

**UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
CAPE MAY PLANT MATERIALS CENTER
CAPE MAY COURT HOUSE NEW JERSEY 08210**

NOTICE OF RELEASE OF

**COASTAL GERMPLASM
INDIANGRASS**

A SOURCE IDENTIFIED CLASS OF NATURAL GERMPLASM

The Natural Resources Conservation Service, U.S. Department of Agriculture announces the naming and release of Source Identified germplasm of Coastal Germplasm Indiangrass, *Sorghastrum nutans* Nash. This germplasm was identified by the USDA NRCS Plant Materials Center in Cape May New Jersey and has been assigned Accession number 9094765.

Collection Site Information: Coastal Germplasm is a composite, bulk harvest source identified germplasm resulting from 5 parental populations. The collection sites represent a cross section of natural stands from Connecticut, Rhode Island and Massachusetts.

Collection sites were located at:

Township of Martha's Vineyards, Dukes County, Massachusetts assigned Accession number 9082593. Collected near Oyster Watcha Midlands a native grass lands resource of Martha's Vineyard; N Latitude 40° 23' 41.77" W Latitude 73° 58' 14.19". Plants growing in associated include switchgrass, little bluestem, big bluestem and bushy clover.

Township of Falmouth, Barnstable County, Massachusetts assigned Accession number 9082501. Collected at the Crane Wildlife Management Area N. Latitude 41° 38' 21.4" W. Longitude 70° 33' 18.9". Site consists of Merrimac Sandy Loam soils and plant growing in association includes little bluestem, oak, and sumac.

Near the Town of Madison, New Haven County, Connecticut assigned Accession number 9082536. The site was located on the Hammonasset State Park N. Latitude 41° 15' 39.78" W. Longitude 72° 33' 12.79". Materials were collected from sandy coastal shoreline site consisting of a sandy loam soil. Plants in association included sumac, Virginia creeper, little bluestem and bushy clover.

Near the Town of Woonsocket Providence County, Rhode Island assigned Accession number 9082587. Materials were collected from a historic elevated floodplain terrace along the Blackstone River near Route 146 A at approximately N. Latitude 41° 59' 32.87" and W. Longitude 71° 23' 57.27". The site consisted of loamy soils. Plants

growing in association included little bluestem, big bluestem, switchgrass, Gamagrass, and bushy clover.

Near the town of Southbury, New Haven County Connecticut assigned Accession number 9082588. Collected from grasslands near Bent of the River Audubon and Highway 6 N. Latitude 41° 27' 19.73" and W. Longitude 73° 17' 25.82"

Delaware State Park, Delaware assigned Accession number 9094761. Plants associations include limited switchgrass, fescue, little bluestem and oak.

Description: *Sorghastrum nutans* (L.) Nash. Tufted perennial; culms to 2.5 m tall; nodes usually appressed pubescent, internodes glabrous. Blades to 6 dm long and 15 mm wide; ligules retuse to cordate, 4-6 mm long, appearing auriculate when split. Panicle 1-4 dm long, mostly 3-4 cm broad; rachis nodes usually appressed pubescent, internodes glabrous. Glumes yellowish brown, acute; lemmas ciliate, 4-5 cm long, awns yellowish, twisted, slightly geniculate, mostly 1-2 cm long.

Method of Breeding and Selection: Vegetative propagules from each parental line were started in the greenhouse and transplanted to a crossing block located at the Cape May PMC. Equal numbers of plants were installed in rows and rows were randomized to encourage cross pollination. Materials are harvested using a Flail-Vac Prairie Harvester. No selections were made in order to maintain the broadest possible genetic pool.

Ecological Considerations and Evaluation: An Environmental Evaluation of Plant Materials Releases which included a Scoring of Criteria for Impact, Management, Need and Biological Characteristics was conducted.

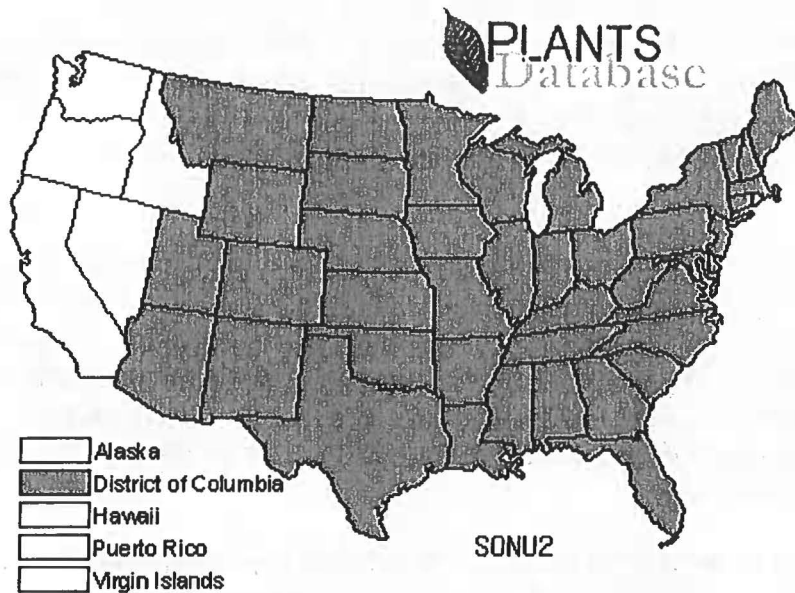
The resulting determination indicated that Coastal Germplasm material can be recommended for use within proximity to its native habit.

Conservation Use: This plant is intended for use in USDA Conservation Programs which include CRP, CREP, EQIP WHIP and any other program that is designed to enhance native warm season grass habitat.

Area of Adaptation: Indiangrass is adapted to the Northeast west to Texas and North Dakota. It grows best in deep, well-drained floodplain soils. However, it is highly tolerant of poorly to excessively well-drained soils, acid to alkaline conditions, and textures ranging from sand to clay.

Distribution by State:

Sorghastrum nutans (L.) Nash



© Image generated using gd 1.8

See available county distributions by clicking on the states below or on the map.

AL	MI	TN
AR	MN	TX
AZ	MO	UT
CO	MS	VA
CT	NC	VT
DC	ND	WI
DE	NE	WV
FL	NH	WY
GA	NJ	
IA	NM	
IL	NY	
IN	OH	
KS	OK	
KY	PA	
LA	RI	
MA	SC	
ME	SD	

For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Indiangrass and other warm-season grasses require a soil temperature above 50°F for satisfactory germination. Dormant seedings have not been successful. The optimum time to plant is from early May to late June.

The seed is light and has small awns attached. De-bearding the seed removes the awns to produce a free-flowing product. The planting site should be free of perennial or noxious weeds. A moist, firm seedbed is essential. Firming the soil with a roller packer before seeding helps to ensure that the seed is placed at the recommended seeding depth of ½ to ¾ inch.

If seed is drilled for solid stands, use 6 to 8 pounds per acre rate PLS (pure live seed). For broadcast seedings, the rate should be between 12 and 15 pounds per acre. Seeding depth is ¼ inch. If seed is broadcast or hydro seeded, it is important to "incorporate" the seed by tracking with a heavy machine to improve the seed to soil contact. Indiangrass has strong seedling vigor, but stands are slow to develop where competition from broadleaf weeds and cool-season grasses are heavy. New seedings into fine-textured soils where weeds are persistent may require no-till establishment to minimize the amount of exposed weed seeds. The cool-season grasses must be controlled with a contact herbicide before seeding. Also, Indiangrass shows tolerance to most broadleaf

herbicides. It is important to follow label instructions for application amounts and grazing requirements.

The most common cause of failure of warm-season grasses is a loose seedbed. Conventionally-tilled seedbeds should be packed before and especially after seeding. The seedbed should be firm enough to show only a light imprint when stepped on. When using a no-till drill, be sure the coulter furrows are closed to avoid seed exposure and drying. This can be accomplished by cultipacking after the drilling operation.

Management

Fertilization to moderate levels of phosphorus and potassium are recommended for establishment. Nitrogen applications are not recommended until the grass is established and well above the competing weeds. Fertilizer may be applied late in the first summer of establishment at a rate of 20 to 40 pounds per acre of phosphorus and potassium or in the early summer of the second year at 40 to 80 pounds per acre rate. In future years fertilize as needed to enhance vigor and production of forage. For critical area seedings, no additional fertilization is necessary.

If well-established stands of Indiangrass are properly managed and maintained, they should not require replanting. Poor stands can be rejuvenated by using proper management practices, such as controlled grazing, the application of recommended rates of herbicides and fertilizer, and prescribed burning, where permitted, before the beginning of spring growth. Nitrogen, phosphorus, and potassium fertilizer should be applied according to soil tests.

In rotational grazing systems, remove no more than ½ the above ground growth (no shorter than 8 to 12 inches). With care, the stand will last indefinitely. Forage quality will remain high until the seed head emerges. Grazing should begin from mid to late June when grasses reach 12 to 16 inches in height. Overgrazing can damage the stand and should be stopped when the plants are grazed to within 6 inches of the ground. If re-growth of more than 12 inches takes place, the plants can be re-grazed to 6 to 12 inches. Leaving this much stubble before frost allows the plants to store carbohydrates and ensures the production of vigorous plant growth in the spring

Availability of Plant Materials: Foundation seed is available by contacting:

USDA NRCS Cape May PMC
1536 Route Nine North
Cape May Court House, New Jersey 08210

References:

Britton and Brown. 1970. An Illustrated Flora of the Northern United States and Canada. Dover Press New York NY.

Radford, Ahles and Bell. 1968. Manual of the Vascular Flora of the Carolinas. University of North Carolina Press Chapel Hill.

USDA, NRCS. 2007. The PLANTS Database (<http://plants.usda.gov>, 22 August 2007). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Prepared by:

William Skaradek
Cape May PMC Manager
1536 Route Nine North
Cape May Court House NJ 08210

Reviewed by:

Chris Miller
Plant Materials Specialist
1536 Route Nine North
Cape May Court House NJ 08210

Joel Douglas
RTC Plant Specialist
USDA NRCS Central Region

James Briggs
RTC Plant Specialist
USDA NRCS West Region

August 23, 2007

Signatures for release of:

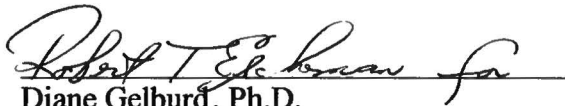
Coastal Germplasm
Indiangrass
Sorghastrum nutans Nash
A Source Identified Release



Thomas Drewes
State Conservationist
United States Department of Agriculture
Natural Resources Conservation Service
Somerset, NJ

9-6-07

Date



Diane Gelburd, Ph.D.
Director, Ecological Sciences Division
United States Department of Agriculture
Natural Resources Conservation Service
Washington, D.C.

Date

9-17-2007