

# Turf Disease

Disease-Description	Cultural Management	Chemical Controls*
<p><b>Algae-</b> black scum-like or slimy growth in thin turf areas or non-crop areas such as gravel. Found often in sunny areas.</p>	<ul style="list-style-type: none"> <li>- Improve drainage</li> <li>- Diagnose and correct conditions that limit turf growth</li> <li>- Decrease irrigation frequency and/or duration</li> <li>- Aerify and/or rake area to break up algal mats</li> </ul>	<p>benzyl ammonium-chloride, chlorothalonil, chlorothalonil + zinc, mancozeb, mancozeb + copper hydroxide</p>
<p><b>Anthracnose-</b> thinning of cool-season turf during hot, humid weather. Dead leaves are scattered among healthy leaves</p>	<ul style="list-style-type: none"> <li>-Any practice that will relieve heat stress (fans, syringing, etc.)</li> <li>-Raise mowing height</li> </ul>	<p>azoxystrobin, chlorothalonil, chlorothalonil + thiophanate methyl, fenarimol, myclobutanil, propiconazole, pyraclostrobin, thiophanate methyl, triadimefon, trifloxystrobin</p>
<p><b>Brown Patch-</b> Bentgrass- patches 6" to 1' in diameter, "smoke ring" visible at outer edge of patch early in morning, favored by hot, humid weather Tall fescue-patches 6" to 3' in diameter, "smoke ring" may be visible, as well as lesions on leaf blades; favored by hot, humid weather and moderate to high N fertility Bermudagrass + Zoysia-large patches up to 10' in diameter appear at greenup in Spring</p>	<p>Cool season grasses - reduce N fertility during hot, humid weather; syringe or sweep turf to remove dew</p>	<p>azoxystrobin, chlorothalonil, chlorothalonil + thiophanate methyl, fludioxonil, flutolanil, iprodione, mancozeb, myclobutanil, polyoxin D, propiconazole, pyraclostrobin, thiophanate methyl, triadimefon, trifloxystrobin, vinclozolin</p>
<p><b>Bentgrass Dead Spot -</b> Small patches, similar to ball marks, appear on bentgrass golf greens. During early development, patches are reddish-brown or copper colored. Unlike dollar spot, you will see no visible fungal growth with BDS. BDS is usually most active during summer and early fall.</p>	<p>Urea forms of N fertilizer have been reported to help speed recovery when used in conjunction with fungicide sprays</p>	<p>boscalid, fludioxonil, pyraclostrobin</p>

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<p><b>Dollar Spot-</b> Small silver dollar-size spots appear on golf greens; on higher cut turf, patches may be 6" in diameter; favored by low N fertility; white mycelium is often visible in patches early in morning when dew is present</p>	<ul style="list-style-type: none"> <li>-Increase N fertility according to soil test</li> <li>-Some bentgrass cultivars are resistant</li> <li>-Remove dew on golf greens</li> </ul>	<p>boscalid, chlorothalonil, myclobutanil, propiconazole, pyraclostrobin, triadimefon</p>
<p><b>Fairy Ring-</b> Mushrooms and/or fungal puffballs may be associated with rings of dark green turf, dead turf or normal looking turf</p>	<ul style="list-style-type: none"> <li>-Remove all woody debris during establishment</li> <li>-Aerify and use wetting agents</li> <li>-N fertilization may mask dark green rings</li> <li>-Soil removal or fumigation are more drastic measures for high value turf areas</li> </ul>	<p>azoxystrobin, flutolanil, flutolanil + thiophanate methyl, pyraclostrobin</p>
<p><b>Gray Leaf Spot -</b> May cause blighting of ryegrass and tall fescue during summer months; leaf spots may be present on foliage</p>	<ul style="list-style-type: none"> <li>-Avoid high N during summer months</li> <li>-Irrigate only as needed to keep foliage as dry as possible</li> <li>-Thatch removal may help</li> </ul>	<p>azoxystrobin, chlorothalonil, chlorothalonil + thiophanate methyl, flutolanil + thiophanate methyl, mancozeb, propiconazole, pyraclostrobin, thiophanate methyl, trifloxystrobin</p>
<p><b>Leaf Spot/Melting Out-</b> (Bipolaris or Drechslera spp.)- One of the most visible symptoms is a dark brown leaf lesion. These fungi may attack leaves, crowns and roots, causing a generalized thinning, browning and melting out.</p>	<ul style="list-style-type: none"> <li>-Avoid over fertilization</li> <li>-Stress from improper soil fertility, pH or herbicide applications may increase disease severity</li> <li>-Raise mowing height</li> <li>-Reduce thatch</li> </ul>	<p>azoxystrobin, chlorothalonil, fludioxonil, iprodione, mancozeb, propiconazole, pyraclostrobin, trifloxystrobin, vinclozolin</p>

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<p><b>Microdochium Patch (Pink Snow Mold)-</b> Small patches of diseased turf form on golf greens or under tarps on athletic fields overseeded with perennial ryegrass. Mycelium is often visible and has a pinkish hue.</p>	<ul style="list-style-type: none"> <li>-Avoid high N fertilization going into winter</li> <li>-Mow turf as long as it is actively growing</li> <li>-Remove leaves from turf promptly</li> <li>-Remove tarps from overseeded athletic fields when possible during warm periods during winter months</li> </ul>	<p>azoxystrobin, chlorothalonil, chlorothalonil + thiophanate methyl, fludioxonil, iprodione, mancozeb, myclobutanil, propiconazole, pyraclostrobin, thiophanate methyl, triadimefon, trifloxystrobin, vinclozolin</p>
<p><b>Pythium Diseases-</b> <u>Pythium Blight (Cottony Blight, Greasy Spot)-</u> white mycelium may be visible on affected grass. Symptoms follow drainage areas. Plants totally collapse. <u>Pythium Root Rot-</u> part of the summer decline syndrome of bentgrass. Affected grass may thin, have a short root system, and wilt easily. <u>Pythium Patch-</u> a cool season disease of bentgrass, in which affected greens have mottled appearance. Infected plants have dead leaf tips</p>	<ul style="list-style-type: none"> <li>-Improve drainage to prevent standing water</li> <li>-Greens should be built to ensure excellent drainage</li> <li>-Deep tine aerification may help on older greens by improving water infiltration</li> <li>-Avoid excessive irrigation</li> <li>-Fungicide treated seed can be used to protect seedlings in areas with a history of pythium blight</li> <li>-Avoid excessive N rates</li> </ul>	<p>etridiazole, fosetyl AI, potassium salt of phosphoric acid, mefanoxam, propamocarb,</p>
<p><b>Red Thread-</b> usually found on bluegrass, but may be found on fescues and ryegrass. Patches may resemble dollar spot. Pinkish-red “threads” (mycelium) are visible at the tips of leaf blades. Red thread occurs most often during the spring.</p>	<ul style="list-style-type: none"> <li>-Fertilize turf according to soil test as red thread most often appears on nutrient deficient turf</li> <li>-Irrigate deeply but infrequently</li> <li>-Sanitation: remove clippings when mowing</li> </ul>	<p>azoxystrobin, chlorothalonil, flutolanil, iprodione, myclobutanil, polyoxin D, propiconazole, pyraclostrobin, thiophanate methyl, triadimefon, vinclozolin</p>

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<p><b>Rust</b>-normally the first symptom noticed is a yellowing of affected turf. Close examination of leaf blades reveals yellow leaf spots with yellow to orange pustules of rust. Thinning occurs in diseased turf.</p>	<ul style="list-style-type: none"> <li>-Plant resistant species or cultivars when available</li> <li>-Mow at regular intervals as rust may develop on overgrown turf</li> <li>-Remove clippings on diseased turf</li> <li>-Fertilize turf according to soil test</li> </ul>	<p>chlorothalonil, mancozeb, myclobutanil, propiconazole, pyraclostrobin, triadimefon</p>
<p><b>Slime Mold</b>- brown to gray fungal growth appears on leaf blades following warm, wet weather. Slime mold fungi move from soil onto leaf blades. Slime mold is harmless to turf.</p>	<p>-Slime mold may be removed by mowing, raking or brushing; fungicides are not necessary</p>	
<p><b>Spring Dead Spot</b>- SDS is normally a disease of hybrid bermudagrass. Bleached patches of dead grass 6"-3' in diameter appear at greenup. The fungi associated with SDS are active in early fall, although symptoms only appear the following spring.</p>	<ul style="list-style-type: none"> <li>-Avoid N fertilization after late August</li> <li>-Apply potassium (2 lbs/1000 sq ft)</li> <li>-Raise mowing height</li> <li>-Reduce thatch by dethatching (power rake) or core aeration</li> </ul>	<p>azoxystrobin, fenarimol, myclobutanil, propiconazole</p>
<p><b>Take-all Patch</b> - frog eye spots develop on bentgrass greens. <b>Bermuda Decline</b>- affected bermuda thins; roots, rhizomes and stolons may be dark and discolored</p>	<ul style="list-style-type: none"> <li>-Maintain soil pH at 6.0</li> <li>-Use acidifying fertilizers if soil pH is alkaline</li> <li>-Core aerify and topdress with clean sand</li> <li>-Application of manganese may help</li> <li>-Raise mowing height on bermuda greens</li> </ul>	<p>azoxystrobin, fenarimol, propiconazole, pyraclostrobin, triadimefon</p>
<p><b>Yellow Patch</b> (Cool Season Brown Patch)- yellow rings develop on bentgrass rings during late fall or winter months. This disease often disappears with the advent of warmer weather</p>		<p>azoxystrobin, fludioxonil, flutolanil,</p>

Author: Dr. Alan Windham, Entomology and Plant Pathology, University of Tennessee