

Impact of Trinity and other DMI fungicides on the quality of bermudagrass putting greens, 2007.

DMI fungicides were evaluated for their impact on the quality of ‘Tifeagle’ bermudagrass maintained under golf course putting green conditions. This trial was conducted at the Lake Wheeler Turfgrass Field Lab in Raleigh, NC. The turf was mowed four times weekly at a height of 0.165 in. with clippings collected, and the site was irrigated to prevent drought stress. Fertilizer was applied as 26-0-22 on 15 Mar (0.33 lb N/1000 sq ft), 18-3-16 on 13 Apr (0.75 lb N/1000 sq ft), 30-0-0 on 17 May and 25 Jul (2.6 and 0.3 lb N/1000 sq ft, respectively), 18-0-12 on 7 Jun and 29 Aug (0.25 lb N/1000 sq ft), 18-19-18 on 3 Jul (0.25 lb N/1000 sq ft), and 20-20-20 on 4 Sep (0.36 lb N/1000 sq ft). Micronutrients were applied as Maxigreen (6.0 fl oz/1000 sq ft) on 7 Jun. Ronstar 2G (2 lb ai/a) was applied on 26 Feb for pre-emergence control of crabgrass and goosegrass. Revolution (6.0 fl oz/1000 sq ft) was applied on 25 Jul to improve water infiltration. 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 a TeeJet 9508E nozzle. All treatments were initiated on 19 Jun and were reapplied on 14-day intervals. Turfgrass quality was evaluated on 6, 15, and 28 Aug, and 11 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).

Weather conditions were abnormally hot and dry during the course of this study, resulting in considerable turfgrass stress. No fungicide treatments improved turf quality as compared to the untreated control. Trinity (2.0 fl oz) and Lynx (2.0 fl oz) induced significant foliar bronzing and thinning of the turf canopy, resulting in unacceptable turf quality on all rating dates. Applications of Bayleton (1 oz) also caused unacceptable injury to the turf on 6 Aug, 15 Aug, and 11 Sep. Eagle WSP caused a significant reduction of turfgrass quality on 6 Aug, but had no significant impact on evaluation dates thereafter. No adverse side effects were induced by applications of Trinity (0.5, 0.75, or 1 fl oz) or Banner Maxx (2 fl oz) during this trial.

Treatment, formulation, and rate per 1000 sq ft	Appl. interval (days)	Turfgrass quality ^z			
		6 Aug	15 Aug	28 Aug	11 Sep
Trinity 1.67SC 0.5 fl oz.....	14 ^y	7.0 ab ^x	5.3 abc	5.5 a	5.3 ab
Trinity 1.67SC 0.75 fl oz.....	14	6.5 abc	6.3 ab	5.0 ab	4.5 abc
Trinity 1.67SC 1.0 fl oz.....	14	6.3 abc	5.0 abc	4.8 abc	5.0 ab
Trinity 1.67SC 2.0 fl oz.....	14	3.8 d	2.8 d	3.3 c	2.8 d
Banner MAXX 1.3ME 2.0 fl oz.....	14	6.0 abc	5.8 ab	6.3 a	5.3 ab
Bayleton 50WG 1.0 oz.....	14	5.0 bcd	4.5 bcd	4.8 abc	3.5 cd
Eagle WSP 40WP 1.2 oz.....	14	5.8 bcd	5.5 ab	4.8 abc	4.8 abc
Lynx 2SC 2.0 fl oz.....	14	4.8 cd	3.5 cd	3.5 bc	4.0 bcd
Untreated Control.....		8.0 a	6.5 a	5.3 a	5.5 a

^z Turfgrass quality on a 1-9 scale, where 9=highest quality, and 5=acceptable.

^y Fungicides were applied on 19 Jun, 3, 17, and 31 Jul, and 14 and 29 Aug.

^x Values are means of four replications. Means within columns followed by the same letter are not significantly different according to Waller-Duncan k-ratio t-test (k=100).