Itasca Germplasm Little Bluestem

USDA Natural Resources Conservation Service, Plant Materials Center, Bismarck, North Dakota

Itasca Germplasm little bluestem

Schizachyrium scoparium

Plant Description

Little bluestem is a warm-season perennial bunchgrass, 1 to 3 feet tall. Leaves are primarily basal, and blades are slightly folded. Mature seeds are fluffy and white in late September. Leaves become reddish brown at maturity. It has a deep, fibrous root system, and vegetative reproduction is from tillers and short rhizomes. Little bluestem is adapted to a variety of soils from shallow/gravel uplands to limy subirrigated bottomlands. It is nutritious and readily grazed when immature.

USDA-NRCS PLANTS Database / USDA NRCS. Wetland flora: Field office illustrated guide to plant species. USDA Natural Resources Conservation Service.

Conservation Uses

- Range Seeding
- Prairie Restoration
- Prairie Landscaping
- Wildlife Habitat
- Critical Area Plantings

Area of Adaptation

Itasca has been developed to provide an adapted seed source with a broad genetic base for use in the upper Midwest, particularly Minnesota, eastern/central North Dakota, and eastern/central South Dakota. Itasca is expected to perform well on those soils/sites suitable for the species throughout regions of the upper Midwest and Northern Great Plains including Minnesota, Wisconsin, North Dakota, South Dakota, eastern Montana and northeast Wyoming.

Itasca Germplasm Features

- Itasca is a composite of plants originally collected from 72 different sites within eastern North Dakota, north central South Dakota, and central and northeastern Minnesota.
- The broad genetic base of plant genotypes increases the area of adaptation and improves plant performance on a variety of sites.
- Selected plants comprising the Itasca Germplasm were chosen for improved vigor, leafiness, and disease resistance.
- Variation in plant size, leaf abundance, and color are considered normal within the population.
- Phenology may vary up to two weeks within the population and is similar to Badlands Ecotype.
- Plant maturity is approximately four weeks earlier than Blaze and Camper (originating from Nebraska and Kansas, respectively).
- Production of viable seed is consistent, with seed ripening in September in central North Dakota.

Establishment

- Plant seed from mid-May to mid-June.
- Plant at a seeding rate (North Dakota) of 25 to 30 pure live seeds (PLS) per ft^2 if planted alone (4.0 to 4.5 PLS lb/ac). Generally, little bluestem is planted

as part of a mix, therefore, seeding rate varies depending on percent desired in the stand.

- Number of seeds per pound averages 286,000; debearded seed will vary from this amount depending on the degree of debearding.
- Seed should be seeded through the fluffy seedbox on a grass drill unless the seed has been debearded.
- Shallow seeding depth of ¼ to ½ inch is critical.

Management

- Forage quality declines with advancing growth stages, dropping rapidly as the plant matures and sets seed.
- When used as a forage resource, proper timing of livestock removal is essential to facilitate plant growth recovery.
- Prescribed burning in late winter or early spring will increase seed production and improve forage quality.
- Burning during dry conditions or when plants are actively growing can cause severe damage to the plant crowns.

Brush strippers work well for harvesting little bluestem seed

Seed Production

- Seed can be harvested by combining or seed stripping.
- Fluffy seed will require air reduction or closure on harvesting equipment.
- Uneven seed maturity, sometimes on the same plant, is common for little bluestem.
- The species is noted for its variable seed yields.
- Long-term average seed yields are 75-150 lb/ac dryland and 100-300 lb/ac irrigated.

Native stand of little bluestem in McHenry County, North Dakota

Seed Availability

Foundation equivalent seed eligible for certification will be made available for commercial seed increase by the Bismarck Plant Materials Center. Seed will be distributed through the North Dakota State University Foundation Seedstocks Program as Selected class (green tag) of natural germplasm. Certification is limited to one generation from seed available from the Bismarck PMC.

Variation in plant size and color is to be expected within the population of Itasca Germplasm

For more information, contact:
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http://Plant-Materials.nrcs.usda.gov/ndpmc

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