

# Creeping Bentgrass/ Snow Mold Study

(*Agrostis palustris* 'Procup' or 'Pennncross')

Fusarium patch; *Microdochium nivale*  
Typhula blight; *Typhula incarnata*

By G. L. Schumann, R. Anair, Jr., and J.S. Ebdon  
Depts. of Microbiology and Plant and Soil Sciences  
University of Massachusetts

Each treatment was applied to 3 ft x 3 ft plots on two different application dates: 12 or 18 Nov 01. The original plan was to have a longer time period between the application dates, but threatening weather conditions resulted in only a 6-day interval. The experimental design was a randomized complete block with four replications. Two separate experimental areas were used. One set of plots was on creeping bentgrass cv. 'Procup' that had been established Jun 96 on Hadley silt loam with pH 6.8. Novex 18-2-18 fertilizer was applied at a rate of 1lb N per 1000 sq ft on 18 Aug 01. Daconil Weather Stik (chlorothalonil) was applied at a rate of 6 oz per 1000 sq ft on 20 Aug 01. The other set of plots was on creeping bentgrass cv. 'Pennncross' that had been established in fall, 1999 on the same soil adjacent to the Procup experimental area. The same Novex fertilizer and Daconil Weather Stik applications were made to this experimental area. In both areas, the mowing height was 0.5 in., and the last mowing date was 1 Nov 01. Fungicides were applied with a CO2 backpack sprayer in water equivalent to 2.5 gal per 1000 sq ft at 30 psi. The snow mold pathogens (*M. nivale* and *T. incarnata*) were grown separately on sterilized rye (*Secale cereale*) grain for several weeks before the experiment was initiated. Approximately 1.7 oz (by volume) of pathogen-infested grain were applied by hand to each plot following the second fungicide application (18 Nov 01). *Microdochium nivale*-infested grain was applied to the Procup experimental area; *Typhula incarnata*-infested grain was applied to the Pennncross experimental area. After inoculation, the plots were covered with a high-density woven polyethylene commercial greens cover. Rainfall was far below normal, and temperatures were the highest on record for the winter months. Snowfall was sporadic and did not last long because of the warm temperatures. On 26 Feb 02, the turf covers were removed, and the plots were rated.

No *Typhula* blight developed in any of the plots inoculated with *T. incarnata*. This is not surprising given the warm and dry weather conditions. *Fusarium* patch did develop in some plots inoculated with *M. nivale*, but there was less disease in the nontreated plots than expected from past experience due to the warm, dry winter. Eighteen treatments resulted in no *Fusarium* patch on either application date. Sixteen additional treatments resulted in only

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# Creeping Bentgrass

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trace amounts of disease (<2% Fusarium patch on both application dates). Applications of Insignia alone, Chipco 26GT + TADS12529, or TD2390 resulted in disease development that was commercially unacceptable. No phytotoxicity or other quality differences were observed in any of the plots. There were no significant differences in disease development at the two application dates with the exception of plots treated with TD2390.

<u>Treatment and Rate per 1000 sq ft</u>	<u>Application Date</u>	<u>Per Cent Turf Affected by Fusarium Patch</u>
Bayleton 50WP 2 oz + Compass 50WG 0.25 oz	Nov 12	0c
	Nov 18	0
Chipco 26GT 2SC 4 fl oz + Chipco Signature 80WG 4 oz + Turfcide 400 4SC 8 fl oz	Nov 12	0
	Nov 18	0
Chipco 26GT 2SC 4 fl oz + Chipco Triton 1.67SC 1 fl oz + Turfcide 400 4SC 8 fl oz + Surfactant 13093 16 fl oz/ 100 gal	Nov 12	0
	Nov 18	0
Chipco 26GT 2SC 4 fl oz + Daconil Weather Stik 6F 5.5 fl oz + Turfcide 400 4SC 8 fl oz + Surfactant 13093 16 fl oz/100 gal	Nov 12	0
	Nov 18	0
Chipco 26GT 2SC 4 fl oz + TADS12529 70WG 0.3 oz + Turfcide 400 4SC 8 fl oz	Nov 12	0
	Nov 18	0
Defend 75WP 8 oz	Nov 12	0
	Nov 18	0
Honor 50WG 0.2 oz	Nov 12	0
	Nov 18	0
Honor 50WG 0.2 oz + Chipco 26GT 2SC 4 fl oz	Nov 12	0
	Nov 18	0
Lynx 45WP 2.22 oz + Compass 50WG 0.15 oz	Nov 12	0
	Nov 18	0
Lynx 45WP 2.22 oz + Compass 50WG 0.25 oz	Nov 12	0
	Nov 18	0
Medallion 50WP 0.33 oz + Banner MAXX 1.24MEC 3 fl oz + Daconil Weather Stik 6F 5.5 fl oz	Nov 12	0
	Nov 18	0
Spectro 90WDG 5 oz	Nov 12	0
	Nov 18	0
Spectro 90WDG 4 oz + Defend 75WP 6 oz	Nov 12	0
	Nov 18	0
Spectro 90WDG 4 oz + Defend 75WP 6 oz + Nutri-Grow 0-28-26 3 fl oz	Nov 12	0
	Nov 18	0
TD2390 42DF 6 oz + Topsin-M 70WP 3 oz	Nov 12	0
	Nov 18	0
Topsin-M 70WP 3 oz	Nov 12	0
	Nov 18	0
Turfcide 400 4SC 9 fl oz + Daconil Ultrex 82.5WDG 3.7 oz	Nov 12	0
	Nov 18	0
UCC UBI 4277 4SC 15 fl oz	Nov 12	0
	Nov 18	0
Bayleton 50WP 2 oz + Compass 50WG 0.25 oz + Turfcide 400 4SC 6 fl oz	Nov 12	0.3
	Nov 18	0
Chipco 26GT 2SC 4 fl oz + Chipco Triton 1.67SC 1 fl oz + Surfactant 13093 16 fl oz/ 100 gal	Nov 12	0.3
	Nov 18	0
Chipco 26GT 2SC 4 fl oz + Chipco Triton 1.67SC 1 fl oz + Turfcide 400 4SC 8 fl oz	Nov 12	0
	Nov 18	0.3
Chipco 26GT 2SC 4 fl oz + TADS12529 70WG 0.3 oz + Surfactant 13093 16 fl oz/100 gal	Nov 12	0
	Nov 18	0.3
Medallion 50WP 0.5 oz + Banner MAXX 1.24MEC 4 fl oz	Nov 12	0
	Nov 18	0.3
Spectro 90WDG 5 oz + Nutri-Grow 0-28-26 3 fl oz	Nov 12	0
	Nov 18	0.3
Turfcide 400 4SC 12 fl oz	Nov 12	0
	Nov 18	0.5
Chipco 26GT 2SC 4 fl oz + Chipco Triton 1.67SC 1 fl oz	Nov 12	0.5
	Nov 18	0.3
UCC UBI 4278 5SC 12 fl oz	Nov 12	0
	Nov 18	0.8
Chipco 26GT 2SC 2 fl oz + TADS14649 0.3 G 70 oz	Nov 12	0
	Nov 18	1.0
Insignia 20WG 0.9 oz + Chipco 26GT 2SC 4 fl oz	Nov 12	1.0
	Nov 18	0

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## MGCSA Calendar

August 18

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September 8

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October 13

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Host Superintendent:  
John Monson  
Long Prairie, Minn.



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	Application Date	Per Cent Turf Affected by Fusarium Patch
Insignia 20WG 0.9 oz + Chipco 26GT 2SC 4 fl oz	Nov 12	1.0
	Nov 18	0
Chipco 26GT 2SC 4 fl oz + Daconil Weather Stik 6F 5.5 fl oz + Turfcide 400 4SC 8 fl oz	Nov 12	1.3
	Nov 18	0
Insignia 20WG 0.9 oz + Turfcide 400 4SC 8 fl oz	Nov 12	1.3
	Nov 18	0.3
Heritage 50WDG 0.4 oz + Banner MAXX 1.24MEC 2 fl oz + Daconil Weather Stik 6F 5.5 fl oz	Nov 12	0.5
	Nov 18	1.5
Lesco PCNB 12.5G 6 lb	Nov 12	1.5
	Nov 18	0.5
Medallion 50WP 0.5 oz + Daconil Weather Stik 6F 5.5 fl oz	Nov 12	0
	Nov 18	2.5
Chipco 26GT 2SC 4 fl oz + Chipco Triton 1.67SC 1 fl oz + Chipco Signature 80WG 4 oz	Nov 12	0.5
	Nov 18	2.3
Chipco 26GT 2SC 4 fl oz + TADS12529 70WG 0.3 oz	Nov 12	4.0
	Nov 18	0.3
Insignia 20WG 0.9 oz	Nov 12	4.5
	Nov 18	4.8
TD2390 42DF 6 oz	Nov 12	18.0
	Nov 18	6.5
Nontreated		21.5
	LSD (p=0.05)	4.1

a All treatments were applied to separate plots on 12 Nov 01 or 18 Nov 01.

b Experimental area on creeping bentgrass cv. Procup. Each plot was inoculated with a measured volume of rye grain infested with *Microdochium nivale*. No *Typhula* blight developed in the plots inoculated with *T. incarnata*.

c Data are the means of four replications of each treatment except that there were eight nontreated plots.

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