HALE COUNTY

TEXAS A&M AGRILIFE EXTENSION

December 13, 2023 | ISSUE 12

THE GRAZE

A quarterly newsletter with livestock and agronomy updates.

IN THIS ISSUE:

Ag/timber registrations expire Dec. 31, renew before end of year

BY JULIE TMASCIK, EDITOR

Farmers, ranchers and timber producers with a valid agricultural and timber registration number must renew those by Dec. 31.

The ag/timber registration numbers are required under Texas law to claim a sales tax exemption on products used in the course of agricultural or timber production.

"This renewal process is part of helping farmers and ranchers reduce their input costs," Brant Wilbourn, Texas Farm Bureau associate director of Commodity and Regulatory Activities, said. "We want to make sure everyone is aware that it's time for the ag/timber number renewal in order to keep claiming those valid exemptions."

Legislation was passed in 2011 that required a uniform renewal date for all numbers regardless of when they were first registered. They must be renewed every four years.

Eligible persons must renew their registration with the Texas Comptroller of Public Accounts by Dec. 31 in order to continue claiming sales tax exemptions.

Anyone producing agricultural or timber products for sale can complete an application for an ag/timber number. That includes farmers and ranchers who grow agricultural products to sell to others, timber producers, custom harvesters, and aquaculture and apiculture producers. Those engaged in agricultural aircraft operations and commercial nurseries that grow stock from seed or cuttings, replant seedlings in larger containers and foster the growth of plants for sale are also eligible.

A registration number is not needed for seed, feed or livestock purchases, nor is it needed for veterinarian-prescribed items such as medication or topical products.

Items that may qualify for sales tax exemptions include fertilizers, pesticides, defoliants and desiccants used exclusively in agricultural production.

Machinery and equipment, irrigation systems, seedlings for timber, electricity and natural gas, some motor fuel and certain motor vehicle sales and use tax may also be claimed if used primarily for farming, ranching or timber production.

Retailers may accept and keep on file blanket exemption certificates, but those also need to be updated after Dec. 31 to include new expiration dates.

The Comptroller's office recently mailed renewal information to individuals who hold current registration numbers. There is a unique WebFile number located in that letter that can be used to renew the registration online.

Those who wish to renew by phone may do so by calling 1-844-247-3639.

More information regarding ag and timber sales tax exemptions can be found online at comptroller.texas.gov/taxes/ag-timber/.

https://texasfarmbureau.org/ag-timber-registrations-expire-dec-31-renew-before-end-of-year/

What happens to soil microbes during the winter months?

BY HPJ Staff

December 7, 2023

Do they become "snowbirds" and relocate to warmer climates until spring? Do they hibernate like bears? Or do they continue to do the jobs they do so well, waiting for spring and fresh plantings to support?

In regenerative and biological farming, the fate of soil microbes during the winter months plays a crucial role in shaping the overall health and productivity of the soil. Traditional farming practices can undervalue

soil health post-harvest, but regenerative approaches prioritize maintaining an active and diverse microbial community, even in the winter.

As the temperatures drop and the growing season ends, the microbial activity in the soil changes. Studies show that microbial activity in agricultural soils increases in the fall when compared to other growing seasons–likely due to an increased level of nutrients and soil organic matter from crop and plant residue post-harvest. Throughout the wintertime, or non-growing season, microbial activity and composition are thought to be stagnant, but stable. An increase in microbial activity occurs after the thawing of frozen soils and can be linked to the freeze-thaw cycle that colder climates experience.

During the colder months, soil freezes over, preventing air diffusion and creating anaerobic conditions for the microbial communities. This occurrence alters the soil community structure. In turn, this change causes an increase in denitrification, respiration, and production of greenhouse gases, which are trapped under the frozen layer. When temperatures begin to rise, the soil begins to thaw, enabling oxygen to enter the soil. This process provides labile carbon and other nutrients to the soil, which increases microbial activity and biomass. Additionally, when the soil thaws, the trapped greenhouse gases are released into the air. This exact dynamic between microbial activity and the FTC is still being debated due to different soil properties greatly affecting freeze/thaw rates and as researchers use different methodologies, making it difficult to compare results between studies.

The incorporation of cover crops is a key practice in regenerative agriculture during the winter months. These cover crops serve as a protective blanket for the soil, preventing erosion and providing a habitat for beneficial microbes. The roots of cover crops, left in the soil after harvest, create a network that sustains microbial life. Additionally, the above-ground biomass of cover crops can act as a carbon source, feeding soil microorganisms even when the primary crops are not actively growing.

The winter period becomes a time for microbial communities to thrive beneath the surface, breaking down organic matter, cycling nutrients, and enhancing soil structure. This activity sets the stage for a vigorous start to the next growing season. “A plant needs a tremendous amount of energy as it breaks dormancy. We should be building that plant up as much as we can, so it comes out swinging strong next season,” says August York, a noted agronomist based in California. “Farmers need to give it more momentum, so it goes into next year at a faster pace.”

Jim Ladlie, who holds a doctorate in crop science and has been in the agriculture industry for more than 30 years, says that when soils are fed well after harvest, growth emerges sooner and more vigorously the next spring, leading to a robust start to the season. He also said that for anyone who fertilizes with products that feed the microbes, soils and plants remain strong throughout the winter, as proven by field studies conducted by Rodale Institute, The Ohio State University, and the U.S. Department of Agriculture. By promoting the health of these microbial populations, regenerative farmers ensure that the soil remains alive and resilient, ready to support plant growth when conditions become favorable again.

In contrast to conventional thinking that might view winter as a dormant period for the soil, regenerative farming recognizes it as a crucial phase in the continuous cycle of soil regeneration. The proactive management of soil health during winter pays dividends in the form of improved nutrient availability, reduced pest and disease pressure, and overall enhanced soil fertility come spring. This holistic approach to soil care during the winter months aligns with the overarching principles of regenerative agriculture—working with, rather than against, the natural processes that sustain life in the soil.

https://hpj.com/2023/12/07/what-happens-to-soil-microbes-during-the-winter-months/

Walking in another's rotational grazing pastures

Texas A&M AgriLife initiates peer group learning for regenerative ranch management

BY KAY LEDBETTER

When Joe VanZandt walks across his ranchland in Wheeler County, he observes the soil, the plant growth, water availability and the cattle. Like most ranch owners, he knows how each connects and contributes to a successful ranching operation.

Ranching is a family affair for the VanZandt's. The family's multigenerational ranch in Mobeetie is why he, his wife, Janie, and now his grandson, Josh Reid, have all taken the Grass Grazing and Animal Management School coordinated and taught by Tim Steffens, Ph.D., Texas A&M AgriLife Extension Service range specialist and West Texas A&M University assistant professor in Canyon.

It's also why he and his family joined a peer advisory group formed for alumni of Steffen's school. This peer group was formed through a Southern Risk Management Education Center grant received by Pancho Abello, AgriLife Extension economist and assistant professor in the Department of Agricultural Economics in the Texas A&M College of Agriculture and Life Sciences.

VanZandt said they did not hesitate to join the peer advisory group when it began meeting across the Texas High Plains and neighboring counties in Oklahoma. They were eager to meet and learn from other ranchers about resource management, finances, profitability and succession planning.

"This peer group has been very beneficial," VanZandt said. "I wasn't sure if, as an older person, it would help me. However, we went to a different operation each month to see what they were trying to do and learned about their specific circumstances. We benefited from seeing how other people have adapted their operations to fit their situation, because no two operations are the same."

Peer-to-peer education expands ranch management understanding

Steffens teaches "profitable, regenerative grazing management," which he explains is not typically practiced by many ranchers.

VanZandt had heard about the rotational grazing method, often called holistic management, since it was first developed and promoted. But most ranchers didn't understand how to incorporate it into their operations. They knew it involved smaller pastures and moving cattle around, but they didn't pay close attention to what was happening to the land these cattle were grazing.

Experimenting and learning new management practices can lead to underperforming cattle at first, so some producers walk away from the new method before they get things right, he said. But over time, ranchers have refined the process. They've implemented more adaptive grazing management practices to evaluate both the cattle and the grass in the paddock, then move the cattle according to grass condition and not planned days.

Steffens agrees. The basics of the regenerative grazing ranching style is to manage when, where and how many animals are grazing a particular spot at a particular time, how long they stay and how often they come back. Sometimes, he said, adopters of the practice may feel they are alone or the only ones making mistakes.

Abello said he found a way to overcome that feeling of isolation when he was working on a 17,000-acre farm and ranch operation in Argentina. He participated in two peer advisory ranching groups for many years and wanted to bring that learning style to this AgriLife Extension program and this ranching group.

“I owe a lot of what I learned and how I grew professionally to being a part of those groups,” he said. “They were groups formed by ranchers and farmers who were willing to share their experiences and make the most of each individual’s skills to reach solutions to their problems and make decisions in their own businesses.”

Building the two-step learning process

Steffens and Abello said they believe this peer advisory group concept is perfect for ranchers who are willing to continuously improve their business, productivity and resources. Initially, the school provides 40 hours of in-depth training on profitable and productive livestock management to achieve lifestyle, livelihood and landscape goals. Then, to complement the programming within the school, the peer group serves as a reciprocal advisory board.

“Our whole concept behind establishing the peer group was to allow the ranchers to bounce ideas off one another,” Steffens said. “Although everyone has been through my school and they have a common paradigm, they all come with different viewpoints.”

Abello said this first peer group included young and older producers as well as a mix of men and women – a very diverse group in age and gender. Although the peer group was comprised of people from different walks of life, they came together and bonded because of their views on how to manage their grass and ranch.

“Like in every group, as time goes by, the group bonds and the participants start sharing more information. About halfway through the year, they started sharing everything,” he said. “We talk about every aspect of the business. We discuss all the issues an operation has, and the rancher host gets input from the others.”

Learning in school, learning in the pasture

VanZandt, a former AgriLife Extension county agent, and his family have attended the school multiple times. He said he learns a bit more each time and hears something different from the people involved.

Abello elaborated on the importance of ranchers continually expanding their ranching knowledge, even if they have been in operation for a long time.

“By adapting new grazing techniques, you may not only help profits, but you can help the sustainability of your business in the long term,” he said. “For example, the better I manage my soil and grass, the better I will be prepared for a drought. Also, the better the soil quality, the more productive the land will be for future generations. Of course, we want to be more profitable right now, but we also need to learn how to sustain that profitability into the future.”

Providing an example from his business, VanZandt said he had to sell cows and calves in the summer two years ago. He needed to reduce his cow herd to a more manageable stocking rate, so he could leave grass cover on the pastures and not graze it to the ground.

“We’ve learned in Dr. Steffen’s school to leave a good cover on the ground to serve as a food source for the soil microorganisms when they die off,” he said. “On our sandy loam soil, a lot of the acreage was

broken out 100 years ago or more; the rolling country was stripped of its cover of grass, and the replenishing nutrients from the cover died off. The soil began to blow away."

VanZandt said some of his ranch has been in his family since 1901, and it hasn't been farmed, so it has good topsoil still in place. However, the neighboring farmland he purchased was severely eroded and washed away.

"My goal was to figure out how to make this ol' wore-out land better by managing the grass and cattle," he said.

In the peer advisory groups, one benefit of seeing other operations is learning how they adapted in similar situations and picking up some tricks of the trade from each other, VanZandt said. Not everything fits all operations.

Starting small to grow the community

Initially, Steffens created the school to help beef cattle producers find more profit and better steward the land, wildlife, cattle and other natural resources in the Panhandle.

But now, through the peer advisory groups, he and Abello know this AgriLife Extension-based educational process could lead to a much larger community of practice and understanding that invites participants to continue learning from one another long after the school is over.

Steffens said while the initial group consisted of 12 early adopters, the peer advisory group opportunity is open to all the alumni of his schools.

"I'm hoping we will get more groups going," he said. "I'm doing another school right now. Once the word gets around about this peer advisory group and others see how they can learn from one another, I hope this first group will move to an advanced level, and another group will start again at the beginning."

https://agrilifetoday.tamu.edu/2023/07/17/walking-in-anothers-rotational-grazing-pastures/

‘It’s not the cow; it’s the how’

Texas A&M AgriLife researchers investigate impact of adaptive grazing management on Conservation Reserve Program lands

BY SARAH FULLER

Researchers at the Texas A&M AgriLife Center for Grazinglands and Ranch Management are investigating the impact of grazing practices on the long-term sustainability and biodiversity of landscapes enrolled in the U.S. Department of Agriculture’s Conservation Reserve Program.

Four cows stand in tall grass. Texas A&M Agrilife researchers are investigating the impact of adaptive grazing management on Conservation Reserve Program lands

Researchers at the Texas A&M Center for Grazinglands and Ranch Management are investigating the impact of adaptive grazing practices on landscapes enrolled in U.S. Department of Agriculture’s Conservation Reserve Program. (Texas A&M AgriLife photo by Michael Miller)

Supported by the USDA Farm Service Agency, the project will focus on adaptive grazing practices such as managed timing, intensity, frequency, duration and resting period.

About the Conservation Reserve Program

“The Conservation Reserve Program continues to be one of the signature conservation efforts of the USDA,” said Jeff Goodwin, Ph.D., director of the Center for Grazinglands and Ranch Management, Bryan-College Station. “The effort has a 38-year legacy of successfully protecting the nation’s natural resources while providing significant economic and environmental benefits to rural communities across the U.S.”

Established in 1985, the Conservation Reserve Program, or CRP as it is commonly known, is one of the nation’s largest private-land conservation programs with more than 23 million acres enrolled across the U.S.

Through contracts varying in length from 10 to 15 years, voluntary participants agree to remove environmentally sensitive cropland from agricultural production and devote the land to the long-term conservation of grasslands, soil health, water quality and wildlife habitat. In return, these landowners receive annual payments and cost share assistance to implement conservation-based management practices.

Texas’ enrolled landscapes

In Texas, more than 90% of the roughly 2.7 million acres enrolled in the Conservation Reserve Program are in the High Plains and Rolling Plains ecological regions.

Due to this density of enrolled properties, Goodwin and research partners in the Texas A&M College of Agriculture and Life Sciences will focus their studies within these regions.

Collaborating researchers include Katie Lewis, Ph.D., Texas A&M AgriLife Research soil chemistry and fertility scientist and associate professor in the Department of Soil and Crop Sciences, Lubbock, and Stephen Webb, Ph.D., Texas A&M Natural Resources Institute research assistant professor in the Department of Rangeland, Wildlife and Fisheries Management, Bryan-College Station.

Grazing exclusion and grassland trends

Since its inception, the Conservation Reserve Program has excluded grazing on enrolled lands with certain exceptions for emergency drought and disaster events or biennial grazing regimes outside of the grassland bird nesting season. Producers who do graze at a reduced stocking rate during the primary nesting season generally receive a 25% reduction in their annual payment from the program.

Historically, grassland ecosystems were maintained by periodic disturbances in the form of fire and grazing ruminants such as bison.

Goodwin said the removal of these disturbances can lead to the proliferation of less-desirable vegetative communities. Woody encroachment, land conversion, land fragmentation, invasive species and poor grazing practices have also contributed to the precipitous decline in native grassland health, as well as the avian species that depend on them.

“There is a common misconception that cattle production and conservation cannot coexist and have mutually exclusive goals,” Goodwin said. “But as the adage goes, ‘it’s not the cow; it’s the how.’”

Goodwin said an increasing amount of scientific research suggests that by focusing on ecological principles, grazing animals become yet another tool in the toolbox to help conserve and manage wildlife habitat and other ecosystem processes.

Boots and hooves on the ground

Specifically, researchers are seeking to answer three key questions related to lands enrolled in the Conservation Reserve Program:

- Can adaptive grazing management provide greater ecosystem and climate change mitigation benefits than biannual grazing or grazing exclusion?
- Are the conservation and ecosystem benefits of adaptive grazing management influenced by native versus introduced grass species?
- Can grassland birds be used as an indicator metric for the health and function of Conservation Reserve Program lands in the Texas High Plains?

To find these answers, over the next five years researchers will employ and replicate a variety of land management treatments across 18 properties enrolled in the program. These different management treatments include grazing exclusion, as well as alternative year grazing and adaptive grazing management techniques.

This investigation will enable researchers to collect valuable data on soil organic carbon and microbial activity, vegetation composition and structure, plus the presence or absence of high-priority avian species.

“Information gained from this study will benefit a number of stakeholders by providing data-driven insights and scientific evidence to inform Conservation Reserve Program policy on the ecologic outcomes associated with the implementation of grazing management,” Goodwin said. “Ultimately, this study will continue to inform the scientific literature serving as a scientific basis of support for the conservation of working lands in the U.S.”

https://agrilifetoday.tamu.edu/2023/11/30/grazing-conservation-reserve/

Targeted Grazing with Goats and Sheep

BY CASEY MATZKE

Before producers can consider adding additional species to their operations, forage production and carrying capacity must be determined. This is crucial and the foundation of any operation. More information on determining stocking rate and carry capacity can be found in this AgriLife Extension Publication – Stocking Rate: The Key Grazing Management Decision.

What is Targeted Grazing?

Targeted grazing is defined as the application of livestock grazing to achieve specific management goals. While many have heard of traditional grazing management, targeted grazing management is used as a long-term approach to address land management problems.

For targeted grazing to be successful it requires:

- Determining the goals and desired outcomes of each management area
- Identifying the vegetative species of concern within the area
- Tailoring the livestock species composition and stocking intensity to achieve those goals

Why use Goats and Sheep in Targeted Grazing Operations?

Goats are often chosen for targeted grazing operations due to their browsing habits, which make them effective at removing undesirable and unpalatable plants. They consume poison ivy, junipers, greenbrier, and sericea lespdeza, which other species will not consume. In addition, goats can create a secondary income through the breeding and selling of these animals.

While Goats manage the woody and unpalatable plants, adding Sheep helps with the addition of managing forbs and grasses. Sheep prefer to consume the undesirable forbs that are mixed in with the desirable forage. Sheep can improve the soil health and promote beneficial vegetation cover. Both of these species are better adapted at grazing on steeper, rockier areas of land.

What Challenges will be faced?

As with any addition to an operation the complexity in management increases. This includes managing the herd health and the nutritional aspects for all species. Another component of health and nutrition is water. Will water need to be hauled in? Are all the species able to reach the watering systems being used. Keep in mind that many water troughs that are suited for Cattle will be too tall for Goats and Sheep.

Another aspect that needs to be considered with the addition of multiple species, is fencing and predation. Proper fencing is needed to maintain keeping the livestock in and predators out. Predators can include bobcats, wild pigs, coyotes, stray dogs, and mountain lions.

As with all things being implemented on operations, timing is key. Different factors, such as drought, seasonal changes, and other climatic factors can affect the ideal timeframe for targeted grazing.

Targeted grazing when used correctly can be an effective way to manage vegetation to reach a number of operational goals. Some important advantages include; a cost-effective vegetation management alternative, enhancing habitat restoration, and breaking down plant carbon in the soil. For more information on this topic, read the full AgriLife Extension Publication – Targeted Grazing with Goats and Sheep https://agrilife.org/westtexasrangelands/2023/03/01/targeted-grazing-with-goats-and-sheep/

TEXAS A&M AGRILIFE EXTENSION

HALE COUNTY

CEU MEETING

5 CEUs

December 21, 2023

HALE COUNTY EXTENSION OFFICE
225 BROADWAY, SUITE 6
PLAINVIEW, TEXAS 79072

8:00 AM	Registration
8:20 AM	Update from Plains Cotton Growers - ***Kody Bessent***
8:30 AM	Know your Pesticide Laws and Regulations - Comprehensive look at the pesticide laws and regulations, EPA updates, and licensing / certification guidelines. - ***Dr. Don Renchie***
9:20 AM	Weed control mishaps and how to manage success? Potential issues related to herbicide or management failures in controlling weed pests. (resistance, management decisions, timing, herbicide selection, application, equipment , and mother nature) - ***Dr. Peter Dotray***
10:10 AM	Update from Texas Corn producers - ***David Gibson***
10:20 AM	Reducing risk of off target drift, off label decisions, and updates on new regulations affecting pesticide availability. - ***Dr. Scott Nolte***
11:10 AM	Available tools for management of brush and weed problems in pastures. - ***Dr. Morgan Treadwell***
12:00 PM	Break
12:30 PM	Update from Texas Sorghum Producers - ***Wayne Cleveland***
12:40 PM	Unlocking the genetic potential of corn/sorghum hybrids? How to protect your investment and select technologies that not only optimize yield but mitigate risk from pests such as weed, disease, drought, and insects. - ***Dr. Jourdan Bell and Dr. Kevin Heflin***

RSVP Required

COST: $40

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Mid-Plains AG EXPO

January 18, 2024

Hale County Justice Center Assembly Room
225 Broadway, Plainview, TX 79072

7:45 - 8:00	**Registration & Welcome**
8:00 – 9:00	**Laws & Regulations** Mark Navarrete - TDA
9:00 – 10:00	**Regenerative Agriculture and Nutrient Management** Katie Lewis, Assistant Professor, Lubbock Research & Extension Center Joseph Burke, Assistant Professor, Lubbock Research & Extension Center
10:00 – 10:15	**Break/Booth Visitation**
10:15 – 11:05	**Update on Herbicide Resistant Weeds** Dr. Peter Dotray, Professor, Lubbock Research & Extension Center
11:05 – 12:00	**Residue Management Using Cover Crops** RN Hoper, Local Producer
12:00 – 12:45	**LUNCH/Booth Visitation/Shelley Heinrich, Cotton Board/Award**
12:45 – 1:40	**Water Quality** Jourdan Bell, Assistant Professor, Amarillo Research & Extension Center
1:40 – 1:55	**Break/Booth Visitation**
1:55 – 2:50	**Advances in IPM and Impact of 2023 Research Results** Blayne Reed, Extension Agent - IPM, Hale & Swisher Counties
2:50 – 3:40	**Farm Bill Updates** Kody Bessent, Chief Executive Officer, Plains Cotton Growers
3:40 - 4:00	**Surveys & Registration for Auxin Training**
4:00 - 5:00	**Auxin Training** Kristie Keys, Extension Agent - Agronomy, Castro/Hale/Lamb County

CEUs: 7 Total – 1 L&R, 1 IPM, 4 General, 1 L&R (Auxin Training)

COST: $30 Per Individual | $100 Per Vendor Booth | Sponsorship Opportunities

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Andy Hart, Ph.D.

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AM Radio – The Graze "All things livestock and ranching" Educational Series

First Friday of Every Month @ 11:00 AM
Aired on Radio: All Ag, All Day – 900AM

Hale County CEU Meeting

December 21, 2023 | 8-1 PM
Hale County Extension Office
Plainview, Texas
RSVP HERE or call 806-291-5267.

Mid-Plains Ag Expo

January 18, 2024 | 8-5 PM
Hale County Justice Center Assembly Room
Plainview, Texas
RSVP HERE or call 806-291-5267.

Hale County Ag Committee:

Shane Berry
Greg Cronholm
Chance Crossland
Donald Ebeling
Steven Ebeling
Jessica Finck
Shelly Fuston
Phillip Kidd
Mark Mahagan
Joe Mustian
Leo Ruijne
Mark True
Robert Unterkircher