

**Table 5. Annual Bluegrass Summer Decline 2001.**

Hancock Turfgrass Research Center, East Lansing, MI						
Rating Scale: Mean quality ratings; 1 to 10, 1 = poor and 7 = acceptable.						
Treatment and Rate/1000 sq ft	Interval (Days)	9-Jul LSD <sup>a</sup>	17-Jul	3-Aug	17-Aug	24-Aug
Chipco Signature 4 oz + Ch 26 GT 4 fl oz	14	6.8 ab	6.3ab	7.0 b	7.3a-c	8.0 a
Chipco Signature 4 oz + Daconil Ultrex 3.2 oz	14	7.0 a	6.8 a	8.0 a	7.8 a	7.8 ab
Heritage 0.2 oz	14	6.3 b-d	6.0 a-c	6.0 c-f	5.8 e-g	6.0 de
Chipco Signature 4 oz + Triton 1 oz	14	6.5 a-c	6.5 ab	6.3 b-e	6.5 c-e	7.3 a-c
Chipco Signature 4 oz + Prostar 2.2 oz	14	6.5 a-c	6.0 a-c	6.0 c-f	6.3 d-f	5.8 de
TS-LF300 2.5 gal/A	14	5.8 de	5.3 cd	5.3 f	5.0 g	5.8 de
TS-LF300 2.5 gal/A + Dac. Ultrex 3.2 oz	14	6.5 a-c	6.5 ab	6.8 bc	7.0 a-d	7.0 bc
Heritage 0.2 oz + Banner Maxx 1 fl oz	21	7.0 a	6.5 ab	7.0 b	7.0 a-d	7.8 ab
Dac. Ultrex 3.2 oz + Primo Maxx 0.25 fl oz	21 (6/14)	6.0 c-e	5.8 b-d	5.8d-f	7.3 a-c	8.0 a
Dac. Ultrex 3.2 oz + Banner Maxx 1 fl oz + Primo Maxx 0.25 fl oz	21 (7/6)					
Heritage 0.2 oz + Banner Maxx 1 fl oz + Primo Maxx 0.25 fl oz	21 (7/27)					
Heritage 0.2 oz + Dac. Ultrex 3.2 oz + Primo Maxx 0.25 fl oz	21 (8/15)					
Banner Maxx 1 fl oz + Primo Maxx 0.25 fl oz	21 <sup>b</sup>					
Dac. Ultrex 3.2 oz	14	6.3 b-d	6.3 ab	6.8 bc	6.8 b-d	7.0 bc
Macrosorb 2 fl oz	14	6.0 c-e	5.8 b-d	5.8 d-f	5.8 e-g	5.3 e
Dac. Ultrex 1 oz	14	6.3 b-d	5.8 b-d	6.0 c-f	6.5 c-e	6.5 cd
Macrosorb 2 fl oz + Dac. Ultrex 1 oz	14	6.8 ab	6.3 ab	6.5 b-d	6.8 b-d	6.5 cd
Quelant-CA 2 oz	14	6.0 c-e	5.8 b-d	5.3 f	5.5 fg	5.3 e
MKP 5#/A	14	6.0 c-e	5.0 d	5.3 f	5.6 e-g	5.3 e
MKP 5#/A + Dac. Ultrex 1.5 oz	14	6.5 a-c	6.5 ab	6.0 c-f	6.3 d-f	6.5 cd
Dac. Ultrex 1.5 oz	14	6.5 a-c	5.8 b-d	6.0 c-f	6.3 d-f	6.5 cd
Control (Fertilized)	--	5.5 e	5.3 cd	5.5 ef	5.0 g	5.5 e

<sup>a</sup>Means followed by the same letter do not differ significantly (LSD, p = 0.05).

## **BROWN PATCH (*RHIZOCTONIA SOLANI*)**

### **Study A**

Brown patch study A was established on a creeping bentgrass green at the Hancock Turfgrass Research Center, East Lansing, MI. The plot area was mowed at 0.157". The study was a randomized complete block design with four replicates of each treatment. Plots measured 2' x 4.5' with 1' alleys. Treatments were applied using a CO<sub>2</sub> backpack sprayer at 48 GPA and 34 PSI with a single 8002E tee jet flat fan nozzle. All treatments were applied beginning on 6/26

with the exception of TD 2390 which was applied on 7/16 and 7/30. Re-application intervals for all other treatments were as listed in Table 6 with the 10 day interval treatment applied on 6/26, 7/3, 7/16, 7/26, 8/6, and 8/15; 14 day treatments on 6/26, 7/12, 7/24, and 8/6; 21 day treatment on 6/26, 7/16, and 8/6; and 28 day treatment on 6/26 and 7/24. Subdue Maxx was applied at 1 oz/1000 ft<sup>2</sup> on 7/11, 7/26, and 8/6 to prevent a *Pythium* blight outbreak. The study area was inoculated (6/27, 7/5, 7/16) 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: 6/15 (1/2 # N), 6/20 (1/4 # N), 6/22 (1/2 # N), 7/5 (1/4 # N), 7/19 (1/4 # N), and 8/2 (1/4 # N). Plots were rated for percent area blighted by brown patch (Table 6.) Data were analyzed using ANOVA and means separated with LSD (p = 0.05).

In Study A on the green, all treatments but one provided significant brown patch control when compared to the control plots. None of those treatments tested were significantly different from each other with percent disease means ranging from 0-10%. The control averaged 32.5% disease. No phytotoxicity was observed.

**Table 6. Study A – Brown Patch Green, Hancock Turfgrass Research Center.**

<b>Rating Date: July 24, 2001</b>							
<b>Rating Scale: Percent plot area with brown patch.</b>							
<b>Treatment</b>	<b>Rate/1000 sq ft</b>	<b>Interval (Days)</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>Mean (LSD<sup>a</sup>)</b>
Prostar	2.2 oz	14	0	0	0	0	0 a
Insignia 20WG	0.5 oz	14	0	0	0	0	0 a
SysStar WDG	3 oz	21	0	0	0	0	0 a
Heritage	0.2 oz	14	0	0	0	0	0 a
Honor	0.2 oz	14	1	0	0	0	0.3 a
Dac Ultrex	3.2 oz	10	0	0	0	5	1.3 a
Endorse	4 oz	14	0	1	5	0	1.5 a
Insignia 20WG	0.9 oz	28	0	10	0	0	2.5 a
TD 2390	6 oz	14	5	0	0	5	2.5 a
Spectro 90 WDG	4 oz	14	0	10	0	0	2.5 a
WAC79 + Spectro 90 WDG	5 fl oz + 4 oz	14	0	0	5	5	2.5 a
Insignia alt with Chipco 26GT	0.5 oz / 4.0 fl oz	14	10	5	5	15	8.8 a
Chipco 26 GT	4 fl oz	14	5	10	5	15	8.8 a
Endorse	6 oz	14	0	15	20	0	8.8 a
SysTec	1.5 oz	14	5	25	5	5	10 a
Control (Fertilized)	--	--	40	60	20	10	32.5 b
WAC79	5 fl oz	14	30	50	50	25	38.8 b

<sup>a</sup>Means followed by the same letter do not differ significantly (LSD, p = 0.05).

## **Study B**

Study B was set up on a perennial ryegrass fairway mowed at ½". Plots measured 3' x 6' with 1' alleys. The study set up was the same as above except for the fertility. Re-application intervals were as listed in Table 7 with the 10 day interval treatment applied on 6/26, 7/6, 7/16, 7/26, 7/31, 8/6, and 8/15; 14 day treatments on 6/26, 7/11, 7/24, and 8/6; 21 day treatments on 6/26, 7/16, and 8/6; and 28 day treatments on 6/26 and 7/24. The exception was TD 2390 which was applied on 7/16 and 7/24 only. Subdue Maxx was applied at 1 oz/1000 ft<sup>2</sup> on 7/11, 7/26, and 8/6 to prevent a *Pythium* blight outbreak. The study area was inoculated (6/27, 7/5, 7/16) with *Rhizoctonia solani* growing on a sand/cornmeal mixture using a drop spreader at approximately 2.5 #/1000 sq ft. Fertility for Study B was as follows: 6/13 (1/8 # N), 6/20 (1/2 # N), 6/22 (1/2 # N), 6/27 (1/2 # N), 7/5 (1/2 # N), 7/19 (1/2 # N), 8/3 (1/2 # N), and 8/14 (1/8 # N). Plots were rated for percent area blighted by brown patch (Table 7). Data were analyzed using ANOVA and means separated with LSD (p = 0.05).

In Study B on ryegrass, there was very little disease development. However, the rating on Aug. 8 (Table 7) shows similar results as did Study A. All treatments but one provided significant brown patch control when compared to the control plots.

**Table 7. Study B – Brown Patch Rye, Hancock Turfgrass Research Center.**

<b>Rating Date: August 10, 2001</b>							
<b>Rating Scale: Percent plot area with brown patch.</b>							
<b>Treatment</b>	<b>Rate/1000 sq ft</b>	<b>Interval (Days)</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>Mean (LSD<sup>a</sup>)</b>
Prostar	2.2 oz	14	0	0	0	0	0.0 a
Insignia 20WG	0.5 oz	14	0	0	0	0	0.0 a
Insignia 20WG	0.9 oz	28	0	0	0	0	0.0 a
Insignia alt with Chipco 26GT	0.5 oz / 4.0 fl oz	14	0	0	0	0	0.0 a
Honor	0.2 oz	14	0	0	0	0	0.0 a
Spectro 90 WDG	4 oz	14	0	0	0	0	0.0 a
Endorse	4 oz	14	0	0	0	0	0.0 a
Endorse	6 oz	14	0	0	0	0	0.0 a
SysStar WDG	3 oz	21	0	0	0	0	0.0 a
SysTec	1.5 oz	14	0	0	0	0	0.0 a
Heritage	0.2 oz	14	0	0	0	0	0.0 a
Dac Ultrex	3.2 oz	10	0	0	0	0	0.0 a
WAC79 + Spectro 90 WDG	5 fl oz + 4 oz	14	0	0	0	3	0.8 ab
TD 2390	6 oz	14 <sup>b</sup>	7	3	0	1	2.8 ab
Chipco 26 GT	4 fl oz	14	7	15	0	0	5.5 bc
WAC79	5 fl oz	14	10	20	0	10	10 cd
Control (Fertilized)	--	--	5	5	10	25	11.3 d

<sup>a</sup>Means followed by the same letter do not differ significantly (LSD, p = 0.05).

<sup>b</sup>Treatment applied on 7/16 and 7/24 only.