



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

'Windbreaker' big sacaton

Sporobolus wrightii Munro ex
Scribn.

A Conservation Plant Release by USDA NRCS Los Lunas Plant Materials Center



'Windbreaker' big sacaton at the Los Lunas Plant Materials Center

'Windbreaker' big sacaton (*Sporobolus wrightii* Munro ex Scribn.) is a cultivar released by the USDA Natural Resources Conservation Service Los Lunas Plant Materials Center (LLPMC) and the New Mexico State University Los Lunas Agricultural Science Center in 2011.

This native, warm-season, perennial bunchgrass is adapted to the southwestern United States and other semi-arid temperate environments and can provide:

- Wind erosion control
- Forage for livestock and wildlife
- Cover for livestock and wildlife
- Hay mulch for critical area seeding
- Ornamental in low water use plantings

Description

Windbreaker big sacaton is a native robust, perennial warm-season bunchgrass that forms dense clumps. It is a coarse upright grass that can grow up to 10 feet in height. Leaf width is from 0.15 to 0.35 inch at the base and up to 5 feet in length. The pale flowers form in stiff, upright clusters 1 to 3 feet above the foliage.

The original source of Windbreaker big sacaton was selected from 37 accessions collected by NRCS Field office staff looking for robust plants within their respective service areas in Arizona, New Mexico and Texas. From these 37 accessions, 10 accessions were selected that displayed the largest plants. From each of these 10 accessions, the most robust plant was selected during the fifth growing season from a population of 20 in advanced evaluation field plots for use in forming Windbreaker big sacaton.

Conservation Uses

The tall plant stature of Windbreaker (10 ft. under ideal growing conditions) and relatively low water usage makes it a popular choice for windstrip (a wind-breaking soil erosion control barrier on the margin of a field) plantings in the arid Southwest. The successful use of Windbreaker as a windstrip has been demonstrated at 20 locations throughout New Mexico, Arizona and Texas for controlling wind erosion on cropland. Your local NRCS New Mexico Field Office can advise you of the nearest demonstration planting. Its rigid upright habit persists throughout the winter and spring to provide wind erosion protection. Seed may also be planted for range restoration because big sacaton provides livestock and wildlife both food and cover. Due to its highly palatable new growth, spring and early summer is the ideal time for grazing. Big sacaton hay serves as excellent soil surface mulch for dryland seedings in the arid Southwest. The thick, long leaves and stems easily crimp (anchor) into the soil surface without cutting, which is a common problem with grains and other short and medium height grass species.

When the grass hay is cut in the crimping process, it becomes poorly anchored and easily dislodged and blown away by even moderate winds. Big sacaton has also been popular for use as an ornamental in low water use plantings in the Southwest. Because of the very large stature of Windbreaker, it is ideally suited for use as a large specimen bunchgrass.

Area of Adaptation and Use

Big sacaton is found on all types of soils, but it is common on heavier soils in lowland sites at elevations from 3,500 to 7,000 ft. It is tolerant of highly alkaline and saline soils and can tolerate poorly drained soils and seasonally flooded areas. The plant also is found in open areas, such as rocky slopes, plateaus, and mesas. Big sacaton is widely distributed throughout the southwestern United States.

Establishment and Management for Conservation Plantings

To establish Windbreaker big sacaton as a pasture or range grass in the Southwest where monsoonal moisture is common, plant one (1) pound per acre of pure live seed (PLS) between July 15 and August 15. To create a windbreak, plant containerized transplants on 5 ft. to 6 ft. centers to obtain maximum height. Supplemental irrigation is required to establish and maintain transplants at most locations.

Ecological Considerations

This cultivar release is from a species native to the Southwest and has no known negative impacts on wild or domestic animals. Big sacaton is not considered a weedy species or invasive species, but it could spread to adjoining vegetative communities under ideal environmental conditions.

Seed and Plant Production

Biomass yield for Windbreaker by the third growing season with plants on 1, 2 and 3-foot centers at the LLPMC was 4,870, 6,795 and 16,133 per acre respectively.

Windbreaker seed typically matures during September at the LLPMC and can be harvested using a small grain combine. Seed production the second year averaged 165 PLS lbs. per acre. However, seed yield can be severely reduced (by more than 75%) by inadequate plant spacing within and between rows once the plants reach their mature height which generally occurs by the third year. Plants need to be spaced at a minimum on 3 ft. centers to continue to produce maximum seed yields.

Seedling transplants for production fields are grown in $\frac{3}{4}$ x $\frac{3}{4}$ x 2.5 in. plug trays. The soil medium is: two parts Sunshine® Mix #1 (a peat moss and perlite mix), one part perlite, and 2 cups of controlled release fertilizer per 4 cubic ft. of medium. Seedlings take approximately 6 weeks to grow out from seed.

Transplants for windstrip field plantings are started by direct sowing or transplanting plug seedlings into 16 cubic inch cones (2 inches in diameter and 7 inches deep). The soil medium is a commercial mix of composted bark/ wood chips and pumice. Each plant is top dressed with 1 teaspoon of controlled release fertilizer. Plants take 6 to 8 weeks to grow out.

Availability

For conservation use:

Contact your local USDA-NRCS Field Office or your local county extension agent for both information on where to purchase seed and specific planting information for your area. Trade names appear in this document only to provide specific information. USDA NRCS does not guarantee or warranty the product and other products may be equally effective.

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Citation

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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>>

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