

TURFGRASS DISEASE MANAGEMENT

The most important lawn diseases in New York include leaf spots, patch diseases (necrotic ring spot, summer patch), red thread, Pythium root rot, rust, and snow mold. These diseases can usually be controlled through the use of resistant varieties and proper culture.

Leaf spots are most serious on Kentucky bluegrass lawns when cool and wet weather prevails, usually in the spring. If the diseases progress into early summer, a much more damaging crown rot or “melting-out” stage may develop. Avoid high rates of nitrogen fertilizer in the spring. Raise your mowing height if you notice disease. Contact Cornell Cooperative Extension for information on cultivars of bluegrass and the fescues that are resistant to leaf spots.

Summer patch is a devastating disease that occurs during hot, dry periods. Perennial ryegrass and several Kentucky bluegrass varieties are resistant to this disease and should be included in a new seed or overseeding mixture. Summer patch is caused by a root pathogen. Therefore, any practice that encourages deeper rooting (such as proper pH and fertilization, proper mowing, and irrigation) will make the lawn more tolerant of this disease.

Red thread is usually favored by low nitrogen and potassium fertility. Therefore, maintaining an ample supply of these nutrients should make your lawn more resistant to this disease.

Rust is common on Kentucky bluegrass and perennial ryegrass in the fall. It is favored by low nitrogen levels. Fall fertilization should prevent a rust problem.

Snow mold is one of the more serious diseases in upstate New York. The symptoms of snow mold are not usually noticed until after the snow recedes in the spring. Snow mold is a winter disease that is enhanced by succulent growth. Proper fertilization in the fall with nitrogen and potassium should help keep the damage to a minimum. Timing of application is most important. Avoid fertilizer applications after October 1 and just before the last mowing.

Some natural organic fertilizers and compost will suppress and sometimes prevent disease problems. Compost may contain microorganisms that are natural antagonists to pathogens. Diseases that have been suppressed by these products include red thread and dollar spot. Examples of natural organic fertilizers with known disease suppression include Ringer (Judd Ringer Corporation) and Sustane (composted turkey litter). Other diseases may occur in home lawns.

The following listing provides a description of those diseases found in lawn grasses and suggested measures for control of the diseases:

ANTHRACNOSE - Spots vague or variable in shape. Leaf ends are often tan or brown, giving turf a brownish cast. Most common on turf that is not growing rapidly. Spring-fall. Maintain adequate nitrogen fertility, but avoid excess nitrogen in spring. Avoid drought and water early. Apply chlorothalonil, fenarimol, thiophanates, triadimefon, or propiconazole.

BROWN PATCH (*Rhizoctonia* blight) - Brown patches a few inches to several feet in diameter. Bare spots may occur where turf is killed. Most common in summer during periods of hot, humid weather. Avoid excess nitrogen and excess water. Water early in the day. Use of some organic fertilizers may reduce disease severity. Restore lawn. Pesticides that can be used include chlorothalonil, fenarimol, iprodione, mancozeb, propiconazole, quintozene, thiophanate, triadimefon, and vinclozolin.

DOLLAR SPOT - Bleached leaf spots with brown borders, often extending across entire leaf blade. Often in small silver-dollar-sized patches at first, but may then spread over the lawn. June-September. Assure adequate fertility. Avoid watering frequently or watering in late afternoon or evening. Use of some organic fertilizers may reduce disease severity. Resistant Kentucky bluegrasses include Adelphi, America, Aquila, Bonnieblue, Eclipse, Majestic, Midnight, Parade, Park, Touchdown, Vantage, and Victa. Apply chlorothalonil, fenarimol, iprodione, propiconazole, thiophanate, triadimefon or vinclozolin.

FAIRY RINGS & TOAD STOOLS - Fairy rings occur as arcs or rings of fast-growing, dark-green grass that often surrounds a ring of thin or dead grass where mushrooms may grow. Rings vary in size. Mask symptoms with good fertility, watering, and mowing programs. Rake down or pick and discard the mushrooms.

FUNGAL LEAF SPOTS & BLIGHTS - Oblong brown leaf spots with dark red, brown, or purple borders. Overall yellowish cast to turf; generally does not occur in distinct patches. If severe, leaves shrivel and entire plants discolor and die. Spring-fall. Avoid high-nitrogen nutrition in early spring. Water early in the day. Renovate lawn. Resistant Kentucky bluegrasses include Bonnieblue, Challenger, Eclipse, Fylking, Midnight, Nassau, Parade, and Touchdown. Avoid systemic fungicides. Apply chlorothalonil, iprodione, mancozeb or vinclozolin.

GRAY SNOW MOLD (*Typhula* blight) - Bleached, tan, small or large patches covered with white-gray, fluffy mycelial growth. Tiny, yet visible, red or brown spherical fungal sclerotia embedded in infected leaves. Rarely kills grass plants. December - March. If fungicides are used they should be applied before long lasting snow cover: chlorothalonil, fenarimol, iprodione, propiconazole, quintozene, or triadimefon.

NECROTIC RINGSPOT & SUMMER PATCH (formerly *Fusarium* blight syndrome) - Irregularly shaped, bleached leaves or dying leaf ends. Irregular crescents or circles of dying grass with or without a small patch of healthy grass in the center. April - November. Remove excess thatch. Avoid high-nitrogen, excessive watering, and drought stress. Avoid soil pH below 6.2 and drought stress. Resistant Kentucky bluegrasses include Adelphi, America, Aspen, Columbia, Eclipse, Glade, Midnight, Mystic, Nassau, Parade, Ram I, Sydsport, Touchdown, Vantage, and Windsor. Mix perennial ryegrass seed with Kentucky bluegrass seed when overseeding. Where the disease has occurred in previous years, apply fenarimol or iprodione beginning in April.

PINK SNOW MOLD (*Gerlachia* patch) - Bleached brown, small or large patches covered with pinkish fluffy mycelium. No sclerotia. Can rot crowns and kill grass plants. Autumn - spring. Avoid nitrogen application in late fall. Remove thatch. Rake matted grass in spring. Resistant Kentucky bluegrasses include Adelphi, Birka, Bonnieblue, Bristol, and Touchdown. Worsened by cool, wet autumn or spring and by snow over unfrozen soil. Snow is not necessary for disease. In repeatedly severe cases, apply chlorothalonil, fenarimol, iprodione, propiconazole, quintozene, thiophanate, triadimefon or vinclozolin.

POWDERY MILDEW - White, powdery growth on leaves, which appear frosted. Usually found in shady areas. Infected leaves become yellow and then die. July - October. Reduce shading and avoid excess nitrogen. Plant shade-tolerant varieties. Resistant Kentucky bluegrasses include A-34, Bristol, Eclipse, Glade, Nugget, and Touchdown. Only where infection is extensive and severe, apply fenarimol, propiconazole, triadimefon, or thiophanate.

PYTHIUM BLIGHT - Diseased patches often follow shapes of wettest areas. Plants that are killed feel slimy or greasy in early morning. Most common during hot weather on poorly drained sites. Avoid excess nitrogen and excess water. Do not mow wet grass. When the disease occurs, apply etridiazole, fosetyl Al, metalaxyl, or propamocarb. Renovate lawn.

PYTHIUM ROOT & CROWN ROT - Small or large areas of lawn appear thinned, off-color, and slow growing. A general decline. Year-round. Avoid excessive water and frequent use of triadimefon. In severe cases apply etridiazole, fosetyl-AI, metalaxyl, or propamocarb.

RED THREAD - Pink to red threadlike fungus strands grow from the ends of leaves. Entire leaves eventually die and turn brown. Irregularly shaped patches. June - July. Maintain adequate fertility and avoid nitrogen deficiency. Resistant Kentucky bluegrasses include A-34, Adelphi, Birka, Bonnieblue, Challenger, Monopoly, Nassau, and Touchdown. The use of some organic fertilizers will reduce disease severity. When the disease occurs, apply chlorothalonil, fenarimol, iprodione, propiconazole, or triadimefon in spring and fall.

RUST - Small orange spots occur on leaf blades; later the grass develops a reddish discoloration and the affected plants shrivel and die. July - September. Avoid nitrogen deficiency and drought. Resistant Kentucky bluegrasses include Fylking, Park, and Sydsport. Avoid systemic fungicides. Only where infection is extensive and severe apply chlorothalonil, mancozeb, propiconazole or triadimefon.

SLIME MOLD White, yellow, bluish, or dark-gray fungus fruiting structures appear on the lawn. Patches of grass become dull gray, but do not die. Late summer. Rake or wash slime mold off leaves. Do not use fungicides.

SMUTS - Leaf blades become yellowish, wi