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Snow mold diseases of turfgrass are typically dependent on snow cover or prolonged periods of cool, wet weather. Disease development also is favored by excessive thatch, poor drainage, late fall fertilization (before grass dormancy), and high soil moisture. In Wyoming, two types of snow mold are common and can occur together. *Typhula* blight (gray snow mold) and *Fusarium* patch (pink snow mold) are caused by the fungi *Typhula incarnata* and *Microdochium nivale*, respectively. These fungi affect a wide range of turfgrass species, especially bluegrass and bentgrass.

Fungal structures such as sclerotia, spores, and mycelium are produced on infected turf and survive warm, dry periods of summer dormant in the thatch layer. When environmental conditions are favorable for disease development,



Figure 1



Figure 2

these fungal structures germinate or resume growth, infecting grass and continuing the disease cycle.

Typhula blight

- Often called gray snow mold.
- Found primarily in western Wyoming.
- Develops under prolonged snow cover or under heavy mulch.
- Symptoms are often first apparent in the spring as the snow melts (Figure 1).
- Optimum disease conditions include lush grass growth prior to snow cover, prolonged snowcover over unfrozen ground, high soil moisture, and temperatures of 32 to 35 degrees Fahrenheit.

What to look for

- Patches of light colored grass matted together by grayish white threads (or hyphae) as the snow melts (Figure 2).

- Yellow to brown or black, pinhead-sized to 3/16 inch diameter irregularly round bodies (fungal sclerotia) embedded in leaves and crowns (Figure 3).
- As grass dries, the mat disappears and the grass becomes crusty and brittle.
- Irregular small circular areas (3 to 6 inches diameter) of yellow to yellow-brown grass are evident. These patches can fuse together to cover areas of 12 inches or more (Figure 1).

Prognosis

- If crowns are not killed, the turf will regrow but will be delayed.
- Under optimal disease conditions, crowns will be killed and regrowth will not occur. Replanting or re-sodding will be necessary.



Figure 3

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Figure 4

Fusarium patch (Figure 4)

- Pink snow mold often describes the phase of this disease when it is associated with snow melt.
- Although primarily a late fall-winter-spring disease, the fungus can infect and cause damage whenever temperatures are below 60 degrees Fahrenheit with high humidity for prolonged periods. The disease is **not** limited to snow-covered turf.
- Optimum disease development temperatures are between 35 to 45 degrees Fahrenheit.
- Found statewide.

What to look for

- Pale, yellow grass in an irregular outline. Often covered with a light pink mat of fungal hyphae and spore-producing structures.

- As grass dries, affected areas become crusty.
- Patches may appear similar to Typhula blight; however, no sclerotia are present in leaves or crowns.

Prognosis

- Usually only leaves are colonized so regrowth will occur.
- Under severe conditions, crowns can be killed. Replanting or re-sodding may be necessary.

Management of Snow Molds

Cultural methods

Avoid late fall nitrogen applications before turf dormancy. Ideally, do not fertilize within six weeks of dormancy or use only slow-release forms of nitrogen late in the growing season.

Avoid straw mulches.

Avoid excessive thatch.

Prevent snow compaction and ice formation.

Improve soil aeration.

Minimize snow accumulation before ground is frozen.

Mow in fall until grass goes dormant so that snow does not fall on a tall canopy.

Promote rapid drying and warming in spring by raking affected areas. A light spring application of nitrogen stimulates regrowth of these areas.

Chemical methods

Generally, fungicides are not necessary for home lawns because disease can be successfully managed via the cultural practices listed above. If fungicide treatments are necessary, the proper timing of the application is critical for effective management. In general, applications must be made before permanent snowfall or for Fusarium patch, when temperatures regularly drop below 45 degrees Fahrenheit.

Many fungicides are listed for snow mold control and contain active ingredients such as chlorothalonil, iprodione, PCNB, propiconazole, or triadimefon. Label directions frequently change as new information on disease management becomes available. Therefore, always consult product labels for the most recent information on proper chemical usage. All chemical applications must be made according to the label directions.

Acknowledgment: Photographs were provided by W. M. Brown, Jr. (Figures 1 and 3) and L.G. Skoglund (Figures 2 and 4).

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Edna L. McBreen, Director, Cooperative Extension Service, University of Wyoming, Laramie, WY 82071.