



SEASHORE PASPALUM

Paspalum vaginatum Sw.

Plant Symbol = PAVA

Alternative Names

Common Names: Siltgrass, Sheathed Paspalum, Salt Jointgrass, Seaside Millet, Sand Knotgrass, and Saltwater Couch

Scientific Names: *Digitaria foliosa*, *Digitaria paspalodes* subsp. *longipes*, *Digitaria paspalodes* var. *longipes*, *Digitaria pasparoides* var. *longipes*, *Digitaria tristachya*, *Digitaria vaginata*, and *Digitaria vaginata* var. *longipes* (Easyscape, n.d.)

Description

General: Seashore paspalum is a native, low growing, warm season, perennial grass (Poaceae) that spreads by creeping stems and typically reaches approximately 20 inches in height. Its culms are upright with smooth nodes. The leaf sheaths are smooth, becoming slightly hairy near the tip, and the blades measure roughly 0.11–0.61 inches long and 0.12–0.31 inches wide. The leaves are sharply pointed, having prominent sheaths, and display a deep blue-green color. Ligules range from 0.04–0.08 inches in length, and the plant usually produces two to three racemes measuring 0.04–0.3 inches long. The spikelets are solitary, smooth, and elliptic to ovate-lanceolate, about 0.18 inches long and 0.08 inches wide. The fertile floret has a tufted (comose) white appearance, while the caryopsis is yellow and roughly 0.12 inches long (Allen, 1992). Along coastal areas, seashore paspalum forms roots that extend at least 10 inches into the soil (Natural Resources Conservation Service, n.d.), enabling rapid establishment in wetland environments.

Distribution: Seashore paspalum is distributed along the Gulf coast from Texas to Florida, extends up the Atlantic coast to North Carolina, and is also found in California. Globally, it grows in temperate and tropical regions across Asia, Pacific islands, Central and South America, Mexico, New Zealand and Australia (Riefner & Columbus, 2008). For up-to-date distribution information, refer to the species' Plant Profile page on the PLANTS Web site.

Habitat: Seashore paspalum occupies tropical and subtropical coastal regions worldwide. It grows in salt marshes, tidal mud flats, saline soils, coastal dunes and intertidal areas such as beaches and estuaries. These environments experience frequent disturbances, including salt spray, wind erosion, and shifting sands (Fabbri et al., 2016). The species spreads rapidly through stolons and rhizomes, forming dense mats.

Adaptation

Seashore paspalum occurs in brackish sandy habitats along the Gulf coast, Atlantic seaboard, and as far south as coastal Argentina (Joy & Rotar, 1991). It grows best where water levels fluctuate between about two inches above the soil surface and six inches below it, and it can tolerate over two inches of standing water during winter dormancy. Seashore paspalum performs well in course to fine-textured soils with a pH between 5.5 and 8.0 and has a high tolerance for anaerobic conditions. It prefers moist to saturated sites, withstands short periods of inundation, but is negatively affected by prolonged flooding. Seashore paspalum is salt tolerant, with some varieties capable of thriving under irrigation with brackish or even seawater.



Figure 1. Seashore paspalum (*Paspalum vaginatum*) growing in greenhouse at USDA NRCS Golden Meadow Plant Material Center Galliano, LA. Photo taken by Dr. Brian S. Jordan.

Uses

Livestock: Seashore paspalum can be grazed by cattle and horses and is resilient to overgrazing due to its low growth habit. Proper management is important, and no more than 50 percent of its growth should be removed during grazing. It is typically grazed from March to November, with animals consuming its green stolons during winter. During this period, seashore paspalum has moderate palatability for grazing livestock, but low palatability for browsing animals (Natural Resources Conservation Service, n.d.).

Wildlife: Because of its low growth habit and low palatability, seashore paspalum is not a major forage plant for most wildlife. However, geese and other herbivores will graze its tender shoots. The dense vegetation also offers cover for small mammals and invertebrates.

Landscaping: Seashore paspalum is used in both commercial and residential landscapes and is widely planted as turf on golf courses worldwide. When mowed to one inch height, it forms a dense sod and withstands heavy foot traffic. It is also more salt tolerant than most turfgrasses and can be irrigated with saline water.

Conservation: Seashore paspalum is a highly effective shoreline stabilizer used for erosion control, wetland restoration, and reclaiming disturbed sites, including oil and gas well locations. Its rapid spread and dense growth help anchor soil and reduce wave energy. The species is easy to establish, tolerates moderate salinity, and withstands brief inundation. It is recognized as a valuable pioneer plant in coastal restoration (Natural Resources Conservation Service, n.d.). Additionally, it can absorb heavy metals and serves as a useful phytoremediation species. Research identifies seashore paspalum as a top choice for reclamation (Lee et al., 2008) and suitable for planting in soils with up to 3 percent oil contamination to reduce erosion (Bamidele & Igiri, 2011).

Ethnobotany

No traditional or ethnobotanical uses have been documented for seashore paspalum.

Status

Threatened or Endangered: Seashore paspalum is listed as G5 global conservation status (secure). However, seashore paspalum is listed as S2 or imperiled in North Carolina (Nature Serve, 2006).

Wetland Indicator: Seashore paspalum is listed as facultative wetland species in the Arid West, Caribbean, Great Plains and Hawaii. It is listed as an obligate wetland species in the Atlantic and Gulf Coastal Plain and the Eastern Mountains and Piedmont regions (Natural Resources Conservation Service, n.d.).

Weedy or Invasive: While native to the southeast United States, seashore paspalum can become invasive in other areas due to its vigorous growth and ability to spread rapidly. It has been reported as invasive in southern California, where it encroaches into estuarine and salt marsh habitats and displaces native vegetation. In the Hawaiian Islands, it is considered highly invasive in brackish wetlands and similar invasiveness has been documented in New Zealand and Spain (Riefner et al., 2010). Due to its ability to outcompete desirable vegetation, this species may become weedy or invasive in certain regions if not carefully managed.

Please consult the PLANTS Web site (<http://plants.usda.gov/>) and your state's Department of Natural Resources for this plant's status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

Planting Guidelines

Vegetative: Seashore paspalum can be established using container-grown plants, plugs, bareroot material, sod, sprigs, or nodal stem cuttings. Container-grown or plug material should be spaced 12-18 inches apart, depending on site conditions and desired establishment speed. Sprigs should be approximately 6-8 inches long and contain at least two nodes to ensure successful establishment. Apply 200-800 bushels of sprigs or stolons per acre during late spring or summer and plant them within 48 hours of harvest. Fertilize at planting and every 2-3 weeks at 1 lb nitrogen per 1000 square feet until 90 percent coverage is achieved (Brosnan & Deputy, 2008).

Seeds: Seashore paspalum does produce seed, but viability is generally low. Laboratory evaluations using tetrazolium have shown that viability is near 90 percent while actual germination may be below five percent at room temperature (Shin et al., 2006). When viable seed is available, recommended seeding rates are typically around 1-2 pounds per 1,000 square feet (approximately 40-50 pounds per acre), with higher rates suggested for coated or pelleted seed (natural seed that has been coated with a layer of inert material) to achieve uniform stand establishment (Brosnan & Deputy, 2008). Prepare the seedbed by removing existing vegetation and loosening the upper 2-3 inches of soil, creating a smooth, firm surface that promotes good seed-to-soil contact. Optimal soil conditions include well-drained surfaces and a pH between 5.5 and 8.0, a range

within which seashore paspalum grows effectively (Shin et al., 2006). After broadcasting seed, lightly roll or press the soil to enhance contact, and maintain frequent, light irrigation so the upper soil layer remains moist. Germination typically occurs within 14-21 days when soil temperatures remain warm, ideally 80-95° F (Shin et al., 2006).

Management

Seashore paspalum responds well to annual nitrogen inputs of up to 8 pounds of nitrogen per 1,000 sq ft. But lower, split doses of 0.5-1 pound of nitrogen applied throughout the growing season helps reduce succulent growth and minimize scalping. This allows seashore paspalum to maintain density and outcompete bermudagrass under reduced fertility. Research has found that seashore paspalum handles saline conditions very well because its cells make natural adjustments that help the plant stay healthy, even when exposed to high saline conditions (Pan et al., 2023). Other studies show that the most salt-tolerant types of seashore paspalum can safely store extra salt inside their cells while retaining important nutrients like potassium, which helps plants keep growing normally under stress (Wu et al., 2020). It is recommended to maintain a mowing height of 0.75-1.5 inches to avoid scalping due to slow recovery (UC Statewide IPM Program, 2026). It is also recommended to use fresh or low-salinity water at establishments before transitioning to saltwater irrigation, which can be used both economically and selectively to suppress bermudagrass (Lindsey et al., 2019). These traits make seashore paspalum especially useful for shoreline stabilization, erosion control, and conservation plantings in saline or brackish environments.

Pests and Potential Problems

Seashore paspalum generally stays healthy but can run into problems when stressed or consistently wet. It may develop diseases like dollar spot, leaf spot, fairy ring, fusarium blight, and take-all patch, which can cause thinning or discolored patches (Brosnan & Deputy, 2008). Fungicides can help, and your local extension agent can recommend the right treatment. A few insects, such as mole crickets, sod webworms, spittlebugs, cutworms, and fall armyworms can also damage the grass if they become numerous (Brosnan & Deputy, 2008). If issues arise, your local extension service is the best source for safe and effective control options.

Environmental Concerns

Some research shows that seashore paspalum can spread aggressively outside its natural coastal range. In places like California, it has moved into wetlands, displaced native plants, and altered natural ecosystem functions (Riefner et al., 2010). Because of its potential to spread rapidly and disrupt non-native ecosystems, caution is advised when considering its use outside its natural range. To reduce risks, land managers should monitor planting regularly, watch for unwanted spread into nearby natural areas, and remove or contain encroaching patches early. In sensitive sites, use physical barriers, limit vegetative spread, and coordinate with local resource agencies to ensure appropriate long-term control.

Control

Seashore paspalum can be controlled by physically removing unwanted plants through digging, hand-pulling, sod cutting, or plugging. Since no selective herbicides are available for this species, non-selective herbicides may be used when chemical control is necessary. Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read labels and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.

Seeds and Plant Production

Seashore paspalum relies primarily on vegetative propagation because it provides uniform, predictable plant material and rapid establishment. Sod, sprigs, rhizomes, and container grown plants all perform well in commercial systems, especially in coastal or saline environments where fast coverage and salt tolerance are essential. Sprigs are commonly produced by shredding mature sod to create stolon and rhizome pieces. Lower stem cuttings with at least two nodes root consistently and support uniform stand establishment.

For container-grown production, multi-pot trays with 2×4-inch cells, 2×7-inch cone containers, and 4×5-inch square pots all support uniform, well-rooted plant development. Smaller containers, 2×4 and 2×7 inches, are easier to transport and install in large numbers, making them well suited for bulk plantings. Larger pots, 4×5-inch, provide increased rooting volume and produce stronger plants that establish more quickly after transplanting. Regardless of container size, plants should be fully rooted to ensure stable, well-anchored root systems. Sprigs and cuttings with at least two nodes can be planted directly into containers filled with sterile, well-drained substrate (typically a peat-based mix amended with perlite and/or pine bark) to minimize damping-off and other early-stage disease losses. Alternatively, sprigs and cuttings can be placed under intermittent irrigation for 3-4 weeks to encourage rapid rooting and reduce moisture stress. Once these propagules develop a stable root system, they can be planted directly into the soil known as “direct planting”. Direct planting means taking rooted sprigs or cuttings and placing straight into the soil at the planting site, rather than growing them out in containers first. This method bypasses an extended greenhouse production phase by establishing plants in the field as soon as they develop a

functional root system. Rooting the sprigs under intermittent irrigation for a few weeks helps them develop enough roots to survive in the field. This makes direct planting a faster way to establish new plants without an extended greenhouse phase. Maintaining a low-nitrogen fertilizer program during early growth helps produce resilient plants that establish more successfully when moved to the field.

After transplanting, light and frequent irrigation during the first 1-2 weeks helps plants establish new root systems. As plants begin active growth, irrigation can shift to deep, less frequent watering. Maintain low nitrogen during early establishment to reduce stress and promote sturdier growth. It is essential to minimize foot traffic, monitor for moisture stress, and scout for early pest activity. This will help to prevent transplant decline and ensure rapid stand development.

Seed-based production remains limited, but viable seed lines are available through specialized turfgrass breeders and commercial suppliers. Since seed quality varies by source, commercial growers should request germination tests, purity evaluations, and adaption data before committing to seed-based production.

Cultivars, Improved, and Selected Materials (and area of origin)

‘Tropic Shore’ seashore paspalum is a cooperative release that was developed by USDA NRCS Ho’olehua Plant Materials Center and the University of Hawai’i for stabilizing shorelines and the banks of aquaculture ponds, canals, and streams in brackish or saline environments. It is valued for its vigorous growth and strong tolerance to high salinity (Joy & Rotar, 1991). Brazoria Germplasm released by the NRCS Golden Meadow Plant Materials Center in Galliano, Louisiana, was selected to provide high-quality plant material for coastal wetland restoration, particularly in brackish shorelines, dunes, canal banks, mudflats, dredge material sites, and other areas where soils are newly deposited or disturbed.

Several cultivars have been developed specifically for turf applications, including ‘Aloha’ (Avon Par, FL), ‘Salam’ (Alapaha, GA), ‘Seadwarf’ (Avon Park, FL), ‘Sea Isle 1’ (Athens, GA), ‘Sea Isle 2000’ (Alapaha, GA), and ‘Sea Spray’ (Gervais, OR) (Brosnan & Deputy, 2008). Cultivars should be selected based on the local climate, resistance to local pests, and intended use. Consult with your local land grant university, local extension or local USDA NRCS office for recommendations on adapted cultivars for use in your area.

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