

Evaluation of fungicides for control of brown patch in ‘Endeavor’ tall fescue, 2005.

Fungicides were evaluated for control of brown patch in ‘Endeavor’ tall fescue, a cultivar with moderate resistance to *Rhizoctonia solani*. This trial was conducted at the Lake Wheeler Turfgrass Field Laboratory in Raleigh, NC under lawn maintenance conditions. Mowing was performed 2 times weekly at a height of 3 in. with clippings returned, and the site was irrigated to prevent drought stress. Fertilizer was applied as 25-6-12 on 21 Feb, 21 Mar, and 6 Oct (1 lb N/1000 sq ft). Annual grasses were controlled with applications of Barricade 65WDG on 21 Feb (0.5 lbs a.i./acre) and 18 Apr (0.25 lbs a.i./acre). Plots were 5 ft x 6 ft and were arranged in a randomized complete block with four replications. Fungicides were applied in water equivalent to 3 gal per 1000 sq ft with a CO₂ powered sprayer at 40 psi using TeeJet 8004 nozzles. All treatments were initiated on 8 Jun and were reapplied at the appropriate intervals as indicated in the table. The experimental area was inoculated on 16 Jun using rye grain infested with *Rhizoctonia solani* isolates AG 1, Rh65, and Rh68 to encourage brown patch development. Percent turf area exhibiting brown patch symptoms was assessed on 6 Jul, 25 Jul, 3 Aug, 19 Aug, and 30 Aug. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t test (k=100).

Brown patch activity was low in the experimental area on 6 Jul. All treatments except Compass 50WG provided significant control on this date. Brown patch activity increased in the experimental area throughout July, reaching a peak on 3 Aug in untreated plots. During this time, Insignia 20WDG (all rates), Heritage 50WG, and Heritage TL (all rates) provided excellent brown patch control. ProStar 70WP (2.25 oz) provided excellent brown patch control for the first four rating dates, but did not provide acceptable control on 30 Aug. Of the fungicides evaluated in this trial, Heritage 50WDG, Heritage TL, and Insignia 20WDG provided the best brown patch control. The low label rates of these fungicides provided acceptable control on all rating dates even under the severe disease pressure encountered during this trial.

Treatment and rate / 1000 sq ft	Spray interval (days)	Brown patch incidence (%)				
		6 Jul	25 Jul	3 Aug	19 Aug	30 Aug
Heritage TL 0.8ME 0.5fl oz	28 ^z	1 f ^y	0 e	2 g	6 e	9 d
Heritage TL 0.8ME 1 fl oz	28	0 f	0 e	0 g	1 e	5 d
Heritage 50WG 0.2 oz	28	0 f	1 e	2 g	4 e	11 d
Insignia 20WG 0.5 oz	28	3 ef	0 e	2 g	7 e	6 d
Insignia 20WG 0.7 oz	28	2 f	0 e	1 g	7 de	7 d
Insignia 20WG 0.9 oz	28	0 f	0 e	0 g	2 e	8 d
Compass 50WG 0.25 oz	28	12 ab	12 bcd	44 b	20 c	28 abc
ProStar 70WP 1 oz	28	8 bcd	20 b	44 b	31 b	37 a
ProStar 70WP 1.5 oz	28	4 def	6 cde	23 de	17 cd	26 abc
ProStar 70WP 2.25 oz	28	1 f	2 de	7 fg	10 de	23 c
SysStar 80WDG 1 oz	28	7 cde	22 b	39 bc	25 bc	35 ab
SysStar 80WDG 1.5 oz	28	9 bc	15 bc	31 cd	24 bc	34 abc
SysStar 80WDG 2.25 oz	28	2 ef	4 de	14 ef	10 de	26 abc
Banner MAXX 1.3ME 2 fl oz	28	8 bcd	12 bcd	35 bc	22 bc	24 bc
Untreated Control	--	15 a	50 a	62 a	42 a	37 a

^zFungicides were applied on 8 Jun, 6 Jul, and 3 Aug (all treatments).

^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).