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Big Bluestem Varieties for Minnesota Fact Sheet

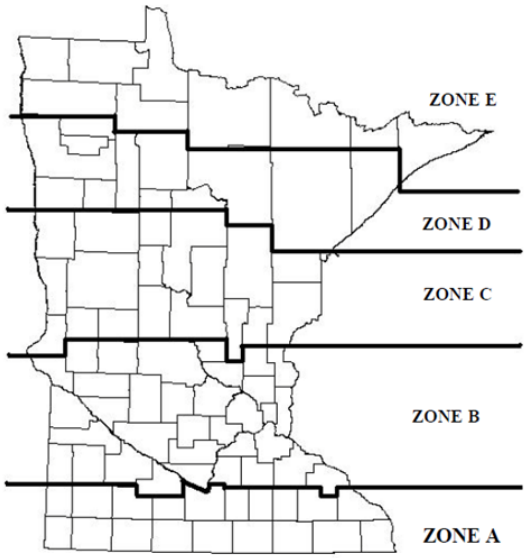
Big bluestem is one of the primary native species found on tall grass prairie and prairie remnants. It is a warm-season grass that often becomes visible after late summer or fall mowing of ditches. It is typically the tallest grass in the tall grass prairie, growing to more than 6 feet tall under ideal conditions. It has slender stems that turn blue-purple as it matures; thus the name big bluestem. It is also referred to as turkey-foot because of the three-digit inflorescence that resembles a turkey's foot. A key identification characteristic for vegetative material and seedlings is the coarse hair on the leaves.

Big bluestem is a warm-season plant that grows best in moist, well-drained soil. Its deep root system and short, scaly rhizomes make it a tough, drought tolerant and persistent grass species that competes well with cool-season invasive species that have been mowed early in the season.

Big bluestem provides abundant high quality forage when utilized for hay or pasture in early to mid-summer. It is readily grazed by livestock and wildlife and provides excellent nesting habitat. It also constitutes part of the native plant community that supports pollinators. Critical area seeding, prairie restoration, and roadside cover are other important uses.

Big bluestem is often included as one of the warm-season components in grass/forb mixtures. For optimum establishment, it should be seeded mid-May to late June, after soil temperatures reach 50 degrees F. The seedbed should be firm and weed-free, with seed placed at ¼ to ½-inch depth. Consult the Minnesota Field Office Technical Guide (FOTG) for seeding dates and rates for different program mixes.

There are several varieties or ecotypes of big bluestem available for conservation plantings in Minnesota. Figure 1 is an adaptability zone map for Minnesota. Table 1 provides helpful information for determining the variety or ecotype that may fit best at a given location. It is based on the Minnesota FOTG, 327 Conservation Cover, Adaptability Zone Ratings. Variety information is found in Table 2.



Source: NRCS – Minnesota Field Office Technical Guide, October 2011

Table 1. Adaptability zone ratings for big bluestem varieties in Minnesota[1]

Variety/Germplasm/Ecovar[2]	Zone				
	A	B	C	D	E
Bounty Germplasm[3]	1	1	1	1	1
Boundary Ecovar[3]	4	4	3	2	1
Bison	3	2	1	1	1
Bonilla	1	1	1	2	3
Sunnyview	1	1	1	2	3
Champ	1	1	2	3	4
Rountree	1	2	3	4	4
Pawnee	1	2	3	4	4

[1] Adaptability zone ratings: 1=adapted with optimum performance; 2=moderately adapted under haying or grazing; may not always produce mature seed; 3=poorly adapted; 4=not adapted.
[2] Named varieties may or may not come from various clones or ecotypes. Germplasm releases were developed in the US and are generally from various clones or ecotypes. Ecovars are "ecological varieties" developed in Canada.
[3] Indicates a variety/germplasm/ecovar that has not been formally tested in MN. Ratings are based on estimated performance.

Big bluestem is capable of producing large amounts of forage/biomass.

Big bluestem provides high quality forage during the summer grazing period (photo by Paul Nyren).

Table 2. Big bluestem release information

Release Name	Release Type	Year of Release	Origin	Attributes/Use
Bounty Germplasm	Selected Class	2012	40 counties in Minnesota and 9 counties in eastern South Dakota	Diverse ecotypes from northern and southern Minnesota and eastern South Dakota.
Boundary Ecovar	Source Identified	2009	Manitoba and eastern Saskatchewan, Canada	Native collection of big bluestem with characteristics typical of the species in that area.
Sunnyview	Variety	1998	South Dakota	Selected for vigor, leafiness, and seed yield. Sunnyview had the highest average forage yields at 5 of 6 replicated trials in South Dakota.
Bison	Variety	1998	South Dakota	Selected for uniform plant type with good leafiness, high plant vigor, seed yields and winter hardiness. Bison is 20 days earlier in anthesis than the variety Bonilla and 30-48 days earlier than the southern varieties Kaw, Champ, and Pawnee. Bison tends to be shorter in mature height. Recommended in plant hardiness zones 3-4.
Bonilla	Variety	1987	South Dakota	Selected for high seed and forage yields and winter survival. Superior winter hardiness, persistence and seed production ability. Forage production exceeds that of Bison and is equal to Champ and Kaw at northern latitudes. Average daily gains of yearling steers have been higher for Bonilla than Pawnee in grazing studies at Morris, Minnesota. Recommended in plant hardiness zones 3-4.
Champ	Variety	1963	Nebraska	Moderately late maturing. Averages 7-10 days earlier in seed maturity than Pawnee. Recommended in plant hardiness zones 4-5.
Rountree	Variety	1983	Iowa	Increased seedling vigor, increased leaf rust resistance, superior forage and seed production, and increased resistance to lodging. Recommended in plant hardiness zone 4.
Pawnee	Variety	1963	Nebraska	Typical of big bluestem of the central prairies. Produces good forage yields in Nebraska; superior to native strains originating farther north and west. Improved seed yields and seed quality. Recommended in plant hardiness zones 5-6.