

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

M.L. Gleason and D.S. Mueller, Department of Plant Pathology

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 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 4 Jun, except for curative treatments, which were initiated on 1 Jul. These were followed by re-applications at recommended intervals until 13 Aug. Visual estimates of disease severity (% dollar spot) were made at approximately 7-day intervals starting on 23 Jun. 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. Due to a long dry spell in July, there was very little disease in early August in any treated plot and only 3.5% disease in the unsprayed check. Most of the tested products suppressed dollar spot significantly ($P \leq 0.05$) in comparison to the unsprayed check. No phytotoxicity symptoms were observed during the trial.

Products and rates per 1000 sq ft	Interval (days)	Dollar spot (%) ^z				AUDPC ^y
		16 Jun	15 Jul	4 Aug	20 Aug	
Unsprayed check.....	---	1.6 bc	6.9 ab	3.5 a	11.0 a	283.1 a
Insignia 0.5 oz.....	14 d	5.9 a	1.0 cd	0.0 c	6.5 b	133.4 b-d
Insignia 0.9 oz.....	28 d	1.1 bc	4.3 bc	2.0 ab	1.3 c	141.2 bc
Emerald 70WDG 0.13 oz.....	14 d	1.1 bc	0.1 d	0.0 c	0.0 c	6.2 e
Emerald 70WDG 0.18 oz.....	21 d	0.1 c	0.0 d	0.0 c	0.4 c	5.9 e
Emerald 70WDG 0.18 oz.....	28 d	0.0 c	0.1 d	0.1 c	0.0 c	2.9 e
Insignia 0.9 oz + Curalan 1 oz.....	21 d	0.0 c	0.0 d	0.0 c	0.0 c	1.2 e
Curalan 1 oz.....	21 d	0.1 c	0.3 d	0.0 c	1.8 c	20.3 c-e
Lynx 45 WP 0.3 oz.....	21 d	0.4 bc	0.1 d	0.0 c	0.0 c	8.1 e
Lynx 45 WP 0.6 oz.....	21 d	0.1 c	0.1 d	0.0 c	0.0 c	4.6 e
Lynx 45 WP 1.2 oz ^x	21 d	2.0 b	10.3 a	0.5 bc	0.5 c	201.3 ab
Lynx SC 0.5 fl oz.....	21 d	0.3 c	0.0 d	0.0 c	0.0 c	8.8 e
Lynx SC 1 fl oz.....	21 d	0.0 c	0.0 d	0.0 c	0.3 c	12.2 de
Lynx SC 2 fl oz ^x	21 d	1.0 bc	3.5 cd	1.0 bc	0.4 c	88.6 b-e
Tartan SC 1 fl oz.....	21 d	0.0 c	0.0 d	0.0 c	0.0 c	3.6 e
Tartan SC 2 fl oz.....	21 d	0.0 c	0.1 d	0.0 c	0.5 c	5.1 e
Chipco 26GT SC 4 fl oz.....	14 d	0.0 c	0.0 d	0.0 c	0.3 c	3.2 e
Bayleton 50 WP 0.5 oz.....	21 d	0.1 c	0.4 d	0.3 c	0.8 c	16.9 de
Bayleton 50 WP 1 oz.....	21 d	0.0 c	1.0 cd	0.0 c	0.0 c	0.5 e
Bayleton SC 0.5 fl oz.....	21 d	0.3 c	0.4 d	0.0 c	0.5 c	13.7 de
Bayleton SC 1 fl oz.....	21 d	1.3 bc	1.0 cd	0.3 c	0.0 c	38.4 c-e
Bayleton SC 2 fl oz.....	21 d	0.0 c	0.0 d	0.1 c	0.5 c	5.8 e
LSD (0.05) ^x	---	1.7	3.7	1.7	3.6	122.2

^zPercent plot symptomatic.

^yAUDPC= area under disease progress curve. This value is calculated from all disease estimates and represents disease development over the entire season.

^xCurative applications were initiated on 1 Jul.

^wMeans followed by the same letter are not significantly different according to Fisher’s protected LSD at $P \leq 0.05$.