



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

Badlands Ecotype Little Bluestem

Schizachyrium scoparium

A Conservation Plant Release by USDA NRCS Plant Materials Center, Bismarck, North Dakota



Badlands Ecotype little bluestem (*Schizachyrium scoparium* [Michx.] Nash) is a cooperative release of the USDA Natural Resources Conservation Service, the USDA Agricultural Research Service, and the North Dakota and South Dakota Agricultural Experiment Stations.

Description

- Native warm-season bunchgrass
- Erect, medium height, 25-40 inches
- Deep, fibrous root system
- Basal portions of stems are flattened
- Leaves are slightly folded
- Leaves become reddish brown at maturity, red in fall/winter
- Mature seed heads become fluffy, white

Badlands Ecotype Features

- The source population is a composite of plants from 68 different sites, including the Badlands region of North Dakota and South Dakota
- A broad genetic base with plants originating from many different range sites, but primarily shallow, thin upland, sandy, and silty
- Improved plant vigor, seed production, and disease resistance
- Variation in plant size, leaf width, and color

- Plant color varies from light to dark green with occasional blue plants
- Phenology may vary up to two weeks within the population
- First seed matures generally in late August at Bismarck, ND
- Approximately 4 weeks earlier in maturity compared to 'Blaze' and 'Camper'
- Original area of collections includes USDA Plant Hardiness Zones 2, 3, and 4

Source

Selected plants comprising Badlands Ecotype little bluestem originated from 68 different sites in southwestern North Dakota and western and central South Dakota. The diverse genetic plant material was collected vegetatively on 10 different range sites.

The climate within the collection area is temperate with temperature extremes from -40 degrees F to 110 degrees F. Killing frosts can occur in late May. The average growing season varies from 120 to 140 days. Average annual precipitation varies from 12 to 23 inches. Elevation varied from 1,250 to 4,440 feet. The average slope was about 8 percent and ranged from flat to 30 percent.



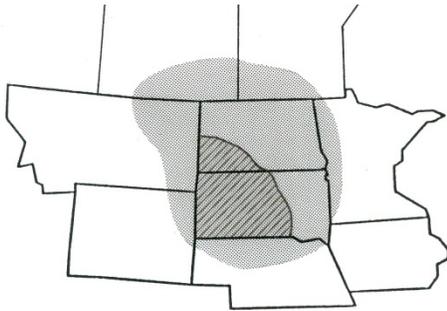
Hitchcock, A.S. 1935 (rev.1951).
Manual of the Grasses of the United States. USDA Misc. Publication No. 200, 1051 p.

Conservation Uses

- Range seedings
- Prairie restoration
- Prairie landscaping

Area of Adaptation and Use

The collection area of Badlands ecotype (lined) and projected area of adaptation (shaded) are shown on the map below.



Establishment

- Seed from mid-May to mid-June
- Shallow seeding depth of ¼ to ½ inch is critical
- Plant through fluffy seedbox with grass drill unless the seed is debarbed
- Plant at a seeding rate of 25 to 30 pure live seeds (PLS) per square foot if planted alone (4.2 to 5 PLS lb/ac); generally, little bluestem is one component of a range mix, so rate varies depending on percent desired in the stand
- Number of seeds/lb averages 270,000; debarbed seed will vary from this amount
- Accent plants for landscaping are generally spaced at 1-2 feet

Management

- Proper grazing would include not removing more than half of the new growth during the growing season
- Forage quality declines with growth stage, dropping rapidly as the plant matures and sets seed
- Prescribed burning in late winter or spring will increase seed production and improve forage quality
- Without proper use or burning, little bluestem can form dead centers
- Plant crowns may suffer severe damage when burned during dry conditions

Seed Production

- Seed harvest can be accomplished by combining or stripping
- Because of the light, fluffy seed, air should be reduced or closed
- Variable seed maturity, even on the same plant, is common

- Seed strippers can be used after seeds have reached the “full-fluff” stage, but before heavy shattering occurs
- Clean seed yields at the Bismarck Plant Materials Center have averaged 100 to 200 lb/ac with irrigation and 42-inch row spacing



Seed production field at the Bismarck Plant Materials Center

Availability

For conservation use: For more information on the availability and use of Badlands Ecotype little bluestem, contact your local NRCS field office or the Bismarck Plant Materials Center.

For seed or plant increase: Generation 2 seed, equivalent to foundation seed, is available for seed increase from the USDA, NRCS Plant Materials Center, Bismarck, ND.

For more information, contact:
USDA-NRCS Plant Materials Center
3308 University Drive
Bismarck, ND 58504
Phone: (701) 250-4330
Fax: (701) 250-4334
<http://Plant-Materials.nrcs.usda.gov>

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>>

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