

TALL FESCUE (*Festuca arundinacea* ‘Coronado’)  
Brown patch; *Rhizoctonia solani*  
Pythium blight; *Pythium aphanidermatum*

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### **Preventative control of brown patch in ‘Coronado’ tall fescue, 2006.**

Fungicides were evaluated for control of brown patch in the highly susceptible variety ‘Coronado’. This trial was conducted at the Lake Wheeler Turfgrass Field Laboratory in Raleigh, NC on tall fescue maintained under home lawn conditions. Mowing was performed two times weekly at a height of 3.5 in. with clippings returned, and the site was irrigated daily with 0.13” at 8 PM to enhance disease development. Fertilizer was applied as 25-6-12 on 28 Feb, 29 Mar, and 16 Jun (1.0 lb N/1000 sq ft). Barricade 65WG (0.75 lb ai/A) was applied on 7 Mar for pre-emergent weed control. 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 2 gal per 1000 sq ft with a CO<sub>2</sub> powered sprayer at 40 psi using TeeJet 8004 nozzles. Granular formulations were applied by hand with a shaker jar. All treatments were initiated on 13 Jun and were reapplied at the appropriate intervals as indicated in the table. The experimental area was inoculated on 5 Jun using rye grain infested with *R. solani* isolates AG-1, Rh-45, and Rh-46 to encourage brown patch development. Percent turf area exhibiting brown patch symptoms was assessed on 29 Jun, 5 and 12 Jul, 3 and 15 Aug, and 8 Sep. Pythium blight was assessed on 3 Aug as the percent turf area exhibiting symptoms. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t test (k=100).

Brown patch activity was low during June because of unusually cool and wet weather. Night temperatures consistently above 70°F in late June and early July stimulated an epidemic, with disease incidence reaching a maximum of 20% in untreated plots on 5 Jul. On this date, 22 days after initiation of the trial, all treatments provided good to excellent control of brown patch, with the exception of SP102000015045 (applied to wet foliage) and SP102000015034 (applied to wet foliage). Seven days later, on 12 Jul, Lynx + Compass, Armada, Banner Maxx, and AB0330925 treatments were no longer providing significant brown patch suppression. Also on this date, SP102000015045 provided better brown patch control when applied to wet foliage, whereas SP102000015034 provided superior control when applied to dry foliage. Brown patch incidence reached a second peak on 8 Sep, 32 days after the final application of all treatments. On this date, Lynx + Compass, AB0330925, and Banner Maxx treatments failed to provide acceptable control of brown patch. Treatments containing Headway, Heritage TL, Heritage 50WG, and Insignia provided excellent control of brown patch throughout this trial.

Treatment, formulation, and rate per 1000 sq ft	Spray interval (days)	Brown patch incidence (%)		
		29 Jun	5 Jul	12 Jul
Headway 1.39ME 0.75 fl oz.....	14 <sup>z</sup>	0.6 a <sup>y</sup>	1.5 c	0.0 f
Headway 1.39ME 0.75 fl oz.....	28	0.6 a	1.6 c	0.7 f
Headway 1.39ME 1.5 fl oz.....	28	0.2 a	5.1 bc	1.2 ef
Headway 1.39ME 2.0 fl oz.....	28	0.4 a	1.1 c	0.3 f
Headway 1.39ME 3.0 fl oz.....	28	0.0 a	0.0 c	0.0 f
Heritage TL 0.8ME 0.5 fl oz.....	28	0.0 a	1.6 c	1.9 def
Heritage TL 0.8ME 1.0 fl oz.....	28	0.0 a	0.1 c	0.7 f
Heritage TL 0.8ME 2.0 fl oz.....	28	0.2 a	0.0 c	0.9 ef
Lynx 2SC 0.8 fl oz + Compass 50WG 0.1 oz.....	28	2.1 a	6.3 bc	5.4 a-e
Lynx 2SC 1.6 fl oz + Compass 50WG 0.2 oz.....	28	0.6 a	4.8 bc	5.7 a-d
AB0330925 L 0.5 fl oz.....	28	2.9 a	5.6 bc	9.2 a
AB0330925 L 1.0 fl oz.....	28	1.9 a	6.7 bc	7.0 abc
Armada 50WP 0.6 oz.....	28	2.0 a	8.2 bc	3.9 b-f
Armada 50WP 1.2 oz.....	28	0.4 a	3.6 bc	3.6 b-f
Heritage 50WG 0.3 oz.....	28	0.4 a	1.2 c	1.2 ef
Banner MAXX 1.3ME 1.0 fl oz.....	28	0.6 a	5.5 bc	3.3 b-f
Banner MAXX 1.3ME 2.0 fl oz.....	28	3.2 a	5.6 bc	5.3 a-e
SP102000015045 GR 6.0 lb <sup>x</sup> .....	28	2.7 a	8.4 bc	9.1 a
SP102000015045 GR 6.0 lb <sup>w</sup> .....	28	3.6 a	10.5 b	3.5 b-f
SP102000015034 GR 6.0 lb <sup>x</sup> .....	28	2.7 a	8.5 bc	4.1 b-f
SP102000015034 GR 6.0 lb <sup>w</sup> .....	28	1.7 a	19.4 a	8.8 a
Insignia 20WG 0.7 oz.....	28	0.0 a	0.9 c	2.6 c-f
Untreated Control.....		2.5 a	20.1 a	7.4 ab

<sup>z</sup>Fungicides were applied on 13 Jun (all treatments), 29 Jun (14 day treatment), 11 Jul (all treatments), 27 Jul (14 day treatment), and 7 Aug (all treatments).

<sup>y</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).

<sup>x</sup>Treatment applied to dry foliage.

<sup>w</sup>Treatment applied to wet foliage.

	Spray interval (days)	Brown patch incidence (%)			Pythium blight (%)
		3 Aug	15 Aug	8 Sep	3 Aug
Headway 1.3ME 0.75 fl oz.....	14 <sup>z</sup>	0.1 d <sup>y</sup>	0.0 c	4.4 d-g	0.0 a
Headway 1.3ME 0.75 fl oz.....	28	1.5 a-d	0.4 bc	2.4 fg	0.0 a
Headway 1.3ME 1.5 fl oz.....	28	0.2 cd	0.6 bc	1.2 fg	0.3 a
Headway 1.3ME 2.0 fl oz.....	28	0.3 cd	0.2 bc	1.5 fg	0.0 a
Headway 1.3ME 3.0 fl oz.....	28	0.0 d	0.0 c	0.5 g	0.0 a
Heritage TL 0.8ME 0.5 fl oz.....	28	1.3 a-d	0.7 bc	3.7 d-g	0.0 a
Heritage TL 0.8ME 1.0 fl oz.....	28	0.6 bcd	0.2 bc	2.2 fg	0.0 a
Heritage TL 0.8ME 2.0 fl oz.....	28	0.4 bcd	0.3 bc	1.7 fg	0.0 a
Lynx 2SC 0.8 fl oz + Compass 50WG 0.1 oz.....	28	1.3 a-d	1.6 abc	7.7 b-e	1.7 a
Lynx 2SC 1.6 fl oz + Compass 50WG 0.2 oz.....	28	1.7 a-d	0.9 abc	12.5 ab	0.7 a
AB0330925 0.5 fl oz.....	28	1.1 bcd	1.8 abc	12.9 a	0.0 a
AB0330925 1.0 fl oz.....	28	4.3 abc	3.0 a	9.8 abc	0.0 a
Armada 50WP 0.6 oz.....	28	1.1 bcd	0.3 bc	5.6 c-g	0.0 a
Armada 50WP 1.2 oz.....	28	0.7 bcd	0.6 bc	3.6 d-g	0.0 a
Heritage 50WG 0.3 oz.....	28	0.0 d	0.3 bc	1.1 fg	0.4 a
Banner MAXX 1.3ME 1.0 fl oz.....	28	2.8 a-d	0.9 abc	8.3 a-d	0.0 a
Banner MAXX 1.3ME 2.0 fl oz.....	28	4.5 ab	1.3 abc	6.2 c-f	0.0 a
SP102000015045 6.0 lb <sup>x</sup> .....	28	4.5 ab	1.5 abc	2.7 efg	0.0 a
SP102000015045 6.0 lb <sup>w</sup> .....	28	2.9 a-d	0.3 bc	3.3 d-g	0.3 a
SP102000015034 6.0 lb <sup>x</sup> .....	28	2.8 a-d	2.3 ab	5.3 c-g	0.0 a
SP102000015034 6.0 lb <sup>w</sup> .....	28	2.0 a-d	1.3 abc	4.6 c-g	0.4 a
Insignia 20WG 0.7 oz.....	28	0.2 cd	0.7 bc	1.2 fg	0.0 a
Untreated Control.....		5.4 a	1.6 abc	13.2 a	0.0 a

<sup>z</sup>Fungicides were applied on 13 Jun (all treatments), 29 Jun (14 day treatment), 11 Jul (all treatments), 27 Jul (14 day treatment), and 7 Aug (all treatments).

<sup>y</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).

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