

Invasive, Non-Native and Native Texas Tree Species Explained, March 4-10

The tree landscape in Texas is made up of a variety of species. From ponderosa pines in West Texas to oaks in Central Texas to dogwoods in East Texas, trees play a vital role in the ecosystem and provide countless benefits. But, what about species that cause negative impacts – invasive species? Simply put, there are three basic categories of tree species: native, non-native and invasive. Knowing where tree species fall into these categories may seem like trivial information, but species selection is vital to the health of the overall ecosystem. “All species are good somewhere, and all species are bad somewhere,” said Gretchen Riley, Texas A&M Forest Service Forest Systems department head, Bryan-College Station. “Planting the right tree in the right place, and avoiding invasive species, helps prevent devastating issues and bolsters the benefits a tree will provide over its lifetime.” When selecting trees to plant, it’s important to understand where trees fall into these three categories and how that may vary from region to region.

Native species have evolved and occur naturally in a region, ecosystem or habitat. Loblolly pines, for example, are native to the East Texas Pineywoods and the Lost Pines regions. The species was here long before civilization and reproduces on its own, creating a stable, self-perpetuating population. Native species provide a multitude of values to their ecosystem, filling a specific ecological niche. They provide food and shelter for local wildlife, typically require less water once established and often have a better chance of survival because they are well-adapted to their region. “Native species are resistant and resilient to disturbances that happen in their specific region because they evolved there and have adapted to that habitat,” said Demian Gomez, Texas A&M Forest Service Regional Forest Health coordinator, Austin. This includes adaptation to temperature variations and extremes, like dry, hot summers or harsh, cold winters, as well as local pests and pathogens because they have co-evolved together, making them more resilient to attacks. Native species can range in how they behave in their ecosystem, though, and some tend to have aggressive or highly prolific characteristics, Gomez said. “An example of an aggressive native species is the winged elm in the Brazos Valley,” Riley said. “While they are native to the region, they take advantage of ideal local conditions during good rainfall years to rapidly reproduce and expand their range in yards and pastures.” Knowing how species, native or otherwise, perform in a region is key in species selection.

Non-native species do not originate in the area or region where they are found. These species are introduced into an ecosystem, sometimes intentionally and sometimes by accident. While native species are preferred, non-native species are not necessarily bad for the ecosystem, as long as they do not have a measurable negative impact. Some can even be beneficial to the environment, particularly in urban areas where they increase ecosystem diversity. “Not all non-natives are invasive,” Riley said. “Many do well without competing with

natives. In fact, they can fill gaps where some natives may not perform well, such as is the case in urban areas where not only has the native soil been removed for construction purposes, but the natural ecosystem has been altered by the built environment.” The performance of any species in a specific region may change over time, making non-natives more ideal in particular ecosystems. “What we call non-native is tricky sometimes,” Gomez said. “Because the natural range of a native species may change over time due to changes in climate or even human disturbance, this is called species migration.” Ultimately, while native species are preferred when planting trees, there is a time and place for non-native species to add value to an ecosystem’s diversity and resiliency.

Invasive species have two main characteristics: they are non-native to an ecosystem and their introduction causes or is likely to cause harm to the economy, environment or human health. “Invasive species produce a measurable impact,” Gomez said. “If left unchecked, invasives can threaten native species, biodiversity, ecosystem services, water resources, agricultural and forest production, economics and property values.” Invasive species have been introduced into an ecosystem, often due to human activity. This can include plants introduced as ornamentals, experimental introductions that escaped containment and species accidentally introduced in imported shipping materials. Species that are invasive succeed because of their ability to grow in favorable environments and lack of natural predators, competitors and diseases that would normally regulate their populations in their native range. A significant negative impact of invasives is when they outcompete and reduce native species populations. “If one species reduces the population of many species, biodiversity is reduced,” Gomez said. “Often, the new, invasive species does not have fruit or vegetation that can be utilized by native insects and wildlife, causing those populations to reduce as well.” Chinese tallow is extremely invasive to several regions of Texas. It’s invasive because it is a prolific seed producer and adapts well to many conditions, easily outcompeting native vegetation. The species has also negatively impacted wildlife, including the displacement of the Attwater’s prairie chicken. Invasive species should be avoided when planting and should be removed from the environment when possible. “The hard part is, once they are in the ecosystem, they are challenging to remove and often mowing them down just makes them come back with a vengeance,” Riley said. While learning how to remove invasives can vary with species, manual removal is considered the most effective. Treating stumps and any remaining root system with herbicide may be necessary for mature established trees. A local forester or certified arborist should be contacted for species-specific recommendations. Learning how to control invasive species around your property and what tools to use to properly remove them will help improve and maintain ecosystem health.

When selecting a tree species to plant, choosing the right tree for the right place is essential. Evaluate and determine the location and the tree’s purpose, then consider tree type by size at maturity. “When planting trees, native trees are preferred because of their adaptability and resiliency,” Gomez said. “But planting a tree that will add value, perform well in the ecosystem, increase diversity and not become invasive are the major goals.” Species diversity is critical for the health of our ecosystems, especially when you consider pests and diseases. “Diversity is a good thing,” Gomez said. “When you have pests and pathogens that affect only one group of species, that’s when non-natives can help increase diversity, creating more resilient urban landscapes.” In Northeast Texas, native ash trees are being threatened by a harmful introduced pest, the emerald ash borer, which is detrimental to only one family of trees. “If 10% of all your trees are one species and you lose them all to a pest or disease, you lose a significant amount of value,” Riley said. “Which means you have to spend more money on heating and air conditioning, water purification, air filtering and health care because all of these benefits are associated with having trees around us.” In urban forests, the goal is to have a tree population include no more than 5% of one species, 10% of one genus or 15% of one family, Riley said. While this can be challenging to achieve, it’s a benchmark that ensures urban forest resiliency. When planting, choose a variety of species to have a diverse and resilient ecosystem, including trees in for the yard and overall community. “The most important thing is to know your region,” Riley said. “There isn’t a one size fits all for Texas. Know what is considered invasive or aggressive in your area and what the needs are for the particular region.” Finally, avoid planting invasive species. They are harmful to the environment, and if they are already growing, learn how to control and remove them. For more information on invasive tree species and common invasive species found in Texas, visit <https://tfsweb.tamu.edu/InvasiveTrees/>.



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Sweet Corn, March 11-17

Sweet corn is a favorite treat during summertime. Who doesn't love eating sweet corn fresh off the cob! Sweet corn can be a challenging crop to grow in small gardens due to space issues, but if you have the garden space sweet corn can be a great addition.

Believe it or not sweet corn belongs to the grass family and has the same growth characteristics as the grass in your lawn. When selecting a site well drained soils are preferred, but sweet corn can grow in a variety of soil conditions. Sweet corn is best suited for deeper soils, however if your garden has sandy soils, you can still grow sweet corn. Magnesium deficiency is a common issue seen in sweet corn in sandy soils and you will need to add magnesium. Magnesium can be found in products such as K-MAG fertilizer and Epsom salt. Another issue you will see in Polk County soils is pH levels. Sweet corn grows best in soils with a pH between 5.5 and 7.0. Many soils in Polk County have a pH between 4.5 and 5.5. An application of lime can correct soil pH.

Block plantings or several short rows of sweet corn is required in small gardens instead of one or two long rows. This is because sweet corn is wind pollinated. Pollination will be ineffective when sweet corn is planted in single rows, thus effecting yields. When preparing the site, work the soil thoroughly to 10 inches and remove all weeds, rocks, and trash. An application of fertilizer should occur right before or during planting. A soil test is preferred to determine exact amounts and type of fertilizer to add. However, a general recommendation is 2 to 3 lbs. of 13-13-13 fertilizer for every 100 square feet.

Sweet corn should be planted as soon as the danger of the last frost has passed. Sweet corn is a crop that requires large amounts of water and the earlier you plant will help ensure sweet corn matures before the dry hot weather of summer. In Polk County plantings should occur during the first half of March.

Watering should occur regularly to ensure the leaves do not wilt. Keep the soil weed free and till the soil when the sweet corn is knee to waste high. A top dress application of

nitrogen fertilizer should also occur at this time. Corn earworm is the most easily recognized pest in corn. Corn earworm is the worm, or larvae of a moth, that is present under the husk on the silk end of the corn cob. Control includes Sevin, Bt, and garlic juice extracts. European corn borer is another damaging pest in corn. As the name suggest the borer feeds inside the stalk of the plant. Control options include Bt and garlic juice extracts.

To determine when sweet corn should be harvested you will need to pay attention to the tassel on top of the plant. Sweet corn is ready to be harvested about 3 weeks after the tassel emerges. To harvest hold the stalk below the ear and twist the tip of the ear towards the ground until it breaks. Sweet corn should be eaten within one or two day of harvesting as the kernels begin to lose sweetness after 2 days.

Sweet corn can be a fun crop to grow in the garden, but it does have some challenges. The biggest issue effecting production in small gardens is planting in one or two long rows and from underwatering.

Sweet Corn Varieties for Polk County

Variety	Days to harvest
Sugary enhanced	
Ambrosia (bicolor)	75
Kandy korn (yellow)	89
Legend (yellow)	65
Sugar buns (yellow)	72
Tender treat (yellow)	95
Shrunken, super sweet, extra sweet	
Crisp-N-Sweet (yellow)	85
Florida staysweet (yellow)	85
Honey-N-Pearl (bicolor)	78
How sweet is (white)	87
Mirai	70
Summer sweet	81
Normal sugary	
Bonanza (yellow)	82
Merit (yellow)	75
Silver queen (white)	91
Sweet G-90 (bicolor)	90
Triple Sweet	

Honey select	79
Serendipity	82

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Farm Animal Terminology, March 18-24

Springtime is county stock show season for many 4-H and FFA students across the state. Polk County's own local show, Trinity Neches Livestock Show, will be occurring during March 27-31. I highly encourage everyone to get out and support the youth of the county by coming out to cheer them on during the show or Friday night at the auction. For many first-time stock show visitors, the terminology can be confusing. While we all can tell the difference between a hog and a lamb many do not know the difference between a barrow, gilt, ewe, or wether. This week's article will focus on terminology used to describe the different types of livestock seen both at local county shows and at farms across the state.

Cattle (Bovine)

- Bull, mature male
- Steer, castrated male
- Cow, mature female
- Heifer, young female that has not yet had a calf
- Calf, immature young offspring

Swine (Porcine)

- Boar, mature male
- Barrow, castrated male
- Sow, mature female
- Gilt, young female
- Piglet, immature young offspring

Sheep (Ovine)

- Ram or buck, mature male
- Wether, castrated male
- Ewe, female sheep
- Lamb, a sheep less than one year of age

Goats (Caprine)

- Buck or billy, mature male
- Wether, castrated male
- Doe or nanny, female goat
- Doeling, immature female goat
- Buckling, immature male goat
- Kid, immature young offspring

Rabbit (Leporidae)

- Buck, male rabbit
- Doe, female rabbit
- Kit or kitten, young rabbit

Poultry (Aves)

- Rooster or cock, mature male chicken
- Tom, mature male turkey
- Cockerel, male chicken less than one year old
- Capon, castrated rooster
- Hen, mature female chicken or turkey
- Chick, newly hatched chicken
- Poult, young turkey
- Pullet, young chicken less than six months old
- Boiler, a chicken that is raised for meat production

Now that you know farm animal terminology make sure to support the youth of Polk County at the 2023 Trinity Neches Livestock Show. More information can be found on the website.

<https://www.tnspolkco.com/>

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Woodpeckers of East Texas, March 25-31

The forest of East Texas and woodpeckers go together naturally. We are blessed with a high diversity of woodpecker species here in both Polk County and East Texas as a result of the mosaic of hardwood and pine forests. East Texas is home to 9 of the 16 species of woodpeckers that have been recorded in Texas. Of those 9 woodpeckers two are endangered and one is

considered extirpated in Texas. Identifying woodpeckers is easy and can add to your enjoyment while watching a woodpecker drill a hole.

You can roughly divide woodpeckers into three groups. The first is small to medium size woodpeckers that have white and black barring on wings and back, but does not have a head or crown that is predominately red. This group includes Yellow Bellied Sapsucker, Hairy Woodpecker, Downy Woodpecker, and Red Cockaded Woodpecker. The Yellow Bellied Sapsucker and Red Cockaded Woodpecker have solid barring on the back, while Hairy Woodpecker and Downy Woodpecker have a white stripe down the middle of the back. Hairy Woodpecker and Downy Woodpecker are very similar, and the easiest difference is the Hairy Woodpecker is approximately 2.5 inches bigger. Yellow Bellied Sapsucker is the only species of woodpeckers in East Texas that cannot be seen year around and is just present during the winter. All the above species are common except for the Red Cockaded Woodpecker which is found in old growth savannah pine forest which has disappeared across much of East Texas. Because of habitat loss and decreasing numbers, Red Cockaded Woodpecker has been on the endangered species list since 1970. However, the future is looking bright for the Red Cockaded Woodpecker as habitat restoration and protection has caused numbers to increase since 1970.

The second group of woodpeckers are medium size and include Red Bellied Woodpecker, Red Headed Woodpecker, and Northern Flicker. These species are common to abundant and can be found in many forest types and in open areas of cities, yards, and parks. Red Bellied Woodpecker has a white and black barring on back and wings with a red crown that goes from beak to barring on back. Red Headed Woodpecker has a solid red head and neck with a solid black then white back. Northern Flicker is a brownish woodpecker with a white rump and flashes of yellow in wings and tail. Northern Flicker can also be seen foraging on the ground.

The last group includes two large woodpecker species that are easily recognizable. The first is Pileated Woodpecker which is crow size with a black back with a prominent red crest. Pileated Woodpecker prefers extensive forest with mature trees. The other species is the endangered Ivory Billed Woodpecker which is similar in appearance to the Pileated Woodpecker except it has white lines down back. The Ivory Billed Woodpecker requires very large extensive stands of mature hardwood forest. Due to habitat loss the bird no longer lives in Texas and was believed to be extinct across the south for over 60 years until possible sightings in Southern Arkansas in 2004.

We are blessed with a high diversity of woodpeckers here in East Texas. But to ensure their continue survival their habitat must be managed to encourage older trees and snags for

feeding and nesting. If not, more woodpecker species may follow the same path as the Ivory Billed Woodpecker.



Red Cockaded Woodpecker, Image Credit: USFWS

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