The Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture announces the naming and release of a vegetative propagated selected class of gulf cordgrass \([\text{Spartina spartinae} \text{ (Trin.) Merr. ex A.S. Hitchc.}]\). This selected class release is referred to as West Bay Germplasm gulf cordgrass.

West Bay Germplasm gulf cordgrass originated from Brazoria County, Texas. It was chosen from an assembly of sixty-five gulf cordgrass accessions collected from sites in Texas and Louisiana and released as a vegetative propagated selected class pre-varietal germplasm. West Bay Germplasm was assigned NRCS accession number 9068195. This alternate release procedure is justified because there are currently no commercial sources of gulf cordgrass for the Gulf Coast Marsh, Gulf Coast Prairies and Gulf Coast Saline Prairies (Major Land Resource Areas (MLRA) 151 and 150A and 150B).

**Collection Site Information:** USDA NRCS personnel made vegetative collections of gulf cordgrass in the 1980s and early 1990s for coastal stabilization and restoration projects along the gulf coast. Collection areas included MLRA 151, 150A and 150B. Average annual rainfall ranges from 28 to 63 in. (0.71-1.60 m) for MLRA 150A; 26 to 57 in. (0.66-1.45 m) for MLRA 150B; and 49 to 60 in. (1.24-1.52 m) in MLRA 151. The average freeze-free days vary from 325 to 340 days (USDA NRCS, 2006).

**Description:** West Bay Germplasm is a native, perennial grass that grows in dense clumps. Leaves are long and slender and have a spine-like tip. The inflorescence is a long, slender panicle with tight, erect spikes (Chabreck and Condrey, 1997). West Bay Germplasm stems reach heights of ~ 30 to 50 in. (0.76 - 1.27 m) tall. Leaf blades are narrow, strongly involute, narrowed to hard sharp tips. Spikes of 10 or more grow from the central axis but very closely appressed and overlapping, forming a compact cylindrical to fusiform inflorescence ~ 6 to 7 in. (15-18 cm) long. Spikelets are 0.39 to 0.79 in. (10 - 20 mm). The botanical description of West Bay Germplasm gulf cordgrass fits within the taxonomic description of gulf cordgrass described by Dr. Jonathan Willis, Assistant Professor, Department of Biological Sciences, Nicholls State University, Thibodaux, LA.

**Conservation Use:** West Bay Germplasm is recommended in the Gulf Coast Marsh (MLRA 151), Gulf Coast Prairies (MLRA 150A) and Gulf Coast Saline Prairies (MLRA 150B) for NRCS conservation practices such as conservation cover (327), critical area planting (342) and wildlife habitat planting (420).

**Method of Selection:** Sixty-five, vegetative gulf cordgrass collections were assembled from MLRAs 151, 150A and 150B in southeastern Texas and southwestern Louisiana and transplanted in an observational nursery at the Golden Meadow Plant Materials Center, Galliano, LA in 1987 where they were evaluated for environmental, biological and physiological plant criteria. These evaluation factors included resistance to heat and cold, drought, insect, and disease. Vegetative growth factors included plant vigor, basal spread, stem height, maturity and seed production. Thirty accessions were selected from seed that germinated from the original sixty-five accessions and individually grown out in an observational nursery. New accession numbers were assigned to the thirty accessions for further field evaluations in comparative seed germination trials. Percent germination of West Bay Germplasm was significantly higher \((P<0.05)\) than the average germination of the other thirty accessions when compared to seed age (Fig.1.). Percent germination of West Bay Germplasm averaged 19 to 24 percent compared to the average germination of 5 to 8 percent of other...
accessions tested. Active germination was the key reason for choosing West Bay Germplasm for release as this adds potential for seedling recruitment in coastal ecosystems planted to West Bay Germplasm.

Ecological Considerations and Evaluation: An Environmental Evaluation of Plant Materials Releases was completed using guidelines established by the NRCS National Plant Materials Program (USDA NRCS, 2010), and the best available information for this species. Results from this evaluation determined West Bay Germplasm was suitable for release based on criteria contained in this document. Gulf cordgrass is a naturally occurring species throughout the Gulf South and the release of West Bay Germplasm for public use would not constitute introduction of a foreign species to local ecosystems. West Bay Germplasm was selected from native stands of gulf cordgrass and has had no genetic modification. It is believed that any negative impact to other native species would be minimal to nonexistent.

Area of Adaptation: West Bay Germplasm is recommended for use in coastal areas of the north central Gulf of Mexico basin, as it performed well in field and demonstration plantings on soils ranging from coarse sands to clays, mucks, and aquent mixes and tolerated fluctuating water levels. Original collection locations in MLRA 151, 150A and 150B define the areas of anticipated use, but additional field plantings are needed to verify its full range of adaptation.

Availability of Plant Materials: West Bay Germplasm material is maintained by the USDA NRCS Golden Meadow Plant Materials Center, Galliano, Louisiana. To ensure the availability and genetic integrity of West Bay Germplasm gulf cordgrass, the Plant Materials Center will provide Breeder or Foundation vegetative material through the USDA-NRCS Seed and Plant Transfer Agreement to commercial growers for the establishment of production fields for large-scale increase.

References:

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Signatures for the release of: West Bay Germplasm gulf cordgrass

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Richard “Chad” Kacir
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