



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

# 'San Marcos' Eastern Gamagrass

*Tripsacum dactyloides* (L.) L.

A Conservation Plant Release by USDA NRCS James E. "Bud" Smith Plant Materials Center, Knox City, TX



USDA-NRCS James E. "Bud" Smith PMC

'San Marcos' eastern gamagrass [*Tripsacum dactyloides* (L.) L.], was released from the James E. "Bud" Smith Plant Materials Center in Knox City, Texas in 2006.

### Description

Eastern gamagrass is a warm-season, native, perennial bunchgrass that grows to a height of 5 to 9 feet tall. The leaves are 12 to 30 inches long and ½ to 1½ inches wide with a well-defined midrib. Plants reproduce from seed and vegetatively from thick, knotty rhizomes. The spikes are 6 to 10 inches long and contain both male and female flowers. The female flowers are located on the bottom ¼ of the spike and the male flowers occupy the upper ¾ of the spike. Seed is produced from July to September with seed maturity beginning at the top of the spike and moving downward. This results in uneven maturation and increase susceptibility to seed shattering. There are approximately 7,107 seeds per pound.

### Source

San Marcos was collected from a native stand in Hays County, Texas.

### Conservation Uses

San Marcos can be used in pure stands for grazed pastures and hay production. It has excellent forage quality and is highly palatable by all classes of livestock. Crude protein and digestibility range from 18% and 75%, respectively in early spring to 8% and 60%, respectively in late fall at the James E. "Bud" Smith Plant Materials Center. It exhibits major growth in early spring and stays green well into late fall. San Marcos also provides food and cover for wildlife. It can also be planted for filter strips, field borders, contour buffer strips, and cross wind trap strips for erosion control.

### Area of Adaptation and Use

San Marcos is adapted throughout much of Texas and southern Oklahoma. It grows best on moist, well-drained fertile soils, but does not tolerate standing water for long periods. San Marcos requires at least 28 inches of annual precipitation but may be produced successfully if grown under irrigation.

### Establishment and Management for Conservation Plantings

The full seeding rate for San Marcos eastern gamagrass is 10 pounds of pure live seed per acre. When planting this as a component of a seed mixture, the seeding rate should be adjusted to the desired percent of the mix. Seed should be planted ½ to ¾ inch deep.

Seedbed preparation should begin the year prior to spring planting to reduce weed problems during the first year of establishment. Work the site as necessary during the summer or early fall prior to establishment to create a firm weed-free seedbed. Work should be completed in the fall to allow time for the soil to settle and accumulate moisture. Minimum and no-till operations should use herbicide applications to control weeds.

Plantings should be well established before livestock grazing is permitted. Twelve months of grazing deferment should give plants enough time to become established. Established stands of San Marcos eastern gamagrass should not be grazed lower than 6-8 inches, depending upon the prescribed grazing system. Contact your local U.S. Department of Agriculture-NRCS field office for assistance in planning and applying prescribed grazing plans.

Soil tests should be conducted to determine the amount of fertilizer applied to sustain a medium level. Nitrogen should not be used during the establishment year because it will encourage weed growth. Weeds may be controlled by mowing or with herbicides. Consult your local extension weed specialist for recommendations on herbicides for eastern gamagrass.

### Seed and Plant Production

San Marcos eastern gamagrass seed is harvested by direct combining. Average seed yield at Knox City is 215 pounds per acre.

### Availability

*For conservation use:* Commercial seed is available from several commercial seed companies.

*For seed or plant increase:* Breeder seed will be maintained by the USDA-NRCS James E. “Bud” Smith Plant Materials Center, Knox City, Texas and is available to seed growers through the Texas Foundation Seed Service in Vernon, Texas, phone number (940) 552-6226.



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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/>>



2USDA-NRCS James E “Bud” Smith PMC

*For more information, contact:*

James E. “Bud” Smith PMC

3950 FM 1292 Suite 100

Knox City, TX 79529

Phone: (940) 658-3922 ext. 5

Fax: (940) 658-3095

<http://plant-materials.nrcs.usda.gov/txpmc/>

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