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THE GRAZE

A quarterly newsletter with livestock and agronomy updates.



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Bull breeding soundness should be tested after Winter Storm Uri

AgriLife Extension experts: Potential increased BSE failures due to frostbite

BY KAY LEDBETTER

Winter Storm Uri could have long-term effects on Texas' cattle herd. [Texas A&M AgriLife Extension Service](#) specialists recently expressed concerns about bull reproductive soundness being affected by frostbite.

Some of these effects may include increased bull culling rates, delayed breeding seasons, lower conception rates, and lighter calf weaning weights, all of which have economic consequences, according to the AgriLife Extension experts.

“We are encouraging beef cattle producers to conduct breeding soundness examinations (BSE) on bulls prior to the spring breeding

season,” said Jason Smith, Ph.D., AgriLife Extension beef cattle specialist, Amarillo. “While always a good practice, conducting a BSE this year is probably more important than ever in the recent past.”

Joining Smith in expressing concerns are Ron Gill, Ph.D., AgriLife Extension beef cattle specialist, and Tom Hairgrove, DVM, Ph.D., AgriLife Extension cattle veterinary specialist, both in Bryan-College Station. All three are in the [Department of Animal Science](#) within Texas A&M University’s [College of Agriculture and Life Sciences](#).



After the recent week-long winter storm, Texas A&M AgriLife officials are recommending bulls be given breeding soundness exams. (Texas A&M AgriLife photo)

Following the February winter storm that produced record low temperatures across a large portion of the state, there is concern among the experts about the presence of frostbite on some breeding bulls.

Others have expressed concern about reduced sperm production and quality, even if no frostbite was observed on the scrotum.

Testing of bulls for the spring breeding season recently began, and there have been reports from veterinarians and AgriLife Extension agents of higher-than-normal BSE failures in bulls, Smith said.

“While it is difficult to estimate the extent to which a specific operation’s bull battery may or may not have been affected by abnormally low temperatures and extended snow and ice cover, one thing remains certain ... a pre-breeding BSE is the only way to objectively evaluate a bull’s readiness to breed prior to turnout,” Smith said.

Bull testing should be a priority

Producers are encouraged to request a complete BSE that includes evaluation for motility, morphology and physical defects as well as testing for Trichomoniasis, Gill said. Most often a quick screening for sperm motility constitutes a “fertility test” on bulls. Morphology is as important to a sperm’s ability to fertilize an oocyte and is often not looked at during routine BSEs conducted in the field. The value of a complete BSE cannot be overemphasized, he said.

“We want to make best management recommendations to help producers mitigate any negative consequences of the recent winter storm on bull fertility,” Smith said.

Hairgrove, who is actively collecting data from veterinarians in collaboration with Ky Pohler, Ph.D., Department of Animal Science reproductive physiologist, will be analyzing and using that data to provide reproduction recommendations.

Early observations indicate a higher-than-normal rate of BSE failure or deferment to re-test in bulls with visual signs of frostbite, Hairgrove said. It appears that a large portion of those are likely due to physical/structural defects to spermatozoa that can be attributed to damage that occurred during storage in the epididymis.

“From a conceptual standpoint, the damage most likely occurred due to excessive testicular heating in response to the frostbite,” Smith said. “Similar consequences would be expected during times of extreme heat stress, such as is often the case throughout the summer months in Texas. “We also preliminarily expect younger bulls to have been more resilient to the extreme cold, as they have a greater ability to raise their testes to regulate scrotal temperature and prevent frostbite. However, we do not yet have the objective data to support that notion.”

Don't panic, but take action

The experts said it could be that many of the bulls that fail a BSE or are deferred to re-test may recover and pass a BSE without requiring a full 60-day cycle of spermatogenesis to do so.

It is also important to recognize that even in a normal year the rate of BSE failure is in the realm of 15% to 20% of bulls tested, and therefore approximately one out of every five bulls would be expected to fail a BSE, Smith said.

Hairgrove added that “while it is likely there will be a small portion of bulls that will be non-breeders due to physical damage and inability to breed cows, those bulls should be quickly identified by a BSE.

“This extreme weather event is one of many reasons why working with your veterinarian to conduct a pre-breeding BSE on all bulls is always advised, regardless of past performance,” Smith said. “This is also true for recently purchased bulls that underwent a BSE prior to the winter storm. For producers who do not routinely conduct pre-breeding BSE’s, this would certainly be the year to start, and to start early.”

The experts said the knowledge gained by testing will provide producers with the ability to decide if they need to replace bulls while replacements are still available, or if they need to turn out more bulls than normal.

“A key takeaway from this is to not panic and not immediately cull all bulls that fail a BSE or are deferred for re-test,” Gill said. “Once results are known on the initial tests, plans can be made to locate additional sires if needed, or a plan can be developed to rotate sires in and out during the breeding season.”

The experts said that, following the re-test, they expect some of the deferred bulls to pass a BSE.

Forage producers face high input costs, drought

Texas Crop and Weather Report – April 6, 2021

BY ADAM RUSSELL

Higher fertilizer prices and poor precipitation outlook could mean thin margins and little room for error for cattle and forage producers this year, according to a [Texas A&M AgriLife Extension Service](#) expert.

Vanessa Corriher-Olson, Ph.D., AgriLife Extension forage specialist, Overton, said input costs and weather conditions now and those forecasted should be on forage and cattle producers’ minds as they prepare for warm-season grass production.

It may feel cooler than usual, but temperatures were on par for a typical March, she said. Temperatures were still dipping into the 40s at night for much of the state, which means warm-season grasses have not started to actively grow.

Corriher-Olson said producers need to be patient and hold off on fertilizing hay meadows and grazing pastures until nighttime temperatures are 60 degrees consistently. For example, Bermuda grass does not begin to actively grow and take in nutrients until soil temperatures reach 65 degrees.

“It seems like every year I see producers starting to fertilize way too early,” she said. “They see everything turning green and they think it’s time. It’s time to locate a source, but not time to apply until temperatures warm.”



Fertilizer expense

Corriher-Olson said producers need to be especially mindful of when and how much nitrogen, phosphorous and potassium they apply because prices for most fertilizers and nutrients have increased compared to last year. Recent price checks in East Texas showed diammonium phosphate was \$695 per ton; ammonium nitrate was \$500 per ton; potash was \$465 per ton and ammonium sulfate was \$360 per ton.

Cattle producers should be making a plan for transitioning from cool-season to warm-season forage production. Making good decisions is especially important this year due to high input costs and potential drought. (Texas A&M AgriLife photo by Adam Russell)

“Fertilizer prices will be a big challenge for some producers, so they will need to base their decisions on soil tests,” she said. “If they want to cut costs, they need to cut across the board. Don’t focus your investment on nitrogen and forgo potassium or phosphorous. Cutting one for the other creates a nutrient imbalance in the soil.”

Corriher-Olson said producers might find less expensive alternatives like poultry litter or animal manure if proximity makes them economically feasible. However, she said, be careful when searching for low-cost alternatives because non-traditional sources are marketed heavily when traditional fertilizer costs are high.

“These non-traditional sources may make bold claims, so be wary of something that sounds too good to be true,” she said. “Seek out unbiased opinions, your local county agent or soil and forage specialists to determine the value of what you’re buying.”

Drought concerns

The threat of drought is another challenge that could translate into lower production, which compounds higher input costs, Corriher-Olson said.

A recent [National Oceanic and Atmospheric Administration](#) drought outlook for Kansas, Oklahoma and Texas reported worsening conditions for Texas. Western and southern parts of the state were in extreme to exceptional drought, while drought conditions throughout Central Texas reached moderate to severe levels. Conditions were not expected to improve through June.

“Even some parts of East Texas are drying down, so producers need to utilize the moisture to the greatest benefit whether it’s for forage production or grazing,” she said. “We can hope for rain, but producers need to be preparing for drier-than-normal conditions and considering the options that work best for their operations.”

Corriher-Olson said it's important for producers to make good herd and forage management decisions to maximize cool-season forages while helping warm-season grasses emerge from dormancy.

Most cool-season grasses around the state like ryegrass performed well in much of the state despite Winter Storm Uri, she said. Some oat fields that were not winter-hardy varieties suffered more than other cool-season grasses, but the long freeze set production back more than it physically damaged the crop.

But any setbacks can magnify overall margin losses in a year where input costs are higher and production potential is lower, she said.

"It will be important to remove those cool-season forages by either grazing them out or baling them, to let those warm-season forages grow and capitalize on remaining moisture in the ground," she said. "You want to maximize the resources you have, but it may mean adjusting stocking rates to prevent overgrazing and leaving stubble height for regrowth so you don't have to feed hay earlier than you plan."

AgriLife Extension district reporters compiled the following summaries:

CENTRAL

Soil moisture declined as conditions were warm and very windy with little measurable precipitation. Livestock looked great and were benefiting from the fresh regrowth of winter forages. Stock tanks continued to drop and raised some concerns for livestock producers. The short-term precipitation forecast called for warmer and drier conditions. Septoria and leaf and stripe rusts were reported on winter wheat, and fungicide spraying operations were underway. Post-plant preemergent herbicide applications were also being applied. Corn was fully emerged, and plant stands were very uniform and looked excellent. Most sorghum had emerged and planting neared completion. Cotton acres were expected to be down substantially compared to last year.

ROLLING PLAINS

Conditions were cool, windy and dry. Supplemental feeding continued in areas with limited grazing. Farmers were taking advantage of the recent moisture and preparing fields for the upcoming crop year by plowing and applying preemergent herbicides.

COASTAL BEND

Weather conditions were warm, humid and mostly dry. Most areas needed a good soaking rain. Corn, grain sorghum and some cotton had emerged. However, some areas were reporting drought stress and critically low moisture availability for row crops, rangelands and pastures. Rice was emerging in some fields, and planting was almost complete. Livestock were doing well with some spring grass growth. Many pastures and hay fields were being fertilized.

EAST

Rain was a general concern across the district. Windy conditions and warmer temperatures continued to dry out the soil. Pasture and rangeland conditions were fair to good. Subsoil and topsoil conditions were adequate. Marion County reported producers were planting gardens. Livestock were doing fair to good with supplemental feeding taking place. Houston County reported growing fly populations. Feral hogs damaged pastures and property.

SOUTH PLAINS

Subsoil and topsoil moisture levels were poor due to lack of rainfall. Producers were pre-watering and working to get fields prepared for planting season. Cattle were in good condition.

PANHANDLE

Northern parts of the district reported adequate soil moisture, while central areas reported short to adequate moisture levels. Southern areas reported very short to short soil moisture levels. Pasture and rangeland conditions were very poor to good. Winter wheat was in poor to good condition. Wheat in southern parts of the district reported good progress and excellent growing conditions. Corn, cotton and grain sorghum preplant preparations continued despite dry conditions. Some producers started to irrigate winter wheat for silage or hay production. Green-up was slowed by lack of moisture, and cattle were still receiving supplemental feed on range. Stockers were being moved off wheat to market.

NORTH

Topsoil moisture ranged from short to adequate. Temperatures were moderate with lots of sunshine. Most winter wheat recovered from the winter storm and was doing well. Severe stripe rust was seen in some wheat, and producers were spraying fields with fungicides. Pastures were turning green with sunshine and warmer temperatures. Ryegrass and clovers were flourishing and expected to grow rapidly with continued sun and warmer temperatures. Bermuda grass was starting to become visible. Corn planting started, and early planted fields had emerged. Livestock were in good condition.

FAR WEST

Temperature highs ranged from the 80s to mid-60s with lows from the mid-60s to low-40s. No rainfall was reported, and high winds continued. Dry grasslands were a wildfire danger. Rangeland forage remained very limited, so livestock and wildlife were receiving supplemental feed. Producers worked lambs and kid goats and some cattle. Farmers were gearing up for cotton planting. Mesquite trees were still not in bloom, and trees that started to bloom before the winter storm were still not blooming. Pecan orchards were being watered, and pre-irrigation continued for row crops. In the El Paso area, Rio Grande project water will not be released until late May. Some Lower Valley farmers were receiving effluent from the city of El Paso, and others were pumping low-quality water. Negative impacts on soil conditions and crop production were expected.

WEST CENTRAL

Temperatures were near-normal, and conditions were windy. Moisture was needed throughout the district. Producers increased field preparation for summer forage planting, including fertilizer applications. Pecan trees and several other varieties had not broken winter dormancy yet. Sorghum planting was almost complete, and corn planting finished. Supplemental feeding of livestock was slowly decreasing.

SOUTHEAST

Soil moisture was drying despite some scattered rain showers. Conditions were getting very dry, but rice planting was progressing. Livestock were in good condition. Rangeland and pasture ratings were very poor to excellent. Soil moisture levels ranged from very short to adequate.

SOUTHWEST

Dry conditions continued across the district with only slight rainfall reported. Kinney County reported extremely dry topsoil. Fire hazards were in place due to windy conditions. Winter wheat potential looked to be about the same as last year. Spring lambing and kidding continued. Sutton County reported sheep

shearing had begun. Livestock were in fair condition. Producers continued to provide supplemental feed to livestock and wildlife.

SOUTH

Soil moisture levels were very short to short. No rain was reported for most of the district, and conditions were windy with fluctuating temperatures. Willacy County reported significant rainfall, and Cameron County reported some drizzle. Forecasts called for 95-degree days in the near future. Dryland oats were playing out in a lot of areas. Irrigated wheat and oats continued to develop. Crops planted on dryland acres struggled to emerge. Early cotton was underway in northern areas and complete in southern areas. Corn, sorghum and cotton were under irrigation. Pastures and rangelands continued to decline due to drought. Supplemental feeding continued for wildlife and livestock. Producers were beginning to run low on hay, and bale prices were rising with averages at \$85 per bale. Cattle herds continued to be culled. Irrigated Coastal Bermuda grass fields looked good and should produce bales soon. Producers were fertilizing pastures in areas with some soil moisture. Strawberries recovered from the freeze and were doing well. Crops like watermelons and cantaloupes were planted and being irrigated by water canal systems. Sesame was planted. Sugarcane harvest continued.

Agribusiness, U.S. dairy roll out sustainability framework

BY JENNIFER WHITLOCK

Thanks to dairy farmers' dedication and technological advancements, dairy farming is already more sustainable than ever.

But a partnership between Syngenta, the Nature Conservancy (TNC) and U.S. Dairy's Net Zero Initiative hopes to bring a new "sustainability framework" to farms soon.

The program aims to develop a replicable program and toolset to scale best management practice adoption in feed and forage production and feed efficiency. A [handout](#) jointly distributed by the organizations during the 2021 *Agri-Pulse* Ag and Food Policy Summit noted the expected outcome is significant benefit in climate mitigation, soil health and water quality on dairy farms of all sizes.

"This partnership really aims to develop a program that we can replicate across the country—that we can scale resources for the adoption of best management practices in feed and forage production and feed efficiency," Krysta Harden, president and CEO of the U.S. Dairy Export Council, said. "The plan is to launch in one or two sites across the U.S. later this year with a plan to really scale across the country over the next three years."

Cross-sector collaboration between the three groups brings a variety of resources and expertise to farm-level management, beginning with feed.

"Syngenta brings a corn product, Enogen®, for dairy feed, but also agronomists and digital technology to provide advice to farmers about best practices for sustainability and then tools for data collection and reporting," Syngenta Group CEO Erik Fyrwald said. Enogen®, originally developed for the ethanol industry, was later found to provide improved starch and sugar availability and fiber digestibility when ensiled for dairy feed. One result of improved digestibility is reduced methane emissions, making Enogen® an ideal choice when considering sustainability.

[TNC](#) will provide what Chief External Affairs Officer Lynn Scarlett called an interface with the broader conservation and environmental community.

“We are a voice amplifier, and we blend our technology, our science....and our partnerships to help broaden out both the audience and the knowledge,” she said.

Farmers complete a self-assessment to begin participation. Then, they work with program partners to decide what management practices work best on the farm. Farmers are expected to receive support in:

- soil health practices,
- nutrient and manure management,
- edge-of-field practices including riparian buffers and pollinator strips,
- alternative feed rations and feed additives,
- and conservation of marginal lands and nonproductive acres.

The work is founded on a theory of change that farmers will create positive environmental outcomes, because the value of participation in the program is greater than the cost of participation for the farmer, the groups said.

The framework aims to support the dairy industry’s [Net Zero Initiative](#), an industry-wide effort to accelerate voluntary actions to reduce environmental impacts by making sustainable practices and technologies more accessible and affordable to all U.S. dairy farmers.

The Net Zero Initiative was formed in direct response to 2050 environmental stewardship goals set by the Innovation Center for U.S. Dairy.

[Click here](#) to view a handout on the sustainability framework.

Texas sheep, goat prices strong despite pandemic

BY JENNIFER WHITLOCK

The Texas sheep and goat sector remains strong despite COVID-19 sending shock waves across the agricultural economy.

That’s thanks in large part to shifts that occurred in the industry over the past decade, according to Dr. Reid Redden, director of the Texas A&M AgriLife Research and Extension Center at San Angelo.

“In Texas, the lamb and goat industry has fared very well throughout the COVID pandemic. And the prices and the market have been really good,” Redden said in an [interview](#) with the [Texas Farm Bureau Radio Network](#). “The traditional lamb industry had suffered some pretty serious losses from March 2020 throughout the whole summer, primarily due to the shutdown of all the restaurants. Somewhere in the neighborhood of half of all the lamb that’s produced in the U.S. through the traditional channels goes to those restaurants, hotels, resorts. That market basically, like a lot of places, went away overnight, so it had a big impact on it.”

But over the last decade, Texas transitioned to a non-traditional market, supplying animals to a different production chain. The traditional sheep and goat industry mimics the beef industry where ranchers raise lambs and kids to weaning stage before the animals go to backgrounders, feeders and then meatpackers to be processed into retail or wholesale cuts and distributed across the nation.

Redden noted about 75 percent or more of the Texas sheep industry provides lighter-weight lambs to primarily ethnic markets where consumers seek different cuts of meat than the typical American grocery store shopper.

“We’re talking more about recent immigrants into the U.S. from Africa, Middle East, Southeast Asia, different parts of the world that eat lamb all the time. But they don’t really eat lamb like we do,” he said. “They don’t go buy a package of lamb chops. They’re buying a whole lamb or half a lamb and cooking them using their traditional techniques. But they also don’t want to purchase a big animal, so we’ve transitioned away from producing those.”

Most lambs at harvest are about half the weight of traditionally-raised animals, ranging from 50 to 80 pounds. Redden said many of those lambs come straight from the pasture.

“They may background a little bit, but they’re not going through a production system,” he said.

There’s been a shift in breed selection, too.

Redden noted larger-framed wool sheep breeds used to be the norm on Texas ranches. But hair sheep breeds like Dorper, St. Croix and other Barbados breeds are more popular selections now, due to their smaller frames. Wool sheep ewes weigh about 140-180 pounds, but hair sheep ewes are only around 90-130 pounds when fully grown.

Seasonally, there is higher demand based around Muslim holidays for animals without blemishes, so some ranchers are also turning away from practices like docked tails, notched ears and castration.

“At times, the buyers will even pay a premium for that type of animal outside of the holiday season,” Redden said. “It’s just supply and demand. There’s a larger demand for non-traditional lambs and goats than what the supply is for the most part.”

That’s because most of the lambs in Texas are born in late fall, winter or early springtime and reach harvest weight between three and eight months of age. The largest supply of lambs in Texas runs from April through August, then drops throughout fall and winter. But demand doesn’t waver during those periods of low supply, which leads to premium prices for lambs, according to Redden.

The Texas sheep and goat industry is more resilient to the initial shock of the pandemic because of its infrastructure, Redden noted.

“The majority of lambs that are going to the primary auctions in San Angelo, Fredericksburg, Goldthwaite and Hamilton are shipped live to major metropolitan areas across the nation and are then harvested at smaller meat processors,” he said. “The pandemic didn’t really have an impact on the lamb and goat market here because of that diversity. We don’t have just one or two major packers, where if there’s a COVID-19 outbreak it may have to shut down for two weeks and causes huge market disruptions. There are just so many small packing plants spread across the U.S. that we don’t have that issue with lambs and goats.”



BOVINE VIRAL DIARRHEA

FACT SHEET

WHAT IS BOVINE VIRAL DIARRHEA?

Bovine viral diarrhea (BVD) is caused by the bovine viral diarrhea virus (BVDV). BVD affects cattle and other ruminants. BVD is not a human health concern.

BVD is endemic in most cattle-producing countries and in some countries is considered the single most important viral infection of cattle. While cattle of all ages are susceptible to BVD, most cases of disease are seen in cattle between six months and two years old. The major reservoir responsible for disease spread geographically is the persistent infection syndrome (BVDV-PI) seen in calves.

SIGNS & SYMPTOMS

In adult cattle, clinical signs of BVD are highly variable. Signs of acute infection include:

- fever
- drowsiness
- loss of appetite
- discharge from the eyes and nose
- oral lesions
- diarrhea
- decreased milk production

In calves, infection is evidenced by:

- birth defects
- abortion
- congenital malformations
- lack of coordination
- shaking
- wide stance
- failure to nurse

TRANSMISSION

Based on the age of the cow when BVDV is introduced, the animal will either become persistently infected or transiently infected.

Persistent infection occurs when BVD is transmitted to a calf from an infected mother during pregnancy, specifically between 40 and 120 days in the uterus. Persistently infected animals shed very high quantities of the virus for life and expose pen mates and adjacent cattle to the virus.

Transient infection occurs when an animal becomes infected after birth. The animal is infected temporarily, and during this time is capable of shedding the virus and transmitting it to other herd or pen mates.

BVD may also be spread by biting insects, fomites, semen, biologic products, and other animals including swine, sheep, goats, camelids and possibly wild ruminants.

DIAGNOSIS

There are many diagnostic tests available to detect both transiently and persistently infected cattle, such as virus isolation, antigen detection, and nucleic acid detection.

Cattle producers are encouraged to consult with their veterinarian on how to best utilize BVDV diagnostic tests and testing strategies for their herd health plan.

REPORTING

Though BVD is not a reportable disease to the TAHC, there are rules in place to mitigate the risk of disease spread. Contact your private veterinarian if you suspect BVD in your herd.

BOVINE VIRAL DIARRHEA CONTROL PROGRAM

In order to protect Texas cattle from BVD, the TAHC established a control program that requires the seller of a BVDV-PI animal to disclose the status in writing to the buyer prior to or at the time of sale. For more information on the program, visit: <https://bit.ly/2uGu50Q>

PREVENTION

A BVD control program on farm would aid in preventing fetal infections, eliminating reproductive loss and production loss due to transient infections.

A simple and quick testing strategy is to test all cattle on a premises in a narrow time frame. All positive cattle should be isolated and then retested in 2-3 weeks. Animals that retest positive are considered to be persistently infected and should be isolated from the cattle until they leave the herd.

To complete herd screening, calves born over the next year should also be tested. A calf that tests positive on an initial and retest is an indication that the dam, or mother, may also be persistently infected. In this case the dam should also be tested using the farm protocol.

Tune In For The
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900 AM

First Friday every
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