

CREEPING BENTGRASS (*Agrostis palustris* 'SR-1119')

Brown patch; *Rhizoctonia solani*

Slime mold; Myxomycetes

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Preventative control of brown patch in creeping bentgrass, 2005.

Fungicides were evaluated for control of brown patch in creeping bentgrass putting greens. This trial was conducted at the Lake Wheeler Turfgrass Field Laboratory in Raleigh, NC on 'SR-1119' creeping bentgrass maintained under putting green conditions. Mowing was performed 5 times weekly at a height of 0.156 in., raised to 0.185 on 20 Jun, with clippings collected, and the site was irrigated to prevent drought stress. Fertility was applied as Coron 18-3-6 (5% Fe + micronutrients) on 25 Jul and 8 Aug (0.25 lb N/1000 sq ft) and on 13 Jun, 27 Jun, 11 Jul, and 22 Aug (0.125 lb N/1000 sq ft). Insect pests were suppressed with Dursban Pro (1.5 fl oz/1000 sq ft) on 23 Jun, 21 Jul, and 23 Aug. Plots were 3.33 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 CO₂ powered sprayer at 40 psi using TeeJet 8004 nozzles. All treatments were initiated on 7 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* isolates Rh45, Rh46, and Rh47 to encourage disease development. Percent turf area exhibiting brown patch symptoms was assessed on 6 Jul and 16 Aug. Slime mold infection centers were counted in each plot on 6 Jul. Turfgrass quality was evaluated on 16 Aug, using a 1 to 9 scale (9=best, 5=acceptable) based on color, density, and uniformity. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t test (k=100).

Brown patch pressure was very erratic during the summer of 2005. No significant differences were detected among treatments on 6 Jul. On 16 Aug, the majority of the treatments were providing significant brown patch suppression except for CL-EXP-4 (1 oz), Heritage 50WG (0.2 or 0.4 oz), Instrata 3.61SE (4.15 fl oz), TM473 (all rates), TM473 480SC + Bayleton 50DF (0.1 + 0.25 oz), Lynx 45WP (0.6 oz), Lynx Flo 1.75F (0.5 fl oz), and Armada 50WP (0.6 oz).

Symptoms of slime mold were widespread in the experimental area during June and July. No significant differences were detected among treatments, however, the following treatments exhibited no slime mold symptoms: Instrata 3.61SE (4.15 fl oz), TM473 480SC (0.1 or 0.2 fl oz), TM473 480 SC + 3336 4F (0.1 + 4 fl oz), Lynx 45WP (0.6 oz), Lynx Flo 1.75F (0.5 fl oz), Lynx Flo 1.75F (1 fl oz), and Armada 50WP (0.6 oz).

Turfgrass quality was assessed on 16 Aug. Most treatments resulted in inadequate turfgrass quality ratings due to persistent heat and intermittent periods of wet weather during 2005. The following treatments resulted in significant quality improvements compared to the untreated control: Spectro 90WDG (4 oz), Heritage TL 0.8ME + Banner MAXX 1.3EC (1 + 1 fl oz), Heritage TL 0.8ME + Banner MAXX 1.3EC (2 + 2 fl oz), Instrata 3.61SE (2.75 fl oz), Daconil Ultrex 82.5WDG (3.2 oz), TM473 480SC + Daconil Ultrex 82.5WDG (0.2 + 1.8 oz), and TM473 480 SC + 3336 4F (0.1 + 4 fl oz/1000 ft²).

Treatment and rate / 1000 sq ft	Spray Interval (days)	Brown patch incidence (%)		Slime mold incidence	Turf quality ^z
		6 Jul	16 Aug	6 Jul	16 Aug
CL-EXP-4 10WP 1 oz/1000 ft ²	14 ^y	0 a ^x	13 a-d	5 a	3.8 cde
Spectro 90WDG 4 oz/1000 ft ²	14	0 a	1 d	4 a	6.0 a
Heritage 50WG 0.2 oz/1000 ft ²	14	2 a	12 a-d	13 a	4.0 b-e
Heritage 50WG 0.4 oz/1000 ft ²	28	1 a	10 a-d	13 a	4.0 b-e
Heritage TL 0.8ME 1 fl oz/1000 ft ²	14	0 a	5 cd	16 a	4.8 a-d
Heritage TL 0.8ME 2 fl oz/1000 ft ²	28	0 a	10 bcd	10 a	4.3 b-e
Headway 1.39EC 1.5 fl oz/1000 ft ²	14	0 a	4 cd	10 a	4.3 b-e
Headway 1.39EC 3 fl oz/1000 ft ²	28	0 a	5 cd	2 a	4.5 b-e
Heritage TL 0.8ME 1 fl oz/1000 ft ² + Banner MAXX 1.3EC 1 fl oz/1000 ft ²	14	0 a	4 cd	4 a	5.3 ab
Heritage TL 0.8ME 2 fl oz/1000 ft ² + Banner MAXX 1.3EC 2 fl oz/1000 ft ²	28	0 a	2 d	17 a	5.0 abc
Concert 4.3SE 4.2 fl oz/1000 ft ²	14	3 a	6 cd	7 a	4.5 b-e
Instrata 3.61SE 2.75 fl oz/1000 ft ²	14	0 a	4 cd	3 a	5.0 abc
Instrata 3.61SE 4.15 fl oz/1000 ft ²	21	0 a	13 a-d	0 a	3.8 cde
Daconil Ultrex 82.5WDG 3.2 oz/1000 ft ²	14	0 a	3 cd	10 a	5.0 abc
TM 473 480SC 0.1 fl oz/1000 ft ²	14	0 a	28 ab	0 a	3.5 de
TM 473 480SC 0.2 fl oz/1000 ft ²	14	0 a	11 a-d	0 a	4.0 b-e
TM 473 480SC 0.3 fl oz/1000 ft ²	14	0 a	22 a-d	7 a	3.5 de
TM 473 480SC 0.1 fl oz/1000 ft ² + Bayleton 50DF 0.25 oz/1000 ft ²	14	0 a	19 a-d	6 a	3.8 cde
TM 473 480SC 0.1 fl oz/1000 ft ² + Daconil Ultrex 82.5WDG 1.8 oz/1000 ft ²	14	0 a	5 cd	2 a	4.3 b-e
TM 473 480SC 0.2 fl oz/1000 ft ² + Daconil Ultrex 82.5WDG 1.8 oz/1000 ft ²	14	0 a	4 cd	2 a	5.0 abc
TM 473 480SC 0.1 fl oz/1000 ft ² + 26GT 2SC 2 fl oz/1000 ft ²	14	0 a	4 cd	17 a	4.5 b-e
TM 473 480SC 0.1 fl oz/1000 ft ² + 3336 4F 4 fl oz/1000 ft ²	14	0 a	7 bcd	0 a	5.3 ab
TM 473 480SC 0.1 fl oz/1000 ft ² + TM 438 11.2WP 1 oz/1000 ft ²	14	0 a	5 cd	14 a	4.0 b-e
Lynx 45WP 0.3 oz/1000 ft ²	14	0 a	6 cd	3 a	4.5 b-e
Lynx 45WP 0.6 oz/1000 ft ²	14	0 a	11 a-d	0 a	3.5 de
Lynx Flo 1.75F 0.5 fl oz/1000 ft ²	14	0 a	10 a-d	0 a	4.0 b-e
Lynx Flo 1.75F 1 fl oz/1000 ft ²	14	0 a	9 bcd	0 a	4.3 b-e
Armada 50WP 0.6 oz/1000 ft ²	14	0 a	12 a-d	0 a	3.8 cde
Untreated Control	--	6 a	32 a	7 a	3.5 de

^zTurfgrass quality on a 1 to 9 scale, where 9=highest quality and 5=acceptable.

^yFungicides were applied on 7 Jun (all treatments), 21 Jun (14 day treatments), 30 Jun (21 day treatments), 8 Jul (14 and 28 day treatments), 19 Jul (14 and 21 day treatments), 5 Aug (14 and 28 day treatments), and 11 Aug (21 day treatments).

^xValues 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).