# NATIVE PLANT SOLUTIONS FOR COASTAL RESTORATION ALONG THE GULF COAST

***Garret Thomassie*** *, Curt J. Riche'* and *Daniel Pingel* USDA-NRCS Golden Meadow Plant Materials Center

*Spartina alterniflora* - smooth cordgrass

- Used primarily for erosion control along shorelines, canal banks, levees, and other areas of soil-water interface
- An effective soil stabilizer used on interior tidal mudflats, dredge-fill sites, and other areas of loose and unconsolidated soils associated with marsh restoration
- Provides an effective buffer that dissipates energy, reduces shoreline scouring, and traps suspended sediments and other solids

*Uniola paniculata* - seaoats

- Recommended for conservation plantings used for dune building, dune enhancement and sand stabilization on coastal beaches and barrier islands
- Tolerates salt spray, short inundation of saltwater from storm surges, strong winds, xeric soil conditions, and rapid sand accretion
- Excellent pioneering species because of its ability to rapidly establish and colonize on fore-dunes and dune crests
- Exceptionally tolerant of harsh conditions associated with coastal beach environments

*Avicennia germinans* - black mangrove

- Valuable in restoring brackish and saline marshes due to its ability to filter and trap sediments
- Important to coastal ecosystems by stabilizing soils with their extensive root systems
- Provides valuable habitat for brown pelicans and other shorebirds, and serves as nursery habitat for crustaceans and fish
- Contributing biomass to the detritus cycle
- Can persist in strongly saline habitats

*Panicum amarum* - bitter panicum

- Above ground portion of the plant reduces wind velocity causing sand to drop out of the wind stream and accumulate
- Shows greatest plant vigor where blowing sand accumulates around the plant
- Resilient to salt spray, occasional inundation, high temperatures, low soil moisture, low fertility, sand abrasion and smothering by drifting sands
- Exceptionally tolerant of harsh conditions associated with coastal beach environments

*Spartina patens* - marshhay cordgrass

- Effective for marsh restoration, shoreline and levee stabilization, and coastal beach and barrier island sand dune enhancement and stabilization
- Provides food and cover too many terrestrial and aquatic species of wildlife and is considered an important forage species to livestock producers along the Gulf Coast
- Grows in all marsh types but dominant in intermediate and brackish marshes
- Recommended for conservation plantings in coastal areas of the north central Gulf of Mexico basin

*Schizachyrium maritimum* - gulf bluestem

- Intended for use on coastal beaches and barrier islands of the north central Gulf of Mexico basin
- Excellent planting component to increase species diversity and back dune stabilization
- Provides habitat for small mammals, shore and migratory birds
- Found to naturally occur on coastal and offshore islands of the Florida panhandle west to Louisiana

*Paspalum vaginatum* - seashore paspalum

- Effective pioneering species used on shorelines, dunes, canal banks, mudflats, dredge materials, and other bare and transient soil deposits
- Inhabits brackish sand areas and saline areas along the Gulf Coast from Texas to Florida
- Spreads rapidly and can form dense stands within two growing seasons from planting
- Adapted to low-elevations at or slightly above normal water levels

*Distichlis spicata* – inland saltgrass

- Intended for use in saline areas, brackish marshes, and in salt flats along the coast of the Gulf of Mexico
- Excellent planting component to increase species diversity and back dune stabilization
- Provides nesting grounds for birds, fish and larvae of many species of marine invertebrate animals
- Exceptional mat forming root system that spreads rapidly by rhizomes and stolons

*Schoenoplectus californicus* - California bulrush

- Recommended for erosion control along freshwater shorelines, canal banks, levee banks, and other areas of soil-water interface
- Used in the creation and restoration of wetlands, to improve water quality, and reduce suspended sediments
- Provides habitat for mammals, birds and fish and promotes establishment zones for submerged aquatic plants

*Spartina spartinae* – gulf cordgrass

- Intended for use on coastal flats, slightly elevated intermediate to saline marshes, bay shores and coastal back beach marshes along the Gulf Coast from Texas to Florida
- Excellent for erosion control along shorelines, canal banks, levee banks, and to increase species diversity
- Provides habitat for nesting birds and wildlife cover for wetland margin species