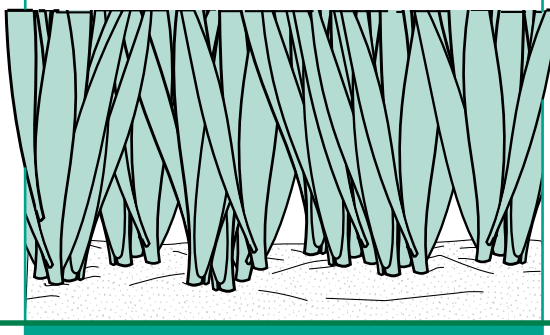


# SHADE-TOLERANT GRASSES

Turfgrass



The main goal of lawn care is maintaining persistent, healthy turf. This can be a challenge since grass prefers sunlight. When growing turf in shade, be prepared for thinner grass. A thinner stand of healthy grass is more satisfactory than a thicker one that dies.

### Causes of Shade

Shade can be caused by many things—trees, bushes, buildings and wooden fences. Buildings and wood fences reduce air circulation, increasing the chance for disease. The north side of buildings and fences is nearly always in the shade.

### Moss

Moss commonly grows in the shade and contributes to thin, weak turf by forming a slimy coating that reduces soil aeration. Low fertility, poorly drained soil, acidity, frequently wet soil, soil compaction, excessive thatch or a combination of these factors produces moss. To avoid this problem, improve soil drainage and aerate.

### Effects of Shade

Shade affects grass by reducing light and air circulation and increasing relative humidity. This increases the chance of disease and pest invasion. Another problem of turfgrass is root competition with trees. Grass roots are shorter, thinner and less branched than tree roots. Because trees have bigger root systems, turfgrass has a lower food reserve resulting in a more shallow root system. Shading also causes grass blades to elongate and grow in a more upright position.

### Planting in Shade

When planting a lawn in a shady area it is important to purchase the proper variety of turfgrass. Grasses vary in their shade tolerance, disease resistance and adaptability. Fine fescue has the highest shade tolerance. If turf doesn't establish, another option would be to try a ground cover or mulch.

A thick stand of grass won't grow without enough light. The seeding rate for turfgrass planted in a shaded area is less than a sunny yard. Planting at a

### Shade-Tolerant Varieties

Kentucky			Fine Fescues		Perennial
Bluegrass	Tall Fescue	Hard Fescue	Creeping Red	Chewings	Ryegrass
A-34	Apache II	Aurora	Pennlawn	Highlight	Allstar
Americ	Arid III	Biljart	Commodore	Jamestown	Birdie II
Bristol	Falcon II	Reliant	Flyer	Center	Cowboy
Columbia	Houndog V	Scaldis	Fortress	Enjoy	Elka
Enmundi	Jaguar III	Spartan	Pernille	Shadow	Gator
Glade	Kentucky 31	Waldina	Robot	Victory	Palmer
Georgetown	Olympic Gold	SR 3000	Ruby	Waldorf	Pennant
Midnight	Rebel 2000				Repell
Mystic					Yorktown II
Nugget					
RamI					
Sydsport					

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## Shade Tolerance of Species

Fine fescue	CS	Excellent	Most
Tall fescue	CS	Good	
Kentucky bluegrass	CS	Fair	
Perennial ryegrass	CS	Fair	
Zoysiagrass	WS	Poor	
Buffalograss	WS	Poor	
Bermudagrass	WS	Poor	Least

CS=Cool-season

WS=Warm-season

normal rate puts too many grass plants in a shaded area and results in poor establishment. It is best to seed in the fall when tree leaves are gone. If lawn is established in the spring, use sod. It is preferred in both seasons. In either case, be prepared to accept a thinner stand of grass in the shade than in the sun.

## Shade Maintenance

If an area receives less than four hours of sunlight a day, chances are turfgrass will not grow well. There are several options: remove unneeded trees, thin the canopy and trim branches, plant ground cover, put down mulch, or a combination of these. Mow at a height of 3 to 4 inches. Limit traffic when the soil is saturated. Also, avoid late afternoon and evening watering. For new grass, remove any fallen leaves. If leaves are not picked up they will create a mat blocking air and light from the turf.

## Light Quality in Shade

Shade problems result from reduced amounts and quality of light received. It is important for turf to receive light to perform its photosynthetic processes.

Light is transmitted through tree canopies in longer wavelengths (far-red, infrared) that are not desirable for photosynthesis. Photosynthetic rates are slower in the shade causing plants to have lower carbohydrate reserves and shallower root systems.

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## Kansas State University Agricultural Experiment Station and Cooperative Extension Service

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## Excessive Shade

- Less than 50 percent open sunlight
- Less than 4 hours of sunlight per day

## Shady Areas Experience

- Reduced light
- Reduced air circulation
- Increased humidity
- Increased chance of disease and pests
- Increased competition between trees and grass

## Turfgrass Responses

- Reduced carbohydrates, less plant vigor
- Reduced root growth and tillering
- Thinner leaves, stems and turf density
- Reduced tolerance to heat, cold, drought, disease
- Less able to compete with weeds

## Maintaining Turf in Shade

- Prune trees, remove fallen leaves
- Deep, infrequent irrigation
- Moderate fertilization
- Plant shade tolerant grasses
- Seed half the normal rate
- Mow 3 to 4 inches high
- Limit traffic on saturated soil
- Avoid late afternoon and evening watering

## Common Turfgrass Diseases in Shade

- Brown patch
- Leafspot (melting out)
- Powdery mildew

## Options Other Than Grass

- Mulch
- Ground cover