

Treatment ^c	Rate/1000 ft ^{2b}	Application			Avg	DMR ^a	
		Interval (Date)	I	II			III
Bayleton	1 oz	65° + 30 days	25	15	25	21.7	AB
Control	--	--	15	25	35	25.0	A

^aTreatments followed by same letter are not significantly different from each other at the 5% level.

^bRates are formulation.

^cDeleted treatments are proprietary.

^dApplied initially on 6/11/93.

^eMild greening of turf observed, especially earlier in season.

DOLLAR SPOT FUNGICIDE TRIAL - 1993

Hancock Turfgrass Research Center, Michigan State University, East Lansing, Michigan

The 1993 dollar spot (*Sclerotinia homoeocarpa*) fungicide trial was conducted on an irrigated Emerald creeping bentgrass/annual bluegrass putting green at the Hancock Turfgrass Research Center on the Michigan State University campus in East Lansing, Michigan. The green was maintained at ¼" height of cut and was fertilized at ¼ # N/mo. Treatments were applied curatively to 2' x 9' plots in three replications of a random block design on 7, 10, 14, 21, or 28 day schedule as indicated in the data tables (Table 5), beginning on 8/4/93. By the date of the last rating (10/11/93) the weekly treatments had been applied 10 times, the 10-day treatments had been applied 7 times, the 14-day treatments were applied 5 times, the 21-day treatments were applied 3 times, and the 28-day treatments were applied 3 times.

Disease pressure was moderate this year and developed somewhat unevenly in the study. As the data in Table 5 indicates, however, most treatments gave statistically significant control of dollar spot when compared to the untreated controls. The Anderson 373-376 treatments were initially applied curatively on 9/3 and failed to perform as well as expected due to the early onset of turf dormancy. The dollar spot strains in this plot area are benzimidazole-resistant and have also traditionally exhibited low-level resistance to the dicarboximide fungicides (Chipco 26019, Curalan, etc.)

Table 5. Dollar Spot Fungicide Study - 1993

Hancock Turfgrass Research Center
Michigan State University
East Lansing, Michigan

Rating Scale: 0 = no disease, 10 = 100% of plot diseased

Rating Date: 10/11/93

Treatment ^c	Rate/1000 ft ^{2b}	Interval	I	II	III	Avg	DMR (.05) ^a
Fluazinam	1 fl oz	21 days	0	0	0	0	H
ASC 67098Z	6 oz	28 days	0	0	0	0	H
ASC 67098X	3 oz	14 days	0	0	0	0	H
D.2787 + ASC 67135	4 fl oz + 2 fl oz	21 days	0	0	0	0	H
Rubigan	1.5 fl oz	14 days	0	0	0	0	H
Thalonil	3 oz	10 days	0	0	0	0	H
TRA 0028	5.4 fl oz	10 days	0	0	0	0	H

46 GENERAL SESSION - HIGHLIGHTS AND UPDATES

Treatment ^c	Rate/1000 ft ^{2b}	Interval	I	II	III	Avg	DMR (.05) ^a
Banner	0.1376 oz ai	14 days	0	0	0	0	H
Banner + ICIA 5504	0.2752 oz ai + 0.1764 oz ai	28 days	0	0	0	0	H
Banner + ICIA 5504	0.2752 oz ai + 0.1764 oz ai	14 days	0	0	0	0	H
Curalan (DF)	1 oz ai	21 days	0	0	0	0	H
Bayleton + D.2787	0.25 oz + 3 fl oz	14 days	0	0	0	0	H
Bayleton + D.2787	0.5 oz + 4 fl oz	21 days	0	0	0	0	H
Bayleton + Curalan	0.5 oz + 0.5 fl oz	21 days	0	0	0	0	H
Bayleton + Curalan	0.75 oz + 0.75 fl oz	28 days	0	0	0	0	H
D.2787	6 fl oz	14 days	0	0	0	0	H
Bayleton	2 oz	28 days	0	0	0	0	H
Daconil SDG	3.8 oz	14 days	0	1	0	0.3	GH
EXP 10307A + EXP 02164B	1.5 fl oz + 1.5 fl oz	28 days	1	0	0	0.3	GH
Banner	2 fl oz	28 days	1	0	0	0.3	GH
EXP 10064C	1 oz	28 days	1	1	0	0.7	F-H
EXP 10307A	2 oz	28 days	1	1	0	0.7	F-H
EXP 10307A + EXP 02164B	1 fl oz + 1 fl oz	28 days	1	1	0	0.7	F-H
EXP 10512A	1.6 fl oz	28 days	1	1	0	0.7	F-H
FCI 6444	5 oz ai	7 days	f ₁	f ₁	f ₀	0.7	F-H
Ch.26019 (WDG)	2 oz	28 days	1	1	1	1.0	E-H
Sentinel	0.167 oz	28 days	1	1	1	1.0	E-H
S-4404	0.25 oz ai	28 days	1	1	1	1.0	E-H
EXP 10512A	0.8 oz	28 days	2	1	1	1.3	E-H
Banner	2 gm ai	28 days	2	1	1	1.3	E-H
CGA 173506 + Banner	1.75 gm ai + 2 gm ai	28 days	2	1	1	1.3	E-H
CGA 173506 + Banner	3.5 gm ai + 2 gm ai	28 days	2	1	1	1.3	E-H
Banner + ICIA 5504	0.1376 oz ai + 0.1764 oz ai	28 days	2	1	1	1.3	E-H
FCI 6444	2 oz ai	7 days	e ₃	e ₂	e ₀	1.7	D-G
EXP 10307A	1 fl oz	28 days	3	1	1	1.7	D-G
AND. 375 ⁸	4 lbs	14 days	2	3	1	2.0	C-F
S-4404	0.125 oz ai	28 days	3	2	2	2.3	B-E
AND. 374 ⁸	4 lbs	14 days	4	2	2	2.7	B-D
CGA 173506	3.5 gm ai	28 days	3	4	1	2.7	B-D
ICIA 5504	0.1764 oz ai	14 days	3	2	3	2.7	B-D
FCI 6444	1 oz ai	7 days	5	3	1	3.0	BC
AND. 376 ⁸	4 lbs	14 days	3	3	3	3.0	BC
Control	--	--	4	3	3	3.3	B
AND. 373 ⁸	4 lbs	14 days	5	3	2	3.3	B
Panasea Plus + Trypt.	4 fl oz	28 days	5	3	2	3.3	B
Panasea Plus	4 fl oz	28 days	4	3	3	3.3	B
FCI 6444	0.5 oz ai	7 days	6	2	3	3.7	AB
Thatch X Blank	3 lbs	28 days	5	2	4	3.7	AB
E.I. DS (Strain #16)	3 lbs	28 days	5	2	4	3.7	AB

Treatment ^c	Rate/1000 ft ^{2b}	Interval	I	II	III	Avg	DMR (.05) ^d
Thatch X + Trypt.	3 lbs	28 days	5	3	3	3.7	AB
Thatch X	3 lbs	28 days	5	6	3	4.7	A

^aTreatments followed by the same letter are not significantly different from each other at the 5% level.

^bRates listed are formulation unless listed as active ingredient (ai).

^cDeleted treatments are proprietary.

^dModerately severe phytotoxicity observed.

^eSevere phytotoxicity observed.

^fTreatments initiated curatively on 9/3.

NECROTIC RING SPOT FUNGICIDE STUDIES - 1993

Two necrotic ring spot (*Leptosphaeria korrae*) studies were conducted this year; one on a commercial lawn site in Grand Rapids, and another on a similar site in Lansing. Both sites consisted of diseased Kentucky bluegrass turf which was automatically irrigated and was fertilized at ½ lb N./1000 ft²/mo., except as noted on the data tables.

Initial applications were made on symptomatic turf with necrotic ring spot patches from previous disease activity on 5/28/93 (fertilizers and natural products) and 8/28/93 (fungicides) at the Lansing site and on 6/19/93 and 7/24/93, respectively, on the Grand Rapids site. Fertilizer and natural product applications were made on monthly schedules through October on both sites. The fungicides were reapplied approximately a month after the initial applications. Liquid applications were made as foliar sprays as previously described in this report while granular products were preweighed and hand applied to the 6' x 9' plots.

As Table 6 indicate, disease severity is inversely correlated to fertility level. At somewhat elevated nitrogen levels of 1 lb/1000 ft²/mo., Turf Restore and IBDU fertilizers provided virtually total control of patch symptoms. Statistically similar levels of disease control were achieved with lower levels of fertility (½ lb nitrogen/1000 ft²/mo.) combined with experimental fungicides such as ASC 67103, EXP 10307A, EXP 02164B, ASC 67098-X, Eagle, etc.

No phytotoxicity or significant turf greening was observed at any time in either of these studies, however, overall turf quality and density was best in the Turf Restore and IBDU plots.

Table 6. Necrotic Ring Spot Study (Lansing Site) - 1993

Rating Scale: percent recovery/plot from pretreatment disease levels
Rating Date: 9/10/93

Treatment	Rate/1000 ft ²	I	II	III	IV	Avg	DMR (.1) ^a
IBDU Fertilizer	1 lb N (nitrogen)/mo	100	100	100	100	100.0	A
Turf Restore	1 lb N/mo	100	96.0	100	94.0	97.5	AB
ASC 67098-X	6 oz	85	100	100	100	96.3	ABC
							A-D
D.2787 + ASC 67103	6 fl oz + 16 ml	80	90	100	100	92.5	A-E
EXP 10307A + EXP 02164B	3 fl oz + 2.4 fl oz	100	66.7	100	100	91.7	A-E
Eagle	0.6 oz	100	100	53.3	100	88.3	A-E
Thatch X Blank	3 lbs/mo	75	85.7	82.5	90	83.3	A-F
Thatch X	3 lbs/mo	71.4	66.7	90	88	79.0	A-G
D.2787 + ASC 67135	4 fl oz + 2 oz	100	40	88	76	76.0	A-G