

Evaluation of Fungicides for Control of Dollar Spot and Brown Patch in Creeping Bentgrass - 2003

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Trials were conducted at Veenker Memorial Golf Course in Ames, Iowa. Creeping bentgrass was maintained at 0.16 inch cutting height. Fungicides selected for activity against dollar spot and brown patch were applied using a modified bicycle sprayer at 30 psi and a dilution rate of 5 gal per 1000 sq ft. The experimental design was a randomized complete block with four replications. All plots measured 4 ft x 5 ft. Because several treatments were added to the trial after it began, spray applications were initiated on June 10 and June 24 (garlic oil treatments). These were followed by re-applications at recommended intervals until August 20. Visual estimates of disease severity were made at approximately 10-day intervals starting on July 17. Percent disease severity for dollar spot and a qualitative scale of 0-5 for brown patch were used to estimate severity, where 0 = no disease; 1 = 1-5%; 2 = 6-10%; 3 = 11-25%; 4 = 26-50%; 5 = >50% plot symptomatic. Data were analyzed using the GLM procedure in SAS, and mean separations were determined using Fisher's protected LSD at $P \leq 0.05$.

Disease pressure was moderate to severe for dollar spot and brown patch. Most of the tested products suppressed both diseases significantly ($P \leq 0.05$) in comparison to the unsprayed check. No phytotoxicity symptoms were observed during the trial.

Table 1. Dollar spot and brown patch trial 2003. Veenker Memorial Golf Course, Ames IA (creeping bentgrass). Plot size: 20 ft² (4 ft x 5 ft); 4 plots per treatment

Trt #	Company	Product	Rate/ 1,000 ft ²	Interval (days)	Dollar spot severity (%) ^{II}				
					17 Jul	27 Jul	6 Aug	15 Aug	23 Aug
1	Check	-----	-----	-----	16.2	16.2	30.7	19.2	36.7
2	BASF	Emerald 70WG	0.13 oz	14	0.7	0.5	0.0	0.7	0.0
3	BASF	Emerald 70WG	0.18 oz	21	0.0	0.0	0.0	0.1	0.0
4	BASF	Insignia 20WG	0.9 oz	14	3.0	5.5	9.5	13.0	26.2
5	BASF	Emerald 70WG ROTATE	0.13 oz +	14	0.0	0.0	0.0	0.4	0.0
		Insignia 20WG †	0.9 oz						
6	BASF	Propiconazole Pro 1.3 MC	1.0 fl oz	14	0.0	0.0	0.2	1.4	0.2
7	Cleary	Endorse 2.5WP	4 oz	14	16.7	15.5	26.5	22.0	50.0
8	Cleary	Spectro 90WDG	4 oz	14	0.0	0.0	0.0	0.2	0.0
9	Bayer	26GT 2SC	4 fl oz	14	0.0	0.5	0.0	0.0	0.1
10	Bayer	Bayleton 50DF	0.5 oz	14	0.0	0.0	0.0	0.0	0.0
11	USA Absorbents	Garlic Oil	5% v/v	7	10.3	9.5	21.2	2.2	5.5
12	USA Absorbents	Garlic Oil	5% v/v	14	8.0	8.2	8.2	2.7	9.5
13	USA Absorbents	Garlic Oil	10% v/v	7	7.2	7.7	7.2	2.5	2.5
14	USA Absorbents	Garlic Oil	10% v/v	14	13.5	11.2	17.5	8.5	10.2
15	USA Absorbents	Garlic Oil	10% v/v	21	15.5	8.7	14.2	2.2	1.2
LSD (0.05)					8.6	7.1	12.1	6.2	10.9
					Brown patch severity (1-5 scale) ^{II}				
1	Check	-----	-----	-----	4.2	3.5	4.5	2.0	4.7
2	BASF	Emerald 70WG	0.13 oz	14	3.5	2.2	0.0	0.7	1.7
3	BASF	Emerald 70WG	0.18 oz	21	1.2	1.7	2.5	0.2	0.2
4	BASF	Insignia 20WG	0.9 oz	14	0.2	0.2	2.2	0.2	1.5
5	BASF	Emerald 70WG ROTATE	0.13 oz +	14	2.2	1.0	1.5	0.2	0.0
		Insignia 20WG †	0.9 oz						
6	BASF	Propiconazole Pro 1.3 MC	1.0 fl oz	14	1.2	0.5	2.7	0.2	1.5
7	Cleary	Endorse 2.5WP	4 oz	14	0.7	0.7	2.2	0.0	2.5
8	Cleary	Spectro 90WDG	4 oz	14	0.7	0.0	2.7	1.0	0.7
9	Bayer	26GT 2SC	4 fl oz	14	0.2	0.0	1.2	0.0	1.2
10	Bayer	Bayleton 50DF	0.5 oz	14	1.2	1.0	2.2	0.7	2.2
11	USA Absorbents	Garlic Oil	5% v/v	7	3.7	1.7	3.7	0.0	1.7
12	USA Absorbents	Garlic Oil	5% v/v	14	5.0	4.0	4.0	0.5	2.2
13	USA Absorbents	Garlic Oil	10% v/v	7	0.2	2.5	4.7	1.2	1.7
14	USA Absorbents	Garlic Oil	10% v/v	14	4.5	3.5	4.2	1.0	3.0
15	USA Absorbents	Garlic Oil	10% v/v	21	4.5	2.0	3.2	0.7	1.2
LSD (0.05)					1.4	2.0	1.5	1.3	1.5

† Product applications were rotated on a 14-day interval (Emerald June 10, July 8 and August 5; Insignia June 24, July 22 and August 19).

II Disease severity ratings on the following qualitative scale: 0 = no disease; 1 = 1-5%; 2 = 6-10%; 3 = 11-25%; 4 = 26-50%; 5 = >50% plot symptomatic.