

# Lawn Diseases on Home Landscapes in Western Washington

Red Thread (*Laeticaria fuciformis*); Fusarium Patch (*Microdochium nivale*)

Fungal lawn diseases can cause spots on grass leaf blades, thinning or “melting out” of turf in patches, a ragged appearance to turf, and can contribute to failure of turf to thrive and grow effectively. Several disease problems affect turf in western Washington, the most common being red thread (*Laeticaria fuciformis*) and fusarium patch (*Microdochium nivale*). Several lawn diseases occurring in eastern Washington are infrequent in western Washington (basal rot, brown patch, dollar spot, necrotic ring spot, take-all patch, typhula blight). Moss infestation, algae, and mushrooms may be considered lawn disease problems, though these are best dealt with by attention to proper lawn culture.

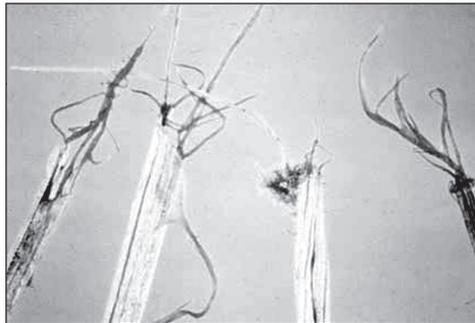
(NOTE: This publication is not intended to guide golf course maintenance practices or athletic field care because sequences of action and choices of controls for these high-use areas differ from those appropriate for home turf care.)

## Host/site

Lawns, turf of all types. Red thread is more serious on fescue and rye grasses than on bentgrass and bluegrass. Since tall fescue and perennial rye (rather than bentgrass and bluegrass) are recommended seeding grasses in western Washington, this selectivity of the fungus becomes important. Fusarium patch, in contrast, is worse on bentgrass and annual bluegrass. Annual bluegrass is a common invasive weedy grass that contributes to difficulty in maintaining western Washington lawns both because it is disease prone and because it contributes to irregular lawn texture.

## Identification/appearance

**Red thread:** Initially, irregularly circular yellow patches 2 to 24 inches across become brown and dead looking. Turf may show a combination of brown, green, and reddish blade tips. As the disease advances, small pink/red horn-like fruiting bodies of fungus on leaf blades (shown in the photo above) indicate the disease and give it the name “red thread.” Often the disease remains unnoticed until this advanced stage.



Red threads emerging from leaf tips. Photo by Ward Stienstra, courtesy of University of Minnesota

**Fusarium patch:** reddish-brown circular patches (1 to 2 inches in diameter), appear. Patches may enlarge and coalesce to cover extensive areas. The center of the patch will be tan and may contain unaffected turf. Early infestations may be confused with dog damage, but dog damage leaves a spot that doesn't enlarge.

## Life cycles:

Both diseases occur when fungal material living on diseased grass blades and in soil sprouts in wet humid weather in late fall, winter, and early spring. Fusarium patch can grow under snow or as snow melts.

## Natural enemies

Not applicable

## Monitoring

Turf should be monitored during the wet weather of fall, winter, and early spring for symptoms noted above.

## Action threshold

Identification of the disease presence indicates need to undertake proper lawn care practices. Good cultural care will improve the grass condition. In the case of both of these diseases, grass often recovers as the weather warms and dries.

Red thread doesn't usually kill turf but causes it to look unattractive. Fusarium patch can affect large areas of turf and reduce lawn survival.

## Cultural controls:

There is no substitute for proper lawn care: good cultural practice is the key to best management. Diseases are more severe on turf lacking vigor. Understanding of drainage and water requirements on the particular site is especially vital where lawn diseases may be evident. If the lawn is on soggy soil, correct drainage so that turf dries after rains. Wet soil and standing water contribute to disease. Healthy turf requires sun; replace lawns in shaded areas with appropriate ground covers. Mow regularly to appropriate turf height, do not allow turf to grow long, especially when weather is cool and humid.

(continued/over)



The Green Gardening Program is a program of Seattle Public Utilities to promote alternatives to lawn and garden chemicals. Funded by the Local Hazardous Waste Management Program in King County.

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Returning grass clippings to the ground when mowing is a beneficial practice on healthy lawns, but if fungal disease has infested the lawn, stop “grasscycling” temporarily. Remove the clippings until the lawn is fully recovered because fungal organisms live on affected grass blades.

In cases of red thread, do not allow the lawn to go under summer drought stress. Water deeply and infrequently, providing one inch of water per week when it is not supplied by rainfall. Fertilize with adequate nitrogen in a balanced nutritional program. (WSU recommends applying a total of 4 pounds of actual nitrogen per 1000 square feet of lawn per year divided between four separate applications. (If disease is present, avoid late fall fertilization.)

For fusarium wilt, avoid all excessive nitrogen applications. Fertilizers with moderate levels of nitrogen (in a 3-1-2 ratio) in a timed-release formula are best for fall use.

Some landscape professionals have found that aerating and thatching in fall, combined with topdressing with a compost and sand or topsoil mixture reduces turf diseases. Mixtures reported range from pure compost to 80/20 sand/compost. Studies and trials support improved resistance to turf diseases as one of several benefits resulting from topdressing. Aeration before or after topdressing helps mix compost into the soil. For more details on topdressing, see the report

by McDonald in the references section below. Some local research indicates that topdressing can accumulate at the surface and may cause problems. If topdressing frequently, take core samples to be sure compost is being incorporated into the soil rather than merely accumulating on top.

### **Chemical controls:**

Not recommended for non-commercial (home) landscapes. Focus on cultural controls for both red thread and fusarium wilt problems.

### **References**

McDonald, David K. *Ecologically Sound Lawn Care for the Pacific Northwest: Findings from the Scientific Literature and Recommendation from Turf Professionals*. Seattle: Seattle Public Utilities, 1999. This report can be downloaded from the Internet at <http://www.ci.seattle.wa.us/util/lawn-care/> or a hard copy requested by calling (206) 684-7560.

Pscheidt, Jay and Ocamb, Cynthia, editors. *Pacific Northwest Plant Disease Control Handbook*, Oregon State University, 1999.

Stahkne, Gwen. *Disease Control in Home Lawns*, EB 0938, Washington State University Cooperative Extension, 1993.

Byther, Ralph. *Red Thread of Turfgrass*, EB 1016, Washington State University Cooperative Extension, 1989.

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