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Improving Lawns in the Shade

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Shade trees are an important and prominent feature in most lawns. Though trees provide cooling for us and our homes, trees are very competitive with turf, causing turfgrasses to decline in shade. Trees compete with grasses for light, water, and nutrients. Additionally, air flow under trees is usually restricted, increasing humidity and turfgrass disease pressure. In response, turfgrass stand density decreases as turfgrass plants become more succulent with elongated leaves and restricted roots. These factors make maintaining a dense, healthy turf in shade a challenge, if not an impossibility.

The choice: Trees or turf?

Turf performs best in full sun with a minimum of four to six hours of full sun per day. Before struggling to maintain turfgrass underneath trees, evaluate the need for turfgrass on the area. You may be better off using shade-tolerant ground covers, rock beds, or even mulch or pavers in the shade instead of turfgrass. If the shaded area is not trafficked, a ground cover or ornamental bed may be easier to maintain and more attractive. If there will be heavy traffic on the area, consider stone pavers, rock pads, or even mulch. Thoroughly consider all of the alternatives before you decide to manage turfgrass in shade. For most shaded areas, it is more practical and more attractive to use something other than turf. Unfortunately, shaded areas still exist where turf needs to be grown. Following are some suggestions to improve turfgrass grown in the shade.

Pruning

Selective pruning and thinning of limbs and removal of some trees will allow better penetration of sunlight and increase air circulation. Unfortunately, trees will

naturally regrow into voids left by pruning, necessitating pruning yearly or every other year.

Mowing

Mow cool season turfgrasses at a minimum of 2.5 inches and preferably 3.0 to 3.5 inches. This is important for all lawns but especially for shaded lawns. Mowing at this height leaves the maximum leaf area for photosynthesis.

Irrigation

Most shaded areas are over-watered. Irrigate only as needed to prevent turf from becoming drought stressed. Deep and infrequent irrigation is favored over shallow, frequent irrigation. It is better to underwater shaded turf to minimize disease pressure.

Traffic

As with all turf grown in less-than-optimum areas, minimize traffic in shaded areas. Recuperation potential of traffic-damaged turf is severely reduced in shade.

Fertilization

Grass plants in shade are slow-growing and succulent and thus need less nitrogen than grass plants growing in full sun. Applying 1.0 lb nitrogen/1000 ft² in September and in November should provide adequate fertility for the entire year in most cases.

Pest Management

Shade-loving broadleaf weeds like wild violet or ground ivy have a tremendous advantage over turfgrasses and usually dominate in shade. These weeds are difficult to control and even if they are controlled, the turf is rarely vigorous enough in shade to prevent weeds from reestablishing. This is probably the best reason not to grow turfgrasses in shade. Crabgrass and other

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annual grassy weeds are rarely a problem, and thus preemergence annual grass controls are not needed in shade. However, the perennial grassy weed nimble will thrive in the shade and may need applications of glyphosate to control. Most herbicides have restrictions on their use in shade, so be sure to follow the label for most effective use. Diseases like powdery mildew and dollar spot thrive in the low-light, high-humidity environment under trees. Moss and algae also thrive under these conditions. Selective pruning to increase air flow should decrease pressure from these pests. Using pesticides to control moss, algae, or turfgrass diseases in shade is recommended only on high-value turf areas.

Overseeding

Overseeding to improve density of the turf stand is important in shady areas. Early fall (mid-August to mid-September) is the best time to seed cool-season grasses. Be sure to irrigate regularly to encourage germination, maintain adequate fertility, and keep falling tree leaves off newly seeded turf to maximize sunlight to the young plants. Some turf managers prefer to seed in early spring when no tree leaves are present. Spring-seeded turf needs extra irrigation well into

the summer to help it survive the summer stresses.

Species Selection

Though all turfgrasses perform better in full sun than in shade, some grass species perform adequately in shade. In most of Indiana, tall fescue or fine-leaf fescue (chewings, creeping red or hard fescues) are the species of choice for shady areas. Some cultivars of Kentucky bluegrass and perennial ryegrass will also grow adequately in the shade. Consider using the following mixes for planting in shade:

- 100% tall fescue
- 50% fine fescue/
50% Kentucky bluegrass
- 50% fine fescue/
30% Kentucky bluegrass/
20% perennial ryegrass

Table 1 lists cultivars of fine fescue, tall fescue, perennial ryegrass, and Kentucky bluegrass that have been shown to be shade tolerant.

More information and mentioned publications are available at www.agry.purdue.edu/turf

Table 1. Cool season turfgrass species and cultivars exhibiting shade tolerance.

Tall Fescue	Kentucky Bluegrass	Perennial Ryegrass
Falcon	A-34 (Bensun)	Birdie II
Finelawn	Bristol	Citation II
Hounddog	Eclipse	Fiesta II
Jaguar	Glade	Manhattan II
Olympic	Nugget	Palmer
Rebel	Touchdown	Regal
Rebel II	Victa	
Fine-leaf Fescues		
<i>Chewings fescues</i>	<i>Creeping red fescues</i>	<i>Hard fescues</i>
Banner	Dawson	Aurora
Barfalla	Ensylva	Biljart (C-26)
Checker	Fortress	Reliant
Highlight	Pennlawn	Scaldis
Jamestown	Ruby	Waldina
Koket		
Shadow		

Sources of additional information from Purdue University:

- AY-9 Control of Broadleaf Weeds in Turf
- AY-11 Control of Perennial Weedy Grasses in Turf
- AY-20 Seeding a Turf Area in the Spring
- AY-22 Fertilizing Established Lawns
- HO-222 Landscape Plants for Shady Areas

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