, Agricultural Economics

Many producers are making plans for the next wheat crop and it is certainly not too early to think about the possibility of grazing stockers out on wheat. Profits will boil down to managing costs and the financial risk associated with running stockers. I hope with some adequate fall moisture, we can get the 2024 wheat crop off to a good start.

Stockers for winter grazing maybe purchased over the next four to six weeks. Timing of purchases will depend on expected availability of wheat pasture and the ability to receive and utilize other feed resources to hold stockers until wheat pasture is ready. The livestock markets will need to be closely monitored over the next sev-

eral weeks to determine what signals are being sent relevant to what kind of market animals and weight classes are coming into demand that might offer the best opportunity. Sometimes a 550 lb. calf winds up looking more attractive than a 450 lb. calf from a stocker standpoint. Producers will have to determine how that works into their broader management goals.

A stocker budget with typical assumptions is summarized below:

- Winter grazing, early November – early March (120 days)
- Purchase 450 pound steers at \$305/cwt.

Wheat Pasture Grazing Prospects (cont.)

- Gain 2 lbs./day, 2% death loss
- Cattle gain/forage removed charged for 30 pounds of N per 100 pounds gain = 72 pounds N x \$.62/pound N = \$44.64/head (owned wheat).
- \$14.50/head vet/med, \$18/head hay cost
- 8.5% interest, \$15/head marketing
- \$20/head machinery/equipment fuel and maintenance
- Sell 669 pound steers (net death loss and 3% shrink)
- Total operating costs approximately \$1565 per head (selling breakeven around \$240/cwt)

The budget above also includes a labor charge for machinery and animal care at \$15.50 per hour. When the producer provides all of the labor for stocker production, they are also paying themselves about \$36 per head in labor returns in this example.

In late August, CME March Feeders were trading around \$255.cwt. A March basis of around \$13/cwt. means that a 669-pound steer can be hedged at \$268/cwt

now for sale in March. While this provides a positive return, there is always the possibility (albeit small) that the markets in the spring will not be as strong as they look now. There will be significant capital outlays to finance stockers for winter grazing. Wheat producers who do not have the time and/or the money to invest with running stockers may consider leasing grazing rights to others. If wheat pasture availability is generous this fall, forage-based gains will be very attractive.

To summarize, livestock returns will depend on factors such as purchase price, supplemental feed costs and other production inputs, the amount of forage produced before winter, the efficiency of livestock converting forage to weight gain, and finally, the sale price of cattle. Sample crop and livestock budgets are available to view and download at the OSU Enterprise Budget website at <https://extension.okstate.edu/programs/farm-management-and-finance/budgets/>. The cost and return summaries allow quick and easy changes. Producers are encouraged to tailor these budgets to fit their own operation because everyone's situation and bottom-line is different.

Kellie Curry Raper
Agricultural Economics
kellie.raper@okstate.edu



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MASTER CATTLEMAN

David Lalman
Animal and Food Sciences
david.lalman@okstate.edu