

### **Evaluation of fungicides for preventative control of spring dead spot in bermudagrass, 2005-2006.**

Fungicides were evaluated for control of spring dead spot in bermudagrass fairways. This trial was conducted at Brier Creek Country Club in Raleigh, NC on 'Tifway' bermudagrass maintained under golf course fairway conditions. Mowing was performed 3 times weekly at a height of 0.5 in. with clippings collected, and the site was irrigated to prevent drought stress. Fertilizer was applied as 18-24-12 on 9 May 05 (0.72 lb N/1000 sq ft), 25-5-15 on 7 Jun 05 (1.5 lb N/1000 sq ft), and as 5-10-31 on 31 Oct 05 and 3 May 06 (0.16 lb N/1000 sq ft). Primo Maxx (0.26 fl oz/1000 sq ft) was applied for growth regulation on 21 Jun 05, 18 Jul 05, and 20 Aug 05 and Ronstar + Glystar (2.2 + 0.7 oz/1000 sq ft) was applied on 1 Feb 06. Plots were 5 ft x 10 ft and were arranged in a randomized complete block with six replications. Fungicides were applied in water equivalent to 5 gal per 1000 sq ft with a gasoline-powered sprayer at 40 psi using TeeJet 8004 nozzles. All treatments were applied on 19 Sep 05, and certain treatments were reapplied on 13 Oct 05 as indicated in the table. Prior to initiation of the trial, the number of spring dead spot patches per plot was assessed to ensure uniform disease pressure. Fungicide efficacy was evaluated on 9 May 06 by determining the percent turf area exhibiting spring dead spot symptoms. Turfgrass quality was assessed on 14 Apr 06, using a 1 to 9 scale (9=best, 5=acceptable) based on color, density, and uniformity. Spring greenup was assessed on 14 Apr 06 and 9 May 06, using a scale of 0 to 10 (10=100% green, 5=50% green). Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t test (k=100).

No significant differences in spring dead spot incidence were detected on 14 Jun 05, prior to initiation of the trial. Applications of Headway, Heritage TL + Banner Maxx, Heritage TL, Insignia, and Lynx 2SC significantly slowed spring greenup and reduced turfgrass quality on 14 Apr 06. These treatments were also observed to increase the density of dormant bermudagrass foliage, which likely slows greenup by reflecting sunlight and keeping soil temperatures cooler in spring. It is interesting to note that Heritage 50WG did not increase dormant density and also did not affect spring greenup. Few significance differences in spring greenup were evident by 9 May 06, indicating that no long-term damage was done to the bermudagrass turf.

Spring dead spot pressure was lower in 2006 as compared to 2005, with only 4.8% spring dead spot evident in untreated plots. Headway, Heritage TL + Banner Maxx, Heritage TL, Banner Maxx, Rubigan (all formulations and rates), 3336, and Lynx 22F provided significant reductions in spring dead spot incidence compared to untreated plots.

Treatment, formulation, and rate per 1000 sq ft	Appli- cation code	Disease incidence (patches/plot)	Turfgrass quality <sup>z</sup>	Spring greenup <sup>y</sup>		Disease incidence (%)
		14 Jun 05	14 Apr 06	14 Apr 06	9 May 06	9 May 06
Headway 1.39ME 3 fl oz .....	AB <sup>x</sup>	19 a <sup>w</sup>	3.3 g	4.3 e	5.2 c	0.8 cd
Heritage TL 0.8ME 2 fl oz .....						
+ Banner MAXX 1.3ME 2 fl oz .....	AB	13 a	3.3 g	4.3 e	6.0 abc	0.0 d
Heritage 50WG 0.4 oz .....	AB	19 a	4.7 abc	5.7 ab	5.7 bc	1.2 bcd
Heritage TL 0.8ME 2 fl oz .....	AB	16 a	3.7 efg	4.8 cde	6.7 abc	0.2 d
Banner MAXX 1.3ME 4 fl oz .....	AB	18 a	4.3 bcd	5.2 bcd	6.2 abc	0.5 cd
A14472 32.5WG 2 oz .....	AB	18 a	4.7 abc	6.0 a	7.8 ab	1.3 bcd
Rubigan 1AS 6 fl oz .....	AB	18 a	5.2 a	6.0 a	8.3 a	0.2 d
Rubigan 1AS 6 fl oz .....	A	19 a	4.8 ab	6.2 a	7.0 abc	0.7 cd
Rubigan 1AS 4 fl oz .....	AB	18 a	4.5 bcd	5.7 ab	6.2 abc	0.7 cd
Rubigan 1G 6 lb .....	AB	20 a	4.7 abc	5.2 bcd	7.2 abc	0.3 cd
Rubigan 1G 6 lb .....	A	17 a	4.8 ab	5.7 ab	7.5 abc	0.0 d
Rubigan 1G 4 lb .....	AB	14 a	4.3 bcd	5.7 ab	7.5 abc	1.0 cd
Insignia 20WG 0.9 oz .....	AB	15 a	3.7 efg	4.5 de	5.0 c	3.0 a-d
Insignia 20WG 0.9 oz .....						
+ Dispatch 17%L 0.75 fl oz .....	AB	17 a	4.0 def	5.0 b-e	6.0 abc	3.0 a-d
Endorse 2.5WP 4 oz .....	AB	19 a	4.5 bcd	5.5 abc	5.3 bc	4.0 abc
3336 50WP 6 oz .....	AB	18 a	4.8 ab	5.7 ab	7.2 abc	0.3 cd
Lynx 45WP 1.2 oz .....	AB	16 a	4.3 bcd	5.7 ab	5.7 bc	1.5 a-d
Lynx 2SC 2 fl oz .....	AB	15 a	3.5 fg	4.7 de	6.2 abc	0.0 d
Eagle 1.67EW 2.4 fl oz .....	A	18 a	4.3 bcd	5.5 abc	5.5 bc	2.0 a-d
Eagle 1.67EW 2.4 fl oz .....	B	17 a	4.3 bcd	5.0 b-e	5.3 bc	5.2 a
Eagle 1.67EW 2.4 fl oz .....	AB	16 a	4.2 cde	5.0 b-e	6.2 abc	3.2 a-d
Untreated Control .....		18 a	4.3 bcd	5.5 abc	5.0 c	4.8 ab

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

<sup>y</sup> Spring greenup on a scale of 0 to 10 (10=100% green, 5=50% green)

<sup>x</sup>Application code indicates the application date(s) of each treatment: A-19 Sep 05 and B-13Oct 05.

<sup>w</sup>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).