



Seed production field of OZ-70 Germplasm big bluestem

OZ-70 Germplasm Big Bluestem

Andropogon gerardii is a germplasm and was released in 2004 by the Elsberry Plant Materials Center.

Description

Andropogon gerardii OZ-70 Germplasm big bluestem is a cross pollinated native warm-season perennial tall grass. Collections for OZ-70 big bluestem were taken from native prairie remnants from Southern Missouri, Northern Arkansas, Eastern Oklahoma, and Southern Illinois. Seventy of 370 collections were selected from this region. Big bluestem has 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. It is one of the most widespread and important forage grasses of the North American tallgrass prairie region. The abundant, leafy forage is palatable to all classes of livestock. 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.).

Source

Three hundred and seventy collections were vegetatively collected from one hundred and ninety counties throughout the Ozark region. Each collection was increased vegetatively in the greenhouse and planted into an evaluation nursery with two replications and six plants per collection in each replication. Each plant was evaluated independently and 70 of 4680 plants were selected based on amount of forage, late maturity, and rust resistance. Selected plants were vegetatively removed and isolated in a crossing block. Seed produced from the crossing block was separated by weight, propagated by seed and planted into a second evaluation nursery. Plants were selected for forage quality and quantity, seed production, rust resistance, and late maturity. Unwanted plants were removed and seed produced from this block was used to establish an increase (G1) field and given the accession number 9078831. This accession was then compared with 'Rountree' big bluestem for forage quality, emergence, maturity date, and rust resistance at the Elsberry PMC and in field plantings within its intended area of use.

Conservation Uses

The potential uses of OZ-70 Germplasm big bluestem include forage production, erosion control, and vegetative buffers and filters.

Area of Adaptation and Use

OZ-70 Germplasm big bluestem's recommended area of use includes the Ozark Highland region of Southern Missouri, Northern Arkansas, Eastern Oklahoma, and Southern Illinois.

Establishment and Management for Conservation Plantings.

Prepare a clean weed-free seedbed by disking and harrowing or using chemical weed control. Firm the seedbed by cultipacking. Seedbed should be firm enough to allow seed to be planted 1/8 to 1/4 inch deep. Use a planter that insures proper seeding depth and good seed and soil contact like a billion seeder or a no-till grass seeder that is capable of handling and placing seed in a uniform manner. 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. Avoid nitrogen applications during the establishment as this can encourage weed competition. There are approximately 165,000 seeds in a pound of big bluestem. When seeding for pasture and hay management a seeding rate of 10 pounds Pure Live Seed (PLS) per

acre is sufficient; for seed production, a seeding rate of 3.5 pounds PLS per acre in 36 inch rows is sufficient.

Weed control can be accomplished by mowing over the big bluestem plants or cultivating between the rows. For broadleaf weed control usage of a post emergence broadleaf herbicide (2, 4-D) can provide control and will encourage a good stand. For faster green-up, remove dead plant material in the spring by burning. Big bluestem is a fire climax type grass; it responds positively to burning. OZ-70 Germplasm big bluestem can be grazed the first year once the stand is established. Contact your local NRCS office to develop a grazing management plan.

Ecological Considerations

OZ-70 Germplasm big bluestem is a selection of naturally occurring germplasm and has undergone selection for forage quantity and quality, late maturity, and rust resistance. OZ-70 Germplasm did not meet the assessment of a plant that could become invasive, based on guidelines adopted by the NRCS Plant Materials Program.

Seed and Plant Production

OZ-70 Germplasm big bluestem can be planted using several different row spacing, including 12, 24, 36 inch rows and as a solid stand. Seeding rates in rows are 40 Pure Live Seed (PLS) per linear foot. Seeding rate for 36 in row spacing should be 3.5 pounds PLS per acre; for 24 inch row spacing, 5.3 pounds PLS per acre, and 10 pounds PLS per acre for the 12 inch and solid stand plantings. For best results, plantings should be made in the spring of the year. Average seed production ranges from 250 to 300 bulk pounds (clean seed) per acre.

Availability

Commercial availability of OZ-70 Germplasm big bluestem is only available from Bamert Seed Co in Muleshoe, TX and BCAP Seed in Montrose MO.

G1 material is being produced in limited supply by the Elsberry Plant Materials Center.

For more information, contact:
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website: [http://plant-
materials.nrcs.usda.gov](http://plant-materials.nrcs.usda.gov)



Cow grazing OZ-70 Germplasm big bluestem

Citation

Fact Sheet for release of OZ-70 Germplasm big bluestem (*Andropogon gerardii*). USDA-Natural Resources Conservation Service, Elsberry Plant Materials Center, Elsberry, MO 63343. [September 2011]

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/>>

Title: OZ-70 Germplasm big blustem, *Andropogon gerardii*

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Subject: Big bluestem (*Adropogon gerardii*), is a tall, native prairie, warm-season, perennial grass. Uses include forage production, erosion control, and vegetative buffers and filters.

Keywords: Conservation Plant Release Brochure, Big bluestem, *Andropogon*, *Andropogon gerardii*, warm-season, perennial, grass, forage production, erosion control, vegetative buffers and filters.

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