



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

Southampton Germplasm Prairie Cordgrass

Spartina pectinata Bosc ex Link

A Conservation Plant Release by USDA NRCS Cape May Plant Materials Center, Cape May, NJ



Southampton Germplasm prairie cordgrass is a selected class conservation plant released in 2013.

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Description

Prairie cordgrass is a warm season, perennial grass reaching heights of 4 to 6 feet at maturity. The leaf blades are rough and 8 to 24 inches long. The leaf edges will roll inward along the central vein and may form a tube if conditions become dry. Prairie cordgrass has a flowering period from July to September. Seedheads are formed in late summer and are composed of 6 to 20 spikes attached to the main stem ranging from 1.5 to 2.5 inches in length. The spikes are comprised of up to 40 spikelets arranged in 2 rows on the outside of the spike. The seedhead of Prairie cordgrass resembles that of big cordgrass (*Spartina cynosuroides*), however can be differentiated by examining the angle of the spikes to the stem. The seedhead of the prairie cordgrass is somewhat appressed usually forming angles of 45 degrees or less while big

cordgrass is spreading with spikes at nearly right angles to the stem.

Prairie cordgrass primarily spreads by means of rhizomatous growth, up to 2 feet in a growing season. Under ideal growing conditions, prairie cordgrass may form nearly pure stands growing from dense mats of an intertwined rhizome system. The numerous and much branched rhizomes have a scaly appearance and feel. They produce numerous tillers and spikes to form new plants. Prairie cordgrass has been documented to have some degree of salt tolerance and is well adapted to brackish and fresh water marshes, along streams, lake edges, and wet meadows. It grows on a wide range of soil textures from sandy soils to fine clays to silt loams. Prairie cordgrass often grows in association with reed grasses (*Phragmites* spp.), sedges (*Carex* spp.), and switchgrass (*Panicum virgatum*).

Source

The original source material of Southampton Germplasm was collected by NRCS personnel from 3 sites in November of 1992 around the Mecox Bay area of Long Island, NY. Plants growing in association at the collection sites included American beachgrass (*Ammophila breviligulata*), saltmeadow cordgrass (*Spartina patens*), and common reed (*Phragmites australis*). Collections were made from stands occurring below the mean high tide line.

Southampton Germplasm was selected from a collection of 53 accessions assembled and evaluated at the Big Flats PMC from 1994 to 1997. Evaluations after 1 growing season evaluated plants for survival, vigor, height, and tiller number. Second year evaluations compared plants for percent survival, vigor, leaf height, disease resistance, spreading ability, seed head height, and flower abundance. One accession from Long Island displayed superior vigor, height, flower abundance, and spreading ability over most other accessions. This accession was included in a seed increase block with 2 other Long Island accessions at the Big Flats PMC in 1998. The resulting Southampton Germplasm was established at the Cape May PMC in 2009 for increased production and evaluation. Observations on survival and productivity were made from 2009-2012.

Conservation Uses

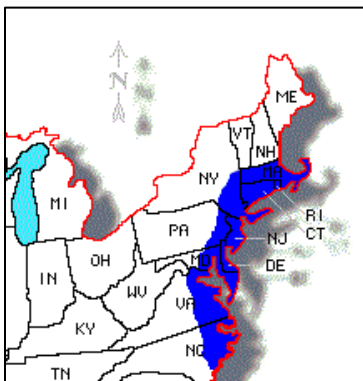
Prairie cordgrass has great potential for erosion control applications. Erosion on drainage channels, spillways, and streambanks can be prevented or minimized by a healthy stand of prairie cordgrass. Other potential uses are critical area treatment on hydric soils, wetland revegetation, and

shoreline stabilization. Additionally, prairie cordgrass competes with several nonnative, invasive species that occur in similar habitats. Prairie cordgrass also provides potential wildlife benefits. Stands provide nesting area for the marsh wren and habitat for the muskrat. The rootstocks, seed, and plants provide a food source for waterfowl, marshbirds, shorebirds, songbirds, and deer.

Prairie cordgrass also has biomass production and perennial haylage production applications. These applications may have the most benefit on marginal agricultural lands and salt affected soils. Ideal lands are seasonally waterlogged soils and areas where salt water intrusion is affecting traditional production.

Area of Adaptation and Use

Prairie cordgrass is native to and occurs in natural areas throughout most of the continental United States and Canada. Areas of suggested and potential use for Southampton Germplasm are the coastal regions of Southern New England to the Mid-Atlantic area. Inland waterways, marshes, and wetland areas are also potential sites for use.



Areas of suggested and potential use for Southampton Germplasm prairie cordgrass.

Establishment and Management for Conservation Plantings

Southampton Germplasm may be successfully established from vegetative material or seed. Site conditions must be considered to determine best establishment practices. Seeds germinate more readily and seedlings develop more rapidly in wet soils. Establishment with seed may be achieved by drilling or broadcasting. Seeding rates will vary due to site conditions and seeding methods. The general guideline is 7 lbs. PLS/acre for a pure stand or 0.25 to 1 lb. PLS/acre for a seeding mix. Recommended seeding depth is 0.5-0.75 inches. Vegetative plugs and rhizomes form the most successful establishments if planted in early spring. Planting depth should be 3 to 6 inches. Spacing will vary with site conditions and purpose of the planting. Unless extreme conditions exist, spacing

in row should be no less than 2 feet with staggered rows being planted 3-6 feet apart.

Ecological Considerations

Under ideal environmental conditions, prairie cordgrass grows rapidly and may form dense mats of pure stands as a result of vegetative spread. However, it is not considered a weedy or invasive species. It is a documented host of rust diseases (*Puccinea* spp.) but infections have not necessitated treatment for successful seed or vegetative production.

Seed and Plant Production

Southampton Germplasm produced 9.5 lbs. /acre of bulk seed the year of establishment at the Cape May PMC. The following years it produced 55.2 lbs. /acre when harvested by hand and 33.6 lbs. /acre when combined. Vegetative cuttings may be dug by hand or mechanically with an undercutter, disk, or plow 2-3 years after establishment. Cuttings should be taken when plants are dormant in early spring or late fall. Fall cuttings must be stored in cool moist conditions to prevent premature shoot development.

Availability

For conservation use: Seed and vegetative cutting availability is limited at this time. Commercial producers are being recruited.

For seed or plant increase: G1 foundation seed and vegetative cuttings are available from the Cape May PMC. Nurseries may establish their own plants for long term production.

For more information, contact:
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<http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/plantsanimals/plants/centers/?cid=stelprdb1086061>

Citation

Release brochure for Southampton Germplasm prairie cordgrass (*Spartina pectinata*). USDA-Natural Resources Conservation Service, Cape May Plant Materials Center. Cape May Court House, NJ 08210. Published August 2013.

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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