



Master Cattleman Quarterly

Oklahoma State University

COVID-19 and the Cow-Calf Producer

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COVID-19 has had severe impacts on cattle markets, along with every sector of the U.S. economy. The impacts began as early as late January, mostly affecting fed cattle cash and futures markets. By March 1, feeder cattle prices began to drop and it was obvious that all cattle industry sectors would be negatively impacted in 2020. In early April, Oklahoma State University published a study estimating impacts to the beef cattle industry. The study showed significant damages from coronavirus to cow-calf, stocker and feedlot sectors with total industry damages estimated at \$13.6 billion. The study can be accessed with these links as an [executive summary](#) or the [full report](#). The report shows estimated damages to the cow-calf sector of \$111.91 per mature beef breeding animal (cows and bulls) in 2020. Moreover, damages in 2020 would reduce the value of beef breeding animals by another \$135.24/head if not recuperated.

Much has happened since the damages report was published. By mid-April, COVID-19 was sickening many workers in packing plants across the country. Many plants were forced to close for a time or significantly reduce capacity leading to reduced slaughter and sharp reductions in beef production. In what is hopefully the worst week ending May 2, weekly cattle slaughter was reduced 38 percent below year earlier levels (figure 1). It is encouraging that, in the following week ending May 9, cattle slaughter and beef productions showed some recovery. Packing plant capacity should rebound though is likely to remain restricted for the foreseeable future. Serious backlogs of fed

cattle have developed that will take many weeks to process before the industry will be current again. In the meantime, there will continue to be price pressure and sluggish demand for feeder cattle until feedlots return to a normal marketing pace. The economic signal to the entire cattle industry at this time is to slow cattle down and hold them out of feedlots and delay slaughter until the packing capacity catches up.

Cow-calf producers weaning fall calves at this time are caught in about the worst part of this. It may be worth evaluating a retained ownership program to keep the calves as stockers until later in the year. There is risk, however, as it is unclear when significant recovery may happen. It may take until this fall to work through the feedlot backlog and feeder demand should pick up by then. For spring calves, there is still considerable time before weaning this fall. It is hoped but by no means certain that the economy will be showing positive signs of recovery by late in the year.

There are many uncertainties ahead. Will COVID-19 flare up again later? How bad of a recession are we in and how long before we see significant economic recovery? How will global coronavirus impacts affect beef trade? Despite many things to watch in the weeks ahead, it is important to remember that the longer run prospects for the cattle industry are good. Cattle prices may show significant recovery in the last part of this year and are currently forecast to be modestly higher in 2021.

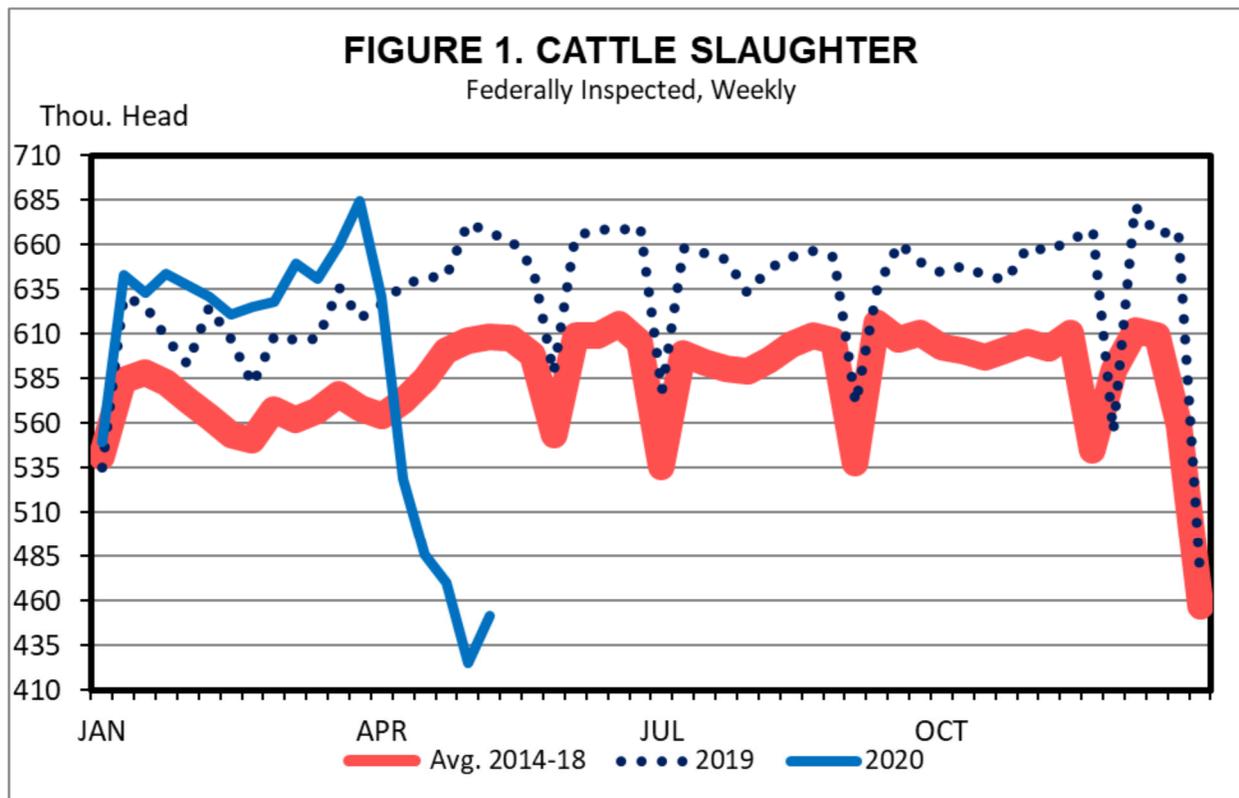
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COVID-19 and the Cow-Calf Producer (cont.)



Oklahoma Quality Beef Network Sale Dates 2020-2021

Jeff Robe, OQBN program coordinator



2020 - 2021 OQBN Sale Dates



EXTENSION

oqbn.okstate.edu

OQBN							
Location	OQBN Representative	Representative Phone Number	Livestock Market Representative	Livestock Market Direct Phone #	Sale Date	Wean Date (45 days)	Wean Date (60 days)
OKC West (El Reno)*	Marty New	580-255-3674	Bill Barnhart 405-262-8800	800-778-9378	10/13/2020 - 2/2/2021 Tues. at noon*	8/29/2020	8/14/2020
Cherokee Sales Co.	Tommy Puffinbarger	580-596-3131	Jarrid Herrmann 785-564-0869	580-596-3361	11/4/2020	9/20/2020	9/5/2020
McAlester Stockyards	Brian Freking	580-254-3391	Lindsey Grant 918-423-2834	918-423-2834	11/10/2020	9/26/2020	9/11/2020
McAlester Stockyards	Brian Freking	580-332-7011	Lindsey Grant 918-423-2834	918-423-2834	11/17/2020	10/3/2020	9/18/2020
Payne County Stockyards	Nathan Anderson	405-747-8320	Brad Chapman 405-747-7870	405-547-7522	11/18/2020	10/4/2020	9/19/2020
Woodward Livestock	Dana Bay	580-254-3391	Larry Wingart 580-661-1157	580-256-5547	11/19/2020	10/5/2020	9/20/2020
Southern Plains Livestock	Dana Zook	580-237-7677	Lance Cochran 580-395-0877	580-363-9941	11/21/2020	10/7/2020	9/22/2020
McAlester Stockyards	Brian Freking	580-332-7011	Lindsey Grant 918-423-2834	918-423-2834	2/9/2021	12/26/2020	12/11/2020
McAlester Stockyards	Brian Freking	580-332-7011	Lindsey Grant 918-423-2834	918-423-2834	4/20/2021	3/6/2021	2/19/2021
McAlester Stockyards	Brian Freking	580-332-7011	Lindsey Grant 918-423-2834	918-423-2834	6/8/2021	4/24/2021	4/9/2021

*OQBN sales at OKC West will be held every Tuesday at noon starting October 13, 2020 and continue through February 2, 2021.

The Coronavirus Food Assistance Program (CFAP) for Cattle Producers

Amy Hagerman, Assistant Professor of Agricultural and Food Policy

On April 17, USDA announced that \$16 billion in direct payments would be distributed through the Coronavirus Food Assistance Program (CFAP) to producers directly impacted by the 2019 novel coronavirus (COVID-19). A further \$3 billion in meat, dairy and produce will also be purchased. That food will then be distributed through the CFAP Food Box Distribution Program to food aid organizations. There are several industries, including the cattle industry, which have not historically received federal aid for market price declines. A program like CFAP is unprecedented, and may be a little confusing as a result. As of May 11, 2020 no payment levels or sign up deadlines have been announced, but here is what we do know.

The CFAP payments will be based on actual measured losses for each industry. Preliminary information indicates that payments could be based on 85% of industry specific losses from January to April, 2020, and 30% of anticipated losses for the 6 months following April. A recent report published by OSU in cooperation with NCBA estimated that cattle industry losses could reach \$13.6 billion without any interventions.

Second, most government aid programs do have eligibility requirements to receive payments. For CFAP, you can expect eligibility to be determined based on your Adjusted Gross Income (AGI), basic conservation compliance, and a requirement that owners of the farming or ranching operation are not foreign entities. The Farm Service Agency will require documentation that you do not make more than \$900,000 AGI. If your AGI does exceed that level, then at least 75% of your primary income has to come from the farm or ranch to be eligible.

Third, payment limitations may be included in CFAP, but at this time we just don't know what those limits, if

any, will be. If you look at other types of programs, like the Livestock Forage Program (LFP) which helps offset losses due to drought on grazing land, there is a \$125,000 payment limitation for an individual. However, LFP payments do not count toward your payment limits for other kinds of programs, like the Environmental Quality Incentives Program (EQIP) or payments on crop acres. On the other hand, the Livestock Indemnity Program (LIP), which helps offset losses for cattle that die in excess of normal death loss due to a natural disaster, had payment limits eliminated in 2018. Initial information on payment limits for CFAP were met with a great deal of criticism given the depth of losses among livestock producers so far in 2020. USDA's ultimate decision on CFAP payment limits is yet to be seen.

Sign up for the CFAP has not begun as of May 11, 2020. There will be announcements and webinars when USDA is ready to begin CFAP sign up, which is anticipated to begin in late May, or go online to www.farmers.gov/cfap. The process of applying for this kind of aid may be new territory for you as a cattleman. If you have ever applied for disaster aid like LFP or LIP with the Farm Service Agency, then you will already have an account and the process will feel similar. When CFAP sign up does begin, you will make an appointment with your county Farm Service Agency office to set up an account, if you don't already have one, and to determine your eligibility. Have your Taxpayer Identification Number and tax forms to prove AGI levels handy. These are unprecedented times for cattle producers across the globe, and the CFAP may provide an opportunity to offset some losses. More information will be coming soon from USDA and OSU Extension to help those interested individuals apply for this aid program.

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: "Personally, I have always felt that the best doctor in the :
: world is the Veterinarian. He can't ask his patients what :
: is the matter...he's just got to know." :
: – Will Rogers :
:.....

Preconditioning in a Pandemic?

Kellie Curry Raper, Livestock Marketing Specialist

As the cattle market goes through arguably one of the strangest times in a century, you may be considering how to manage and market all of those babies currently running around the pasture now and when it comes weaning time later this summer or fall. Should you do what you've always done? Should you do nothing at all? Should you do something different? Will you get paid for your extra efforts? Though increased uncertainty may be the norm in the short run and perhaps even beyond that, one thing IS certain - good calf management practices are still good calf management practices.

Basic calf health management practices implemented on the ranch such as castration, dehorning, vaccinations and longer pre-marketing weaning periods improve calf health, weight gain, and meat quality as those calves move through the beef supply chain. For example, a survey of Texas Cattle Feeders Association Feedlot Managers reported that only 9.2 percent of preconditioned calves required treatment for illness in the feedlot as compared to 36.4 percent for non-preconditioned calves (Avent, Ward and Lalman, 2017). They also reported fewer days on feed for preconditioned calves to reach slaughter weight.

That improved performance and reduced veterinary costs give cattle buyers incentive to pay more for preconditioned calves over non-preconditioned calves. Research using data collected at livestock auctions consistently shows that preconditioned calves tend to bring higher prices than non-preconditioned calves. As reported in the March newsletter, 2019 Oklahoma Quality Beef Network premiums for steer calves in the VAC45 program averaged \$11.48 per hundredweight with average premiums for \$12.62 per hundredweight for heifers. Historically, OQBN premiums have averaged over \$9.50 per hundredweight since 2011 relative to non-preconditioned calves of the same weight. The 45 day weaning period adds some cost but also results in additional pounds to sell and typically moves calves into a marketing period beyond the seasonally low prices seen in early fall. Since every producer's resources, constraints – and thus costs – are different, your returns may not match your neighbor's, but research indicates that there is a high probability that

you will come out ahead. The OQBN Vac 45 Budgeting Tool is available at <http://www.agecon.okstate.edu/faculty/publications/3943.xlsx> and can help you evaluate your potential for positive returns under different price and cost scenarios.

If a full preconditioning program that bundles several practices together requires more resources than you have, whether pens, people, time or equipment, there are still steps that you can take to increase the value of your calves before you sell them. Start with castration. Steer calves that have been castrated and healed, whether banded or knife cut, before they come to the sale barn generally bring \$6-\$12/hundredweight over bulls of the same weight being sold as feeder calves. Also, castration at younger ages induces less stress and less impact on calf performance. If you are not enrolled in a non-hormone treated cattle program, consider calthood implants. Implants are relatively inexpensive to administer at roughly \$2.00 per head and are an efficient way to add pounds to calves if you keep them on the ranch long enough afterward to realize the weight gain before marketing. You may make a different decision for steers versus heifers, depending on your marketing outlets for the heifers. Longer weaning periods prior to sale builds stronger immune systems. Anecdotal evidence suggests that buyers may place additional value on weaning even beyond 45 days.

The bottom line - remember that good management practices are good management practices – in any kind of market.

References:

Keith Avent, Clem Ward, and David Lalman. "Economic Value of Preconditioning Calves." Oklahoma Cooperative Extension Service Fact Sheet, AGEC-583. Available at <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-11631/AGEC-583web.pdf>

How Ethanol Plant Closures affect the Oklahoma Cattle Industry

Dana Zook, Extension Livestock Specialist, Enid OK

A perfect storm of low gas prices and an unstable economy have led to severe reduction of ethanol production. For cattle producers, this means a reduction or even loss of ethanol byproducts as a feed or supplement for the time being. The main byproducts affected include wet and dried distiller's grains (DDGS). The lesser known distillers steep and solubles byproducts are used in protein and mineral tubs which could lead to an increase in price of these products as well.

Nutritionally, DDGS provided the cattle industry with a perfect nutritional package of both high protein and energy. In a recent article about ethanol byproducts, I explained that the process of ethanol production starts with the extraction of starch from corn. Removing the starch concentrates protein, fat, and fiber threefold leading to the byproduct called distillers grains. Corn is approximately 9% protein in its true form and the threefold concentration will make distillers grains 25 to 30% protein. The energy value is where DDGS shine by providing high energy through a digestible fiber source that is not laden with starch like corn.

In Oklahoma, DDGS had only just become widely available within the last year. In the last feed season, some Cow-calf producers had switched over to the new DDGS cubes supplements and now the protein source in that cube will be adjusted to fill the void of DDGS. Unfortunately, this adjustment will not come without cost, at least for the time being. Local suppliers report a recent \$30-50/ton hike in all cubed products.

Producers using blended or mixed rations will see the

most change. A reduction or loss of DDGS is unfortunate but substitutions can be made to recover the nutritional void. Corn gluten, a wet milling byproduct, can be widely utilized to fill a portion or the entire nutritional deficiency. Wheat midds and soybean hulls are relatively similar in energy but midds will provide more protein. For this reason, wheat midds can be substituted for all or a portion of the soybean hulls to help boost the total ration protein slightly. In dairy rations or high protein supplements (25-38% CP), soybean meal can be added. In general, protein is the most costly part of the ration, so the greater the need for this nutrient, the higher the cost. Hopefully most adjustments can be made with little effect on price. However, in the short term producers should expect some increase in price as the supply of products are readjusted to fill the void of DDGS.

So where do we go from here? For Oklahoma, this shortfall came at time when producers should be tapering off supplements as grass greens up and graze out options remain, making the transition a little easier. For grow yards and feedlots, ethanol byproduct availability has been narrowing in the past months and so they had already been making the switch to alternative feedstuffs before the rapid decrease in production. It is my hope that by the time producers want to book supplements for next fall and winter, we will have the DDGS products back to at least some suppliers in the state. Time will tell.

For questions about byproduct feeds or assistance with livestock nutrition, contact your local Oklahoma Cooperative Extension Educator.

Blue Green Algae

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

This year an Oklahoma a cattle producer in Payne county found 7 dead cows and 1 dead deer in close proximity to a pond. The owner suspected something was wrong with the water. An analysis of the water was performed. According to Oklahoma State University Payne County Ag Educator Nathan Anderson, "the analysis revealed that it was positive for blue-green algae and was above the lethal

threshold." This year there has been reports of similar unexplained deaths by ponds. This would not be much of a surprise if these had occurred in late summer, but this incidence took place in early spring. This should be a warning to livestock producers to inspect ponds for blue-green algae accumulation when conditions are right no matter what time of the year it is.

Blue Green Algae (cont.)

Blue-green algae is not really an algae but a bacterium which is referred to as cyanobacterium. The most common species found in the Midwest are *Microcystis*, *Oscillatoria*, and *Anabaena* (Morgan, 2011). The bacterium is found in most bodies of water. However, they become a problem during times of rapid growth which is fueled by high nitrogen and phosphorus content and warm sunny weather. The overgrowth of the bacterium lead to the death of the organism which then floats to the top and forms a “scum” on top of the water. These “scum” layers can be moved about the pond by wind movement. Sometimes this causes certain areas in the pond to be concentrated with the toxic levels of the dead bacterium. Rain or wind disturbance can break up the “scum” and reduce the chance of toxicity, but this is not always the case.

All livestock, pets, wild animals, and humans are susceptible to blue-green algae toxicity. The amount of water consumed needed to cause toxicity depends on the species of animal, concentration of toxins, and how much water is ingested. Ingestion of 1 quart of highly concentrated water is lethal to cattle (Meehan & Mostrum, 2015).

Most producers do not recognize a problem with blue-green algae until they find dead livestock in the pond or in close proximity to a body of water. Most cattle that ingest contaminated water will die, but occasionally producers may find sick cattle. Clinical signs of blue-green algae toxicity depend on the type of toxin ingested. The two types of toxins associated with blue-green algae are a neurotoxin (affects the nervous system) or a hepatotoxin (affects the liver). If seen early, cattle affected by the neurotoxin will show muscle tremors, reluctance to move, and breathing problems. This leads to convulsions and death. If cattle consume water with liver toxin bacteria, they will have weakness, pale mucous membranes, gastroenteritis, nervous signs, and death. Animals that survive will lose weight and become poor doers. These survivors may also develop photosensitization, creating proneness to sunburns on light colored skin areas.

Typically, diagnosis is based on exposure to blue-green algae along with clinical signs or sudden death. If a producer suspects blue-green algae is the cause of death, he/she should immediately collect a pint of water where

large amounts of the algae exist. The reason for quickly obtaining a sample is the toxin could be dispersed by wind. Then the producer should contact a veterinarian to conduct a necropsy to rule out other causes of death. A veterinarian will most likely take tissue samples for more testing and rumen contents may be taken to examine for presence of blue-green algae. The water sample will need to be submitted for analysis. More information for guidance about necropsy or water sampling may be found at the Oklahoma Animal Disease Diagnostic Laboratory at (405) 744-6623 or <https://cvhs.okstate.edu/oaddl>.

Since there is no known antidote, treatment is usually unrewarding. For this reason, producers need to focus on conditions that favor the development of blue-green algae. The algae blooms with sunshine and warm weather. Excessive blooms are associated with ponds located in areas that catch runoff water high in nutrients. Producers should be inspecting ponds anytime these conditions are present and be prepared to provide alternative water sources in times of crisis.

Blue-green algae toxicity is not a new problem for Oklahoma livestock producers but having problems with cyanobacterium in early spring is new. When weather conditions are right for algae build up, producers need to be constantly observing their ponds for any signs of the blue “scum” on the water. If found, producers need to take action to reduce the problem. An excellent fact sheet is available from Oklahoma State University Extension Service on blue-green algae and how to best manage the problem. The fact sheet can be found at <https://extension.okstate.edu/fact-sheets/toxic-blue-green-algal-blooms.html>. If a producer has questions about blue-green algae, they should contact their local veterinarian or County Extension Educator.

References

- Morgan SE. Water quality for cattle. *Veterinary Clinics of North America Food Animal Practice*. 2011;27(2):285
- Meehan MA, Mostrum M. Cyanobacteria Poisoning (Blue-green Algae). Fact Sheet at <https://www.ag.ndsu.edu/publications/livestock/cyanobacteria-poisoning-blue-green-algae/v1136->

Cattle Management during the Breeding Season

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

The spring breeding season is drawing near and producers need to properly manage both their cows and bulls considering ways to optimize beef production. Herd reproduction and fertility are important for profitability to occur. Research has shown that the economic value of reproduction is **5 times greater** than growth or maternal output traits in beef cattle (Mulliniks et al., 2019). Hence, getting cows bred in a timely manner is critical. Open cows negatively impact profitability, so producers need to use breeding programs that increase the percentage of their cows that get bred. A successful breeding season hinges on nutrition, vaccination, sire selection, breeding soundness exams, and management protocols to control the length of the breeding season.

The first step in preparing the herd for the breeding season is to assess the nutritional status of both cows and bulls. Body condition scoring (BCS) is a practical management tool to allow beef producers to distinguish differences in nutritional needs of animals in the herd. A cow should calve at a BCS of 5 to 6 and be bred at a BCS of 5 to 6. If a cow calves at a BCS less than 5 it will take her longer to return to estrus and thus, take longer to get her rebred.

ABCS of 5 to 6 for bulls is also recommended before the breeding season starts since bulls being too fat or too thin can impact fertility. If changes need to be made to the diet to achieve this BCS they should occur gradually. Ration changes prior to the breeding season can have effects on reproductive performance because mature sperm is produced over a 60-day period before ejaculation. During the breeding season producers should assess the BCS of the bull. It is not unusual for a bull to lose 100 to 200 lb during the breeding season. If the bull becomes too thin the producer should consider replacing him because his ability to breed cows will be reduced. After the breeding season adequate nutrition is needed to help the bull regain the weight lost.

It is recommended that breeding soundness exams be conducted on all bulls a few weeks before the breeding season even if they were recently purchased as "satisfactory breeders" as a good insurance policy. In addition to breeding soundness exams, pre-breeding vaccinations is an important practice. A visit with your veterinarian about appropriate vaccinations, deworming, and other health considerations is recommended.

Even if bulls have a proper BCS, have had adequate exercise, and have been with the other herd bulls to determine social dominance, ranchers need to continually observe and manage bulls. Young bulls have great potential to bring genetic improvement to your herd, however they will experience an acclimation period prior to breeding any females. In order to start calving on your selected date, it may be important to turn young bulls out a few days early, so they can get adjusted to their environment and be ready to breed cows when you would like them to start. Managing young bulls will be more challenging because they are still growing. Since they have higher nutrient requirements, they will likely lose condition faster than mature bulls.

Social dominance in pastures can also be a concern. Yearling bulls and older, mature bulls should be in separate pastures. If they are together, the yearlings cannot compete with the older bulls thus, resulting in limited genetic improvement, as well as possible injury to the younger bulls. If older bulls have been used more than two breeding seasons, they have a tendency to become territorial and may spend more time fighting and defending their territory than servicing cows. This is a situation where observation is key because bulls may not be getting the cows bred or could be injured or causing injuries. If you are observing animals closely, bulls that are either injured or lack desire can be removed.

Another important issue to address is how many bulls to put in each pasture. A rule of thumb is one cow per month of age of the bull up to 3 years old. Therefore, the true "yearling" would only be exposed to 12 or 13 females. If he is a year and a half old (18 months), then he should be able to breed 15 – 18 cows. By the time the bull is two years of age, he should be able to breed 24 or 25 cows. However, research indicates this number could be increased to as many as 50 cows per bull without a negative impact on conception rate. In determining the proper bull power, several factors should be considered including the topography and size of the pasture, feed condition, age and condition of the bulls.

Producers need to continually observe and manage both bulls and cows during the breeding season. Overlooking critical warning signs could result in reduced pregnancy rates. Assess the BCS of the bulls. It is not unusual for a bull to lose 10 to 15% of their body weight during the breeding season. If the bull becomes too thin

Cattle Management during the Breeding Season (cont.)

the producer should consider replacing him because his ability to breed cows will be reduced. Observe bulls to ensure they are actively checking cows and breeding normally. Watch for injuries. Multiple cows coming back into heat after being bred or a high number of cows showing heat late in the breeding season are also important warning signs.

In conclusion, a successful breeding season is not only dependent on the BCS of the cows but also on the success of the bulls. Bulls have more influence on the success of the breeding season and the herd's future ge-

netics because a cow produces one calf a year, while a bull can potentially sire 25 to 50 calves annually. Breeding success is vitally important to the profitability of the beef operation. Through good management practices breeding efficiency can be obtained. It is important to remember that both the cow and the bull are vital parts to the breeding equation. For more information, contact your County Extension Educator.

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