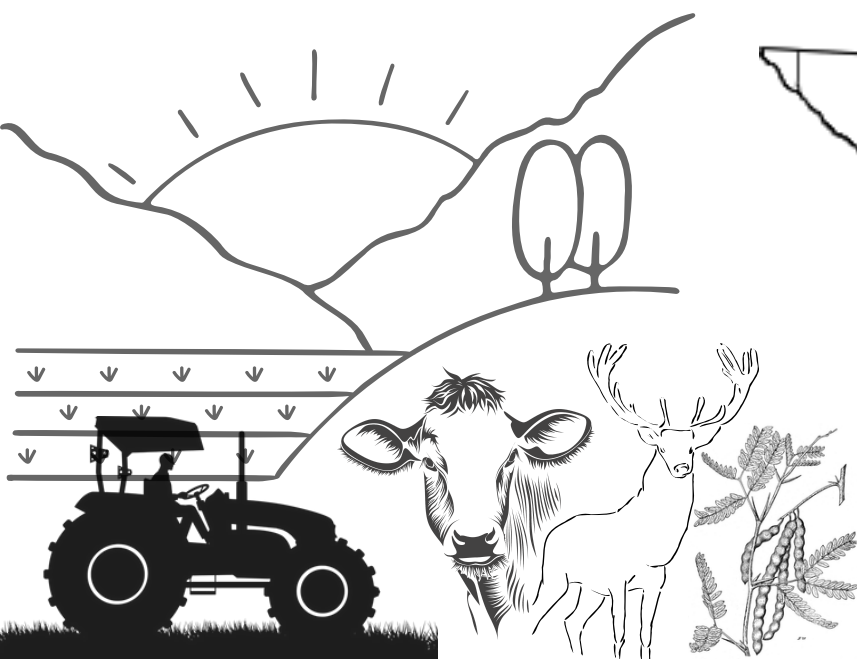




ZAVALA COUNTY

AGRICULTURE AND NATURAL RESOURCES

June 2023
Newsletter



Texas A&M AgriLife is committed to providing safe and non-discriminatory learning, and work environments for all members of the AgriLife community. AgriLife provides equal opportunity in all programs, activities, education, and employment to all persons regardless of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation, gender identity, or any other classification protected by federal, state, or local law.

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TEXAS BEEF QUALITY ASSURANCE

BQA TIPS



Safe Injection Practices for Your Herd

It is important to follow BQA principles and label directions when giving injections.

Subcutaneous injections (i.e., under the skin) should be given in either the neck or elbow pocket. All intramuscular injections should be given in the neck regardless of the animal or the type of injection; this includes estrus synchronization products sometimes used in replacement heifers and cows. Whenever the label allows for either intramuscular or subcutaneous injections, the subcutaneous route should be used.

Additionally, make sure to leave at least 4 inches between each injection and do not place one injection under another one.

For more information please visit: <https://texasbeefquality.com/>

Districts 11 & 12 CEA's Rangeland Monthly Digest May 2023



GMOs

Genetically modified organisms include bacteria, plants, or animals whose DNA has been altered through genetic engineering. For centuries, humans have engaged in selective breeding practices to produce organisms with more desirable traits. Sometimes this produced mixed results - when an organism had the desired traits but unwanted traits were also present. Genetic engineering can be a way around the mixed results that sometimes occurred with selective breeding practices.

GMOs can be a controversial subject. Remember, there's two sides to every story. Let's relay the facts and let our stakeholders decide for themselves. Here's a couple of AgriLife links to get you started gathering some GMO facts:

1. TX Ag. Law Blog: [GMO Archives](#)
2. [AgriLife Today GMO Article](#)

May by the #s



4 events

D12 CEA Program Planning & 3 Programs: Rangeland Ecology, Engaging with Stakeholders, Herbicide Application & Common Mistakes



1 applied research

Jim Wells: testing spring huisache control



937 miles

in support of CEAs, programming, brush research, and training next generation of professionals

Newest GMO Cow

News | Hot off the Press



BVD virus is estimated to cost the US beef industry billions of dollars annually.

If you're not signed up for the *Morning Ag Clips*, then you may have missed the article on the newest genetically modified organism (GMO); a calf that is resistant to bovine viral diarrhea virus (BVDV).

BVDV affects cattle and other ruminants, but is not a human health concern. It can be transmitted to a calf in the womb from an infected mother, between animals in close contact, through biting insects, and even contact with infected biological substances or objects. Signs of acute infection in adult cattle are similar to humans suffering from the flu (fever, discharge from eyes and nose, diarrhea, etc.) but the clinical symptoms can be highly variable. Calves infected during development may be aborted or may be born with birth defects if carried to full term. See this [fact sheet](#) to learn more about BVDV.

BVDV is a leading cause of economic losses due to unhealthy cattle and it has been estimated to cost the US beef industry \$1.5 to 2.5 billion a year ([reported in Riley et al., 2019](#)). The Texas Animal Health Commission established a BVDV rule in 2020, requiring all sellers to disclose the status in writing to a buyer of all BVDV positive cattle that are persistently infected. [Click here](#) for more details.

The GMO calf, named Ginger, was born in summer 2021 and has shown no observable health effects when exposed to BVDV. Ginger's health and her ability to successfully have and raise her own calves will be monitored. [Click here](#) to read the full article on Ginger and to sign up for *Morning Ag Clips*.

CEA Spotlight

Thanks so much!

Thank you Rogelio Mercado (Jim Wells ANR CEA) for your assistance in finding sites to test spring huisache control and helping me test my new equipment. I hope to continue to learn from all of our CEAs. Keep the opportunities and ideas coming!

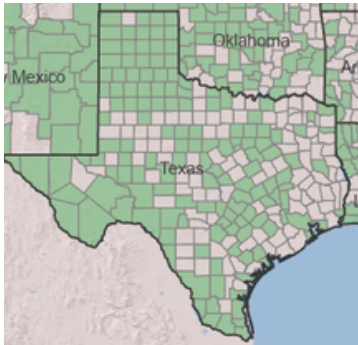
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<https://ccag.tamu.edu/extension/rangeland-habitat-management/>
Teams Phone #: 361-360-4533

Districts 11 & 12 CEA's Rangeland Plant Identification May 2023



Distribution Map Credit: USDA Plants Database @ plants.usda.gov

Silverleaf Nightshade Distribution

Silverleaf nightshade is found in all ten TX ecoregions. Often, it continues to bloom during the dry seasons in Texas, when many other plants have stopped blooming.



Silverleaf Nightshade Look-a-Likes

There are many nightshades and nettles that have:

1. star-shaped flowers with yellow stamens in the center,
2. have flower petals that are purple and white in color, and
3. have spines or prickles on the stems and leaves.

The narrow, elongated leaves with the wavy leaf margin is one of the best characteristics to distinguish silverleaf nightshade from other species with similar flowers. For example, western horse nettle has broad, oak-like shaped leaves and Carolina horse nettle has broader leaves that are slightly lobed. Click on the links to see images of the look-a-like species.

Fortunately, chemical treatment recommendations to control silverleaf nightshade and these 2 nettle look-a-likes are the same, with the same control ratings.

Silverleaf Nightshade

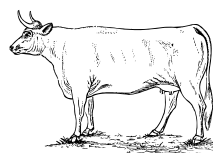
Solanum elaeagnifolium



Plant Identification Tips

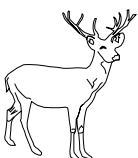
Silverleaf nightshade is a native, perennial forb that grows up to 2' tall. It can reproduce and spread by both rhizomes and seeds. The elongated leaves are narrow and have wavy leaf margins. Leaves have tiny hairs and are alternately arranged on the stem. Sometimes, there are prickles on the leaves and the stem.

The flowers have 5 fused petals, which resemble a star. The flower petals are mostly various shades of purple, but can also be white. The stamens (male reproductive part of flower in the center) are yellow to yellow-orange in color. The fruits look like cherry tomatoes and are yellow when immature and turn black or brown when mature.



Livestock & Wildlife Value

The leaves and fruit are toxic to livestock; the highest toxicity is in ripe fruits. Birds are not affected & readily consume fruits and spread seeds.



Risk and Management

Naïve livestock, especially cattle, are more susceptible to silverleaf nightshade's toxic agent. It has **reportedly poisoned** many livestock species and humans, but sheep and goats seem to be more resistant to the toxic agent than cattle. There are many herbicide control methods in **ERM-1466** that have very high (76-100%) control ratings. It is best to spray in spring, when the plant is flowering.

Parts of this article were derived from:

Richardson & King. 2011. *Plants of Deep South Texas*. Texas A&M University Press.

[Plants of Texas Rangelands Virtual Herbarium.](#)

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Sorghum Ergot

New Disease Threat to the Sorghum Industry

Joseph Krausz and Thomas Isakeit*

What is it?

Sorghum ergot is a disease caused by a fungus (*Claviceps africana*) that infects the ovaries of sorghum flowers and often converts them into a white, fungal mass (sphacelia). The most obvious external symptom of infection is the abundant exudation from infected flowers of an amber-colored, sticky fluid, or “honeydew,” which often drips onto the leaves and soil. Spores of the fungus are contained within the honeydew, and when these germinate they produce secondary spores on the surface of the honeydew, giving it a white-scum to powdery appearance. Wind rapidly spreads these secondary spores over long distances. The fungus also can be spread by seed contaminated with sphacelia or honeydew. Under certain conditions, *Claviceps africana* produces very durable, compact fungal structures called sclerotia.

Where is it?

Sorghum ergot has existed in Africa for many decades. It appeared in Brazil in 1995, and since then it has quickly spread throughout sorghum production areas in the Americas. It was first detected in the United States in Texas in 1997. During the 1997 season, sorghum ergot spread from the Lower Rio Grande Valley to the High Plains of Texas, and into Kansas, Nebraska, New Mexico and Georgia.



Newly formed honeydew dripping from an infected panicle.

How Are Different Types of Sorghum Affected?

Sorghum ergot infects only unfertilized ovaries. Once fertilized, an ovary becomes resistant to infection. The mechanism of this resistance is uncertain, but the resistance is highly effective. Any condition that prevents or delays fertilization increases the risk of ergot. Sorghum plants with inherent male sterility or with pollination difficulties caused by cool temperatures are most severely affected by ergot.

Because of their high self fertility, grain sorghum hybrids should sus-

tain very little damage from ergot, except where cool temperatures can predispose the flower to infection. Cool temperatures (average daily minimum below 55 degrees F) occurring 3 to 4 weeks before flowering inhibit pollen development, while cool temperatures occurring at flowering to 5 days thereafter can delay fertilization by slowing pollen tube growth. Therefore, grain sorghum maturing during the cooler temperatures of autumn is at greater risk of ergot than sorghum maturing during summer months.

Male-sterile sorghum (female “A” line) used in hybrid seed production is at significant risk because of a delay in pollination, since the female flower receives pollen from a different plant. Poor pollination caused by cool temperatures increases chances of ergot infection in normally resistant commercial grain sorghum hybrids. High humidity and moist conditions also favor ergot infection. Forage sorghums vary in their levels of fertility. Some forage sorghums, especially sterile hybrids, are very susceptible to ergot because they often produce little or no pollen and tillering provides a succession of sorghum flowers that can be conducive to the rapid and prolonged buildup of inoculum. Johnsongrass is a host of the sorghum ergot pathogen and likely serves as an overwintering source of ergot inoculum in south Texas.

*Extension Plant Pathologists, The Texas A&M University System.



White secondary sporulation of the ergot fungus on the surface of honeydew.

How is it a Threat to Texas?

Each flower infected with ergot represents a direct loss of one seed. Additional losses occur because the stickiness of infected panicles interferes with the harvest of healthy seed and favors the growth of saprophytic fungi, which can affect seed quality. A high incidence of ergot in sorghum forages also can result in abundant amounts of honeydew that can interfere with harvest by “gumming” the equipment.

Seed production fields are very susceptible to this disease. Texas produces approximately 90 percent of the hybrid sorghum seed planted in the United States and 45 percent of the world supply. To protect this seed supply, seed production fields may need to be treated with a fungicide and additional pollinator rows may need to be planted. These measures will add to the cost of hybrid seed production.

Evidence to date suggests that *C. africana*, the sorghum ergot fungus in the United States, has little or no toxicity to livestock, especially at the low quantities that might be consumed if good disease management practices are employed. However, the presence of ergot on grain sorghum may result in regulatory restrictions on grain shipment to other nations.

What to Do?

The following practices can minimize the development of ergot and limit its impact:

1. Time planting to avoid low evening temperatures (below 55 degrees F) during the period 3 to 4 weeks prior to flowering and from flowering to 5 days thereafter. The former induces pollen sterility and the latter slows pollen tube growth. Both subject the flower ovary to the risk of infection.

2. When planting in ergot-free areas, use seed treatment fungicides such as captan, thiram or Maxim®. Where the disease is already present, or if the seed has been stored for 3 or more months prior to planting, seed treatments are of much less importance than other practices for ergot management.



White secondary sporulation on honeydew that dripped onto leaves.

- 3.** After harvest, disk the fields to prevent sorghum ratoon and sorghum volunteer development. The ergot fungus can maintain itself on sorghum ratoon and volunteer plants not killed by winter freezes.
- 4.** Manage Johnsongrass within and around the borders of the field.
- 5.** Harvest forage sorghums prior to heading.
- 6.** In hybrid sorghum seed production, use an approved fungicide according to the label. Also use the most effective pollen management practices. It is not necessary to use fungicides for grain sorghum production.

More information on sorghum ergot can be found on the internet at:

(<http://www.cgiar.org/icrisat>)
 (<http://www.ars.grin.gov/ars/SoAtlantic/Ma yaguez/sorghumnews.html>)
 (<http://www.agr.state.tx.us/comm/pr112.htm>)
 (<http://cygnus.tamu.edu>)
 (<http://primera.tamu.edu.pubs/ERGOT.HTM>)

Texas A&M AgriLife Extension Service AgriLifeExtension.tamu.edu

More Extension publications can be found at AgriLifeBookstore.org

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The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating.

Southwest Texas Prescribed Burn Association

Kinney, Medina, Uvalde, and Zavala Counties



Benefits of Prescribed Burns:

- Lowers risk of more dangerous fires
- Increases water availability through plant removal
- Increases plant diversity
- Helps control invasive/unwanted species
- Reduces tree competition
- Improves wildlife habitat
- Minimizes the spread of pests and diseases

Want to learn more?

Join us at our next meeting September 12, 2023

12 PM @ The First State Bank of Uvalde

200 E Nopal, Uvalde, Tx

Contact info: (830) 426-2532 ext 3

Zavala County



Dangerous Creatures To Look Out For

Venomous Snake Species:

- Coral snake (1)
- Copperhead (2)
- Cottonmouth (3)
- Rattlesnake (4)



Venomous Spider Species:

- Brown Recluse spider (1)
- Black Widow spider (2)



Venomous Species:

- Striped Bark Scorpion (1)
- Centipedes (2)



Zavala County Texas A&M AgriLife Extension Service Soil Sampling

Analysis Suites offered by our agency:

1. Routine Analysis (R)
2. R+ Micronutrients
3. R+ Micro + Hot Soluble Boron (B)
4. R+ Micro + B + Organic Matter (OM)
5. R+ Micro + B + OM + Texture Analyses (TEX)
6. R+ OM
7. R+ TEX
8. R+ OM + TEX
9. R+ Detailed Salinity (SAL)
10. R+ Micro + B + SAL
11. R+ Micro + B + OM + SAL
12. R+ Micro + B + OM + SAL + TEX

Prices per sample:

1. \$12
2. \$19
3. \$26
4. \$46
5. \$66
6. \$32
7. \$32
8. \$52
9. \$37
10. \$51
11. \$71
12. \$91

Please stop by our office to pick up a soil sample bag and form

If you have any questions, feel free to reach out to our office, (830) 374-2883 or
stop by at 221 N 1st Ave, Crystal City, TX 78839

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