Top of the Windmill News

Summer 2022 2nd Edition

Kerr County AgriLife Extension Service
3775 Hwy. 27
Kerrville, TX 78028
(830) 257-6568
kerr@ag.tamu.edu
Kerr.agrilife.org

By: Justin Klinksiek CEA-Ag/NR

Calendar of Events

Sept 12	**Owning Your Piece of Texas: Key Laws Texas Landowners Need to Know-Fredericksburg**
Sept 13	**Ranchers Leasing Workshop-Kerrville**
Sept 24	**Learn Your Lawn & Landscape-Fredericksburg**
Oct 1	**Kerr 4-H Wild Game Dinner- Kerrville**
Oct 10 - 11	**2022 Bennett Trust Land Stewardship Women's Conference-Fredericksburg** ***"Building a Legacy of Environmental Stewardship"***
April 1	**Save the Date! Farm & Ranch Expo**

Farewell

It is with great sadness that I have to inform you that my last day as Kerr County Extension Agent for Agriculture & Natural Resources is Friday August 26, 2022. This was certainly not an easy decision to make, but one that my wife and I feel confident will benefit our family long-term. My time with AgriLife Extension has been very rewarding, but unfortunately, I am making a career change. With that being said, I want to personally thank everyone for being so helpful and welcoming here in Kerr County. Kerr County has been extremely good to us, and we are for sure planning to stay and raise our family here.

It has been great working with Kerr County agriculture producers, homeowners, landowners, and most importantly the youth. I plan to continue helping Kerr County 4-H as a volunteer with Livestock Judging, Livestock Skill-a-Thon, livestock projects, and the Kerr County Junior Livestock Show. I currently serve on the Kerr County Farm Bureau Board where I will continue to serve and advocate for Texas Agriculture.

I look forward to what the future has to offer, and again, thank you!

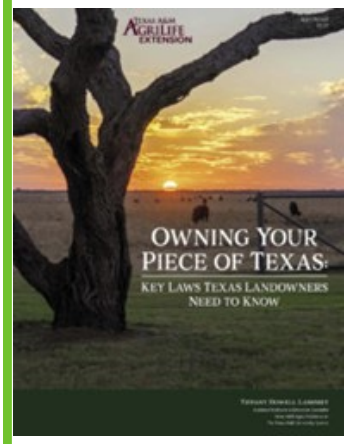
Sincerely,

Justin T. Klinksiek

Hill Country Landowners Leasing & Legal Updates in September

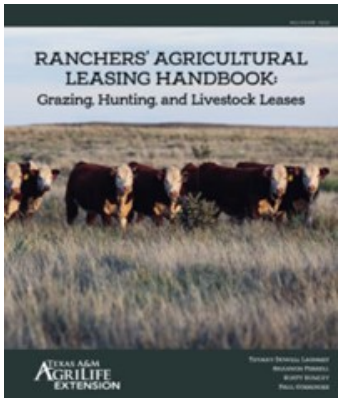
Two award-winning Texas A&M AgriLife Extension Service programs are making their way to the Hill Country in September. Owning Your Piece of Texas: Key Laws Texas Landowners Need to Know will be September 12 in Fredericksburg and the Ranchers Leasing Workshop is scheduled for September 13 in Kerrville. “We are excited to bring both of these programs to the Hill Country,” said Tiffany Lashmet, J.D., AgriLife Extension agricultural law specialist in Amarillo. “With so many new rural landowners in Central Texas, we know this program can be an important tool to understand the rights and responsibilities related to land ownership and lease agreements.”

Owning Your Piece of Texas: Key Laws Texas Landowners Need to Know



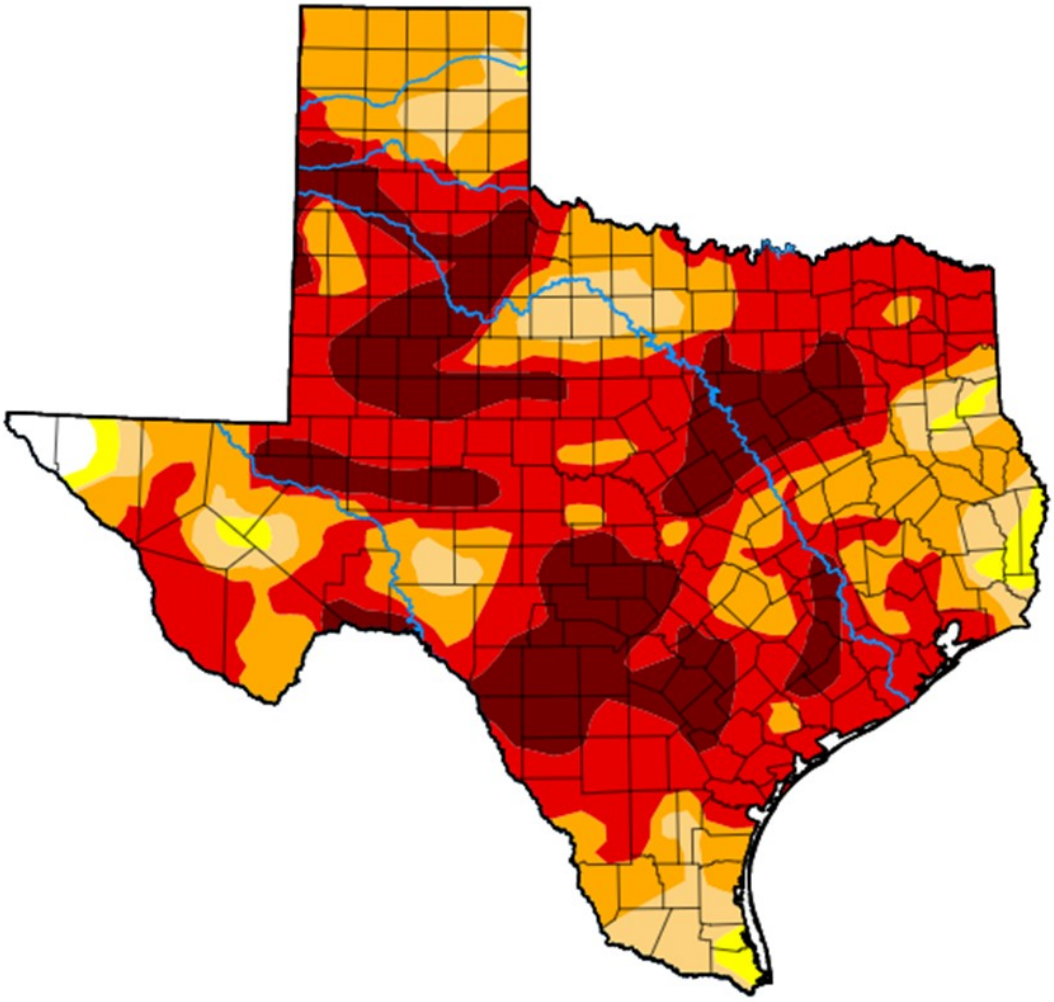
This program will run 9 a.m.-3 p.m. at the AgriLife Extension office in Gillespie County, 38 Business Court. Lunch will be provided. The cost is $75, and advance registration is required for the event at https://tx.ag/AgLawEvents22. All attendees will receive a hard copy of the “Owning Your Piece of Texas: Top Laws Texas Landowners Need to Know” handbook. Lashmet and team will discuss and update attendees on common issues facing landowners, from water law to eminent domain to landowner liability, fence law and more. In addition to Lashmet, speakers will include Blake Bennett, Ph.D., AgriLife Extension economist, Dallas Luke Ellis, J.D., Marrs Ellis and Hodge LLP, Austin, and Tim Milligan, Plateau Land and W ildlife Management, Austin. For those unable to attend in person, the online version of the course is available for $150.

Rancher’s Leasing Workshop



The cost for the Rancher’s Leasing Workshop is $50, and preregistration is required at https://tx.ag/AgLawEvents22. Each participant will receive a copy of the “Ranchers Agricultural Leasing Handbook,” containing checklists and sample lease language. Lunch is included. Lashmet and Greg Kaase, Ph.D., AgriLife Extension agricultural economist and risk management specialist, Bryan-College Station, both with Texas A&M’sDepartment of Agricultural Economics, are the program presenters. The half-day program is designed for agricultural landowners and tenants and focuses on grazing, hunting and livestock leases. The workshop also covers landowner liability law and how landowners and tenants can protect themselves if someone is injured on a property they own or control. Additionally, the program highlights economic resources, budgets, and decision tools. For those unable to attend the in-person workshop, there is an online version of the Rancher’s Leasing Workshop program at tx.ag/OnlineRanchersWorkshop. The online program is $75. For more information on the program, contact Kaase at 979-458-3348 or Lashmet at 806-677-5600.

Texas Drought Monitor (As of: August 2nd, 2022)



Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

Protect Your Water Well During Drought

Kristine A. Uhlman, Extension Program Specialist
Diane E. Boellstorff, corresponding Author; Assistant Professor and Extension Water Resources Specialist
Mark L. McFarland, Professor and State Soil Fertility Specialist
Drew M. Gholson, Extension Program Specialist–Water Resources Texas A&M Department of Soil and Crop Sciences, The Texas A&M University System

During severe droughts, people rely heavily on groundwater—the water held underground in aquifers. An aquifer can become depleted when more water is pumped out of it than is replenished by rainfall or other water sources. If the water level drops below the point of your pump intake, the pump could be damaged. To protect your well equipment and water supply when the water level is low, follow these practices:

- Monitor your pump. Water levels that are low or recover slowly will make your pump cycle on and off rapidly and burn out the motor. Low water levels can also cause submersible pumps to overheat and damage PVC drop-pipes. If your pump is rapidly cycling on and off, turn it off. You may need to reduce your future pumping rate or lower the pump if the water level does not rise.

- If your pump sounds like it is sucking air, let it rest. When the water level drops, your well may begin to produce sand and air bubbles. Indications that the well may go dry include sand in the toilet tank and milky-looking tap water that clears after a short time.

- Depending on the depth of the well, you may be able to lower the pump. This procedure will require help from a licensed pump installer. The Texas Department of Licensing and Regulation maintains a list of licensed well drillers and pump installers at http:// www.license.state.tx.us/LicenseSearch/.

- Have the well water tested regularly during and after a drought. As the water level falls, air will enter the aquifer and change its chemistry. Oxygen in the aquifer will increase concentrations of naturally occurring contaminants such as arsenic. If your well normally contains low concentrations of arsenic, expect it to increase during a drought. The concentrations of other contaminants, such as total dissolved solids or salinity, may also change.

- Add a pumped-water storage tank if you have a low-yielding well. Adding a storage tank will help meet peak demand when your water needs exceed the pump's capacity.

- Work with your neighbors to schedule heavy water use. If everyone does laundry on Saturday, all the wells may go dry on Sunday. Distribute heavy water use over the week to help individual wells recover and to maintain the water supply in your area.

- Conserve water to preserve your well's resources during drought.

Rangeland Drought Management for Texans: Supplemental Feeding

By: Bruce B. Carpenter and Charles R. Hart

When forage quality and/or quantity is affected by drought, livestock producers are usually faced with decisions about supplemental feeding. First, they must determine whether they can afford to supplement, and if so, then decide what to supplement and how to manage feeding. If the drought continues or worsens, they will also need to decide when to stop supplementing and start selling livestock.

Whether to Supplement

When deciding whether or not to feed during a drought, the first question a producer should ask is, "Can I afford to meet the animal's nutrient requirements?" rather than, "How much can I afford to spend on feed?" (and hope that whatever is in it does the job).

A good place to start is with a monitoring program for animal body condition. As always, this should be a routine part of management. To further define what specific dietary nutrients may be lacking and in turn, what kind and how much of the supplement might remedy the problem, livestock managers can use additional tools such as forage testing and fecal analysis.

Results of these tests can indicate the diet quality of free-ranging animals.

For more information on these technologies see: http://cnrit.tamu.edu/ganlab/ and http://soilcrop.tamu.edu/soiltest/index.html

Supplementation in Relation to Forage Quality and Quantity

The goal of a supplemental feeding program is to augment a forage-based diet. Therefore, having a proper s tocking rate is critical, because even in drought situations, the majority of dry matter consumed by livestock should come from pasture forage.

This typically means adjusting stocking rate to a level appropriate for forage supply, and then supplementing protein to improve diet quality and forage consumption. In planning, remember that an average 1,000-pound cow will consume 20 to 30 pounds of dry forage per day or 2 to 3 percent of her body weight.

Either hay or high energy supplements may be used to extend or partially replace existing forage supplies. Note, however, that this comes at higher cost, and when more than 3 pounds of high energy supplements are used, it results in lower efficiency of feed conversion.

Therefore, this technique is probably best reserved for specific, short-term situations. Supplementing large amounts of energy in any form for long periods is usually uneconomical.

Remember also that if high-energy grain supplements are chosen to compensate for short grass (probably being fed at more than 2 to 3 pounds per day), feeding frequency may affect animal performance. Feed grain supplements daily (as opposed to skipping days and increasing amounts). This will help keep acidosis problems in check and minimize the inhibitory effects of grain on digestibility of pasture forage.

As an alternative, supplements that are high in digestible fiber, such as wheat mids, soybean hulls, peanut skins, etc., can also be used to extend forage supplies. These supplements provide energy, but because they are lower in starch, they lessen undesirable effects on the digestibility of pasture forage.

For more information, see Extension publication B-6067, Supplementation Strategies for Beef Cattle.

What to supplement

When evaluating supplements, remember that there are no "magic bullets." Animals will perform as long as the supplement compensates for the nutrients that are lacking in the diet. *(continued on page 6)*

(continued from page 5)

A dry cow or ewe requires a minimum of 7 percent crude protein in her diet just to keep the digestive system microbes healthy and working on forage digestion. Therefore, the first limiting nutrient in dormant or drought-stressed forage is usually protein.

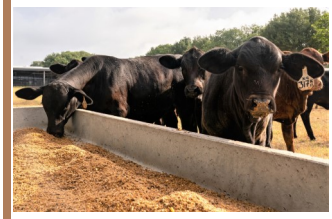
When evaluating supplements, the most important factors to consider are nutrient content and price per pound of nutrient(s) in the supplement. To choose the right one for your herd, you need to not only calculate the cost per pound of supplement, but also consider the supply and quality of available forage.

For example: You are comparing two types of cubes to add crude protein to the livestock diet. One cube contains 38 percent crude protein, the other 20 percent. Which is the better buy?

First, calculate the cost per pound of crude protein. The 38-percent cube provides 760 pounds of crude protein per ton of bulk feed; at $280 per ton, it costs $0.37 to provide a pound of protein. The 20 percent cube provides 400 pounds of actual protein per ton of bulk feed; at $210 per ton, it costs $0.53 to provide a pound of crude protein.

If protein were the only concern, then the 38 percent cube would be the better buy. However, if grass is not only dormant but also in short supply, then the 20 per- cent cube, fed at twice the rate, would probably be a more complete feed because it would provide some extra energy as well. Note however, that this would add 30 percent to the overall cost of the supplemental feeding program.

The form of supplement—be it block, tub, cube, meal, etc.—is unimportant as long as the animal consumes enough of it to compensate for nutrients lacking in the pasture diet. If animal supplemental requirements are particularly high, some types of self-fed supplements may limit intake to a level below what is needed.



Molasses is another energy supplement that is often used to stretch forage supplies. It is convenient because it can be self-fed, and in most cases, it also contains some type of protein additive.

Be cautious: Some pre-formulated molasses supplements may use high levels of nonprotein nitrogen (NPN), such as urea, as their primary “protein” source. High NPN supplements are not drought supplements. If and when they are used, it should be in situations such as this: forage is abundant, but dormant; dietary protein requirements are low (dry mature females); and protein deficiency is only minor.

Feed Management Tips

Sort and feed livestock by age, body condition and production status (growing vs. mature, lactating vs. nonlactating, etc.).

If reductions in stocking rates are needed, begin by culling the open cows, or dry spring and summer ewes. If numbers need to be reduced further, follow by culling lactating females in poor body condition (they probably won’t re-breed anyway).

Other feed management tips include:

- Buy and store feed in bulk. You can sometimes trim a few dollars by forward contracting.
- Feed protein supplements less often. Supplements high in natural protein may be fed as infrequently as twice or even once per week. Conversely, feed high-energy supplements daily to avoid chances of acidosis.
- Use a good 1:1 calcium-to-phosphorus mineral.
- Inject vitamin A or provide it in frequently fed supplements if it has been more than 3 to 4 months since the diet has included any green forage.

In many situations, supplementation strategies are just a best guess, unless something is known about diet quality in relation to animal requirements. A lot of that guesswork can be removed by using some of the previously discussed technologies that predict pasture diet quality. Knowing diet quality can help you evaluate supplements for their biological benefits to the animal. Livestock and feed prices will tell you if that answer is economically feasible.

Testing Forages and Hay for Hydrogen Cyanide (Prussic Acid) Potential

J.P. Banta, J.M. Bell, V. Corriher-Olson, J.L. Foster, R.L. Noland, and J.K. Smith Texas A&M AgriLife Extension and Research

In some situations, there may be a desire to test forages or hay for hydrogen cyanide or prussic acid potential. Hydrogen cyanide (HCN) or hydrogen cyanide potential are more appropriate terms and will be used throughout this document. Free hydrogen cyanide is not routinely found in the plant. Instead, the plant contains one or more cyanogenic glycosides that can be converted to hydrogen cyanide by enzymes in the plant or enzymes in the rumen of cattle, which is why the term hydrogen cyanide potential is used. There are several testing procedures being used by various labs, which may lead to results v arying from lab to lab. To evaluate the full hydrogen cyanide potential, it is critical that the testing procedure includes a beta-glucosidase enzyme. The inclusion of this step is necessary because it allows for the most accurate measurement of hydrogen cyanide potential and more closely represents the conditions and changes that would occur within the rumen. Samples should be submitted to a lab that includes a beta-glucosidase enzyme and incorporates standard samples to ensure the test is consistent. ServiTech Laboratories (servitech.com) is the only commercial lab that we are aware of that currently includes both steps and is the lab our group has used to test research and producer samples. Research conducted near Amarillo in 2021 (Bell and Banta, unpublished data) revealed both hydrogen cyanide potential and nitrates in pearl millet, corn, forage sorghum, and Sudan grass samples grown in the same trial. Based on this research and other sampling, if forages are being tested for hydrogen cyanide potential it would be advisable to also test them for nitrates as well. The same sample can be used for both. Cost for hydrogen cyanide, nitrates, and dry matter analysis are currently running about $43 per sample. Interpreting results: Results should be expressed and evaluated as mg/kg or ppm on a 100% dry matter basis (1 mg/kg = 1 ppm). Unfortunately, testing results can't guarantee that a forage will be safe to feed. There is limited research in cattle regarding toxic levels of hydrogen cyanide. Additionally, toxicity is a function of cyanogenic glycoside concentration in the forage, rate of forage consumption, and rate of hydrogen cyanide detoxification in the animal. Mammalian species including cattle and humans can detoxify some level of hydrogen cyanide. Toxicity becomes an issue when absorption of hydrogen cyanide exceeds the bodies' ability to detoxify it. Although testing cannot guarantee safety, knowing the level of hydrogen cyanide potential provides valuable information to make informed decisions regarding the risk level of a particular forage. July 2022 Collecting samples: Hay samples: Use a hay probe to collect and composite samples from at least 8 to 10 representative bales from each cutting or lot of hay, just like would be done for other hay testing analysis. Mix the samples and place the composite sample in a quart sized plastic bag for shipping. Contrary to what has historically been thought, hydrogen cyanide potential can be an issue in some dry hay, even following a substantial post-harvest storage period. Research results from 4 experiments published by Dr. Stuart indicate that increased drying time, conditioning hay, or double conditioning hay did not lower hydrogen cyanide potential when compared with plant samples taken just prior to cutting. Fresh forage samples: When collecting fresh forage samples, try to minimize bending or cutting of plant tissue until after the plants are dry. Plants should be cut approximately 2 to 4 inches above the ground and collected at random across the field. The number of plants to collect will vary by size. See below for size-dependent reference numbers of plants to collect. Generally, it would be desirable to collect enough sample to provide at least 100 grams of dry tissue for analysis. • Fresh plant samples can be shipped overnight to the lab. Cut plants into 12-to-24-inch pieces so they will fit into a brown paper grocery bag (preferred) or trash bag. Place the bag in a cardboard box for shipping. Cut samples into as few pieces as possible. Samples absolutely should not be frozen and should not be placed on ice. Placing samples on ice could cause tissue freezing and cell rupture resulting in lower hydrogen cyanide values. • Alternatively, samples can be dried or partially dried prior to shipping. Partially drying samples by placing them in the sun for a few days works well in many situations. It reduces shipping weight and allows for samples to be shipped with lower cost options compared to overnight shipping. If samples are dried, they can be cut or bent to help with shipping. Amount of fresh forage sample to collect: • Plants less than 12 inches tall: Collect about 40 to 60 plants. • Plants 18 to 30 inches tall: Collect about 15 to 20 plants. • Plants over 30 inches tall: Collect about 6 to 10 plants.

Note: This document reflects the current information and understanding of hydrogen cyanide potential in forages, testing, and risks to cattle and other livestock. However, there is still much to learn about these topics and additional research and technology advancements may change scientific understanding and recommendations in the future.

Plant of the Month

American Beautyberry (Callicarpa americana)
By: Kent Ferguson

American Beautyberry is a native, warm-season, perennial shrub found in most areas of the state, except the western regions. It is also known as French Mulberry, Sourbush, Turkey Berry, Spanish Mulberry, and several other localized names.

The American Beautyberry:

- Can grow more than 10 feet tall, but 4 to 6 feet is most common
- Is a multi-branched shrub with gray to reddish twigs. The stems can be round or square shaped, characteristic of the Verbenaceae family.
- Has simple leaves that are opposite, oval, or elliptic with saw-toothed margins. They are 2 to 5 inches wide, 3 to 9 inches long, and dark green on the upper surface. On the lower surface, leaves are pale, rough textured with star-shaped hairs.
- Will have pinkish-white flowers growing from the leaf axils, staking in clusters up the stem.
- Will form bright violet or purple fruit from the flowers' clusters, encircling the stem.

American Beautyberry is a palatable plant for browsing animals, and the seed is eaten by turkey, deer, quail, most songbirds, and small mammals. It can be eliminated from the landscape by overgrazing. Rotational grazing and proper stocking rates should be in place to ensure the plant's survival.

The American Beautyberry can be cultivated by cuttings and is gaining popularity in home landscapes.

Ranchers Leasing Workshop

Kerrville, TX
September 13, 2022
9:00 AM - 1:00 PM
Registration $50.00
Lunch Provided

Hill Country Youth Event Center
3785 Highway 27

Registration Required
Register online @
tx.ag/aglawevents22

Award Winning program attended by over 1,200 Texans!

- **Focused specifically on grazing, hunting, and livestock leases.**
- **Speakers Tiffany Dowell Lashmet (attorney) and Dr. Greg Kaase (economist) will be glad to answer questions.**
- **All participants receive their own copy of Ranchers Agricultural Leasing Handbook, which contains checklists and sample lease language.**
- **"This workshop saved me 100's of hours in time and research and $1000's in potential costs." - 2019 Attendee**

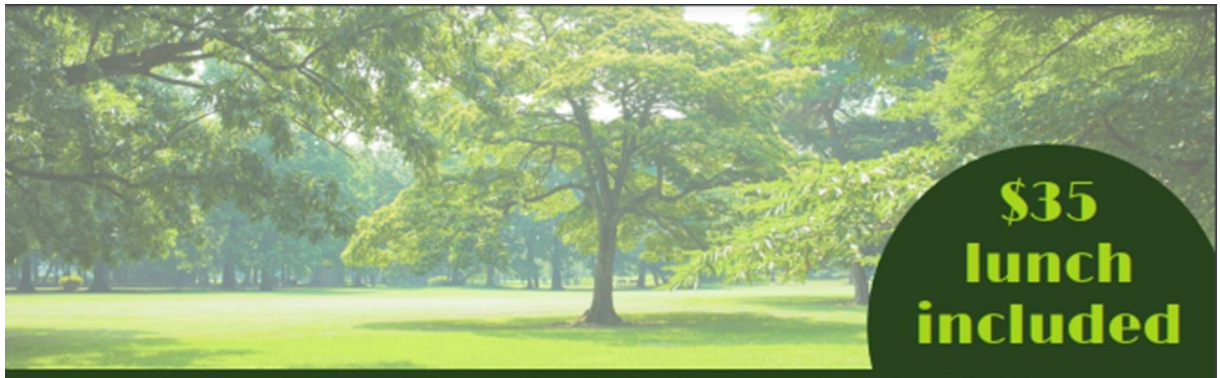
For more information on the program contact Dr. Greg Kaase at 979-458-3348 or Tiffany Lashmet at 806-677-5600.

Anyone needing specific accommodations to participate in this educational meeting should contact Tiffany at 806-677-5681 at least five days prior to the event so arrangements can be made. The members of Texas A&M AgriLife will provide equal opportunities in programs and 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 and will strive to achieve full and equal opportunity throughout Texas A&M AgriLife.

TEXAS A&M AGRILIFE EXTENSION

CAPITAL FARM CREDIT

BENNETT TRUST



$35 lunch included

LEARN YOUR LAWN & LANDSCAPE

RSVP by Sept. 20th, 2022

Door Prizes!

SATURDAY, SEPTEMBER 24TH, 2022

FROM 9:00 A.M. - 3:30 P.M.

AT THE GILLESPIE EXTENSION OFFICE

LOCATED AT 38 BUSINESS CT. FREDERICKSBURG, TX 78624

lunch provided by Capital Farm Credit

Topics to Include: Turfgrasses, Native Plants, How to Landscape/Plan Your Yard, & Trees to Use in Your Yard

Great for New Landowners!

Come by the Extension Office to register (cash or check only), or register online using the link below!

https://www.eventbrite.com/e/learn-your-lawn-landscape-tickets-367136052817

(small online fee)

FOR MORE INFORMATION, PLEASE CONTACT THE GILLESPIE EXTENSION OFFICE AT (830) 997-3452

TEXAS A&M AGRILIFE EXTENSION

CAPITAL FARM CREDIT

TEXAS MASTER GARDENER TEXAS A&M AGRILIFE EXTENSION


Buy Tickets Online
Kerr.Agrilife.org
Kerr County 4-H
Wild Game Dinner
OCTOBER 1, 2022
Hill Country Youth Event Center • 3785 Hwy 27
Doors Open @ 5:30 PM
Raffle Includes: Guns, Exotic Hunts, Taxidermy, Hunting & Fishing Accessories, Jewelry & Much More!!
Tickets Only
$20.00
6 & Under are free!
Kerr County 4-H
Call (830) 257-6568
for more information
Locations to Purchase Tickets
Balser's Northside Automotive
Double L Feed
- Both in Ingram & Kerrville
Kerrville Ranch & Pet
Powell Feed
McCoy's Building Supply
Or Online
Kerr.Agrilife.org

BENNETT TRUST
STEWARDSHIP OF THE EDWARDS PLATEAU

TEXAS A&M AGRILIFE EXTENSION

Bennett Trust Land Stewardship Women's Conference

"Building A Legacy of Environmental Stewardship"

October 10-11, 2022

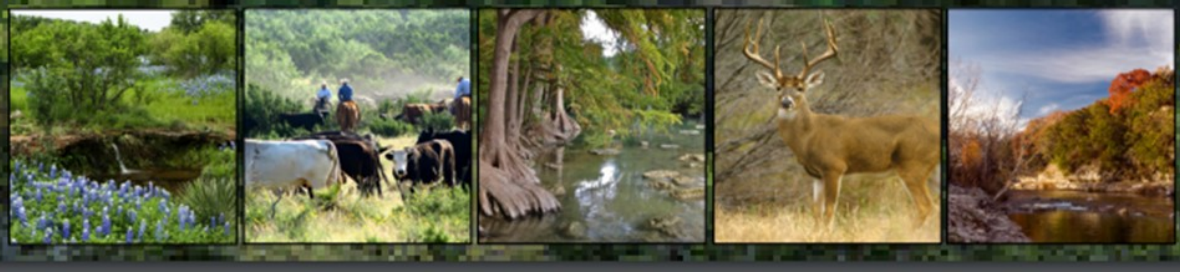
Inn on Barons Creek
308 S. Washington St.
Fredericksburg, Texas

Conference Agenda

Conference includes :
Day 1: Presentations on Ag Law, Prescribed Burn, Water Well Education, and more.

Day 2: Tours

For more information, please visit:
BennettTrust.tamu.edu



SAVE THE DATE!