

Influence of rate and application date on control of spring dead spot with fenarimol, 2003-2004.

Varying rates of fenarimol applied on different timing regimes were evaluated for control of spring dead spot. This trial was conducted at Walnut Creek Softball Complex on Field 4 in Raleigh, NC on 'Tifway' bermudagrass maintained under athletic field conditions. Mowing was performed twice weekly at a height of 1.5 in. with clippings returned, and the site was irrigated to prevent drought stress. Plots were 5 ft x 10 ft and were arranged in a split-plot randomized complete block with 4 replications. Application rates served as the main plots, whereas application dates were the sub-plots. Fungicides were applied in water equivalent to 5 gal per 1000 sq ft with a CO₂ powered sprayer at 40 psi using TeeJet 8008 nozzles. Treatments were initiated on 1 Aug 2004 and were applied as indicated in the table. Percent turf area exhibiting spring dead spot symptoms was assessed on 12 May 2004 using digital image analysis. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t test (k=100).

Spring dead spot was severe in 2004, due to a wet fall and cold winter in 2003-04. All fenarimol application rates provided significant control of spring dead spot when averaged across all timings (Table 1). When treatments were initiated on 1 Aug 03, only the 4 + 4 fl oz and 6 + 6 fl oz treatments provided significant spring dead spot control. All treatments provided significant control of spring dead spot when initiated on 15 Aug 03 or 15 Sep 03. No significant differences were detected among treatments for the 1 Sep 03 or 1 Oct 03 application dates. There were no significant differences detected among application timings when analyzed across all Rubigan rates (Table 2). No phytotoxicity or other negative impacts on turfgrass quality were observed at any time during this trial.

Table 1. Spring dead spot incidence ratings for application timings.

Treatment and rate / 1000 sq ft ²	Disease incidence on 12 May 04 (%)					
	All Timings ^z	1 Aug 03	15 Aug 03	1 Sep 03	15 Sep 03	1 Oct 03
1. Rubigan 1AS (6 fl oz).....	12.00 b ^y	13.30 ab	10.30 b	14.83 a	9.28 b	12.29 a
2. Rubigan 1AS (4 + 4 fl oz)	11.37 b	9.61 b	8.35 b	15.75 a	11.37 b	11.76 a
3. Rubigan 1AS (6 + 6 fl oz)	10.31 b	8.87 b	10.00 b	10.60 a	9.38 b	12.68 a
4. Untreated Control	21.70 a	23.02 a	23.00 a	18.41 a	24.66 a	19.41 a

^zTreatments were initiated on the dates indicated in the table. For split-applications, follow-up treatments were applied 14 days after the initial application.

^yDisease incidence values from 12 May 04 rating date 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).

Table 2. Spring dead spot incidence ratings for all Rubigan rates.

Application Timing ^z	Disease incidence on 12 May 04 (%)
1. 1 Aug 03	13.70 a ^y
2. 15 Aug 03	12.91 a
3. 1 Sep 03	14.90 a
4. 15 Sep 03	13.67 a
4. 1 Oct 03	14.03 a

^zTreatments were initiated on the dates indicated in the table. For split-applications, follow-up treatments were applied 14 days after the initial application.

^yDisease incidence values from 12 May 04 rating date 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).