

Balli Germplasm prostrate bundleflower

Desmanthus virgatus (L.) Willd.
var. *depressus* (Willd.) B.L. Turner

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



Balli Germplasm prostrate bundleflower. Photo by Shelly D. Maher, USDA-NRCS, Kingsville, TX.

Balli Germplasm prostrate bundleflower (*Desmanthus virgatus* (L.) Willd. var. *depressus* (Willd.) B.L. Turner) is a selected plant material class of certified seed cooperatively released in 2013 by the USDA NRCS E. "Kika" de la Garza Plant Materials Center, *South Texas Natives* Project of the Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville, and Texas AgriLife Research Station Beeville. Balli Germplasm prostrate bundleflower will be identified by USDA NRCS accession number 9085381.

Description

Prostrate bundleflower is a low growing, warm season perennial legume with stems 75 cm or longer. It produces small white flowers during the summer and seed ripens at the beginning of July in South Texas. The fruits are legume pods 2.2-8.8 cm long, which split open when ripe, and contain 9-27 seeds per pod.

Source

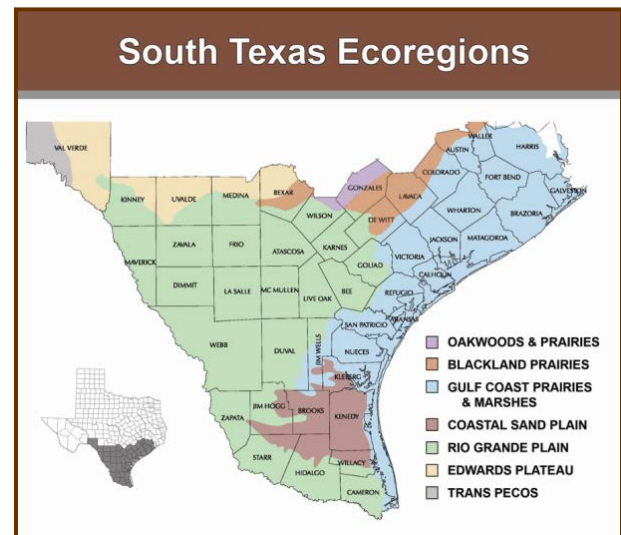
Balli Germplasm originated from a sandy loam soil in Hidalgo County in South Texas. Balli Germplasm has superior growth, plant density, and seed production when compared to other prostrate bundleflower collections made in south Texas. No breeding, selection or genetic manipulation was imposed with any of this material, and it was increased for commercial production using the original wild-harvested seed collection.

Conservation Uses

Prostrate bundleflower is recommended for upland wildlife plantings, critical site revegetation, roadside plantings, and for inclusion in range seeding mixes.

Prostrate provides forage and seeds utilized by bobwhite quail, Rio Grande turkey, white-tailed deer, and livestock.

Area of Adaptation and Use



Balli Germplasm has shown excellent competitive ability with many introduced exotic grasses. Best performance of this seed source has been observed on medium to fine textured soils. Prostrate bundleflower does not naturally occur on coarse sands or loamy sand soils in south Texas. The area of known adaptation of Balli Germplasm includes the Rio Grande Plain, Gulf Coast Prairies and Marshes, and Sand Sheet Ecoregions of Texas.

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.

Prostrate bundleflower can be seeded using a drill or broadcast planter. If broadcast seeded, some type of additional coverage such as culti-packing or light dragging is recommended to ensure good seed to soil contact.

Seed should be planted 1/4 to 1/2 inch deep. It is better to plant too shallow than too deep. For calibration purposes, Balli Germplasm prostrate bundleflower will generally be used in planting mixtures. As such the seeding rate will

need to be adjusted according to the percent of prostrate bundleflower in the mixture. For calibration purposes, a seeding rate of five to ten pounds of pure live seed (PLS) per acre would be the single species recommended seed rate. Balli Germplasm prostrate bundleflower contains approximately 62,000 seeds per bulk pound. It has shown to have a high amount of dormant seed. However, scarification can greatly increase seed germination. If one plant per square foot has become established than the planting has been successful.

Areas planted to Balli Germplasm should be deferred for 90 days to allow plants to become established. Established plants should be allowed to produce seed annually because in many areas with proper soil moisture prostrate bundleflower readily reseeds itself with minimal soil disturbance.

Ecological Considerations

There are no known environmental concerns with prostrate bundleflower.

Seed and Plant Production

Seed production for Balli Germplasm can be started from transplants or direct seeded on beds or flat ground. Seed is best harvested using a combine with a grain-style header. The seed of Balli Germplasm dehisces at maturity, however about 75% of the seed ripens uniformly. Seed can be harvested before peak ripeness; however, harvesting too early has resulted in lower seed quality making the added yields negligible.

There are a host of insects that feed on the seed of prostrate bundleflower and will continue to feed on the seed after harvest unless treated. In order to reduce the detrimental effects of these insects, it is recommended that following harvest and seed drying, seed should be placed in a freezer for a minimum of 48 hrs to kill seed-feeding insects. It is possible that an insecticide treatment prior to harvest may eliminate this problem however this has not been tested.

Following harvest, trash can be removed using a Clipper seed cleaner. After the trash has been removed, seed can be further cleaned using a gravity table. This will

remove light (immature) seed, which will greatly increase purity of the seedlot.

Well managed seed fields have produced 775 lbs pure live seed/acre in a single year. Purity of seed harvests are usually around 85% and germination rates for scarified seed ranges from 80 to 95%. 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 Balli Germplasm prostrate bundleflower will be identified by USDA NRCS accession number 9085381. First generation (G0) seed will be produced and maintained by South Texas Natives. Seed production fields have a 10 year production limit.

For more information, contact:
USDA NRCS E. "Kika" de la Garza
Plant Materials Center
Kingsville, TX 78363
Phone/Fax: 361-595-1313
Website: <http://plant-materials.nrcs.usda.gov/stpmc/index.html>

Citation

Release brochure for Balli Germplasm prostrate bundleflower (*Desmanthus virgatus* (L.) Willd. var. *depressus* (willd.) B.L. Turner). USDA-Natural Resources Conservation Service, E. "Kika" de la Garza Plant Materials Center, Kingsville, TX 78363. Published July 2013.

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>>

Helping People Help The Land

USDA IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER