

# Evaluations of Fungicides and a Soil Surfactant for the Control of Fairy Ring

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## PURPOSE

To evaluate fungicides and a soil surfactant for the control of Type I fairy ring on a annual bluegrass/creeping bentgrass putting green.

## MATERIALS AND METHODS

This evaluation was conducted at Seven Oaks Country Club, Beaver, PA on a mixed stand of annual bluegrass and creeping bentgrass maintained under golf course green management conditions, at approximately 0.125 inch cutting height. Individual plots, of 3 ft x 6 ft, were arranged in a randomized split block design with three replications. The main plots were fungicide treatments and the sub-plots were 3 ft x 3 ft and either received soil surfactant or none. The experimental area was not inoculated; all disease development was of natural occurrence. Treatments were applied with a CO<sub>2</sub>-powered boom sprayer, using XR TeeJet 8005 VS nozzles, at 30 psi, in water equivalent to 2.0 gal per 1000 sq ft. Applications were immediately followed with approximately ¼" of irrigation. Applications were initiated on May 22 and reapplied on June 23 and July 21, 2005. Number of fairy rings per plot was rated 9 times during the season. Percent annual bluegrass seedheads was rated on June 2 and July 28, 2005. Turfgrass quality was rated on June 23, 2005 using a 1-9 scale, 1 = dead turf, 9 = ideal turf, and 6 being acceptable turf. Data obtained was subjected to analysis of variance and LSD was used to determine significant differences between treatment means.

## DISCUSSION AND CONCLUSION

Five of the nine rating dates had significant differences between the treatments. In all but the July 28 and August 11 rating dates there was no separation between the fungicide treatments only the untreated control plot. At the July 28 treatment the ProStar, Insignia, and Heritage applications provide the best control. By the August 11 rating only the ProStar and Insignia treatments were providing the best control. The addition of Cascade was not observed to increase the efficacy of the fungicides or alone.

Cascade did however reduce annual bluegrass seedhead production and increase turfgrass quality. Seedhead reduction was observed as high as 80% where Cascade had been applied.

Table 1. Number of fairy rings per plot ratings from fairy ring control study, Seven Oaks Country Club 2005.

Treatment		Rate				Average Fairy Rings Per Plot									
						May-22	Jun-02	Jun-12	Jun-23	Jun-29	Jul-06	Jul-22	Jul-28	Aug-11	
<b>FUNGICIDE MEANS</b>															
1	ProStar	70	WP	4.5	OZ/1000 FT2	1.2	0.5	1	1.7	1.3	1.7	1.2	1.5	1.5	
2	Insignia	20	WG	0.9	OZ/1000 FT2	1.8	1.2	1	1.2	0.7	1	1	2.2	2.7	
3	Heritage	50	WG	0.4	OZ/1000 FT2	1.8	0.7	0.8	1	0.7	1	3.2	4.2	8.3	
4	Endorse	2.5	WP	4	OZ/1000 FT2	2.3	1.2	1.2	1.5	0.7	1.2	3	4.5	6.2	
5	Untreated Check					1.5	2.2	2.8	2.7	3.2	2.7	6.7	6.3	7.2	
						NS	1	NS	NS	1.7	NS	3.1	2.7	4.4	
<b>SOIL SURFACTANT MEANS</b>															
1	Cascade	100	ME	8	FL OZ/1000 FT2	2	1.3	1.4	1.5	1	1.3	2.8	3	4.7	
2	Untreated Check					1.5	0.9	1.3	1.7	1.6	1.7	3.2	4.5	5.7	
						NS	NS	NS	NS	NS	NS	NS	NS	NS	

Table 2. Percent seedheads and turfgrass quality ratings from fairy ring control study, Seven Oaks Country Club 2005.

Treatment		Rate				% Seedheads		Quality*
						Jun-02	Jul-28	Jun-23
<b>FUNGICIDE MEANS</b>								
1	ProStar	70	WP	4.5	OZ/1000 FT2	50	13.3	6.67
2	Insignia	20	WG	0.9	OZ/1000 FT2	50.8	11.7	6.42
3	Heritage	50	WG	0.4	OZ/1000 FT2	46.7	15	6.5
4	Endorse	2.5	WP	4	OZ/1000 FT2	46.7	17	6.5
5	Untreated Check					46.7	17.5	6.5
						NS	NS	NS
<b>SOIL SURFACTANT MEANS</b>								
1	Cascade	100	ME	8	FL OZ/1000 FT2	17	6.5	6.83
2	Untreated Check					79.3	23.3	6.2
						3.4	2.8	0.2

\*Turfgrass quality: 1-9 scale, 1 = dead turf, 9 = ideal turf, and 6 being acceptable turf