

Evaluation of Rhapsody Biofungicide for dollar spot control in creeping bentgrass, 2005.

Rhapsody Biofungicide was evaluated for control of dollar spot when applied alone or tank-mixed with fungicides. This trial was conducted at the Lake Wheeler Turfgrass Field Lab in Raleigh, NC on 'SR 1119' creeping bentgrass maintained under putting green conditions. Mowing was performed 5 times weekly at a height of 0.156 in. (0.185 in. after 20 Jun) with clippings collected, and the site was irrigated to prevent drought stress. To encourage dollar spot severity, no fertility was applied throughout this study. Insect pests were suppressed with Dursban Pro (1.5 fl oz/1000 sq ft) on 23 Jun. 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/1000 sq ft with a CO₂ powered sprayer at 40 psi using TeeJet 8004 nozzles. All treatments were initiated on 12 May. Fungicides were reapplied at the appropriate intervals as indicated in the table. All dollar spot infection centers within each plot were counted on 4 May, 11 May, 18 May, 25 May, 1 Jun, 8 Jun, 15 Jun, 24 Jun, 1 Jul, 6 Jul, and 20 Jul. Turfgrass quality was evaluated on 16 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).

Symptoms of dollar spot were evident in early May throughout the research plot, with increased dollar spot pressure occurring in mid-May and throughout July peaking at 157 infection centers per plot in the untreated plots on the 1 July assessment date. After the initial application on 12 May, treatments that contained Daconil Ultrex (1.8 oz) or Insignia (0.5 oz), either alone or combined with Rhapsody, provided significant control of dollar spot on all rating dates except for 15 Jun. Rhapsody (3% v/v) provided significant suppression of dollar spot on 1 Jul and 6 Jul.

Only Rhapsody (2% v/v) + Daconil Ultrex (1.8 oz) provided adequate turfgrass quality (≥5) on the 16 Aug rating date, whereas all treatments containing Daconil Ultrex (1.8 oz) or Insignia (0.5 oz), either alone or combined with Rhapsody, provided significantly better turfgrass quality when compared to the untreated control.

Treatment and rate / 1000 sq ft	Spray interval (days) ^z	Disease incidence (infection centers/plot) ^y						
		4 May	11 May	18 May	25 May	1 Jun	8 Jun	15 Jun
Rhapsody 2% v/v	14	10 b	10 a	55 ab	18 ab	12 ab	31 ab	27 a
Rhapsody 3% v/v	14	10 b	14 a	57 ab	15 abc	13 ab	32 ab	36 a
Rhapsody 2% v/v + Daconil Ultrex 82.5WDG 1.8 oz	14	15 b	8 a	10 c	1 c	0 b	7 b	2 a
Rhapsody 2% v/v + Insignia 20WG 0.5 oz.....	14	13 b	17 a	27 bc	6 bc	0 b	9 b	2 a
Daconil Ultrex 82.5WDG 1.8 oz.....	14	33 a	16 a	19 bc	4 bc	1 b	11 b	2 a
Insignia 20WG 0.5 oz	14	21 ab	19 a	21 bc	5 bc	1 b	18 b	3 a
Untreated Control.....	--	20 ab	18 a	80 a	27 a	24 a	49 a	36 a

^zFungicides were applied on 12 May, 26 May, 9 Jun, 23 Jun, 8 Jul, 21 Jul, 4 Aug, and 17 Aug 05.

^yValues 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).

Treatment and rate / 1000 sq ft	Spray interval (days) ^z	Disease incidence (infection centers/plot) ^y				Turf quality ^x
		24 Jun	1 Jul	6 Jul	20 Jul	16 Aug
Rhapsody 2% v/v	14	38 a	103 ab	118 ab	92 a	2.8 cd
Rhapsody 3% v/v	14	36 a	70 b	98 b	75 a	2.8 cd
Rhapsody 2% v/v						
+ Daconil Ultrex 82.5WDG 1.8 oz	14	2 b	0 c	4 c	1 b	6.0 a
Rhapsody 2% v/v						
+ Insignia 20WG 0.5 oz	14	5 b	0 c	7 c	4 b	4.3 bc
Daconil Ultrex 82.5WDG 1.8 oz	14	6 b	0 c	18 c	3 b	4.8 ab
Insignia 20WG 0.5 oz	14	2 b	1 c	15 c	3 b	4.5 ab
Untreated Control	--	49 a	157 a	153 a	111 a	2.0 d

^zFungicides were applied on 12 May, 26 May, 9 Jun, 23 Jun, 8 Jul, 21 Jul, 4 Aug, and 17 Aug 05.

^yValues 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).

^xTurfgrass quality is based on a 1 to 9 scale (9=best, 5=acceptable) based on color, density, and uniformity.