



Selecting a Turfgrass for Florida Lawns¹

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The lawn is an integral part of the landscape and provides many important benefits in our increasingly urbanized environment. A lawn not only increases the land's aesthetic and economic value, it also creates a recreational surface, controls erosion, filters pollutants, and supplies oxygen.

Florida grasses vary widely in their adaptive abilities, so choose your turfgrass wisely. Table 1 provides information to assist in your selection. The following questions may serve as guidelines.

1. What Lawn Do You Want?

Lawns require different levels of maintenance. Do you want a lawn that is highly manicured and carefully tended? Or are you looking for an average lawn that will require a moderate work input? Perhaps you're looking for something more naturalized, with less grass and more plantings of other types.

Most turfgrass will respond to a range of maintenance levels, but there is an optimum level for each grass. A zoysiagrass or St. Augustinegrass lawn will not perform well without supplemental irrigation

during dry spells. Bahiagrass may be able to survive without supplemental irrigation, but it may never form a dense, lush, dark green lawn, as some of the other grass species will.

Maintenance levels are closely related to cost and time. High-maintenance turf costs the most and takes the most time to maintain. Whether you do the work yourself or pay to have it done, you should realistically assess your ability to maintain your lawn before choosing a grass.

2. What Are Your Site's Limitations?

- **Irrigation:** Water quantity and quality are a factor. Do you have an irrigation system? Will you rely on a hose and sprinkler? On rainfall? What is the pH of your water? Do you have elevated salt levels? Are you using fresh (potable) water, or reclaimed waste water?
- **Mowing:** Can the area be easily mowed, or is it sloped? Are there areas that limit the size of mower you can use?

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- **Soil type, pH, drainage, and other soil characteristics:** It is important to soil test before planting a lawn. The information that you need includes soil pH (see Table 1), soil nutrient availability, and amount of compaction, which can affect drainage. It is also important to know your soil type. Is it sandy (will not hold water long), or does it contain more clay or organic matter (more water- and nutrient-holding capacity)?
- **Shade:** The amount of shade the turf will receive can limit the selection of suitable grasses. In general, shady areas need to receive at least 6 hours of sunlight per day for any of the warm-season grasses to grow well.

With answers to these questions in mind, use Table 1 and the following descriptions to select the proper turfgrass for your Florida lawn, and enjoy!

And please remember: Cost of installation and establishment should not be the primary reason for your choice. A lawn is a long-term investment, and the grass you choose for your lawn should be one you can commit to maintaining.

Region of Adaption

Grasses grown in Florida are maintained in a totally different way from those grown in the northern regions of the United States. Northern-grown grasses (such as fescue, bluegrass, and ryegrass) will grow in Florida only during the fall, winter, and early spring months and will not survive year-round. Some turfgrasses can be planted statewide, while others perform best in the panhandle and north Florida regions.

Soil Conditions

Soil conditions vary widely within Florida. Many of our coastal regions tend to have sandy, high-pH soils. In central Florida, soil pH will generally be lower, and soil types may range from sand to muck. In north Florida, soils tend to have more clay and low soil pH.

- Some turfgrasses grow in a wide range of soil conditions. St. Augustinegrass can do well in either sand or heavier soils, and can tolerate a range of pHs, from acidic to mildly alkaline.
- Others, such as centipedegrass and bahiagrass, grow best in acidic soils. Micronutrient deficiencies can be a problem if these grasses are grown in high-pH (alkaline) soils.

Environmental Stress Tolerances

Environmental stress can affect all grasses, and no environment is completely free from stress. It is important to reduce as many of these stresses as possible for healthy turfgrass growth, and to consider these limitations when selecting a grass type (see Table 1).

- **Drought Tolerance:** Drought tolerance is a measure of how well turf will survive extended dry periods. Bahiagrass and centipedegrass have good drought tolerance, while St. Augustinegrass does not perform well during extended dry periods.
- **Salt Tolerance:** In coastal areas, turf can be subjected to salt stress. Salt stress comes from irrigation water, saltwater intrusion, and salt spray from the ocean. Most grasses will not grow well in this type of environment, but seashore paspalum thrives in a salt-affected site. Zoysiagrass, bermudagrass, and St. Augustinegrass all tolerate moderate to high levels of salinity, while bahiagrass and centipedegrass have less tolerance for salt.
- **Shade Tolerance:** Turfgrasses vary widely in their shade tolerance. Both St. Augustinegrass and zoysiagrass have good shade tolerance compared with other warm-season grasses, but still require at least 6 hours of sunlight daily for most cultivars.
- **Wear Tolerance:** Wear tolerance is a measure of how well a grass continues to grow after being walked or played upon.

Wear tolerance can determine whether or not a grass will be able to survive in an area of moderate traffic. Zoysiagrass and bermudagrass have good wear tolerance.

Major Pest Problems

All grasses have some pest problems, although bahiagrass and centipedegrass are generally less affected by pests than other species. Some of these pests can be managed through cultural practices such as proper fertilization, irrigation, and mowing, while others may require chemical controls. Each turfgrass has a major pest that could limit its use. Proper management practices can help keep most pest problems to a minimum.

- **Major insect pests:** The most common pests are chinch bugs, grubs, mole crickets, ground pearls, webworms, spittlebugs, and billbugs. Most of our grasses have at least one insect pest that may cause problems. Insect pressure may be affected by fertilization, irrigation, temperature, season, and other factors. Pests may also be introduced from neighboring yards.
- **Major turf diseases:** The major turf diseases include brown or large patch (*Rhizoctonia*), dollar spot (*Sclerotinia*), root rot (*Pythium*), take-all (*Gaeumannomyces*), and gray leaf spot (*Pyricularia*). Disease pathogens are often present in the soil, but populations may only become elevated in the presence of a susceptible host and favorable conditions, such as excess moisture or fertilizer.
- **Nematodes:** Nematodes are microscopic worms that live in moist soil environments. They feed on grass roots and can severely limit turf growth and health if present in large quantities. There are no chemical controls for nematodes in a home lawn, so proper cultural practices and selection are important.

Leaf Texture

Leaf texture is a relative measure of the leaf blade width. Leaf textures may be coarse, medium, or fine.

- Texture choice is merely a visual preference unless the grass is important for a sport, such as golf.
- Most southern lawn grasses are coarser in leaf texture than those grown further north (e.g., fescue, bluegrass and ryegrass). This is especially true of the three most used lawn grasses in Florida (St. Augustinegrass, bahiagrass, and centipedegrass).
- Many of the zoysiagrasses now available for home lawn use have finer leaf textures than St. Augustinegrass. For more information on zoysiagrass, please refer to EDIS publication ENH11, "Zoysiagrass in Florida." [<http://edis.ifas.ufl.edu/LH011>]

Turf Density

Turf density represents the number of leaves or shoots per area of the ground.

- Species with a **high density** and **finer leaf texture** generally produce better quality lawns.
- Turf with a **lower density** and **coarser leaf texture** often require a higher mowing height to produce an acceptable quality lawn.
- Higher-density varieties include hybrid bermudagrasses and zoysiagrass. Bahiagrass has a low-stand density, while other warm-season grasses have a medium density.

Maintenance Level

Some grasses—typically those that are mowed at lower heights and have fine leaf textures—require more maintenance than other grass species. This is due to their rate of growth and susceptibility to pests.

- Turfgrass species grow at different rates.
- Each grass has its optimum level of fertilization, mowing, and irrigation.
- As more water and fertilizer are applied to the turf, mowing and pest control needs increase.
- **Low-maintenance turf** should be fertilized one to two times a year, mowed as needed (often just to remove seedheads), and may or may not be irrigated. Bahiagrass and centipedegrass are examples of low-maintenance turfgrasses.
- **High-maintenance turf** should be fertilized throughout the growing season and mowed weekly. In some cases, excess fertilization may result in increased pest pressure, but adequate fertilization is required to maintain a healthy turf.
- It is also possible to "plug" or "sprig" a lawn. "Plugging" means planting a pre-potted turf section with roots and shoots intact. Plugs are spaced at a specified distance from one another and grow together by lateral stems. "Sprigging" is a planting technique using a piece of shredded sod. Individual pieces of stems are spread over the soil surface and then partially inserted into the soil.
- St. Augustinegrass is not available in seed and must be planted by one of the vegetative methods described above. Seeding of some other species is also limited to certain cultivars (varieties of species). Seeding can be a time-intensive process with many of the warm-season grasses.
- Proper preparation and planning is the key to establishing a good lawn by any method. For more information, please refer to EDIS publication ENH02, "Preparing to Plant a Florida Lawn."
[<http://edis.ifas.ufl.edu/LH012>]

Mowing

- Taller mowing heights allow for more leaf surface for photosynthesis, deeper root systems, and better drought tolerance.
- Mowing turf below its recommended height can stress the grass and subject it to invasion by weeds, insects and diseases.
- Turf mowing frequency will vary seasonally and will depend somewhat on the species.
- Lawn clippings should be left on the lawn rather than bagged. This will add both organic matter and nutrients back into the soil, and may reduce the need for fertilization throughout the year. Lawn clippings do not typically contribute to thatch.

Establishment Methods

- All grasses can be established as sod. This is the preferred method of establishment because it provides an "instant" lawn, with less chance for weed invasion or other grow-in problems.

Table 1. Comparison of lawngrasses available for use throughout Florida.

Environment	Bahiagrass	Bermudagrass	Carpetgrass	Centipedegrass	Seashore Paspalum	St. Augustinegrass	Zoysiagrass
Area Adapted To	Statewide	Statewide	Wet Areas	N. Florida and Panhandle	Statewide	Statewide	Statewide
Mowing Ht. (inches)	3-4	.5-1.5	1.5-2	1.5-2	1-2	1.5-4	1-2
Soil	Acid, Sandy	Wide range	Acid, wet	Acid, infertile	Wide range	Wide range	Wide range
Leaf Texture	Coarse-medium	Fine-medium	Medium	Medium	Fine-Medium	Coarse-Medium	Fine-Medium
Drought Tolerance	Excellent	Good	Poor	Medium	Good	Fair	Medium
Salt Tolerance	Very Poor	Good	Poor	Poor	Excellent	Good	Good
Shade Tolerance	Poor	Poor	Fair	Fair	Poor	Good	Good
Wear Tolerance	Poor	Good-excellent	Poor	Poor	Good-excellent	Poor	Good-excellent
Nematode Tolerance	Very Good	Poor	Poor	Poor	Good	Good	Poor
Maintenance Levels	Low	Medium-High	Low	Low	Medium	Medium	High
Uses	Lawns, roadsides	Athletic Fields, golf	Wet Areas	Lawns	Lawns, athletic fields, golf	Lawns	Lawns
Establishment Methods	Seed, Sod	Sod, sprigs, plugs, some seed	Seed, sprigs	Seed, sod, sprigs, plugs	Sod, plugs, sprigs	Sod, plugs, sprigs	Sod, plugs, sprigs

¹'Hammock' centipedegrass is a selection adapted to south Florida.²'Celebration' bermudagrass can tolerate higher levels of shade than other bermudagrass varieties.³'Seaspray' seashore paspalum is a seeded variety.