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The Rutgers Turfgrass Proceedings is published yearly by the Rutgers Center for Turfgrass Science, Rutgers Cooperative Extension, and the New Jersey Agricultural Experiment Station, Cook College, Rutgers University in cooperation with the New Jersey Turfgrass Association. The purpose of this document is to provide a forum for the dissemination of information and the exchange of ideas and knowledge. The proceedings provide turfgrass managers, research scientists, extension specialists, and industry personnel with opportunities to communicate with co-workers. Through this forum, these professionals also reach a more general audience, which includes the public. Articles appearing in these proceedings are divided into two sections.

The first section (white pages) includes lecture notes of papers presented at the 1997 New Jersey Turfgrass Expo. Publication of the New Jersey Turfgrass Expo Notes provides a readily available source of information covering a wide range of topics. The Expo Notes include technical and popular presentations of importance to the turfgrass industry.

The second section (green pages) includes technical research papers containing original research findings and reviews covering selected subjects in turfgrass science. The primary objective of these papers is to facilitate the timely dissemination of original turfgrass research for use by the turfgrass industry.

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Dr. Ann B. Gould, Editor
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EVALUATION OF FUNGICIDES FOR THE CONTROL OF FUSARIUM PATCH ON CREEPING BENTGRASS GREENS

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Fungicides were evaluated in 1997 for their ability to control Fusarium patch, caused by *Microdochium nivale*, on a creeping bentgrass (*Agrostis palustris* cv. Penncross) 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. The turf was irrigated to avoid drought stress. Fertilizer was applied as 18-5-10 on 7 September, 1996 (1 lb N/1000 ft^2) and 12 April, 1997 (0.5 lb N/1000 ft^2). Turcam 2.5G (2 lb/1000 ft^2) was applied on 10 August, 1996 for control of insect pests, and Bayleton 25DF (2 oz/1000 ft^2) was applied on 2 September, 1996 for preventive dollar spot control. Plots were 3 X 9 ft and were arranged in a randomized complete block with four replications.

Fungicides were applied in water equivalent to 2 gal per 1000 ft^2 with a CO_2 powered sprayer at 30 psi using TeeJet 8003E nozzles or by hand using a shaker jar (granular treatments). Treatments (trt) were first applied on 27 November, 1996. Fungicides requiring a spring application were reapplied on 7 February, 1997 as indicated in Table 1. The number of Fusarium patch infection centers per plot was assessed on 19 March. Average patch diameter was 3 inches. Winter injury in the form of tip burn was also rated on 19 March using a 0 to 5 scale, where 0 = no tip burn and 5 = all foliage exhibiting tip burn. Data were subjected to analysis of variance and means separation by Duncan's New Multiple Range Test ($p = 0.05$).

No extended periods of snow cover were experienced during this trial. However, significant disease development occurred in the absence of snow cover during cool, wet periods in late February and early March. Excellent control of Fusarium patch was provided by most treatments in this trial. In general, fall applications of several fungicides (trt 11 to 14, 19, 20, 22, 26 to 31) were as effective as treatments with fall and spring applications, even though disease development primarily occurred in the spring. A significant amount of disease was observed in plots treated with the 0.6 oz rate of Eagle 40W (trt 1), Eagle 40W + Chipco 26019 50WG (trt 6), Lynx 25DF (trt 15), and Sentinel 40WG (trt 21). Winter injury was more severe in plots treated with Eagle 40W + Fore 80W (trt 4, 5) and Sentinel 40WG + Rizolex 75W (trt 23) when compared to untreated turf.

Table 1. Impact of fungicides on severity of Fusarium patch in a creeping bentgrass green in Denville, NJ.

	Treatment and rate/1000 sq ft	Application schedule[1]	Fusarium patch[2,3] (inf. ctrs./plot) 19 March	Winter injury[2,4] 19 March
1	Eagle 40W 0.6 oz.	F/S	5.5 bc	0.0 a
2	Eagle 40W 1.2 oz.	F/S	1.5 a	0.2 ab
3	Eagle 40W 1.8 oz.	F/S	1.5 a	0.0 a
4	Eagle 40W 0.6 oz + Fore 80W 8.0 oz.	F/S	0.0 a	1.0 bc
5	Eagle 40W 1.2 oz + Fore 80W 8.0 oz.	F/S	1.0 a	1.0 bc
6	Eagle 40W 0.6 oz + Chipco 26019 50WG 2.0 oz.	F/S	4.0 bc	0.0 a
7	Eagle 40W 1.2 oz + Chipco 26019 50WG 2.0 oz.	F/S	0.2 a	0.0 a
8	Eagle 40W 0.6 oz + Turfcide 75WP 8.0 oz.	F/S	0.2 a	0.0 a
9	Eagle 40W 1.2 oz + Turfcide 75WP 8.0 oz.	F/S	0.0 a	0.2 ab
10	Turfcide 75WP 6.0 oz.	F/S	0.0 a	0.0 a
11	Turfcide 400F 12.0 fl oz.	F only	1.0 a	0.0 a
12	Turfcide 75WP 6.0 oz + Daconil Ultrex 82.5WDG 4.1 oz.	F only	0.5 a	0.0 a
13	Turfcide 75WP 6.0 oz + Spotrete 75WDG 6.0 oz.	F only	1.2 a	0.0 a
14	Turfcide 75WP 6.0 oz + Chipco 26019 2F 4.0 fl oz.	F only	0.0 a	0.0 a
15	Lynx 25DF 2.0 oz.	F/S	5.2 bc	0.0 a
16	Lynx 25DF 1.0 oz + Turfcide 75WP 4.0 oz.	F/S	0.8 a	0.0 a
17	Lynx 25DF 1.0 oz + Turfcide 75WP 6.0 oz.	F/S	0.5 a	0.0 a
18	Lynx 25DF 1.0 oz + Turfcide 75WP 8.0 oz.	F/S	0.5 a	0.0 a
19	Rizolex 75W 4.0 oz.	F only	0.0 a	0.0 a
20	Rizolex 75W 4.0 oz + Turfcide 75WP 4.0 oz.	F only	0.0 a	0.0 a
21	Sentinel 40WG 0.33 oz.	F/S	6.5 c	0.0 a
22	Sentinel 40WG 0.33 oz + Turfcide 75WP 4.0 oz.	F only	0.0 a	0.8 abc
23	Sentinel 40WG 0.33 oz + Rizolex 75W 2.0 oz.	F/S	0.8 a	1.5 c
24	Sentinel 40WG 0.33 oz + Heritage 50WG 0.4 oz.	F/S	0.0 a	0.0 a

(continued)

Table 1 (continued).

Treatment and rate/1000 sq ft	Application schedule[1]	Fusarium patch[2,3] (inf. ctrs./plot) 19 March	Winter injury[2,4] 19 March
25 Sentinel 40WG 0.33 oz + Chipco 26019 50WG 2.0 oz.	F/S	0.5 a	0.0 a
26 Scotts FF-II 15.4G 51.0 oz.	F only	0.8 a	0.0 a
27 Fungicide IX G 92.0 oz.	F only	0.2 a	0.0 a
28 Scotts FF-II 15.4G 51.0 oz + Fungicide IX 5G 92.0 oz.	F only	0.0 a	0.0 a
29 ParFlo 6F 8.0 fl oz.	F only	0.2 a	0.0 a
30 AMV 53 80WDG 8.0 oz.	F only	0.8 a	0.0 a
31 UBI 4087 75WG 8.0 oz.	F only	0.0 a	0.0 a
32 RH-0611 62.2W 8.0 oz.	F/S	0.0 a	0.0 a
33 RH-0611 62.2W 10.0 oz.	F/S	0.2 a	0.0 a
34 Untreated Check.	---	19.8 d	0.0 a

[1] Fungicides were applied in the fall (F, 27 Nov., 1996) or in the fall and spring (F/S, 27 Nov., 1996 and 7 Feb., 1997).
[2] Values are means of four replicates. Means followed by the same letter are not significantly different according to Duncan's New Multiple Range Test ($p = 0.05$).
[3] Average patch diameter = 3 inches.
[4] Winter tip burn on a 0 to 5 scale, where 0 = healthy green leaf tissue and 5 = all foliage in plot with tip burn.