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PLSC 464
Professor Tripepi
Homework #4
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Pink Snow Mold/Microdochium Patch in Turfgrass caused by *Microdochium nivale*



Source: <http://www.uoguelph.ca/~thsiang/snow/snowmold.htm> Obtained November 18, 2003. Pink Snow Mold in Kentucky bluegrass left, Creeping bentgrass right.



Source: <http://www.uoguelph.ca/~thsiang/snow/snowmold.htm> Obtained November 18, 2003. Severe infection of Pink Snow Mold in a Creeping bentgrass golf green.3

Description and cause of the problem:

The above pictures are of Pink Snow Mold which is a turf disease caused by the imperfect fungus *Microdochium nivale*, a Deuteromycete (Latin). This disease has two forms in turf; one that first occurs under snow cover (Pink Snow Mold) and one that develops in the absence of snow cover (Microdochium patch). These names are often used interchangeably in the trade. This disease affects all common cool-season turfgrasses in the Northwest. Some species are more susceptible than others. Bentgrass and annual bluegrass are primary species of turf found in golf greens in the Northwest and they are also the most susceptible to *Microdochium nivale*. Ryegrasses, fescues and Kentucky bluegrass are fairly susceptible as well. The disease causes a leaf blight symptom in the turf that is initially white and turns pink at the margins when exposed to UV light after snowmelt. The crown and roots are not affected unless the disease goes untreated or there is over 90 days of snow cover, in which case the plant can die. The disease appears in patches 3-12" in diameter, and they tend to coalesce and expand. The patches tend to be matted down and circular (Christians). The lower the turf is mowed the more circular in appearance the patches are. This is due to the lower amount of obstruction for the mycelia to grow out radially. This disease attacks lush, healthy turf in the fall, especially turf with high N levels in the shoots. This presents a problem because most fertilizer recommendations tell people to fertilize turf well going into the fall for quick spring green-up. The spores germinate in late fall, the damage occurs under snow cover in the winter in the spores and mycelia go dormant in the summer, once temperatures are above 55° F (Johnston). There are several other environmental factors

that contribute to infection, including cool-wet weather, poor light, poor air movement, excessively thick thatch layers, poor drainage, leaf debris and high humidity (Johnston).

Actions and Remedies to the Problem:

There are physical, cultural and chemical controls that will help prevent or treat

Microdochium nivale from producing Pink Snow Mold. Cultural practices include:

minimizing thatch, improving drainage, improve air flow, avoiding snow compaction, remove or melt snow, reducing shade, proper N fertility and mowing until snowfall.

Physical practices include verticutting turf to reduce matting, raking damaged areas, core aerification and temporarily covering greens or other turf areas to warm them in the

spring. There are various preventative fungicides that are effective on *Microdochium*

nivale. Recommended fungicides include: flutolanil, PCNB, azoxystrobin, thiophanate-

methyl, chlorothalonil, trifloxystrobin, Iprodione and propiconazole (Christians). Some

of the commonly used fungicides that I have used and found to be effective in my

experience are: Banner (propiconazole), Compass (trifloxystrobin), Daconil

(chlorothalonil), Cleary's 3336, Heritage (azoxystrobin) and Terroclor (PCNB). These

preventative fungicides should be applied in the late fall, just prior to the first snow fall.

Caution should be used when applying PCNB because it is phytotoxic to actively

growing bentgrass (Latin). Turf, especially bentgrass should be dormant when applying

PCNB. If you are planting a new lawn and have a choice of which turfgrass species to

plant the Kentucky bluegrass and the fine-leaf fescues are the most resistant to

Microdochium nivale of all cool season species. Resistant cultivars can be found at

www.ntep.org.

Works Cited

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