

6th Eastern Native Grass Symposium Oct. 7–10, 2008 Columbia, SC

Abstract: NATIVE SPECIES and GENETIC DIVERSITY

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There is growing interest in using native plant species for rangeland, restoration, and wildlife habitat. Some ecologists are concerned that the current selection and breeding program used in cultivar development and release of native species reduces or eliminates genetic diversity and debases the whole “adapted” concept for using native species. Ecotype selection programs must carefully maintain genetic diversity and integrity without becoming so burdensome as to be commercially unviable. The USDA-NRCS E. “Kika” de la Garza Plant Materials Center in Kingsville, Texas, in partnership with the U.S. Forest Service-National Forest Genetics Laboratory in Placerville, CA, will report on their efforts to genetically screen plant material. Twenty-six collections of multiflower false Rhodes grass representing 16 of the known 25 counties from which this species is known to inhabit are under evaluation. There were no differences among the 26 collections in ploidy levels. Isozyme analyses revealed that 21 of the 26 collections had the same genotype. Five collections contained low levels of genetic variation with only one of these revealing a fixed allelic difference. This genetic screening along with our ecotype selection program improves our efforts to release commercial seed that is adapted, diverse, and appropriate for the landowners of south Texas.