

Suther Germplasm Little Bluestem

(*Schizachyrium scoparium*) (Michx.) Nash

A Conservation Plant Released by the USDA NRCS Cape May Plant Materials Center, Cape May, NJ



Suther Germplasm little bluestem (Schizachyrium scoparium (Michx.) Nash.) is source-identified germplasm released from the Cape May Plant Materials Center in Cape May, NJ in 2002. Photo by, USDA NRCS Plant Materials Center, Cape May, NJ.

Description

Little bluestem (*Schizachyrium scoparium* (Michx.) Nash.) is a warm-season (C₄), perennial bunchgrass that grows 1½–3 ft tall. It has slightly flattened coarse stems and smooth, 2–12 in long basal leaves that are hairy near the sheath and that fold with maturity. Plants are green, but often appear purplish at base of the stem. The plant will have a reddish cast after frost. Seed heads are hairy, 1–3 in long, unbranched and indeterminate, with many stalked flowers. It can reproduce from tillers, rhizomes, and seed.

Little bluestem can be sometimes confused with broomsedge bluestem (*Andropogon virginicus*) and Seacoast bluestem (*Schizachyrium scoparium* var. *littorale*). Broomsedge bluestem has a straight awn and two or more stalked seed clusters per branch; while little bluestem has a twisted, bent awn and a single cluster of seeds per branch. Seacoast bluestem (*Schizachyrium scoparium* var. *littorale*) occurs only in the coastal plain region. It is very similar to little bluestem but can be distinguished by having bent stems at its base, whereas little bluestem stems are erect.

Source

Suther Germplasm is source-identified germplasm that originated from the piedmont of Cabarrus County, North Carolina. The undisturbed site was considered a remnant, eastern U.S. native prairie system. This germplasm was collected from a wet prairie in the floodplain of the Dutch Buffalo Creek, 27 miles Northeast of Charlotte, NC; at approximately 680 ft above sea level.

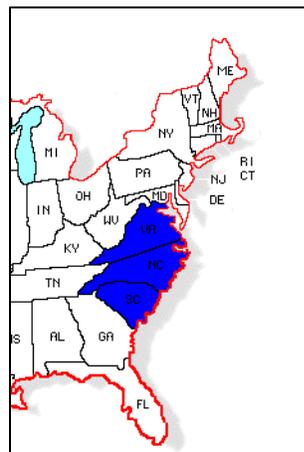
Conservation Uses

Little bluestem is an important component in tall grass native prairies. It can be used for USDA conservation programs that establish and maintain permanent vegetative cover, critical area plantings, contour buffer strips, field borders, filter strips, prescribed grazing, vegetative barriers to reduce sheet and rill erosion, food and cover for wildlife, and in native restoration projects to increase species diversity. A variety of grassland birds depend heavily on little bluestem for nesting and roosting habitat and as a source of seed.

Little bluestem is considered an increaser in tallgrass prairie systems and can provide fair hay and forage for cattle and horses. It has 12–14% crude protein content (Tober and Jensen, 2013) early in the growing season; tapering off by late summer/fall.

Area of Adaptation and Use

The area of adaptation for Suther little bluestem has not been determined. However, this genotype has exhibited typical morphological characteristics as far north as Cape May NJ. Suther little bluestem was collected from the North Carolina piedmont, so is best suited for use in the North and South Carolina and Virginia Mid-Atlantic region specifically. This region corresponds to USDA Plant Hardiness Zone 7b.



Map of Suther Germplasm little bluestem area of adaptation and recommended area of use.

Establishment and Management for Conservation Plantings

Little bluestem should be seeded into a well-prepared, weed-free, seedbed as early in the spring as possible or as a dormant seeding in late fall or winter. Seed will not germinate until soil temperature rises above 50° F. Seed can be drilled with conventional or no-till drills. If a no-till drill is used, sod should be controlled in fall to permit early spring planting. Seed in the coulters furrows should be fully covered to avoid seed exposure and drying. Seed should be drilled at 6–8 lb PLS (pure live seed) acre. Debearded seed should be used with conventional drills. If non-debearded seed is used, the drill should have a chaffy seed box. When broadcasting, use 10 lb/ac. on a firm seedbed, and roll with a packer. Seeding depth is ¼ to ½ inch.

If needed, fertilization can be used moderately as determined by a soil test, however, fertilization will also increase weed competition. Amendments may be applied prior to, during, or after seeding. Moderate levels of N, P, and K are sufficient for establishment. Nitrogen should only be applied after green growth has begun in the second growing season. Lime is recommended during site preparation if soil pH is below 5.5.

It is necessary to control weed competition for successful stand establishment. High mowing (above the bluestem seedlings) is a common method of weed control. Once established, poor stands can be rehabilitated by using proper management practices such as controlled grazing and prescribed spring burning, where permitted.

Do not graze forage plantings during the year of establishment. When grazing or haying it is important not to remove more than 50% of the current year's growth. No cropping should occur below 8 inches or within 1 month of anticipated frosts. It is recommended to graze competing cool season grasses after frost in the fall and before the little bluestem is 1 inch tall in the spring. With care, the stand will last indefinitely. Grazing should begin from mid to late June when grasses reach 12–16 in tall. Forage quality will remain high until the seed head emerges. Overgrazing can damage the stand. If there is more than 12 inches of re-growth, the plants can be re-grazed to 6–12 in. Leaving this much stubble before frost allows the plants to store carbohydrates and ensures the production of vigorous plant growth in the spring.

Ecological Considerations

There are no serious pests of little bluestem. This plant may become weedy or invasive in some regions or habitats and may displace more desirable vegetation if not

properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, state natural resource, or state agriculture department regarding its status and use. Weed information is also available from the PLANTS Web site at <http://plants.usda.gov>.

Seed and Plant Production

Stands are successfully established by seeding, though seedling vigor and growth are relatively poor (Tober and Jensen, 2013). This germplasm does not appear to have any dormancy issues and is relatively easy to establish. A stand of Suther Germplasm produced an average of approximately 18 lb/ac of cleaned seed with an average germination rate of 11% at the Cape May Plant Materials Center, in Cape May, NJ from the years 2008 to 2013. There are 255,000 seeds per pound.

Availability

For conservation use: For sources of supply for Suther little bluestem or for more information on the availability, planting and use, contact your local NRCS office or Soil and Water Conservation District

For seed or plant increase:

Suther Germplasm little bluestem is an eastern US source-identified release. NRCS maintains foundation stock at the Cape May Plant Materials Center in Cape May Court House, NJ. Foundation seed can be obtained from the Cape May PMC for the purpose of large-scale increase.

For more information, contact:
USDA-NRCS

Cape May Plant Materials Center
1536 Route 9 North
Cape May Court House, NJ 08210
phone: (609)465-5901
fax: (609)465-9284

Citation

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov>>, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov>>

References

Tober, D. and N. Jensen. 2013. Plant guide for little bluestem (*Schizachyrium scoparium*). USDA Natural Resources Conservation Service, Plant Materials Center, Bismarck, North Dakota 58501

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