UK Forage News

Keeping Forage-Livestock Producers in Kentucky Informed
Dr. Ray Smith and Krista Lea, editors

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Imported Fire Ant Update

Imported fire ants (IFA) have been a recurring problem in several Western Kentucky counties for almost 25 years. The pattern has been that suspect IFA mounds (Figure 1) are reported, confirmed by a specialist, treated, and then eliminated. This has kept IFA from becoming established in the western portion of the state. Most of these reported mounds have been in counties near the Land Between the Lakes Region.

Figure 1. IFA typically makes raised, dome-shaped mounds to help capture sunlight and heat the colony. When the colony is disturbed, workers "boil out" to defend their nest (Photo: Ric Bessin, UK).

In the winter of 2022, an IFA mound was reported, confirmed, and eliminated in McCreary County. Soon after that, dozens of new mounds from various southern parts of the county were reported and confirmed, followed by numerous reports in southern Whitley County. IFA mounds have also been found in several locations in Knox County and single locations in Bell and Laurel Counties. The mounds identified in Knox, Bell, and Laurel counties have been treated, but infestations in portions of McCreary and Whitley Counties are too extensive to eliminate.

While IFA may have some value as a predator of insect and tick pests, they are a serious public health threat. For many people, an IFA sting is painful and causes a raised pustule, but for some it can cause a serious anaphylactic reaction that can require prompt medical attention. UK Entomology's webpage has a factsheet on IFA (ENTFACT-469) that describes its identification, significance, biology, and management.

While it may not be possible to eliminate IFA once it becomes established in an area, it is important to slow the spread of this invasive insect into new areas of Kentucky. Persons that find a suspect mound should contact their county Extension agent or take a picture and e-mail it to ReportAPest@uky.edu.

For more information about the current status of IFA in KY, visit this webpage.

~ Ric Bessin and Jonathan Larson, Entomology Extension Specialists, and Joe Collins, State Nursery Inspector for Kentucky Pest News

Forage Timely Tips: December

- ✓ Begin utilizing stockpiled pastures. Graze pastures with orchardgrass and clovers first. Save tall fescue pastures for late winter grazing.
- ✓ Using polywire, strip graze stockpiled pastures to improve Utilization. Start at the water source and allocate enough forage to for 2-3 days. Back fencing is not necessary since pastures are not regrowing this time of the year.
- ✓ Make plans to frost seed red and white clover onto closely grazed tall fescue pastures in February. Seed supplies of improved varieties may be tight.
- ✓ Begin hay feeding as stockpiled forage is used up.
- ✓ Supplement hay with commodity feeds as needed.
- ✓ Minimizing waste by utilizing ring feeders.

Hart County Producers wins Forage Spokesperson Contest

Matthew Isaacs of Hart county, KY won the Kentucky Forage and Grassland Council's annual Forage Spokesperson Contest. At 33 years old, his journey into farming began over a decade ago, marked by a deep-seated passion for cultivating the land and a commitment to sustainable practices. Through the years, Matthew has embraced the challenges and joys that come with farming, witnessing the growth of both crops and livestock. Nestled in the heart of Horse Cave, KY the family-run farming operation, Isaacs Angus, has thrived for generations, cultivating a deep-rooted connection to the land and a commitment to sustainable agriculture.

His spouse, Madison, is an essential partner in this journey, bringing a keen eye for crop management and livestock. Children, Emma and Jacob, are the next generation of caretakers, Emma is in Kindergarten and

Jacob is three. They enjoy checking on cattle, bailing hay, and the many other tasks that have to be done on the farm. Together, the Issacs embrace the challenges and rewards of farming, fostering a legacy of dedication, resilience, and the simple joys that come from working the land as a family.

The contest was held during the Ky Grazing Conferences Oct. 31 and Nov. 1. Matthew will travel to the American Forage and Grassland Council's annual conference in Mobile, AL to complete in the National Forage Spokesperson Contest January 7-10, 2024.

ARS Scientists Provide Insight into an Age-Old Crop

Agriculture has been around for about 10,000 years, so it's not often that scientists are called on to conduct research on a new crop. However, when the 2018 Farm Bill reversed a 50-year-old federal ban on growing hemp, and Congress subsequently appropriated funding to study it, that's exactly what happened. Suddenly, researchers were asked to help growers fight diseases of hemp and mitigate the damages they cause.

As a crop, hemp is not exactly new – its first recorded cultivation was nearly 5,000 years ago in China. However, due to the 1970 ban, researchers in the United States have not had much opportunity to work with it until now.

"Hemp is a relatively new crop for us to work on in the United States, therefore, we don't know what sort of plant diseases it might be susceptible to in Oregon, the Pacific Northwest (PNW), and the rest of the country," said Hannah Rivedal, plant pathologist with the Agricultural Research Service (ARS) Forage Seed and Cereal Research unit in Corvallis, OR.

ARS researchers there are partnering with colleagues at Cornell University, Alabama A&M, Oregon State University, University of California-Davis, the University of Wisconsin, and many other institutions to optimize hemp production and help hemp growers find new and existing markets for this new crop.

Farmers in the PNW grow crops related to hemp, such as hops, that may help scientists understand what potential pathogens could affect hemp and how they might impact or cause disease in other crops in the region. To better understand current diseases of hemp, research teams are visiting fields and surveying plants throughout the growing season over 3 years, beginning in 2021.

Rivedal said that what they learn about pathogens that affect hemp will both educate growers about the diseases they should monitor and inform future research efforts.

"Agriculturally, this is an important study so that we can understand the types of management challenges a hemp grower may face," Rivedal said. "Disease management is a costly challenge to growers and plant diseases can reduce yields. We want our growers to be able to produce the best product they can with the lowest costs."

ARS researchers also want to know how diseases of hemp might affect other crops and impact yield and production costs. "We have identified several diseases, including fungal pathogens that cause diseases like powdery mildew, fusarium root and crown rot, and botrytis bud rot," Rivedal said.

The researchers have also identified pathogens that cause curly top disease and "dudding" disease, which causes stunted growth, brittle stems, and less flower mass. In addition, they have found root lesion nematodes associated with hemp roots and soil, though, in general, the sizes of plant parasitic nematode populations have been low.

The presence of these pathogens in hemp is a concern because hemp could act as a vehicle for pathogens to infect other crops. "We will continue to investigate this concern through our survey and in future research efforts," she said.

Hemp is treated differently in a legal sense from recreational or medicinal marijuana. Even though they come from the same cannabis species, the legal difference is the amount of tetrahydrocannabinol (THC) the plant contains. If the cannabis plant contains more than 0.3% THC, it is considered marijuana. Medical or recreational marijuana cannot be produced legally with a hemp license.

Industrial uses of hemp include clothing and shoes; ropes and nets; paper and building materials; biofuel; and food products and beauty products.

"What's really exciting about this project is the fact that production of this crop in the United States has been restricted for so long that it's basically brand new," Rivedal said. "It's exciting to be teasing out the pathogens of hemp since it has not been done in many years. So, there's a lot to learn and understand, which is exciting to me."

Visit the USDA website for information on the Hemp Production Program. – By Scott Elliott, ARS Office of Communications

UK researchers warn that recent weather could be problematic for mares grazing tall fescue pastures

According to researchers at the University of Kentucky Martin-Gatton College of Agriculture, Food and Environment, Kentucky's late summer drought, followed by mild/late fall weather and recent rains could put mares at risk on tall fescue pastures.

In a statement jointly issued by Megan Romano, specialist veterinary toxicologist at the UK Veterinary Diagnostic Laboratory (VDL); Krista Lea, research analyst and coordinator of UK's Horse Pasture Evaluation Program; Emma Adam, research and industry liaison and assistant professor

with UK's Department of Veterinary Science; and Ray Smith, extension professor and forage specialist within UK's Department of Plant and Soil Sciences, horse farm owners and managers were advised on the following.
Important observations:

- Recent rains after extended drought have enhanced endophyte-infected tall fescue production of the toxic compound, ergovaline.
- Owners should restrict exposure to ergovaline in late-term pregnant mares to avoid tall fescue toxicosis. Signs of tall fescue toxicosis include poor or absent milk production; poor udder development; prolonged gestation, greater than two weeks; thickened, retained placenta; "red bag" deliveries; and potentially fatal dystocia/foaling trauma.
- November and December are typically low pasture growth months where low ergovaline levels are seen, however the UK VDL recently tested numerous tall fescue samples and detected high ergovaline levels. Often fescue is diluted with other grasses, but recent weather conditions have allowed fescue to grow while bluegrass and orchardgrass have slower growth or are dormant.
- This is an issue that can affect states beyond Kentucky. The "fescue belt" includes 50% or more of the acreage in the states of Alabama, Arkansas, Georgia, Illinois, Indiana, Kansas, Kentucky, Maryland, Mississippi, Missouri, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Virginia and West Virginia.

Protective measures:

- Removing mares 60-90 days from their due date from pastures containing more than 20% toxic tall fescue onto pastures containing mainly orchard grass, Kentucky bluegrass or novel endophyte fescue.
- Feeding appetizing, high-quality hay, such as alfalfa or alfalfa mixed hay, can dilute the intake of ergovaline eaten on pastures, reducing the risk in situations where moving mares to very low fescue pastures is not feasible.
- Discussing managing high-risk mares and using domperidone with a veterinarian.
- Once temperatures drop into the high teens, ergovaline usually drops for the remainder of the winter.

UK resources:

Owners can test pasture samples for ergovaline at the UK VDL. Samples can be collected using the instructions found here. Local county extension agents can assist with sampling and results interpretation. Find your county extension agent here. Learn more about tall fescue, including mitigation strategies and new novel endophyte tall fescue varieties with no ergovaline, by visiting the Alliance for Grassland Renewal.
Attend UK's Equines and Endophytes Workshop Jan. 31 in Lexington. Register today at https://eew24.eventbrite.com. ~ Holly Wiemers

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Forage News

Upcoming Events (see Forage website for details and to register, click on EVENTS)

Jan. 7-10 - AFGC Annual Conference, Mobile, AL
Jan. 31 - Equines and Endophytes Workshop, Lexington
Feb. 8 –KY Alfalfa Stored Forage Conference, Bowling Green
Feb. 19-20 - Heart of America Grazing Conference, Cincinnati, OH
March 19 - Tall Fescue Renovation Workshop, Greenville, TN
March 21 - Tall Fescue Renovation Workshop, Batesville, AR
March 26 - Tall Fescue Renovation Workshop, Kearneysville, WV

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