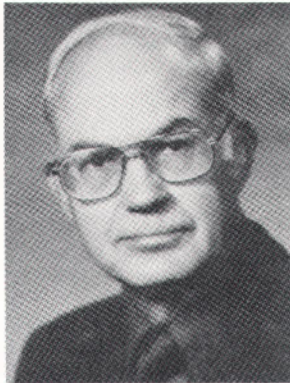


## Wisconsin Pathology Report

# Snow mold: causes, control suggestions —and some perceptions



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In most years, snow mold is a very damaging disease to non-protected fine turf surfaces. Our long winters, often preceded by periods of cold, wet rains and followed by heavy snowfall that keeps the frost level scant or non-existent is ideal for the development of snow mold. Late springs, especially when they are wet, further aid and abet serious snow mold problems. So it is worth a few minutes of time to review snow mold causes and control. We'll also comment on some of our observations with snow mold control research over the past few years, as well as some general observations on snow problems in the state.

### CAUSES OF SNOW MOLD

**Typhula, or gray snow mold**, is the most common type of snow mold we see in Wisconsin. In the northern half of the state, *Typhula ishikariensis* var *canadensis* is the predominant pathogen, while in the southern half of the state the fungus *Typhula incarnata* predominates. When sclerotia are present in the springtime, the two can be differentiated by the much smaller sized sclerotia of *T. ishikariensis*. (Sclerotia are the tiny black or brown bodies found embedded in the diseased turf or on the leaf surface.) *Typhula* is usually much harder to control in



the northern part of the state. While this may be due in part to the different fungus, we think the primary reason is the longer, more favorable environment for snow mold.

The second disease has long been called "pink snow mold" or "pink patch" because of the pinkish cast to fresh infections in some instances. (The latter is not a good name, because it is now the accepted name for a summer disease caused by the fungus *Limonomyces*.) The name of the causal organism has been changed several times. Historically, it was called *Fusarium nivale*. So it's sometimes also incorrectly called "Fusarium patch." The botanical name had been changed to *Gerlachia*, and more recently, *Microdochium*. Pink snow mold sometimes damages turf in late fall during cold, damp weather, but more commonly it occurs in late winter or early spring. It has become an increasing concern on well-managed fairways where it often appears with a late season snowfall.

Other low temperature diseases occasionally occur in Wisconsin and the upper midwest. Minnesota has reported *Sclerotinia borealis*, a fungus producing much larger sclerotia than *Typhula*, causing damage on occasion. The fungus *Acremonium boreale* has been observed in association with snow mold here and elsewhere. We even observed red thread causing winter damage during a relatively warm wet period in December, and a few unknowns occur upon occasion, but they've not become important.

### SOME CONTROL SUGGESTIONS

In most instances control measures are selected to provide control for both gray and pink snow mold, though increasingly, some fairways are being treated primarily with a pink snow mold fungicide because of cost and frequency of the problem there. Several chemicals have registra-

tion for snow mold, and most of these will do some good where disease pressure is not too severe, and especially where "summer" fungicides have also been applied into September and October. Research, observations and experience indicate that combinations of two or more good fungicides have given better results when disease pressure is high, rather than one fungicide applied singly. In the northern part of the state, best success has been achieved when an inorganic mercurial (Calo-clor or Calo-gran) is combined with pentachloronitrobenzene (PCNB) (ProTurf FF II, Terraclor or Turfcide). Combining them at half the labeled rate of each product has given virtually as much protection as higher rates. Better success yet is gained when an application of chlorothalonil (Daconil 2787) or PMA-Thiram (ProTurf Board Spectrum Fungicide) is made about mid-October. This also affords some protection against last fall dollar spot or early pink snow mold.

In southern Wisconsin, chloroneb (ProTurf Fungicide II, Terremec SP) has often performed a little better than PCNB in combination with mercuries, and some superintendents have been happy with either of these products alone.

These suggestions are only applicable to greens, tees and aprons at distances greater than 25 feet from water, since mercuries can only be used there.

PCNB has become increasingly important as an economical and reasonably effective treatment for fairways, especially for control of pink snow mold. Rates of four ounces/1000 ft<sup>2</sup> of the 75% formulation have given nearly as good control as higher rates, and in some trials, three ounces of PCNB 75W and two of Terremec SP have been slightly superior to PCNB alone against pink snow mold. Such a combination might improve activity against gray snow mold, too but it hasn't been present in recent years' trials, so we don't know that for sure.

When should treatments be made? We used to think that late applications, just before "permanent" snowfall was best, but late October treatments last year at Westmoor were better than mid-November treatments! Some less

effective chemicals failed completely with the second date. In the Wausau trial, there was not much difference. Trials in previous years have trended the same way. Our 1984-85 results were not striking, as there was relatively little disease. However, there was enough to support earlier years' observations that neither the newer registered fungicides nor several experimentals have provided as consistent snow mold control as the earlier "tried and true" compounds.

Two other comments seem in order. First, our most common snow mold failures in recent years have been on courses where transitions in superintendents have occurred, and proper treatments sort of "fall through the slats." If you're in a new location this year, my admonition would be: Don't take anything for granted on snow mold control!" Secondly, the northern part of the state suffered severely this past winter from a long siege of ice that began in December and lasted through March. In most situations the cause was obvious, but in marginal areas, the damage sometimes mimicked snow mold. Laboratory tests told us that the problem was not disease. We hope no part of the state fares badly this winter—either from fungal or physical damage!

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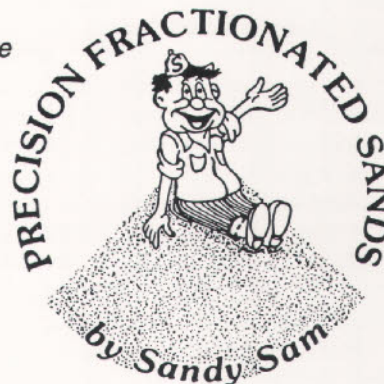
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**High Fantasy** continued

pect (I would) to make more than existing department heads. This will stifle your potential earnings at your club, unless you are the GM! I think this concept not only threatens our salary as Golf Course Superintendents, it also threatens our identity and stability. If the Golf Course Superintendent has a good year, the GM gets the praise. If the golf course has a bad year, color the golf course superintendent GONE.

The GM concept isolates the Superintendent from the members of the club. We need that contact to sell ourselves, our programs and our ideas to the membership, the Green Committee and the Board **directly**, not through a figurehead.

And let's face it — the GM will end up being a false title anyway. Most will never have control over

the Golf Committee or the Green Committee or the House Committee. There is great risk he will be resented, no matter how sincere. When he goes to buy one of those \$50,000 tractors, the House Chairman will declare that the bar furniture is needed much more. What problem has the GM solved here? He will be subjected to fierce lobbying and chances are that the strongest and most convincing chairman will prevail, NOT the most pressing problem.

I subscribe to the old saying "if it ain't broke, don't fix it," when it comes to this proposal. If I didn't have respect for the NCA and its officials, I would suggest they were feigning seriousness. I am convinced, however, that the CMAA harbors a gene that compels them to constantly and con-

tinually promote this idea, in hopes of creating another rung for their club manager members to step up. The ultimate solution for us, if this silly notion crops up, is to apply for the job. I think many of us would get it. But that doesn't change the fact that the idea has little or no merit.

The problem of the general manager concept is that it is high fantasy. Most clubs have seen that and left things well enough alone. "Greater than the tread of mighty armies," wrote Victor Hugo, "is an idea whose time has come." Well, the GM idea is one whose time **hasn't** come and probably won't. It's a bad idea that won't be instituted, no matter how often it is brought to the table. It doesn't need to be revised or refined or resurrected; it needs to be buried.