

year.

Orchard Lake Country Club, Orchard Lake, MI

Summer Patch Fungicide Study #1

The summer patch fungicide study #1 at Orchard Lake Country Club was initiated preventively on May 12, 1988 with a second application being made on June 13, 1988. The plots were rated on August 27.

As the data from the control shows (Table 4), disease pressure slowly intensified during the July 20--August 27 period. Disease control by the various treatments also declined as disease pressure grew, however, the experimental compounds (Spotless, H6573, HWG 1608, etc.) seemed to maintain control of the disease longer than did many of the standards. Of special note was the Spotless compound which maintained season-long control of the disease at the 1 lb ai/1000 ft² rate after the turf outgrew some initial chemical phytotoxicity.

Phytotoxicity was observed as noted on the data tables.

Grand Rapids Elks Country Club, Grand Rapids, MI

Summer Patch Fungicide Study #4

The summer patch fungicide study #4 was initiated preventively on May 24, 1988 with a second application being made on June 21, 1988. The plots were rated for summer patch infection on August 30, 1988.

As the data shows (Table 5) this study was very heavily diseased by summers end. Rather large variations in disease severity between replications are attributable to lack of uniform disease pressure in the plot area. As in the other summer patch trials, experimental compounds such as Spotless, ICIA 523, H6573 and Prochloraz continued to perform well. Banner, Rubigan and Bayleton were the best performing standard compounds.

No phytotoxicity was noted on the dates the ratings were taken.

DOLLAR SPOT FUNGICIDE TRIALS - 1988

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

Preventive Study

The 1988 preventive dollar spot (Moellerodiscus sp., Lanzia sp.) fungicide trial was conducted on an irrigated Emerald creeping bentgrass (Agrostis palustris huds) putting green at the Hancock Turfgrass Research Center on the MSU campus. The green was maintained at 1/4" height of cut and fertilized at .33 #N/mo. Treatments were applied preventively to 3' x 6' plots in three replications of a random block design on 7, 14, 21 or 28 day schedules as indicated on the data table. Because of the hot, dry wether we experienced this summer, disease did not begin to develop in the plot area until the rains came in mid-August. Our initial treatments were applied on August 18. All treatments were applied with a CO₂ small-plot sprayer at 30 PSI and 48

gal/A. The plots were rated for disease on September 25, at which time the 7 day treatments had been applied five times, the 14 day treatments had been applied three times and the 21 and 28 day treatments had been applied twice.

Disease pressure was late in developing and remained relatively light in the plot area this year which might explain why most of the treatments worked so well. As in previous years, the Tersan 1991 treatment was ineffective due to benzimidazole-resistant dollar spot strains which predominate in the plot area. As the data table shows (Table 6), many of the newer, experimental fungicides which looked promising in our summer patch trials also show promise as dollar spot controls (SDS 66533, Spotless, ICIA523, H6573, etc.). All the products tested (except T1991) gave significant disease control when compared to the control.

Phytotoxicity was observed as indicated on the data tables.

Curative Study

The 1988 curative dollar spot (Lanzia sp., Moellerodiscus sp.) fungicide study was conducted at the same location and under the same conditions described above except that it was located on a heavily diseased turf area. The duration of the study was limited somewhat by late development of disease pressure and an unusually early fall. Initial applications were made on September 10 with all subsequent applications being made at the intervals indicated on the data table. The rating was taken on October 3, 1988.

At the time of the rating (Table 7), the 7 day treatments had been applied 3 times, the 14 day treatments had been applied twice and the 21 and 28 day treatments had been applied once. The study was terminated after the October 3 rating because disease pressure in the controls and the plot area in general was abating. This decline in disease pressure occurred before recovery was complete in some treated plots. Had we been able to continue the study for two additional weeks, some of the treatments (CH 26019 + LS 84.606, H6573 + T1991, etc.) would probably have shown 100% recovery from initial disease damage. As the statistics show, however, all treatments gave a significant reduction in the disease levels, compared to the untreated controls.

Phytotoxicity was observed as indicated on the data tables.

NECROTIC RING SPOT FUNGICIDE TRIALS #1 AND #2 - 1988

Glen Haven Condominiums, Novi, MI

The 1988 necrotic ring spot (Leptosphaeria korrae) fungicide trials #1 and #2 were conducted on an irrigated, moderately fertilized (1/3 #N/mo) Kentucky bluegrass residential turf area at the Glen Haven Condominium complex in Novi, Mi. Two preventive studies were initiated in May 1988, one study utilizing the same treatments and rates used in our summer patch fungicide trials, and a second study which used corporate contract treatments and rates. These studies will be referred to as study #1 and study #2, respectively.

Both studies were laid out in three replications (6' x 9' plots) of a random block design in areas which showed evidence of severe and uniform disease pressure in previous seasons. All sprayable formulations were applied

Table 6. Preventive Dollar Spot Fungicide Trial - 1988

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

Rating date: 9/24/88

Number of dollar spots/plot

Treatment	Rate/1000 ft ²	Interval	I	II	III	Ave	DMR(.05) ^a
HWG1608	.125 oz ai	21 day	0	0	0	0	B
Dac 2787	6 fl oz	14 day	0	0	0	0	B
Bayleton	1 oz	21 day	0	0	0	0	B
Banner	1 fl oz	21 day	0	0	0	0	B
CH 26019 (W)	1 oz ai	21 day	0	0	0	0	B
CH 26019	1 oz ai	21 day	0	0	0	0	B
CH 26019 + LS 84.606	1 oz ai + .05 oz ai	21 day	0	0	0	0	B
RH 3486	.75 oz ai	14 day	0	0	0	0	B
RH 3486	.75 oz ai	21 day	0	0	0	0	B
RH 3486	.75 oz ai	28 day	0	0	0	0	B
RH 3486	.5 oz ai	14 day	0	0	0	0	B
RH 3486	.5 oz ai	21 day	0	0	0	0	B
RH 3866	.25 oz ai	14 day	0	0	0	0	B
Spotless	.125 lb ai/A	21 day	0	0	0	0	B
Spotless	.25 lb ai/A	21 day	0	0	0	0	B
Spotless	.5 lb ai/A	21 day	0	0	0	0	B
Spotless	1 lb ai/A	21 day	0 ^b	0	0	0	B
SAN 619	1 gm ai	21 day	0 ^b	0	0 ^b	0	B
SAN 619	1.5 gm ai	28 day	0 ^b	0 ^b	0 ^b	0	B
SAN 619	1.5 gm ai	21 day	0 ^c	0 ^b	0 ^b	0	B
SAN 619	2 gm ai	28 day	0 ^b	0 ^b	0 ^b	0	B
SAN 832	31 gm ai	21 day	0	0 ^b	0 ^b	0	B
SAN 832	46.5 gm ai	28 day	0 ^b	0 ^b	0	0	B
Vorlan	1 oz	21 day	0	0	0	0	B
H6573 + DPX-965	.06 oz ai + 1 oz ai	21 day	0	0	0	0	B
H6573 + DPX-965	.125 oz ai + 1 oz ai	21 day	0	0	0	0	B
H6573 + Tersan 1991	.06 oz ai + 1 oz ai	21 day	0	0	0	0	B
H6573 + Tersan 1991	.125 oz ai + 1 oz ai	21 day	0	0	0	0	B
H6573 + Tersan 1991	.25 oz ai + 1 oz ai	21 day	0	0	0	0	B
H6573	.06 oz ai	21 day	0	0	0	0	B
H6573	.125 oz ai	21 day	0	0	0	0	B
H6573	.25 oz ai	21 day	0	0	0	0	B
ICIA 523 + X-77	3 gm ai + .05% v/v	21 day	0 ^b	0	0 ^b	0	B
ICIA 523 + X-77	6 gm ai + .05% v/v	21 day	0 ^b	0 ^b	0 ^c	0	B
Dac 2787	3 fl oz	7 day	0	0	0	0	B
Dac 2787	6 fl oz	21 day	0	0	0	0	B
SDS66518	1.75 oz	7 day	0	0	0	0	B
Dac 2787	3.5 oz	21 day	0	0	0	0	B
Dac 2787 + SDS 66533	3 fl oz + 1 fl oz	14 day	0	0 ^b	0	0	B
Dac 2787 + SDS 66533	6 fl oz + 2 fl oz	21 day	0	0	0	0	B
Dac 2787 + SDS 66533	6 fl oz + 4 fl oz	28 day	0	0 ^b	0 ^b	0	B

Table 6. Preventive Dollar Spot Fungicide Trial - 1988 (cont.)

Treatment	Rate/1000 ft ²	Interval	I	II	III	Ave	DMR(.05) ^a
Dac 2787 + SDS 66533	1.5 fl oz + .5 fl oz	7 day	0	0	0	0	B
SDS 66534	2.1 fl oz	14 day	0	0	0	0	B
SDS 66534	4.3 fl oz	21 day	0 ^b	0 ^b	0 ^b	0	B
SDS 66608 ^d	7.4 oz	one appl	0 ^b	0 ^b	4 ^b	1.3	B
SDS 66608 ^d	11.2 oz	one appl	0 ^c	9 ^c	4 ^c	4.3	B
SDS 66608 ^d	3.7 oz	14 day (2 appl only)	1 ^b	26 ^b	8 ^b	11.7	B
DPX-965	1 oz ai	21 day	23	29	50	34.0	A
Control	----	----	54	23	36	37.7	A
Tersan 1991	1 oz ai	21 day	9	38	82	43.0	A

a = treatments followed by the same letter are not significantly different at the 5% level

b = indicates mild phytotoxicity

c = indicates moderately severe phytotoxicity

d = SDS 66608 treatments at all levels were phytotoxic only for 7-10 days following application.

Phytotoxicity was primarily a greening response in which no actual foliar injury was observed

Table 7. Curative Dollar Spot Fungicide Trial - 1988

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

Number of dollar spots/plot

Rating date - October 3, 1988

Treatment	Rate/1000 ft ²	Interval	I	II	III	Ave	DMR(.05) ^a
SAN-619	1 gm ai	21 day	0 ^c	0 ^c	0 ^b	0	B
H6573 + Tersan 1991	.06 oz ai + 1 oz ai	21 day	0	0	0	0	B
Dac 2787 + SDS 66533	6 fl oz + 4 fl oz	28 day	0 ^b	0 ^b	0 ^b	0	B
RH-3486	.75 oz ai	14 day	0	0	0	0	B
H6573	.25 oz ai	21 day	0	0	1	0.3	B
SAN-619	2 gm ai	28 day	2 ^c	0 ^c	0 ^b	0.7	B
H6573 + Tersan 1991	.125 oz ai + 1 oz ai	21 day	0	0	2	0.7	B
RH-3486	.75 oz ai	28 day	0	0	2	0.7	B
RH-3486	.5 oz ai	21 day	0	0	2	0.7	B
SDS-66608 ^d	11.2 oz	1 appl only	0 ^b	0 ^c	3 ^b	1.0	B
CH26019	1 oz ai	21 day	0	0	3	1.0	B
Dac 2787 + SDS-66533	3 fl oz + 1 fl oz	14 day	1 ^b	0	2	1.0	B
SDS-66608 ^d	7.4 oz	1 appl only	2 ^b	0 ^b	2 ^b	1.3	B
Dac 2787	3 fl oz	7 day	0	0	4	1.3	B
CH26019(W)	1 oz ai	21 day	3	0	2	1.7	B
Spotless	.5 lb ai/A	21 day	0	0	5	1.7	B
RH-3486	.5 oz ai	14 day	0	0	5	1.7	B
SDS-66518	1.75 oz ai	7 day	0	0	6	2.0	B
RH-3486	.75 oz ai	21 day	0	0	7	2.3	B
H6573 + DPX-965	.125 oz ai + 1 oz ai	21 day	0	8	0	2.7	B
H6573	.125 oz ai	21 day	0	2	6	2.7	B
Spotless	.125 lb ai/A	21 day	0	0	8	2.7	B
ICIA523 + X-77	6 gm ai + .05% v/v	21 day	0 ^c	0 ^b	9 ^b	3.0	B
Spotless	1 lb ai/A	21 day	0	0	9	3.0	B
Bayleton	1 oz	21 day	6	3	0	3.0	B
SDS-66534	4.3 fl oz	21 day	0	6	5	3.7	B
Spotless	.25 lb ai/A	21 day	0	5	6	3.7	B
Dac 2787	6 fl oz	14 day	4	0	7	3.7	B
Vorlan	1 oz	21 day	7	2	4	4.3	B
H6573 + DPX-965	.06 oz ai + 1 oz ai	21 day	0	1	12	4.3	B
Dac 2787 + SDS 66533	1.5 fl oz + .5 fl oz	7 day	4	0 ^b	9	4.3	B
RH-3866	.25 oz ai	14 day	0	10	3	4.3	B
Banner	1 fl oz	21 day	0	0	14	4.7	B
HWG-1608	.125 oz ai	21 day	2	0	12	4.7	B
SAN-832	31 gm ai	21 day	10	0 ^b	4	4.7	B
SAN-619	1.5 gm ai	21 day	0 ^b	0 ^c	15 ^b	5.0	B
Dac 2787 + SDS-66533	6 fl oz + 2 fl oz	21 day	2 ^b	0 ^b	16	6.0	B
H6573 + Tersan 1991	.25 oz ai + 1 oz ai	21 day	0	0	20	6.7	B
SAN-832	46.5 gm ai	28 day	22	0 ^b	0	7.3	B
H6573	.06 oz ai	21 day	1	17	5	7.7	B
SDS 66518	3.5 oz	21 day	3	21	4	9.3	B

Table 7. Curative Dollar Spot Fungicide Trial - 1988 (cont.)

Treatment	Rate/1000 ft ²	Interval	I	II	III	Ave	DMR(.05) ^e
SDS-66534	2.1 fl oz	14 day	4	0	25 ^b	9.7	B
SAN-619	1.5 gm ai	28 day	4 ^c	2 ^b	32 ^b	12.7	B
CH26019 + LS 84.606	1 oz ai + .05 oz ai	21 day	48	0	0	16.0	B
SDS-66608 ^d	3.7 oz	14 day	0 ^b	0 ^b	55	18.3	B
		2 appl only					
Dac 2787	6 fl oz	21 day	11	0	46	19.0	B
ICIA-523 + X-77	3 gm ai + .05% v/v	21 day	5 ^b	0	74 ^b	26.3	B
DPX-965	1 oz ai	21 day	17	2	65	28.0	B
Tersan 1991	1 oz ai	21 day	45	131	37	71.0	A
Control	----	----	42	45	167	84.7	A

a = treatments followed by the same letter are not significantly different at the 5% level

b = indicates mild phytotoxicity

c = indicates moderately severe phytotoxicity

d = SDS-66608 treatments at all levels were phytotoxic only for 7-10 days following application.

Phytotoxicity was expressed as a greening response with no foliar necrosis