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Maximizing Snow Mold Control

By JIM MERICK & TOM VRABEL, Ph.D. CHIPCO[®] Development Team

With the coming of fall, we again think about winterizing our spray equipment. But even before this is done, it is important to consider whether or not a fungicide application is needed for snow mold control.

Gray Snow Mold

In areas with permanent snow cover, gray snow mold or typhula blight caused by *Typhula incamata* or Typhula ishikarensis is a very destructive disease of turfgrass. Turfgrass species which are susceptible include bentgrass, annual bluegrass, fescues and perennial ryegrass.

Although having permanent snow cover on the ground for several months is necessary for typhula blight to develop, other conditions that stimulate cover, such as leaves, mulch and desiccation 'cover,' can cause the same effect.

The gray snow mold fungus generally grows and infects turfgrass when temperatures range between 30-50 degrees Fahrenheit. The effects of gray snow mold are worst when snowfall occurs on unfrozen turfgrass which has not yet been "hardened" by frost. When snowfall occurs on frozen ground, the disease usually does not develop until the following spring, when snow begins to melt.

As this snow melts during spring, the typhula blight fungus can be seen with the naked eye as sclerotia. These spores will eventually dry up and no longer be visible.

The sclerotia, which are the dormant state of this disease, allow the typhula blight fungus to survive over the summer. They are resistant to warm temperatures as well as the fungicides used in summer spray programs. With the coming of cool, wet weather during the fall, these sclerotia will swell, germinate and produce new spores.

Pink Snow Mold

Pink snow mold (Microdochlum nivalis—formerly Fusarium nivale), is also a devastating turfgrass disease in regions that have long periods of cool wet weather with frequent "snow-falls" and "snow-melts." This disease organism does not need a permanent snow cover to germinate and infect turfgrass. Pink snow mold can be observed in the late fall through spring if weather favors germination and growth of the spores.

Fungicide treatments used for snow mold control are longer lasting than similar treatments made to control summer diseases. This is because with snow mold applications, the fungicides are not removed through mowing as the turf grows. In fact, single applications usually provide winter-long control, assuming that permanent snow cover is maintained until spring. Mid-winter thaws can dissipate fungicide efficacy due to exposure to sunlight, wind, and rain. They can also accelerate snow mold growth. If a thaw does occur, a second fungicide application is recommended to maintain turf protection until spring "green-up."

Cultural and Chemical Control

Cultural management of these diseases should always be considered in any control program. Be particularly aware of conditions that favor disease development during the late fall and winter months, such as poor drainage, excessive thatch, high nitrogen fertility and high relative humidity. Also, keep in mind that both gray and pink snow molds can occur in the same location.

Chemical control of gray and pink snow mold can be achieved with a tank mix combination of CHIPCO[®] 26019 FLO + Daconil[®] 2787 FLO at 8 + 8 fl. oz./1,000 ft.² Alternatively, apply CHIPCO[®] 26019 WP + Daconil[®] 2787 FLO at 4 oz. + 8 fl. oz./1,000 ft.² This tank-mix application should be timed close to the first snow cover. A second application should be applied to the turfgrass when a mid-winter thaw occurs.

Both CHIPCO[®] 26019 and Daconil[®] 2787 have activity on gray and pink snow mold organisms. However, a combination of the two products results in increased control of these diseases. In regions of the U.S. which experience only pink snow mold, CHIPCO[®] 26019 FLO alone at 4-8 fl. oz./1,000 ft², or the wettable powder formulation at 2-4 oz./1,000 ft² will provide very good disease control.

Confidence in the tank mix of CHIPCO[®] 26019 + Daconil[®] 2787 for snow mold control has been proven through more than a decade of research data generated by turfgrass pathologists at Michigan State, Rutgers, University of Massachusetts and other universities.

CHIPCO is a registered trademark of Rhone-Poulenc. Daconil is a registered trademark of ISK Biotech.





Summer is finally here? The heat that we experienced at Northfork was not only a test in endurance for the players in our Championship, but also for the turf that was expertly maintained by Paul Mayes and staff. (Can you say "Full Sun?")

My observation put the final score as MGCSA members 10 and the Links at Northfork 4.

* * * *

Congratulations go out to Paul Mayes, our new MGCSA champion for '93. Paul applied a little heat of his own with a 76 to take all honors.

Prior to the tournament, the Links, like many of our courses, was blessed with yet another torrent from the sky. Then the sun and heat, overall excellent playing conditions, host superintendent takes all honors...No Pressure.

* * * *

John Katterheinrich and Company at Interlachen are to be commended for their truly outstanding job in preparation for the Walker Cup. Regardless of the heat and rain, nothing was out of place. Obviously, the Americans loved it, and the bagpipes sounded "extra sweet" as I was told from a reliable source.

John and his staff had to deal with an opening day rain, coupled with all of that traffic. . . No Pressure.

Bill Whitworth, Conference and Education chair, and his committee are putting the final touches on our annual conference.

Going to the Convention Center in Minneapolis certainly will be a new experience for all of us, but I encourage everyone to be optimistic and supportive of this move. Our Association continues to grow, and so does our field and all the responsibilities connected with it. We must be prepared to put the horse before the cart and not the other way around.

Check out the agenda in this issue that Patty Knaggs has written for Conference '93. It looks like we are *really* going downtown...No Pressure.

* * * *

Upcoming is the 9th annual Harold Stodola Research Scramble on September 13. I trust many of you have signed up for this important fundraiser and are looking forward to another test in golf at Hillcrest Country Club.

George Ostler and Company certainly will handle anything that Mother Nature has to offer and will welcome us with a fine track we can all admire...No Pressure. Finally, congratulations to Tom Fischer, CGCS, and his people at Edinburgh U.S.A. on their fine job of hosting the Minnesota LPGA Classic. Judging by the photographs taken by Dale Wysocki, everything was picture perfect, if you'll pardon the pun.

The Burnet Classic, The Minnesota LPGA Classic and the Walker Cup...how are we doing so far, not to mention other prestigious events of not so long ago.

I think there is a definite trend here. Certainly there are many beautiful facilities nationwide with fine staffs. However, Minnesota golf courses and surrounding out-ofstate member courses are increasingly drawing national attention.

We as Superintendents take on more and more challenges and look as though we persevere no matter what the weather...Absolutely, No Pressure!

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