

Refuge Germplasm Big Bluestem

Andropogon gerardii L., Refuge Germplasm big bluestem is a cross pollinated native warm-season perennial tall grass which was selected for use as wildlife habitat, vegetative buffers, filters, and landscape uses. Refuge Germplasm selection is at the shorter end of the range of height for the species. Average total height is 4.5 to 5.5 feet tall.

The Refuge selection was vegetatively selected from a group of three hundred and seventy collections (370) from one hundred and ninety (190) counties throughout the Ozark region of Missouri, Arkansas, Oklahoma, and Illinois. Three individual plants representing three collections, accession numbers 9056902, 9056905, and 9056906, were selected for their short, columnar stature. These accessions were selected based on the following characteristics: short stature, columnar shape and resistance to lodging.

The USDA Natural Resources Conservation Service (NRCS), U. S. Department of Agriculture announced the 2006 selected release of Refuge Germplasm big bluestem, (*Andropogon gerardii* L.) for use in the Ozark Highland region of Southern Missouri, Northern Arkansas, Eastern Oklahoma, Southern Illinois and could extend into adjacent regions.

Description

Big bluestem is a tall, warm-season, perennial, native grass with stiff, erect culms; flattened and keeled sheaths; membranous ligules; and flat or folded leaf blades. Big bluestem has developed a very efficient spreading root system which may reach depths of 5-8 feet (150-200 cm) in Northern latitudes, and 6-8 feet (180-240 cm) or more in the Southern part of its natural range. Although short rhizomes may be present, it usually makes a bunch type growth. Big bluestem is composed of many ecotypes with a wide range of adaptation to soil and climate. Big bluestem is one of the most widespread and important forage grasses of the North American tallgrass prairie region.

Big bluestem is usually associated with one or more of the other three dominant species; Indiangrass, (*Sorghastrum nutans* L. Nash.), switchgrass, (*Panicum virgatum* L.), and little bluestem (*Schizachyrium scoparium* Michx.).



Refuge Germplasm Big Bluestem during the month of December

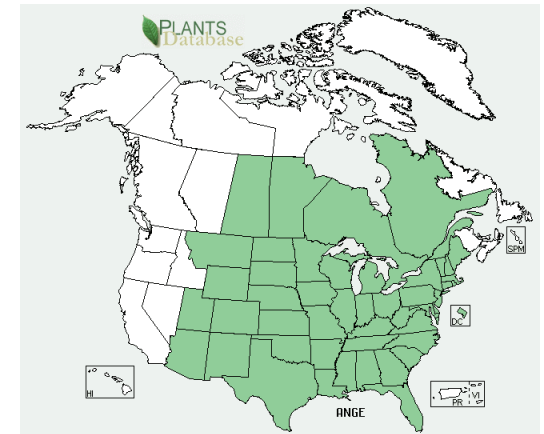
Adaptation

Big bluestem occurs on sub-irrigated lowlands, nearly level gently undulating glacial till plains, overflow sites, level swales and depressions, residual and glacial uplands, and stream terraces and bottomlands along rivers and tributaries.



Known Distribution

This map shows adaptation for big bluestem



Area of Intended Use for Refuge Germplasm Big Bluestem

Refuge's recommended area of use is the Ozark Highland region of Southern Missouri, Northern Arkansas, Eastern Oklahoma, and Southern Illinois.

Establishment

Prepare a clean weed free seedbed by disking and harrowing or using chemical weed control. Firm seedbed by cultipacking. Seedbed should be firm enough to allow seed to be planted 1/4 to 1/2 inch deep. Use a planter that insures proper seeding depth and good seed and soil contact. A brillion seeder or a native grass drill that is capable of handling and placing seed in a uniform manner would work well. There are approximately 165,000 seeds in a pound of big bluestem.

Seeding Rate (Conservation Cover and Wildlife)

Seeding rate for conservation cover and wildlife should be 10 pounds Pure Live Seed (PLS) per acre. A seeding rate of 4.2 pounds (PLS) per acre in 30 inch rows is sufficient for seed production (40 PLS per linear foot).

Seeding Rate (Seed Production)

Planting big bluestem for seed production can be accomplished in four different row spacings: 36 inch row spacing, 24, 12, and solid stand. Seeding rate for 36 inch row spacing should be 3.5 pounds PLS per acre; for 24 inch row spacing the seeding rate should be 5.3 pounds PLS per acre and 10 pounds PLS per acre for the 12 inch and solid stand plantings. For best results seedings should be made in the spring of the year. Use no fertilizer the establishment year unless soil test indicates a low deficiency of less than 15 PPM of phosphorus and/or less than 90 PPM of potassium. Use no nitrogen during the establishment year as this can encourage weed competition.

Management

Reduce weed competition by mowing over the height of the big bluestem plants or cultivating between the rows. Use a non-selective contact herbicide while dormant or a pre emergent herbicide to control annuals and perennial weeds after the big bluestem is established. Remove dead plant material in the spring for faster green up by burning. Big bluestem is a fire climax type grass; it responds positive to burning.

Availability

Foundation seed of Refuge Germplasm big bluestem is being produced in limited supply by the Elsberry Plant Materials Center.



For More Information

Visit our Plant Materials website at <http://Plant-Materials.nrcs.usda.gov> to find more information on solving conservation problems using plants.

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Refuge Germplasm Big Bluestem *Andropogon gerardii*, Vitman



An Improved Conservation Plant Developed by Elsberry Plant Materials Center Elsberry, Missouri