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ANIMAL SCIENCE E-NEWS

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**DIVISION OF AGRICULTURE
RESEARCH & EXTENSION**
University of Arkansas System

Investigating Animal Deaths on the Farm

Heidi Ward, DVM, PhD. - Associate Professor and Extension Veterinarian

One of the most frustrating events to happen to a livestock producer is discovering a dead animal in the field. In addition to the financial loss of that animal, one also worries that whatever caused the animal to die may affect others in the flock or herd. How can a producer find out if the death is an isolated event or the start of a major catastrophe? The simple answer is to perform a necropsy, but a thorough investigation requires a few more steps.

A necropsy is the systematic examination of a dead animal to determine the cause of their demise. The procedure can be done in the field or at a laboratory but must be done by a trained person (usually a veterinarian) with knowledge of the anatomy of that animal. Samples are taken from several organs for testing in the laboratory. Sometimes the examination alone can provide answers. For example, perilla mint toxicosis results in foam in the lungs. Anaplasmosis results in severe jaundice. Blackleg results in black and hardened muscle that smells like rancid butter. In other words, the examination guides what tests need to be ordered to confirm the diagnosis.

There are a few things that will help in the investigation, even before examining the animal. First, check other animals in the pasture for signs of illness before moving them to another area. Pictures should be taken of the carcass and its surroundings. Are there any potential toxic plants or contaminated water sources nearby? If so, place samples in a clean container for

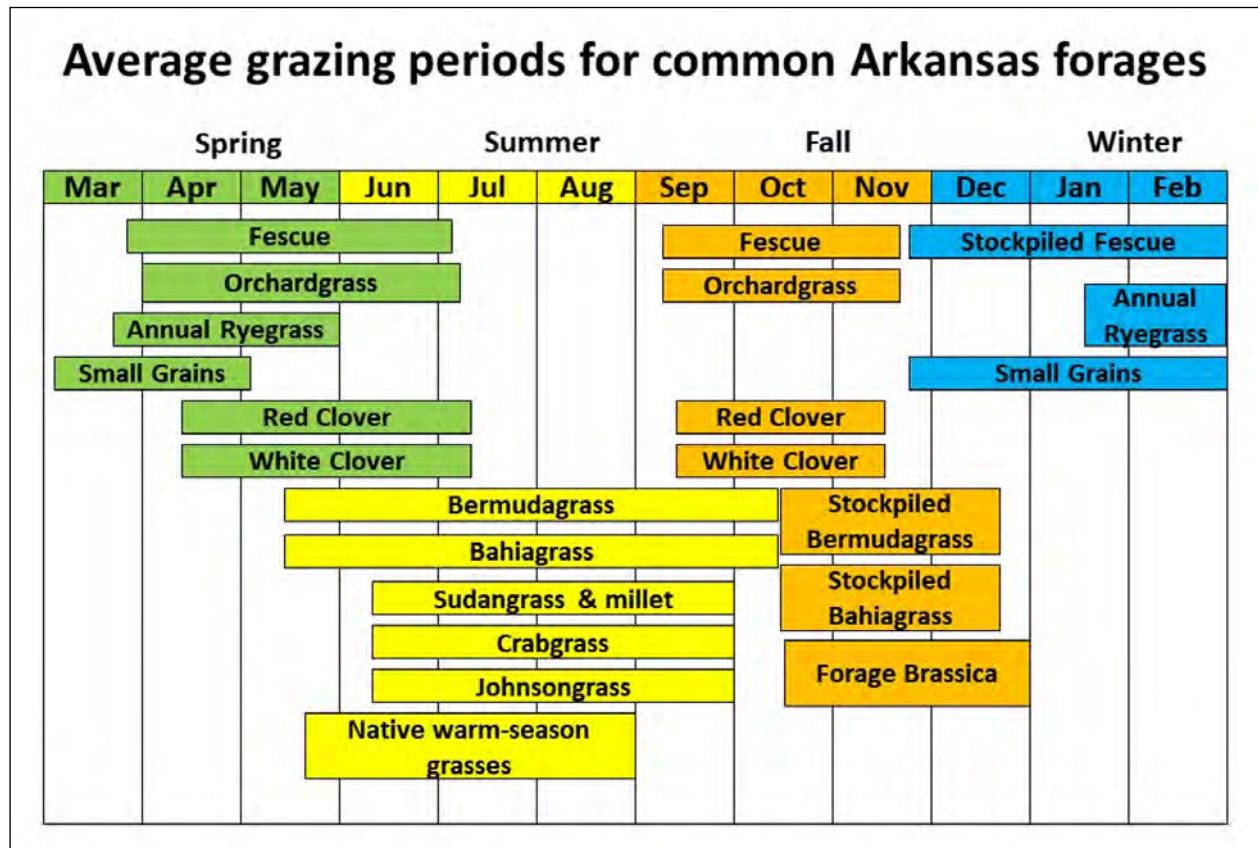
testing. If you are not sure, have your county Extension agent scan the area with you. After walking the field, call your veterinarian. He/she might be able to come to your property to perform a field necropsy. That would be the best-case scenario. If you do not have a veterinarian or you cannot get into contact with your veterinarian, call an Extension veterinarian or a veterinarian at a diagnostic laboratory for instructions.

Arkansas has two veterinary diagnostic laboratories: the Arkansas Livestock and Poultry Laboratory at the Department of Agriculture in Little Rock and the Veterinary Diagnostics Lab on the University of Arkansas campus in Fayetteville. If a field necropsy isn't possible, the carcass will need to be loaded on a truck and taken directly to the diagnostic laboratory within 24 hours of finding the body. It is important to keep the carcass cool with ice packs to slow down decomposition while transporting to the laboratory.

Finding a dead animal will always be frustrating. It is important to remember to stay calm and follow the above steps to find out the cause of death. A skilled investigator can quickly rule out the more common deadly afflictions. Once a diagnosis is confirmed, a veterinarian can develop a plan to protect the rest of the flock or herd. For more information on necropsies, visit the Arkansas Department of Agriculture website at <https://www.agriculture.arkansas.gov/livestock-poultry/veterinary-diagnostic-lab/>. ■

John Jennings, Professor and Forage Specialist

Look at this calendar and think about how you might be able to use your existing forages to extend your grazing season and also to decide if other forages can be easily added to your system to fill forage gaps during the year. ■



Fall Update from Southwest Research and Extension Center

Daniel Rivera, Ph.D Director, SWREC

It has been a busy summer for the group at the SWREC! In May we had several interns from Southern Arkansas University in Magnolia work on the beef cattle side. Ms. Hannah Ledbetter (Senior), and Ms. Taylor Orrell (Sophomore) worked with Whitney Rook and the beef group. They assisted with several projects, including a deworming study on the stocker unit, a pregnancy detection study with Whitney Rook, and a synchronization project with Wyatt Weber. In addition to day-to-day care and feeding of the study animals, students helped with forage sampling, forage grinding and did some work with the forage nutrient analyzer (NIR). They students also got to help with routine farm chores, from fence repair and building, plumbing repair, spraying and mowing. Ms. Sara Sweat (Sophomore) worked with Dr. Charles Looney and assisted in his reproductive Extension program, helped with Wyatt's data collection at Batesville, as well as helping the other crew out when she could.

The de-worming study was sponsored by Merck Animal Health and is examining two management options for grazing cattle: one is simply treating with an injectable and oral de-wormer at turn out; the second is to follow up the initial deworming at day 28 and 56 with de-wormer crumbles in the feed. The cattle are scheduled to graze until September 22, then they will be sampled again for parasites, and obtain a final weight. We hope to have data together for the field day on October 28. Registration to the field day can be found here:

https://bit.ly/SWREC_Cattle_Field_Day_2022

A stand-alone project related to the de-worming study was a simple survey of parasite loads within cattle operations in Southwest Arkansas. Multiple county Extension agents (Jennifer Sansom, Jennifer Caraway, Sherry Beaty- Sullivan, Shaney Hill, Kim Rowe, and Jimmy Driggers) collected samples from various operations throughout the region. We are still waiting on a few more samples to come in, but preliminary data show some most herds to be in decent shape with regards to parasite loads, which speaks to the level of management of those herds. In other instances, we may be seeing the effects of the dry weather and lack of forage with some herds having high parasite numbers despite being treated for parasites (possibly due to the cows having to graze closer to the ground).

Higher input costs mean we must more judiciously manage our herds. One of the most effective things we can do is pregnancy detect, since that allows us to get the animals not paying the bills off site and allows us to focus our inputs on the productive animals. A small study was done to compare two blood tests to standard ultrasound pregnancy detection. Our final goal was to see how accurate the blood tests are, and to do an economic analysis of the tests to see if they would fit for our producers. Initial results suggest that both tests were about 92% accurate (92% of the time they matched the



ultrasound diagnosis). The economic assessment still needs to be conducted.

We are doing a follow up of sorts to the demonstration led by Kenny Simon and Dr. John Jennings last year at SWREC. We have planted pearl millet along with annual ryegrass, to see how much summer/early fall grazing we can achieve off the millet and how easy that can transition to winter grazing with annual ryegrass. We used two establishment methods (burn existing sod with glyphosate, and no till into the sod; or scratch existing sod with disk and broadcast). While needed, the rain came at the worst time which delayed our planting by about 2.5 weeks. We will examine weight gain, grazing days, and total cost of gain for the two methods. Finally, we have started year 2 of the weaning project, examining fenceline vs. pasture based vs. drylot based weaning.

It has been a busy summer at SWREC with the various interns and projects. I would like to express my gratitude to Cody Shelton, Whitney Rook, Cyle Jones, Austin Frugé, and Guy Womack for their help at various times throughout the summer with sampling, managing interns and everything needed to keep the operation moving forward. ■

Livestock Team Success at the Oklahoma and Texas State Fairs this Fall

Dr. Bryan Kutz, Instructor/Youth Specialist - Agricultural, Food and Life Sciences

The State Fairs of Oklahoma and Texas in proved to be great contest trips for the University of Arkansas's Intercollegiate Livestock Judging Team. The team finished ranked fourth in each contest and several team members finished individually in the top ten.

At the Oklahoma state fair livestock judging contest Julie Isbell was the reserve champion individual overall. Julie was champion individual in the Sheep and Goat division and third in reasons. Rylee Simpson was 7th place individual overall.

The team then traveled to the Texas state fair in Dallas two days later. The team was named champions in the Sheep and Goat division. Individually, Rylee Simpson was 6th overall, 8th in Swine and 8th in Sheep and Goats. Julie was 11th overall, and 7th individually in Sheep and Goats. Ryan McDuffie and Carter Culp were also individually in the top ten in the Sheep and Goat division.

These two contests were very valuable as the team prepares to wrap up the judging season with trips to the



Team Members Left to Right: Carter Culp; Walker Antilla; Rebekah Oneal; Ryan McDuffie; Rylee Simpson; Julie Isbell; Keely Harrelson; Kiley Weir; Kason Cathey

American Royal in Kansas City, MO this month and the North American International Livestock Exposition in Louisville, Ky in November.

Congratulations and good luck! ■