

## Description

Ghost Rider Germplasm purple bluestem, also known by the synonym *Andropogon glaucopsis* Ell., is a native, warm season, perennial bunch grass. It is related to bushy bluestem *A. glomeratus* (Walt.) B.S.P., but can be distinguished by the chalky, glaucous covering on the foliage. The plant reaches 3 to 4.5 feet at maturity. The dense inflorescence is partially enclosed in a purplish sheath. The fluffy seeds are hairy and have a long straight awn. Ghost Rider was released by the USDA, NRCS Plant Materials Program. It is a composite germplasm, created by allowing the natural cross-pollination of ten accessions of purple bluestem collected from various locations in Florida. At Brooksville, seed heads are generally produced in October and November.

## Adaptation and Uses

Ghost Rider Germplasm is well adapted for use in appropriate sites throughout Florida. Although the native range of this species extends to several additional states in the Southeast and Mid-Atlantic region, it has not been tested outside Florida. Appropriate sites include mesic to somewhat hydric areas such as flatwoods to hydric flatwoods, wet to dry prairies, and the margins of freshwater ponds. It will not survive on droughty, upland sites without supplemental irrigation. It is especially well adapted to planting on heavier soil types. Ghost Rider Germplasm is recommended for use to provide wildlife habitat, species diversity, and forage on reclaimed mined land and other critically eroding areas, pastures, and restored rangelands.



**Harvesting Ghost Rider Germplasm with a Woodward Flail-Vac seed stripper**



**Ghost Rider Germplasm production field**

## Establishment (Seed Production):

The planting site should be cultivated or treated with herbicides for one or two years prior to planting to obtain a clean, weed-free seed bed. In Florida, production fields can be planted year round if irrigation is available. Non-irrigated fields are best planted in January or August. The recommended planting method is to use a drill with a fluffy seed box in 24 to 48 inch rows. If a drill is not available, seeds can be broadcast; however, maintenance of production fields will be more difficult if plants are not growing in rows. Recommended planting rates are 0.25 to 1 PLS lb/acre(drill), depending on row spacing, or 2 to 3 PLS lb/ac (broadcast). If debearded seed is available, planting rates can be reduced by 25 percent.

## Establishment (Conservation Use):

The planting site should be free of invasive or noxious weeds. Closely mowing or burning prior to planting will reduce competition from existing vegetation and allow seeds to reach the soil surface. Most sites will be broadcast planted; however, a no-till drill with a fluffy seed box can be used if available. Grazing should be deferred until the plants become established.

## Stand Management:

Seed production stands should be fertilized according to soil test recommendations. Nitrogen fertilization is not recommended at planting; but other nutrients should be applied if soil testing indicates they are deficient.

Following establishment, 30 to 50 pounds per acre of nitrogen can be applied in the spring on nitrogen deficient soils. Ghost Rider Germplasm plants are tolerant of fire, but they do not respond well to annual burning; mowing to a 4 to 8 inch stubble height is recommended to remove dead tissue in the spring.

### Seed Harvesting/Processing:

Seed matures from November to early December. The seeds will cling to the plant for several weeks, barring high winds. Seeds should be harvested by stripping during the warmest, driest time of day. Use of a Woodward Flail-Vac seed stripper or similar machine is recommended and will allow multiple harvests as the seeds mature. Research at the Brooksville Plant Materials Center has shown the brush speed should be 800 to 900 rpm if a single harvest is planned or 400 to 600 rpm if the field will be harvested multiple times. The seed lot can be air dried for 5 to 10 days or it can be run through an air-screen cleaner while still damp to remove (scalp) the large residue using recommended settings.

### Availability:

Ghost Rider Germplasm was released in 2006. Breeder and foundation quality seed (generations 0 and 1, respectively) are being maintained at the Brooksville Plant Materials Center. Seed may be obtained by contacting the Florida Plant Materials Specialist.

### For More Information:

Brooksville Plant Materials Center  
14119 Broad Street  
Brooksville, Florida 34601  
Phone 352-796-9600

<http://plant-materials.nrcs.usda.gov/flpmc>  
<http://www.fl.nrcs.usda.gov/programs/pmc/flplantmaterials.html>

or

Plant Materials Specialist  
P.O. Box 141510  
Gainesville, Florida 32614-1510  
352-338-9544

or

Any USDA Natural Resources Conservation Service Office

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Brooksville, FL October 2007



## Ghost Rider Germplasm

### Purple Bluestem

*Andropogon glomeratus* (Walt.) B.S.P.  
*var. glaucopsis* (Ell.) C. Mohr.



**Brooksville  
Plant Materials Center,  
Florida**