



Seashore Paspalum for Florida Lawns¹

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Seashore paspalum (*Paspalum vaginatum* Swartz) is a warm-season grass that is native to tropical and subtropical regions worldwide. Seashore paspalum grows naturally in coastal environments, often found in brackish marsh water or in close proximity to ocean waters. It also grows in areas that receive extended periods of heavy rains and low light intensity. Its best growth occurs in response to warm temperatures and long daylengths.



Figure 1. Seashore paspalum growing in ocean water in a coastal area.

Seashore paspalum does not produce viable seed and therefore must be planted as sod, plugs, or sprigs. The fine-textured types are similar in appearance to

hybrid bermudagrass (*Cynodon* spp.). They produce a high-quality, prostrate-growing, dense turf. Although the species has been in existence for hundreds of years, selection of cultivars for commercial, residential, and sports turf use has been limited to the mid and late 1990s. Many turf experts are unfamiliar with the grass and the particular conditions under which it will grow best. The largest testing program and collection of paspalum came from the University of Georgia turfgrass breeding program, which has assembled more than 300 ecotypes of this species.

Advantages

Seashore paspalum produces a high-quality turfgrass with minimal fertility requirements. While it will exhibit best growth and quality under optimal environmental conditions, it can exist under less than optimal conditions for extended periods of time. Some of the stresses for which it exhibits a wide range of tolerance include:

- excellent tolerance of saline or recycled water (to ocean saltwater levels)

1. This document is Circular 1244, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: February 2000. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>.

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- good drought tolerance under proper management
- tolerance of low fertility levels
- tolerates a wide range of soil pHs (from 4-9)
- minimal pesticide requirements
- excellent wear tolerance
- tolerates extended periods of low light intensity, such as from prolonged cloudy or rainy periods
- good insect and disease resistance
- tolerance to flooding or extended wet periods

Characteristics of paspalum that make it favorable for lawn or landscape use:

- minimal seedhead production
- prostrate growth habit reduces mowing needs and provides for dense, fast-growing cover
- minimal weed problems under proper management
- goes off-color and into winter dormancy later than other warm-season grasses

Disadvantages

- produces moderate amounts of thatch during periods of active growth
- emerges from winter dormancy and greens-up slightly later than other warm-season grasses
- does not perform well under tree shade

Cultivars

At the present time, three cultivars are available in Florida for commercial or residential landscape use. Since there has been very little commercial use of this species (to date), it is important to contact your County Extension Office if you are planning to use paspalum in your home lawn. Your county agent will be able to provide you with information on the specific management of this species for home lawn use.



Figure 2. Seashore paspalum in a landscape setting.

Sea Isle 1

This cultivar was released by the University of Georgia in 1999. It is a fine-leaved, dense-growing selection from Argentina, intended for use in commercial or residential landscapes or for athletic use in fairways or sports fields. It produces a dark green, dense grass with excellent salinity tolerance and good tolerance to drought and wear. It produces an excellent lawn under moderate fertility rates.

Salam and ET

These two cultivars were released in the 1990s from Southern Turf/Ecoshores in Punta Gorda, FL. They are suited for athletic, golf course, and landscape use and have qualities similar to Sea Isle 1.

Maintenance of Seashore Paspalum Lawns

Establishment

Seashore paspalum must be established vegetatively by sod, plugs, or sprigs. Sprigging rates should range from 5-10 bushels per 1000 ft². The best time for establishment is during periods of most active growth, when temperatures exceed 70° F.

Site Preparation

Site preparation is critical to lawn establishment. Rough grading should be done on construction sites. Removal of tree stumps, roots, unwanted plant material, rocks, and any debris should be completed prior to planting. Existing turfgrass or other unwanted plant material may need to be treated with a nonselective herbicide such as glyphosate (Round-up)

in two sequential applications 14 days apart to ensure removal prior to planting.

Soil tests should be done prior to planting. These provide information on soil pH and nutrient status and may determine any specific fertility needs for your lawn. Although seashore paspalum can tolerate pH extremes, best growth will typically occur at pH ranges from 5.5-8.0. If soil tests show that pH is <5.5, 2-5 lbs. of lime per 1000 ft² should be incorporated into the top 2 inches of soil. If pH levels exceed 8.5, or if salt-laden water is to be a primary irrigation source, gypsum should be incorporated into the top 4 inches of soil at rates of 20-80 lbs. per 1000 ft².

If irrigation is to be installed or repaired, that also should be done prior to planting. After this, the site is ready for a final grading and thorough moistening to facilitate turf establishment. For more information on site preparation, refer to fact sheet ENH 03.

Fertility

Proper fertilization of any grasslawn is an important component of the best management practices of your home lawn. Fertilization and other cultural practices influence the overall health of your lawn, and can reduce or increase vulnerability to numerous stresses, including weeds, insects, and disease.

It is advisable for homeowners to have soil tests done prior to planting. Your local Cooperative Extension Service office has recommendations and bags for taking soil samples and submitting to the Extension Soil Testing Lab for analysis. These tests form the basis for your home lawn fertility program and recommendations from the soil tests should take precedence over recommendations given in the Florida Lawn Handbook.

Seashore paspalum responds well to low fertility rates. As with any lawn, the fertility regime will determine not only the rate of growth and "curb appeal" of your lawn, it will also determine the amount of maintenance required to keep it in optimal condition.

During establishment of a seashore paspalum lawn, small amounts of fertilizer should be applied on

a regular basis to hasten growth and ground cover. "Spoon-feeding" 1/2 lb. of nitrogen per 1000 ft² in two applications during a 3-4 week period will stimulate growth. To encourage root development, phosphorous should be applied during establishment at rates equal to or greater than the nitrogen. Potassium needs of seashore paspalum are also greater during establishment, particularly when irrigated with saline water. Until the grass provides a uniform ground cover, a 1:2:3 fertilizer ratio of N:P:K in biweekly applications will provide the needed nutrients. If sodding seashore paspalum, ground cover will be immediate, but at least two weeks will be needed to insure that the root system is functional and capable of supporting the shoot system. If sprigging, coverage will take longer and establishment fertility requirements will need to be in place until both root and shoot systems have grown in.

Following this establishment period, the fertility regime should be reduced. In north Florida, 2-3 lbs. of nitrogen (N) per 1000 ft² per year will produce a good quality seashore paspalum lawn. It is best to apply fertilizer in small increments (at least 2-3 applications) from late March or early April through August. In south Florida, an additional 1/2 to 1 lb. of nitrogen can be applied yearly. Never apply more than 1/2 lb. of water-soluble nitrogen per 1000 ft² at any one time. Up to 1 lb. of nitrogen per 1000 ft² may be applied as long as at least 50 percent of the nitrogen is in slow-release form. Phosphorous (P) application should be made depending upon results of soil tests. As some Florida soils contain ample amounts of phosphorous, little or none may be required. Generally, if phosphorous is needed, apply no more than 1/4 to 1/2 lb. of phosphorous for every 1 lb. of nitrogen applied. Potassium requirements of seashore paspalum are generally low, with rates of 1/4 to 1/2 lb. of potassium per 1 lb. of nitrogen being adequate. Potassium (K) requirements will be higher during rainy seasons, however, when potassium can be leached through the soil. Additional potassium also may be needed if salt water intrusion or storm surge problems occur.

Mowing

Proper mowing practices are essential for maintenance of a healthy lawn. As with fertility, height and frequency of cut can determine the level of

lawn maintenance. Seashore paspalum used in home lawns should be mowed at .75 to 1.5 inches in height. Higher mowing heights will reduce turfgrass density and increase weed problems. Mower blades should be kept sharp to avoid tearing leaf tissue. When mowing, never remove more than 1/3 of the leaf blade at any one time. If the grass takes on a scalped appearance, too much leaf material is being removed at one time. If the lawn is under stress from drought, shade, nutrient deficiencies, insects, or diseases, it is best to maintain a higher cutting height until the stress pressure is relieved. Do not mow when the grass is wet or the soil is soggy.

Grass clippings can be left on the lawn. These do not contribute to thatch build up, but are readily decomposed by microbial action. Clippings also serve as a nutrient source, and can actually reduce the fertilizer requirements when returned to the lawn.

Irrigation

Due to the tolerance of seashore paspalum to periods of drought, irrigation is recommended on an as-needed basis. Signs of water deficit include rolling of leaf blades, wilting, and foot imprints that remain on the lawn after walking on it. At these signs of water deficit, apply 1/2 to 3/4 inch of irrigation to the entire lawn. This will supply water to a depth of approximately 9-12 inches in most Florida soils and should provide adequate water. Do not apply smaller volumes of water more frequently, as this will not encourage root growth. To avoid overwatering when rainfall is adequate, reduce the frequency of irrigation.

Overwatering lawn grasses not only wastes water, but results in weakened root systems, nutrient leaching through the soil, and poor stress tolerance.

Because seashore paspalum is very tolerant of poor water quality, it can be irrigated with recycled water or water subjected to saltwater intrusion. It is important to realize, however, that even this grass can develop salt toxicity problems with repeated use of saline water over extended periods, particularly in areas receiving little rainfall. Where rainfall is ample, this will flush out accumulated salts in the soil and minimize salt toxicities.

Thatch Control

Thatch is the layer of decomposing and dead leaf blades, stems, and roots on top of the soil surface. Thatch occurs due to excessive nitrogen application, overwatering, or poor mowing practices. Vertical mowing is the most efficient remedy for excessive (>1 inch) thatch. Vertical mowing uses vertical knife-like blades to thin out the thatch by slicing into it. While this process can alleviate buildup by removing thatch, it also removes portions of the grass and can cause damage. It is best to have this job done by experienced professionals who are familiar with the specialized equipment and the needs of your lawn. For seashore paspalum, vertical blades should be spaced 2-3 inches apart for successful verticutting. It is important to perform this procedure only during times of active grass growth, and only on healthy, non-stressed grass (i.e., no drought, shade, insect, or disease problems). Mulching mowers are also quite effective in minimizing thatch buildup and can be used by homeowners.

Pest Problems

Weeds

Current herbicides available to homeowners are generally not labeled for seashore paspalum. Herbicides that do not injure paspalum include pendimethalin, halosulfuron, and mixtures of 2,4-D, dicamba, and MCPP. Irrigation with saltwater has been one method used to effectively control both grassy and broadleaved weeds in seashore paspalum. Consult your County Extension Service office for proper identification of weeds and a prescription for environmentally friendly control of the problem.

Insects

In general, seashore paspalum has few problems with insects, and chemical requirements for their control are minor. It is subject to occasional problems from mole crickets, sod webworms, spittlebugs, white grubs, billbugs, cutworms, and fall army worms. It generally has no problems with chinch bugs.

Disease

Seashore paspalum has relatively few disease problems when maintained under recommended fertility levels and cultural practices. Organisms which may cause problems include fusarium blight, which may be found under hot, humid conditions, or when the grass is under drought stress. When infected, the entire turfgrass plant will change color from green to reddish brown to dark brown. Helminthosporium disease also may occur under conditions of high humidity or soil compaction. This disease is seen as small purple leaf spots with brown centers and light tan halos.

Cultural controls to reduce disease incidence on paspalum include:

1. Aerate soil at a depth of 3 to 6 inches.
2. Irrigate with saltwater.
3. Avoid excessive nitrogen application.
4. Avoid growing grass in shade or where air circulation is poor.
5. Avoid afternoon or evening irrigation.
6. Increase mowing height.