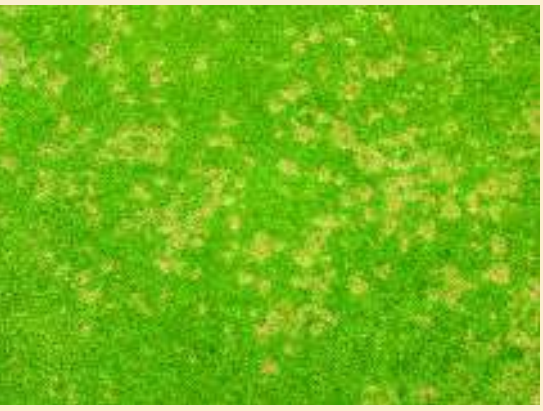
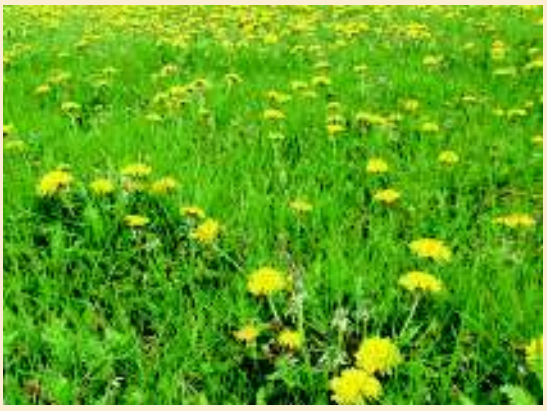
INTEGRATED PEST MANAGEMENT FOR TURF

Publication 845





Ministry of Agriculture,
Food and Rural Affairs

Ontario

Disease Cycle: The fungus survives through the summer as sclerotia in the thatch or soil. In winter, sclerotia germinate under snow cover and fungal hyphae infect turfgrass plants, especially as they weaken after long periods of snow cover. In spring, the damage is evident after snowmelt, but the fungus is no longer active after snowmelt. Extended periods of snow cover of 2 months for *T. incarnata* disease, and 3 months or more for *T. ishikariensis* can cause heavy damage.

Management: Minimize thatch and prevent succulent growth into late fall, by mowing until leaf growth stops. Avoid applying nitrogen any later than 6 weeks before dormancy. In the spring, after damage has occurred, rake matted areas to encourage drying. Promote new growth by lightly fertilizing damaged turf. Fungicides can be applied just before snowfall as a preventive measure.

Pink snow mould and Fusarium patch (also known as Microdochium patch)

Pathogen: *Microdochium nivale* (formerly known as *Fusarium nivale* or *Gerlachia nivalis*).

Hosts: All cool season turfgrasses can be hosts.

Symptoms: Pink snow mold patches are orange to red-brown up to 25 cm across (Figure 5-6, on page 67, and Figure 5-7, on this page). Fuzzy hyphal growth is white to pink, often on the outer margin of patches after snowmelt. Pink snow mold patches are more bleached white on Kentucky bluegrass than on creeping bentgrass (Figure 5-8, on this page). No sclerotia are produced, which distinguishes this disease from grey snow mould (Figure 5-6, on page 67).

Figure 5-7. Pink snow mould symptoms are apparent as the snow melts.

Figure 5-8. Pink snow mould on Kentucky bluegrass (left) and creeping bentgrass (right). *(Photo: Dr. Tom Hsiang, University of Guelph)*

In spring and fall, the pathogen causes Fusarium patch with no snow cover (Figure 5-9, on this page, and Figure 5-10, on this page). Fusarium patches are small, up to 5 cm across, often intensely reddish-brown. Around the edges of pink snow mould patches, there may be intense fungal activity after snowmelt giving this bronze outer zone (Figure 5-11, on this page).

Figure 5-9. Fusarium patch on creeping bentgrass causing irregular shaped patches.

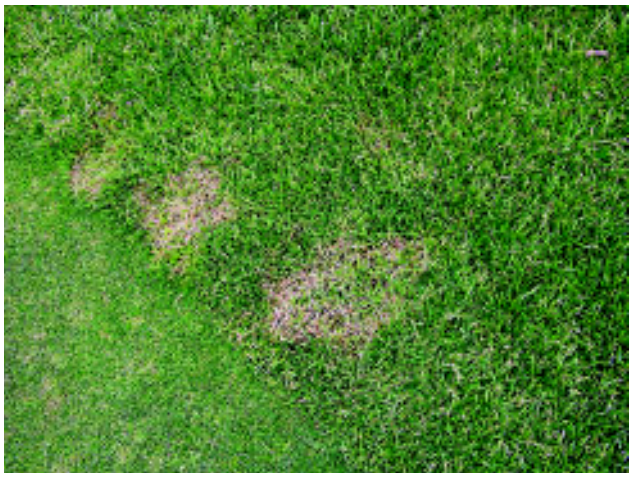


Figure 5-10. Fusarium patch on Kentucky bluegrass causing small distinct round sunken patches.

Disease Cycle: The fungus survives through the summer as spores and mycelium in thatch or soil. In autumn, under cool, wet weather and even without snow cover, spores may germinate or mycelium may grow from thatch or soil and infect leaves, causing Fusarium patch. Under snow cover, grass blades are infected leading to typical pink snow mould patches.

The circular reddish brown patches with fuzzy hyphal growth at the edges are evident in the spring after the snow has melted. The fungus may continue activity well into the spring and cause Fusarium patch under cool wet conditions. The fungus is not active under warm summer conditions, although it may sometimes be seen after prolonged wet periods in summer.

Figure 5-11. Actively growing Fusarium patch causing reddish margins at the edge of a pink snow mould patch.

Management: Minimize thatch, since this is where the fungus survives summer as mycelium and spores. Prevent succulent growth into late fall, by mowing until leaf growth stops, and not applying nitrogen any later than 6 weeks before dormancy.

After damage has occurred, rake matted areas to encourage drying. Promote new growth by lightly fertilizing damaged turf. In autumn, remove surplus water, improve air circulation, rake leaves and avoid heavy topdressings. Fungicides can be applied just before snowfall as a preventive measure, and with wet cool weather in the spring and fall.