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This publication includes lecture notes of papers presented at the 2003 New Jersey Turfgrass Expo. Publication of these lectures provides a readily available source of information covering a wide range of topics and includes technical and popular presentations of importance to the turfgrass industry.

This proceedings also includes research papers that contain original research findings and reviews of selected subjects in turfgrass science. These papers are presented primarily to facilitate the timely dissemination of original turfgrass research for use by the turfgrass industry.

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Dr. Ann Brooks Gould, Editor
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EVALUATION OF FUNGICIDES FOR THE CONTROL OF GRAY SNOW MOLD ON A BENTGRASS/POA GREEN

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Fungicides were evaluated for their ability to control gray snow mold (caused by *Typhula incarnata*) on a creeping bentgrass (*Agrostis stolonifera*) and annual bluegrass (*Poa annua*) putting green at the Peace Pipe Country Club in Denville, NJ. The test area was mowed at a height of 0.156 inches seven times per week with clippings collected. Turf was irrigated to avoid drought stress. Fertilizer was applied as 10-10-10 (0.75 lb nitrogen (N)/1000 ft^2) on 12 August 2002 and as 18-3-17 (0.75 lb N/1000 ft^2) on 19 September 2002. Plots were 3 x 9 ft and were arranged in a randomized complete block with four replications.

Fungicides were applied in water equivalent to 1.9 gal per 1000 ft^2 with a CO_2 powered sprayer at 30 psi using TeeJet 8003VS flat fan nozzles. Treatments (trt) were first applied on 26 November 2002. Fungicides requiring a spring application were applied on 21 January 2003 as indicated in Table 1. Turf was visually evaluated for number of infection centers per plot on 24 March 2003. Average patch diameter was 4.5 inches. Turf quality was assessed on 24 March using a 1 to 9 scale, where 9 = best turf quality. Winter tip burn was also evaluated on 24 March using a 1 to 5 scale, where 1 = no injury, 2 = slight tip burn, 3 = moderate tip burn, 4 = severe tip burn, and 5 = most leaf tissue devoid of chlorophyll. Data were subjected to analysis of variance and means were separated using the Waller-Duncan *k*-ratio *t*-test (*k* = 100).

The duration of snow cover was marginal (i.e., 5 to 6 weeks) for the development of gray snow mold during the experimental period (November 2002 to March 2003) resulting in a moderate incidence of gray snow mold. Disease development was first observed after snow melt on 15 March 2003. Due to the moderate disease pressure (16.8 patches per untreated plot), all fungicides provided excellent control of gray snow mold (Table 1). Turf quality was very good (6.8 to 8.5, where 6.0 = acceptable quality) for all fungicide entries. Due to the lack of snow cover in December 2002 and January 2003, a slight to moderate foliar tip burn was observed on most treatments. Only Chipco 26GT 2SC + Chipco Signature 80WG + Defend 4F (trt 2) and Chipco 26GT 2SC (trt 26) reduced the amount of tip burn, compared to the untreated control (trt 32).

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Table 1. Evaluation of fungicides for the control of gray snow mold on a bentgrass/poa green, Denville, NJ, 2002-2003.

	Treatment and Rate per 1000 sq ft	Application Schedule[w]	Infection Centers per plot[z]	Turf Quality[y]	Winter Tip Burn[x]
			24 March 2003		
1.	Chipco 26GT 2SC 4 fl oz + Chipco Signature 80WG 4 oz + Defend 4F 8 fl oz	F	0.0 a	8.0 bc	2.0 ab
2.	Chipco 26GT 2SC 4 fl oz + Chipco Signature 80WG 8 oz + Defend 4F 8 fl oz	F	0.0 a	8.0 bc	2.5 a-d
3.	Chipco 26GT 2SC 4 fl oz + Defend 4F 8 fl oz	F	0.3 a	7.5 ab	3.5 c-e
4.	Chipco 26GT 2SC 4 fl oz + Chipco Signature 80WG 8 oz	F	0.0 a	8.5 c	3.0 a-e
5.	Chipco 26GT 2SC 4 fl oz + Daconil Weather Stik 6F 5.5 fl oz + Defend 4F 8 fl oz	F	0.0 a	6.8 a	2.5 a-d
6.	Chipco Signature 80WG 8 oz + Chipco 26GT 2SC 4 fl oz + Daconil Weather Stik 6F 5.5 fl oz + Defend 4F 8 fl oz	F	0.0 a	8.0 bc	3.0 a-e
7.	Compass 50WG 0.25 oz + Bayleton 50DF 2 oz + Defend 4F 8 fl oz	F	0.2 a	7.2 ab	2.2 a-c
8.	ParFlo 4F 12 fl oz	F	0.0 a	7.5 ab	2.5 a-d
9.	ParFlo 4F 8 fl oz + Heritage 50WG 0.4 oz	F	0.0 a	7.5 ab	3.0 a-e
10.	ParFlo 4F 8 fl oz + Daconil Ultrex 82.5 SDG 6 oz + Chipco 26GT 2SC 6 fl oz	F	0.2 a	7.0 ab	3.2 b-e
11.	ParFlo 4F 8 fl oz + Lynx 45W 2.2 oz	F	0.0 a	7.0 ab	4.0 e
12.	Insignia 20WG 0.5 oz	F	0.2 a	7.0 ab	3.0 a-e
13.	Insignia 20WG 0.5 oz	F/S	0.0 a	7.5 ab	2.5 a-d
14.	Insignia 20WG 0.9 oz	F	0.2 a	7.2 ab	2.5 a-d
15.	Insignia 20WG 0.9 oz	F/S	0.0 a	7.8 a-c	2.2 a-c
16.	Insignia 20WG 0-.9 oz + Iprodione Pro 2SC 4 fl oz	F/S	0.0 a	7.8 a-c	2.2 a-c
17.	Insignia 20WG 0.9 oz + Defend 4F 8 fl oz	F/S	0.0 a	7.5 ab	2.2 a-c
18.	Insignia 20WG 0.9 oz + Concorde DF 82.5DF 3.2 oz	F/S	0.8 a	7.8 a-c	2.8 a-e
19.	Cleary 3336 50W 4 oz	F	0.0 a	7.5 ab	2.8 a-e
20.	Endorse 2.5W 4 oz	F	0.0 a	7.5 ab	2.2 a-c
21.	Endorse 2.5W 6 oz	F	0.8 a	7.2 ab	2.2 a-c
22.	Endorse 2.5W 8 oz	F	0.0 a	7.2 ab	2.8 a-e

(Continued)

Table 1 (control).

	Treatment and Rate per 1000 sq ft	Application Schedule[w]	Infection Centers per plot[z]	Turf Quality[y]	Winter Tip Burn[x]
			24 March 2003		
23.	Endorse 2.5W 4 oz	F/S	0.8 a	7.8 a-c	2.5 a-d
24.	Endorse 2.5W 4 oz + Spectro 90WG 5.75 oz	F	0.0 a	7.0 ab	3.2 b-e
25.	Endorse 2.5W 6 oz + Spectro 90WG 5.75 oz	F	0.0 a	7.2 ab	2.5 a-d
26.	Chipco 26GT 2SC 4 fl oz	F	0.5 a	7.8 a-c	1.8 a
27.	Chipco 26GT 2SC 4 fl oz	F/S	1.0 a	7.5 ab	2.2 a-c
28.	Daconil Weather Stik 6F 5.5 fl oz	F	0.8 a	7.0 ab	3.8 de
29.	Iprodione Pro 2SC 4 fl oz	F	1.8 a	7.0 ab	2.2 a-c
30.	Defend 4F 8 fl oz	F	0.0 a	7.2 ab	2.8 a-e
31.	Spectro 90WG 5.75 oz	F	0.0 a	7.0 ab	3.0 a-e
32.	Untreated Check	---	16.8 b	7.0 ab	3.5 c-e

[z] Values are means of four replicates. Means followed by the same letter are not significantly different according to Waller-Duncan *k*-ratio *t*-test (*k* = 100). Average patch diameter = 4.5 inches.

[y] Turf quality on a 1 to 9 scale, where 9 = best quality and 6 = acceptable turf quality.

[x] Winter tip burn on a scale of 1 to 5, where 1 = no injury, 2 = slight tip burn, 3 = moderate tip burn, 4 = severe tip burn, and 5 = most leaf tissue devoid of chlorophyll.

[w] Fungicides were applied in the fall (F) on 26 Nov 2002 and in the spring (S) on 21 January 2003.