



United States Department of Agriculture  
Natural Resources Conservation Service  
Plant Materials Center  
Bismarck, North Dakota

## BAD RIVER Ecotype Blue Grama



Announcing the release of

**BAD RIVER Ecotype**  
Blue Grama  
*Bouteloua gracilis*

A blue grama adapted to  
the Northern Great Plains

Potential Uses

Range Seeding

Reduced Maintenance Cover

Prairie Restoration

Prairie Landscaping

Plant Description



⇒ 10 to 25 inches tall

⇒ Seed head  
resembles human  
eyebrow

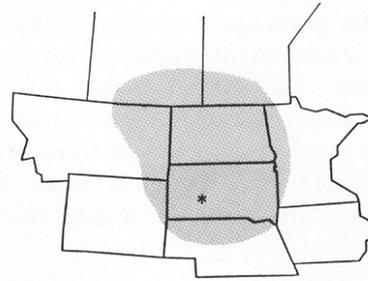
⇒ Native, perennial,  
warm-season  
bunchgrass

⇒ Leaves are mostly  
basal, curling

Hairy leaf  
ligule



Origin\* and Projected Area of Adapatation



Bad River Ecotvove Features

- ◆ Originated from South Dakota and adapted to the Northern Great Plains, USDA Plant Hardiness Zone 3
- ◆ Establishes readily, and has consistent plant performance compared to native harvests
- ◆ Leafier and taller than South Dakota native harvest
- ◆ Drought tolerant, sod-former
- ◆ Improved emergence, vigor, and root development compared to South Dakota native harvest
- ◆ Seed begins to mature late August
- ◆ Provides excellent quality forage for summer grazing
- ◆ Higher percent crude protein and digestibility compared to South Dakota native harvest
- ◆ Forms a short grass sod which provides good ground cover
- ◆ Prefers medium to fine textured soils

Establishment

- ◆ Seed from mid-May to mid-June
- ◆ Shallow seeding depth of  $\frac{1}{4}$  to  $\frac{1}{2}$  inch is critical
- ◆ Plant through fluffy seedbox of grass drill unless seed is debarbed
- ◆ Plant 25 to 30 pure live seeds (PLS) per  $\text{ft}^2$  (1.3 to 1.6 PLS lb/ac) if seeded alone (# of seeds per pound averages 825,000; debarbed seed will vary from this amount)
- ◆ Generally blue grama is one component of a range mix, so rate varies depending on percent desired in stand
- ◆ Recommended low maintenance cover seeding rates vary from approximately 1 to 3 PLS pounds per  $1000 \text{ft}^2$
- ◆ Accent plants for landscaping may be spaced at 1 to 2 feet

Manaaement

Management of Bad River Ecotype does not differ from other blue grama. It is a common associate of buffalograss, sideoats grama, and western wheatgrass. Blue grama is a palatable, nutritious forage species that can withstand extensive grazing. It becomes dormant during drought conditions and recovers quickly with moisture. The short stature of blue grama makes it less desirable for hay; but because it retains its forage quality into the winter months, it makes an excellent standing feed. Controlled burning when the plants are dormant improves seed and herbage production.

## Seed Production

- 4 Harvest seed by combining or stripping
- ◆ Seed of blue grama is light, *so* reduce or close off air when combining
- If seed stripping, wait until late in growing season after most seed is mature
- 4 Shattering is generally not a problem
- ◆ Annual seed yields can be extremely variable
- Seed yields at the Bismarck Plant Materials Center range from 50-250 lbs/ac in 42-inch spaced rows with irrigation



Seed



Seed unit

## Seed Availability

Generation 2 seed, equivalent to foundation seed, is available for seed increase from the USDA, NRCS Plant Materials Center, 3308 University Drive, Bismarck, North Dakota 58502. Generation 3 seed, equivalent to certified seed, is available from various commercial vendors. Contact your local USDA, NRCS Field Office or the Bismarck Plant Materials Center for a list of vendors.

## Origin

Development of Bad River ecotype blue grama began in 1988 with seed harvested from native plants growing on a floodplain of the Bad River in central South Dakota. This loamy terrace

range site with its very fine, sandy loam soils is located in Haakon County, near the town of Philip. Blue grama and western wheatgrass were the predominant plants growing on the site in 1988. Climatic conditions are harsh in this area. Annual precipitation is approximately 16 inches. The annual freeze-free period ranges from 130 to 160 days; and the temperatures are extreme, ranging from -35° F to 110° F.

## Release Agencies

USDA, Natural Resources Conservation Service  
North Dakota Agricultural Experiment Station  
South Dakota Agricultural Experiment Station  
North Dakota Association of Conservation Districts



Natural distribution of blue grama

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