

'Gulf Coast'

Marshhay cordgrass

Spartina patens (Ait.) Muhl.



Figure 1. 'Gulf Coast' marshhay cordgrass foundation field at the Golden Meadow Plant Materials Center

'Gulf Coast' marshhay cordgrass (*Spartina patens*) is cultivar of marshhay cordgrass [*Spartina patens* (Ait.) Muhl.] released by the USDA, Natural Resources Conservation Service (NRCS), Golden Meadow Plant Materials Center in 2003.

Description

'Gulf Coast' marshhay cordgrass is a native, warm season, strongly rhizomatous, perennial grass that grows to 4 feet in height. The slender stems are erect and stiff (wire like) with narrow linear leaves that average 0.16 inches in width, are involute (rolled inward) and sometimes flat. Leaf blades are shiny, dark green on the upper surface and rough with prominent veins on the lower surface. Leaf tips are tapered to a sharp point. Long slender rhizomes extend in straight lines

often forming aboveground mats of stems. The inflorescence is an open panicle with 2-6 spikes with short or sessile pedicels that open from the central axis (Godfrey and Wooten, 1979). Marshhay cordgrass is found growing in saline to brackish marshes, sandy beaches and low dunes, tidal flats and marsh ridges. It is most abundant in Louisiana's brackish marshes. Plant detritus from this species is important for soil building and to aquatic food chains.

Source

'Gulf Coast' marshhay cordgrass was originally collected in 1991 and vegetative plant stock was taken from an area located in Cameron Parish, Louisiana (MLRA 151). The collection was assigned and tested under the accession number 9067787 and released in 2003 by the Golden Meadow PMC located in Galliano, Louisiana. 'Gulf Coast' marshhay cordgrass is a performance proven plant material that is needed for use in Louisiana's coastal restoration program. 'Gulf Coast' marshhay cordgrass has proven superiority to other Louisiana and Texas ecotypes assembled and tested. It has also demonstrated early response and vigorous re-growth after 50 days of inundation from floodwaters caused by Hurricane Andrew. This plant material has also proven superior in field evaluation plantings to the commercially available cultivars 'Flageo' and 'Sharp' marshhay cordgrass.

Conservation Uses

Erosion control: 'Gulf Coast' marshhay cordgrass is recommended for conservation planting in coastal areas of the north central Gulf of Mexico basin. 'Gulf Coast' marshhay cordgrass can be successfully planted in brackish and salt marshes, marsh ridges, coastal beaches, barrier islands and restored marsh where dedicated sediments are used. 'Gulf Coast' marshhay cordgrass has proven effective for marsh restoration, shoreline and levee stabilization, and coastal beach and barrier island sand dune enhancement and stabilization.

Area of Adaptation and Use

'Gulf Coast' marshhay cordgrass can be established in saline to brackish marshes, sandy beaches and low dunes, tidal flats and marsh ridges from normal high tide to about 13 feet above sea level. 'Gulf Coast' marshhay cordgrass is adapted to a wide range of soils from coarse sands to silty clay sediments with pH levels ranging from 3.7 to 7.9. 'Gulf Coast' marshhay cordgrass will tolerate irregular inundations with 0 to 35 parts per thousand salinity. 'Gulf Coast' marshhay cordgrass is found to be adapted to the coastal areas of Louisiana, Mississippi and Texas.

Establishment and Management for Conservation Plantings

Due to sparse seed production, 'Gulf Coast' marshhay cordgrass is usually propagated by vegetative stem divisions. Depending on the energy effecting the planting site, either containerized (high impact sites) or bare root (mild impact sites) plants can be utilized. Bare root material should contain 3 to 5 stems per planting unit, while containers should have at least 5 to 8 healthy stems. Bare root plugs are generally limited to planting sites that are exposed to little or no wave energy. Since most marsh sites are irregular and difficult to access, hand planting is normally performed, using spades, dibbles or planting bars. If site conditions are ideal, planting can be carried out with a mechanical tractor drawn transplanter. Plant spacing should be between 18 and 36 inches; up to 2 feet of lateral spread can be expected annually.

In nursery rows, 'Gulf Coast' marshhay cordgrass should be spaced 6 to 12 inches apart. Under ideal nursery conditions, each planting unit should be able to yield up to 50 stems in a single growing season. Effective weed control is essential for producing quality plants.

Ecological Considerations

'Gulf Coast' marshhay cordgrass is selected and propagated from naturally occurring stock that has not been altered from the original collection. It does not meet the assessment requirements of a plant which could become invasive based on guidelines adopted by the USDA-NRCS Plant Materials Program.

Seed and Plant Production

'Gulf Coast' marshhay cordgrass can be established successfully by using container grown plants propagated from vegetative propagules. Several container sizes can be used to grow marshhay cordgrass commercially. The most widely used container is the trade-gallon (3/4 gallon). Trade-gallon containers have a higher per unit cost compared to smaller containers. Smaller containerized (e.g. 4 inch containers and cone pots) are the easiest type of containers to grow and transport marshhay cordgrass.

Bare-root plugs are the most economical of commercially available plant materials. Per unit production, and transportation costs are considerably lower compared to container grown plants. Bare root plugs are generally limited to planting sites that are exposed to little or no wave energy. Container grown plants are generally more reliable in successfully establishing stands of marshhay cordgrass. Bare-root plugs are highly successful when used on appropriate sites.

Availability

'Gulf Coast' marshhay cordgrass is available through commercial wetland plant growers. 'Gulf Coast' marshhay cordgrass is a clonal release and must be propagated by vegetative means. Foundation planting stock of 'Gulf Coast' marshhay cordgrass is available for commercial nursery production from the USDA, Natural Resources Conservation Service, Golden Meadow Plant Materials Center. 'Gulf Coast' marshhay cordgrass seed is not available commercially. Seed are not to be used for plant increase or establishment of this cultivar.

For more information, contact:

Golden Meadow Plant Materials Center

438 Airport Road, Galliano, LA 70354

Phone: 985.475.5280

Fax: 1.844.325.6941

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/plantmaterials/pmc/southeast/lapmc/>



Citation

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Godfrey, R.K. and Wooten, J.W. 1979. Aquatic and Wetland Plants of the United States, Monocotyledons. The University of Georgia Press. Athens, Georgia

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

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