

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

# Loma Germplasm purple threeawn

*Aristida purpurea* Nutt.

Loma Germplasm (*Aristida purpurea* Nutt.) was cooperatively released in 2021 by the Texas Native Seeds Project of the Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville; USDA NRCS E. “Kika” de la Garza Plant Materials Center; Sul Ross State University Borderlands Research Institute; and Texas A&M AgriLife Research Center. This release is a selected plant material class of certified seed.

## Description

Loma Germplasm purple threeawn (*Aristida pupurea* Nutt.) is a warm season, perennial grass with dense basal leaves. The seed is easily recognizable by its 3 long awns (Fig.1). This selection originates from collections made from native plants growing in the South Texas Plains.

## Source

Loma Germplasm is a single accession from native plants growing in the Coastal Sand Plain and was selected from an evaluation involving 36 different native collections of purple threeawn collected from west, central, and south Texas.

## Conservation Uses

Loma Germplasm purple threeawn is recommended for critical site revegetation, roadside plantings, erosion control, wildlife plantings, and for inclusion in range seeding mixes on fine sandy soils. It provides quick cover in dry gravelly to sandy sites.

## Area of Adaptation and Use

Loma Germplasm performs best in the Coastal Sand Plain, Gulf Coast Prairies and Marshes (MLRA 150A & B), and Rio Grande Plain (MLRA 083A-D) ecoregions. Loma Germplasm may be adapted to adjacent ecoregions but has not been tested. Loma Germplasm was specifically selected for use in the Coastal Sand Plain. This release is taller and more robust than other purple threeawn releases. In the Coastal Sand Plain, Loma Germplasm responds more like a late successional species than other threeawn releases.

## Establishment and Management for Conservation Plantings

Begin seedbed preparation in advance of planting. Plant in late fall or 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 purple threeawn using 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 1/8 to 1/4 inch deep. It is better to plant too shallow than too deep. For calibration purposes, Loma Germplasm purple threeawn contains approximately 4,813,000 seeds per bulk pound. A seeding rate of 0.5-1 pounds pure live seed (PLS) per acre is recommended for pure stands. When planted in a mix, adjust the seeding rate to the desired percentage of the plant on the site.



Figure 1. Loma Germplasm purple threeawn  
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Although not preferred purple threeawn is grazed prior to setting seed and therefore new plantings should be deferred from grazing until plants become established and are allowed to set seed. Allow established plants to produce seed annually because purple threeawn readily reseeds itself with minimal soil disturbance.

### **Ecological Considerations**

No severe insect or disease problems have been observed in purple threeawn once established. No breeding, selection or genetic manipulation was used in the development of Loma Germplasm.

### **Seed and Plant Production**

Seed quality of Loma Germplasm averaged 15% PLS in seed increase fields. Potential seed yields per acre have been calculated at 10 PLS lb/acre/year on 36" bedded rows with a plant population of 14,000 plants per acre.

Seed production fields of Loma Germplasm purple threeawn are best started using greenhouse grown transplants and planted on 36" bedded rows. Seedlings grow and mature quickly and will produce a marketable crop in the first year of planting.

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 crop without damaging or eliminating the ability to make subsequent harvests of the stand. However, most of the seed holds well on the plants after maturity, allowing for combine harvesting. An additional benefit of combining the seed is the removal of unfilled florets which increases seed purity. In well managed irrigated fields, 2-3 harvests can be expected per year. The first harvest typically occurs in early May with the last harvest occurring in October in South Texas.

### **Availability**

*For conservation use:* Seed is available from native seed dealers in Texas. Seed of Loma Germplasm purple threeawn release is identified by USDA NRCS accession number 9088745.

*For seed or plant increase:* All commercial seed fields of Loma Germplasm must be in Texas and isolated from other cultivated varieties and wild populations of *Aristida purpurea* by a minimum of 900 feet. G1 and G2 seed fields have a 7 year production limit, after which time, fields must be replanted using the appropriate seed of generation (G0 or G1).

### **Citation**

Release Brochure for Loma Germplasm purple threeawn (*Aristida purpurea* Nutt.). USDA-Natural Resources Conservation Service, E. "Kika" de la Garza Plant Materials Center, Kingsville, Texas 78363. Published October 2021.

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:*

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