TALL FESCUE (*Festuca arundinacea* 'Kentucky 31')
Gray leaf spot; *Pyricularia grisea*

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

Control of gray leaf spot with fungicides in tall fescue landscapes, 2007.

Fungicides were evaluated for preventative control of gray leaf spot in tall fescue maintained under home lawn conditions. This trial was conducted at the Lake Wheeler Turfgrass Field Lab in Raleigh, NC on newly established 'Kentucky 31' tall fescue, which was seeded on 14 May (10 lb seed/1000 sq ft). The turf was mowed once weekly at a height of 3.5 in. with clippings returned. No fertilizer was applied during the course of this study. ProStar (2.2 oz/1000 sq ft) was applied on 8 and 29 Jun, and 13 Jul for control of brown patch. Banol (2.0 fl oz/1000 sq ft) was applied on 29 Jun and Subdue MAXX (1.0 fl oz/1000 sq ft) was applied on 13 Jul and 3 Aug for control of Pythium foliar blight. Drive 75DF + methylated seed oil (1 lb/a + 1 qt/a) was applied on 16 and 30 Jul for post-emergence control of crabgrass. Plots were 5 ft x 5 ft and were arranged in a randomized complete block with three replications. Fungicides were applied in water equivalent to 2 gal per 1000 sq ft with a CO_2 powered sprayer at 40 psi equipped with TeeJet 8004 nozzles. All treatments were initiated on 21 Jun and reapplied on 14-day intervals thereafter. The study was irrigated with 0.13 in. water daily at 2000 h to produce environmental conditions conducive to disease development. Percent turf area exhibiting gray leaf spot symptoms was assessed on 19 and 27 Jul, and 2, 16, and 31 Aug. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t test (k=100).

Symptoms of gray leaf spot were first observed in late June. Disease incidence continued to increase throughout July and August, reaching a maximum of nearly 45% in untreated plots on 31 Aug. Heritage TL (2.0 fl oz), 3336 Plus, Armada, Compass, and Headway provided excellent control of gray leaf spot throughout the study. Heritage TL (1.0 fl oz) and the mixture of Rhapsody + Heritage TL (5.0 fl oz + 1.0 fl oz) provided excellent disease control on all but the 19 Jul rating date. CLEXP-9 provided significant disease suppression on 16 and 31 Aug compared to the untreated control. Rhapsody and Endorse were not effective in this trial. It should be noted that the 8.0 fl oz rate (14-day interval) of 3336 Plus is only appropriate for golf course fairways. The maximum individual application rate for residential and public areas is 4.0 fl oz. No phytotoxicity was observed in the study.

Treatment, formulation, and rate per 1000 sq ft	Appl. interval (days)	Gray leaf spot incidence (%) 19 Jul	27 Jul	2 Aug	16 Aug	31 Aug
Rhapsody L 5.0 fl oz	14*	4.9 ab**	18.9 a	12.8 ab	35.4 a	44.4 a
Heritage TL 0.8ME 2.0 fl oz	14	0.2 c	1.2 d	1.0 c	6.5 bc	12.2 b
Heritage TL 0.8ME 1.0 fl oz	14	1.4 bc	4.6 cd	0.3 c	7.5 bc	8.7 b
Rhapsody L 5.0 fl oz + Heritage TL 0.8ME 1.0 fl oz	14	2.7 abc	5.4 cd	1.2 c	7.0 bc	8.0 b
3336 Plus F 8.0 fl oz	14	0.2 c	1.0 d	0.2 c	2.6 c	7.1 b
CLEXP-9 WG 1.2 oz	14	2.2 bc	9.2 bc	7.8 b	20.1 b	15.6 b
Endorse 2.5WP 4.0 oz	14	6.5 a	14.1 ab	14.6 a	44.0 a	45.7 a
Armada 50WP 1.2 oz	14	0.0 c	2.6 cd	0.0 c	1.5 c	1.4 b
Compass 50WG 0.2 oz	14	0.2 c	2.9 cd	0.2 c	3.2 c	3.6 b
Headway 1.39ME 1.5 fl oz	14	0.0 c	1.9 cd	0.0 c	0.9 c	1.7 b
Untreated Control		4.3 ab	16.0 ab	12.9 ab	39.8 a	44.7 a

* Fungicides were applied on 21 Jun, 6 and 20 Jul, and 3 and 17 Aug.

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