

PLANTING GUIDE

FORT COOPER GERMPLASM SPLITBEARD BLUESTEM

Andropogon ternarius

Release Information: Ft. Cooper Germplasm is a source-identified release collected as seed in Ft. Cooper State Park, Citrus County, Florida.

Description: Ft. Cooper Germplasm splitbeard bluestem is a native, warm-season, upright, perennial bunch grass. It has paired racemes with white, hairy spikelets on slender culms that are 1- to 3-feet tall. The narrow leaves are often hairy and generally purplish in color. It can be distinguished from other related bluestems by its white spikelets and the fringe of white hairs that remain at the base of the inflorescence after the seeds disperse. Its seed germinates in fairly high numbers and seedlings establish readily.



Conservation Use: Ft. Cooper has great potential as a nurse crop to control erosion and aid establishment of slower-growing native species on coarse soils. Areas in which it can be used include reclaimed minelands, timber harvest areas, and other severely disturbed sites. Livestock will graze splitbeard bluestem plants in the spring, but this species is not considered to be an important source of forage on native Florida rangelands. It provides little food value for wildlife; however, it is considered to have excellent growth characteristics to serve as cover and nesting sites for species such as Northern Bobwhite Quail (*Colinus virginianus*). Its silvery seedheads are quite attractive and can be cut and used in flower arrangements.

Adaptation: Ft. Cooper has undergone limited testing, so its range of adaptation is not fully known. It was collected from a Florida population and is probably adapted for use throughout most of the state on appropriate sites. Future testing may determine if Ft. Cooper is adapted for use in adjacent states. Splitbeard bluestem is generally found growing on dry, upland soils. Ft. Cooper can also be planted on well-drained medium-textured soils and plant size will often be larger under these less adverse growing conditions.

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 seedbed. In Florida, production fields can be planted year round if irrigation is available. Non-irrigated fields are best planted in January or August. Using a drill with a fluffy seed box and planting in 24- to 48-inch rows is recommended.

Row Spacing (in.)	Planting Rate (Non-debearded)	Planting Rate (Debearded)	Planting Rate (Dehulled)
	lb/ac PLS	lb/ac PLS	lb/ac PLS
24	3.0	2.0	1.9
36	2.0	1.3	1.3
48	1.5	1.0	0.9

Using debearded seed (with the awns removed) will allow seed to pass more easily through a planter, but may not be as readily available as non-debearded seed. The PMC has also used a hammermill to dehull the seed to the bare caroyopsis. This treatment greatly improved initial germination rates; however, the effect of this treatment on long-term viability of the seed has not been determined. Proper calibration of the drill is important to ensure that seed is planted at the appropriate rate. Seed should be drilled to a ¼-

to ½-inch depth. If a drill is not available, seed can be broadcast; however, maintenance of production fields is more difficult when plants are not growing in rows. Prior to broadcast planting, the soil should be lightly disked and cultipacked. Seed should be broadcast at 6 pounds PLS per acre. Following drilling or broadcasting, the field should be cultipacked or rolled to ensure good seed to soil contact.

Establishment (Conservation Use): Herbicides should be used to control existing vegetation, especially perennial weeds, which will be difficult to control once the Ft. Cooper plants become established. Sites should be planted prior to the rainy season (spring to early summer). Establishment success will be better on a clean-tilled site, but may not be feasible in many 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 3 to 6 pounds PLS per acre (non-debearded) or 2 to 4 pounds PLS per acre (debearded). Grazing will need to be deferred for at least one year until the plants become well established. Once established, the stands should 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. Excess nitrogen will encourage lodging and may reduce stand persistence. Ft. Cooper plants are tolerant of fire, but annual burning can damage the stand. Stands should be mowed to a 4- to 8-inch-stubble height is recommended to remove dead tissue in the spring in years when the plants are not burned. Production fields can probably be treated with broadleaf herbicides, such as 2, 4-D; however, other herbicide options are limited. No serious insect and pathogen problems have been noted for this species.

Seed Harvesting/Processing: Seed matures from November to early December. The seed will cling to the plant for several weeks, barring high winds, and multiple harvests can be made. Seed should be harvested by stripping during the warmest, driest time of the day. A seed stripper, such as a Woodward Flail-Vac is recommended and the brush speed should be 400 to 600 rpm. Higher brush speeds cause excess stem material to be pulled into the machine. The seed should be air-dried for 5 to 10 days and then run through an air-screen cleaner. Clean seed averages 200,000 seed/lb for non-debearded, 350,000 seed/lb for debearded, and 360,000 seed/lb for dehulled.

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 (dehulling)	1-8 round hole	60	
	Top Screen	Bottom Screen	Air
First Cleaning	6 x 22 wire mesh	50 x 50 wire mesh	Closed
Second Cleaning	1/16 round wire	50 x 50 wire mesh	Closed
Third Cleaning (if needed)	1/16 x 1/2 slotted	50 x 50 wire mesh	Closed

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

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.