

'Rountree' Big Bluestem, *Andropogon Gerardii*, Vitman

'Rountree' big bluestem is a native warm-season perennial grass. It is a major component of the tall grass prairie. It is also a major ground cover throughout the tallgrass region in a variety of prairies ranging from dry to wet, most common and often dominant in mesic sites.

The USDA-Natural Resources Conservation Service (NRCS), (formerly the Soil Conservation Service) Elsberry Plant Materials Center in Cooperation with the Missouri Agricultural Experiment Station released of Rountree big bluestem in 1983, *Andropogon gerardii*, Vitman. Rountree was collected from a native stand near Moorhead, Monona County, Iowa. It was evaluated, selected, and increased at the Elsberry Plant Materials Center, as



'Rountree' Big Bluestem planted at the Elsberry PMC

M2-10407. It was later assigned a temporary PI number T05067. Rountree was collected as seed from a native stand and evaluated in field plantings throughout Iowa and Missouri and limited plantings in Southern Illinois. Advantages over available cultivars are increased seedling growth rate, increased leaf rust resistance, superior forage production, and increased resistance to lodging.

Description

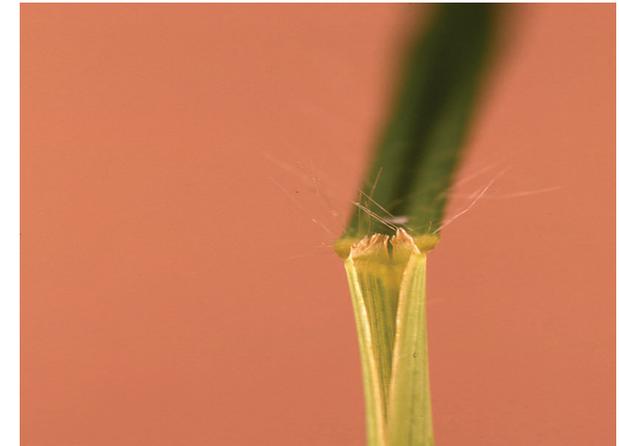
Big bluestem is a tall warm-season, perennial native grass with stiff, erect culms; flattened and keeled sheaths; membranous ligules; and flat or folded leaf blades. Big bluestem has developed a very efficient spreading root system which may reach depths of 5-8 feet in Northern latitudes, and 6-8 feet 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 one of the most widespread and important prairie forage grasses of the North American tallgrass prairie region. It is usually associated with one or more of the other three dominant species, indiagrass, (*Sorghastrum nutans* (L.) Nash.), switchgrass, (*Panicum virgatum* L.), and little bluestem (*Schizachyrium scoparium* (Michx.) Nash.). Big bluestem occurs on sub irrigated lowland, nearly level to gently undulating glacial till plains, overflow sites, level swales and depressions, residual and glacial uplands, and stream terraces and bottomlands along rivers and tributaries. The abundant, leafy forage is palatable to all classes of livestock.



A closeup of big bluestem seedheads

Adaptation

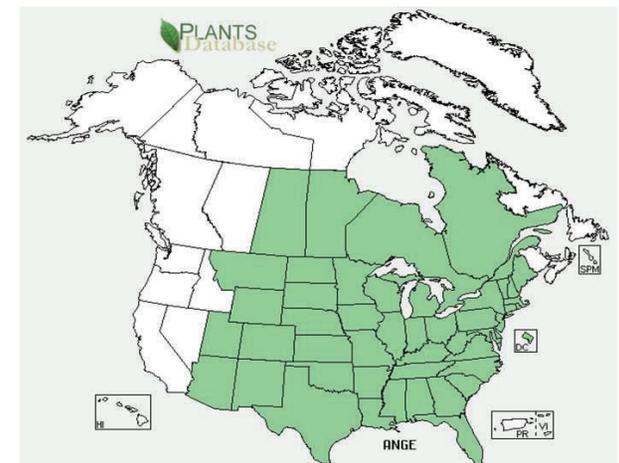
Big bluestem is adapted to most upland and some bottomland soils. Rountree has demonstrated adaptability in major land resource areas; 102, Northwest Iowa, 108, Central and Southeast Iowa to 107 in Western Iowa and Central and Northwest Missouri; 115, Southeast and East Central Missouri; 116, Southwest Missouri. This Cultivar has proven to be adaptable throughout Missouri, Iowa, Illinois, Southern Minnesota and Wisconsin as well as Eastern Kansas, Nebraska, and South Dakota.



Big bluestem leaf sheath, shows the ligule and hair-like appendages

Area of Adaptation for Rountree Big Bluestem

The area of adaptation for Rountree big bluestem is primarily Iowa, Illinois and Missouri. Rountree was developed to bridge the grazing gap in June, July and August when the cool season grasses are becoming semi dormant.



Known Distribution

This map shows adaptation for big bluestem

Establishment

Prepare a clean weed free seedbed by disking and harrowing or using chemical weed control in the spring of the year (mid April - June). Firm seedbed by cultipacking. Seedbed should be firm enough to allow seed to be planted approximately 1/4 inch deep. Use a planter that will insure proper seeding depth and good seed and soil contact like a brilliant seeder or a no-till grass drill that is capable of handling and placing seed in a uniform manner. There are approximately 165,000 seeds in a pound of big bluestem.

Seeding Rate (Forage Production and Conservation Cover)

A seeding rate of 10 pounds Pure Live Seed (PLS) per acre (FOTG 40 PLS per square foot) for pasture and hay is sufficient.

Seeding Rate (Seed Production)

Planting big bluestem for seed production can be accomplished using several different row spacings: 36 inch row spacing, 30, 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. A seeding rate of 4.2 pounds PLS per acre in 30 inch rows is also sufficient for seed production (40 PLS per linear foot). Seeding should be made in the spring of the year, mid April - June. 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 labeled herbicide to control annuals and perennial weeds. Panoramic, Plateau, and Journey are labeled for use on big bluestem with different restrictions. Weed control on established stands of Rountree big bluestem can be minimized by maintaining plant vigor and density. Remove dead plant materials in the spring for faster green up by burning. Big bluestem is a fire climax type grass; it responds positive to burning. Burning plant residues at initiation of spring growth decreased competition and stimulates big bluestem growth. Annual fertilizer application of 60 pounds nitrogen and 30 pounds each of phosphorus and potassium per acre usually is adequate for maximum yields. Rates should be adjusted in accordance with soil tests.

Availability

Foundation seed of Rountree 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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Rountree Big Bluestem *Andropogon Gerardii, Vitman*



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