

## **Restoration of Native Plant Communities in the South Texas Sand Sheet**

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The South Texas Sand Sheet is one of the best strongholds for native plant communities and wildlife in South Texas. Native plant communities have proven difficult to restore after disturbance due to sandy soils, narrowly adapted plant ecotypes, and non-native grass invasion. *South Texas Natives* (STN) is working with El Coyote Ranch to address these challenges and develop strategies to improve restoration outcomes in this ecoregion. Over the past few years, we have begun restoration studies on degraded range sites, former drilling pads, and an electric transmission line right-of-way. Data are being collected on restoration outcomes to assess our efforts.

Factors evaluated include seed mix composition, non-native grass control techniques, and planting methodology. Preliminary results indicate that high percentages of early seral grasses in Sand Sheet seed mixes are needed for success. Repeated, multi-season application of glyphosate herbicides prior to seeding can be effective for controlling non-native grasses on disturbed sites. Without such efforts, initial establishment of native seed can be difficult.

Analysis of exclosure data suggests that the use of livestock grazing within months after seeding can help suppress the reinvasion of non-native grasses. This is especially true for Guinea grass, though some negative effects on late seral native plant establishment are likely. We have also examined the use of 2 seeding tools, a Truax flex II drill and a Trillion drop seeder, and documented similar establishment using both implements. STN personnel will use results from these projects to refine and improve restoration recommendations for the Sand Sheet.

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