

Propagation & Establishment

Smooth cordgrass is a poor seed producer. Plants will produce a significant number of seeds, though many seeds are sterile, empty, or damaged by predation. For planting purposes, two forms of vegetative plant materials are commonly used - containerized and bare-root plugs.

Smooth cordgrass can be produced in a number of container sizes. The most widely used container is the trade-gallon (3/4 gallon or 3 quart pot). Plants grown in trade gallon containers have proven highly successful when transplanted and established along shorelines and other areas of high wave energy. Smaller containerized propagules can be used in sites with low wave energy. Containers 2.5 x 7 inches and 4 x 5 inches have been used successfully.

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. Plugs typically consists of 3 stems, 12 to 18 inches in height with stems attached to the rootmass. The rootmass should be at least 2 inches in diameter at the root crown and 6 inches in length.

Container grown plants are generally more reliable in successfully establishing stands of smooth cordgrass. Bare-root plugs are highly successful if used on appropriate sites.



Availability

For more information on availability and use of 'Vermilion' smooth cordgrass, contact the Natural Resources Conservation Service, Golden Meadow Plant Materials Center at the address, phone number, or web sites provided below.

Golden Meadow Plant Materials Center
438 Airport Rd
Galliano, LA 70354
(ph) 985-475-5280
(fax) 985-475-6545



Visit our web sites at:

<http://www.la.nrcs.usda.gov>

<http://plant-materials.nrcs.usda.gov>

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'Vermilion'

Smooth Cordgrass

(*Spartina alterniflora*)



USDA NRCS
Natural Resources Conservation Service

*Golden Meadow
Plant Materials Center
Galliano, Louisiana*

'Vermilion' Smooth Cordgrass

'Vermilion' smooth cordgrass (*Spartina alterniflora* Loisel.) is an important plant in maintaining the stability of brackish to saline marshes. Vermilion is recommended for shoreline erosion control and stabilization of canal banks, levees, and other soil-water interfaces. Vermilion is also an effective soil stabilizer used on interior tidal mudflats, dredge fill sites, and other areas of loose and unconsolidated soils associated with marsh restoration.

When established along shorelines, Vermilion smooth cordgrass provides an effective buffer that dissipates energy, reduces shoreline scouring, and traps suspended sediments and other solids. Dense stands of Vermilion are efficient users of available nutrients, producing significant amounts of organic matter.

Vermilion smooth cordgrass is a sustainable and renewable restoration resource. When properly established in the appropriate habitat, Vermilion will persist and provided an important conservation tool for coastal restoration and preservation.



Description

Smooth cordgrass is a herbaceous, native, warm-season, perennial grass that forms dense colonies along shorelines and intertidal flats in coastal wetlands. Vermilion is a robust and vigorously spreading plant that tolerates diurnal tidal inundation and relatively high salinity. Vermilion spreads primarily by vegetative propagation, producing new above ground biomass from an extensive underground system of rhizomes. 'Vermilion' grows to a height of 24 to 72 inches. Stem height is variable but uniform within stands. Leaves are $\frac{1}{4}$ to $\frac{1}{2}$ inches wide tapering to a length of 15 inches. The inflorescence is a tightly compressed panicle with sessile spikelets.

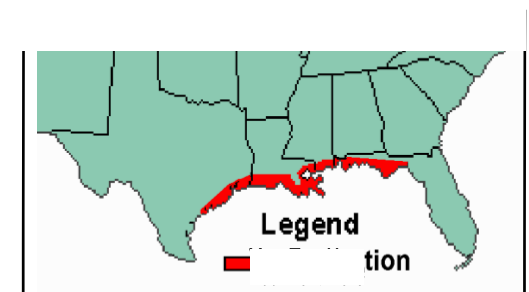


Adaptation

Vermilion smooth cordgrass is an intertidal brackish/saline marsh grass. It is described as a facultative halophyte, i.e., it will tolerate salinity, but salt is not required for its growth. The salinity range for establishing and growing Vermilion is 8 to 33 parts per thousand (ppt). Vermilion can be established and will persist in areas of elevated salinity such as salt-flats and tidal lagoons, but plants in these habitats tend to be short of stature and less robust, often resulting in thinner, open stands. Optimum water depths for establishing and growing Vermilion is 1 to 18 inches. Plantings in deeper water levels have been successful, but plants are slow to anchor and vegetative cover is sparse. Such plantings are more prone to washout and minimal shoreline protection is achieved.

Vermilion is adapted to a wide range of soils, from coarse sands to clays and mucks. Plant performance and productivity is best on heavier mineral soils such as mucky clays, silty clays, silty clay loams, and fine sands. Establishing stands of Vermilion in soils with high levels of organic matter is difficult.

The native distribution of smooth cordgrass is on coastal intertidal areas of the Atlantic coast and the Gulf of Mexico. Vermilion smooth cordgrass has proven performance throughout the north central Gulf of Mexico basin. Plantings have been successful from the panhandle of Florida to Kingsville, Texas.



Known range of adaptation of 'Vermilion'