



# LONGSPIKE BEARDGRASS

## *Bothriochloa longipaniculata* (Gould) Allred & Gould

Plant Symbol = BOLO

*Common Names:* longspike silver bluestem

*Scientific Names:* *Bothriochloa saccharoides* (Sw.) Rydb. var. *longipaniculata* (Gould) Gould

### Description

*General:* Longspike beardgrass [*Bothriochloa longipaniculata* (Gould) Allred & Gould] is a native, perennial bunch grass with glabrous culms, branched near the base, ranging from 70-115 cm tall. It has a ligule that is 1.8-2.4 mm long, glabrous and truncate at the tip. Leaf blades are 15-25 cm long, 4-6 mm wide and glabrous. The inflorescence is a contracted panicle 10 to 17 centimeters long and roughly 1.5-2.2 cm broad. Panicle branches are appressed or ascending, one per node, with densely villous, white hairs obscuring spikelets. The pedicels have silky-white villous hairs up to 1 cm long. Pedicellate spikelets are sterile and reduced to a linear membrane. Fertile sessile spikelets are 4.3-4.4 mm long and 1.0-1.3 mm wide. Glumes are as long as the spikelet but unequal in length. Lemmas have one awn, 1.0-1.8 cm long, bent near the base. Caryopsis is yellow and 1.6-2.0 mm long. Chromosome number is  $2n=120$  (Gould 1975). The plants produce seed mostly from May through November. Longspike beardgrass has an average of 527,000 seeds per pound.



Longspike beardgrass, Shelly Maher, STPMC

*Distribution:* Longspike beardgrass is found from southeastern and southern Texas into Northern Mexico. Plants in Guatemala, Salvador and Panama are not entirely typical but may also referred to this taxon (Gould 1975). For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

### Adaptation

Longspike beardgrass is common along roadsides and field borders within its natural range. It is a shade tolerant grass frequent on fine-textured upland clay soils.

### Uses

Longspike beardgrass is recommended for upland wildlife plantings, highway rights-of-way revegetation, energy exploration reclamation and for inclusion in range seeding mixes. It is a fair to good livestock forage and competes well with exotic grasses such as buffelgrass (*Pennisetum ciliare*). Meyer and Brown (1985) reported in-vitro dry matter digestibility (IVDMD) at 45% and crude protein (CP) at 8% for silver bluestem (*Bothriochloa saccharoides*) a closely related species. Willard and Schuster (1973) found that crude fiber was generally high (between 32% and 38%) in silver bluestem. Longspike beardgrass provides nesting cover for birds, foraging habitat for raptors and fawning cover for deer (Hatch et al 1999).

### Status

*Threatened or Endangered:* No.

*Wetland Indicator:* Longspike beardgrass is an upland species.

*Weedy or Invasive:* Longspike beardgrass is not known to be an invasive species. Please consult with your local NRCS Field Office, Cooperative Extension Service office, state natural resource, or state agriculture department regarding its status and use.

Please consult the PLANTS Web site (<http://plants.usda.gov/>) and your state's Department of Natural Resources for this plant's current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

### **Planting Guidelines**

Seedbed preparation should begin well in advance of planting. Planting can be done in late fall or spring in South Texas. Longspike beardgrass 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 beardgrass is best seeded using a native grass drill with picker wheels or in a fluffy seed box. Broadcast seeding may be used in areas not easily planted 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  $\frac{1}{8}$  to  $\frac{1}{4}$  inch deep. It is better to plant too shallow than too deep. For calibration purposes, longspike beardgrass 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 beardgrass desired on the planting site.

### **Management**

Areas planted to longspike beardgrass should be deferred from grazing until plants become established and are allowed to set seed. Established plants should be allowed to produce seed annually to ensure stand longevity.

### **Pests and Potential Problems**

There are no known potential pests or problems with this species.

### **Environmental Concerns**

There are no known environmental concerns associated with this species.

### **Seeds and Plant Production**

Longspike beardgrass is best started using greenhouse grown transplants, planted on bedded rows. Seedlings grow and mature quickly and will produce a marketable crop in the first year of planting.

A Woodward Flail-Vac Seed Stripper (Ag-renewal, Inc., Weatherford, Oklahoma) 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 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 run the seed through a Westrup brush machine (Westrup, Slagelse Denmark) and then through a Clipper seed cleaner (A.T. Farrell, Bluffton, Indiana).

Longspike beardgrass 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 through 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.

### **Cultivars, Improved, and Selected Materials (and area of origin)**

Starr Germplasm longspike silver bluestem (longspike beardgrass) was cooperatively released by the E. "Kika" de la Garza Plant Material Center and *South Texas Natives* in 2019. It was selected for its vigor and forage production throughout the intended area of use. Starr Germplasm is recommended for use in Rio Grande Plain (MLRA 83A, B, C and D), Coastal Sand Plain (MLRA 83 E) and Gulf Coast Prairies and Marshes ecoregions of Texas (MLRA 150A and B) for upland wildlife plantings, highway rights-of-way revegetation, energy exploration reclamation and for inclusion in range seeding mixes. This release is a selected plant material class of certified seed. No breeding, selection or genetic manipulation was used in the development of this release.

Cultivars should be selected based on the local climate, resistance to local pests, and intended use. Consult with your local land grant university, local extension or local USDA NRCS office for recommendations on adapted cultivars for use in your area.

## Literature Cited

- Gould, F.W. 1975. The Grasses of Texas. Texas A&M University Press, College Station, TX.
- Hatch, S. L., J.L. Schuster and D. L. Drawe. 1999. Grasses of the Texas Gulf Prairies and Marshes. Texas A&M University Press, College Station, TX.
- Meyer, M.W., and R.D. Brown. 1985. Seasonal trends in the chemical composition of ten range plants in south Texas. J. Range Manage. 38:154-157.
- Willard, E.E. and J.L. Schuster. 1973. Chemical composition of six southern Great Plains grasses as related to season and precipitation. J. Range Manage. 26:37-38.

## Citation

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