

Brown Patch (*Rhizoctonia solani*)

This study was set up on a newly renovated ryegrass plot area at the Hancock Turfgrass Research Center, E. Lansing, MI. The study was a randomized complete block design with 4 replicates of each treatment. Plots measured 2' x 6' with 1' alleys. Treatments were applied using a CO₂ backpack sprayer at 48 GPA and 34 PSI with a single 8002E tee jet flat fan nozzle. Subdue Maxx was applied at 1 oz/1000 ft² every 14 days to prevent a *Pythium* blight outbreak. The study area was inoculated (7/9, 7/17, 7/25) with *Rhizoctonia solani* growing on a sand/cornmeal mixture using a drop spreader at approximately 2.5#/1000 sq ft. The plot area was covered using a blue vinyl tarp to encourage disease development. Fertility was as follows: 6/21 (1/2#N), 6/30 (1/2#N), 7/6 (3/4#N), 7/17 (1/2#N). Plots were rated for percent area blighted by brown patch (see Table 6.) Data were analyzed using ANOVA and means separated with LSD (p=0.05). A quality rating was taken using a 1-10 scale, where 1= poor and 10= excellent (see Table 6.)

A second study was set up on a Penncross creeping bentgrass green mowed at 0.125". The study set up was the same as above except for the fertility. Fertility for the green study was as follows: 6/21 (1/4#N), 7/6 (1/2#N), 7/17 (1/4#N).

Due to a rather mild summer, conditions were not ideal for brown patch development in our area. However, with the covering of the plots with the vinyl tarp, disease did develop. On the green, the covering also caused some slight etiolation which resulted in scalp when the plots were mowed. By the time that brown patch became severe and uniform enough to rate, scalp made the plot area unrateable so no reliable data were collected from the green study. On the taller cut ryegrass, however, data are presented from 2 rating dates. On the 7/20 date (Table 6), there are no significant differences between the control and any of the treatments, but by the 7/31 rating, most treatments provided significant control of brown patch (Table 6). Mean quality values ranged from 7.5 – 5.3 (see Table 6.)

Table 6. Brown Patch (Ryegrass)				
Rating Scale: % area blighted by <i>R. solani</i>				
Quality Rating Scale: 1-10, 1= poor, 10= excellent				
Treatment Rate/1000 ft²	Interval (Days^a)	Mean 7/20 (LSD^b)	Mean 7/31 (LSD)	Mean Quality 7/31
Heritage 0.2 oz	14	0.3 a	0.0 a	7.5
Heritage 0.4 oz	28	0.3 a	0.0 a	6.8
Compass 0.15 oz + Banner Maxx 1 fl oz	14	0.4 a	0.0 a	7.5
Chipco 26GT 4 oz	14	2.5 ab	0.4 a	6.5
Prostar 2.2 oz	14	2.8 ab	0.0 a	6.3
Compass 0.15 oz	14	2.9 ab	0.0 a	7.0
WAC79 2 fl oz + Protect T/O 5 oz	14	3.3 ab	0.9 ab	6.3
WAC79 2 fl oz + Dac. Ultrex 3.8 oz	14	6.3 a-c	0.1 a	7.0
Daconil Ultrex 3.8 oz	14	6.5 a-c	0.0 a	7.0
WAC79 4 fl oz + Dac. Ultrex 3.8 oz	14	7.3 a-c	2.5 ab	6.8
WAC79 4 fl oz + Protect T/O 5 oz	14	7.5 a-c	2.5 ab	6.5
WAC79 3 fl oz + Dac. Ultrex 3.8 oz	14	8.8 a-d	0.0 a	6.8
Control	--	8.8 a-d	17.6 d	5.8
WAC79 2 fl oz + 3336 WP 4 oz	14	13.5 b-d	13.8 cd	5.3
WAC79 3 fl oz + 3336 WP 4 oz	14	14.0 b-d	7.8 a-c	5.5
WAC79 4 fl oz + 3336 WP 4 oz	14	16.5 cd	8.9 bc	6.0
WAC79 3 fl oz + Protect T/O 5 oz	14	21.0 d	0.0 a	6.5

^a 14-day treatments were applied on 6/28, 7/12, 7/25 and 8/4. 28 day treatments were applied on 6/28 and 7/25.

^b Means followed by the same letter do not differ significantly (LSD, p=0.05).