

## Plains Bristlegrass Seed Yield Response to Nitrogen Fertilization in Texas

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Grasses native to South Texas have an increasing demand for use on right-of-way cover, for soil stabilization, rangeland recover, and wildlife habitat improvement. Previous research identified plains bristlegrass collections, which proved to be valuable for such use. As seed demand by ranchers and public organizations raises, it is essential to develop technology to effectively produce seed. The objective of this study was to quantify seed production responses to nitrogen fertilization treatments at two different locations. In 2005 experiments were established to document seed production response to nitrogen fertilization and humic acids levels on four plains bristlegrass accessions. Experiments were established in two locations with different annual mean temperature. The plains bristlegrass accessions 648, 677, 715 and 820 were planted at Beeville and Stephenville, Texas. Nitrogen fertilization treatments imposed consisted of 0, 45, 67, 89 and 125 lbs / acre. At Beeville, application of humid acids was tested vs. a control. Humic acids were applied to the soil and also sprayed onto the plants. Experiments at both locations were conducted under irrigation. Grass accessions differed in their response to increasing nitrogen levels and to locations. Spring seed production increased up to 50% over the fall production at Beeville. Two accessions, productive in southern conditions, could not tolerate winter temperatures in northern conditions.

*This research was partially supported by the “Joe Skeen Institute for Rangeland Restoration”.*

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Plains bristlegrass response to nitrogen fertilization. Stephenville, TX. Picture by Jorge A. Lopez-Garcia.