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

M.D. Soika and L.P. Tredway
Department of Plant Pathology
North Carolina State University
Raleigh, NC 27695

Evaluation of granular fungicide formulations for control of brown patch on tall fescue, 2007.

Granular fungicides were evaluated for control of brown patch in tall fescue landscapes. This trial was conducted at the Lake Wheeler Turfgrass Field Lab in Raleigh, NC on 'Coronado' tall fescue maintained under home lawn conditions. Mowing was performed twice weekly at a height of 3.5 in. with clippings returned. Fertilizer was applied as 46-0-0 on 11 Jan (0.25 lb N/1000 sq ft), and 25-6-12 on 20 Feb and 24 Apr (1.0 lb N/1000 sq ft each). Barricade 65WG was applied at 0.25 lb ai/a on 26 Feb and 25 Apr. Plots were 5 ft x 6 ft and were arranged in a randomized complete block with four replications. During the experimental period, the site was irrigated with 0.13 in. water daily at 800 h and 2000 h to encourage disease development. Foliar spray treatments were applied in water equivalent to 2 gal per 1000 sq ft with a CO_2 powered sprayer at 40 psi using TeeJet 8004 nozzles. Granular formulations were dispensed by hand using a shaker jar. All treatments were initiated on 15 Jun and were reapplied at the appropriate intervals as indicated in the table. Foliar spray treatments were applied in early afternoon, whereas granular treatments were applied to wet foliage after 1930 h to facilitate fungicide absorption. No irrigation was applied within 24 hr after treatment application. The experimental area was inoculated on 6 Jun using rye grain infested with *R. solani* isolates ECC-A, ECC-B, ECC-C, and ECC-E. Percent turf area exhibiting brown patch symptoms was assessed on 3, 12, and 30 Jul, and 6 Aug. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t-test (k=100).

Disease incidence was low to moderate in this study, likely due to abnormally dry weather conditions. Brown patch incidence peaked in mid-July, then gradually declined thereafter. Brown patch development was not observed in August, during which temperatures exceeded 90°F and 100°F on 25 and 6 days, respectively, and no rain events occurred during the first 20 days of the month. Throughout the experiment, excellent control of brown patch was provided by the granular and WP formulations of Armada (all rates), Bayleton 4SC, Heritage 50WG (all rates and timings), A-14912-A (both rates), and A-14912-C (both rates). Bayer Advanced Fungus Control, Immunox, Scotts Lawn Fungus Control, and Compass failed to provide acceptable control of brown patch on 16 and 30 Jul. No phytotoxic effects were observed in this trial.

Treatment, formulation, and rate per 1000 sq ft	Applic. code	Brown patch incidence (%) 3 Jul	16 Jul	30 Jul
Armada 0.6GR 6.0 lb	AEI*	0.3 c**	3.7 cd	1.4 cde
Armada 0.6GR 8.0 lb	AEI	0.0 c	0.5 d	0.0 e
Bayleton 1.0GR 4.0 lb	AEI	1.3 bc	8.5 b	3.5 b-e
Bayleton 4SC 1.25 fl oz	AEI	0.0 c	1.1 d	0.6 de
Armada 50WP 1.2 oz	AEI	0.0 c	0.3 d	0.2 de
Armada 50WP 1.5 oz	AEI	0.0 c	0.5 d	0.8 de
Heritage 50WG 0.3 oz	AEI	0.2 c	0.5 d	0.9 de
A-14912-A 0.31GR 32.2 oz	AE	0.3 c	3.5 cd	3.2 cde
A-14912-A 0.31GR 64.5 oz	AE	0.0 c	0.8 d	1.2 cde
A-14912-C 0.31GR 32.2 oz	AF	0.0 c	2.7 cd	2.4 cde
A-14912-C 0.31GR 64.5 oz	AF	0.0 c	1.7 d	1.1 de
Heritage 50WG 0.2 oz	AE	0.0 c	1.3 d	2.7 cde
Heritage 50WG 0.4 oz	AE	0.0 c	0.8 d	1.9 cde
Heritage 50WG 0.2 oz	AF	0.0 c	1.2 d	1.6 cde
Heritage 50WG 0.4 oz	AF	0.0 c	0.4 d	2.3 cde
Bayer Adv Fungus Control for Lawns 1.0GR 23.9 oz	AE	1.1 bc	6.3 bc	5.1 abc
Immunox 0.39GR 64 oz	AE	3.7 a	9.5 b	5.1 abc
Scotts Lawn Fungus Control 2.3GR 43.0 oz	AE	1.9 b	7.4 b	7.4 ab
Compass 50WG 0.25 oz	AEI	0.5 bc	2.7 cd	4.2 bcd
Untreated Control		3.5 a	16.3 a	9.1 a

* Application code indicates the application date(s) of each treatment: A-18 Jun, E-16 Jul, F-23 Jul, I-13 Aug.

** Values are means of four replication. Means within columns followed by the same letter are not significantly different according to the Waller-Duncan k-ratio t-test (k=100).