

Evaluation of fungicides for maintenance of summer quality in creeping bentgrass, 2004.

Fungicides were evaluated for their effect on the summer quality of creeping bentgrass maintained under golf course putting green conditions. This trial was conducted at the Sandhills Research Station in Jackson Springs, NC on ‘Penncross’ creeping bentgrass. Mowing was performed 3 times weekly at a height of 0.156 in. with clippings collected, and the site was irrigated only as needed to prevent severe drought stress. Fertilizer was applied as 18-6-15 on 23 Feb (0.75 lb N/1000 sq ft), as 18-3-16 on 30 Mar (1.24 lb N/1000 sq ft), as 20-20-20 on 15 Jun (0.08 lb N/1000 sq ft), 29 Jul (0.08 lb N/1000 sq ft), and 13 Jul (0.14 lb N/1000 sq ft), and as 15.5-0-0 (0.08 lb N /1000 sq ft) on 10 Aug and 23 Aug. Insect pests were suppressed with Deltagard GC (0.4 oz/1000 sq ft) on 6 May, 10 Aug, and 23 Aug and with Sevin SL (2.6 oz/1000 sq ft) on 3 Aug. 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 CO₂ powered sprayer at 40 psi using TeeJet 8004 nozzles. All treatments were initiated on 4 Jun. Fungicides were reapplied at the appropriate intervals as indicated in the table. Turfgrass quality was evaluated on 1 Jul, 6 Jul, 14 Jul, 22 Jul, 30 Jul, and 1 Sep, 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 was low in the experimental area throughout 2004 due to heat stress, drought stress, dollar spot activity, and brown patch activity. Significant differences among treatments were detected on 1 Jul, 6 Jul, 14 Jul, 22 Jul, and 30 Jul; all proceeding discussions will therefore focus on these assessment dates. Untreated plots received average quality ratings ranging from 2.0 to 3.0 during the experiment. All treatments, except Alude + Protect and Alude Program #8, resulted in a significant improvement in turf quality on all rating dates compared to the untreated control. Alude + Protect and Alude Program #8 failed to improve turfgrass quality on one date each, 30 Jul and 1 Jul, respectively. Signature Program #7 exhibited higher turf quality than Alude Program #8 on 1 Jul, 6 Jul, 14 Jul, and 22 Jul. Signature + Daconil Ultrex maintained turfgrass quality to above acceptable levels (≥ 5) on all rating dates except 1 Sep. Signature + Fore and Fore Program #11 maintained acceptable turf quality on 3 of 6 assessment dates.

Treatment and rate / 1000 sq ft	Application code	Turfgrass quality ^z					
		1 Jul	6 Jul	14 Jul	22 Jul	30 Jul	1 Sep
1. Alude SC 5.5 fl oz	ACEGIKM ^y						
Protect 80WP 8 oz.....	ACEGIKM	4.5 bc ^x	3.8 de	4.0 c	3.8 d	3.0 ef	3.8 a
2. Alude SC 5.5 fl oz	ACEGIKM						
Endorse 2.5WP 4 oz	ACEGIKM	4.5 bc	4.3 bcd	4.0 c	4.0 d	3.5 de	3.8 a
3. Alude SC 5.5 fl oz	ACEGIKM						
Spectro 90WDG 4 oz.....	ACEGIKM	4.8 bc	4.5 bc	4.5 bc	4.3 cd	4.8 abc	5.0 a
4. GX-734 SC 9 fl oz.....	AEIM						
Vital Sign SC 6 fl oz.....	CGK						
Pentathlon 75DF 6 oz.....	CGK	4.8 bc	4.5 bc	4.3 c	4.3 cd	3.5 de	2.8 a
5. Signature 80WDG 4 oz.....	ACEGIKM						
Fore 80WP 8 oz.....	ACEGIKM	5.0 b	6.0 a	5.0 ab	5.3 ab	4.0 cde	3.3 a
6. Signature 80WDG 4 oz.....	ACEGIKM						
Daconil Ultrex 82.5WDG 3.2 oz.....	ACEGIKM	6.5 a	5.8 a	5.3 a	5.5 a	5.8 a	4.8 a
7. Signature 80WDG 4 oz.....	ACEGIKM						
Bayleton 50WG 1 oz	A						
26GT 2SC 4 fl oz.....	C						
Compass 50WG 0.25 oz	E						
Daconil Ultrex 82.5WDG 3.2 oz.....	G						
Daconil Ultrex 82.5WDG 3.2 oz.....	I						
Compass 50WG 0.25 oz	K						
26GT 2SC 4 fl oz.....	M	4.3 bc	4.8 b	4.5 bc	4.8 bc	5.5 ab	5.8 a

Treatment and rate / 1000 sq ft	Application code	Turfgrass quality ^z					
		1 Jul	6 Jul	14 Jul	22 Jul	30 Jul	1 Sep
8. Alude SC 5.5 fl oz	ACEGIKM						
Bayleton 50WG 1 oz	A						
26GT 2SC 4 fl oz.....	C						
Compass 50WG 0.25 oz	E						
Daconil Ultrex 82.5WDG 3.2 oz.....	G						
Daconil Ultrex 82.5WDG 3.2 oz.....	I						
Compass 50WG 0.25 oz	K						
26GT 2SC 4 fl oz.....	M	3.0 de	3.3 e	3.3 d	3.8 d	4.5 bcd	4.0 a
9. Signature 80WG 4 oz	ACEGIKM						
26GT 2SC 4 fl oz.....	A						
Bayleton 50WG 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	3.8 cd	3.8 de	3.3 d	4.3 cd	4.3 cd	4.8 a
10. Daconil Ultrex 82.5WDG 3.2 oz...	ACEGIKM						
Insignia 20WG 0.9 oz.....	A						
26GT 2SC 4 fl oz.....	C						
Systar 90WDG 3 oz.....	E						
Subdue Maxx 2ME 1 fl oz.....	G						
Heritage 50WG 0.4 oz.....	I						
Signature 80WDG 4 oz.....	K						
Endorse 2.5WP 4 oz	M	4.8 bc	4.0 cd	4.0 c	4.8 bc	5.0 abc	5.3 a
11. Fore 80WP 8 oz.....	ACEGIKM						
Insignia 20WG 0.9 oz.....	A						
26GT 2SC 4 fl oz.....	C						
Systar 90WDG 3 oz.....	E						
Subdue Maxx 2ME 1 fl oz.....	G						
Heritage 50WG 0.4 oz.....	I						
Signature 80WDG 4 oz.....	K						
Endorse 2.5WP 4 oz	M	5.3 b	5.5 a	5.0 ab	5.0 ab	4.3 cd	5.3 a
12. Untreated Control	--	2.5 e	2.0 f	2.0 e	2.5 e	2.3 f	3.0 a

^zTurfgrass quality on a 1 to 9 scale, where 9=highest quality and 5=acceptable quality.

^yApplication code indicates the application date(s) for each treatment component: A, 4 Jun; C, 18 Jun; E, 2 Jul; G, 16 Jul; I, 30 Jul; K, 17 Aug; M, 1 Sep.

^xValues 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).