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Evaluation of fungicides for control of dollar spot and brown spot in fairway height creeping bentgrass, 2008

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analyzed using the GLM procedure in SAS and mean separations were determined using Fisher's protected LSD at $P \leq 0.05$.

Introduction

Fungicide evaluations for control of dollar spot and brown spot in fairway height creeping bentgrass were conducted at the Iowa State University Horticulture Station in Gilbert, Iowa.

Materials and Methods

Creeping bentgrass (cv. Penncross) was maintained at 1-inch cutting height. On 16 May, 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 20 May, followed by re-application at recommended intervals until 20 Aug. Visual estimates of disease severity of each plot with dollar spot symptoms were made at approximately 14-day intervals starting on 23 July.

Dollar spot assessments were taken as percent of plot. Brown spot symptoms were evaluated using a qualitative scale of 0-5, where 0 = no disease; 1 = 1-5%; 2 = 6-10%; 3 = 11-25%; 4 = 26-50%; 5 = >50% plot symptomatic. A turf quality assessment of 1 to 10 was also taken throughout the season. Data were

Results and Discussion

Dollar spot pressure was moderate due to wet conditions throughout June and July; conditions were dry in August. On the first and third ratings, both test products suppressed dollar spot significantly ($P \leq 0.05$) in comparison to the unsprayed check (Table 1). On the second and fourth rating fungicide treated plots did not significantly differ in dollar spot severity than the unsprayed check. Fungicide treatments were not significantly different in control of dollar spot. No phytotoxicity symptoms were observed during the trial.

Low severity rates of brown spot infestations occurred as a result of natural inocula. Treatments did not differ from control until later in the summer, where on August 7, fungicide treated plots had significantly higher disease values. However, fungicide treatments did not differ (Table 2). Turf quality assessments did not differ significantly (Table 3).

Acknowledgements

We thank the hort farm turf crew at for maintenance of turf during 2008.

Table 1. Fairway height creeping bentgrass

Products and rates per 1000 sq ft

	Interval (days)	Dollar spot (%) ^z			
		23-Jun	7-Jul	7-Aug	14-Aug
Unsprayed check.....	---	5.8 a	4.5 a	15.8 a	10.8 a
Cleary 26/36 4.0 oz.....	21 d	1.5 b	0.0 a	2.3 b	1.3 a
Cleary 3336 Plus 4.0 oz.....	21 d	1.8 b	0.0 a	3.8 b	5.8 a
LSD (0.05) ^x	---	2.8	5.4	5.3	9.7

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

Table 2. Fairway height creeping bentgrass Products and rates per 1000 sq ft	Interval (days)	Brown spot ^z			
		23-Jun	7-Jul	7-Aug	14-Aug
Unsprayed check.....	---	0.0 a	4.5 a	2.5 a	1.0 a
Cleary 26/36 4.0 oz.....	21 d	0.0 a	0.0 a	0.0 b	0.0 b
Cleary 3336 Plus 4.0 oz.....	21 d	0.0 a	0.0 a	0.0 b	0.3 ab
LSD (0.05) ^x	---	0.0	5.3	1.0	1.0

^zDisease 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.

Table 3. Fairway height creeping bentgrass Products and rates per 1000 sq ft	Interval (days)	Turf Quality		
		23-Jun	7-Jul	14-Aug
Unsprayed check.....	---	7.0 a	4.5 a	4.5 a
Cleary 26/36 4.0 oz.....	21 d	7.0 a	6.5 a	7.5 a
Cleary 3336 Plus 4.0 oz.....	21 d	7.0 a	6.0 a	6.0 a
LSD (0.05) ^x	---	0.0	6.4	6.4

^z A turf quality assessment of 1 to 10 (1=poorest, 10=best, 6=acceptable)