

2002 RUTGERS Turfgrass Proceedings



THE NEW JERSEY TURFGRASS ASSOCIATION

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**RUTGERS COOPERATIVE EXTENSION
NEW JERSEY AGRICULTURAL EXPERIMENT STATION
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2002 RUTGERS TURFGRASS PROCEEDINGS

of the

**New Jersey Turfgrass Expo
December 10-12, 2002
Trump Taj Mahal
Atlantic City, New Jersey**

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, The State University of New Jersey 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.

This publication includes lecture notes of papers presented at the 2002 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.

Special thanks are given to those who have submitted papers for this proceedings, to the New Jersey Turfgrass Association for financial assistance, and to those individuals who have provided support to the Rutgers Turfgrass Research Program at Cook College, Rutgers, The State University of New Jersey.

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CHEMICAL CONTROL OF BROWN PATCH IN TALL FESCUE

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Fungicides were evaluated in 2002 for their ability to control brown patch (caused by *Rhizoctonia solani*) on tall fescue at the Plant Science Research Farm in Adelphia, NJ. Turf was established in 2000 on a Norton loam with a pH of 6.5, and mowing was performed three times per week at a height of 2 inches with clippings returned. Turf was irrigated as needed to prevent drought stress. Plots were 3 X 9 ft and were arranged in a randomized complete block design with four replications. Fungicides were applied in water equivalent to 1.9 gal water per 1000 ft² with a CO₂ powered sprayer at 30 psi using TeeJet 8003VS flat fan nozzles.

Treatments (trt) were initiated on 17 June and reapplied as indicated in Table 1. Percent turf area infected with *R. solani* was assessed on 1 July, 15 July, 24 July, 12 August, 20 August, and 26 August. Turf quality was evaluated on 6 September on a 1 to 9 scale, where 9 = best turf quality. Data were sub-

jected to an analysis of variance and means separation by Waller-Duncan *k*-ratio *t*-test (*k* = 100) following arcsine transformation.

Disease pressure was light to moderate this season, and brown patch did not appear until the end of June. Almost all of the treatments provided acceptable control of brown patch, the most effective being the low rate of Heritage 50WG (trt 1) and the other QoI fungicide, Compass 50WG, at both the low and high rate (trt 3, 4) as well as the Compass 0.3125EW formulation (trt 20), the high rate of ProStar 70W (trt 6), Fore Rainshield 80W (trt 7), and Lynx 45W (trt 13). The only treatments that did not suppress brown patch significantly were many of the granular fungicides applied in the study (e.g., all 1G formulations of Tebuconazole (trt 8 to 11), Bayleton 1G Attap Clay (trt 14), and both the high and low rates of Scotts Lawn Fungicide 2.3G (trt 16, 17)). No phytotoxicity was observed.

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Table 1. Evaluation of fungicides for the control of brown patch in tall fescue, Adelphia, NJ, 2002.

Treatment and Rate per 1000 sq ft	Spray Interval (days) ^x	Turf Area Infested (%) per Plot ^z						Turf Quality ^y 6 Sept.
		1 July	15 July	24 July	12 Aug.	20 Aug.	26 Aug.	
1. Heritage 50WG 0.2 oz	14	6.0 ab	0.5 ab	0.0 a	0.0 a	0.0 a	0.0 a	8.3 e-g
2. Heritage 50WG 0.4 oz	28	1.3 a	5.0 d-f	3.8 b-e	0.0 a	0.3 a	1.8 bc	8.3 e-g
3. Compass 50WG 0.15 oz	14	4.3 ab	1.3 a-c	0.8 ab	0.0 a	0.3 a	0.0 a	8.3 e-g
4. Compass 50WG 0.25 oz	14	2.0 a	1.3 a-c	0.3 a	0.0 a	0.5 a	0.0 a	8.8 fg
5. Prostar 70W 2.2 oz	28	1.8 a	5.0 d-f	4.3 c-g	1.0 a-c	1.8 a	1.8 bc	8.0 d-f
6. Prostar 70W 4.5 oz	28	1.3 a	0.0 a	0.0 a	0.5 a	0.3 a	0.0 a	7.3 c-e
7. Fore Rainshield 80W 8.0 oz	14	4.5 ab	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a	9.0 g
8. Tebuconazole 1G Attap Clay 25 oz ^w	14	3.5 ab	4.3 c-f	9.0 f-i	12.2 hi	14.8 c-e	9.5 ef	7.5 c-e
9. Tebuconazole 1G Attap Clay 50 oz ^w	14	2.0 a	1.0 a-c	7.0 d-h	10.0 gh	10.0 b-d	9.0 ef	7.3 c-e
10. Tebuconazole 1G DG Lite 25 oz ^w	14	2.5 ab	5.0 d-f	9.8 g-i	15.8 h-j	16.8 ef	10.5 ef	7.0 b-d
11. Tebuconazole 1G Biodac LD 25 oz ^w	14	1.3 a	5.5 ef	8.3 e-h	10.5 g-i	14.8 c-e	13.3 f	6.5 bc
12. Tebuconazole 2.9SE 8.26 fl oz	14	0.5 a	1.5 a-d	0.8 ab	4.8 d-f	6.8 b	2.8 cd	7.5 c-e
13. Lynx 45W 0.556 oz	14	1.0 a	1.3 a-c	1.8 a-d	1.3 a-c	1.3 a	2.0 bc	7.0 b-d
14. Bayleton 1G Attap Clay 48 oz ^w	14	2.8 ab	8.8 f	11.0 hi	6.8 fg	14.3 c-e	12.8 ef	6.3 b
15. Bayleton 50DF 0.96 oz	14	2.3 ab	5.0 d-f	3.3 b-e	2.5 c-e	7.3 b	8.3 e	7.5 c-e
16. Scotts Lawn Fungicide 2.3G 21.6 oz ^w	14	2.5 ab	5.0 d-f	9.0 f-i	15.8 h-j	15.5 de	12.8 ef	7.0 b-d
17. Scotts Lawn Fungicide 2.3G 43.2 oz ^w	14	2.5 a	5.0 d-f	12.0 hi	10.5 g-i	16.3 d-f	10.8 ef	6.8 bc
18. Spectracide Immunox 1.55SC 14 fl oz	14	1.8 a	3.8 b-e	0.0 a	5.0 ef	9.3 bc	3.8 d	7.0 b-d
19. Eagle 40W 0.565 oz	14	4.5 ab	1.8 a-e	4.0 b-f	6.0 fg	7.8 b	1.3 ab	7.3 c-e
20. Compass 0.3125EW 15.34 oz	14	2.0 a	0.0 a	0.8 a-c	0.5 ab	1.0 a	0.0 a	8.3 e-g
21. Compass 50WG 0.1 oz	14	1.8 a	0.0 a	1.8 a-d	1.5 b-d	1.8 a	2.5 b-d	7.5 c-e
22. Cleary 3336 50W 2.0 oz	14	4.3 ab	5.3 ef	3.8 b-e	13.5 hi	13.0 c-e	8.5 ef	6.3 b
23. Untreated Check	-	11.3 b	22.8 g	16.5 i	20.2 j	24.0 f	22.5 g	4.8 a

INT ^v	DAT ^u	DAT	DAT	DAT	DAT	DAT	DAT
14	14	14	9	14	14	8	11
28	14	28	9	28	8	8	25

(Continued)

Table 1 (continued).

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- ^z Values are means of four replications. Means followed by the same letter are not significantly different according to Waller-Duncan *k*-ratio *t*-test (*k* =100).
- ^y Turf Quality on a 1 to 9 scale, where 9 = best turf quality.
- ^x Fungicides were applied on 17 June (all treatments), 1 July (14 day treatment), 15 July (14 and 28 day treatments), 29 July (14 day treatment), 12 August (14 and 28 day treatments), and 26 August (14 day treatment).
- ^w Granular treatments were irrigated into the thatch with 1 gal water per 3 X 9 ft plot.
- ^v Spray interval in days.
- ^u Days after treatment (DAT) for each spray interval.