

*Caesar
Kleberg
Wildlife Research Institute*



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and production of seeds throughout the year. Based on these qualities, we predict that hooded windmillgrass and shortspike windmillgrass will out-compete introduced species, specifically bermudagrass.

The study will take place on sandy and clay soils in Andrews, Baylor, and Kleberg counties. Each study site will consist of 4 standard mixture plots, 4 plots containing native species only, and 4 plots combining both standard and native mixes. The point intercept method will be used to evaluate ground cover of each plot at 30, 60, and 90 days (TxDOT's plant species standard requires 70% land cover within 90 days).

Data were collected in 2006 and additional evaluations will be conducted during summer 2007. Information from this research will help facilitate changes to TxDOT's standard seed mixture used to revegetate right-of-ways throughout Texas by replacing introduced grass species with native species.

Cooperative funding was provided by Texas Department of Transportation and USDA Natural Resources Conservation Service Kika de la Garza Plant Materials Center.

Germplasm Releases of Rio Grande Clammyweed and Orange Zexmenia

John Lloyd-Reilley, Paula D. Maywald, William Ocumpaugh, Timothy E. Fulbright, Shelly D. Maher, Forrest S. Smith, Albert Quiroga, George Farek, and Keith A. Pawelek

South Texas Natives (STN), Kika de la Garza Plant Materials Center (PMC), and Texas Agricultural Experiment Station at Beeville will jointly submit proposals recommending the release of 2 native forb species (Rio Grande clammyweed and orange zexmenia) for wildlife and rangeland plantings in the South Texas region. Accessions were selected that produce plants and seed that will meet ecological and physiological qualities desired by public and private landowners wishing to revegetate their land with native plants.

Rio Grande clammyweed is an annual that produces large amounts of seed. The seeds are consumed by numerous game and non-game birds and other wildlife. Clammyweed is an important insect host plant, provides food to a number of butterfly species, and adds herbaceous diversity to revegetation projects. This release is made up of 3 accessions and has shown good seed production and germination characteristics.

Orange zexmenia is a shrubby perennial forb. The foliage is favored by white-tailed deer, and is frequently eaten by cattle. The seeds are also eaten by bobwhites. Orange zexmenia attracts many insects and provides food to several butterfly species and their larvae. Four accessions will be chosen from STN's evaluations across the region and 4 will be chosen from the PMC's previous work. This release should be well adapted to most range sites in South Texas, and it will be an excellent addition to rangeland seeding mixes and wildlife habitat plantings.

Cooperative funding was provided by the USDA Natural Resources Conservation Service and numerous donors of South Texas Natives.

Screening South Texas Plant Seedlings for Salinity Tolerance

LeeRoy Rock, John Lloyd-Reilley, and Shad D. Nelson

Over 600,000 acres of land in South Texas are affected by saline soil conditions. The weathering of parent rock material releases soluble salt ions such as Na^+ , Cl^- , Ca^{2+} , Mg^{2+} , SO_4^{2-} , and HCO_3^- that contribute to soil salinity. Elevated levels of these soluble salts in the soil restrict plant establishment in some areas of South Texas. To aid establishment of plants on saline and alkaline sites, information is needed to determine how young seedlings respond to varying levels of salinity. This greenhouse study is focused on evalu-



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Seedlings are thinned out before saline treatments begin on ebb-flow tables.

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