

### **Evaluation of fungicides for maintenance of summer quality in creeping bentgrass, 2005.**

Fungicides were evaluated for their influence on the summer quality of creeping bentgrass putting greens in the transition zone of the United States. This trial was conducted at the Lake Wheeler Turfgrass Field Laboratory in Raleigh, NC on 'Penncross' creeping bentgrass maintained under putting green conditions. Mowing was performed 5 times weekly at a height of 0.156 in. until 20 Jun, when the height was raised to 0.185. Clippings were collected and the site was irrigated to prevent drought stress. Fertilizer was applied as 18-3-6 on 25 Jul and 8 Aug (0.25 lb N/1000 sq ft) and on 27 Jun, 11 Jul, and 22 Aug (0.125 lb N/1000 sq ft). Insect pests were suppressed with Dursban Pro (1.5 fl oz/1000 sq ft) on 23 Jun, 21 Jul, and 23 Aug. Fairy ring symptoms were suppressed with Prostar 70WP (4.5 oz/1000 sq ft) on 21 Jun. Emerald 20WG (0.13 oz/1000 sq ft) was applied on 1 Jul to control a developing infestation of dollar spot. Plots were 3.33 ft x 6 ft and were arranged in a randomized complete block with four replications. Fungicides were applied in water equivalent to 2 gal per 1000 sq ft with a CO<sub>2</sub> powered sprayer at 40 psi using TeeJet 8004 nozzles. All treatments were initiated on 7 Jun and were reapplied on 14 day intervals as indicated in the table. Turfgrass quality was evaluated on 6 Jul, 20 Jul, 4 Aug, 16 Aug, and 31 Aug using a 1 to 9 scale (9=best, 5=acceptable) based on color, density, and uniformity. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t test (k=100).

Creeping bentgrass quality declined rapidly during July and August in 2005 due to persistent heat and intermittent periods of wet weather. Differences in turfgrass quality were not detected until the 4 Aug rating date, on which all treatments resulted in acceptable turfgrass quality. Of the individual treatments evaluated, Alude + Spectro (5.5 + 5.75 oz), Spectro (5.75 oz), Signature (4 oz), and Signature + Daconil (4 + 3.2 oz) consistently provided the highest turf quality in this trial. were acceptable with the following treatments being statistically similar to the untreated control; Alude SC (5.5 fl oz) + 3336 Plus F (4 fl oz) applied every 14 days, Alude SC (5.5 fl oz) + 3336 Plus F (6 fl oz) applied every 14 days, Alude SC (5.5 fl oz) applied every 14 days, CL-EXP-1 F (1 fl oz) applied every 14 days, Heritage 50WG (0.2 oz) applied every 14 days, and Heritage TL 0.8ME (1 fl oz) applied every 14 days. Few significant differences were detected among the programs evaluated, with the exception of Treatment 15 being statistically superior to Treatments 13 and 14 on 4 Aug. This date was preceded by a period of warm and wet weather from 28 Jul to 31 Jul during which average high/low temperatures were 84°F/70°F and 0.98 in of rainfall was recorded. The Subdue Maxx application in Treatment 15 may have provided protection of *Pythium* species that was not provided by the other programs. In general, regular applications of fosetyl-Al alone or phosphonate + chlorothalonil tank-mixtures resulted in the highest turfgrass quality in this trial.

Treatment and rate / 1000 sq ft	Application code	Turfgrass quality <sup>z</sup>				
		6 Jul	20 Jul	4 Aug	16 Aug	31 Aug
1. Alude SC 5.5 fl oz						
+ 3336 Plus F 4 fl oz .....	ACEGIKM <sup>y</sup>	7.0 a <sup>x</sup>	6.5 ab	5.5 f	5.3 bcd	5.0 def
2. Alude SC 5.5 fl oz						
+ 3336 PLUS F 6 fl oz .....	ACEGIKM	7.0 a	6.5 ab	6.0 def	4.8 de	4.5 efg
3. Alude SC 5.5 fl oz						
+ CL-EXP-1 F 1 fl oz .....	ACEGIKM	6.8 a	7.0 a	6.5 cde	6.0 abc	6.0 abc
4. Alude SC 5.5 fl oz						
+ Spectro 90WDG 5.75 oz.....	ACEGIKM	7.0 a	6.3 abc	6.8 bcd	7.0 a	6.8 a
5. Alude SC 5.5 fl oz.....	ACEGIKM	6.8 a	6.3 abc	5.8 ef	4.8 de	5.3 cde
6. CL-EXP-1 F 1 fl oz.....	ACEGIKM	7.0 a	5.8 bc	6.0 def	4.3 de	4.3 fg
7. Spectro 90WDG 5.75 oz.....	ACEGIKM	7.3 a	6.8 ab	7.0 abc	6.8 a	6.8 a
8. Signature 80WDG 4 oz.....	ACEGIKM	7.3 a	6.8 ab	7.3 abc	6.3 ab	6.0 abc
9. Signature 80WDG 4 oz						
+ Daconil Ultrex 82.5WDG 3.2 oz..	ACEGIKM	7.0 a	6.8 ab	7.5 ab	7.0 a	6.3 ab
10. Heritage 50WG 0.2 oz.....	ACEGIKM	7.0 a	5.3 c	5.8 ef	4.8 de	4.8 efg
11. Heritage TL 0.8ME 1 fl oz.....	ACEGIKM	7.0 a	5.8 bc	6.0 def	5.0 cde	5.0 def
12. Signature 80WDG 4 oz.....	ACEGIKM					
Bayleton 50DF 1 oz.....	A					
26GT 2SC 4 fl oz.....	C					
Compass 50WG 0.25 oz.....	E					
Daconil Ultrex 82.5WDG 3.2 oz.....	GI					
Compass 50WG 0.25 oz.....	K					
26GT 2SC 4 fl oz.....	M	7.5 a	6.8 ab	7.0 abc	6.5 a	5.8 bcd
13. Alude SC 5.5 fl oz.....	ACEGIKM					
Bayleton 50DF 1 oz.....	A					
26GT 2SC 4 fl oz.....	C					
Compass 50WG 0.25 oz.....	E					
Daconil Ultrex 82.5WDG 3.2 oz.....	GI					
Compass 50WG 0.25 oz.....	K					
26GT 2SC 4 fl oz.....	M	6.8 a	6.0 abc	6.5 cde	6.3 ab	5.8 bcd
14. Signature 80WP 4 oz.....	ACEGIKM					
26GT 2SC 4 fl oz.....	A					
Bayleton 50DF 1 oz.....	C					
26GT 2SC 4 fl oz.....	E					
Compass 50WG 0.25 oz.....	G					
Daconil Ultrex 82.5WDG 3.2 oz.....	I					
Compass 50WG 0.25 oz.....	K					
ProStar 70WP 2.2 oz.....	M	7.0 a	6.5 ab	6.8 bcd	6.5 a	6.0 abc
15. Daconil Ultrex 82.5WDG 3.2 oz.....	ACEGIKM					
Emerald 70WG 0.13 oz.....	A					
Curalan 50WG 1 oz.....	C					
Heritage 50WG 0.4 oz.....	E					
Subdue MAXX 2ME 1 oz.....	G					
Insignia 20WG 0.9 oz.....	I					
Banol 6F 2 fl oz.....	K					
26GT 2SC 3 fl oz.....	M	7.5 a	6.5 ab	7.8 a	7.0 a	6.3 ab
16. Untreated Control.....	--	6.8 a	6.0 abc	5.5 f	4.0 e	4.0 g

<sup>z</sup>Turfgrass quality on a 1 to 9 scale, where 9=highest quality and 5=acceptable.

<sup>y</sup>Application code indicated the application date for each treatment component: A, 7 Jun; C, 21 Jun; E, 8 Jul; G, 21 Jul; I, 4 Aug; K, 17 Aug; M, 2 Sep.

<sup>z</sup>Values are means of four replicates. Means within columns followed by the same letter are not significantly different according to Waller-Duncan k-ratio t-test (k=100).