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seeding rates of native grasses. Potential implications include a reduction in the overall seed cost of native grass seeding projects.

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### Seed Increase of South Texas Natives Plant Releases

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Suitable quantities of native plant seed are needed for commercial seed producers and for experimental plantings. To meet this demand, South Texas Natives (STN) and cooperators have established seed increase fields at Bladerunner Farms, Rio Farms, and the Texas Agricultural Experiment Station (TAES) in Beeville. Species being produced include Arizona cottontop, sideoats grama, yellow Indiangrass, big bluestem, little bluestem, pink pappusgrass, and whiplash pappusgrass at Rio Farms; slender grama, hairy grama, and Texas grama at Bladerunner Farms; and plains bristlegrass, Hookers plantain, redseed plantain, and buckthorn plantain at TAES.

A total of 579 lbs. of cleaned seed was produced by STN during 2006 and 2007. A total of 41 lbs. of



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**Little bluestem is a native grass species being grown for seed increase at Rio Farms (shown here being harvested).**

pure live seed (PLS) of Dilley germplasm slender grama was provided to commercial seed producers. Currently, we have 2.5 acres of commercial seed production of this release. Additionally, 92 lbs. of PLS of La Salle germplasm Arizona cottontop were distributed to 2 commercial seed producers, and approximately 35 acres are in commercial seed production.

We conducted numerous seed production and agronomic input experiments in 2006 and 2007. Seed harvests during March and May have resulted in the highest quality seed, followed by August and later harvests. We have also found that in most species, cleaning of seed to the bare caryopsis significantly reduces seed quality. Herbicide test plots were installed to determine species resistance and to control various pest, weed, fungal, and disease problems. Additionally, cultivation and vegetative management practices are being studied to maximize seed production.

*Cooperative funding was provided by South Texas Natives, Texas Agricultural Experiment Station, USDA Natural Resources Conservation Service, Rio Farms, and Bladerunner Farms.*

### Monitoring Variation in Soil Salinity in Zapata County

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

Zapata County is located in the southwest region of southern Texas. This region is arid and is characterized by mild winters and hot, dry summers. Summer temperatures can exceed over 100°F with highly variable rainfall year-to-year. Average annual rainfall is 19 inches. However, rains are seldom evenly spread throughout the year, leading to extended periods of drought. Less than 1% of the county is considered prime farmland as the majority of the soils contain highly soluble salts that prevent vegetation establishment. For developing successful revegetation strategies on these sites, it is important to know how seasonal temperature and rainfall affects salt levels in the soil. Therefore, the objective of this study is to establish a monitoring station in Zapata County to record soil moisture, temperature conditions, and salinity levels.

A 0.25 acre site in Zapata County has been selected for monitoring. Soils in this area vary in salinity with electrical conductivity values ranging from 1 to 45 dS/

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