

## Description:

Gulf hairawn muhly or sweetgrass (*Muhlenbergia sericea*) is a clump-forming perennial grass that is native to the southern Atlantic and Gulf coasts. It has narrow, involute (rolled) leaves that can grow to almost 4-feet tall. The purplish flowers are held in an open, diffuse panicle-type seedhead (below).



Another species, hairawn muhlygrass (*Muhlenbergia capillaris*) is very similar in appearance to sweetgrass, but it does not grow on the dunes. In fact, sweetgrass was once considered to be a variety of *M. capillaris*, although it is now considered to be a separate species. Besides habitat, characteristics used to distinguish between the two species occur in the spikelets. The awns (hairs) on the lemmas are shorter (2-18 mm vs. 8-35 mm) and the awns on the upper glumes are either absent or very short (1-5 mm vs. 2-25 mm) for *M. capillaris* compared to sweetgrass. Sweetgrass also has two long (1-5 mm) setaceous teeth (bristles), one located on each side of the awn, whereas *M. capillaris* usually has no setaceous teeth on the lemma or they are less than 1-mm long.

Sea Islands Germplasm is derived from sweetgrass seed collected in the 1990s by Dr. Robert Dufault of Clemson University, on the beach front on Kiawah Island, SC, and Little St. Simons Island, GA, and was cultivated at the Clemson Coastal Res. and Ed. Center in Charleston, SC. Seed and plants of this material were given to the PMC for accessioning at the request of Tommy Socha, U.S. Army Corps of Engineers, Charleston District. The accession number assigned to it was 9060701.

## Adaptation and Uses:

Sweetgrass is found in coastal dune land and at the margins of the marsh and woods from North Carolina south to Florida and west to Texas. In dune areas, it generally occurs on back dune sites. It is the main component used for African-coiled basketry in the Southeast, particularly by the Gullah/Geechee community around Mt. Pleasant and Charleston, SC. The common name "sweetgrass" is derived from the fresh, corn silk fragrance of the leaves or "threads". It is being recommended by the Corps of Engineers for use in coastal restoration plantings in South Carolina to reduce erosion and to reestablish populations that have been depleted by development and damage from hurricanes and tropical storms. Sea Islands Germplasm can probably be planted in other areas throughout its native range although it has not been widely tested.

## Propagation:

Seed germinates readily without treatment. Seed should be sown on the surface or only lightly covered with potting soil. Sweetgrass flowers from mid-September to late October and seed can be collected from existing plants between Thanksgiving and Christmas. It is

important that the seed is totally mature before harvesting; seed needs to age on the plant. Sea Islands Germplasm can also be propagated by division. If divisions are used, it is important to not divide the clump into sections that are less than ½ inch in diameter, because survival of smaller sections will be poor. Shoots should be trimmed before dividing so that the clumps are easier to handle. Regardless of the propagation method, a tray with large, cone-like deep plugs (i.e., 1-inch diameter by 6-inch deep plugs such as those shown in the picture below) should be used for this grass. The growing medium should allow for ample drainage and should be kept moist, but not wet, to aid root growth of this coastal species. Seedlings/divisions will require fertilization throughout the nursery production period and can be fertilized with a low to medium rate of either slow release fertilizer or a liquid fertilizer solution.



## Establishment:

Planting sites should be chosen that mimic the natural sites in which sweetgrass would be found in nature. Therefore, it should be planted on back dune areas, not on the fore dunes, where plants will be exposed to more sand movement and salt spray. Any necessary reshaping or other mechanical operations should be completed before the planting is installed.

A 3- by 3-foot or 4- by 4-foot spacing mimics its natural spacing. Crowns should be set about 2 inches below the soil surface. A slow-release fertilizer and/or a hydrophilic polymer gel can be placed in the planting hole. In inland cultivation, irrigate the plants weekly. For additional information on planting techniques, refer to the publication “Native Plants for Coastal Dune Restoration: What, When and How for Florida”, located at <http://www.plant-materials.nrcs.usda.gov/pubs/flpmstu7474.pdf>.

### Management:

Established plants should require little additional fertilizer or pesticide applications. Plants planted on beaches do not need renovation. If plants in landscape settings need to be renovated, the optimum cutting height to maintain plant health and clear out dead leaves is about 6 to 8 inches above the ground surface. Mowing closer destroys superficial growing points and weakens the plant. Renovation cutting should be done while the plant is dormant prior to the onset of rapid spring growth and is usually done in January in the Charleston area. Sweetgrass should never be burned during renovation.

### Availability:

Generation 0 (breeder) planting stock is being maintained at the Brooksville Plant Materials Center and is available for distribution to interested commercial producers. Plants 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 Center Office

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Brooksville, FL June 2009



## Sea Islands Germplasm

### Sweetgrass or Gulf Hairawn Muhly

*Muhlenbergia sericea (Michx.)  
P.M. Peterson*



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Plant Materials Center,  
Florida