Dollar Spot Fungicide Trials - 1989

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

The 1989 curative 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 ¼" height of cut and fertilized at ½# N/mo. Treatments were applied curatively to 3' X 6' plots in three replications of a random block design on 14, 21 and 28 day intervals as indicated on the data tables. The initial treatments were applied on August 1. All liquid treatments were applied with a CO_2 small-plot sprayer at 30 PSI and 48 gal/A. The granular treatments were pre-weighed and applied by hand. Following the initial application (8/1), the 14 day treatments were reapplied on 8/14,8/28 and 9/11, the 21 day treatments were reapplied on 8/23 and 9/11 and the 28 day treatments were reapplied on 8/28. The plots were rated for percent plot area infected on 8/14, 8/28, 9/11 and 9/19 (Table 5).

The plot area where the dollar spot fungicide trial was conducted has a benzimidazole-resistant strain of dollar spot so Tersan 1991 (and another benzimidazole fungicide, Fungo) failed to control the disease. As the data tables show, however, many experimental compounds (SDS 66518, SDS 66811, SAN 619F, SAN 832, Lynx 2F, BAS 4800, etc.) and many standard fungicides (Dac. 2787, Banner, Vorlan, Ch. 26019, Bayleton, etc.) gave good control of dollar spot this year.

Although no phytotoxicity was observed throughout the course of this study, it is interesting to note the large number of compounds (SAN 619, Banner, ICIA 523, Bayleton, SAN 832) which seemed, at some point, to produce a "greening response" in the turf.

Red Thread Fungicide Trial - 1989

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

The 1989 red thread (*Laetisaria fuciformis*) fungicide trial was conducted on already-infected perennial ryegrass (Loretta) at the Hancock Turfgrass Research Center on the campus. The study was laid out in three replicates of a random block design utilizing a plot size of 3'/x6'. Treatments were applied foliarly with a CO_2 small-plot sprayer at 30 PSI and a volume of 48 gal/A. The first applications were made on June 17 with subsequent applications being made on 14, 21 or 28 day schedules.

At the time of the first disease rating (7/13) (Table 6), the 14 day treatments had been applied twice (6/17,6/30), and the 21 and 28 day treatments had been applied once (6/17). When the second rating was taken

(7/24) (Table 7), the 14 day treatments had been applied three times (6/17,6/30,7/13) and the 21 and 28 day treatments had been applied twice (6/17,7/7 and 6/17,7/13 respectively).

As data Table 6 indicates, Chipco 26019 and Bayleton were among the fastest curative treatments used in this test. By the date of the second rating, however, compounds such as SDS 6608, Fore, and Daconil 2787 were also quite effective at arresting disease development and promoting turf recovery (Table 7).

No phytotoxicity was observed during the course of this study.

Yellow Tuft Fungicide Trial - 1989

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

The 1989 yellow tuft (*Sclerophthora macrospora*) fungicide study was conducted on an irrigated Penneagle creeping bent grass putting green at the Hancock Turfgrass Research Center on the MSU campus. Treatments were applied preventively to 3'x6' plots in three replications of a random block design. Treatments were applied foliarly with a CO_2 small-plot sprayer at 30 PSI and 48 gal/A.

The initial applications were made on July 7, with subsequent applications being made on a 21 day schedule through September 28. Following each application, mild phytotoxicity was observed in the Aliette plots beginning on approximately day 2 and continuing through approximately day 9. This phytotoxicity was expressed as a bleaching of the leaf tips and a mild yellowing of the turf. Because of this phytotoxicity, the re-treatment interval was increased to 21 days from the contractual request of 14 days. The Subdue plots maintained good turfgrass quality and disease control throughout the season with no phytotoxicity observed (Tables 8 & 9).

Necrotic Ring Spot Fungicide Studies - 1989

Preventive Studies

As with our summer patch fungicide research, we decided to attempt preventive control of necrotic ring spot (Leptosphaeria porrae) in our fungicide field trials for the 1989 season. Two preventive studies were established on irrigated Kentucky bluegrass lawn areas in Novi, Michigan, where disease was present in previous years. All treatments were applied prior to disease occurrence in three replications of a random block design utilizing a 6' x 9' plot size. The turf was moved at a 2" height of cut and was to be fertilized at the rate of 1 lb N/1000 ft^2 in May, July and September. These areas were treated for weeds and insects, however, no other fungicides were applied during the course of the season.

Table 6. Red Thread Fungicide Trial - 1989

Hancock Turfgrass Research Center, MSU, E. Lansing, MI
Percent plot area infected with red thread disease
Rating date: 7/13/89

Treatment	Rate/1000 ft[2b]	Interval	I	II	III	AVE	DMR (.05)[a]
Ch 26019 (F)	4 fl oz	14 days	0	0	0	0.0	C
Bayleton	2 oz	21 days	0	10	5	5.0	BC
SDS 66608	7.5 oz	28 days	25	10	2	12.3	BC
Fore	8 oz	14 days	15	10	20	15.0	BC
Dac 2787	6 fl oz	14 days	35	10	15	20.0	BC
SDS 66608	5 oz	28 days	15	40	20	25.0	BC
Fore	4 oz	14 days	25	5	45	25.0	BC
Dac 2787	3 fl oz	14 days	45	2	30	25.7	BC
ICIA 0523 + X-77	8gm ai +.25%v/v	21 days	10	45	35	30.0	B
Control	---	---	55	50	70	58.3	A

Table 7. Red Thread Fungicide Trial - 1989

Hancock Trufgrass Research Center, MSU, E. Lansing, MI
Percent plot area infected with red thread disease
Rating date - 7/24/89

Treatment	Rate/1000 ft[2b]	Interval	I	II	III	AVE	DMR (.05)[a]
Ch 26019 (F)	4 fl oz	14 days	0	0	0	0.0	B
Bayleton	2 oz	14 days	0	0	0	0.0	B
SDS 66608	7.5 oz	28 days	0	5	0	1.7	B
Fore	8 oz	14 days	5	5	0	3.3	B
Dac 2787	6 fl oz	14 days	5	0	5	3.3	B
Dac 2787	3 fl oz	14 days	15	0	10	8.3	B
Fore	4 oz	14 days	0	15	20	11.7	B
SDS 66608	5 oz	28 days	10	20	10	13.3	B
ICIA 523 + X-77	8gm ai +.25%v/v	21 days	0	25	15	13.3	B
Control	---	---	50	35	45	43.3	A

[a]Treatments followed by the same letter are not significantly different from each other at the 5% level.
[b]Rates listed are formulation unless listed as active ingredient (ai).