

'Atlantic'

Coastal Panicgrass

(Panicum amarum Ell. var. *amarulum*)

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



'Atlantic' coastal panicgrass (*Panicum amarum* Ell. var. *amarulum*) is a cultivar released in 1981. Photo by, USDA-NRCS.

Description

Coastal panicgrass is a 3 to 6 foot tall, native, warm-season perennial grass with robust ½ inch stems and 8 to 20 inch blue-green leaves. It is a fast-growing, deep-rooted, long-lived, multi-stemmed bunchgrass that spreads through short rhizomes and seed dispersal. It has a large, compact, terminal inflorescence that produces large quantities of viable seed. 'Atlantic' Germplasm was developed as a cultivar release because of its strong seedling vigor, uniform growth characteristics, and reliable seed production under cultivation. Other attributes such as leafiness, height, and culm size are typical of the species.

Source

'Atlantic' coastal panicgrass was evaluated and selected for release by the Cape May Plant Materials Center, NJ in 1981. The source material for this released cultivar was collected from Back Bay Wildlife Refuge in Virginia Beach, Virginia.

Conservation Uses

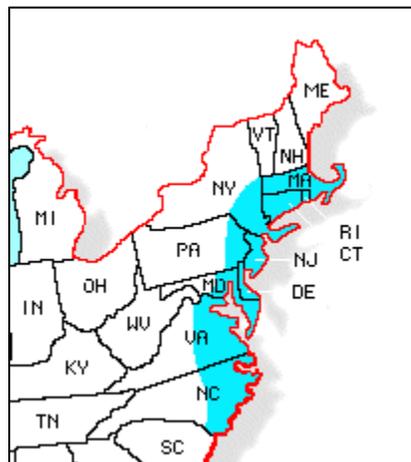
Coastal panicgrass plays an important role in stabilizing wind-blown sand and creating new dune systems in beach replenishment projects. It can also be used for critical area plantings in mine or gravel reclamation sites or in areas with hot, dry, or infertile soils. Because it a robust biomass producer with upright growth, it has also been used successfully as a windbreak. 'Atlantic' coastal

panicgrass is very resilient, has good salt-tolerance, and will remain standing through the winter; thus providing wind erosion protection and cover for wildlife. Its seed is eaten by doves and quails.

Coastal panicgrass provides fair palatable graze and protein content and can be used in grazing land improvement. A study by (Mehaffey et al., 2005) found a CP level of 140 g kg⁻¹; which is considered an adequate level for beef production.

Area of Adaptation and Use

'Atlantic' is best adapted to the mid-Atlantic Coastal Plain and the piedmont region from Massachusetts to Texas. It is recommended for use along the coast from Massachusetts south to North Carolina. It is winter-hardy in areas where the average low temperature is 10–0 degrees F. It grows successfully in southern Connecticut, but winterkills every three or four years in Cape Cod, Massachusetts. Locations further north and inland from Massachusetts are susceptible to winterkill.



Map of 'Atlantic' coastal panicgrass distribution.

Establishment and Management for Conservation Plantings

'Atlantic' coastal panicgrass seed can be produced on almost any well-drained, tillable soil. Sowing seed in soil that has been cultivated for a few years will reduce weed competition. Seed should be shown in early spring with a conventional row planter or a no-till drill with tape over every fourth seed port, using 6-8 lb seed/ac. In silty or medium-textured soils, plant seed ½ to 1 inch deep. In coarse-textured soils, plant seed up to 2 inches deep.

For shoreline planting, plant seeds or vegetative plugs in secondary dune systems; as large deposits of wind-blown sand in frontal dune systems tend to inhibit or terminate plant growth. PMC scientists, working in cooperation with the U.S. Army Corp of Engineers, have had some success seeding 'Atlantic' in a frontal dune system when planted with 'Cape' American beachgrass. There will be greater success in either dune system when seeded with associated dune plants.

Ecological Considerations

Coastal dune systems provide many economic and environmental benefits to the communities they protect. Coastal tourism creates jobs and generates billions of dollars for the economy; while coastal dunes absorb storm energies that would otherwise cause harm to life and property. These dunes provide needed habitat for many species of plants and animals—some of which are endangered and threatened. Coastal panicgrass plays a unique and important role in dune restoration, as there are few other plant species that have been successfully direct-seeded into dunes. There are no known allelopathic effects on other plants.

Seed and Plant Production

Plants will take at least two years to reach reproductive maturity. Open soil or disturbed soil is required for germination. Annual controlled burning can be used to stimulate seed production. 'Atlantic' can produce 300 lb of clean seed/ac. There are approximately 325,000 seeds per lb. Seed dispersal is limited to less than 20 ft and seed can remain viable in the soil for 4-5 years.

In a 4-year study, 'Atlantic' produced an average biomass yield of 12,183 lb/ac. Plants can regenerate from pieces of rhizomes left in the soil, or spread up to 3 ft per year through rhizomes. It will produce approximately 1 foot of top growth the first year when planted from seed into dunes.

Availability

'Atlantic' is the only cultivar grown for commercial distribution. Seed is available from many commercial nurseries. Foundation seed of this grass is available from the Cape May Plant Materials Center in New Jersey.

For more information, contact:

USDA-NRCS

Cape May Plant Materials Center

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

Citation

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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/>>

References

- Mehaffey, M.H., D.S. Fisher, and J.C. Burns. 2005. Photosynthesis and nutritive value in leaves of three warm-season grasses before and after defoliation. *Agron. J.* 97:755-759. <https://dl.sciencesocieties.org/publications/aj/abstracts/97/3/0755> (accessed 9 Jan. 2014).
- USDA-NRCS. 2006. Coastal panicgrass (*Panicum amarum*). USDA NRCS Plant Materials Program. <http://plants.usda.gov/core/profile?symbol=PAAMA2> (accessed 9 Jan. 2014).

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