

A Conservation Plant Released by the Natural Resources Conservation Service
 E. "Kika" de la Garza Plant Materials Center, Kingsville, Texas and
South Texas Natives, Caesar Kleberg Wildlife Research Institute,
 Texas A&M University-Kingsville, Kingsville, Texas

Starr Germplasm

longspike silver bluestem

Bothriochloa longipaniculata (Gould) Allred & Gould



Figure 1. Starr Germplasm longspike silver bluestem seed production field

Starr Germplasm longspike silver bluestem [*Bothriochloa longipaniculata* (Gould) Allred & Gould] was cooperatively released in 2019 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. This release is a selected plant material class of certified seed.

Description

Starr Germplasm longspike silver bluestem is a native, perennial bunch grass. It produces fluffy white seedheads throughout the summer and fall in South Texas.

Source

This selection is made up of five different accessions originating from the Rio Grande Plains ecoregion of Texas. These five accessions were chosen from 41 accessions of silver bluestem (*Bothriochloa* spp.) evaluated at the E. "Kika" de la Garza Plant Materials Center in Kingsville, Texas. Additional evaluations were conducted at seven other locations across Texas. No breeding, selection or genetic manipulation was used in the development of the release.

Conservation Uses

Starr Germplasm recommended for wildlife habitat improvement and inclusion in range seeding mixes. Longspike silver bluestem is common along roadsides and field borders of the lower and mid Gulf Coast region of Texas. It is a shade tolerant grass frequent on fine-textured upland clay soils.

Area of Adaptation and Use

The area of known adaptation of Starr Germplasm includes the Rio Grande Plain (MLRA 083B), Gulf Coast Prairies and Marshes (MLRA 150B) and Coastal Sand Plain (MLRA 083E) ecoregions of Texas. Best performance of this seed source has been observed on medium to course textured soils.

Establishment and Management for Conservation Plantings

Planting can be done in late fall or spring in South Texas. Longspike silver bluestem can be included in warm-season planting mixtures. Establish a clean, weed-free seedbed by either tillage or herbicides. Prior to planting, the site should be firm and have accumulated soil moisture.

Longspike silver bluestem is best seeded using a native-grass drill with picker wheels or a fluffy seed box. Broadcast seeding may be used in areas not easily accessible 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 1/8 to 1/4 inch deep. It is better to plant too shallow than too deep. For calibration purposes, Starr Germplasm longspike silver bluestem contains approximately 527,000 seeds per bulk pound. A seeding rate of 2 pounds pure live seed (PLS) per acre is recommended. In seed mixes, reduce the rate according to the percent of longspike silver bluestem desired on the planting site. Starr Germplasm longspike silver bluestem is quick to emerge and establish under good conditions.

Areas planted to Starr Germplasm should be deferred until plants become established and are allowed to set seed. Established plants should be allowed to produce seed annually to ensure stand longevity.

Ecological Considerations

No severe insect or disease problems have been observed in longspike silver bluestem once established. Cold tolerance of this germplasm beyond the area of intended use is unknown. Starr Germplasm is a composite of naturally occurring germplasm and has undergone no purposeful selection.

Seed and Plant Production

Starr Germplasm Longspike silver bluestem is best started from greenhouse grown transplants and planted on bedded rows. Seedlings grow and mature quickly and will produce a marketable crop in the first year of planting.

A Flail-Vac harvester can collect the ripe seed crop without damaging or eliminating the ability to make subsequent harvests of the stand as later flowering florets mature. For optimum harvesting efficiency, operate the Flail-Vac harvester with the tractor at 1500 rpm and the ground speed range from 2.5 – 4 mph. This setting results in relatively clean seed, needing little cleaning or processing. Handpicking the stems and chaff from the harvest further cleans the seed or process the seed through a brush machine and then an air-screen cleaner for final cleaning.

Longspike silver bluestem can be harvested two times per year. There is a spring harvest which is generally considered the months of April - June, and a fall harvest which is generally late September - October. Occasionally, a summer harvest in August can be done but it is almost always poor yielding with low germination. The trend in seed production is for both better seed yields and germination during the cooler temperatures of spring provided there is good soil moisture. However, it is not consistent by month ranging anytime from April - June, nor is it consistent by year. Fall (September - October) can occasionally produce good seed yields and good germination, but there is even more variability in the fall harvests than the spring harvests.

Availability

For conservation use:

Seed will be available from native seed dealers in south Texas. Seed of Starr Germplasm longspike silver bluestem will be identified by USDA NRCS accession number 9112614.

For seed or plant increase:

All commercial seed fields of Starr Germplasm must be located in Texas and isolated from other cultivated varieties and wild populations of *Bothriochloa longipaniculata* by a minimum of 990 feet. Release of this variety will be limited to a single grower, with preference given to those who can provide production locations meeting isolation requirements.

G0 seed of Starr Germplasm Longspike silver bluestem is a composite of five individual accessions, grown in isolation from one another, and maintained by the breeder. G1 seed is harvested by isolated plantings of G0 seed by commercial seedsmen and G2 seed is harvested from plantings of G1 seed. Increasing Generation 2 seed is prohibited. Generation 0 seed will be made up of equal amounts (by percent PLS, +/-10%) of each of the five accessions. G1 and G2 seed fields have a 7 year production limit, after which time, fields must be replanted using the appropriate seed generation (G0 or G1).

Citation

Release Brochure for Starr Germplasm longspike silver bluestem [*Bothriochloa longipaniculata* (Gould) Allred & Gould] USDA-Natural Resources Conservation Service, E. "Kika" de la Garza Plant Materials Center. Kingsville, Texas 78363. Published September 2019.

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