



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

Venado Germplasm awnless bushsunflower

Simsia calva

(Engelm. & A. Gray) A. Gray

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



VenadoGermplasm awnless bushsunflower. Photo by A. Falk, South Texas Natives, Kingsville, TX.

Venado Germplasm awnless bushsunflower (*Simsia calva* (Engelm. & A. Gray) A. Gray) is a selected plant material class of certified seed cooperatively, released in 2013 by the *South Texas Natives* Project of the Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville and the USDA NRCS E. "Kika" de la Garza Plant Materials Center.

Description

Awnless bushsunflower is a perennial forb or sub-shrub that has orange-yellow disk shaped flowers. Mature foliage height ranges from 30-90 cm (1-3 ft). Mature plants form mounds in open settings, or vines through brush or thick vegetation. Awnless bushsunflower begins flowering in April and will continue to produce flowers through the fall with adequate precipitation.

Source

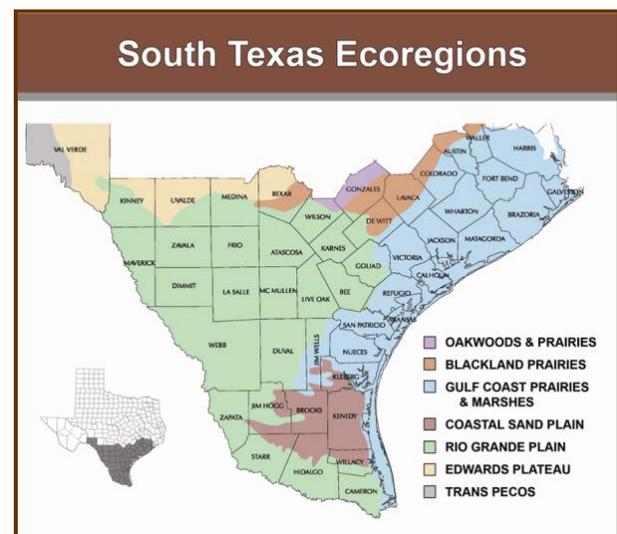
Venado Germplasm is made up of 4 collections made in the Rio Grande Plain of South Texas from clay loam, loam and very fine sandy loam soil types. These four collections were made from native stands in Medina, Bee, Webb, and La Salle County, Texas. This release is a selected plant material class of certified seed. The four components that comprise Venado Germplasm were chosen from evaluations of 30 native populations based on indications of superior plant vigor, survival, seed

production, and seed quality at 3 evaluation locations 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

Venado Germplasm awnless bushsunflower will be useful for upland wildlife plantings, critical site revegetation, roadside plantings, and for inclusion in range seeding mixes. Awnless bushsunflower is an excellent pollinator plant, and is a host plant for the bordered patch butterfly (*Chlosyne lacinia*). It produces seeds eaten by bobwhite quail and Rio Grande turkey. Awnless bush sunflower is a highly sought after forage for white-tailed deer, and it is also frequently grazed by cattle. Mean crude protein value of awnless bushsunflower is reported to be 16%, and the species may have high potential for use as adequate supplemental forage (e.g. food plot plant species) for deer from summer to fall. Awnless bushsunflower is considered a preferred food of deer, sheep, and goats. Recent work by at the Caesar Kleberg Wildlife Research Institute suggests awnless bushsunflower is one of the most preferred food plants of white-tailed deer in western south Texas.

Area of Adaptation and Use



In field plantings, Venado Germplasm has shown excellent competitive ability with many introduced exotic grasses. Best performance of this seed source has been documented on medium to fine textured soils, and naturally awnless bushsunflower generally occurs on

sandy loam and caliche soils in the region. Venado Germplasm is recommended for use in the Rio Grande Plains, Gulf Coast Prairies and Marshes, and Coastal Sand Plains Ecoregions of Texas. Good performance is possible in adjacent areas of northern Mexico, the southern Edwards Plateau, and eastern Trans Pecos Ecoregions of Texas. However this use has not been extensively tested. Acceptable performance has also been documented in north central Texas in the Cross Timbers and Prairies and Rolling Plains Ecoregions.

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.

Awnless bushsunflower 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 1/8 to 1/4 inch deep. It is better to plant too shallow than too deep. For calibration purposes, Venado Germplasm awnless bushsunflower contains an average of 330,000 seeds per bulk pound. A seeding rate of 1-2 pound of pure live seed (PLS) per acre is recommended for pure stands. When planted as part of a mixture, the seeding rate per acre should be adjusted according to the desire percent of the plant on the site. Venado Germplasm has shown rapid emergence in most planting trials, however heavy grazing pressure by deer can limit plant establishment. If one plant per square foot has become established than the planting has been successful.

Areas planted to Venado Germplasm should be deferred for 90 days to allow plants to become established. Established plants should be allowed to produce seed annually.

Ecological Considerations

There are no known environmental concerns with awnless bushsunflower.

Seed and Plant Production

Seed production of Venado Germplasm awnless bushsunflower can be started from seed, however weed competition can create a problem. Once established awnless bushsunflower has shown tolerance to grass

specific herbicides (Select), and pre-emergent herbicides (Prowl). White flies have proven to be a pest and cause significant plant damage at certain times of the year. Seed can be harvested using a combine with a grain style header when 75% of the seed heads have reached maturity, typically as early as mid June. Following harvest, seed should be dried, as a significant amount of plant material will also be harvested in the process. After drying, seed can be cleaned using a Clipper seed cleaner and further cleaned using a gravity table.

Well managed seed fields have produced 150 lbs pure live seed/acre in a single year. Purity of seed harvests in Kingsville, Texas has ranged from 35% to 50%. Germination rates for seed ranges from 30-65%.

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 Venado Germplasm awnless bushsunflower will be identified by USDA NRCS accession number 9109773. 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:
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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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