



Anthracnose Suppression on Golf Course Fairways

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OBJECTIVE

To determine the efficacy of experimental and standard fungicides for the management of anthracnose caused by the fungus *Colletotrichum cereale*.

MATERIALS AND METHODS

The study was replicated at two sites: Janesville Country Club in Janesville, WI on a mixed stand of creeping bentgrass (*Agrostis stolonifera* 'Penncross') and annual bluegrass (*Poa annua*) maintained at 0.5 inches and the O. J. Noer Turfgrass Research and Education Facility on a mixed stand of creeping bentgrass and annual bluegrass maintained at 0.5 inches. Individual plots measured 3 ft by 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 CO₂ pressurized boom sprayer equipped with two Teejet AI8004 VS nozzles. All fungicides were agitated by hand and applied in the equivalent of 2 gallons of water per 1000 ft². All treatments were initiated June 9th, 2014 at Janesville CC and June 12th, 2014 at OJ Noer and subsequent applications were made at 14 day intervals. Anthracnose severity and turfgrass quality (1-9, 9 being excellent and 6 acceptable) were visually assessed and subjected to an analysis of variance and means were separated using the Waller-Duncan test ($P = 0.05$). Results of the disease severity and turfgrass quality ratings from Janesville CC can be found in table 1 and 2, respectively.

RESULTS AND DISCUSSION

Mild temperatures and low humidity for much of the summer prevented significant anthracnose from developing at either research site. At Janesville CC, anthracnose severity never eclipsed 5% and only minimal differences in treatment efficacy were apparent. Turfgrass quality mirrored disease severity, with minimal differences present between treatments over the course of the summer. Phytotoxicity was not observed with any treatment.

Table 1. Mean anthracnose severity at Janesville Country Club in Janesville, WI during 2014.

	Treatment	Rate	Application Interval	Anthracnose Severity ^a		
				Aug 6	Aug 19	Sep 5
1	Non-treated control			3.8a	2.5ab	2.5a
2	Isofetamid IB10354	0.2 FL OZ/1000 FT2 3.2 FL OZ/1000 FT2	14 Day	10.0a	5.0ab	1.3a
3	Isofetamid IB10354	0.3 FL OZ/1000 FT2 3.2 FL OZ/1000 FT2	14 Day	5.0a	1.3ab	0.0a
4	Isofetamid IB10354	0.4 FL OZ/1000 FT2 3.2 FL OZ/1000 FT2	14 Day	11.3a	6.3ab	0.0a
5	SR-9059 SC	0.5 FL OZ/1000 FT2	14 Day	0.0a	0.0b	1.3a
6	SR-9059 SC	0.4 FL OZ/1000 FT2	14 Day	1.3a	1.3ab	0.0a
7	SR-9059 SC	0.3 FL OZ/1000 FT2	14 Day	0.0a	0.0b	1.3a
8	Medallion	0.5 OZ/1000 FT2	14 Day	8.8a	8.8a	0.0a
9	Banner MAXX II	2.0 FL OZ/1000 FT2	14 Day	2.5a	0.0b	0.0a
10	QP Strobe 50 WG Foursome	0.2 OZ/1000 FT2 0.4 FL OZ/1000 FT2	14 Day	0.0a	0.0b	0.0a
11	Heritage Foursome	0.2 OZ/1000 FT2 0.4 FL OZ/1000 FT2	14 Day	3.8a	1.3ab	0.0a
12	QP Fosetyl Al QP Chlorothalonil DF Foursome	4.0 OZ/1000 FT2 3.23 OZ/1000 FT2 0.4 FL OZ/1000 FT2	14 Day	0.0a	0.0b	0.0a
13	Chipco Signature Daconil Ultrex	4.0 OZ/1000 FT2 3.23 OZ/1000 FT2	14 Day	2.5a	1.3ab	0.0a
14	QP Enclave Foursome	3.0 FL OZ/1000 FT2 0.4 OZ/1000 FT2	14 Day	0.0a	0.0b	0.0a

^aAnthracnose severity was visually estimated as the percentage of affected area within each plot. Plot size was 30ft². Means followed by the same letter do not significantly differ (P=0.05, Waller Duncan).

Table 2. Mean turfgrass quality rating at Janesville Country Club in Janesville, WI during 2014.

	Treatment	Rate	Application Interval	Turfgrass Quality ^a		
				Aug 6	Aug 19	Sep 5
1	Non-treated control			6.5a	6.5a	6.5d
2	Isofetamid IB10354	0.2 FL OZ/1000 FT2 3.2 FL OZ/1000 FT2	14 Day	6.3a	6.3ab	7.0bcd
3	Isofetamid IB10354	0.3 FL OZ/1000 FT2 3.2 FL OZ/1000 FT2	14 Day	6.3a	6.8a	7.0bcd
4	Isofetamid IB10354	0.4 FL OZ/1000 FT2 3.2 FL OZ/1000 FT2	14 Day	5.8a	6.0ab	7.0bcd
5	SR-9059 SC	0.5 FL OZ/1000 FT2	14 Day	7.0a	7.0a	6.8cd
6	SR-9059 SC	0.4 FL OZ/1000 FT2	14 Day	6.8a	6.8a	7.0bcd
7	SR-9059 SC	0.3 FL OZ/1000 FT2	14 Day	7.0a	7.0a	6.8cd
8	Medallion	0.5 OZ/1000 FT2	14 Day	5.8a	5.5b	7.0bcd
9	Banner MAXX II	2.0 FL OZ/1000 FT2	14 Day	6.5a	7.0a	7.5abc
10	QP Strobe 50 WG Foursome	0.2 OZ/1000 FT2 0.4 FL OZ/1000 FT2	14 Day	7.0a	7.0a	7.8ab
11	Heritage Foursome	0.2 OZ/1000 FT2 0.4 FL OZ/1000 FT2	14 Day	6.5a	6.8a	8.0a
12	QP Fosetyl Al QP Chlorothalonil DF Foursome	4.0 OZ/1000 FT2 3.23 OZ/1000 FT2 0.4 FL OZ/1000 FT2	14 Day	7.0a	7.0a	8.0a
13	Chipco Signature Daconil Ultrex	4.0 OZ/1000 FT2 3.23 OZ/1000 FT2	14 Day	6.5a	6.8a	7.0bcd
14	QP Enclave Foursome	3.0 FL OZ/1000 FT2 0.4 OZ/1000 FT2	14 Day	7.0a	7.0a	8.0a

^aTurfgrass quality was rated visually on a 1 – 9 scale with 1 being bare dirt, 6 being acceptable, and 9 being exceptional. Means followed by the same letter do not significantly differ (P=0.05, Waller Duncan).