



United States Department of Agriculture

# East Texas Plant Materials Center 2023 Progress Report of Activities



## Urban Agriculture – Conservation in the City

The East Texas Plant Materials Center (ETPMC) and [Texas Native Seeds](#) (TNS) Program partnered with the [City of Nacogdoches](#) on a median conversion project. The 43,000 square foot project covered 3 medians at the northern entrance to Nacogdoches on Business US 59. City leaders approached the ETPMC for a sustainable solution to weekly mowing regimes and were open to planting native plants as an alternative to Bermuda grass.

A seed mix comprised of low growing grasses and forbs was created with visibility, safety, and beautification in mind. The site received two growing season herbicide applications in the summer and fall of 2022 and a cool season application the week of planting. ETPMC and TNS staff planted the medians on February 24, 2023, using a Woods® planter with a native seed box. By May, the annuals incorporated in the mix were blooming and attracting attention from local residents.

The seed mix included several conservation plant releases from the three Texas plant materials centers, as well as annual and perennials native to the Western Coastal Plain. Using the [9 Natives](#) concept from the Coastal Prairie Conservancy, three perennials that each bloom in spring, summer, and fall were included, as well as several showy annuals.

The planting is designed to need mowing once a year in late winter after plants have had a chance to reseed. Follow-up spot treatment with herbicide will be employed to eliminate noxious weeds like Johnsongrass.

The project is a 2023 recipient of the NRCS Chief’s Conservation Stewardship Community Service Award.

Read more about the project here: [Native Plants in Urban Landscapes](#)



## Study: Cover Crops for Use in Conservation Planning

The ETPMC, along with the [Jimmy Carter PMC](#) in Americus, GA and the [Tucson PMC](#) in Tucson, AZ, participated in a study to characterize the growth characteristics of Cosaque black seeded oats and Soil Saver black oats for NRCS wind and water erosion prediction conservation planning tools in the southern U.S. Plots of each oat species were planted in the fall, and plant height, and percent canopy cover measurements were taken monthly. Biomass production was collected 60 days after planting and at termination.

Both species established quickly at the ETPMC, but a hard freeze in December greatly reduced canopy cover. Cosaque recovered enough to provide greater than 50% canopy cover, although it proved more susceptible to foliar diseases. Soil Saver failed to recover enough to provide adequate cover for soil protection. Plant height and biomass were also affected by cold damage. Cosaque produced more than 3000 lb/acre biomass, which was 1400 lb/acre greater than Soil Saver.



Soil Saver black oats growing at the ETPMC. Photo on left taken December 16, 2022. Photo on right taken January 16, 2023, showing freeze damage.

## New Team Member

In July of 2023, Juan Rodriguez-Cruz joined the ETPMC staff as the Biological Technician. He hails from Lajas, Puerto Rico, and most recently worked for APHIS as an Animal Health Technician. He studied Agribusiness at the University of Puerto Rico – Mayagüez Campus. Juan grew up helping his grandfather on a horse and cattle farm and was a competitive team roper at rodeos and is no stranger to farming.

When asked what he likes best about working at the ETPMC, Juan indicated that he loves to learn, and every day at the center is a new opportunity to do just that. He has learned many new things in the jobs he has held since college, but growing plants is an entirely different experience for him, and he says he's learned the most from his current position. Juan's favorite work activities include harvesting with the flail vac and sowing cover crops. He is not one to sit still, so seed cleaning doesn't land at the top of the list. Juan takes satisfaction in a job well-done, and he has worked tremendously hard to get the fields at the ETPMC back into shape.

Ultimately, Juan would like to take the experiences and knowledge he has gained here back to Puerto Rico to introduce conservation practices in his homeland, and to own his own cattle ranch.



## Proof of Concept: ETPMC Plant Releases Trialed in Harris County

The TNS Program recently partnered with the Harris County Flood Control District (HCFCD) and Houston Wilderness to develop an affordable viable, native grass seed mix for various land uses in the Gulf Coast region, specifically along rights-of-way, riparian corridors, large open spaces, detention basins, and other areas. Collaboratively, project participants, including the ETPMC, are known as the Regional Access to Native Seed Mix (RANSM) Coalition.



RANSM Coalition members and commercial seed growers observing a detention basin planted with conservation plant releases.

Texas Native Seed staff sowed conservation plant releases singly, and in mixes in 10'x10' plots at 40 Pure Live Seed (PLS) on two sites in Harris County. Plots were sown by hand, followed by culti-packing and a capping material applied by hydroseeder to ensure good seed-to-soil contact. East Texas Plant Materials Center releases included in the trials were: Coastal Plains Germplasm little bluestem, Harrison Germplasm Florida paspalum, 'Nacogdoches' eastern gamagrass, Pineland Gold Germplasm swamp sunflower, Crockett Germplasm herbaceous mimosa, and Cajun Sunrise Germplasm ashy sunflower. These species, as well as other conservation releases are currently included in planting specifications for all future HCFCD projects due to the initial success of the project.

In March of 2023, RANSM Coalition members met with commercial seed growers to address the need for

large-scale production of these conservation releases to meet the demand for use in the Harris County Flood Control District. As a result of the visit, ETPMC secured grower agreements with Bamert Seed Company, Douglass King Seed, Roundstone Native Seed Company, and Turner Seed Company, Foundation and Generation 1 seeds were shipped to these growers.

## Field Office Resource Materials

Two updated publications are now available for Zone 4 field office personnel to aid in conservation planning with private landowners.

Conservation Plant Releases of East Texas and Western Coastal Plain includes regionally adapted plant releases developed at the ETPMC for use in conservation planning specifications. These plant releases have a proven level of performance in the Western Coastal Plain and should be given preference in seeding specifications for landowners.

Native Pollinator Plants of East Texas and the Western Coastal Plain is an expanded version of the original brochure with 27 plants that are commercially available from seed or nursery stock. Alternative species that occur or are adapted to the region are also listed. Native Soft Mast of East Texas and the Western Coastal Plain is a current brochure and includes examples of fleshy fruit varieties preferred for many game and nongame wildlife species. Native Legumes of East Texas and the Western Coastal Plain is currently under revision.



To request physical brochures for your office, please contact the East Texas Plant Materials Center at 936-564-4873, or by email to [dawn.stover@usda.gov](mailto:dawn.stover@usda.gov).

## Connections

The ETPMC has seen a marked increase in outreach opportunities. Manager, Alan Shadow attended the Texas Seed Trade Association trade show in January and spoke at the National Native Seed Conference in Washington, D.C. in March. He also presented an Office Hour Tech Talk with the other Texas PMC managers to train field office staff on the work the PMCs do, what we can provide as resources, and how they can contact us. It was the most successful training to date.

Multiple rainfall simulator demonstrations, facility/farm tours, and presentations were given to NRCS staff and partner agencies including Texas Parks and Wildlife and the Conservation Delivery Network, Texas Forestry Association members, Texas Longleaf Team, Stephen F. Austin State University forestry soils students, Texas Master Gardeners, Texas Master Naturalists, garden clubs, and several area beekeeping associations. Zone 4 staff were invited to the ETPMC to attend a day-long demonstration on how to set up and run the rainfall simulator led by Dennis Brezina, Trey Bethke, and Cole Patton with contributions from Alan Shadow, Dawn Stover and Tyson Hart.

Alan and Dawn also partnered with the USDA Southern Plains Climate Hub and the Bureau of Indian Affairs Tribal Climate Resilience group for a meeting with the Alabama-Coushatta Tribe of Texas. Dawn presented an overview of the Nacogdoches median project, and Alan shared the role the ETPMC plays in conservation of natural resources in the Western Coastal Plain.

Also of note, Dawn led a group from the American Youthworks Texas Conservation Corps in a service-learning day where tribal youth learned how to harvest and clean native grass seed and learned about the role of the plant materials program in the NRCS. Dawn also worked with seventh grade Science, Technology, Engineering, and Mathematics (STEM) students from Lufkin Middle School on their Monarch Mission project – teaching about the value and role of native plants in monarch conservation, and helping students design a pollinator garden.



Alan Shadow speaks to tribal members at the Alabama-Coushatta Reservation.



Field office personnel practice setting up the rainfall demonstration table.



Students and staff from the American Youthworks Texas Conservation Corps stand in a field of Pineywoods Germplasm thickspike gayfeather.



Dawn Stover helps 7<sup>th</sup> graders at Lufkin Middle School design pollinator gardens.



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