United States Department of Agriculture

A Conservation Plant Released by the Natural Resources Conservation Service
James E. "Bud" Smith Plant Materials Center, Knox City, Texas

Centex Germplasm threeflower melicgrass

Melica nitens (Scribn.) Nutt. ex Piper

Centex Germplasm threeflower melicgrass [*Melica nitens* (Scribn.) Nutt. ex Piper] was released in 2021 by the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) James E. "Bud" Smith Plant Materials Center (PMC), Knox City, Texas. Centex Germplasm is a selected class natural-track pre-varietal germplasm release identified by USDA NRCS accession number 9114504.

Fig. 1. Typical plant of Centex Germplasm threeflower melicgrass.

Description
Threeflower melicgrass is a native cool-season perennial bunchgrass. Centex Germplasm averages 29 inches in height and has a basal diameter of 9 inches (Fig. 1). The smooth, hairless leaves average eight inches long and ½-inch wide. The panicle is six inches long with abundant two or three flower spikelets.

Source
Centex Germplasm is made up of six populations originating from the Edward's Plateau, Cross Timbers and Prairies, and Rolling Plains ecoregions of Texas. These accessions were chosen from forty-two accessions evaluated at the Plant Materials Center near Knox City, Texas. No breeding, selection or genetic manipulation was used in development of this selected class release.

Conservation Uses
Centex Germplasm is recommended for critical area and wildlife habitat plantings and inclusion in range mixtures and pasture plantings.

Area of Adaptation and Use
Centex Germplasm threeflower melicgrass is likely to perform best in the Cross Timbers and Prairies, Edwards Plateau, and Rolling Plains ecoregions of central and west Texas. It may also be adapted to areas of the Trans Pecos and High Plains ecoregions; however, additional plantings are needed to verify its full range of adaptation.

Establishment and Management for Conservation Plantings
Schedule planting for late summer or early fall in north 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. Threeflower melicgrass can be seeded using a drill or broadcast seeder. A seeding rate of 3.7 pure live seed (PLS)/acre is recommended for drill plantings and 4.8 PLS lb/acre for broadcast plantings. For broadcast planting, 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 ¼-inch deep. Due to the small size, it is better to plant too shallow than too deep. Centex Germplasm contains approximately 235,700 seeds/lb (Fig. 2). Defer grazing 90 days after planting to allow plants to become well established. For assistance with a prescribed grazing plan, contact the local NRCS Field Office. Threeflower melicgrass readily reseeds itself with minimal soil disturbance. Allow plants to produce seed annually to maintain stand health.

Ecological Considerations
No severe insect or disease problems have been observed in threeflower melicgrass once established. Cold tolerance of this germplasm beyond the area of intended use is unknown. Centex Germplasm is not likely to become weedy, and if it does propagate itself in conservation plantings, it is expected to have a low impact on other species and is easy to control if needed.

Seed and Plant Production
Centex Germplasm averaged 75% PLS from well managed seed increase fields. Seed yields at the James E. "Bud" Smith PMC in Knox City, Texas average 40-60 PLS/acre on 40-inch bedded rows.

Centex Germplasm seed production fields can be established from greenhouse grown transplants or planted on bedded rows. Seedlings grow and mature quickly and may produce a marketable seed crop the first year. Seed harvest is possible using a variety of methods and implements. Because seed ripens indeterminately, a brush-like harvester or Shelbourne header collects the ripe seed without damaging or eliminating the ability to make subsequent harvests as later flowering florets mature. Seed matures in late spring so harvests should be made in May and June.

Parent populations of the composite of 6 accessions that make up Centex Germplasm (Generation 0) is maintained by the James E. "Bud" Smith PMC. Seed harvested from the G0 population will be designated as G1 seed and distributed to commercial growers. Growers may increase G2 and G3 seed for commercial sale. Increase of Centex Germplasm beyond G3 seed is prohibited. All G2 and G3 seed fields have a seven-year production limitation. All seed production fields of Centex Germplasm must be isolated from other increase fields or native populations of *Melica nitens* by a minimum of 500 feet.

Fig. 2 Centex Germplasm threeflower melicgrass seed

Availability
For conservation use: Centex Germplasm threeflower melicgrass seed will be available from licensed native seed dealers in Texas.

For seed or plant increase: Seed and plant growers should contact the James E. "Bud" Smith PMC to obtain G1 seed of Centex Germplasm threeflower melicgrass for commercial increase.

Citation
Release Brochure for Centex Germplasm threeflower melicgrass (*Melica nitens)*. 2021. USDA-Natural Resources Conservation Service, James E. "Bud" Smith Plant Materials Center. Knox City, Texas.

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>

For more information, contact:
USDA-NRCS James E. "Bud" Smith Plant Materials Center
3950 FM 1292 Suite 100
Knox City, Texas 79529
Phone: 940.658.3922 ext. 5
https://www.plant-materials.nrcs.usda.gov/txpmc/

Helping People Help The Land