

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

Little bluestem

The USDA-Natural Resources Conservation Service (NRCS), the University of Missouri at Columbia (UMC), Missouri Department of Conservation (MDC) and the Missouri Department of Transportation (MODOT), announce the release of a source identified Northern Missouri Germplasm little bluestem, *Schizachyrium scoparium*, Michx.

The little bluestem has been assigned the NRCS accession number 9079004.

Origin: Counties north of the Missouri River.

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, *Andropogon virginicus*. Plants are slender to robust, compressed, 50 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, scabrous, 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 260,000. 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 eight 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.

Chemical sprays available for use in the establishment of little bluestem are limited. Post-emergence broadleaf sprays have been used during little bluestem establishment. Burning established fields in April reduces competition and encourages seed head to fill.

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 Missouri guarantees the adaptation of releases to the entire zone. Plants are cross-pollinated. For isolation requirement, little bluestem should be spaced a minimum of 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.

Site Description:

Nineteen collections from fourteen counties in northern Missouri were combined to form accession 9079004.

Climate:

The average annual temperature is 50 degrees Fahrenheit. July is the warmest month with an average high of 88 degrees and low of 67 degrees. January is the coldest month with an average high of 30 degrees and low of 11 degrees. The average annual precipitation for this region is 33 inches with much of this coming during the growing season. The average frost-free growing period runs from April 20 to October 10.

Availability of Plant Materials:

Breeders' material is being produced in limited supply by the Plant Materials Center, located in Elsberry, Missouri.

Release Approved By:

/s/ Randy Freeland for Roger Hansen
Missouri State Conservationist

Date: 5/28/99

/s/ Robert McGraw, UMC
Professor of Agriculture

Date: 5/28/99

/s/ Stacy Armstrong, MODOT
Roadside Management Supervisor

Date: 7/12/99

/s/ Larry Mechlin, MDC
Research Biologist

Date: 6/2/99

/s/ Richard S. White for Diane Gelburd
Director, Ecological Sciences Division
United States Department of Agriculture
Natural Resources Conservation Service
Washington, D.C.

Date: 8/10/99

References

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

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