

Avoid Lawn Diseases with Proper Selection and Care

Steve Mayer
Extension Educator-Horticulture

Just as healthy people are less susceptible to getting sick, healthy lawns are less apt to be overcome by disease. If you properly select and maintain a healthy lawn, you can avoid many lawn diseases without using pesticides.

The first step towards a healthy lawn is proper soil preparation before the grass is planted. Take a soil test to determine pH and nutrient levels. Add the necessary soil amendments and till deeply. The end result should be a firm soil without depressions. Inadequate surface and subsurface drainage provide an ideal environment for certain turf diseases to develop.

Select grass species that are adapted to the growing site. Fine (red) fescue tolerates cool, dry, and shady habitats. However, it rapidly becomes stressed in hot, sunny areas. Kentucky bluegrass does best in full sun and may become more susceptible to diseases in shady areas. If planted in the shade, choose shade tolerant bluegrass cultivars (varieties).

Choose disease resistant grass seed mixtures and blends. Since perennial ryegrass is especially susceptible to red thread disease, avoid seed mixes containing more than 10 percent ryegrass. When planting bluegrass, choose a blend of several cultivars that are tolerant to different diseases. This will increase the overall disease resistance of the turf.

Most lawn diseases occur above ground on the leaves and shoots. Development of these diseases usually requires extended periods of surface moisture. Therefore, conditions which decrease the amount of time that the leaves remain wet discourage disease development.

Plan your landscape to provide good air circulation which will allow the turf to dry rapidly. Prune trees and shrubs to allow better light and air circulation.

Irrigate early in the morning to minimize disease infection. At this time the grass is often already wet from dew and the sun comes up and dries the leaf blades quickly.

Irrigating in the evening can cause a greater incidence of disease due to extended leaf wetness. Night watering can especially become a problem during long periods of hot, humid weather. The potential for disease from night irrigation can be reduced somewhat by watering deeply and infrequently. Never water established lawns with a light sprinkling every day or two.

Soak the soil to a depth of 6 to 8 inches and then do not water again until the turf shows signs of needing water. However, water established lawns thoroughly during drought to avoid plant stress.

Purdue Extension-Marion County
6640 Intech Blvd., Suite 120, Indianapolis, IN 46278-2012 (317) 275-9305

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Other cultural practices such as mowing, fertilizing, core aeration, and dethatching also influence the amount of disease development.

Mow frequently at a 3-inch cutting height. Remove no more than one third of the grass leaf blade at any one time. If possible, mow when the grass is dry. However, it is better to mow when the grass is slightly wet than let the grass grow excessively tall. Keep the mower blades sharp for a clean cut.

Continue to mow at the same height in the fall as long as there is anything to mow. Snow mold can be minimized by mowing the lawn at the recommended height well into the fall to avoid the exposure of long, lush grass to favorable disease conditions.

Excess thatch can provide an environment that promotes disease. Reduce thatch layers over one half inch thick by dethatching and/or core aeration. Coring also relieves soil compaction.

Fertilize according to soil test results and maintain adequate fertility. Avoid typical fertilizer rates in March and April. This creates succulent leaf tissue which can provide ideal conditions for plant pathogen activity. Don't apply fertilizer during periods of drought or high temperature. Most of your fertilizer should be applied in the fall.

Too much or too little nitrogen can increase lawn disease problems. Outbreaks of dollar spot, red thread, and rust diseases usually occur on lawns that are growing slowly due to nitrogen deficiency or other stressful conditions. Additional nitrogen can help lawns recover from infection by these diseases. However, diseases like brown patch and Pythium blight are more likely to occur if too much nitrogen is applied.

For more information on controlling specific lawn diseases, consult the Purdue Turf Disease Profiles. They are online at:
<http://www.agry.purdue.edu/turf/publicat.htm>