USDA-Natural Resources Conservation Service

Notice of Source Identified Plant Release

Indiangrass

The USDA-Natural Resources Conservation Service (NRCS), the University of Northern Iowa (UNI), the Iowa Integrated Roadside Vegetation Management Program (IRVM), the Iowa Department of Transportation (IDOT), and the Iowa Crop Improvement Association (ICIA) announce the release of a Source Identified Central Iowa Germplasm of indiangrass, *Sorghastrum nutans* (L.) Nash.

The indiangrass has been assigned the NRCS accession number 9062317.

Origin: Central Iowa

Ecotype Description:

Indiangrass is a tall (four to eight feet) warm season perennial grass which spreads by short rhizomes. Golden-yellow lance-shaped, rather dense panicles are 4-12 inches long on erect stems 4-8 feet tall. Leaves are rather stiff and straight. Prominent vertical projections are located on both sides of the sheath throat. Leaves are lighter green than those of big bluestem, a common associate. It is found in the eastern Canadian provinces and in all but six western states. It is most commonly associated with bluestem grasses; particularly in the central lowland and eastern portions of the Great Plains. This grass, which is relished by livestock, produces excellent hay if cut before flower stalks develop. In recent years it has been seeded in mixtures with other native tall grasses in the true prairie region.

Indiangrass seeds per pound average 175,000. A seeding rate of 25 to 30 pure live seeds (PLS) per linear foot in 36 to 40 inch rows for seed production is sufficient. Rates for pasture seeding should be seven to ten PLS pounds per acre (15 to 25 bulk pounds/acre). Seed should be planted ¼ to ½ inch deep in a firm relatively weed free seedbed. Seedling vigor is good and stands are comparatively easy to establish where competition is controlled. Mowing above the height of the indiangrass has been used to reduce competition when weeds begin to severely encroach into the planting.

Available chemical sprays for use in the establishment of indiangrass limited. Post-emergence broadleaf sprays have been used during indiangrass establishment.

Seed yields are good and can be harvested with a combine. Yields of 250 pounds bulk seed per acre have been commonly harvested on managed stands.

Collections of indiangrass from east to west across Iowa prevent positive assessment of all pollination or chromosome characteristics. Plants are cross-pollinated and many hybrids are

formed in the area of adaptation. For isolation requirements, indiangrass should be spaced a minimum of 900 feet from any other different indiangrass selection.
Indiangrass is adapted to most upland and some bottomland soils. Ecotypes are adapted to areas with as little as 14 inches to over 50 inches of average annual precipitation. The number of collections from each zone in Iowa guarantees the adaptation of releases to the entire zone.

Site Description:

Collections were taken from native prairie remnants within the three tiers of counties located in Central Iowa.

Climate: The average annual temperature is 48 degrees Fahrenheit. July is the warmest month with an average high of 85 degrees and low of 64 degrees. January is the coldest month with an average height of 27 degrees and low of 8 degrees. The average annual precipitation for this region is 30 inches with much of this coming during the growing season. The average frost-free growing period runs from April 30 to October 6.

Availability of Plant Materials:

Breeders material is being produced by the Plant Materials Center, Elsberry, Missouri and the University of Northern Iowa (UNI) at Cedar Falls, Iowa.

Release Approved By:

Chairman, PM Advisory Committee, NRCS
Roger A. Hansen
Missouri State Conservationist

President, UNI
Robert D. Koob

Program Director, IRVM
Daryl D. Smith

Iowa State Conservationist, NRCS
Leroy Brown

Secretary/Treasurer, ICIA
Robert E. Lawson

Representative, IDOT
Steve Holland

References

Flora of Missouri; p. 232; Steyermark, J. A.; Iowa State University Press, Ames, Iowa 1968.

Forage Crops; 27, 181; Ahlgren, Gilbert H.; Rutgers University; New Brunswick, New Jersey, 1949.

Gray's-Manual of Botany, p. 234; Fernald, m. l.; Harvard University, Boston, Mass, 1950.

Grasses and Grassland Farming, pp. 19, 50, 89, 92, 146, 207, 216-217, 285-286, 142, 150, 152, 162; Staten HI W.; Oklahoma A & M College, Stillwater, OK 1952.

Source Identified Release

General

Indiangrass

State of Problem:

Currently many conservation groups support the planting of native species for erosion control and for the maintenance of related resources. Many locally adapted native forb and grass species are currently not available or are not available in sufficient quantities to meet these needs. The Iowa Department of Transportation (IDOT) and the Iowa Integrated Roadside Vegetation Management Program (IIRVMP) have emphasized the need for native materials in stabilizing roadbanks. A lack of sufficient seed sources of this kind of material limits the reestablishment of native plants and correspondingly limits native habitat for wildlife.

State of Need:

Well adapted native grass and forb species offer many advantages as sustainable vegetative cover for stabilization and management of soil and water resources. Native plant communities resist noxious weed invasion, provides excellent erosion control, and generally requires relatively low maintenance. The lack of species or lack of sufficient seed supplies limits the use of these plants in conservation work.

Producers are often unwilling to risk the dollars needed to collect and increase these materials without guarantee of a ready market. By collecting the materials, providing the initial increase, and providing an initial market through the IDOT this program brings plant needs to the attention of producers and provides a means of reducing their risk.

The implementation of this program and release of this species will help solve a high priority problem identified by the Iowa State Plant Materials Committee. Erosion control is the top priority of this committee. Additionally, other priority items such as water quality and wildlife needs will be benefited through this plant release. The seed source problem will be solved for this native species and seed will be available in sufficient quantities to be used in conservation seedings. The plant when released will be immediately marketed to the IDOT and IIRVMP. Development of other markets are anticipated through promotion by wildlife organizations and through private interest when IDOT needs have been satisfied.

Sorghastrum nutans
Indiangrass
'Central Iowa ~~Source~~ Origin'

USDA-Natural Resources Conservation Service

Notice of Source Identified Plan Release

Indiangrass

The USDA-Natural Resources Conservation Service (NRCS), the University of Northern Iowa (UNI), the Iowa County Integrated Roadside Vegetation Management Program (IIRVMP), the Iowa Department of Transportation (IDOT), and the Iowa Crop Improvement Association (ICIA) announce the release of a source identified (Central Iowa) germplasm of indiangrass, *Sorghastrum nutans* (L.) Nash.

The indiangrass has been assigned the NRCS accession number ~~9062313~~. 9062317

Origin: Central Iowa

Ecotype Description:

Indiangrass is a tall (four to eight feet) warm season perennial grass which spreads by short rhizomes. Golden-yellow lance-shaped, rather dense panicles are 4-12 inches long on erect stems 4-8 feet tall. Leaves are rather stiff and straight. Prominent vertical projections are located on both sides of the sheath throat. Leaves are lighter green than those of big bluestem, a common associate. It is found in the eastern Canadian provinces and in all but six western states. It is most commonly associated with bluestem grasses; particularly in the central lowland and eastern portions of the Great Plains. This grass, which is relished by livestock, produces excellent hay if cut before flower stalks develop. In recent years it has been seeded in mixtures with other native tall grasses in the true prairie region.

Indiangrass seeds per pound average 175,000. A seeding rate of 25 to 30 pure live seeds (PLS) per linear foot in 36 to 40 inch rows for seed production is sufficient. Rates for pasture seeding should be seven to ten PLS pounds per acre (15 to 25 bulk pounds/acre). Seed should be planted 1/4 to 1/2 inch deep in a firm relatively weed free seedbed. Seedling vigor is good and stands are comparatively easy to establish where competition is controlled. Mowing above the height of the indiangrass has been used to reduce competition when weeds begin to severely encroach into the planting.

Available chemical sprays for use in the establishment of indiangrass are limited. Post-emergence broadleaf sprays have been used during indiangrass establishment.

Seed yields are good and can be harvested with a combine. Yields of 400 pounds per acre have been commonly harvested on managed stands.

Collections of indiangrass from east to west across Iowa prevent positive assessment of all pollination or chromosome characteristics. Plants are cross-pollinated and many hybrids are formed in the area of adaptation. For isolation requirements, indiangrass should be spaced a minimum of 900 feet from any other different indiangrass selection.

Indiangrass is adapted to most upland and some bottomland soils. Ecotypes are adapted to areas with as little as 14 inches to over 50 inches of average annual precipitation. The number of collections from each zone in Iowa guarantees the adaptation of releases to the entire zone.

Site Description:

Collections were made from the following locations (see attached) and included in the composite indiangrass, Central Iowa origin (~~9062313~~ 9062317).

Climate: The average annual temperature is 48 degrees Fahrenheit. July is the warmest month with an average high of 85 degrees and low of 64 degrees. January is the coldest month with an average high of 27 degrees and low of 8 degrees. The average annual precipitation for this region is 30 inches with much of this coming during the growing season. The average frost-free growing period runs from April 30 to October 6.

Availability of Plant Materials:

Breeders material is being produced by the Plant Materials Center, Elsberry, Missouri and the University of Northern Iowa (UNI) at Cedar Falls, Iowa.

Release Approved By:

Roger A. Hansen Chairman, PM Advisory Committee, NRCS
Roger A. Hansen
Missouri State Conservationist

_____ President, UNI
Robert D. Koob

Program Director IRVM
Daryl D. Smith

Leroy Brown Iowa State Conservationist
Leroy Brown

Robert E Lawson Secretary/Treasurer ICIA
Robert E. Lawson

_____ Representative IDOT
Steve Holland

Zone	County	Twp.	Range	Section	Collector	Species	code
2	Allamakee	T-100-N	R- 6-W	26	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-82
3	Appanoose	T- 70-N	R- 18-W	13 SE4	Paul Egeland	*Sorghastrum nutans*	SN 3-79
2	Audubon	T- 78-N?	R- 35-W?	25?	Paul Walther	*Sorghastrum nutans*	SN 2-31
2	Black Hawk	T-	R-			*Sorghastrum nutans*	SN 2-76
2	Black Hawk	T-	R-		Paul Bockenstedt	*Sorghastrum nutans*	SN 2-2
2	Black Hawk	T- 89-N	R- 11-W	31 SE4 SW4	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-4
2	Black Hawk	T- 89-N	R- 11-W	32 NW4 SE4	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-39
2	Black Hawk	T- 89-N	R- 12-W	4 E2 edge	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-3
2	Black Hawk	T- 90-N	R- 11-W	32 SE4 NW4	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-41
2	Black Hawk	T- 90-N	R- 14-W	19 SW4 NW4	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-1
3	Boone				Jimmie D. Thompson	*Sorghastrum nutans*	SN 3-75
1	Bremer	T- 93-N	R- 12-W	6 NE4 NW4	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-9
2	Buchanan	T- 87-N	R- 8-W	31 NE4	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-38
2	Buchanan	T- 87-N	R- 09-W	3 SW4 SE4	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-40
2	Buchanan	T- 90-N	R- 9-W	11		*Sorghastrum nutans*	SN 2-81
1	Butler	T- 90-N	R- 15-W	7 NE4	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-10
1	Butler	T- 90-N	R- 16-W	9 N edge NE4	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-12
1	Butler	T- 92-N	R- 16-W	14 SW4 SW4	Laura Wood & Paul	*Sorghastrum nutans*	SN 1-44
2	Cedar	T- 79-N	R- 3-W	12 SW4 NE4	Richard 'Sandy' Rhodes	*Sorghastrum nutans*	
2	Cedar	T- 79-N	R- 3-W	12 SW4 NE4	Richard 'Sandy' Rhodes	*Sorghastrum nutans*	SN 2-59
2	Cedar	T- 82-N	R- 2-W	30 Center	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-48
1	Chickasaw	T- 96-N	R- 13-W	4	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-29
1	Chickasaw	T- 96-N	R- 13-W	15 E edge	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-21
3	Clarke	T- 73-N	R- 27-W	26 center of south	L. Herman III & Paul	*Sorghastrum nutans*	SN 3-71
1	Clay	T- 96-N	R- 87-W	25 NW4	Russell Heine, 2110	*Sorghastrum nutans*	SN 1-84
2	Crawford	T-	R-		Blake Deiber 712-263-	*Sorghastrum nutans*	SN 2-77
2	Dallas	T- 78-N	R- 29-W		William (Bill) Eby 2131	*Sorghastrum nutans*	SN 2-54
2	Dallas	T- 79-N	R- 27-W		William (Bill) Eby 2131	*Sorghastrum nutans*	SN 2-56
2	Dallas	T- 79-N	R- 27-W	2	William (Bill) Eby 2131	*Sorghastrum nutans*	SN 2-58
2	Dallas	T- 79-N	R- 28-W	33?	William (Bill) Eby 2131	*Sorghastrum nutans*	SN 2-57
2	Dallas	T- 79-N	R- 28-W	BIKE TRAIL ADEL &	William (Bill) Eby 2131	*Sorghastrum nutans*	SN 2-53
2	Delaware	T- 87-N	R- 20-W	14	Phyllis Kiburz	*Sorghastrum nutans*	SN 2-16
2	Delaware	T- 89-N	R- 4-W	31	John Zietlow	*Sorghastrum nutans*	SN 2-49
2	Delaware	T- 89-N	R- 5-W	6 SE4	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-5
2	Delaware	T- 89-N	R- 5-W	25 S edge	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-7
2	Dubuque	T- 99-N	R- 2-W	8 SW4 SW4	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-8
2	Dubuque	T- 88-N	R- 2-W	4 NE4 NW4	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-6
2	Dubuque	T- 88-N?	R- 2-W?	33 SW4 SW4?	Walter Bockenstedt &	*Sorghastrum nutans*	SN 2-13
1	Fayette	T- 92-N	R- 9-W	10	FCCB IRVM	*Sorghastrum nutans*	SN 1-85
1	Fayette	T- 93-N	R- 9-W	22 E edge NE4	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-24

Zone	County	Twp.	Range	Section	Collector	Species	code
1	Floyd	T- 95-N	R- 18-W	8	Joel C. Hanes	*Sorghastrum nutans*	SN 1-51
1	Floyd	T- 95-N	R- 18-W	16 center	Laura Wood & Paul	*Sorghastrum nutans*	SN 1-43
1	Franklin	T-	R-	5	Marcia Roll	*Sorghastrum nutans*	SN 1-32
2	Greene	T- 82-N	R- 29-W	24	William (Bill) Eby	*Sorghastrum nutans*	SN 2-55
2	Grundy	T- 88-N	R- 17-W	28	Kirk Henderson	*Sorghastrum nutans*	SN 2-34
2	Grundy	T- 89-N	R- 15-W	15 S edge SW4	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-11
2	Hardin	T-	R-		Doug Sheeley	*Sorghastrum nutans*	SN 2-88
2	Hardin	T- 88-N	R- 19-W	18	Doug Sheeley	*Sorghastrum nutans*	SN 2-87
2	Hardin	T- 88-N	R- 19-W	22	Doug Sheeley	*Sorghastrum nutans*	SN 2-89
1	Howard	T- 99-N	R- 11-W	36 E edge NE4	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-22
1	Howard	T-100-N	R- 12-W	26 N edge SE4	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-26
1	Howard	T-100-N	R- 13-W	33 N4 SW4	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-27
2	Jackson	T-	R-		Ray Hamilton & Kirk	*Sorghastrum nutans*	SN 2-18
2	Johnson	T- 79-N	R- 6-W	9 SW4 SW4 NW4 &	Richard 'Sandy' Rhodes	*Sorghastrum nutans*	SN 2-62
2	Johnson	T- 79-N	R- 8-W	35 W2 SE4 NE4 & E2	Richard 'Sandy' Rhodes	*Sorghastrum nutans*	SN 2-61
2	Johnson	T- 80-N	R- 8-W	1 SE4 NW4	Richard 'Sandy' Rhodes	*Sorghastrum nutans*	SN 2-60
2	Johnson	T- 80-N	R- 8-W	1 SE4 NW4	Richard 'Sandy' Rhodes	*Sorghastrum nutans*	
2	Johnson	T- 80-N	R- 8-W	25 NE4 NE4 & 24 S2	Richard 'Sandy' Rhodes	*Sorghastrum nutans*	SN 2-64
2	Johnson	T- 80-N	R- 8-W	25 NE4 NE4 NW4 & 24	Richard 'Sandy' Rhodes	*Sorghastrum nutans*	SN 2-63
2	Johnson	T- 90-N	R- 11-W	13 N2 NW4	Johnson CCB	*Sorghastrum nutans*	SN 2-42
2	Jones	T- 85-N	R- 1-W	18	Phyllis Kiburz	*Sorghastrum nutans*	SN 2-14
2	Linn	T- 82-N	R- 8-W	16 center	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-36
	Lucas	T- 73-N	R- 21-W	2 center	Lloyd Herman III & Paul	*Sorghastrum nutans*	SN 3-72
	Lucas	T- 73-N	R- 21-W	4 SW4	Lloyd Herman III & Paul	*Sorghastrum nutans*	SN 3-66
3	Lucas	T- 73-N	R- 21-W	5 center	Lloyd Herman III & Paul	*Sorghastrum nutans*	SN 3-73
2	Madison	T- 71-N	R- 26-W	24 E edge SE4	L. Herman III & Paul	*Sorghastrum nutans*	SN 3-69
	Mahaaska	T- 75-N	R- 16-W	14 center	Lloyd Herman & Paul	*Sorghastrum nutans*	SN 3-65
3	Mahaska	T- 75-N	R- 17-W	13 W edge SE4	L. Herman III & Paul	*Sorghastrum nutans*	SN 3-67
3	Marion	T- 75-N	R- 21-W	12 N edge	Martha Skillman	*Sorghastrum nutans*	SN 3-83
2	Marshall	T- 82-N T- 82-N	R- 20-W R- 19-	Btwn 24 & 25 19 & 30	Scott Sauer	*Sorghastrum nutans*	SN 2-17
2	Marshall	T- 85-N	R- 17-W	2 boundary, 23-24, 25-	Scott Sauer	*Sorghastrum nutans*	SN 2-15
2	Monroe	T- 71-N	R- 18-W	? NW4 NE4	Peter Everhalde	*Sorghastrum nutans*	SN 2-50
3	Montgomery	T- 72-N	R- 39-W	30 N edge	Dave Carlisle	*Sorghastrum nutans*	SN 3-52
3	Page	T- 67-N	R- 37-W	7	Charly Stevens	*Sorghastrum nutans*	SN 3-46
1	Palo Alto	T- 95-N	R- 33-W	7 NW4	Palo Alto CCB	*Sorghastrum nutans*	SN 1-28
1	Pocahontas	T-	R-		Pocahontas CCB, R. R.	*Sorghastrum nutans*	SN 1-86
2	Polk	T- 81-N	R- 23-W	3	Cindy Hildebrand, RR,	*Sorghastrum nutans*	SN 2-90
2	Polk	T- 89-N	R- 25-W	1	Loren Lown	*Sorghastrum nutans*	SN 2-19
3	Pottawattamie	T- 76-N	R- 38-W	16-17	Bruce Heyne	*Sorghastrum nutans*	SN 3-33
3	Story	T-	R-		Jimmie D. Thompson	*Sorghastrum nutans*	SN 3-74

Zone	County	Twp.	Range	Section	Collector	Species	code
2	Story	T- 82-N	R- 21-W	36	Cindy Hildebrand, RR,	*Sorghastrum nutans*	SN 2-93
2	Story	T- 82-N	R- 22-W	21 1/8th mile South	Paul Egeland, RFD 3,	*Sorghastrum nutans*	SN 2-78
2	Story	T- 84-N	R- 24-W	13	Cindy Hildebrand, RR,	*Sorghastrum nutans*	SN 2-91
2	Story	T- 84-N	R- 24-W	28 Northridge	Cindy Hildebrand, RR,	*Sorghastrum nutans*	SN 2-92
2	Story	T- 84-N	R- 24-W	34	Cindy Hildebrand, RR,	*Sorghastrum nutans*	SN 2-94
2	Tama	T-	R-		Ray & Yvette Berner	*Sorghastrum nutans*	SN 2-47
2	Tama	T- 84-N	R- 13-W	17 S edge	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-37
2	Tama	T- 85-N	R- 14-W	36	Paul Bockenstedt	*Sorghastrum nutans*	SN 2-35
3	Taylor	T- 67-N	R- 34-W	16	Charly Stevens	*Sorghastrum nutans*	SN 3-45
3	Warren	T- 77-N	R- 25-W	24 E edge SE4	L. Herman III & Paul	*Sorghastrum nutans*	SN 3-70
3	Warren	T- 74-N	R- 24-W	19 SE4 NE4	L. Herman III & Paul	*Sorghastrum nutans*	SN 3-68
2	Webster	T- 89-N?	R- 29-W?		Linn Reece	*Sorghastrum nutans*	SN 2-30
1	Winneshiek	T- 69-N	R- 10-W	22 NW4	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-23
1	Winneshiek	T- 97-N	R- 9-W	9	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-25
1	Winneshiek	T- 99-N	R- 10-W	31 E edge NW4	Paul Bockenstedt	*Sorghastrum nutans*	SN 1-20

References

Flora of Missouri; p. 232; Steyermark, J. A.; Iowa State University Press, Ames, Iowa 1968.

Forage Crops; 27, 181; Ahlgren, Gilbert H.; Rutgers University; New Brunswick, New Jersey, 1949.

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