

Prolonged drought leaves mark on beef industry

Drought throughout the Southern Plains has taken its toll on Oklahoma cattle producers over the past two years. Ponds are dry, pastures are brown and cattle herds have been liquidated, especially in western Oklahoma.



Drought Monitor maps from the Oklahoma Mesonet consistently displayed a prominent drought line slashing across the state from northeast to southwest. Now that rain has fallen across much of the state this past month, weary producers wonder if a long-awaited recovery is near.

Difficult decisions on the horizon

Families who have devoted generations of blood, sweat and tears to their herds have held on as long as they can but could still face difficult decisions this summer.

Lindsay Coker and her brother left careers in Houston to move back home with their own families to help their parents farm near Texola, Oklahoma. They grow cotton, wheat and hay while managing an Angus cow-calf operation. Some western Oklahoma producers like Coker live in an area teetering in the extreme to exceptional drought category.

“My dad always taught me to not overstock, but that has gotten a little more challenging,” she said. “This past winter, we had the leanest pastures we’ve ever started with, and we had to supplement more with forage, cake and protein.”

Coker’s operation uses a pasture rotational program to ensure forages recover to maintain cattle grazing and minimize inputs. However, this method is more difficult to follow when grass is stunted or dormant from drought. As a result, additional hay must be purchased, and the concentrated, processed cake cattle feed made from distillers’ grains, soybean meal, sunflower meal and other crude protein is expensive.

When hay can’t be found and water is scarce, older cattle and those not bred are sold to reduce expenses. This year, the Coker family’s thorough pregnancy checking improved the operation’s efficiency.

“We knew it wasn’t going to be an ideal situation going into this past winter, so we wanted to give our cows an optimal chance to thrive and produce to the best of their ability,” she said.

The recent rain recorded in Texola has stirred a new sense of optimism, and Coker anticipates the day when pastures can thrive and provide much-needed forage.

“Everything is starting to green up, and that helps our mood and outlook,” she said. “I hope this is the start of the turnaround. You’ve just

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got to have hope and faith that things will work out.”

Two-and-a-half hours north, rancher Johnny Owens owns yearlings near Buffalo in northwestern Oklahoma. He has 50% fewer cattle this year and said if his area doesn't receive additional rain soon, he will be forced to sell his stock.

“Since last August, up until three weeks ago when we got a couple of inches of rain, we've had almost no moisture whatsoever,” he said. “We have 20% of what our normal grass growth would be this time of year.”

After dusting in wheat last fall with no moisture, Owens and his Harper County neighbors are facing a failed wheat crop. Owens grazed his failed wheat, and others have followed suit to buy time.

“It's too expensive to feed all winter and this summer,” he said. “Producers with cows have culled heavily and will begin liquidating herds if a turnaround does not occur within the next 30 to 60 days.”

Timely rains for a green spring

In eastern Oklahoma, lush, green forage covers the landscape, a stark contrast to western Oklahoma's cracked, bare earth. Cattleman Dax Burchett manages Burchett Cattle Co. in Talala with his father and uncle and has worked as director of sales and operations at Mid America Feeds for 25 years.

“We're on the edge of stocker country, but we also have a lot of smaller, mom-and-pop operations that rely on hay when they don't have a lot of forage,” Burchett said.

Mid America Feeds typically provides feed for about 300,000 head of cattle in northeast Oklahoma every day, but drought conditions earlier this year forced local producers to cull at least 10% of their herds. The reduction in numbers

trickled down to lower feed sales at the mill.

Burchett's cow-calf and stocker operation was also impacted by the drought with diminished pond water, hay and forage. The Burchett family pregnancy checked cows and heifers, culling 10% to 20% of the herd. Average weaning weights dropped, and fewer cows bred back from the previous year. A dry, barren landscape began to affect the livestock that lived on it.

“We were watering a large percentage of our animals on city water, which because we live next to a large lake wasn't an issue, but we would have had to reduce numbers due to water needs,” he said.

But in February, Burchett's area of northeast Oklahoma received a lifesaving rain that filled some ponds and alleviated the drought's intensity. Timely showers also fell in March and April, and now Burchett is developing a pasture recovery plan after two years of poor forage yields.

“We're going to top dress our pasture more for a quicker healing process,” Burchett said. “Even in drought years, we didn't skip on weed spray. You want every little bit of moisture to go to grass, and we've fertilized a little now that it's more affordable.”

The countdown to recovery

Improving weather conditions are chipping away at the broader area of drought, but drought recovery takes years, said Derrell Peel, Oklahoma State University Extension livestock marketing specialist. In his latest segment on SUNUP, OSU Agriculture's weekly production agriculture television show, Peel said 54% of Oklahoma pastures are still in poor condition.

“It's highly unlikely that we could stop herd liquidation completely,” Peel said. “It's deceiving – pastures look green, but producers tell me there's not a lot of growth. Unless we get a lot of follow-up moisture within the next couple of months, we'll still see a somewhat limited forage season.”

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During the first half of 2023, cow and heifer slaughter has climbed as producers reduced numbers. During a drought, more female cattle are sent to market, a key indicator of desperate times, Peel said.

"It's all related to the female side of the industry. The fastest thing we can do [for recovery] is cut back on cow slaughter. I think it will drop as we go throughout 2023," he said.

If a wetter weather pattern continues, pastures and hay fields will produce more forage yields this summer, and producers can hang on to what's left of middle-aged cows and young heifers to begin rebuilding herds. Only then can the Oklahoma beef industry begin to recover.

"Producers will rebuild in earnest this fall, and females will be extremely expensive next spring," Peel said. "That's going to add another challenge for the ones who need to buy females to rebuild."

Currently, Peel said calf market prices are 40% higher than they were in October 2022, and those prices will jump even more when drought conditions subside enough to the point that cows and heifers are pulled off the market and retained on the ranch.

High prices are a good thing in theory, but for those ranchers who had to liquidate and now want to get back in the game, the price to play will be very expensive.

"High input costs and drought impacts mean a little bit slower recovery process than the last drought," Peel said, referring to the drought from 2011 to 2013. "We had two years of high cattle prices in 2014 and 2015, but this time around, we'll see a relatively elevated cattle price situation for an extended period of time."

Tighter supplies, higher prices

While ranchers watch the skies for rain, beef consumers can expect to feel the effects of a drought-stricken industry. Beef production is expected to slow. Supplies will tighten, and shoppers will pay higher prices for beef.

"Next year and beyond, we're going to make a decreasing supply of beef even smaller, because to increase production long term, we will have to save heifers," Peel said. "You can't fix things fast – this industry turns slowly."

Peel said current retail beef prices have been steady for the past 15 to 18 months. As cattle inventory drops to recover from the drought, consumers should expect higher prices at the meat counter.

"We're setting ourselves up for better conditions in 2024. That's the earliest I would expect to see the tightest squeeze on cattle sold at market," Peel said.

As summer grilling season begins, consumers should take note of their grocery bill during the next few months. Chances are that the cost of a steak or ground hamburger will cost even more next year as Oklahoma endures the painstaking process of drought recovery.



Producers wait in line with trailers full of cattle to unload the animals for sale at the Perkins County Stockyards.

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OSU Ag Research collaborates with African researchers to combat ticks

An Oklahoma State University researcher recently traveled to Namibia, located in southwest Africa, to establish a relationship with the University of Namibia in hopes of combating one of the world's most problematic parasites.

"I've wanted to get back to Namibia ever since I arrived here," said Bruce Noden, OSU associate professor of medical and veterinary entomology, who worked at the Polytechnic of Namibia (now the Namibia University of Science and Technology) from 2010 to 2013.

In Oklahoma, Noden has studied the encroachment of eastern red cedar and the tendency of ticks to live underneath the invasive tree species. In the dry climate of western Oklahoma, ticks prefer the humid climate under eastern red cedars.

Namibia faces a similar tick problem with the invasive plant species of thorn bushes and trees.

"The eastern red cedar is providing a habitat that ticks would not normally have in the dry climate, so our question was if it's happening here with this tree, what's happening in parts of Africa experiencing woody plant encroachment?" said Noden, who traveled to Namibia for six weeks in January and February through the Department of State's Fulbright Specialist Program, which allows short-term trips for creating collaborative relationships, teaching courses or helping institutions establish curriculum.

Noden said the goals of his trip were to establish a relationship with Dr. Simbarashe Chitanga, associate professor of veterinary parasitology at the University of Namibia, and to renew old contacts in the country to get a feel for its current research climate. Chitanga previously reached out to him about his tick research, and the two researchers discussed collaboration.

"A good amount of the time was spent getting to know each other, going out and looking for ticks in the vegetation, pulling ticks off of cattle, identifying ticks, providing feedback on some of their research proposals, and updating my records on

what has been found in southern Africa regarding ticks," Noden said. "In general, we were trying to develop an ecological framework, so if I go back there to work on this issue, we know what is already known and what still needs to be done."

Noden is concerned about Africa's tick problem because of the human and animal diseases that can result from pathogens in the ticks.

"A lot of these encroached areas in Africa are where high amounts of free-range, hormone-free beef is being raised for export to the U.S. and Europe, and there are some significant pathogens in their ticks," he said. "If we can link the ticks with encroached areas, then they can get rid of their encroachment to take care of some of their tick problem. But we don't know that yet. That's why we need to be there."

Noden said he is applying for funding in hopes of returning to Namibia for two to three months next year.

"It is a whole different world than ours, so the question is can we take what we're learning here and apply it there?" he said. "If I were to return, I would focus on getting preliminary data on what's happening with thornbush encroached pastures and ticks in Namibia."



Thorn bushes and trees house ticks in the country of Namibia where an Oklahoma State University researcher visited to build collaborative relationships for tick research. (Photo by OSU Agriculture)

OSU Agriculture tapping into the potential sweetness of Oklahoma



Oklahoma State University researchers are exploring the potential of maple syrup production in the state. (Photo by Shutterstock)

Oklahoma State University researchers are hoping to tap into the potential of a \$132 million industry by exploring maple syrup production in the state.

Maple syrup production in the U.S. produces 4.37 million gallons annually, but the industry currently does not exist in Oklahoma. That's why Lu Zhang, OSU assistant professor of horticulture, and her colleagues are spending the summer visiting maple groves across Oklahoma.

"There is a large maple production industry in the northern part of the U.S., but not here, so we wanted to look at whether maple syrup collection was possible here," Zhang said.

Five maple tree species are indigenous to Oklahoma — sugar maple, red maple, silver maple, boxelder and Florida maple. Sugar maple, the maple species most commonly used to produce syrup, and silver maple are found in at least 15 Oklahoma counties. According to Zhang's preliminary research data, sugar maple syrup can be harvested, and the other four Oklahoma species have potential for being harvested.

"The potential taps in Oklahoma for the five maple species are 5.8 million," Zhang said. "It is important to explore the potential of alternative maple species for syrup production in different geographic locations."

Through a \$500,000 U.S. Department of Agriculture grant, OSU researchers and Extension specialists will visit maple groves in Idabel, Talihina and Quapaw this summer to establish them as sap harvesting locations for research. Sap from sugar maple trees has traditionally been collected by Oklahoma Native American tribes for certain uses. Zhang and colleagues Bob Heinemann, superintendent of

the OSU Kiamichi Forestry Research Station, Mike Schnelle, OSU professor and Extension ornamental/floraculture specialist, and Lu Zhai, assistant professor of natural resources, have formed a working relationship with the Choctaw Nation to explore syrup production.

"We will determine how much maple sap can be collected seasonally from the five maple species using traditional buckets/bags, gravity-based tubing systems and high-vacuum tubing systems," Zhang said. "This project will answer the basic questions landowners ask before investing in maple syrup production. This could be the start of a maple syrup industry in Oklahoma."

The other part of the project is letting people know about the potential of syrup production, Zhang said. Researchers will create and share information through a regional maple tapping network that uses standardized tapping techniques for sap collection and data recording. Schnelle will establish maple production workshops this fall to share the research findings with potential syrup producers.

"Over the next two years, I will be providing outreach to landowners. I want to work with people already blessed with large trees and people who are just starting out," Schnelle said. "For those who aren't established, they can start up for the future. If people are willing to wait years for pecan and chestnut trees to come to full term, they should be willing to do so for maple trees."

Schnelle said he wants to encourage people to grow dual-purpose maple trees for syrup production and ornamental use as well as encourage landowners with maple trees who do not want to harvest syrup to lease their land to others who want to do so.

He said he and his colleagues will bring in Michael Farrell, an expert from New Leaf Tree Syrups, to train the research and Extension specialists in maple tapping. Initial planning for fall workshops is underway for the Idabel and Talihina areas.

"Right now, we are staying with indigenous maples, but I could see us expanding to other maples in the future. This could be a great long-term project," Schnelle said. "We're excited with what we are seeing and hearing so far with people's interest. This whole idea of Oklahoma-made syrup is exciting. I think people could make a good living out of this, especially as a side business."

Private Applicator Recertification

July is right around the corner and I wanted to remind everybody that the Oklahoma Department of Agriculture, Food and Forestry (ODAFF) will start recertification of Private Applicators on July 1st. All Private Applicators who have chosen to retest or those that did not get their required number of CEU's for this cycle may retest beginning July 1st, 2023.

All current Private Applicators are certified through December 31st of this year. ODAFF should be sending out letters and e-mails to all current applicators explaining this process. If you have applicators in your counties that are close to getting their CEU's, please tell them to not wait till the last minute to get those final CEU's.

Also, if you have PA's that need to retest, I would recommend that they retest as soon after July 1st as possible. If everybody waits till the last minute, the testing centers will not be able to accommodate that many applicators in December.

Please remember that the early retesting date is for Private Applicators only. All other commercial and non-commercial applicators (Ag Plant, Aerial, Structural, Demonstration & Research) who need to retest this year, must wait till they are notified by ODAFF. Their retesting date will begin on September 1st.

As always, recertification by CEU's is not mandatory, it is one way to recertify, the other is to retest. Applicators have never been required to get CEU's, it is their choice.

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Persons with disabilities who require alternative means for communication or program information or reasonable accommodation need to contact Rick Nelson, Ag Educator at (580)237-1228 or rick.nelson@okstate.edu at least two weeks prior to the event.