

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.

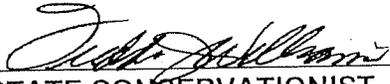
In 1995 and 1996 at the Kika de la Garza PMC, "Falfurrias" big sacaton averaged 1.2 pounds of forage production per plant, "Saltalk" averaged 0.4 pounds/plant and "Salado" averaged 0.2 pounds/plant.

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.

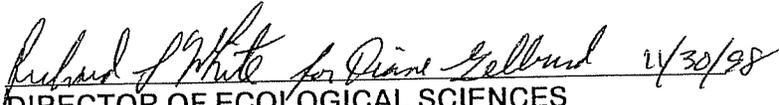
AVAILABILITY OF PLANT MATERIALS:

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

APPROVALS:



Acting
STATE CONSERVATIONIST
NATURAL RESOURCES CONSERVATION SERVICE, TEXAS



DIRECTOR OF ECOLOGICAL SCIENCES
NATURAL RESOURCES CONSERVATION SERVICE, WASHINGTON, D.C.



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REPORT OF SEED ANALYSIS

Names and Addresses	Date Received 12/10/2003	Date Completed 12/23/2003	Date of Report 1/6/2004	Test No. 4920
KIKA DE LA GARZA PLANT MAT. CENT 3409 N. FM 1355 KINGSVILLE, TX 78363 Acct. Num: 1226 MS	Kind: Variety: Lot Number:		BIG SACATON BIG SACATON	
*The information provided here is that of the sender and not of the laboratory.				

Purity Analysis (0.2007 Grams Analyzed)		Viability Analysis									
Pure Seed Component(s):		Germ-ination %	Abn %	Germ Remarks	Dormant %	Hard Seed %	Total Viable %	No. Seeds (Germ)	Days Tested	TFL %	TZ %
BIG SACATON (SPOROBOLUS WRIGHTII)	56.65%	67	1	-	15	X	82	400	13	X	82
Other Crop Seed	0.00%	Comments: PURE LIVE SEED: 46.45%									
Inert Matter	43.35%										
Weed Seed	0.00%										

OTHER CROP SEED: N-O-N-E F-O-U-N-D	A 2.700 g sample was examined for weed seed classified as noxious in the 48 contiguous states (except for Undesirable Grass Seeds) <small>(0 Noxious weed seed species found. Number of species found must equal number of species listed below for an authentic report)</small>
INERT MATTER:	
	N-O-N-E F-O-U-N-D

WEED SEED: N-O-N-E F-O-U-N-D	OTHER DETERMINATIONS:
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TEST CODE AND FEES: Fee: \$65.00
Germination, Purity, TZ, USA Noxious

TO: JOHN REILLEY Fax:
CC:
Tested in accordance with AOSA Rules.
GERM METHOD: 20-35 °
C.BLOTTER,7d,14d
Germination %=14 day 400 seed test, Total Viable Seed %=Tetrazolium test on 200 seed, Dormant %= Total Viable Seed % minus Germination %.
COMMENTS:



Kevin Stahl
Kevin Stahl, RST
Mid-West Seed Services, Inc.



MWSS is an accredited Member Laboratory (USML06) of the International Seed Testing Association (ISTA).

Notice

Tests herein reported were conducted on a sample provided by the requesting party. ALL STANDARD TESTS were conducted in accordance with the procedures prescribed by the AOSA "Rules for Testing Seeds." Results are representative of the condition of the sample on the day the tests were performed. Mid-West Seed Services, Inc. MAKES NO WARRANTIES, EXPRESS OR IMPLIED, including WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE CONCERNING THIS LOT OF SEED. LIABILITY for damages for any cause, including breach of contract, breach of warranty and negligence, with respect to this testing report is LIMITED TO A REFUND OF THE PRICE OF TESTING THE SEED. THIS REMEDY IS EXCLUSIVE. IN NO EVENT SHALL WE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGE, INCLUDING LOSS OF PROFITS.

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