

USDA-Natural Resources Conservation Service
Notice of Source Identified Plant Release
Little Bluestem

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 little bluestem, *Schizachyrium scoparium*, Michx.

The little bluestem has been assigned the NRCS accession number 9062320.

Origin:

Central Iowa

Ecotype Description:

Little bluestem is a medium tall, warm season, bunch type grass with coarse stems at basal leaves. As a perennial it begins growth in late spring and continues through the hot summer period until the first killing frost. It is easily mistaken for common broomsedge. Little bluestem has flat bluish basal shoots, which are somewhat bulbous. Plants are green, but often purplish at base of stem and entire plant has a reddish cast after frost. Leaves are smooth, but frequently are covered with hair at the base next to the sheath. Leaves tend to fold with maturity. Seed heads are in the form of racemes about three inches long. The raceme stems are hairy. Plants are slender to robust, compressed, to 150 cm. tall, erect, the upper half freely branching; sheaths and blades commonly glabrous or nearly so, frequently sparsely pilose at their junction, rarely pubescent to villous throughout, the blades 3 to 6 mm. wide, flat; raceme 3 to 6 cm. long, mostly curved, the filiform peduncles mostly wholly or partly included in the sheaths, commonly spreading, the rachis slender, flexuous, pilose, sometimes copiously so; sessile spikelet mostly 6 to 8 mm. long, scarious, the awn 8 to 15 mm. long; pedicellate spikelet usually reduced, short-awned, spreading, the pedicel pilose. It develops full stands where moisture is sufficient, but gets clumpy on drier sites. It has value as a persistent low maintenance cover plant and as a summer forage plant.

Little bluestem occurs in prairies, glades, rocky open woods, abandoned fields, sandy open ground, waste places, and along railroads. It ranges from New Brunswick and Quebec to Alberta, south to Florida, Texas, and Arizona.

Little bluestem seeds per pound average 270,000. 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; generally little bluestem is one component of a range mix, so rate varies

depending on percent desired in the stand. Seedling vigor is good and stands are comparatively easy to establish where competition is controlled. Mowing above the height of the little bluestem has been used to reduce competition when weeds begin to severely encroach into the planting.

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

Seed yields are good and can be harvested with a combine. Yields may range from 100 to 200 pounds per acre have been commonly harvested on managed stands.

Collections of little bluestem 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, little bluestem should be spaced a minimum of 900 to 1000 feet from any other different little bluestem selection.

Little bluestem is adapted to a wide variety of soil. It grows well on deep to shallow, sandy to fine-textured and rocky soils. It tolerates low rainfall and is often found on droughty sites. It is not tolerant to heavy shade. 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 across Central Iowa and included in the little bluestem composite, Central Iowa origin (9062320).

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.

References:

Manual of the Grasses of the United States; pp. 753-755, Hitchcock, A. S., United States Department of Agriculture, Washington, DC, 1951.

Forages; p. 514, Hughes H. D.; Heath, M. E.; Metcalfe, D. S., The Iowa State College Press, Ames, Iowa, 1951.

Flora of Missouri; p. 244; Steyermark, J. A.; Iowa State University Press, Ames, Iowa, 1968.

Badlands Ecotype Little Bluestem, United States Department of Agriculture, Natural Resources Conservation Service, Plant Materials Center, Bismarck, North Dakota, 1997.

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