

## Evaluation of Fungicides for Control of Dollar Spot in ‘Penncross’ Creeping Bentgrass, 2005

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Trials were conducted at the Iowa State University Horticulture Station in Gilbert, Iowa. Creeping bentgrass was maintained at 0.16-inch cutting height. On 6 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 10 Jun, except for curative treatments, which were initiated on 1 Jul, followed by re-application at recommended intervals until 5 Aug. Visual estimates of disease severity of each plot with dollar spot symptoms were made at approximately 7-day intervals starting on 7 Jul. Area under disease progress curve (AUDPC) values were calculated from all disease estimates. 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 low to moderate due to dry conditions throughout July. The unsprayed check had 6.2% infected area on August 8. Most of the tested products suppressed dollar spot significantly ( $P \leq 0.05$ ) in comparison to the unsprayed check for weekly ratings. Over the entire season (AUDPC value), all products suppressed dollar spot significantly. No phytotoxicity symptoms were observed.

Products and rates per 1000 sq ft	Interval (days)	Dollar spot (%) <sup>z</sup>				AUDPC <sup>y</sup>
		7 Jul	15 Jul	27 Jul	8 Aug	
Unsprayed check.....	---	1.7 ab	1.8 a	1.8 a	6.2 a	80.0 a
Insignia 0.5 oz.....	14 d	1.8 a	1.3 a-c	0.4 b	1.6 b	32.8 b
Insignia 0.9 oz.....	28 d	1.0 b-d	0.1 d	0.0 b	0.0 c	5.3 c-e
Emerald 70WDG 0.13 oz.....	14 d	0.4 cd	0.4 cd	0.0 b	0.0 c	5.3 c-e
Emerald 70WDG 0.18 oz.....	21 d	0.5 cd	0.5 b-d	0.1 b	0.0 c	8.4 c-e
Emerald 70WDG 0.18 oz.....	28 d	1.6 ab	0.5 b-d	0.0 b	0.0 c	11.5 c-e
Insignia 0.9 oz + Curalan 1 oz.....	21 d	0.8 b-d	0.4 cd	0.1 b	0.0 c	8.2 c-e
Curalan 1 oz.....	21 d	1.3 a-c	0.5 b-d	0.1 b	0.5 c	14.2 b-e
Lynx 45 WP 0.3 oz.....	21 d	1.3 a-c	0.5 b-d	0.3 b	0.0 c	12.9 c-e
Lynx 45 WP 0.6 oz.....	21 d	0.4 cd	0.1 d	0.0 b	0.0 c	2.8 de
Lynx 45 WP 1.2 oz <sup>x</sup> .....	21 d	1.5 ab	1.4 ab	0.1 b	0.0 c	21.2 b-d
Lynx SC 0.5 fl oz.....	21 d	0.5 cd	0.0 d	0.0 b	0.0 c	2.0 de
Lynx SC 1 fl oz.....	21 d	0.4 cd	0.1 d	0.0 b	0.0 c	2.8 de
Lynx SC 2 fl oz <sup>x</sup> .....	21 d	1.6 ab	1.6 a	0.1 b	0.0 c	24.2 bc
Tartan SC 1 fl oz.....	21 d	0.1 d	0.1 d	0.0 b	0.0 c	1.8 e
Tartan SC 2 fl oz.....	21 d	0.4 cd	0.1 d	0.0 b	0.0 c	2.8 de
Chipco 26GT SC 4 fl oz.....	14 d	0.4 cd	0.1 d	0.0 b	0.0 c	2.8 de
Bayleton 50 WP 0.5 oz.....	21 d	0.8 b-d	0.1 d	0.1 b	0.0 c	5.7 c-e
Bayleton 50 WP 1 oz.....	21 d	1.0 a-d	0.6 b-d	0.0 b	0.0 c	10.3 c-e
Bayleton SC 0.5 fl oz.....	21 d	0.8 b-d	0.6 b-d	0.0 b	0.0 c	9.3 c-e
Bayleton SC 1 fl oz.....	21 d	1.0 a-d	0.4 cd	0.0 b	0.1 c	8.4 c-e
Bayleton SC 2 fl oz.....	21 d	0.3 d	0.0 d	0.0 b	0.0 c	1.0 e
LSD (0.05) <sup>w</sup>	---	0.9	1.0	0.4	1.1	19.3

<sup>z</sup>Percent plot symptomatic.

<sup>y</sup>AUDPC= area under disease progress curve. This value is calculated from all disease estimates and represents disease development over the entire season.

<sup>x</sup>Curative applications were initiated on 1 Jul.

<sup>w</sup>Means followed by the same letter are not significantly different according to Fisher’s protected LSD at  $P \leq 0.05$ .