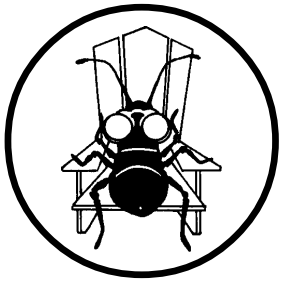
Managing Snow Mold Diseases: Typhula Blight and Microdochium Patch



Pest Watch

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For decades, the Northeast has been plagued with severe snow mold diseases. This has been due in large part to heavy and persistent snow cover characteristic of this region. More recently, however, the relatively wet and mild winters coupled with cooler and wetter springtime conditions have promoted more severe outbreaks of Microdochium Patch. Now is the time to begin considering strategies for minimizing snow mold damage this winter and the following spring.

In New York State, there are two major snow mold diseases causing problems on nearly all turfgrass grown in the state, whether they be on home lawns or on golf courses. These include gray snow mold or Typhula blight, caused primarily in our region by the fungus *Typhula incarnata*, and pink snow mold or Microdochium Patch, caused by the fungus *Microdochium nivale*. These diseases each affect turfgrasses quite differently, with Microdochium Patch being potentially the most damaging. The management strategies for these snow mold diseases must necessarily be multifaceted, including cultural, biological, and chemical approaches.

Fertility management is key to minimizing snow mold damage. It is important to avoid heavy fertilizer applications late in the fall to avoid stimulating unnecessary foliar growth that is more susceptible to infection. Fertilization should occur in the late summer, early fall or should be applied as applications after top growth ceases, well after any Indian summer. Often heavy dormant applications of organic fertilizers, particularly those that are compost-based, are quite helpful in minimizing snow mold damage. These materials provide significant levels of biological activity that help to suppress the activities of the snow mold pathogens. Applications of such composted materials to sensitive areas of between 10 and 200 lbs/1000 ft^2 have been effective. However, you should make sure that composts are adequately stabilized and have an “earthy” odor.

Water management is another key component of successful snow mold management. It is important that turfgrass soils be well drained and free of significant levels of compaction. It is often helpful to maintain lawn turf at a minimum cutting height so that a dense turf canopy, which often holds more moisture and maintains higher relative humidities, does not become matted down with snow cover. Thatch accumulation should also be kept to a minimum since excessive thatch levels can result in high levels of water retention. It is equally important to reduce the amount of snow cover, if at all practical, and to prevent compaction of the snow cover on disease-prone areas. Generally, the greater the snow cover, the longer the soil will stay wet in the spring. Maintaining low soil pH (<6.0) and balanced soil fertility is particularly important in reducing the severity of Microdochium Patch damage.

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Snow Mold Diseases

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Preventive fungicide applications are quite helpful in minimizing snow mold damage. However, oftentimes the fungicides effective against Typhula blight are not always effective against pink snow mold. Among the better choices for fungicide applications are iprodione (e.g., Chipco 26019 2F) applied at 4-8 oz./1000 ft^2, azoxystrobin (Heritage 50WG) applied at 0.4 oz./1000 ft^2, or PCNB (e.g., Terrachlor 75W) applied at 8 oz./1000 ft^2. These fungicides are usually applied in mid to late October up until mid November prior to turf dormancy and snow cover.

In the spring, be sure to rake out any diseased areas to facilitate drying and fertilize to promote turfgrass growth. Snow molds are generally not devastating. But, if left untreated, could destroy vast areas of turf. So take some time now to prepare your turf for next spring!

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Turf Microbiology

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cial microbes to the root zone. Chemical pesticides should be used as sparingly as possible. The goal: a balanced and active microbial population, and heathy green grass.

In future reports on this subject we will examine other questions: For example, how do cultural practices (mowing height, leaving clippings on the turf, watering, fertilizing, cultivating or removing cores of the turf, de-thatching, topdressing, applying fungicides, applying insecticides, liming) affect turfgrass microbiology?

What can we do to improve microbial activity and soil health? While cultivation plus topdressing relieves soil compaction, manages thatch, improves drainage by breaking through soil layers, and aerifies the soil; what is the effect of short term inoculation for biological control? Is there a gradual increase in rooting depth by adding compost?

What are the roles of organic matter and humus in turfgrass microbiology? Adding organic matter increases activity until nitrogen is limiting. What about the release of complex and simple nutrients that can be absorbed by roots, or changes in the population profile. Humus — organic matter at the endpoint, no longer degradable by bacteria — results from the cycling of bacterial products. What are the special roles of actinomycetes, saprophytic fungi and nematodes?

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