



A Conservation Plant Released by the Natural Resources Conservation Service
James E. “Bud” Smith Plant Materials Center, Knox City, Texas; and *Texas Native Seeds*, Caesar
Kleberg Wildlife Research Institute, Texas A&M University, Kingsville, Texas

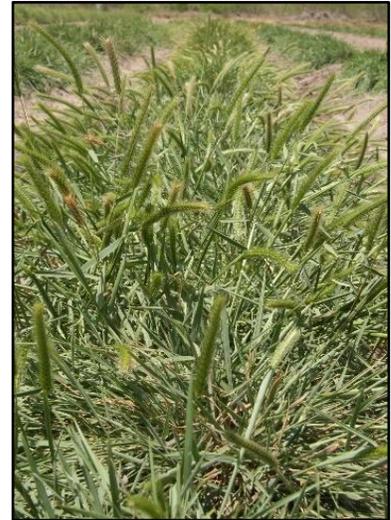
Cibolo Germplasm little barley

Hordeum pusillum Nutt.

Cibolo Germplasm little barley (*Hordeum pusillum*, Nutt.) was cooperatively released in 2021 by the Texas Native Seeds Project (TNS) of the Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville, Kingsville, Texas; USDA NRCS James E. “Bud” Smith Plant Materials Center, Knox City, Texas; Sul Ross State University, Borderlands Research Institute, Alpine, Texas; and Texas AgriLife Research Center, Stephenville, Texas. This release is a selected plant material class of certified seed.

Description

Cibolo Germplasm little barley is a tufted, cool-season annual with culms averaging 4-24 inches (10-60 cm) tall. Blades are 1.4-4.7 inches (3.5-12 cm) long and 0.1 inch (2-3.5 mm) wide lanceolate, flat, glabrous or pubescence. Spikes of Cibolo Germplasm are narrow and dense, 3-5 inches (7-12 cm) long. Cibolo Germplasm has approximately 193,000 seeds per pound. The seed head resembles other barley species, with seeds that readily adhere to clothing, and is known for its early spring green up.



Cibolo Germplasm little barley in the field.
Photo courtesy of South Texas Natives.

Source

This selection originates from collections made from native plants growing in the Cross Timbers, Blackland Prairie, Edwards Plateau, Trans Pecos, and South Texas Plains; and was selected from an evaluation involving 32 different native collections of little barley. No breeding, selection, or genetic manipulation was carried out on this release.

Conservation Uses

Cibolo Germplasm little barley is recommended for use for critical site revegetation, roadside plantings, erosion control, and for inclusion in range seedings. It also has the potential as a native substitute for cereal grains included in seed mixes as a temporary cover. Its short stature is compatible in mixes with wildflowers and other cool season establishing native species.

Area of Adaptation and Use

Cibolo Germplasm is likely to perform best in south, central, and west Texas; including the Central Prairies, Rolling Plains, Edwards Plateau, Rio Grande Plains, Coastal Sand Plains, and Gulf Coast Prairies and Marshes ecoregions, based on the origins of the collections of Cibolo Germplasm and limited plantings within these ecoregions. Cibolo Germplasm may also be adapted to areas of the Trans Pecos and Blackland Prairie ecoregions, but this has not been verified.

Establishment and Management for Conservation Plantings

Begin seedbed preparation well in advance of planting. Plant in late fall or early spring. Establish a clean, weed-free seedbed by either tillage or herbicides. Prior to planting, the site should be firm and have accumulated soil moisture. Seed little barley with a drill or broadcaster. If broadcast seeded, some type of additional coverage such as culti-packing or light dragging is recommended to ensure good seed-to-soil contact. Plant seed $\frac{1}{8}$ to $\frac{1}{4}$ -inch (3-6 mm) deep. It is better to plant too shallow than too deep. For calibration purposes, Cibolo Germplasm little barley contains approximately 193,000 seeds per pound. A seeding rate of 5 pounds pure live seed (PLS) per acre is recommended for pure stands, in mixes the seeding rate should be adjusted according to the desired percentage of the plant in the mix.

Areas planted to Cibolo Germplasm should be deferred from grazing until plants become established and have set seed. Allow plants to produce seed annually because in many areas little barley readily reseeds itself with minimal soil disturbance.

Ecological Considerations

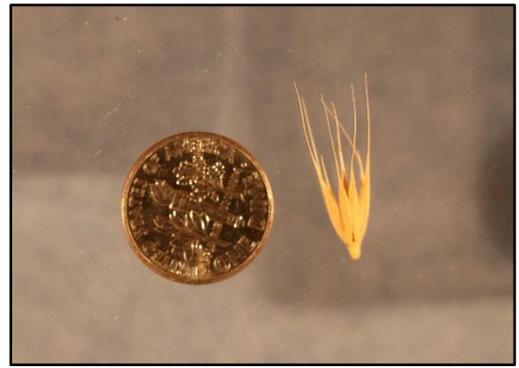
No severe insect or disease problems have been observed in little barley once established. Cold tolerance of this germplasm beyond the area of intended use is unknown.

Seed and Plant Production

Seed quality of Cibolo Germplasm averaged 50% PLS in seed increase fields. Potential seed yields per acre have been estimated at 250 PLS lbs. per acre per year on 36-inch bedded rows with a plant population of 14,000 plants per acre.

Seed production fields of Cibolo Germplasm little barley are best started from greenhouse grown transplants, planted on bedded rows. Seedlings grow and mature quickly and produce a marketable crop in the spring.

Seed harvest is possible using a variety of methods and implements. Seed ripens indeterminately. A Flail-Vac Seed harvester or Shelbourne header can collect the ripe seed without damaging or eliminating the ability to make subsequent harvests. Another method for harvesting mature seed is direct combining which reduces unfilled florets and increases seed purity. The first harvest is usually in early May in South Texas.



Seed of Cibolo Germplasm little barley
© South Texas Natives

Availability

For conservation use: Seed is available from native seed dealers in Texas. Cibolo Germplasm is identified by USDA NRCS accession number 9112349.

For seed or plant increase: Generation (G) 0 seed of Cibolo Germplasm is maintained and supplied by Texas Native Seeds. All commercial seed fields must be grown in Texas and isolated from other cultivated varieties and wild populations of *Hordeum pusillum* by a minimum of 300 feet. Initial seed used for commercial production of Cibolo Germplasm must be obtained from TNS, harvest from initial planting of G0 can be certified as G1 and used for additional production plantings. Commercial harvest of volunteer stands of Cibolo Germplasm originating from an original G0 or G1 seed production planting is allowed for 3 years after which new breeder seed must be obtained from TNS. Seed harvested from volunteer plots must be certified and sold as G2.

Citation

Release Brochure for Cibolo Germplasm little barley (*Hordeum pusillum*). 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 website <<http://plants.usda.gov>> or the Plant Materials Program website <<http://www.plant-materials.nrcs.usda.gov>>

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