Control of Sclerotinia Dollar Spot on Putting Greens in 2004

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Over the past years, I have been hearing several generic statements from superintendents such as, "the same fungicides did not seem to control dollar spot as effectively as previous years," or "I have to put down chemicals more frequently than before." In my opinion, those concerns are true on a few golf courses where fungicide insensitive isolates may be present due to intensive disease management practiced over the past years. In reality, most of golf courses in Wisconsin are just looking great. Superintendents are working hard to maintain the courses in a good shape with very limited tools and resources. I really admire them with their excellence and dedication. Here are results of our research on the chemical control of dollar spot on putting greens which was carried out in the summer of 2004. I hope that the results might give you more options or tools to consider in order to make the greens SPOT-LESS. The objective of this study was to determine the efficacy of fungicides and combinations of fungicides for controlling dollar spot incited by *Sclerotinia homoeocarpa* on a creeping bentgrass putting green.

MATERIALS AND METHODS

The study was conducted at the O.J. Noer Turfgrass Research and Education Facility on a stand of creeping bentgrass (*Agrostis stolonifera* 'Penncross') maintained at 0.156 inch cutting height. The individual plots measured 3 ft X 10 ft and were arranged in a randomized complete block design with four replications. Individual treatments were applied at a nozzle pressure of 40 p.s.i using a

Table 1. Spray schemes, dates and interval, of standard fungicides for the control of dollar spot on putting green at O. J. Noer Research and Education Facility in 2004.

	Fungicide Application Dates						
	June			July			August
Interval	6	25	30	8	22	29	4
14 day	X	X		X	X		X
21 day	X		X			X	
28 day	X			X			X

CO_2 pressurized boom sprayer equipped with two XR Teejet 8005 VS nozzles. All fungicides were agitated by hand and applied in the equivalent of 2 gallons of water per 1000ft^2. All treatments were initiated on June 9th and the last application was made on August 4th. Specific application dates for each interval are listed in the table 1.

RESULTS AND DISCUSSION

Disease infection centers per plot were recorded on June 30th, July 14th, July 22nd, August 2nd, and August 12th (Table 1). This year's dollar spot pressure on our plot was not high as shown in check treatment (#1) ranging from 2.3 to 9.5 patches (mean over four replications) per plot (Table 2). Overall turfgrass quality and turfgrass color were also recorded on selected dates. No noticeable difference in the quality and the color was observed among the treatments. In addition, no phytotoxicity was observed for any treatments during the duration of the trial.

Only treatment five was completely free of dollar spot on all five rating dates. Five other treatments (#2, 6, 11, 14, & 23) were disease free for four of the ratings and had less than one patch per plot on one rating date showing disease. As far as statistical concerns, those six treatments are not significantly different from each other. Fluctuation in means of disease ratings in some treatments over the course of the trial might be due to a combination of timings of the applications, onset of disease outbreak, and longevity of the chemicals.

If you need more information about the results, products, or interpretation of the results, please let Steve (swa@plantpath.wisc.edu) or myself (jung@plantpath.wisc.edu) know.

Table 2. Dollar spot ratings on 24 chemical treatments including an untreated control.

					Dollar Spot Patches Per Plot*									
	Treatment	Rate		Interval	June 30		July 14		July 22		August 2		August 12	
1	Untreated Control				2.3	bc	2.3	b	4.0	b	9.5	ab	6.3	a-d
2	Chipco 26 GT	4.00	FL OZ/M	14 Day	0.8	bc	0.0	d	0.0	e	0.0	f	0.0	f
3	Emerald	0.18	OZ/M	21 Day	0.3	c	0.0	d	0.0	e	0.0	f	2.0	def
4	Emerald	0.13	OZ/M	14 Day	0.3	c	0.0	d	0.3	e	0.0	f	0.0	f
5	Spectator	0.37	FL OZ/M	14 Day	0.0	c	0.0	d	0.0	e	0.0	f	0.0	f
6	Spectator	0.72	FL OZ/M	28 Day	0.8	bc	0.0	d	0.0	e	0.0	f	0.0	f
7	T-Storm	2.50	FL OZ/M	14 Day	0.0	c	0.3	d	0.3	e	0.8	f	0.5	ef
8	18 Plus	3.00	FL OZ/M	21 Day	1.5	bc	0.0	d	1.0	de	5.8	b-e	4.8	a-e
9	3336	4.00	FL OZ/M	14 Day	0.0	c	0.5	cd	0.5	e	1.5	ef	2.0	def
10	Spotrete	3.75	FL OZ/M	21 Day	1.8	bc	1.3	bcd	3.0	bcd	9.8	ab	6.0	a-d
11	Spectro	4.00	OZ/M	14 Day	0.0	c	0.0	d	0.0	e	0.5	f	0.0	f
12	Chipco 26GT	0.75	FL OZ/M	14 Day	2.8	b	2.5	b	4.5	b	9.0	b	6.8	ab
13	Banner MAXX	0.25	FL OZ/M	14 Day	2.0	bc	0.0	d	0.0	e	0.5	f	0.3	ef
	Chipco 26GT	0.75	FL OZ/M	14 Day										
14	Banner MAXX	0.25	FL OZ/M	14 Day	0.0	c	0.0	d	0.0	e	0.3	f	0.0	f
15	Curalan EG	0.25	OZ/M	14 Day	0.5	c	0.3	d	0.3	e	3.8	c-f	0.3	ef
16	Banner MAXX	0.25	FL OZ/M	14 Day	0.0	c	0.0	d	0.3	e	0.5	f	2.3	c-f
	Curalan EG	0.25	OZ/M	14 Day										
17	Banner MAXX	0.25	FL OZ/M	14 Day	0.3	c	0.0	d	0.3	e	0.5	f	0.3	ef
	Daconil WeatherStik	1.00	FL OZ/M	14 Day										
18	Daconil WeatherStik	1.00	FL OZ/M	14 Day	1.3	bc	1.8	bc	3.5	bc	8.3	b	2.3	c-f
19	Banner MAXX	0.25	FL OZ/M	14 Day	0.3	c	0.0	d	0.3	e	0.5	f	0.0	f
	Bayleton	0.25	OZ/M	14 Day										
20	Bayleton	0.25	OZ/M	14 Day	0.0	c	0.0	d	0.0	e	0.3	f	0.3	ef
21	Eagle	0.50	OZ/M	14 Day	0.8	bc	0.3	d	1.0	de	1.3	ef	0.8	ef
22	Rubigan AS	0.75	FL OZ/M	14 Day	0.8	bc	0.0	d	0.0	e	0.5	f	0.3	ef
23	Banner MAXX	0.50	FL OZ/M	14 Day	0.3	c	0.0	d	0.0	e	0.0	f	0.0	f
24	EcoGuard	20.00	FL OZ/M	14 Day	5.0	a	4.0	a	7.8	a	13.5	a	7.5	a
LSD (P=.05)					1.84		1.16		1.85		4		3.79	
Standard Deviation					1.3		0.82		1.31		2.83		2.68	
CV					170.1		176.17		132.17		96.98		143.46	

*Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)