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Bermudagrass for Florida Lawns[1]

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Bermudagrasses (*Cynodon* spp.) are among the most widely used warm-season grasses. Improved, fine-textured bermudagrasses are used throughout the south on golf courses, athletic fields, and in high-profile residential and commercial landscapes where a fine-textured, dense ground cover is desired. Because of the high maintenance requirements of the improved bermudagrasses, however, they are not generally recommended for use as a home lawngrass. Common bermudagrass varieties are often found as pasture and roadside grasses; these coarse-leaved varieties do not provide the high quality nor do they require the high maintenance of the fine-textured types.

Figure 1. Bermudagrass.

Advantages

Bermudagrass produces a vigorous, medium green, dense turf that is well adapted to most soils and climates found in Florida. Bermudagrass has excellent wear, drought, and salt tolerance. It establishes rapidly and is able to outcompete most weed species. It is readily available as sod or plugs, and some improved cultivars are available as seeded varieties. Common varieties are available as seed, sod, or plugs.

Disadvantages

Improved bermudagrasses require high levels of maintenance. They have poor tolerance to many insect, disease, and nematode pests, which limits their use in home lawn sites. They grow very aggressively from stolons (aboveground stems) and rhizomes (belowground stems) and can rapidly invade flower and landscape beds. This aggressive growth also fosters thatch buildup. Bermudagrasses generally have poor to medium cold tolerance and relatively poor shade tolerance. Since bermudagrass performs best with higher levels of fertilizers and chemicals than other Florida lawngrasses, a professional lawn

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care company may best handle maintenance of this species.

Cultivars

Common

Common bermudagrass is a coarse-textured, low-density cultivar often found in pastures or on roadsides. It has a lighter green color and overall lower visual quality than the improved cultivars. It is available by seed or as sod, and is often mixed with bahiagrass for low-utility usage.

Figure 2. Common Bermudagrass.

Other Seeded Varieties -- Cheyenne, Sahara, Sundevil, Jackpot, and Others

These newer seeded varieties have a darker green color, deeper roots, more shoot density, and a less coarse leaf texture than common bermudagrasses. While these varieties are suited for lawns, sports turf, parks, or roadsides, their performance and overall quality are comparable to common bermudagrass.

FloraTex™

FloraTex™ was a joint release from the University of Florida and Texas A & M University in 1993. It is generally of intermediate quality and maintenance between the seeded varieties and the improved cultivars. It has lower fertility and water requirements than other hybrid varieties and remains green for more of the year. It is medium in leaf texture and shoot density. It produces numerous seedheads but is less susceptible to dollar spot disease and bermudagrass stunt mite.

Maintenance of Bermudagrass Lawns

Establishment

Bermudagrasses are established vegetatively by planting sprigs, sod, or plugs. Each of these methods can be equally successful if the site is properly prepared before planting and if correct establishment practices are followed. For detailed information on lawn establishment, refer to the Edis publication LH013, "Establishing Your Florida Lawn." The best time to plant bermudagrass is when plants are actively growing, normally April through September. Other times may be suitable if sufficient care is given to prevent desiccation and cold damage in North or Central Florida.

Sprigging

The most common method of planting bermudagrass is by sprigging. This is done mechanically over large areas or by hand in small areas. Fresh sprigs are rhizomes and stolons that have at least two nodes or joints. Sprigs are usually broadcast over an area at a rate of 200 to 400 bushels per acre, or 5 to 10 bushels per 1000 square feet, then pressed into the soil. Sprigging is less expensive than sodding, but does not produce an instant lawn as does sodding. An alternative method of establishment is to plant sprigs end-to-end in furrows 6 to 12 inches apart, but this will take longer to establish.

Sodding

Establishment of bermudagrass by sodding produces an instant turf surface. Sod should only be laid over bare moist soil, with pieces laid in a staggered bricklike pattern and the edges fitted tightly together to avoid any open cracks. Rolling and watering thoroughly will ensure good contact with the soil for fast rooting. Sodded areas should be watered two or more times per day with 1/4 inch of water until the sod is held fast to the soil by roots (usually 2 to 3 weeks). After the root system has established itself, watering should be reduced to longer, less frequent waterings on an as-needed basis.

Plugging

Sod can be cut into round plugs with a golf green cup cutter or into small squares with a machete. Spacing of plugs varies from 12 to 24 inches, with the closer spacing covering in 3 to 6 months and the farther spacing covering in 6 to 9 months.

Seeding

Only common-type bermudagrasses can be established from seed. Bermudagrass seed should be planted at a rate of 1 to 2 pounds of hulled seed per 1000 square feet.

Fertilization

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

It is advisable for homeowners to have soil tests done annually. Your local Cooperative Extension Service office has recommendations and bags for taking soil samples and submitting them to the Extension Soil Testing Lab for analysis. In particular, phosphorous levels are best determined by soil testing. Since many Florida soils are high in phosphorous, little or no phosphorous may be needed for satisfactory lawn growth.

Maintaining a good-quality bermudagrass turf requires a properly planned fertilization program. Fertilizer timing and amounts for bermudagrass are based largely on the turf use. Generally, bermudagrasses require higher levels of fertilizer than other warm-season grasses for acceptable growth, durability, and appearance. Bermudagrasses can be maintained at moderate maintenance levels in areas such as lawns, athletic fields, or golf course fairways.

In general, two weeks following spring regrowth, apply a complete fertilizer such as 16-4-8 at the rate of 1/2 (water-soluble) to 1 (slow-release) pound of nitrogen per 1000 square feet. The three numbers refer to the percentages of nitrogen, phosphorus, and potassium, respectively. For example, a 50-pound bag of 16-4-8 contains 16% nitrogen or 8 pounds total nitrogen. This bag will fertilize 8000 square feet at the rate of 1 pound of nitrogen per 1000 square feet.

University of Florida guidelines for lawngrass fertility show a range of fertilizer application rates for various areas of the state that enable different species to grow successfully. These ranges are included to account for individual homeowner preferences for low-, medium-, or high-input grass. Additionally, localized microclimatic effects can have a tremendous effect on turfgrass growth, and a range of rates allows for these environmental variations. An example of this would be a typical home lawn that is partially shaded and partially sunny. The grass growing in the shade should receive lower rates of fertilizer than that growing in full sun. The guidelines are also separated into three geographical locations statewide as indicated in the table below. All rates are in pounds of nitrogen per 1000 square feet. For questions on how and when to apply these amounts, refer to Edis publication LH014, "General Recommendations for Fertilization of Turfgrasses on Florida Soils."

Fertilizer should be applied to bermudagrass in three to seven applications from spring green-up through fall. Do not apply nitrogen too early in the growing season, particularly in North Florida, or subsequent frosts may damage the grass. Likewise, don't fertilize too late in the year, as this can slow regrowth the following spring. If applying water-soluble forms at the lower application rate, it will take more applications to apply the total amount of fertilizer needed for the year than if applying a slow-release fertilizer form.

Mowing

Proper mowing practices are necessary to keep any lawn healthy and attractive. Both height and frequency of cut need to be adjusted for the level of turf management and season of the year. Under low to moderate levels of management, bermudagrass should be cut at a height of 3/4 to 1 1/2 inches, which may require mowing one to three times per week. Common bermudagrass should be mowed at the highest recommended heights. This will help the

grass develop a deep root system and give it a better appearance. Under higher levels of management, bermudagrass can be maintained at a height of 1/2 inch if the turf is mowed daily during the growing season. Mowing at this height and frequency requires more fertilizer and water to maintain an attractive and durable turf. It should be noted that low cutting heights and high maintenance levels predispose the turf to many weed and pest problems. Under low to moderate management practices, mowing frequency should be adjusted to the amount of growth. Remove no more than 1/3 of the total leaf blade with any mowing.

A reel mower is preferred for cutting bermudagrass. This gives a cleaner cut, and these mowers can also be more accurately adjusted to low heights. In a home lawn situation, a rotary mower may be used if the blades are sharp and well-adjusted to get a clean, smooth cut and if the cutting height is high enough for the mower. Grass clippings can be left on turf maintained with low to moderate fertility levels if mowed at the proper height and frequency. The clippings do not contribute to thatch, and they provide supplemental sources of nutrients. Remove the clippings only if the amount is so excessive that clumps form, or if appearance is important.

Watering

An established bermudagrass turf should be watered as needed. Irrigation is needed when leaf blades begin to fold up, to actually wilt, to turn blue-gray in color, or when footprints remain visible after walking on the grass. Apply 3/4 to 1 inch of water per application. This will apply water to roughly the top 8 inches of soil, where the majority of the roots are. To determine how much water a sprinkler system is providing, place several coffee cans throughout the irrigation zones to find out how long it takes to apply this amount of water. This is how long your irrigation system should run for each application.

During prolonged droughts, bermudagrass may go dormant if it does not receive irrigation. The grass will turn brown and stop growing during this dormant period, but it will revive and resume growth upon irrigation with sufficient amounts of water.

Pest Problems

Several severe pest problems can affect bermudagrass. Diagnosis and recommendations for treatment of pest problems are available from your county Cooperative Extension Service office. Refer to the pest sections of the *Florida Lawn Handbook* for additional information.

Nematodes

The most serious pests of bermudagrasses in Florida are nematodes. Nematodes cause yellowing and general thinning of older turf, especially during hot, dry periods. These pests cause extensive turf damage, particularly to turf grown on sandy soils or under high-maintenance regimes. Although some cultivars tolerate nematodes better than others, no cultivar is resistant to nematode infestation. Chemical nematode control is extremely limited for home lawns and usually requires commercial applicators. Following the cultural and fertilization recommendations in the Florida Lawn Handbook or Edis publication NG039, "Nematode Management in Residential Lawns," can help to alleviate some nematode damage.

Insects

Mole crickets are a major insect pest of bermudagrass. Other insects that cause damage in bermudagrass are sod webworms, armyworms, cutworms, grass loopers, and bermudagrass mites. High levels of nitrogen fertilizer encourage insect problems. There are several chemical controls available to treat insect pests, but these should be used only when necessary in conjunction with sound cultural and fertility practices.

Diseases

Bermudagrass is subject to many diseases, including dollar spot, brown patch, and *Helminthosporium*. A sound cultural program can minimize most disease problems, and fungicides can be used to cure major disease outbreaks.

Weeds

Weed problems in bermudagrass turf are a sign that the turf has become weakened by improper management practices or damage from pests. Refer to the Edis publication LH033, "Weed Control Guide for Florida Lawns," for more information. Proper management practices can eliminate most weed problems. If weeds are a persistent problem, herbicides labeled specifically for bermudagrass can be used for preemergent or postemergent weed control.

Other Problems

A number of other things can damage turf quality. Among these are excessive thatch production, shade, and problems resulting from improper cultural practices. *To ensure a good bermudagrass area, refer to the Edis publications referenced in this document for recommended management practices, and follow label directions when applying fertilizers and pesticides.*

Table 1. Recommended Fertility Rates for Bermudagrass throughout Florida

Location[1]	N Fertility Guideline[2]
North Florida	3-5
Central Florida	4-6
South Florida	5-7

[1]North Florida in this example is considered to be anything north of Ocala. Central Florida is defined as anything south of Ocala to a line extending from Vero Beach to Tampa. South Florida includes the remaining southern portion of the state.
[2]FloraTex bermudagrass requires less nitrogen annually.

Table 2. Calendar Guide to Annual Bermudagrass Fertilization**,C=

Maintenance Level	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
North Florida											
Basic			C		SRN				C		
Moderate			C		SRN		SRN		C		
High			C	SRN	C		SRN	Fe	C		
Central Florida											
Basic			C		N		SRN		C		
Moderate		C		N		SRN		SRN		C	
High		C	N	SRN	C	SRN	Fe	SRN		C	
South Florida											
Basic		C		N		SRN			C		C
Moderate		C	N		C		SRN		SRN		C
High		C	N	SRN	C	SRN	Fe		SRN		C

*North Florida in this example is considered to be anything north of Ocala. Central Florida is defined as anything south of Ocala to a line extending from Vero Beach to Tampa. South Florida includes the remaining southern portion of the state.

**For initial spring application, particularly in North Florida, the recommended time to fertilize is after the last frost rather than on a specific calendar date.

***FloraTex Bermudagrass requires less nitrogen annually.

C= complete fertilizer application (NPK); N= nitrogen application only; SRN= nitrogen only in a slow release form; Fe= iron application only.