

PLANTING GUIDE

GHOST RIDER GERMPLASM PURPLE BLUESTEM

Andropogon glomeratus var. *glaucopsis*; syn. *Andropogon glaucopsis*

Release Information: Ghost Rider is a composite of ten accessions of purple bluestem collected in Florida.

Description: Ghost Rider purple bluestem is a native, warm-season, perennial bunch grass. It is related to bushy bluestem (*A. glomeratus*), but can be distinguished by the chalky, glaucous covering on the foliage. The dense inflorescence is partially enclosed in a purplish sheath. The fluffy seeds are hairy and have a long straight awn.



Conservation Use: Ghost Rider purple bluestem can be used for soil stabilization in moist soil areas. It produces highly palatable forage, although it requires careful management in a planned grazing system because it is susceptible to being “grazed out”. It also provides excellent habitat for wildlife.

Adaptation: Ghost Rider is well adapted for use in appropriate sites throughout Florida. Although the native range of this species includes Florida and several additional states in the Southeast and Mid-Atlantic region, it has not been tested outside the state. 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.

Establishment (Seed Production): The planting site should be cultivated or treated with herbicides for one to 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 the plants are not growing in rows. Using debarbed seed (with the awns removed) will simplify the planting process, but debarbed seed is not always available.

Row Spacing (in.)	Planting Rate (Non-debarbed)	Planting Rate (Debarbed)
	lb/ac PLS	lb/ac PLS
24	0.5	0.38
36	0.33	0.25
48	0.25	0.19

Proper calibration of the drill is important to ensure seed is planted at the appropriate rate. Seeds should be drilled no deeper than ¼-inch deep. Broadcast seed at 2 to 3 pounds PLS per acre. Prior to broadcast planting, the soil should be lightly disked and cultipacked. Following drilling or broadcasting, the field should be cultipacked or rolled to ensure good seed to soil contact. Fields can be irrigated weekly during those times when sufficient rainfall is lacking; however, fields should not be irrigated when plants are pollinating or during final seed set.

Establishment (Conservation Use): Use herbicides to control/limit growth of existing vegetation. It is essential to control any perennial weeds that are difficult to control with

herbicides prior to planting because control options will be limited once the Ghost Rider plants become established. Sites should be planted in the spring, prior to initiation of the summer rainy season. Establishment success will be better on a clean-tilled site, but this amount of soil disturbance will not be feasible in all situations. In most cases, seeds will be broadcast on the planting site; however, use of a no-till drill with a fluffy seed box will improve success in areas where the soil has not been disturbed. Plant at a rate of 1 to 2 pounds PLS per acre (non-debearded) and 0.75 to 1.5 pounds PLS per acre (debearded). If the planting site is to be grazed, grazing will need to be deferred for at least one year until the plants become well established. Once established, the stands will need to be rotationally grazed, removing the animals when the forage is at a 4- to 6-inch stubble height, to prevent damage to the stand.

Stand Management: Seed production stands should be fertilized according to soil test recommendations. Nitrogen fertilization is not recommended at planting; however, other nutrients can be applied if 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 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. For thick stands, excess residue may need to be removed from the field to prevent smothering the plants. Preliminary testing indicates that the plants are tolerant of 2,4-D applications to control broadleaf weed growth in production fields. Other herbicide options are limited. No serious insect and pathogen problems have been noted for this species. Supplemental irrigation may be required during periods of drought or in areas where the soil does not have a high water-holding capacity.

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 the day. 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 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 the recommended settings listed below.

Operation	Top Screen	Bottom Screen	Air
Scalping	32 round hole	None	Closed
	Speed (rpm)	Time (min.)	
Debearding (for drilling)	300	60	
	Screen	Speed (rpm)	
Hammer Milling	1-8 round hole	60	
	Top Screen	Bottom Screen	Air
First Cleaning	1/16 x 1/12 slotted	1/18 x 1/4 slotted	Closed
Final Cleaning	6 x 34 wire	50 x 50 wire	Closed

Additional Information: Contact the USDA-NRCS Brooksville Plant Materials Center, 14119 Broad Street, Brooksville, FL 34601 (352) 796-9600, FAX (352) 799-7305.

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