

Rio Grande Germplasm prairie acacia

Acacia angustissima (Mill.) Kuntze
var. *hirta* (Nutt.) B.L. Rob.

A Conservation Plant Release by USDA NRCS E. "Kika" de la Garza Plant Materials Center, Kingsville, TX



Rio Grande Germplasm prairie acacia. Photo by Shelly D. Maher, USDA-NRCS, Kingsville, TX.

Rio Grande Germplasm prairie acacia (*Acacia angustissima* (Mill.) Kuntze var. *hirta* (Nutt.) B.L. Rob.) is a selected plant material class of certified seed cooperatively released in 2012 by the USDA NRCS E. "Kika" de la Garza Plant Materials Center and the *South Texas Natives* Project of the Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville.

Description

Prairie acacia, also known as fern acacia, is a native, perennial member of the legume family. It is a semi-woody sub-shrub often forming colonies from its rhizomes. Mature foliage height ranges from 3 to 4 feet tall. Prairie acacia's white to cream flowers bloom from May to November.

Source

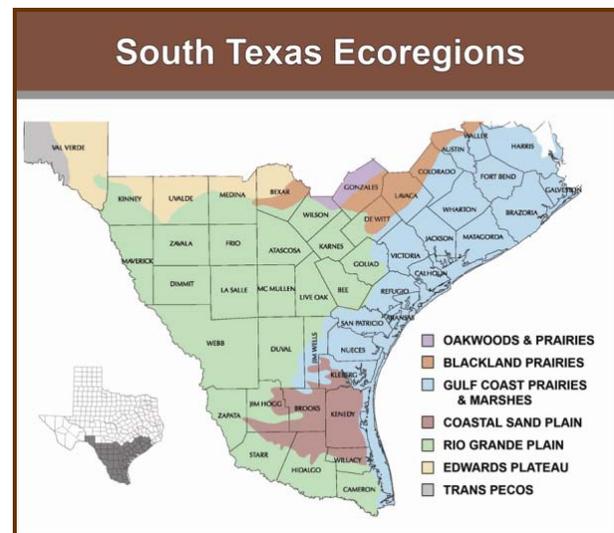
Rio Grande Germplasm prairie acacia is a blend of 3 native populations collected in McMullen, Webb, and Dimmitt Counties of south Texas. This release is a selected plant material class of certified seed. Rio Grande Germplasm has the tallest and widest growth form, best foliage production, good seed production, and good seed germination when compared to other prairie acacia collections made in south Texas. No breeding, selection or genetic manipulation was imposed with any of this material, and all accessions were increased for commercial production using rhizome cuttings rooted

from the plants grown from the original wild-harvested seed collections.

Conservation Uses

Prairie acacia is recommended for upland wildlife, range plantings and native landscaping in south Texas. It produces high quality forage for all types of grazing livestock. Crude protein of prairie acacia leaves have ranged from 16 to 29% with good digestibility. The literature reports some toxicity to sheep and other animals when fed at high concentrations. Prairie acacia provides good forage for wildlife. It also provides seed and cover for fawns and upland game birds.

Area of Adaptation and Use



Rio Grande Germplasm will likely perform best in the Rio Grande Plain. However, based on the natural distribution of *Acacia angustissima*, it will likely do well in the Gulf Prairies and Marshes, the Edwards Plateau, the Trans Pecos eco-regions of Texas and adjacent portions of northern Mexico. Best performance in planting trials has been observed on medium to fine textured soils.

Establishment and Management for Conservation Plantings

Seedbed preparation should begin well in advance of planting. Planting can be done in early spring or late summer-early fall in south Texas. Establish a clean, weed-free seedbed by either tillage or herbicides. Prior to planting, the site should be firm and have accumulated soil moisture.

Prairie acacia is best seeded using a native-grass drill to ensure a good planting of the seed on rough, irregular rangeland. Broadcast seeding may be used in areas not easily planted with a drill, but some type of additional coverage such as culti-packing or light dragging will be beneficial to ensure good seed to soil contact.

Seed should be planted 1/4 to 1/2 inch deep. A brief mechanical scarification will improve seed germination of its hard seed. For calibration purposes, Rio Grande Germplasm prairie acacia contains approximately 31,000 seeds per bulk pound. A seeding rate of five pounds of pure live seed (PLS) per acre is recommended. In planting mixtures reduce the rate according to the percent of prairie acacia in the mixture.

Soil analysis should be performed prior to planting to determine the necessary levels of phosphorus and potassium. No nitrogen fertilizer is necessary since prairie acacia is a legume. It forms a symbiotic relationship with rhizobial bacteria to fix atmospheric nitrogen for use by the plant. However, prior to seeding prairie acacia, the seed must be coated with the appropriate inoculant in order to establish the symbiotic relationship.

If one plant per square foot has become established than the planting has been successful.

Prairie acacia should not be grazed the first year. After a stand is established, either continuous or rotational grazing can be used. It is recommended that a minimum 24 inch stubble height be maintained under continuous grazing. For rotational grazing, forage height should be utilized between 18 to 24 inches. Plants should be allowed to produce seed annually to insure stand health. Prairie acacia is a long-lived perennial that is extremely drought tolerant once established.

Ecological Considerations

There are no known environmental concerns with prairie acacia.

Seed and Plant Production

Seed increase plots have been planted on 36" bedded rows. Prairie acacia can also be established with vegetative transplants. Rapid spread and growth has been observed in transplant established stands providing seed harvests within the first year. Furthermore transplants stands facilitate better weed control in the seed production fields.

Prairie acacia produces seed usually twice a year, once in the early summer and again in the late fall. Seed is

harvested with a combine. The use of slow travel and RPM speeds while harvesting results in relatively clean seed, needing little cleaning or processing. The use of a hammer-mill or flake-breaker is required to get the seed out of its pod. To clean stems and chaff from harvests, a Clipper seed cleaner has been used following the hammer-mill treatment.

Well managed seed fields have produced from 300-500 bulk pounds of clean seed. Purity of the seed is usually around 80-90% and germination rates for scarified seed ranges from 50 to 80%. Adequately stored seed in humidity and temperature controlled facilities can be expected to stay viable for over 10 years.

Availability

For conservation use: Initially seed will be produced exclusively by Douglass King Seed Company, San Antonio, TX.

For seed or plant increase: Seed of the Rio Grande Germplasm prairie acacia will be identified by USDA NRCS accession number 9093599. First generation (G0) seed will be produced and maintained by the E. "Kika" de la Garza Plant Materials Center. Seed production fields have a 10 year production limit.

For more information, contact:
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Citation

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

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