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Evaluation of Fungicides for Control of Dollar Spot and Brown Spot in Creeping Bentgrass, 2007

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Trials were conducted at the Iowa State University Horticulture Station in Gilbert, Iowa. Creeping bentgrass (cv. Penncross). On 18 Jun, all plots were inoculated with rye grain infested with *Sclerotinia homoeocarpa*. Fungicides, selected for activity against dollar spot, were applied using a backpack 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. Spray applications were initiated on 8 Jun, followed by re-application at recommended intervals until 3 Aug. Visual estimates of disease severity of each plot with dollar spot symptoms were made at approximately 14-day intervals starting on 12 July. Data were analyzed using the GLM procedure in SAS, and mean separations were determined using Fisher's protected LSD at P≤0.05. Visual estimates of disease severity of each plot with brown spot symptoms were also made on 12 July and August using a qualitative scale of 0-5 for brown patch, 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≤0.05.

Dollar spot pressure was low to moderate due to dry conditions throughout June and July. On the first rating, all of the tested products suppressed dollar spot significantly (P≤0.05) in comparison to the unsprayed check. On the second rating Headway 1.3 MEC sprayed at 28 day intervals did not significantly differ in dollar spot severity than the unsprayed check, and on the third rating Headway 1.3 MEC sprayed at 21 and 28 day intervals and V-10116 50 WD 0.18 oz sprayed at 14 day intervals did not significantly differ in dollar spot severity than the unsprayed check. No phytotoxicity symptoms were observed during the trial.

Products and rates per 1000 sq ft	Interval (days)	Dollar spot (%) ^z		
		12 Jul	26 Jul	9Aug
Unsprayed check.....	---	2.33 a	1.00 a	1.25 ab
Headway 1.3 MEC 0.75 fl oz.....	28 d	0.50 bc	0.50 ab	1.25 ab
Headway 1.3 MEC 0.75 fl oz.....	21 d	0.125 bc	00.0 b	3.25 a
V-10116 50 WD 0.18 oz.....	14 d	0.00 c	00.0 b	1.25 ab
3336 F Plus 2 oz + CLEXP-13 0.5 v/v.....	21 d	0.00 c	00.0 b	0.00 b
Emerald 0.13 oz.....	14 d	0.00 c	00.0 b	00.0 b
3336 F Plus 2 oz + CLEXP-14 0.125 v/v.....	21d	0.25 bc	00.0 b	00.0 b
3336 F 2 oz.....	21 d	0.00 c	00.0 b	00.0 b
3336 Plus 4 oz.....	21 d	0.00 c	00.0 b	00.0 b
V-10116 50 WD 0.37 oz.....	14 d	0.00 c	00.0 b	0.00 b
Trinity 1.0 oz.....	14 d	0.00 c	00.0 b	0.00 b
Insignia 0.5 oz.....	14 d	1.00 c	00.0 b	0.00 b
Tartan SC 1 fl oz.....	14 d	1.00 b	00.0 b	0.00 b
Tartan SC 1.5 fl oz.....	14 d	0.00 c	00.0 b	0.00 b
Lynx SC 1.0 oz.....	14 d	0.00 c	00.0 b	0.00 b
Lynx SC 2.0 oz.....	14 d	0.25 bc	00.0 b	0.00 b
Headway 1.3 MEC 0.75 fl oz.....	14 d	0.00 c	00.0 b	0.00 b
LSD (0.05) ^x	---	0.98	0.54	2.23

^zPercent plot symptomatic.

^x Means followed by the same letter are not significantly different within column according to Fisher's protected LSD at P≤0.05.

Low severity rates of brown spot infestations occurred as a result of natural inoculum. Several treatments did not differ from control including: Headway 1.3 MEC 0.75 fl oz at 21 and 28 d intervals, 3336 F Plus 2 oz + CLEXP-13 0.5 v/v, 3336 F 2 oz, 3336 Plus 4 oz, Lynx SC 1.0 oz and 2 oz.

Products and rates per 1000 sq ft	Interval	Brown patch (0-5 scale) ²	
	(days)	12 Jul	26 Jul
Unsprayed check.....	---	1.00 ab	0.5 ab
Headway 1.3 MEC 0.75 fl oz.....	28 d	0.50 abc	0.00 b
Headway 1.3 MEC 0.75 fl oz.....	21 d	0.50 abc	0.25 ab
V-10116 50 WD 0.18 oz.....	14 d	0.00 c	0.00 b
3336 F Plus 2 oz + CLEXP-13 0.5 v/v.....	21 d	1.25 a	0.75 a
Emerald 0.13 oz.....	14 d	0.00 c	0.00 b
3336 F Plus 2 oz + CLEXP-14 0.125 v/v.....	21d	0.00 c	0.75 a
3336 F 2 oz.....	21 d	0.75 abc	0.75 a
3336 Plus 4 oz.....	21 d	0.50 abc	0.25 ab
V-10116 50 WD 0.37 oz.....	14 d	0.00 c	0.00 b
Trinity 1.0 oz.....	14 d	0.00 c	0.00 b
Insignia 0.5 oz.....	14 d	0.00 c	0.00 b
Tartan SC 1 fl oz.....	14 d	0.00 c	0.00 b
Tartan SC 1.5 fl oz.....	14 d	0.00 c	0.75 a
Lynx SC 1.0 oz.....	14 d	0.50 abc	0.00 b
Lynx SC 2.0 oz.....	14 d	0.25 bc	0.00 b
Headway 1.3 MEC 0.75 fl oz.....	14 d	0.5 abc	0.00 b
LSD (0.05) ^x	---	0.99	0.63

²Disease rating scale 0 = no disease; 1 = 1-5%; 2 = 6-10%; 3 = 11-25%; 4 = 26-50%; 5 = >50% plot symptomatic.

^x Means followed by the same letter are not significantly different within column according to Fisher's protected LSD at P≤0.05.