

## **Control of Rhizoctonia brown patch on colonial bentgrass maintained at fairway height**

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### **OBJECTIVE**

To determine the efficacy of standard and experimental fungicides for the control of Rhizoctonia blight (brown patch) caused by the fungus *Rhizoctonia solani*.

### **MATERIALS AND METHODS**

The study was conducted at the O. J. Noer Turfgrass Research and Education Facility on a mixed stand of colonial bentgrass (*Agrostis capillaries* 'SR7150') and annual bluegrass (*Poa annua*) maintained at a 0.5 inch cutting height. The individual plots measured 3 ft X 5 ft 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 8004 VS 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 on June 25<sup>th</sup> and subsequent applications were made at 14, 21, or 28 day intervals. Plots were inoculated with *R. solani* July 2<sup>nd</sup> and also received irrigation at 150% of estimated evapotranspiration and monthly applications of 0.5 lb N/1000 ft<sup>2</sup> when conditions were conducive for disease development. Percent brown patch per plot and quality (1-9, 9 being excellent and 6 acceptable) were visually assessed and the data was subjected to an analysis of variance to determine statistical differences between treatments.

### **RESULTS AND DISCUSSION**

No brown patch was observed at the OJ Noer Turfgrass Research and Education Facility due to unseasonably cool conditions throughout the summer. No differences in turfgrass quality were observed as well.



**Photos for this report  
Turfgrass Diagnostic Laboratory Home**

**Table 1. Brown patch severity and turf quality on fairway colonial bentgrass at the OJ Noer Turfgrass Research Facility in 2009.**

	Treatment	Rate	Application Interval	Brown Patch Disease
				Severity(%) <sup>b</sup>
1	Non-treated control			
2	Insignia	0.9 OZ/1000 FT2	28 Day	
3	Honor	1.1 OZ/1000 FT2	21 Day	
4	BAS 67300F	2.25 LB/1000 FT2	28 Day	
5	BAS 67300F	3.0 LB/1000 FT2	28 Day	
6	Insignia Trinity	0.9 OZ/1000 FT2 1.0 FL OZ/1000 FT2	28 Day	
7	Heritage G	3.0 LB/1000 FT2	28 Day	
8	A17629	3.0 LB/1000 FT2	21 Day	
9	A17629	4.0 LB/1000 FT2	21 Day	
10	A17630	3.0 LB/1000 FT2	21 Day	
11	A17630	0.5 OZ/1000 FT2	21 Day	
12	Headway	1.5 FL OZ/1000 FT2	21 Day	
13	Disarm G	2.3 LB/1000 FT2	21 Day	
14	Prophesy	3.0 LB/1000 FT2	21 Day	
15	Prophesy	4.0 LB/1000 FT2	21 Day	
16	DPX-LEM17-50-76	0.3 OZ/1000 FT2	14 Day	
17	DPX-LEM17-50-76	0.5 OZ/1000 FT2	14 Day	
18	Banner Maxx	1.0 FL OZ/1000 FT2	14 Day	
19	Daconil Ultrex	2.53 OZ/1000 FT2	14 Day	
20	Heritage	0.82 LB/Acre	14 Day	
21	NB36479	1.0 LB/Acre	14 Day	
22	NB36479	2.0 LB/Acre	14 Day	
23	NB36691	3.2 Gal/Acre	14 Day	
24	NB36691	6.4 Gal/Acre	14 Day	
25	NB36845	4.5 LB/Acre	14 Day	
26	NB36845	8.9 LB/Acre	14 Day	
27	NB36277	0.28 Gal/Acre	14 Day	
28	NB36277	0.57 Gal/Acre	14 Day	

\*Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)