

A Conservation Plant Released by the Natural Resources Conservation Service
Los Lunas Plant Materials Center, Los Lunas, NM

'Grant' germplasm cane bluestem

Bothriochloa barbinodis
(Lag.) Herter



'Grant' germplasm cane bluestem

'Grant' germplasm cane bluestem (*Bothriochloa barbinodis*) was released in 2001 by the USDA-Natural Resources Conservation Service (NRCS) Los Lunas Plant Materials Center and the New Mexico State University's Agricultural Science Center at Los Lunas. 'Grant' germplasm cane bluestem was released as a selected class of certified seed (natural track).

Description

'Grant' germplasm cane bluestem is a coarse, warm-season bunchgrass. It is a large robust grass with foliage well distributed along the stem. Blades are 2-7 cm broad and 25-30 cm or more long. Plants may be 1.5 to 2 m tall, depending upon environmental conditions. Flowering takes place from June to July.

'Grant' germplasm cane bluestem has been observed to be remarkably drought tolerant and is well adapted to Southwestern rangeland. It has been classified as fair-to-good forage for cattle and wildlife. 'Grant' germplasm cane bluestem has produced yields of approximately 4 metric tons/ha annually under dryland conditions. When green, the total protein of cane bluestem forage is about 10%; however when dormant forage protein may drop to 4.5%. When grown under similar conditions, 'Grant' germplasm cane bluestem and switchgrass (*Panicum virgatum* L.) compared favorably. Under drought conditions, 'Grant' germplasm cane bluestem produced more forage than did switchgrass.

Source

'Grant' germplasm cane bluestem was originally collected in 1982 by USDA-NRCS field office personnel from native stands in New Mexico and Arizona. It was selected from 21 accessions collected from New Mexico and Arizona. Accessions selected were from individual populations. From the initial accessions, six were selected for superior forage and seed yield. Equal amounts of seed from each accession were combined. The composite mix was seeded to become Grant germplasm

Conservation Uses

'Grant' germplasm cane bluestem conservation uses include erosion control, wildlife food/cover, restoring disturbed sites, increasing plant diversity of rangelands, and beautification of urban and rural landscapes that require low water-usage plants.

Area of Adaptation and Use

'Grant' germplasm cane bluestem is naturally occurring from Oklahoma to Arizona and Texas, and south into Mexico. It commonly grows on open rangelands, mesas, dry rocky or sandy slopes and open plains.

Establishment and Management for Conservation Plantings

Successful seed establishment may increase when seeds are planted during the summer rainy season (Gucker, 2011). The recommended planting period is from late June to late August.

Cane bluestem will decline if overgrazed. The presence of cane bluestem is considered an indicator of good range condition (Judd, 1962). Cane bluestem tends to be coarse and fibrous, however, it has been rated as fair-to-good forage when green (Gould, 1978).

Experimental grazing studies with cane bluestem stress the importance of avoiding continuous and heavy grazing to maintain a vigorous and productive stand (Gucker, 2011).

Ecological Considerations

'Grant' germplasm cane bluestem did not meet the criteria of becoming an invasive based on guidelines adopted by the NRCS Plant Materials Program.

Seed and Plant Production

For commercial seed increases, cane bluestem should be planted in the early spring into a firm, weed-free seedbed at a ¼" depth with 24-38 inches within row spacing. Row spacing can vary from 24-38 inches. The planting should be irrigated to maintain a moist soil surface and to avoid soil crusting. Pre-emergent herbicide may be used to

control weeds after the plants have reached the 3-5 leaf stage (Garner, 2004; USDA-NRCS, 2004).

Commercial seed production of cane bluestem may require from 40 to 60 pounds per acre of available nitrogen per year and should be irrigated approximately every four weeks during the growing season. Application of phosphorus and potassium fertilizer should be done according to soil test results (Garner, 2004).

Seed production fields may be harvested with a seed stripper. The harvested seed can be cleaned using a brush huller scarifier with a #12 screen to remove the hairs and awns from the seed heads. Seeds may then be separated from the chaff using a clipper air screen seed cleaner with a #9 top screen and a 45x45 bottom screen. (Garner et. al., 2002).

Availability

Breeder and/or foundation seed will be maintained at the Los Lunas New Mexico Plant Materials Center. Seed will be distributed to interested, certified growers through New Mexico State Seed Certification.

For more information, contact:
Los Lunas Plant Materials Center
1036 Miller Road SW
Los Lunas, NM 87031
Tele: 505-865-4684
FAX: 505-865-5163

<http://plant-materials.nrcs.usda.gov/nmpmc/>

Citation

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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 Website <http://plants.usda.gov> or the Plant Materials Program Web site <http://www.plant-materials.nrcs.usda.gov>



This is a joint release between the USDA Natural Resources Conservation Service Los Lunas Plant Materials Center and New Mexico State University's Los Lunas Agricultural Science Center.

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