Pythium Blight (*Pythium* sp.)

Hancock Turfgrass Research Center, E. Lansing, MI.
A preventive study was established on a ryegrass grass stand mowed at 2.5”. Four replicate plots measuring 2’ x 6’ with 1’ alleys were set up in a randomized complete block design. Treatments were applied using a CO_2 backpack sprayer with a single 8002E flat fan TeeJet nozzle at 48 GPA and 36 PSI. Treatments were applied on 6/17, 7/1, 7/17, and 7/29. Fertility was maintained at approximately 1 lb actual nitrogen/1000 sq ft/month. Fertility was applied as follows: 6/17 (1/2 lb N), 7/1 (1/4 lb N), 7/18 (1/2 lb N), and 7/29 (1/2 lb N). Chipco 26GT was applied to the entire study on 7/1 to prevent a non-target disease outbreak. The study area was inoculated on 7/24 with *Pythium sp*. growing on a sand/cornmeal mixture using a drop spreader. The ryegrass plots were covered to try to induce disease development. However, no disease developed, and the study was concluded after a second site for Pythium blight was identified.

West Shore Country Club, Grosse Ile, MI.
Two Pythium blight studies, one preventive and one curative, were set up on a creeping bentgrass fairway on a golf course with a long history of Pythium blight. The studies were established in randomized complete block designs, and fertility was applied by the golf course superintendent as needed. Treatments were applied using a CO_2 backpack sprayer with a single 8002E flat fan TeeJet nozzle at 48 GPA and 36 PSI. In the preventive study, plots were 6’ x 9’ with four replications. Treatment applications were made on 7/29 and 8/11. Disease began to infiltrate the study by 8/11, but the infection was heavily concentrated in one region and did not spread beyond that area, so no data are available from this study.

In the curative study, plots were 6’ x 6’ with 3 replications. Treatment applications were made on 8/13 after a uniform Pythium blight outbreak. A pre-treatment rating was taken at this time (see Table 4). A disease and phytotoxicity rating were taken on July 18 and are presented in Tables 5 and 6.

As can be seen in Table 5, all treatments provided significant Pythium blight control compared to the untreated check plots. Heritage provided the least amount of control of any of the fungicides tested, significantly less than all treatments tested, except for Vital Sign alone. Quality ratings are presented in Table 6. Slight phytotoxicity was observed in the Vital Sign + Junction plots.

Table 4. Pythium Blight 2003
Location: West Shore Country Club, Grosse Ile, MI.
Rating Scale: Percent area infected (pretreatment rating.)
Rating Scale: Quality (1-10, 7 = acceptable).

		Pretreatment Rating Aug 13, 2003		Percent Area Aug 18, 2003		Quality Aug 18
Treatment and Rate/1000 sq ft	**Interval (Days)**	**Mean**	**LSD***	**Mean**	**LSD***	**Mean**
Protect 4 oz + Alude 5.5 oz	14	0.38	a	0.00	a	7.7
Banol 3 fl oz	14	0.25	a	0.08	a	8.0
Alude 6.5 oz	14	1.63	a	0.17	a	7.7
Spectro 5 oz + Alude 5.5 oz	14	1.44	a	0.17	a	7.0
Vital Sign 6 fl oz + Junction 2 fl oz**	14	0.69	a	0.25	a	6.3
Vital Sign 6 fl oz	14	0.31	a	1.67	ab	7.0
Heritage 0.2 oz	14	1.25	a	5.67	b	6.7
Control	---	0.38	a	12.33	c	6.0

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

Anthracnose (*Colletotrichum graminicola*)

Curative Study

A curative crown rot anthracnose study was set up on an annual bluegrass green at the Hancock Turfgrass Research Center in E. Lansing, MI. It was mowed at 0.130". The design was a randomized complete block with 4 replicates of each treatment. Plots were 6' x 6'. Treatments were applied using a CO_2 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^2/month. Treatments were applied beginning on 2 July with subsequent applications of the 14-day treatments on 17 July and 29 July. Re-application of the 21-day treatment was made on 23 July, and reapplication of the 28-day treatment was made on 29 July. Plots were rated for percent area with crown rot anthracnose. Data are shown in Table 7 and represent the percent plot area with anthracnose. Data were analyzed using ANOVA and means were separated with LSD (p=0.05).

As can be seen in Table 7, many treatments provided significant disease control compared to the untreated control plots including Banner Maxx, Spectro + Alude, Heritage, Banner Maxx + Medallion, Clearys 3336F, Insignia + Propiconazole Pro, several Andersons prototypes, Lesco T-Storm, and Clearys 3336 + Alude. No phytotoxicity was observed in this study this year.