

# TURFGRASS DISEASES I



1. **Helminthosporium Melting-out and Leaf Spot**



2. **Stripe Smut**



3. **Rust**



4. **Sclerotinia Dollar Spot**



5. **Rhizoctonia Brown Patch, Yellow Patch, and Seedling Blight**



6. **Summer Patch**



7. **Pink Snow Mold**



8. **Typhula Blight**



9. **Pythium Blight**



10. **Powdery Mildew**



11. **Fairy Rings**



12. **Red Thread**



13. **Slime Molds**



14. **Dog Injury**



1. **Helminthosporium Melting-out and Leaf Spot** diseases are caused by a dozen or more species of the fungus *Helminthosporium*. Dark brown, reddish brown to purplish black or olive-green spots form in leaves and sheaths. The leaf lesions enlarge and develop white-gray or tan centers with a dark margin. Girdled leaves die and drop off. The turf thins and develops a yellow or brownish cast. Irregular areas may die when the stem and root tissues decay. These diseases are favored by alternating dry and wet periods, close mowing, low or excessive nitrogen fertilization, a thick thatch, frequent light sprinklings, and growing susceptible cultivars.

2. **Stripe Smut** is caused by the fungus *Ustilago striiformis*. Pale green plants develop long gray streaks that rupture to release masses of black spores. Infected leaves later twist, shred, and die. Patches of smutted plants die during summer droughts. Smut is favored by excess thatch, frequent irrigations, and growing susceptible cultivars.

3. **Rust** diseases are caused by about a dozen species of the fungus *Puccinia*. Yellow, orange or reddish brown, dusty pustules form in leaves and sheaths of grass that is growing very slowly. Heavily rusted grass appears yellow, thin, weak, and is more susceptible to drought, weed invasion, winter-kill, and other damage.

4. **Sclerotinia Dollar Spot** is caused by the fungus *Sclerotinia homoeocarpa*. Roundish, straw-colored spots, up to 2½ inches across, appear on closely cut bentgrass. On lawn-type turf, the spots are 3 to 8 inches in diameter. If unchecked, large, irregular, sunken areas may develop. Tan lesions with a reddish-brown border form on leaves at the margins of affected patches. A white mold grows over leaves in moisture-saturated air. Dollar spot is favored by excess thatch and very low levels of nitrogen and potassium fertilization.

5. **Rhizoctonia Brown Patch, Yellow Patch, and Seedling Blight** is caused by several species of the fungus *Rhizoctonia*. Roughly circular, light brown patches of thinned grass, up to 2 or 3 feet across, appear in hot, wet weather on closely cut bentgrass. A grayish black ring of blighted grass may border the margin. On most other turfgrasses the roundish patches are up to 2 feet across. The turf is thinned or killed when the crowns and roots decay. Yellow patch appears in cool-to-cold weather as yellow, tan, or straw-colored rings, up to 2 feet across, with "healthy" grass in the center. *Rhizoctonia* and other fungi often cause seedling blight in patches. Seedlings may wilt, collapse, and die (damp-off), resulting in bare areas or thin turf. These diseases are favored by poorly drained soils, excessive moisture, nitrogen fertilization and shade.

6. **Summer Patch** is incited by *Fusarium roseum*, *F. tricinctum* and several stress factors. Straw-colored circles, crescents, or streaks, up to about 2 feet across, usually with healthy grass in the center, attack Kentucky bluegrass during hot, humid, droughty weather. The disease is favored by a thick thatch, close mowing, lack of water, nematode damage to the roots, a heavy compacted soil, excessive nitrogen fertilization in hot weather, and growing susceptible cultivars.

7. **Pink Snow Mold** (*Fusarium* Patch) by the fungus *Microdochium nivale*, usually appears at the edge of melting snow. Round, bleached-tan to whitish gray or reddish brown spots, up to about 8 to 12 inches across, may merge to kill large irregular areas. A dense, white to pale pink mold covers the margin in wet weather. The mold disappears as the grass blades dry. *Fusarium* patch is favored by excessive shade, poor air circulation, a thick thatch, and a deep snow cover or abundant moisture for prolonged periods.

8. **Typhula Blight** (Gray Snow Mold), caused by several species of the fungus *Typhula*, occurs at the edge of melting snow. Roundish, grayish white to straw-colored areas, up to about 2 feet across, may merge to form large, irregular areas. The wet grass is briefly covered with a white-gray mold that may appear as a silvery, membranous crust. Numerous, minute, yellow then dark brown sclerotia form on the grass leaves and crowns. *Typhula* blight is favored by the same conditions as *Fusarium* patch.

9. **Pythium Blight** (Grease Spot, Spot Blight and Cottony Blight), caused by several species of the fungus *Pythium*, is active during very wet weather in spring, summer and fall. Roundish, dark, "greasy" to slimy patches of matted grass, up to 6 to 12 inches across, suddenly appear. The patches fade from reddish brown to light brown as the grass dries. *Pythium* blight may appear in golf greens as streaks that follow water drainage or mowing patterns. White to straw-colored spots **without** a reddish brown border form in the grass blades causing them to twist, collapse, and die. A whitish, cobwebby mold may cover blighted grass in moisture-saturated air. *Pythium* blight is favored by excessive thatch or shade, lush dense grass, abundant moisture, poor air circulation, and a heavy compacted soil.

10. **Powdery Mildew** is caused by the fungus *Erysiphe graminis*. Superficial, white to grayish patches of mold develop on leaves and sheaths. The turf appears dull white (as if dusted with flour), thin, and weak. The leaves may later turn yellow, wither, and die. Mildew is most serious on Kentucky bluegrass growing in moderate to dense shade.

11. **Fairy Rings** are caused by a number of soil-borne fungi. Circles, arcs, or crescents of dark green, fast-growing grass, often with a ring of thin, wilting, or dead turf inside or outside, form in turf. Most rings are up to 15 feet in diameter with some being 50 feet or more across. Mushrooms (toadstools) or puffballs appear in the outer ring of dark green grass of some rings following heavy rains or watering. Fairy rings are favored by buried organic matter and a thick thatch.

12. **Red Thread** is caused by several fungi that infect turfgrasses during prolonged, cool-to-warm weather in very humid areas. Round to irregular, light tan to pinkish patches develop that are 2 to 12 inches across. The spots may merge to form large, irregular, bleached-tan or yellowish areas with a reddish brown cast. Bright coral-pink to blood-red "threads," up to ¼ inch or longer, commonly protrude from the leaf tips and sheaths. The threads are gelatinous at first but later dry and become brittle. This disease is favored by slow-growing, nitrogen- and calcium-deficient turfgrass, excessive thatch, lack of water, and weakening by other stresses.

13. **Slime Molds**, caused by several soil-borne fungi, suddenly appear on grass, other low-lying vegetation or objects during wet weather or following deep watering. The slimy masses, up to about a foot across, are watery-white, gray, cream, or black. They soon dry to form bluish, bluish gray, grayish white, black, creamy yellow, orange, or purple-brown spore masses that are easily wiped off leaving the blades beneath a healthy green or somewhat yellow. Slime molds are favored by dense, lush, well-watered grass and excessive thatch.

14. **Dog Injury** is seen as roundish, straw-colored or brown areas, up to 2 feet across, usually bordered by a ring of darker green grass.

For chemical and cultural control suggestions, a listing of resistant turfgrass cultivars and other information, consult the Extension Plant Pathologist at your land-grant university, or your county extension office.

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