

## **Growing Turfgrass in the Shade<sup>1</sup>**

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Many landscapes have shaded areas that can drastically affect turfgrass growth depending on the duration and intensity of shade. The amount of shade present in a landscape varies over time as trees mature and seasons change. Sunlight within a yard is also variable: Portions of a lawn may have full sun, be heavily shaded throughout the day, or receive partial shade and sunlight. Many partially shaded landscapes provide enough sunlight to support healthy turfgrass; however, constant or heavy shade makes it difficult to maintain adequate turf quality.

Turfgrass that does not receive enough sunlight has elongated leaf blades and stems because the grass is trying to obtain sunlight. Tissue elongation depletes the plant's energy reserves (i.e., carbohydrates), which can reduce the lawn's overall health, vigor, and coverage, resulting in bare spots that are conducive to weed invasion. Thus, in heavily shaded areas, it is generally not recommended to grow turfgrass. In these situations, other ground covers, shade-tolerant plants, or mulch should be used. Consult the local UF/IFAS Extension office for information on alternative ground covers for shaded environments. Another good source of information is EDIS publication ENH1196, "Landscaping in the Shade."

The amount of sunlight needed by lawn grass varies by species and, in some cases, by cultivar within species. In areas that receive moderate amounts of shade, certain species and cultivars of grass persist, while other, less shade-tolerant species and cultivars rapidly decline. In these areas, choosing the right turfgrass species and cultivar is important. It is also important to follow specific management practices that can encourage better turfgrass performance in the shade.

### **Species Suitable for Use in Shade**

Most **St. Augustinegrass** cultivars have very good shade tolerance, as well as good performance in full sunlight. The most shade-tolerant cultivars are 'CitraBlue', 'Classic', 'Cobalt', 'Palmetto', 'ProVista', 'Seville', 'Sola', and 'Viridian'. 'Floratam', which is the most widely used St. Augustinegrass cultivar, is significantly less shade tolerant than the other cultivars.

**Zoysiagrass**is another good option for moderately shaded areas as well as full sun. Finer-textured *Zoysia matrella* 

cultivars such as 'Zeon', 'Geo', 'Stadium', 'Prizm', 'Gateway', and 'Lobo' have excellent shade tolerance and are typically better in the shade than coarser-textured *Zoysia japonica* cultivars. Among the coarse-textured cultivars, 'Palisades' and 'Brazos' have the best shade tolerance, followed by 'CitraZoy' (medium textured), then 'Empire', and 'Icon'.

Centipedegrass has fair shade tolerance.

**Bahiagrass, bermudagrass,** and **seashore paspalum** are not recommended for use in shady landscapes.

## Management Practices for Growing Turfgrass in the Shade

Because turfgrass grown in the shade already suffers from the effects of stress (i.e., lack of sufficient light), it is important to follow specific management practices.

#### Increase the mowing height.

Mow grass at the highest recommended height for the species and cultivar. The increased mowing height allows for more leaf area. Increasing leaf area serves to increase light absorbance. Additionally, higher mowing heights promote deeper rooting, which is one of the key mechanisms of stress tolerance.

#### Reduce fertilizer applications.

Turf growing in shaded environments needs less fertilizer compared to full sun areas. Too much nitrogen fertilizer depletes energy reserves (i.e., carbohydrates) and produces a weaker turf system in shaded areas. Use a slow-release nitrogen fertilizer to minimize growth surges.

# Irrigate shaded grass less than grass growing in full sun.

Turf growing in the shade needs less water than turf growing in full sun. If an irrigation zone covers an area that is partially shaded and partially sunny, consider removing the sprinkler heads from the shaded areas and irrigating those areas by hand when the turfgrass shows signs of water stress. For more information on irrigating turf and water stress symptoms, refer to EDIS publication ENH9, "Watering Your Florida Lawn." Watering shaded grass on the same schedule as turf growing in full sun can increase disease presence because of greater soil moisture,

increased humidity, and reduced air circulation. Monitor closely for disease in shaded conditions.

#### Avoid heavy traffic.

Grass growing in shade is more easily injured by traffic and may recover from damage slowly. Traffic in shaded areas may also damage tree roots, resulting in tree health decline.

#### Monitor for weeds.

Weeds are able to invade turf under stressful conditions. In a shaded environment, insufficient sunlight will reduce the density of grass, leaving the area more vulnerable to weed invasion. Treatment with a pre- or postemergence herbicide is a good practice. Preemergence herbicides are applied prior to weed germination; postemergence herbicides are applied after germination. Use caution if you choose to apply herbicides since the turf is already under environmental stress. For more information on weed control in the home lawn, please refer to EDIS publication ENH884, "Weed Management Guide for Florida Lawns."

#### Monitor for diseases.

In shaded areas, disease pressure can increase because of greater soil moisture, increased humidity, and reduced air circulation. These factors lengthen the period of leaf wetness, promoting a favorable environment for disease development. Additionally, the leaf cuticle is thinner under shade, making it easier for pathogens to enter and become established in leaf tissue. Fungicide applications may be needed if diseases cause significant turf damage. Again, use caution if applying pesticides as the turf is already under environmental stress.

# Consider a different ground cover for areas under heavy shade.

If shade is too severe, such as under a large oak tree,

turfgrass may not be the best option for a ground cover. Consider alternative ground covers or a mulch bed with shade-tolerant ground covers or flowers.

# Watching for Competition from Trees

Grasses growing under trees are subject to more than just shade stress. These grasses must compete with tree roots for soil space, water, oxygen, and nutrients. Tree roots may extend far from the canopy line (beyond the tree's actual branches and leaves), so these competitive effects can also occur at some distance from a tree. In some cases, the removal of trees or trimming of lower branches may be necessary for continued grass growth. Raising the tree understory lines allows for more low-angle light, which helps to increase the hours of sun exposure significantly. Thinning the canopy also allows more sunlight, which can be highly beneficial for turfgrass that otherwise receives very low levels of light or no direct sunlight for most of the day. Moreover, thinning the tree canopy can increase the aesthetic appearance of the entire landscape by creating scattered patterns of sun and shade.

#### Conclusion

Growing some species and cultivars in partial shade is certainly possible. Most warm-season grasses perform well in moderately sunny or shaded environments. More shady areas will require the selection of shade-tolerant St. Augustinegrass, zoysiagrass cultivars, or an ornamental ground cover. Remember to manage irrigation in a way that reduces long periods of leaf wetness, reduce fertilization in shaded areas, and follow the other management strategies outlined in this fact sheet to enhance lawn health and growth under shaded conditions.

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<sup>&</sup>lt;sup>1</sup> This document is ENH151, one of a series of the Department of Environmental Horticulture, UF/IFAS Extension. Original publication date August 2000. Revised June 2002, May 2003, April 2008, and August 2025. Visit the EDIS website at https://edis.ifas.ufl.edu for the currently supported version of this publication. © 2025 UF/IFAS. This publication is licensed under CC BY-NC-ND 4.0.

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