

Colonial Bentgrass (*Agrostis capillaris*)
 Annual Bluegrass (*Poa annua*)
 Brown Patch (*Rhizoctonia solani*)
 Dollar Spot (*Sclerotinia homoeocarpa*)

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Fungicide application for brown patch control on a colonial bentgrass and annual bluegrass fairway, Summer 2010

This trial was conducted at the Joseph Troll Turf Research Center in South Deerfield, MA to evaluate fungicide treatments and other products for control of brown patch under natural disease conditions. The plot consists of colonial bentgrass and annual bluegrass maintained under fairway conditions; mown at a height of 0.375 in. three times per week and the clippings removed. 24-0-10 fertilizer was applied at a rate of 1 lb nitrogen (N)/1,000 ft² on June 1st and July 1st. Trimec Bentgrass Formula was applied May 25th to control broadleaf weeds at 1.5 fl oz/1,000 ft². Dursban was applied at a rate of 1.5 oz/1,000 ft² on June 17th to control annual bluegrass weevil. The site was irrigated as needed to prevent drought stress. Individual plots measured 3x6 ft and were arranged in a randomized complete block design with three replications. Fungicides/products (see Table) were applied based on label or suggested rates. Individual treatments were applied at a nozzle pressure of 40 psi using a CO₂ pressurized boom sprayer equipped with two XR TeeJet 8004VS nozzles in the equivalent of 2 gallons of water per 1,000 ft². Weekly ratings of percent area infected were made beginning June 11th with the first application and ending July 29th; 14 days after the last application. A secondary disease rating of dollar spot infection centers was made on July 15th, 23rd, and 29th when symptoms were present.

Only rating dates showing significant differences among treatments are shown on the table. The product TB 6-0-0 containing the active ingredients lysine and liquid compost was not significantly different from the control on 4 rating dates for brown patch and 1 rating date for dollar spot. Increased disease pressure on TB 6-0-0 plots was likely due to the added nitrogen. The product Affirm containing the active ingredient polyoxin D zinc salt provided control of brown patch but not of the secondary disease dollar spot which was expected since it is not labeled for dollar spot control. All other treatments provided good control with Honor providing the best control when applied at a rate of 0.83 oz/1,000 ft². Honor, the premixed product of Insignia and Trinity, controlled brown patch the same as when the two chemistries were applied in a tank mix at low and high rates.

| Treatment and oz/1,000 ft ² | Spray Interval (days) | Brown Patch ^z | | | | AUDPC ^x | Dollar Spot ^y | |
|---|-----------------------------|--------------------------|--------|--------|--------|--------------------|--------------------------|--------|
| | | 8 Jul | 15 Jul | 23 Jul | 29 Jul | | 23 Jul | 29 Jul |
| Untreated..... | --- | 28 A ^w | 48 A | 65 A | 27 A | 766 | 19 A | 23 A |
| Honor 0.83..... | 14 | 0 B | 0 B | 0 B | 0 C | 108 | 0 B | 0 B |
| Honor 1.1..... | 14 | 3 B | 0 B | 0 B | 2 BC | 243 | 1 B | 2 B |
| Insignia 0.54 | | | | | | | | |
| Trinity 1..... | 14 | 5 B | 0 B | 0 B | 0 C | 193 | 0 B | 0 B |
| TB 6-0-0 29.5..... | 21 | 8 B | 33 A | 50 A | 20 AB | 543 | 5 AB | 6 B |
| Affirm 0.9..... | 7 | 3 B | 0 B | 1 B | 0 C | 113 | 10 AB | 8 B |
| <i>P</i> value | | 0.0054 | 0.0001 | 0.0001 | 0.0017 | 0.2258 | 0.0092 | 0.0016 |

^z Brown patch percent infected plot area reported as a mean of 3 reps.

^y Number of dollar spot infection centers per plot reported as a mean of 3 reps.

^x AUDPC = Area Under the Disease Progress Curve.

^w Means followed by the same letter are not significantly different according to Tukey's HSD test.