

NOTICE OF SELECTED GERMPLASM RELEASE 'FALFURRIAS' BIG SACATON

The USDA-NRCS announces the naming and release of selected germplasm of "Falfurrias" big sacaton, Sporobolus wrightii Munro ex scribn.

This big sacaton has been assigned the PI number 434453

ORIGIN:

"Falfurrias" big sacaton was collected in 1964 by W.A. Watson from a ranch in Brooks county near Falfurrias, Texas. The site has a sandy loam soil and is about 300 feet in elevation and receives approximately 24 inches of rainfall per year.

SELECTION STATEMENT:

Big sacaton was selected for its ability to produce abundant forage especially on droughty, alkaline and saline sites. It produces nutritious green forage throughout the winter months in south Texas. Big sacaton is useful for revegetating alkaline and saline soils throughout south and west Texas. It performs well as a grass hedge terrace or wind strip for erosion control. It helps stabilize watershed structures, streambanks and flood plain areas.

ECOTYPE DESCRIPTION:

ROOT AND STEM: Firm, tough culms rising from a hard, dense clump. Culms 90-250 cm tall but averaging 160 cm. 2-9 mm in diameter near the base. Sheaths rounded, glabrous, except rarely a few long white hairs on either side of the collar. Ligule a ciliate membrane, 1-2 mm long.

LEAVES: Flat, becoming involute on drying, 20-70 mm long, 3-6 mm wide.

INFLORESCENCE: Tawny or pale, 20-60 cm long, 12-26 cm wide, broadly lanceolate in outline, the secondary branchlets densely flowered for most of their length. Spikelets 1.5-2.1 mm long, on pedicels about 0.5 mm long, crowded, appressed and slightly overlapping. Glumes unequal, the first 0.5-1 mm long, the second 0.8-1.8 mm long. Lemma and palea rather obtuse, 1.2-2.1 mm long. Caryopses about 1.3 mm long and 0.7 mm wide, the pericarp reddish or blackish striate, loose, frequently slipping off at maturity.

SITE DESCRIPTION:

The collection site was a sandy loam soil in Brooks county. No information on salinity levels is available. The area has a climate of hot summers and warm winters. In winter the average temperature is around 58 degrees F, with

average daily minimum temperature of about 45 degrees. In the summer the average temperature is around 96 degrees. Rains are usually heaviest in late spring and early fall.

Big sacaton is adapted to both heavy and light soils, but is primarily found on heavier soils in south and west Texas. It is tolerant of highly alkaline and saline soil. It can tolerate poorly drained soils and seasonally flooded areas. Big sacaton is also adapted to dry, rocky draws of west Texas.

It is found associated with pink pappusgrass, plains bristlegrass and other saline tolerant plants. Its natural range is south of San Antonio, Texas on westward to El Paso.

OBSERVED SELECTION TRAITS AND PERFORMANCE:

Nine accessions of big sacaton were subjectively evaluated in a non-competitive spaced plant nursery over a period of five years (1965-1970) at the Knox City Plant Materials Center. The Falfurrias germplasm was chosen for further evaluation because of its good seedling vigor, good to excellent leaf production and good seed production. Field plantings were conducted from 1982 through 1988. Off-site advanced evaluation plantings were conducted by the Kika de la Garza Plant Materials Center from 1993 through 1996. The Falfurrias selection of big sacaton maintained good production and vigor. It produced significantly more forage than either "Saltalk" or "Salado" alkali sacaton (*Sporobolus airoides*). Big sacaton also makes an excellent grass hedge for wind and water erosion control. Field trials of Falfurrias germplasm as a grass hedge have been conducted in Bellville, Laredo and Kingsville, Texas. The limitations for the Falfurrias germplasm of big sacaton is that it can be hard to establish from seed. If planted too deep, it will establish spotty stands. It also does not appear to have as good of saline tolerance as "Saltalk" alkali sacaton.

In 1995 and 1996 at the Kika de la Garza PMC, "Falfurrias" big sacaton averaged 1.2 pounds of forage production per plant, "Saltalk" averaged 0.4 pounds/plant and "Salado" averaged 0.2 pounds/plant.

Big sacaton has produced as much as 400 pounds per acre of clean seed. It produces between 2,000,000 and 4,000,000 seeds per pound. In a standard seed germination test without stratification or scarification, it had a 72% germination rate. Seed is harvested easiest when rows are established at six foot intervals.

AVAILABILITY OF PLANT MATERIALS:

The NRCS will maintain Breeder seed at the Kika de la Garza PMC in Kingsville.

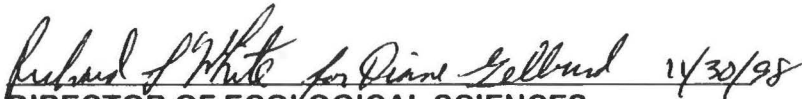
APPROVALS:



Acting

STATE CONSERVATIONIST

NATURAL RESOURCES CONSERVATION SERVICE, TEXAS



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NATURAL RESOURCES CONSERVATION SERVICE, WASHINGTON, D.C.