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LAWN & TURF

MORE ON PHYTOTOXICITY RISK WITH PCNB
by Paul Vincelli

I recently wrote briefly about the excellent efficacy of PCNB against pink snow mold and about the potential for this fungicide to cause phytotoxicity to turfgrass. Because of the rather widespread use of PCNB for control of pink snow mold / Microdochium patch, a follow-up article is in order.

To begin, I'll point out that many snow mold tests have been conducted with PCNB where there has been no report of phytotoxicity. Thus, phytotoxicity does not always result from application of PCNB. However, there are numerous cases of phytotoxicity in the literature I refer to when developing recommendations. For example, there is a report of phytotoxicity from PCNB applied for snow mold control in each of the past three issues of the journal *Fungicide and Nematicide Tests*. Also, an article was published in *Golf Course Management* one year ago describing repeated cases of phytotoxicity from PCNB over a three-year test against snow mold, especially with the flowable formulation. Other examples can be found by looking further into the literature.

The greatest risk of phytotoxicity from PCNB is when the weather following application is above 70EF. While such temperatures are not common during the winter, they can occasionally be reached during the normal application window for pink snow mold and Microdochium patch in Kentucky. Furthermore, there is evidence that PCNB residues in the soil can stunt the growth of plant roots. Since PCNB has such a long half-life in soil, I would be concerned about phytotoxicity showing up during warm spells in spring any time PCNB is applied past mid-January.

I am only aware of phytotoxicity reports from PCNB on creeping bentgrass and *Poa annua*; of those, evidence suggests creeping bentgrass is the more sensitive. I am always concerned whenever a product causes phytotoxicity to either of these grasses, since these constitute the surface of putting greens. Reasons for avoiding the risk of phytotoxicity on putting greens are: standards for quality are very high; the abundance of other stresses (traffic, close mowing, etc.); and springtime is an important time for aggressive growth and food storage by the grass, not recovery from chemical injury. Thus, I would avoid using PCNB on putting greens, especially since a viable alternative exists (Chipco 26GT / Daconil combinations).

Use of PCNB on fairway-height creeping bentgrass is less risky, because stress levels are so much lower and the opportunity for recovery is greater. In Kentucky, pink snow mold / Microdochium patch is a significant risk on overseeded perennial rye. PCNB would still seem to be a viable option for those situations, since I know of no reports of phytotoxicity on perennial ryegrass, and fairway-height turf would be expected to recover rather quickly even if injury occurred. In fct, a point in favor of using PCNB for snow mold control on swards other than putting greens is the fact that it saves the chlorothalonil for disease control during other times of the year (recall that the total amount of chlorothalonil that can be used each year has been restricted according to the Food Quality Protection Act; see www.uky.edu/Agriculture/kpn/kpn_01/pn010326.htm#lawcha for more information on this). Also, an

application of PCNB for snow mold control is less costly than the Chipco 26GGT / Daconil Ultrex combination.

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PLANT PATHOLOGY

This issue concludes the 2001 series of Kentucky Pest News (KPN) and marks the end of the 26th year of inclusion of disease information in KPN. The major objective has been to provide timely information on anticipated and occurring diseases in Kentucky. Any comments (favorable or critical) readers may have regarding KPN (i.e., format, subject matter, coverage, timeliness, etc.) may be directed to KPN authors: John Hartman, William Nesmith, Don Hershman, and Paul Vincelli, Extension Plant Pathologists; Paul Bachi and Julie Beale, Plant Diagnosticians. The above authors appreciate the efforts of colleagues who have co-authored topics in KPN; and Pat Yancey for typing, proofreading, and transmitting KPN.

The final issue of KPN 2001, like final issues of previous years, contains an index of all plant disease topics covered during the current year. The index is alphabetized according to each crop or other subject matter. After each crop, each disease that was discussed the past year is listed with the appropriate issue number(s). KPN issue numbers in parenthesis () refers to a listing of the crop or disease in the "Diagnostic Lab Highlights" section. We wish each of our readers a Cheerful Holiday and Peace and Prosperity in 2002. (Hartman, Nesmith, Hershman, Vincelli, Bachi, Beale, and Yancey).

ALFALFA & CLOVER

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