SYSTEMIC,CONTACT, AND COMBINATION FUNGICIDES FOR THE CONTROL OF SCLEROTINIA DOLLAR SPOT

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This study consists of an evaluation of systemic and contact fungicides applied at (1) two week intervals and/or (2) as needed. The study was conducted on Toronto creeping bentgrass, replicated 3 times in a randomized block design. The plots were 4 x 4 ft and surrounded by a six inch untreated border in an attempt to have inoculum adjacent to all plots. The fungicides were applied with a John Bean Spartan Sprayer and a 3 nozzle boom on wheels that covered a 4 ft swath. The applications were made for the two week interval study on June 11 and 27; July 2 and 16; August 2, 14, and 27. The "as needed" study was treated on June 11 and August 2. The results can be seen in Tables 2 and 3. Table 2 shows that all fungicides, except Acti-dione-thiram plus chloroneb and U-34-910, controlled Sclerotinia dollar spot when applied every two weeks.

Table 3, shows that Cleary's 2020, 2021, 1882, Bromosan, Daconil 2787, Bravo, Tersan 1991 alternated with Bravo, and the Rhodia Experimental all effectively controlled dollar spot when applied every two weeks. Cleary's 1880 and 1881 were not effective in controlling dollar spot.

Table 4, the "as needed" study, shows the first treatments were applied on June 11. Effective control of Sclerotinia dollar spot was obtained for 7 weeks with Tersan 1991 1 oz, Bay Experimental 1 + 2 oz, Mertect 140 1 oz, Fungo 1 + 2 oz, Bay + Dyrene 1 oz + 2 oz respectively, Cleary's 3336 1 oz, MF 568 2 oz, and MF 573 2 oz. Acti-dione-thiram and Chloroneb 4 oz, U-34-910 1 + 2 oz and the untreated control failed to prevent dollar spot development. The dollar spot was allowed to increase in all plots until August 2 at which time a second application was made. The same fungicides which were effective during the first 7 weeks again effectively controlled dollar spot for 5 weeks up to September 10 (Table 4). The fungicides which were not effective during the first 7 weeks again failed to control dollar spot. The disease also increased in the untreated control. This should mean that as few as two or three sprays with a systemic fungicide could give season-long control of dollar spot, resulting in a savings to the user in both material and labor. However, the systemic fungicides should not be used on an exclusive basis because of the danger of the development of resistant strains. It is essential to have contact fungicides also in the spray program.

Table 2. Sclerotinia Dollar Spot Control Evaluations (Fungicide Applied Every Two Weeks)

Treatment	Application Rate 1000 sq ft	Total number of spots in 3 replications							
		6/11*	6/27	7/2	7/16	8/2	8/14	8/27	9/10
Tersan 1991	1 oz	138	0	6	0	0	0	1	0
Bay Experimental	1 oz	143	4	20	0	0	0	0	0
Bay Experimental	2 oz	166	0	0	0	2	0	0	0
U-34-910	1 oz	172	33	106	38	165	148	171	225
U-34-910	2 oz	174	37	108	43	227	189	47	54
Acti-dione+thiram + chloroneb	2 oz	124	8	103	4	77	97	49	6
Mertect 140	1 oz	67	28	117	9	1	0	0	0
Fungo	1 oz	124	3	0	0	0	0	0	0
Fungo	2 oz	48	0	0	0	0	0	1	0
Bay+Dyrene	1+2 oz	67	8	24	0	2	0	0	0
Cleary's 3336	1 oz	66	2	0	0	0	0	0	0
MF 573	2 oz	66	0	0	0	0	0	0	0
MF 568	2 oz	194	3	1	0	0	0	0	0
Untreated		164	118	212	149	315	521	499	518

* Total number of spots prior to any treatment.

Table 3. Sclerotinia Dollar Spot Control Evaluations (Fungicides Applied Every Two Weeks)

Treatment	Application Rate 1000 sq ft	6/11*	6/27	7/2	7/16	8/2	8/14	8/27	9/10	9/24	10/9
Cleary's 2021	3 oz	9	1	0	0	0	0	0	0	0	0
Cleary's 1881	4 oz	11	0	0	0	1	0	5	9	10	44
Cleary's 2020	3 oz	0	0	0	0	0	0	0	0	0	0
Bromosan	4 oz	0	0	0	0	0	0	0	0	0	0
Cleary's 1882	4 oz	0	0	0	0	0	0	0	0	0	0
Cleary's 1880	5 oz	0	0	0	0	2	0	3	11	8	39
Daconil 2787	4 oz	0	1	3	0	0	4	1	0	0	0
Bravo	4 oz	0	0	6	0	3	0	0	0	0	0
Bravo + Tersan 1991	4+ 1 oz	0	0	0	0	2	1	0	0	0	0
Untreated		0	1	3	5	2	0	2	8	9	39
Rhodia Experimental	1 oz				0	0	0	0	0	0	0
Rhodia Experimental	2 oz				0	0	0	0	0	0	0

* Total number of spots prior to any treatment

Table 4. Sclerotinia Dollar Spot Control Evaluations (Fungicides Applied "As Needed")

Treatment	Application Rate 1000 sq ft	6/11*[1]	6/27	7/2	7/16	8/2*	8/14	8/27	9/10
Tersan 1991	1 oz	250	0	0	0	47	0	0	0
Bay Experimental	1 oz	175	1	0	0	28	0	0	0
Bay Experimental	2 oz	11	0	0	3	22	0	0	0
U-34-910	1 oz	19	0	7	9	56	79	101	274
U-34-910	2 oz	3	8	62	5	160	119	168	338
Acti-dione+thiram + chloroneb	4 oz	66	20	88	1	116	66	225	314
Mertect 140	1 oz	39	0	4	1	37	1	5	21
Fungo	1 oz	6	0	0	4	57	0	0	0
Fungo	2 oz	8	0	0	0	21	3	0	0
Bay + Dyrene	1+ 2 oz	21	0	0	1	30	1	0	0
Cleary's 3336	1 oz	101	0	0	0	44	0	0	0
MF 573	2 oz	54	0	0	0	20	0	0	0
MF 568	2 oz	35	0	1	4	106	2	0	24
Untreated		21	12	48	47	95	219	178	243

* Date of application

1 Total number of spots prior to any treatment.