



Growing Turfgrass in the Shade¹

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Turfgrass needs a minimum amount of light to grow. Each lawn's sunlight-to-shade ratio is different. Sometimes portions of a lawn are in full sunlight, while other portions may be shaded. This can work as long as the grass is receiving sufficient light. Grass that receives too little sunlight over time will not do well.

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A plant's light needs can be described in terms of hours of sunlight and percent of full sun. Most of Florida's grasses should receive at least six hours of sunlight each day, some of which may be partially filtered by trees. Research has shown that most St. Augustinegrass cultivars will actually grow if about thirty percent of full sunlight is filtered. Grass growing in this shade has less heat and drought stress and maintains a darker green color than that growing in full sunlight.

A grass that does not get enough light will have long, spindly leaf blades and stems because it is working overly hard to obtain sunlight. This tissue elongation depletes carbohydrates, reducing the lawn's overall health and vigor. Other groundcover sources or mulch should be used on sites where there

is insufficient sun. Consult your county Extension office for information on alternative groundcovers for shaded environments.

In areas receiving *moderate* amounts of shade, certain species and cultivars of grass will grow adequately. Specific management practices will also encourage better turfgrass health.

Species Suitable for Use in Shade

St. Augustinegrass has the best tolerance for shade of any of the warm-season grass species and will also grow well in full sunlight. The most shade-tolerant cultivars are 'Seville', 'Delmar', 'Floraverde', and 'Captiva', all of which can sustain with 5-6 hours of sunlight. 'Floritam', which is the most widely used St. Augustinegrass cultivar, has relatively poor shade tolerance and requires six to eight hours of sunlight daily.

Zoysiagrass cultivars such as 'Empire' have moderate shade tolerance, somewhat similar to Floritam St. Augustinegrass

Centipedegrass will tolerate moderate shade. **Bahiagrass**, **seashore paspalum**, and **bermudagrass**

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1. This document is ENH151, one of a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date August, 2000. Reviewed and revised June 2002, May, 2003, and April, 2008. Visit the EDIS Web Site at <http://edis.ifas.ufl.edu>.
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are sun-loving species that will not do well in shaded conditions.

Management Practices for Growing Turfgrass in the Shade

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

- **Increase the mowing height.**

Mow your grass at the highest recommended height for your species. The increased mowing height allows for more leaf area. The more leaf area, the more light the grass can absorb. Higher mowing heights promote deeper rooting, one of the key mechanisms of stress management.

- **Reduce fertilizer applications.**

Grass grows more slowly in a shaded environment and needs less fertilizer. Too much nitrogen fertilizer depletes carbohydrates and produces a weaker turf system. Use a slow-release nitrogen fertilizer to not accelerate excess growth.

- **Irrigate as needed.**

Water usage is also reduced under shaded conditions, so irrigate only on an "as-needed" basis. When the leaves begin to roll up lengthwise or take on a blue-gray color, or when impressions from foot or vehicular traffic remain on the grass, the lawn needs to be watered. Let your lawn tell you when to water with these wilt signs, rather than watering on a set schedule. If your irrigation system covers an area that is partially shaded and partially in sun, consider removing the sprinkler heads from the shaded areas and irrigating by hand instead.

Shaded areas of the lawn should not be irrigated on the same schedule as the areas in full sun.

- **Avoid heavy traffic.**

Grass growing in shade will be more easily injured by traffic and may recover from damage slowly. Please refer to Minimizing Traffic Damage to Your Florida Lawn" for more information.

<http://edis.ifas.ufl.edu/EP071>

- **Monitor for weeds.**

Weeds are able to invade turf under stressful conditions. In a shaded environment, turfgrass growth may slow and the density of the turf canopy may decrease, leaving bare ground that is vulnerable to weeds. Treatment with a pre- or postemergence herbicide may be necessary. Preemergence herbicides are applied prior to weed germination, postemergence herbicides after germination.

Susceptibility to disease is often increased in shaded conditions because of greater soil moisture, increased humidity, and reduced air circulation. Monitor closely for disease in shaded conditions.

Watch for Competition from Trees

Grasses growing under trees are subjected 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 the tree. In some cases, removal of trees or trimming of lower branches may be necessary for continued grass growth.

Conclusion

Growing some species and cultivars in partial shade is certainly possible. Most warm-season grasses will perform well as long as they receive at least eight hours of sun each day. If your lawn site receives less than eight hours of sunlight, look for a dwarf St. Augustinegrass cultivar such as Delmar, Seville, or Captiva. St. Augustinegrass can generally perform well with mild filtering of sunlight, but shade should not exceed about thirty percent. Reduce irrigation and fertilization of grass in shaded areas. Follow the management strategies outlined in this fact sheet to enhance lawn growth under shaded conditions and to optimize grass health.