

## Pythium Blight (*Pythium* sp.)

### Hancock Turfgrass Research Center, E. Lansing, MI.

A preventive study was established on a perennial ryegrass stand mowed at 0.5". Three replicate plots measuring 3' x 6' were set up in a randomized complete block design. Treatments were applied using a CO<sub>2</sub> backpack sprayer with double 8002E flat fan TeeJet nozzles at 48 GPA and 36 PSI. Treatments were applied on 6/25, 7/9, 7/22, and 8/9. Fertility was maintained at approximately 3/4 lb actual nitrogen/1000 sq ft/month. Compass was applied to the entire study on 7/19 to prevent a non-target disease outbreak. The study area was inoculated on 6/29, 7/9, 7/19, and 8/2 with *Pythium* sp. growing on a sand/cornmeal mixture using a drop spreader. The ryegrass plots were covered with a tarp to induce disease development.

Disease developed unevenly in the study area. Because of this, significant variability was seen between replications for many of the treatments which resulted in no statistical separation between any of the treatment means and the untreated control (Table 7.) Banol, a normally reliable standard, was inexplicably the treatment with the most disease. No phytotoxicity was observed.

**Table 7. Pythium Blight 2004**

**Location: Hancock Turfgrass Research Center, E. Lansing, MI**

**Rating Scale: Percent area infected**

**Rating Date: August 4, 2004**

Treatment and Rate/1000 sq ft	Interval (Days)	Mean*	LSD
Heritage 0.2 oz	14	0.5	b
Signature Aliette 4 oz	14	1.0	b
Subdue Maxx 1 fl oz	14	2.2	b
Vital Sign 6 fl oz + Pentathlon 4LF 8 fl oz	14	2.7	b
Vital 4L 6 fl oz	14	5.0	b
GX-732GC 6 fl oz	14	5.3	b
Gary's Green 6 fl oz + PK Plus 6 fl oz + Ultra Plex 3 fl oz + Banol 1.3 fl oz	14	9.0	ab
Gary's Green 6 fl oz + PK Plus 6 fl oz + Ultra Plex 3 fl oz	14	10.7	ab
Control		13.3	ab
Banol 2 fl oz	14	25.3	a

\*Treatment means followed by the same letter are not significantly different (LSD, 5%).

### West Shore Country Club, Grosse Ile, MI.

A preventive Pythium blight study was set up on a creeping bentgrass fairway on West Shore Country Club, a golf course with a long history of Pythium blight. The study was established in a randomized complete block design, and fertility was applied by the golf course superintendent, with supplemental applications made as needed.

Treatments were applied using a CO<sub>2</sub> backpack sprayer with a single 8002E flat fan TeeJet nozzle at 48 GPA and 36 PSI. Plots measured 6' x 9' with four replications of each treatment. Treatment applications were made on 6/22, 7/6, 7/19, 8/2, and 8/25.

Because we experienced a cool summer, no disease developed in the study area, so no data are available.

### **Anthracoze (*Colletotrichum graminicola*)**

A foliar anthracnose study was set up on an annual bluegrass fairway at the Hancock Turfgrass Research Center in E. Lansing, MI. It was mowed at 0.5". The design was a randomized complete block with 4 replicates of each treatment. Plots were 6' x 6'. Treatments were applied using a CO<sub>2</sub> backpack sprayer with a double 8002E flat fan TeeJet nozzle boom at 100 GPA and 36 PSI. Plots were fertilized at about 1/4#N/1000 ft<sup>2</sup>/month. The study was inoculated with *Colletotrichum graminicola* grown on sand/cornmeal on June 2 and July 7. Treatments were applied as listed in Table 8. Plots were rated by visual estimation of percent area with anthracnose. Data are shown in Table 8 and represent the percent plot area with anthracnose. Data were analyzed using ANOVA and means were separated with LSD (p=0.05).

Disease developed in the study area in mid-July and was complicated by a summer patch outbreak. Pressure waned after the initial outbreak, and disease development was not uniform in the study area. As can be seen in Table 8, several treatments provided significant disease control compared to the untreated control plots, including a program treatment using several fungicides in combination with Primo Maxx, Cleary's 3336, Heritage, T-Storm, and combinations of Signature Aliette with both Secure and Compass. Most treatments provided acceptable turf quality, with the Primo Maxx program providing good quality throughout the study. No phytotoxicity was observed in this study this year, except as noted in Table 8.

A basal rot anthracnose study was set up on an annual bluegrass green using the same parameters as above. However, disease did not develop in the study area, so no data are available.

**Table 8. Anthracnose Study**

**Location: Hancock Turfgrass Research Center, E. Lansing, MI**

**Rating Date: July 22, 2004**

**Rating Scale: Mean percent area infected with anthracnose.**

<b>Treatment and Rate/1000 sq ft (unless noted otherwise)</b>	<b>Interval (Date)</b>	<b>Mean<sup>a</sup></b>	<b>LSD</b>
Banner Maxx 2 fl oz + Daconil Ultrex 1.8 oz + Primo Maxx 0.125 fl oz + + Heritage 0.4 oz + Daconil Ultrex 3.2 oz + Primo Maxx 0.125 fl oz + Medallion 0.25 oz + Daconil Ultrex 3.2 oz + Primo Maxx 0.125 fl oz + Heritage 0.4 oz + Banner Maxx 1 fl oz + Primo Maxx 0.125 fl oz + Medallion 0.25 oz + Daconil Ultrex 3.2 oz + Primo Maxx 0.125 fl oz + Heritage 0.4 oz + Banner Maxx 1 fl oz + Primo Maxx 0.125 fl oz + Medallion 0.25 oz + Daconil Ultrex 3.2 oz + Primo Maxx 0.125 fl oz	27-May 15-Jun 25-Jun 8-Jul 22-Jul 5-Aug 19-Aug	0.1	E
3336 6 oz	7/8, 7/22, 8/5, 8/19	1.4	DE
Heritage 6.1 g/100 m <sup>2</sup>	7/8, 7/22, 8/5, 8/19	2.3	DE
Signature Aliette 122 g + Secure 32 ml/100 m <sup>2</sup>	7/8, 7/22, 7/29, 8/5, 8/19	2.5	DE
T-Storm flowable 2.5 fl oz	7/8, 7/22, 8/5, 8/19	2.8	DE
Signature Aliette 122 g/100 m <sup>2</sup>	7/8, 7/22, 7/29, 8/5, 8/19	3.3	DE
Signature Aliette 122 g + Compass 50WP 1.9 g/100 m <sup>2</sup>	7/8, 7/22, 7/29, 8/5, 8/19	3.4	DE
Signature Aliette 122 g + Compass 50WP 7.6 g/100 m <sup>2</sup>	7/8, 7/22, 7/29, 8/5, 8/19	4.5	C-E