

Evaluation of fungicides for control of brown patch in 'Coronado' tall fescue, 2005.

Fungicides were evaluated for control of brown patch in the highly susceptible tall fescue cultivar 'Coronado'. This trial was conducted at the Lake Wheeler Turfgrass Field Laboratory in Raleigh, NC. Mowing was performed twice weekly at a height of 3 in. with clippings returned, and the site was irrigated to prevent drought stress. Fertilizer was applied as 25-6-15 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* isolate 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, 16 Aug, 22 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 during on 6 Jul was low, as a result all treatments exhibited lower brown patch incidence compared to the untreated control. By 25 Jul, brown patch incidence was much greater. Heritage TL (all rates), Heritage 50WG, and Insignia 20WG (all rates) provided excellent brown patch control on all rating dates. Armada 50WP (all rates), ProStar 70WP (1.5 and 2.25 oz), and Spectro 90WDG provided significant brown patch control on all rating dates but did not maintain disease incidence to acceptable levels.

Treatment and rate / 1000 sq ft	Spray interval (days)	Brown patch incidence (%)					
		6 Jul	25 Jul	3 Aug	16 Aug	22 Aug	30 Aug
Heritage TL 0.8ME 0.5 fl oz	28 ^z	1 e-h ^y	8 d-g	8 efg	10.2 k-n	12.9 hij	11.9 ghi
Heritage TL 0.8ME 1 fl oz	28	0 h	1 f-i	2 g	1.9 n	2.8 jk	5.7 hi
Heritage 50WG 0.2 oz	28	1 fgh	0 hi	6 fg	8.5 k-n	8.7 ijk	11.5 ghi
Insignia 20WG 0.5 oz	28	1 fgh	0 i	3 fg	7.3 k-n	8.2 ijk	13 ghi
Insignia 20WG 0.7 oz	28	1 e-h	0 i	2 g	3.4 mn	3.8 jk	6.3 hi
Insignia 20WG 0.9 oz	28	0 h	0 i	1 g	5.7 lmn	5.8 jk	5.9 hi
Compass 50WG 0.25 oz	28	6 b	11 d	39 ab	31.4 e-h	35.7 def	43.6 abc
ProStar 70WP 1 oz	28	5 bc	19 c	42 a	43.8 bcd	43.8 bcd	48 ab
ProStar 70WP 1.5 oz	28	2 e-h	8 d-h	23 cd	24.5 g-j	25.4 fg	34.2 cde
ProStar 70WP 2.25 oz	28	2 e-h	1 hi	15 def	16.7 i-l	24 gh	36.1 b-e
SysStar 80WDG 1 oz	28	5 bcd	26 c	44 a	41.7 cde	41.4 cd	47.6 ab
SysStar 80WDG 1.5 oz	28	6 b	21 c	42 a	36.6 def	37.8 de	45.8 abc
SysStar 80WDG 2.25 oz	28	3 cde	4 d-i	22 cd	17.2 ijk	18.2 ghi	21 fg
Banner Maxx 1.3ME 2 fl oz	28	5 bc	23 c	48 a	42.2 cde	43.2 bcd	39.6 bcd
Armada 50WP 0.6 oz	21	0 h	8 d-g	7 fg	27.1 f-i	28.3 efg	17.6 fgh
Armada 50WP 1.2 oz	21	0 gh	3 e-i	1 g	17.4 ijk	18.8 ghi	6.7 hi
Armada 50WP 1.2 oz	28	3 d-g	3 e-i	30 bc	21.6 hij	23 gh	25.4 ef
TM 473 480SC 0.2 oz	21	0 h	1 ghi	0 g	3.8 mn	4 jk	6.1 hi
CL-EXP-4 10WP 1 oz	14	3 def	21 c	39 ab	50.1 abc	52.1 abc	47.2 ab
Spectro 90WDG 4 oz	14	1 e-h	9 def	6 fg	14.3 j-m	18.9 ghi	27.1 ef
Untreated Control	--	11 a	47 a	45 a	55.8 a	57.2 a	53.2 a

^zFungicides were applied on 8 Jun, Jul 6, and 3 Aug (28 day treatments), 8 Jun, 30 Jun, 20 Jul, and 11 Aug (21 day treatments), 8 Jun, 22 Jun, 30 Jun, 6 Jul, 20 Jul, 3 Aug, 11 Aug, and 16 Aug (14 day 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).