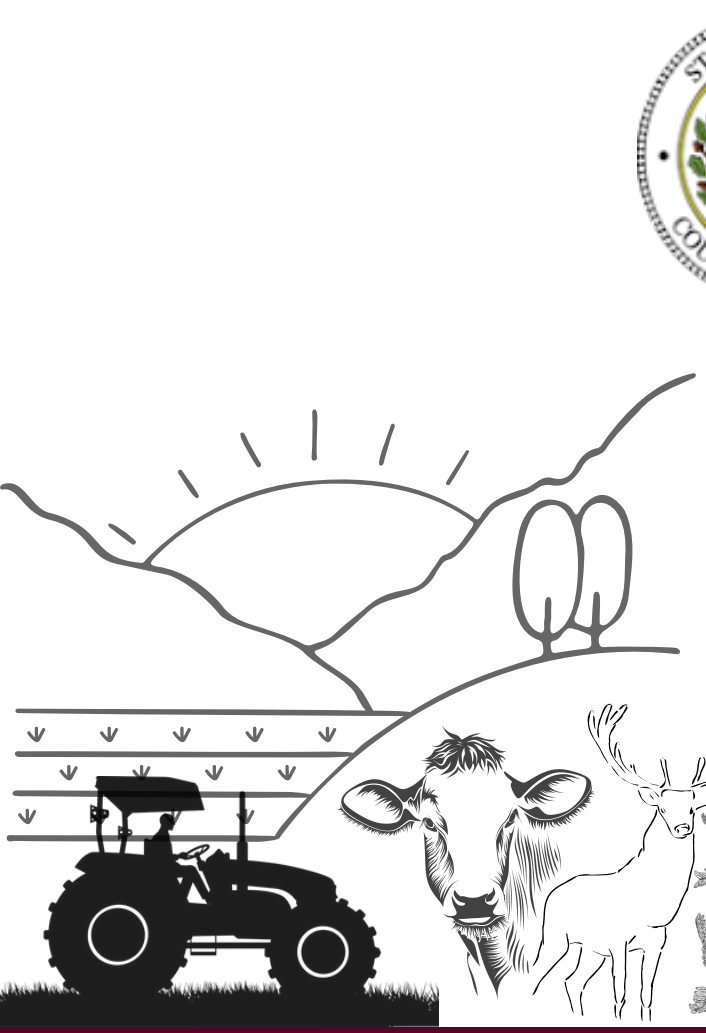
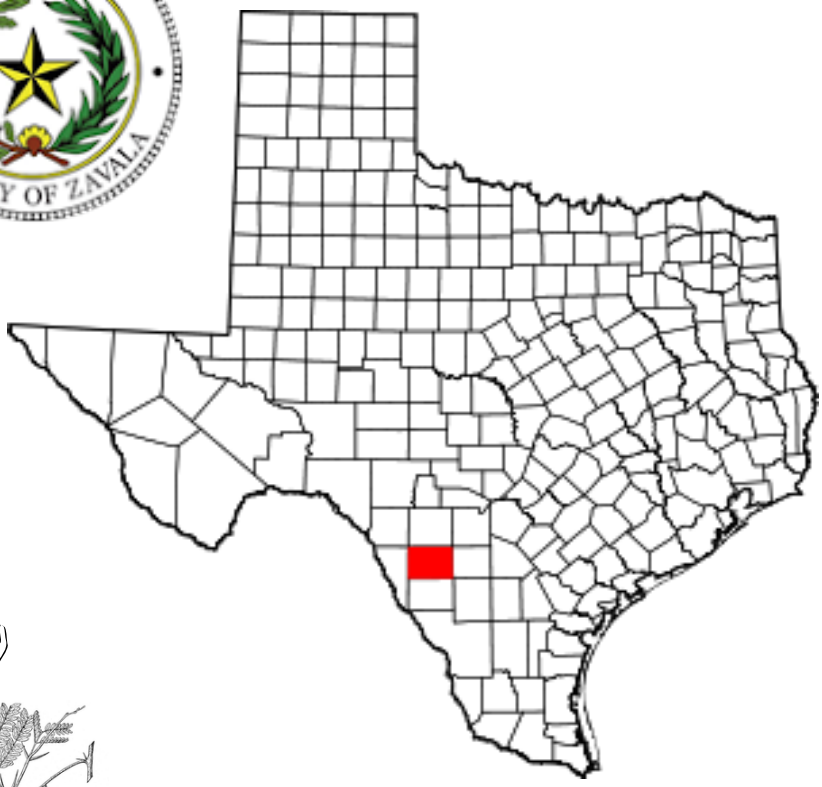
TEXAS A&M AGRILIFE EXTENSION

ZAVALA COUNTY

AGRICULTURE AND NATURAL RESOURCES

March 2024
Newsletter





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ZAVALA COUNTY TEXAS COMMUNITY FUTURE FORUM

TEXAS A&M AGRILIFE EXTENSION

You're invited to our TCFF event!

Join us to address issues within our county regarding Agriculture, Natural Resources, Family and Community Health, and Youth.

The purpose of this event is to identify relevant issues to assist agents in program development and problem solving.
Open to everyone in the community

DATE: April 5, 2024
TIME: 6:00 PM
LOCATION: Crystal City Nutrition Center

PLEASE RSVP BY MARCH 26, 2024

830-374-2883
leslie.dominguez@ag.tamu.edu

ZYDC Zavala Youth Development Committee FOR THE YOUTH OF ZAVALA COUNTY

Zavala County TEXAS

TEXAS A&M AGRILIFE EXTENSION

PRIVATE PESTICDE APPLICATOR TRAINING

Date: April 15, 2024

Time: 9 AM- 12 PM

Location: AgriLife Conference Room
217 N 1st Ave, Crystal City, TX

PLEASE RSVP BY APRIL 8, 2024

830-374-2883
leslie.dominguez@ag.tamu.edu

The three-hour training will give participants the needed information to take the private applicator license test which is administered by the Texas Department of Agriculture.

Cost of the training is $10.00; **Cash only please.**

You are encouraged to participate if you need a Private Pesticide Applicator License. The Private Pesticide Applicator License is required by TDA for a person who uses or supervises the use of restricted and/or state limited pesticides to produce agriculture commodities.

2024 Spinach Field Day

On February 20, 2024, Tiro Tres Farms hosted their annual Spinach Field Day in Crystal City, Tx. This field day was incredibly special as the Ritchie Family celebrated 100 years of growing and shipping Ritchie Brand Spinach. There were over 130 people in attendance from all over Texas, the United States, and out of the country. The purpose of this field day was to screen numerous spinach seed varieties for plant disease resistance, along with testing efficiency of fungicide treatments to combat these plant diseases.

The field day started with a Laws and Regulations presentation given by Vic Alexander, Assistant Regional Director with Texas Department of Agriculture. It continued with a tour overview of the research trials presented by Dr. Larry Stein, Mike Phillips, Dr. Lindsey Du Toit, Dr. Kimberly Cochran, and Dr. Carlos Avila. The research plot consisted of fungicide trails, a white rust trial with 624 spinach varieties, a commercial variety trial with 30 varieties, and a Stemphylium and Anthracnose tolerance trial with 48 spinach varieties. The varieties were each exposed, or inoculated, to three types of fungus: Stemphylium, Anthracnose, and White Rust. Stemphylium, *Stemphylium vesicarium* is a fungus that causes leaf spots that turn a tan color as the disease progresses. Anthracnose, *Colletotrichum dematium*, is a fungus that causes water-soaked lesions on both young and old leaves; the lesions turn a brown color and cause the leaves to become thin. White rust, *Albugo occidentalis*, appears in spinach as yellow lesions on the upper leaf surface, and as white, blister-like pustules on the lower surface of the leaves.

In addition to the fungal inoculation, Dr. Larry Stein conducted a fungicide trial for White Rust Control. This fungicide trial consisted of 12 treatments using 10 fungicides. These treatments were either used alone, in combination with others, or with a nonionic surfactant. The fungicides used were Cabrio (BASF), Veltyma (BASF), Reason (Gowan Company), Miravis Prime (Syngenta), Quadris (Syngenta), LifeGard (Certis Biologicals), Presidio (Valent), Double Nickel (Cerits Biologicals), Velum (Bayer), and Bexfond (Corteva).

Mr. Mike Phillips also conducted a fungicide trail for Stemphylium control. These fungicide trails consisted of 14 treatments using 10 fungicides. These treatments were either used alone, or in combination with others. The fungicides used were Cabrio (BASF), Luna Sensation (Bayer), Merivon (BASF), Veltyma (BASF), Reason (Gowan Company), Badge (Gowman Company), Miravis Prime (Syngenta), Inspire (Syngenta), Inspire Super (Syngenta), and Luna Flex (Bayer).

We would like to thank the seed companies that participated in these trials. Without your products this would not be possible. The seed companies included Pop Vriend, Rijk Zwaan, Nunhems, Bejo, Enza, Vilmorin, Pinnacle, Seminis, Syngenta, and Sakata.

Thank you to the generous sponsors for making this day possible. First State Bank of Uvalde, Zavala County Bank, Helena Agri-Enterprises LLC, Capital Farm Credit, Syngenta, AgriEdge, Winter Garden Soil and Water Conservations District #326, TS&L- California, SeedWay LLC, Texas AgriWomen-Uvalde Chapter, Medina Electric Cooperative INC, F4 Outdoor- Frederick Chong, Gowan Seed Company, Tiro Tres Farms, Keithly Williams, Wintergarden Spinach Producers Board, Crawford Farms, Espinaca Farms, MV Consulting- Marcel Valdez, Enviro 360 LLC, Pinnacle Seed, Choche's BBQ, and Tellus.
With the support of the sponsors we are able to continue research that is vital to the sustainability of spinach production in the Wintergarden area, and the spinach industry as a whole.

Prune your roses and your lawn, but leave the fruit trees alone

AgriLife Extension gardening guide offers top tips for February

February 8, 2024
Susan Himes

What should — or shouldn't — Texas gardeners be doing this month? We asked Larry Stein, Ph.D., Texas A&M AgriLife Extension Service horticulture specialist at Uvalde and professor in the Texas A&M College of Agriculture and Life Sciences Department of Horticultural Sciences, for his top tips.

Keep in mind the weather your region receives, Stein said. Those further south can typically do outdoor gardening activities earlier in the month, whereas those in the Panhandle may need to wait a bit. Stein said we're still waiting to see what effects, if any, January's sub-freezing temperatures had on plants.

"The good news is that many areas have had a really nice rain since the cold weather," Stein said. "The other is that the change in weather was not too extreme — the cold came in gradually and then kind of stayed there."

Top 5 Garden Tips for February

1. Scalp your lawn toward the end of the month to remove any thatch layer and promote spring green up. Scalping is when you cut your grass significantly; the low stems should be exposed.

2. Apply pre-emergent herbicide and incorporate it via water into your lawn to prevent spring weeds from germinating.

3. Frost-sensitive transplants such as tomatoes, peppers and eggplant can be purchased now and potted up into larger containers. This will result in a larger plant with an excellent root system to set out in mid-to-late March.

4. Hold off on pruning fruit trees since early pruning can stimulate bud break. However, now is the prime time to collect budding or grafting wood for this coming spring. Also, if ice accumulation is in the forecast, support tree limbs to reduce breakage.

5. Fertilize woody ornamentals with a 3-1-2 slow-release fertilizer toward the end of the month.

How, when and why it's time to prune your roses

Stein said Valentine's Day serves as a good reminder to gardeners across the state that it is time to think about pruning their roses.

February is typically the month to give your rosebushes the attention they need to have the most bountiful blooms down the road. Texans should consider their weather and keep an eye open for bud breaks that can vary across the state. When you start to see the buds, you need to prune them as soon as possible.

Wait too long, and your plant will have to waste resources on growth that you will just cut off, Stein said. Leaving too many buds will also result in shoots that aren't as strong.

Another key item to keep in mind when it comes to pruning your roses is wine.

"If you imagine the shape of a wineglass, that is the shape you want to prune your roses," Stein said.
He explained that you should use an "open center system" when pruning roses. This means the center of your rose plants should be open like a wine bowl, with the branches in the middle of the plant pruned away.

"Your trunk is like the wineglass stem, and then you want to have your branches shaped into an open bowl," he explained. "You'll want just about three or four key branches to prune back to."

Another pruning should follow later in the year, Stein said, but this first one should be the most extreme so you can stimulate vigorous growth. New shoots are what bear the flowers, so don't be afraid to be heavy-handed with the pruners.

A nearly empty wine glass on a table against a dark background.

“Typically, the harder you prune roses, the better they do,” Stein said. “What you are doing is stimulating vegetative growth, which is where you will have flowers. It is not uncommon to have a lot of brown wood in the top of the rosebush; don’t be afraid to cut back branches, and they can even be taken all the way to the ground.”

Keep in mind, though, that roses grown on their own roots differ from root stock roses when it comes to pruning.

“With root stock roses, you do not want to cut off the part of the plant where the improvement starts,” Stein said. “There is usually a distinct change of color where the improved variety starts, and you do not want to cut below that.”

Bioenergy sorghum wax, a potentially valuable coproduct, enhances crop's resilience

In addition to providing protection from drought, heat and pests, wax could generate extra revenue for producers

February 8, 2024

Already valued for its resilience, biomass production and ability to improve soil fertility, bioenergy sorghum has another attribute that researchers have recently characterized: high wax production.

Plant waxes are useful across a wide scope of commercial products like cosmetics, inks and candles, and as edible food coatings and biofuels. Bioenergy sorghum's production of high wax loads — around 90-180 pounds per acre — might give growers additional profit.

Scientists within Texas A&M AgriLife Research and the Texas A&M College of Agriculture and Life Sciences are learning more about the plant's wax. Robert Chemelewski, a doctoral student in the Department of Biochemistry and Biophysics, carried out research with supervision from John Mullet, Ph.D., University Distinguished Professor and Perry L. Adkisson Chair in Agricultural Biology. Their study was recently published in the journal *Frontiers in Plant Science*.

Importance of wax for sorghum's resilience in harsh environments

Sorghum, a drought- and heat-tolerant grass, is typically used for production of grain, forage and biomass for bioenergy. Bioenergy sorghum grows very long stems that can reach up to 18 feet tall.

The plant's resilience allows it to be productive even when grown on marginal land or with little water. This resilience is due in part to the plant's high wax production, which helps limit water loss and prevent the plant from absorbing too much heat by reflecting solar radiation.

"Bioenergy sorghum spent 50 million years surviving in Africa, in a very hot, dry environment," Mullet said. "To survive drought at high radiation loads, the sorghum adapted by secreting a lot of wax on the surfaces of leaves and stems."

Additionally, researchers suspect that the wax increases pest resistance.

“If you mutate plants to remove waxes, they become much more susceptible to insects,” Mullet said. “Insects crawling up the stem encounter a very thick wax layer. So, we think wax helps protect the stem from insect damage.”

Characterizing sorghum’s wax composition

In their recent study, the researchers sought to identify key information about sorghum wax, such as the amounts on different plant surfaces and its chemical composition.

“Wax is made up of long-chain hydrocarbons,” Mullet said. “We found bioenergy sorghum wax is enriched with aldehydes, a type of organic compound, which may contribute to the plant’s pest defense.”

Next, the team examined the biochemical processes involved in bioenergy sorghum’s wax production. They found the wax biosynthesis genes by using prior knowledge obtained from other plants.

Once those were identified, they confirmed that the genes were expressed in the outer layer of the stem, where the wax is synthesized and deposited. The team then analyzed the activation process of wax biosynthesis during stem development, allowing them to see which genes are involved in regulation.

“By the end, we were able to see how the whole pathway fit together,” Mullet said.

Looking ahead to commercialization

Down the line, growers of bioenergy sorghum may be able to see a financial benefit from the plant’s wax in addition to income the crop generates as a feedstock for biofuels and biopower generation.

“We’re always looking for ways we can extract a value-added product from the plant prior to converting it into biofuel,” Mullet said. “When harvested biomass goes to a biorefinery, you could remove the wax early in the process for later purification and sale as a valuable coproduct.”

TEXAS BEEF QUALITY ASSURANCE

BQA TIPS

Febraury 1, 2024
Emily Lochner

Average gestation length for cattle is often reported as 283 days with a common range of about 9 days either side of the average. When getting ready for the start of calving season be aware that gestation length varies depending on breed, genetics differences within a breed, calf sex, age of dam, and other factors.

The average gestation length for Angus is about 279 days compared with 291 for Brahman. Gestation length is longer for bull calves. Gestation length is often shorter for low birth weight genetics, so be prepared for those heifers to calve early. ~Jason Banta