

Evaluation of fungicides for control of brown patch in Endeavor tall fescue, 2004.

Fungicides were evaluated for their ability to provide acceptable brown patch control in tall fescue when applied on 28 day intervals. This trial was conducted at the Lake Wheeler Turfgrass Field Lab in Raleigh, NC on 'Endeavor' tall fescue, which has a moderate level of resistance to brown patch. Mowing was performed once weekly at a height of 3 in. with clippings returned, and the site was irrigated to prevent drought stress. Fertilizer was applied as 25-5-15 on 5 Mar and 1 Apr (1 lb N/1000 sq ft) and as 30-3-10 on 27 Aug (1 lb N/1000 sq ft). Annual grasses were suppressed with Ronstar 2G (150 lbs/acre) on 14 Mar and Acclaim Extra on 5 Aug and 17 Aug (0.57 fl oz/1000 sq ft), and broadleaf weeds were controlled with Trimec Plus on 18 Jun (4 pts/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 applied on 1 Jun, 29 Jun, and 26 Jul. The experimental area was inoculated on 16 Jun using rye grain infested with *Rhizoctonia solani* to encourage brown patch development. Percent turf area exhibiting brown patch symptoms was assessed on 30 Jun, 16 Jul, 29 Jul, 13 Aug, and 2 Sep. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t test (k=100).

Throughout July and August, brown patch incidence increased steadily in the experimental area, which is typical of brown patch development in a moderately resistant cultivar such as Endeavor. On 30 Jun, Heritage TL, Insignia, Prostar (2.25 oz), and Systar (2.25 oz) provided significant control of brown patch. All fungicide treatments significantly reduced brown patch incidence on 16 Jul, 29 Jul, 13 Aug, and 2 Sep. Only Heritage TL, Insignia, and Systar (2.25 oz) provided excellent control of brown patch on all rating dates. Prostar (2.25 oz) provided excellent brown patch control on 4 of the 5 rating dates.

Treatment and rate / 1000 sq ft	Spray interval (days)	Brown patch incidence (%)				
		30 Jun	16 Jul	29 Jul	13 Aug	2 Sep
Heritage TL 0.8ME 0.5 fl oz	28 ^z	2 d ^y	1 f	1 e	0 d	5 ef
Heritage TL 0.8ME 1 fl oz	28	2 d	1 f	1 e	0 d	4 ef
Insignia 20WG 0.5 oz.....	28	4 bcd	2 def	1 e	0 d	1 f
Insignia 20WG 0.7 oz.....	28	4 bcd	1 f	0 e	0 d	0 f
Insignia 20WG 0.9 oz.....	28	3 d	2 ef	1 e	0 d	1 f
Compass 50WG 0.25 oz.....	28	8 a	3 def	10 cd	4 bcd	16 bc
Prostar 70WP 1 oz.....	28	7 a	6 d	15 bc	1 cd	10 cde
Prostar 70WP 1.5 oz.....	28	6 abc	5 de	5 de	2 cd	21 b
Prostar 70WP 2.25 oz.....	28	3 cd	2 def	1 e	1 cd	13 cd
Systar 70WP 1 oz.....	28	8 a	9 c	20 b	5 bc	11 cde
Systar 80 WDG 1.5 oz.....	28	7 ab	3 def	3 de	1 cd	12 cde
Systar 80 WDG 2.25 oz.....	28	4 bcd	2 def	3 de	1 cd	6 def
Banner Maxx 1.3ME 2 fl oz.....	28	7 a	14 b	21 b	7 b	2 f
Untreated Control	--	7 a	28 a	31 a	44 a	33 a

^zFungicides were applied on 1 Jun, 29 Jun, and 26 Jul.

^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).