TALL FESCUE (*Festuca arundinacea* 'Coronado')
Brown patch; *Rhizoctonia solani*

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Curative control of brown patch in tall fescue using fungicide-fertilizer combinations, 2005.

Fungicide-foliar fertilizer combinations were evaluated for their curative effect on brown patch in tall fescue landscapes to determine if low rates of fertilizer can help to speed recovery from brown patch symptoms. This trial was conducted at the Lake Wheeler Turfgrass Field Laboratory in Raleigh, NC on 'Coronado' tall fescue maintained under landscape 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 and 21 Mar to deliver 1 lb N/1000 sq ft. Annual grasses were controlled with Barricade 65WDG on 21 Feb (0.5 lb a.i./A) and 18 Apr (0.25 lb a.i./A). Plots were 3.33 ft x 6 ft and were arranged in a randomized complete block with four replications. The experimental area was inoculated on 16 Jun using rye grain infested with a mixture of *R. solani* isolates AG1, Rh65, and Rh68 by placing 10 cm^3 of infested rye grain in the turf canopy in two spots per plot. Fungicides were applied once on 18 Jul in water equivalent to 3 gal per 1000 sq ft with a CO_2 powered sprayer at 40 psi using TeeJet 8004 nozzles. Percent turf area exhibiting brown patch symptoms was assessed on 18 Jul, 22 Jul, 29 Jul, 5 Aug, 12 Aug, and 19 Aug using a point-intersect method. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t test (k=100).

Brown patch incidence ranged from 19% to 44% on 18 Jul when the trial was initiated, but no treatments were significantly different from the untreated control on this date. Few differences were detected among treatments on 22 Jul or 29 Jul, but significant differences were noted on 5 Aug, 12 Aug, and 19 Aug. In general, Heritage 50WG (0.2 oz), Heritage TL (1 fl oz), and Insignia (0.7 oz) provided the most rapid and effective curative reductions in brown patch incidence. The addition of fertilizer at 0.0625 or 0.125 lb N had little impact on curative control and recovery from brown patch. On 5 Aug, plots treated with ProStar + 0.0625 lb N exhibited less disease than ProStar alone or ProStar + 0.125 lb N, but this treatment also exhibited low disease activity at initiation of the trial on 18 Jul. Similarly, Insignia + 0.0625 lb N was less effective than Insignia alone or Insignia + 0.125 lb N, but this treatment exhibited very high incidence values when the trial was initiated. Low rates of foliar fertilizer do not appear to have a major positive or negative effect on the curative efficacy of fungicide applications for brown patch in tall fescue.

Treatment and rate / 1000 sq ft	Brown patch incidence (%)					
	18 Jul	22 Jul	29 Jul	5 Aug	12 Aug	19 Aug
Heritage 50WG 0.2 oz	25 ab[z]	25 a	15 c	15 de	23 ef	18 c
Heritage TL 0.8ME 1 fl oz	27 ab	26 a	14 c	11 e	27 def	23 bc
Insignia 20WG 0.7 oz	25 ab	25 a	21 bc	18 de	34 c-f	36 abc
Compass 50WG 0.25 oz	22 b	21 a	16 c	39 b	46 a-d	45 ab
ProStar 70WP 2.25 oz	31 ab	33 a	28 abc	38 b	50 abc	39 abc
Heritage 50WG 0.2 oz + 20-20-20 0.0625 lb N	35 ab	29 a	21 bc	24 b-e	27 def	33 abc
Heritage TL 0.8ME 1 fl oz + 20-20-20 0.0625 lb N	30 ab	28 a	21 bc	25 b-e	36 b-f	33 bc
Insignia 20WG 0.7 oz + 20-20-20 0.0625 lb N	44 a	40 a	39 a	37 b	41 a-e	39 abc
Compass 50WG 0.25 oz + 20-20-20 0.0625 lb N	25 ab	21 a	18 c	34 bc	53 abc	44 abc
ProStar 70WP 2.25 oz + 20-20-20 0.0625 lb N	19 b	25 a	15 c	17 de	36 c-f	38 abc
Heritage 50WG 0.2 oz + 20-20-20 0.125 lb N	27 ab	23 a	19 c	16 de	27 def	25 bc
Heritage TL 0.8ME 1 fl oz + 20-20-20 0.125 lb N	29 ab	26 a	21 bc	19 cde	25 def	25 bc
Insignia 20WG 0.7 oz + 20-20-20 0.125 lb N	26 ab	30 a	14 c	11 e	18 f	24 bc
Compass 50WG 0.25 oz + 20-20-20 0.125 lb N	26 ab	25 a	21 bc	39 b	58 ab	41 abc
ProStar 70WP 2.25 oz + 20-20-20 0.125 lb N	29 ab	28 a	28 abc	29 bcd	54 abc	45 ab
Untreated Control	30 ab	30 a	36 ab	61 a	61 a	60 a

[z]All fungicides were applied on 18 Jul. Values 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).