La Salle Germplasm Arizona cottontop

*Digitaria californica* (Benth.) Henr.

La Salle Germplasm Arizona cottontop (*Digitaria californica* (Benth.) Henr.) was a cooperative release between the USDA-NRCS E. “Kika” de la Garza Plant Materials Center, Texas Native Seeds, and Texas A&M AgriLife Research Station, Beeville, Texas in 2007. It is a selected plant material class of certified seed.

**Description**
Arizona cottontop is a native, warm-season perennial bunchgrass. Plants are 3 to 5 feet in height and produce the cotton-like seedheads throughout the year (fig.1). La Salle Germplasm readily reseeds itself, and individual plants are long lived.

**Source**
La Salle Germplasm Arizona cottontop is a blend of 12 collections from the Rio Grande Plain of Texas. These collections were chosen from a comparison with 31 total collections. Collections comprising this release were selected for seed quality and production, plant vigor, forage production, and adaptability throughout the south Texas area.

**Conservation Uses**
La Salle Germplasm was developed for use in native rangeland restoration and wildlife plantings. It provides good forage for livestock and cover and food for many species of native wildlife.

**Area of Adaptation and Use**
La Salle Germplasm performs well on most soil types, including sandy loam, clay, and clay loam, except for very sandy soils. This germplasm is compatible in plantings with other native species. The good seedling vigor and rapid germination make La Salle Germplasm an excellent choice for planting after brush control or other disturbance. It also shows promise for use in adding diversity to stands of exotic grasses, since establishment into existing stands of bufflegrass has been observed. La Salle Germplasm has shown good performance in the Rio Grande Plain and Coastal Sand Plain (MLRA 83), Coastal Sand Plain and Gulf Coast Prairies and Marshes (MLRA 150), Trans Pecos (MLRA 42), and southern Edwards Plateau (MLRA 81) of Texas. Adaptability to other adjacent eco-regions such as the Rolling Plains (MLRA 73) and High Plains (MLRA 77) is possible but has not been tested.

**Establishment and Management for Conservation Plantings**
Seedbed preparation should begin well in advance of planting. Like most native seeding in south Texas, best establishment occurs with an August planting, however, other locations like Edwards Plateau and West Texas may have different results. Establish a clean, weed-free seedbed by either tillage or herbicides. Prior to planting, the site should be firm and have accumulated soil moisture.

Because of the fluffy nature of the seed, Arizona cottontop is best seeded using a grass drill equipped with picker wheels to evenly distribute the seed and prevent clogging of the planter tubes. Broadcast seeding may be used in areas not easily planted with a drill, but additional practices to encourage good seed-to-soil contact, such as cultipacking and harrowing, may be necessary after planting. Seed should be planted ¼ inch deep. It is better to plant too shallow than too deep. La Salle Germplasm Arizona cottontop contains approximately 677,000 seeds per bulk pound. A seeding rate of 1.5 to 2 pounds of pure live seed (PLS) per acre is recommended. This corresponds to planting 20 live seeds per square foot. In planting mixtures, reduce the rate according to the percent of La Salle Germplasm desired in the seed mixture.
Stands of La Salle Germplasm should be monitored closely to prevent overgrazing and will perform best under rotational grazing systems. Allow plants to set seed yearly to ensure vigorous stands. Mowing or burning old growth while dormant helps to stimulate seed and forage production. Plants can be mowed to 3 inches yearly with no adverse effects.

**Ecological Considerations**
No severe insect or disease problems have been observed in Arizona cottontop once established. Cold tolerance of this germplasm beyond the area of intended use is unknown. La Salle Germplasm is a composite of naturally occurring germplasm and no breeding, selection or genetic manipulation was used in the development of this release.

**Seed and Plant Production**
La Salle Germplasm can produce multiple seed crops per year when grown in south Texas. Seed is harvested with a Flail Vac or similar brush-type harvester. The use of slow travel and RPM speeds while harvesting results in relatively clean seed, needing little cleaning or processing. The quantity and quality of seed harvests vary greatly depending on location and field conditions, but it usually is around 60% PLS. Arizona cottontop has produced as much as 125 lb/acre of clean seed but averages around 80-90 lb/acre. Seed quality ranges from 40-80% pure live seed. Active seed germination of La Salle Germplasm is excellent when compared to other native grasses, averaging 63%. Up to 93% of active germination takes place 3-5 days from the onset of favorable conditions. Seed dormancy ranges from 10-15%. Seed production fields of La Salle Germplasm are best started using greenhouse grown transplants, planted on bedded rows. Rapid spread and growth have been observed in transplant established stands providing seed harvests by the second year and sometimes as quick as the first year. Transplants facilitate better weed control in the seed production fields. The first harvest is typically made in early May with the last harvest occurring in October.

**Availability**
*For conservation use:*
Seed is available from native seed dealers in south Texas. Seed of La Salle Germplasm Arizona cottontop is identified by PI 659330 and accession number 9093398.

*For seed or plant increase:*
First generation (G0) seed is produced and maintained by Texas Native Seeds. All commercial seed fields of La Salle Germplasm must be isolated from other cultivated varieties and wild populations of *Digitaria californica*. 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**

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:
E. “Kika” de la Garza Plant Materials Center  
3409 North FM 1355 Kingsville, Texas 78363  
Phone: (361) 595-1313  

or
Texas Native Seeds  
CKWRI-TAMUK, MSC 218, 700 University Blvd., Kingsville, Texas 78363  
Phone: (361) 593-4525  
[https://www.ckwri.tamuk.edu/research-programs/texas-native-seeds-programs-tns](https://www.ckwri.tamuk.edu/research-programs/texas-native-seeds-programs-tns)

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