

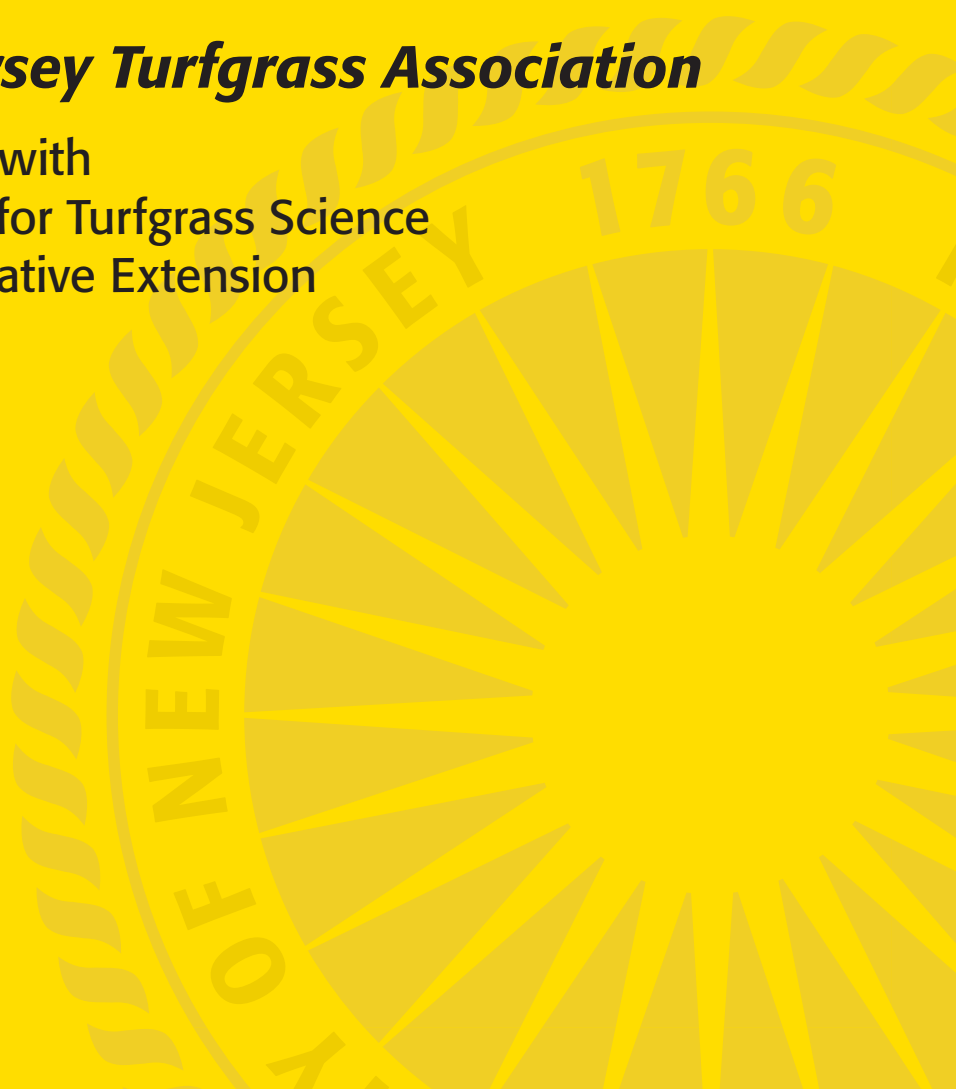
RUTGERS

New Jersey Agricultural
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2006 Turfgrass Proceedings

The New Jersey Turfgrass Association

In Cooperation with
Rutgers Center for Turfgrass Science
Rutgers Cooperative Extension



2006 RUTGERS TURFGRASS PROCEEDINGS

of the

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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, School of Environmental and Biological Sciences, 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 2006 New Jersey Turfgrass Expo. Publication of these lectures provides a readily avail-

able 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 Barbara Fitzgerald and Marlene Karasik for administrative and secretarial support.

Dr. Ann Brooks Gould, Editor
Dr. Bruce B. Clarke, Coordinator

CONTROL OF BROWN PATCH ON COLONIAL BENTGRASS WITH SELECTED FUNGICIDES

Bruce B. Clarke, Pradip R. Majumdar, Amy Matlack, Mark Peacos, Annmarie Scholz,
Dennis Fitzgerald, Lindsay Jepsen, Sam Camuso, and John Inguagiato¹

Fungicides were evaluated in 2006 for their ability to control brown patch (caused by *Rhizoctonia solani*) at the Rutgers Turf Research Farm in North Brunswick, NJ on colonial bentgrass (*Agrostis capillaris* L.) cv. SR7100 maintained under golf course fairway conditions. Turf was established in 2000 on a Norton loam with a pH of 6.1. Mowing was performed three times per week at a height of 0.375 inches with clippings collected. The site was irrigated as needed to prevent drought stress. Fertilizer was applied as 18-0-6 (0.57 lb nitrogen (N)/1000 ft²) on 26 April, 20-20-20 (0.2 lb N/1000 ft²) on 6 May, 15.5-0-0 (0.18 lb N/1000 ft²) on 10 and 27 May, and 16-4-8 (0.5 lb N/1000 ft²) on 20 June.

Dimension 0.15G was applied on 26 April (26.5 oz/A) and 21 June (24 oz/A) for pre-emergence weed control. Broadleaf weeds were controlled with Trimec Bentgrass 1.3L (1.5 fl oz/1000 ft²) + Lontrel T/O 3L (0.18 fl oz/1000 ft²) on 28 April. Insect pests were suppressed with Merit 75WSP (0.16 oz/1000 ft²) on 5 July and Telstar GC 0.67F (0.25 oz/1000 sq ft²) on 14 July. Emerald 70WG (0.18 oz/1000 ft²) was applied to the entire test area on 1 and 16 June, 20 July, and 22 August to control dollar spot. The site was aerified to a depth of 3.5 inches on 26 September with 0.625-inch hollow tines on 4-inch centers and topdressed with sand root-zone mix. Plots were 3 x 5 ft and were arranged in a randomized complete block with four replications.

Fungicides were applied in water equivalents to 1.9 gal/1000 ft² with a CO₂ powered sprayer at 30 psi using TeeJet 8003VS flat fan nozzles. Treatments (trt) were initiated on 8 June when environmental conditions were conducive to brown patch development. Fungicides were reapplied at the appropriate intervals as indicated in Table 1. Turf was visually

evaluated for percent turf area infested with brown patch on 30 June, 7, 17, and 27 July, and 6, 17, and 31 August. Turf quality was rated on 17 August using a 1 to 9 scale, where 9 = best turf quality and 6 = acceptable quality. Data were subjected to analysis of variance and means were separated using the Waller-Duncan *k*-ratio *t*-test (*k* = 100).

Brown patch was first observed on 25 June and became uniform throughout the study by 30 June (Table 1). Disease severity ranged from 41 to 78% turf area infested with *R. solani* on untreated turf (Table 1), which was considered a moderate to severe level of brown patch infestation, respectively. Less than 10% turf area infested per plot represented an acceptable level of disease control. Approximately a third of the treatments in this study provided excellent control of brown patch throughout the evaluation period (30 June to 31 August). RU41523-06A SC (trt 3), ProStar 70W (trts 10 and 82), Heritage 50 WG and Heritage TL 0.8ME (trts 11 and 70, respectively), Tartan 2.4SC (trt 13), Tartan 2.4SC + Chipco Signature 80WG (trt 14), Lynx 2SC + Compass 50WG (trt 15), Headway 1.39EC (trts 21, 23, 71, and 72), Insignia 20WG (trts 25 and 26), RU 42116-06A SC (trt 29), RU 42116-06B W (trt 30), Disarm 480 SC (trts 54 to 56), Disarm 480 SC + Banner MAXX 1.3MC (trt 57), RU21196A-06 + RU21196B-06 (trts 84 to 92), RU21196C-06 (trts 94, 95), and Manicure Ultra 82.5WDG @1.82 oz every 7 days (trt 98) were particularly effective in protecting turf during the severe disease epidemic in 2006.

None of the products applied on 35- or 42-day intervals provided acceptable control of brown patch throughout the study. Moreover, it is interesting to note that chlorothalonil (one of the standard fungicides for controlling brown patch on bentgrass turf)

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provided less than adequate control during the most severe part of the disease epidemic (6 to 17 August) when applied every 14 or 21 days (trts 36 to 49, 59, 60, 78, 79, 99, and 100). Turf quality was closely associated with disease control. All products that

provided excellent control of brown patch throughout the trial exhibited acceptable (> 6.0) turfgrass quality on 17 August except Headway 1.39EC @ 0.75 fl oz every 14 days (trt 21). No phytotoxicity was observed.

Table 1. Control of brown patch on colonial bentgrass with selected fungicides: New Brunswick, NJ, 2006.

Treatment	Rate per 1000 sq ft)	Spray Interval (days) ³	Turf Area Infested (%) per Plot ¹					Turf Quality ² 17 Aug.	
			7 July	17 July	27 July	6 Aug.	31 Aug.		
1	RU41523-06A SC 0.3 fl oz	28	6.5 a-g	15.0 k-q	5.3 a-g	13.3 e-m	24.8 o-t	18.5 g-n	5.8 f-k
2	RU41523-06A SC 0.6 fl oz	28	6.3 a-g	14.0 i-o	2.5 ab	7.3 a-i	13.3 a-o	5.0 a-e	5.8 f-k
3	RU41523-06A SC 0.9 fl oz	28	2.5 a-e	8.3 a-m	0.5 a	1.5 a-c	5.8 a-i	0.8 ab	7.0 k-o
4	RU41523-06A SC 0.3 fl oz	35	7.8 d-g	8.5 a-m	24.3 n-s	50.0 z'b'-f'	71.3 z'j'k'	20.0 i-n	4.0 a-d
5	RU41523-06A SC 0.6 fl oz	35	5.0 a-f	9.0 a-m	10.0 b-j	22.3 m-r	54.3 z'c'-h'	17.8 f-m	4.0 a-d
6	RU41523-06A SC 0.9 fl oz	35	4.8 a-e	9.0 a-m	9.0 a-j	10.0 c-j	16.8 e-q	7.0 a-f	5.3 d-i
7	RU41523-06A SC 0.3 fl oz	42	6.3 a-g	24.0 q-u	31.0 q-u	30.5 q-w	67.8 z'i'-k'	55.8 z-z'a'	4.0 a-d
8	RU41523-06A SC 0.6 fl oz	42	1.8 a-e	24.5 r-u	23.8 m-s	9.8 b-j	54.0 z'b'-h'	71.3 z'e'	4.8 b-g
9	RU41523-06A SC 0.9 fl oz	42	2.8 a-e	8.5 a-m	3.8 a-f	5.3 a-g	42.8 w-z'd'	46.3 xy	4.8 b-g
10	Prostar 70W 2.2 oz	28	5.5 a-f	7.0 a-m	1.8 ab	7.8 a-i	10.8 a-n	8.0 a-h	6.5 i-n
11	Heritage 50WG 0.4 oz	28	3.5 a-e	6.0 a-k	1.5 ab	1.0 a-c	3.3 a-f	1.8 a-c	6.8 j-o
12	Tartan 2.4SC 1.0 fl oz	14	0.3 ab	13.5 h-o	3.0 a-c	1.5 a-c	12.5 a-o	10.3 a-j	5.8 f-k
13	Tartan 2.4SC 1.5 fl oz	14	0.0 a	6.3 a-l	0.0 a	0.0 a	3.3 a-f	3.8 a-d	7.3 l-p
14	Tartan 2.4SC 1.0 fl oz	14	1.3 a-c	3.3 a-g	0.0 a	2.0 a-d	4.0 a-g	7.8 a-g	7.5 m-q
15	+ Chipco Signature 80WG 4.0 oz	14	0.0 a	0.0 a	0.0 a	1.0 a-c	2.0 a-d	0.3 a	7.0 k-o
	Lynx 2SC 0.4 fl oz	14	0.0 a	0.0 a	0.0 a	37.0 v-z	44.3 w-z'd'	37.3 u-x	4.8 b-g
16	+ Compass 50WG 0.1 oz	14	39.0 r	48.0 z'a'	26.0 o-s	26.3 o-u	23.8 n-s	4.3 a-d	5.3 d-i
17	Chipco Signature 80WG 4.0 oz	14	0.3 ab	3.8 a-g	3.5 a-e	40.3 x-z'a'	50.5 z-z'g'	45.0 v-y	5.0 c-h
18	Lynx 2SC 0.4 fl oz	14	7.5 c-g	15.0 k-q	12.8 f-k	16.3 i-n	21.0 k-r	35.3 r-v	5.3 d-i
19	Compass 50WG 0.1 oz	14	3.3 a-e	1.8 a-d	0.5 a	24.3 n-t	39.0 u-z	30.5 o-u	5.5 e-j
20	Chipco 26GT 2SC 4.0 fl oz	14	58.0 t	78.8 z'e'	51.5 w	2.8 a-d	5.0 a-h	1.5 a-c	5.3 d-i
21	Foliar Phosphate 0-29-26 3.0 fl oz	14	0.3 ab	3.3 a-g	1.5 ab	7.5 a-i	17.3 f-q	5.0 a-e	6.0 g-l
22	Headway 1.39EC 0.75 fl oz	14	3.0 a-e	8.5 a-m	14.3 g-l	5.3 a-g	2.8 a-e	0.0 a	7.8 n-q
23	Headway 1.39EC 1.5 fl oz	21	0.0 a	5.8 a-j	2.5 ab	10.3 c-k	13.5 a-o	31.5 p-u	5.5 e-j
24	Headway 1.39EC 2.25 fl oz	28	1.0 a-e	12.0 g-o	7.8 a-i	1.8 a-c	3.0 a-e	1.3 a-c	6.8 j-o
25	Tartan 2.4SC 2.0 fl oz	28	5.5 a-f	10.3 d-n	1.3 ab	0.8 a-c	3.3 a-f	1.3 a-c	6.5 i-n
26	Insignia 20WG 0.5 oz	14	2.8 a-e	1.5 a-d	0.0 a	8.8 a-j	11.3 a-o	5.8 a-e	5.8 f-k
27	Insignia 20WG 0.9 oz	28	0.3 ab	2.3 a-f	3.8 a-f				
	RU42116-06A SC 0.33 fl oz	14	0.0 a						

(Continued)

Table 1 (continued).

Treatment	Rate per 1000 sq ft)	Spray Interval (days) ³	Turf Area Infested (%) per Plot ¹					Turf Quality ² 17 Aug.		
			30 June	7 July	17 July	27 July	6 Aug.		17 Aug.	31 Aug.
28	RU42116-06A SC	14	1.8 a-c	0.0 a	3.3 a-g	1.5 ab	6.0 a-h	11.5 a-o	5.5 a-e	6.0 g-l
29	RU42116-06A SC	14	0.0 a	0.3 ab	3.5 a-g	2.0 ab	4.0 a-f	8.3 a-l	2.8 a-d	6.5 i-n
30	RU42116-06B W	14	2.5 a-c	1.8 a-e	3.5 a-g	2.8 a-c	6.0 a-h	5.0 a-h	3.5 a-d	6.8 j-o
31	RU42116-06C W	14	0.0 a	1.3 a-e	11.3 f-n	5.5 a-g	3.8 a-e	14.5 b-p	9.8 a-i	5.8 f-k
32	Heritage 50WG	14	3.0 a-d	8.0 e-g	15.3 l-q	1.8 ab	9.8 b-j	13.8 a-p	1.3 a-c	6.0 g-l
33	RU42116-06E SC	14	5.0 a-f	7.8 d-g	14.8 j-p	7.5 a-h	15.0 h-n	41.3 v-z'c'	36.0 t-w	4.8 b-g
34	RU42116-06E SC	14	6.3 c-f	4.8 a-e	8.8 a-m	6.3 a-h	15.0 h-n	41.8 w-z'c'	10.5 a-j	4.8 b-g
35	RU42116-06E SC	14	5.5 b-f	6.5 a-g	15.8 m-r	6.8 a-h	7.0 a-i	18.5 h-q	4.8 a-d	5.3 d-i
36	MANA Chlorthal 82.5WDG	14	1.8 a-c	26.3 l-o	38.5 yz	46.0 vw	74.5 z'j'	27.3 p-u	3.5 a-d	4.8 b-g
37	Equus 82.5WDG	14	1.3 a-c	18.3 h-k	28.3 t-x	21.8 k-p	47.5 z'a'-e'	42.5 w-z'd'	28.5 n-u	4.3 a-e
38	Daconil Ultrex 82.5WDG	14	0.0 a	22.0 j-m	20.5 o-t	32.5 s-u	51.5 z'c'-g'	10.3 a-n	9.0 a-h	6.0 g-l
39	MANA Chlorthal 720 FL	14	0.0 a	17.5 h-k	28.5 t-x	32.0 r-u	58.5 z'f'-h'	40.5 v-z'a'	6.3 a-e	4.8 b-g
40	MANA Chlorthal 720 FL-alt	14	3.0 a-d	29.3 n-p	31.8 u-y	22.0 l-q	52.8 z'd'-g'	21.5 l-r	4.8 a-d	5.3 d-i
41	Equus 720 SST 6F	14	3.8 a-e	24.0 k-o	26.5 s-w	17.8 j-o	44.8 z-z'd'	20.0 j-r	4.5 a-d	5.5 e-j
42	Daconil 2787 500 FL	14	2.5 a-c	31.0 o-q	33.8 v-y	23.0 l-r	42.0 y-z'c'	63.5 z'g'-j'	12.3 c-k	4.8 b-g
43	MANA Chlorthal 82.5WDG	14	1.0 ab	19.3 i-l	18.3 n-r	16.8 i-n	28.5 p-v	11.5 a-o	5.3 a-e	5.8 f-k
44	Equus 82.5WDG	14	0.0 a	5.3 a-f	2.5 a-f	3.5 a-e	24.0 n-t	24.8 o-t	8.3 a-h	5.5 e-j
45	Daconil Ultrex 82.5WDG	14	3.0 a-d	0.3 ab	0.3 a	3.8 a-f	11.5 d-l	9.8 a-m	9.0 a-h	5.8 f-k
46	MANA Chlorthal 720 FL	14	0.0 a	4.3 a-e	5.3 a-i	1.3 ab	37.3 v-z	32.0 r-w	5.0 a-e	5.5 e-j
47	MANA Chlorthal 720 FL-alt	14	1.3 a-c	2.0 a-e	2.0 a-e	5.5 a-g	13.3 e-m	19.3 i-r	1.3 a-c	5.8 f-k
48	Equus 720 SST 6F	14	2.5 a-c	20.0 i-l	10.0 c-n	3.5 a-e	21.0 l-q	7.0 a-j	1.8 a-c	6.0 g-l
49	Daconil 2787 500 FL	14	1.3 a-c	5.3 a-f	3.3 a-g	1.5 ab	13.5 f-m	17.8 g-q	4.5 a-d	6.0 g-l
50	Captan 80WDG	14	15.0 i	39.8 r	71.8 z'c'-e'	49.8 w	65.0 z'h'-j'	53.0 z'a'-h'	25.0 l-r	4.3 a-e
51	Captan 480 SC	14	13.8 hi	41.5 r	71.8 z'c'-e'	50.5 w	63.8 z'h'i'	41.0 v-z'b'	18.5 g-n	5.0 c-h
52	Captan 80WDG	14	1.3 a-c	21.3 j-m	43.3 z-z'a'	40.0 uv	56.8 z'e'-h'	35.0 s-x	17.5 f-m	5.3 d-i
53	Captan 480 SC	14	3.8 a-e	27.3 m-o	67.5 z'b'-d'	49.8 w	58.5 z'f'-h'	37.0 t-y	18.8 h-n	5.3 d-i
54	Disarm 480 SC	14	2.5 a-c	6.8 a-g	9.5 b-n	3.0 a-c	7.5 a-i	7.8 a-l	0.0 a	6.8 j-o
55	Disarm 480 SC	21	2.5 a-c	5.5 a-f	6.8 a-m	2.5 ab	1.8 a-c	6.8 a-j	0.5 a	6.8 j-o
56	Disarm 480 SC	28	4.3 a-e	5.3 a-f	8.3 a-m	2.5 ab	1.8 a-c	5.5 a-i	3.3 a-d	5.8 f-k

(Continued)

Table 1 (continued).

Treatment	Rate per 1000 sq ft)	Spray Interval (days) ³	Turf Area Infested (%) per Plot ¹					Turf Quality ² 17 Aug.				
			30 June	7 July	17 July	27 July	6 Aug.		17 Aug.	31 Aug.		
57 Disarm 480 SC	0.18 fl oz											
+ Banner MAXX 1.3MC	1.0 fl oz	21	1.3 a-c	0.3 ab	3.5 a-g	1.3 ab	3.0 a-d	10.8 a-n	3.5 a-d	6.5 i-n		
58 Banner MAXX 1.3MC	1.0 fl oz	21	0.5 ab	3.3 a-e	35.5 w-z	37.5 t-v	32.5 t-y	60.5 z'f'-j'	25.3 l-s	5.0 c-h		
59 Echo 720 6F	3.6 fl oz	14	0.0 a	23.0 j-n	28.5 t-x	9.0 a-j	34.5 u-y	16.5 e-q	0.0 a	6.0 g-l		
60 Echo Ultimate 82.5 WDG	3.25 oz	14	2.5 a-c	21.8 j-m	15.0 k-q	12.3 d-j	30.0 q-w	7.8 a-l	1.8 a-c	6.5 i-n		
61 Propensity 1.3ME	2.0 fl oz	14	1.3 a-c	2.5 a-e	10.3 d-n	9.0 a-j	18.0 j-o	22.5 m-s	26.5 l-t	5.5 e-j		
62 26/36 39.3F	4.0 fl oz	21	2.3 a-c	0.3 ab	5.8 a-j	11.8 c-j	53.3 z'd'-g'	70.0 z'j'k'	59.8 z'a'b'	3.3 a		
63 3336 Plus 19.4F	4.0 fl oz	21	2.5 a-c	1.5 a-e	28.5 t-x	49.3 w	71.5 z'j'j'	83.5 z'l'	64.5 z'a'-c'	3.5 ab		
64 3336 Plus 19.4F	8.0 fl oz	21	2.8 a-c	1.3 a-e	6.5 a-l	24.5 n-s	63.5 z'h'i'	78.3 z'k'l'	59.0 z'a'b'	3.3 a		
65 3336 Plus 19.4F	4.0 fl oz											
+ Daconil Ultrex 82.5 WDG	3.2 oz	21	0.0 a	0.0 a	6.3 a-l	10.0 b-j	45.3 z-z'e'	62.0 z'g'-j'	27.8 m-u	3.8 a-c		
66 CL-EXP-4 W	1.0 oz	14	6.3 c-f	16.3 h-j	30.3 u-y	24.0 m-s	37.8 v-z	47.3 x-z'e'	28.5 n-u	4.8 b-g		
67 CL-EXP-4 W	2.0 oz	14	0.5 ab	3.8 a-e	18.5 n-s	9.0 a-j	22.8 n-s	28.8 q-v	24.5 l-q	5.3 d-i		
68 CL-EXP-6 W	4.0 oz	14	1.3 a-c	1.8 a-e	1.3 a-d	0.8 a	7.5 a-i	9.5 a-m	13.5 d-k	5.8 f-k		
69 Heritage TL 0.8ME	0.5 fl oz	14	12.5 g-i	7.3 b-g	26.0 s-v	6.5 a-h	2.3 a-d	7.3 a-k	2.0 a-c	6.3 h-m		
70 Heritage TL 0.8ME	1.0 fl oz	14	4.3 a-e	4.8 a-e	6.3 a-l	3.5 a-e	2.8 a-d	5.5 a-i	1.5 a-c	6.5 i-n		
71 Headway 1.39EC	0.75 fl oz	21	5.0 a-f	0.0 a	1.8 a-d	0.8 a	2.3 a-d	9.8 a-m	8.8 a-h	6.0 g-l		
72 Headway 1.39EC	1.0 fl oz	21	3.8 a-e	0.3 ab	1.5 a-d	1.5 ab	1.5 a-c	11.0 a-o	9.0 a-h	6.3 h-m		
73 CS-P 30SC	1.08 fl oz	14	35.0 k	50.8 s	64.5 z'b'c'	46.0 v-w	33.3 t-y	59.5 z'e'-j'	35.5 s-w	4.3 a-e		
74 CS-Q 30SC	1.06 fl oz	14	10.0 f-i	34.8 p-r	58.5 z'b'	49.5 w	60.5 z'g'h'	78.5 z'k'l'	26.5 l-t	4.0 a-d		
75 CS-R 30SC	1.08 fl oz	14	6.3 c-f	34.8 p-r	65.3 z'b'c'	68.3 x	52.3 z'd'-g'	55.3 z'd'-i'	20.8 j-o	5.0 c-h		
76 CS-S 30SC	1.05 fl oz	14	23.8 j	37.8 q'r	59.5 z'b'	62.5 x	59.5 z'f'-h'	68.3 z'j'k'	48.8 y-z	3.8 a-c		
77 Banner MAXX 1.3ME	2.0 fl oz	14	2.5 a-c	4.0 a-e	14.0 i-o	24.8 n-s	31.0 r-x	48.3 y-z'f'	11.3 a-j	4.3 a-e		
78 Daconil Ultrex 82.5 WDG	3.2 oz	14	3.0 a-d	12.0 f-h	23.8 p-u	23.5 m-s	40.5 x-z'b'	17.8 g-q	1.5 a-c	5.8 f-k		
79 Daconil Ultrex 82.5 WDG	3.2 oz	21	3.8 a-e	2.3 a-e	43.8 z-z'a'	37.3 t-v	32.3 s-x	55.0 z'd'-i'	16.0 e-l	4.8 b-g		
80 Endorse 2.5W	4.0 oz	14	1.3 a-c	2.3 a-e	11.0 e-n	1.3 ab	6.8 a-i	12.0 a-o	22.0 k-p	6.3 h-m		
81 CL-EXP-8	4.0 oz	14	0.5 ab	0.0 a	2.0 a-e	12.5 e-j	59.8 z'g'h'	62.0 z'g'-j'	44.5 v-y	3.8 a-c		
82 Prostar 70W	2.2 oz	14	1.8 a-c	4.0 a-e	7.3 a-m	3.0 a-c	2.5 a-d	5.5 a-i	2.0 a-c	7.0 k-o		
83 Rutgers Program #1	—	Var ⁴	1.3 a-c	3.3 a-e	2.0 a-e	0.3 a	0.8 a-c	12.5 a-o	9.0 a-h	6.0 g-l		

(Continued)

Table 1 (continued).

Treatment	Rate per 1000 sq ft)	Spray Interval (days) ³	Turf Area Infested (%) per Plot ¹							Turf Quality ² 17 Aug.		
			30 June	7 July	17 July	27 July	6 Aug.	17 Aug.	31 Aug.			
84	RU21196A-06 0.44 fl oz											
	+ RU21196B-06 0.46 oz	14	0.5 ab	1.0 a-e	1.8 a-d	0.8 a	2.3 a-d	2.3 a-d	0.3 a	0.3 a	8.0 o-q	
85	RU21196A-06 0.53 fl oz											
	+ RU21196B-06 0.55 oz	14	0.5 ab	0.5 a-c	2.8 a-f	0.0 a	1.3 a-c	1.3 a-c	0.0 a	0.0 a	8.0 o-q	
86	RU21196A-06 0.62 fl oz											
	+ RU21196B-06 0.64 oz	14	0.0 a	0.0 a	2.3 a-f	1.0 ab	0.3 ab	0.3 a	0.0 a	0.0 a	8.3 p-q	
87	RU21196A-06 0.53 fl oz											
	+ RU21196B-06 0.55 oz	21	2.5 a-c	0.3 ab	2.0 a-e	0.0 a	1.3 a-c	0.5 ab	0.0 a	0.0 a	8.5 qr	
88	RU21196A-06 0.62 fl oz											
	+ RU21196B-06 0.64 oz	21	2.5 a-c	0.0 a	1.5 a-d	0.0 a	0.0 a	1.0 a-c	0.3 a	0.3 a	8.8 r	
89	RU21196A-06 0.70 fl oz											
	+ RU21196B-06 0.74 oz	21	2.0 a-c	0.3 ab	2.8 a-f	0.8 a	2.5 a-d	3.3 a-f	0.3 a	0.3 a	8.3 p-q	
90	RU21196A-06 0.70 fl oz											
	+ RU21196B-06 0.74 oz	28	0.5 ab	3.0 a-e	0.8 ab	2.0 ab	4.0 a-f	6.8 a-j	0.3 a	0.3 a	7.5 m-q	
91	RU21196A-06 0.79 fl oz											
	+ RU21196B-06 0.82 oz	28	0.5 ab	2.8 a-e	2.0 a-e	0.5 a	6.3 a-h	4.5 a-h	1.3 a-c	1.3 a-c	7.5 m-q	
92	RU21196A-06 0.88 fl oz											
	+ RU21196B-06 0.90 oz	28	0.0 a	3.3 a-e	2.0 a-e	3.0 a-c	2.0 a-d	1.8 a-d	0.8 ab	0.8 ab	7.8 n-q	
93	RU21196C-06 0.55 oz	14	3.8 a-e	5.8 a-f	7.8 a-m	3.3 a-d	4.8 a-f	19.5 i-r	0.5 a	0.5 a	5.8 f-k	
94	RU21196C-06 0.83 oz	21	1.3 a-c	1.3 a-e	7.0 a-m	3.8 a-f	0.3 ab	10.8 a-n	1.8 a-c	1.8 a-c	6.5 i-n	
95	RU21196C-06 1.1 oz	28	8.8 e-h	3.3 a-e	4.5 a-h	1.8 ab	2.8 a-d	4.0 a-g	0.8 ab	0.8 ab	7.3 l-p	
96	Spectator Ultra 1.3EC 1.0 fl oz	14	5.0 a-f	13.3 g-i	26.0 s-v	30.5 p-t	38.5 w-z'a'	62.8 z'g'-j'	45.3 w-y	45.3 w-y	4.0 a-d	
97	Spectator Ultra 1.3EC 2.0 fl oz	21	8.0 d-g	4.8 a-e	37.0 x-z	27.5 p-s	34.0 u-y	64.3 z'h'-j'	34.5 q-u	34.5 q-u	4.5 a-f	
98	Manicure Ultra 82.5WDG 1.82 oz	7	1.3 a-c	2.3 a-e	1.0 a-c	2.5 ab	5.3 a-g	2.3 a-d	5.5 a-e	5.5 a-e	6.8 j-o	
99	Manicure Ultra 82.5WDG 3.25 oz	14	0.0 a	1.3 a-e	2.8 a-f	5.0 a-f	19.8 k-p	15.8 d-q	7.3 a-f	7.3 a-f	6.3 h-m	
100	Manicure 6F 3.6 fl oz	14	0.0 a	24.5 k-o	28.8 t-x	15.0 h-m	26.5 o-u	13.3 a-o	9.0 a-h	9.0 a-h	5.5 e-j	
101	Spectator Ultra 1.3EC 2.0 fl oz											
	+ Manicure Ultra 82.5WDG .. 3.25 oz	14	1.3 a-c	0.8 a-d	1.3 a-d	3.0 a-c	14.8 g-n	15.0 c-p	8.0 a-h	8.0 a-h	5.5 e-j	
102	Spectator Ultra 1.3EC 1.0 fl oz											
	+ Manicure Ultra 82.5WDG .. 1.82 oz	7	2.5 a-c	0.0 a	3.5 a-g	1.3 ab	0.8 a-c	4.0 a-g	12.0 b-k	12.0 b-k	7.3 l-p	

(Continued)



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