



## Brown Patch Suppression on a Tall Fescue Lawn

Sam Soper, Bruce Schweiger, and Paul Koch, Ph.D.  
Department of Plant Pathology  
University of Wisconsin - Madison

### OBJECTIVE

To determine the efficacy of standard and experimental fungicides for the suppression of brown patch caused by the fungus *Rhizoctonia solani* on a tall fescue lawn.

### MATERIALS AND METHODS

The study was conducted at the O. J. Noer Turfgrass Research and Education Facility on a stand of tall fescue maintained at 2.5 inches. The individual plots measured 3 feet by 10 feet and were arranged in a randomized complete block design with four replications. Individual treatments were applied at a nozzle pressure of 40 p.s.i. using a CO<sub>2</sub> pressurized boom sprayer equipped with two XR Teejet AI8004 nozzles. All fungicides were agitated by hand and applied in the equivalent of 2 gallons of water per 1000 ft<sup>2</sup>. All treatments were initiated July 1<sup>st</sup>, 2014 and subsequent applications were made at 21 or 28 day intervals. Plots were covered with an Evergreen® cover to promote brown patch infection. Brown patch severity (percent disease) and turf quality (1-9, 9 being excellent and 6 acceptable) were visually assessed, the results were subjected to an analysis of variance, and means were separated using the Waller-Duncan test ( $P = 0.05$ ). Brown patch severity and turfgrass quality results can be found in table 1 and 2, respectively.

### RESULTS AND DISCUSSION

Despite cool and dry conditions most of the summer, brown patch severity increased markedly in August. Brown patch averaged nearly 50% on non-treated controls by the August 22<sup>nd</sup> rating date. Xzemplar did not significantly suppress brown patch in this trial, though Lexicon did provide effective brown patch suppression. Significant variation between replications prevented statistical differences from becoming apparent, though it was clear that Lexicon provided both the most effective brown patch suppression and the highest turfgrass quality. Phytotoxicity was not observed with any treatment.

**Table 1. Mean brown patch severity per treatment on tall fescue maintained at lawn height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2014.**

	Treatment	Rate	Application Interval	Brown Patch Disease Severity <sup>a</sup>		
				Jul 21	Aug 15	Aug 22
1	Non-treated control			0.0a	28.8a	45.0a
2	Xzemplar	0.2 FL OZ/1000 FT2	21 Day	0.0a	50.0a	62.5a
3	Xzemplar	0.26 FL OZ/1000 FT2	21 Day	0.0a	50.0a	40.0a
4	Lexicon	0.47 FL OZ/1000 FT2	28 Day	0.0a	7.5a	15.0a

<sup>a</sup>Percent brown patch was visually assessed as percent disease. Means followed by the same letter do not significantly differ (P=.05, Waller-Duncan).

**Table 2. Mean turfgrass quality per treatment on tall fescue maintained at lawn height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2014.**

	Treatment	Rate	Application Interval	Turfgrass Quality <sup>a</sup>		
				Jul 21	Aug 15	Aug 22
1	Non-treated control			7.0a	4.5a	4.0a
2	Xzemplar	0.2 FL OZ/1000 FT2	21 Day	7.0a	3.8a	2.8a
3	Xzemplar	0.26 FL OZ/1000 FT2	21 Day	7.0a	3.8a	3.5a
4	Lexicon	0.47 FL OZ/1000 FT2	28 Day	7.0a	6.0a	5.8a

<sup>a</sup>Turfgrass quality was rated visually on a 1 – 9 scale with 6 being acceptable. Means followed by the same letter do not significantly differ (P=.05, Waller Duncan).