CREEPING BENTGRASS (*Agrostis palustris* 'A-1')
Pythium root dysfunction; *Pythium volutum*

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The influence of fungicides and soil surfactants on Pythium root dysfunction in creeping bentgrass, 2005.

Fungicides and soil surfactants were evaluated for their effect on Pythium root dysfunction development in creeping bentgrass. This trial was conducted at Carolina Country Club in Raleigh, NC on 'A-1' creeping bentgrass maintained under golf course putting green conditions. Mowing was performed daily at a height of 0.125 in. with clippings collected, and the site was irrigated to prevent drought stress. Fertilizer was applied as 20-5-20 on 8 Apr, 14 Apr, 29 Apr, 20 May, and 30 May (0.125 lb N/1000 sq ft) and 7 Jun, 14 Jun, and 26 Jun (0.0625 lb N/1000 sq ft). Daconil Ultrex 82.5WDG (3.2 oz/1000 sq ft) was applied on 4 Jun and 15 Jun to suppress dollar spot and algae invasion, and Talstar (0.25 oz/1000 sq ft) was applied on 4 Jun to suppress insect pests. Plots were 3.33 ft x 6 ft and were arranged in a randomized complete block with four replications. Treatments were applied on 29 Mar, 4 May, and 7 Jun in water equivalent to 2 gal per 1000 sq ft with a CO_2 powered sprayer at 40 psi using TeeJet 8004 nozzles. All treatments, except Signature and Signature + Banol, were watered-in immediately after application with 0.25 in. of H_2O applied by hand with a shower-type nozzle. Because no symptoms of Pythium root dysfunction were observed in the experimental area during 2005, no disease assessments were taken. Turfgrass quality was evaluated on 13 May and 7 Jun, 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).

No symptoms of Pythium root dysfunction were observed during the summer of 2005 at this experimental location. Fungicide and soil surfactant treatments had no effect on turfgrass quality on 13 May or 7 Jun. The trial was terminated following 7 Jun due to misapplication of fertilizer to a portion of the experimental area.

Treatment and rate / 1000 sq ft	Turf quality[z] 13 May	7 Jun
Signature 80WDG 8 oz	5.8 a[y]	7.0 a-d
Signature 80WDG 4 oz + Banol 6F 2 fl oz	6.3 a	7.0 a-d
Insignia 20WG 0.9 oz	4.5 a	6.5 bcd
Heritage 50WG 0.4 oz	5.5 a	7.5 a-d
Heritage TL 0.8ME 2 fl oz	4.3 a	7.0 a-d
Compass 50WG 0.25 oz	6.0 a	6.3 cd
Subdue Maxx 2ME 1 fl oz	5.3 a	7.0 a-d
Banol 6F 4 fl oz	7.5 a	8.8 ab
Terrazole 35WP 4 oz	5.3 a	7.8 a-d
Cyazofamid 400SC 0.9 fl oz	6.8 a	7.3 a-d
Cyazofamid 400SC 0.45 fl oz + Insignia 20WG 0.5 oz	4.3 a	7.3 a-d
Insignia 20WG 0.9 oz + Dispatch Soil Penetrant 17SC 0.75 fl oz	6.3 a	6.8 a-d
Heritage 50WG 0.4oz + Dispatch Soil Penetrant 17SC 0.75 fl oz	4.3 a	8.0 a-d
Heritage TL 0.8ME 2 fl oz + Dispatch Soil Penetrant 17SC 0.75 fl oz	5.5 a	7.5 a-d
Compass 50WG 0.25 oz + Dispatch Soil Penetrant 17SC 0.75 fl oz	6.8 a	8.0 a-d
Subdue Maxx 2ME 1 fl oz + Dispatch Soil Penetrant 17SC 0.75 fl oz	5.5 a	8.3 a-d
Banol 6F 4 fl oz + Dispatch Soil Penetrant 17SC 0.75 fl oz	5.8 a	8.5 abc
Terrazole 35WP 4 oz + Dispatch Soil Penetrant 17SC 0.75 fl oz	6.5 a	9.0 a
Cyazofamid 400SC 0.9 fl oz + Dispatch Soil Penetrant 17SC 0.75 fl oz	6.5 a	8.5 abc
Cyazofamid 400SC 0.45 fl oz + Insignia 20WG 0.5 oz + Dispatch Soil Penetrant 17SC 0.75 fl oz	5.8 a	8.3 a-d
Magnus 100SC 4 fl oz	6.3 a	6.3 cd
Cascade Plus 100SC 8 fl oz	4.8 a	7.0 a-d
Dispatch Soil Penetrant 17SC 0.75 fl oz	6.5 a	8.3 a-d
Revolution 100SC 6 fl oz	6.3 a	6.0 d
Untreated Control	6.8 a	7.3 a-d

[z]Turfgrass quality on a 1 to 9 scale, where 9=highest quality and 5=acceptable.
[y]All treatments were applied on 29 Mar, 4 May, and 7 Jun. 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).