



Control of Anthracnose on Golf Course Fairways

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OBJECTIVES

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

MATERIALS AND METHODS

This study was conducted on the 1st hole of Pleasant View Golf Course in Middleton, WI. The site is a mixed stand of annual bluegrass (*Poa annua*) and ‘Pennncross’ creeping bentgrass (*Agrostis stolonifera*) maintained under fairway conditions. The individual plots measured 3 ft by 10 ft and were organized in a randomized complete block design with four replications. All treatments were applied using a CO₂-pressurized boom sprayer with two Teejet AI8004VS nozzles at a pressure of 40 psi. All pesticides were agitated by hand and applied at 1.5 gallons of water per 1000 ft². All treatments were initiated on June 10th and subsequent applications were made at 14- or 21-day intervals. Disease severity (percent plot area affected) and turfgrass quality (1-9, 9 being excellent, 6 acceptable, and 1 bare soil) were assessed every two weeks. Turf quality and disease severity were subjected to an analysis of variance and means were separated using Fisher’s LSD ($P = 0.05$). Results of the disease severity and turfgrass quality ratings can be found in table 1 and 2, respectively.

RESULTS AND DISCUSSION

Disease severity in the non-treated controls was relatively low throughout the entire assessment period. All treatments except Velistar reduced disease relative to the non-treated control on the July 10th rating date and all treatments reduced disease on the August 7th rating date. Only Velistar and Enclave + Foursome failed to provide adequate turf quality on the July 10th rating date. All treatments, including the non-treated control, had acceptable turf quality on the August 7th rating date. No phytotoxicity was observed with any treatment.

Table 1. Mean anthracnose severity per treatment on creeping bentgrass/annual bluegrass maintained at fairway height at Pleasant View Golf Course in Middleton, WI during 2019.

| Treatment | Application Rate | App Interval | App Dates ^b | Anthracnose Severity (%) ^a | |
|-----------------------|--|--------------|------------------------|---------------------------------------|-------|
| | | | | Jul 10 | Aug 7 |
| 1 Non-treated control | | | | 13.5 a | 8.8 a |
| 2 Navicon | 0.85 fl oz/1000 ft ² | 14 day | EGIKM | 0.5 b | 0.0 b |
| 3 Lexicon | 0.47 fl oz/1000 ft ² | 14 day | EGIKM | 0.5 b | 2.5 b |
| 4 Maxtima | 0.4 fl oz/1000 ft ² | 14 day | EGIKM | 1.0 b | 2.5 b |
| 5 Maxtima | 0.6 fl oz/1000 ft ² | 14 day | EGIKM | 0.0 b | 1.3 b |
| 6 Maxtima | 0.8 fl oz/1000 ft ² | 14 day | EGIKM | 0.0 b | 0.0 b |
| 7 Velistar | 0.5 oz/1000 ft ² | 14 day | EGIKM | 6.8 ab | 1.3 b |
| 8 Torque | 0.6 fl oz/1000 ft ² | 14 day | EGIKM | 3.8 b | 0.0 b |
| 9 Banner Maxx | 1.0 fl oz/1000 ft ² | 14 day | EGIKM | 1.0 b | 0.0 b |
| 10 Enclave Foursome | 3.0 fl oz/1000 ft ² 0.4 fl oz/1000 ft ² | 21 day | EHKN | 3.0 b | 0.0 b |
| 11 Enclave Foursome | 3.0 fl oz/1000 ft ² 0.4 fl oz/1000 ft ² | 14 day | EGIKM | 4.8 b | 0.0 b |
| LSD P=.05 | | | | 7.32 | 5.7 |

^a Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

^b Application dates: E = June 10th, G = June 27th, H = July 3rd, I = July 10th, K = July 25th, M = August 6th, N = August 14th

Table 2. Mean turf quality per treatment on creeping bentgrass/annual bluegrass maintained at fairway height at Pleasant View Golf Course in Middleton, WI during 2019.

| Treatment | Application Rate | App Interval | App Dates ^b | Turfgrass Quality ^a | |
|-----------------------|--|--------------|------------------------|--------------------------------|-------|
| | | | | Jul 10 | Aug 7 |
| 1 Non-treated control | | | | 5.3 c | 6.5 a |
| 2 Navicon | 0.85 fl oz/1000 ft ² | 14 day | EGIKM | 6.8 ab | 7.0 a |
| 3 Lexicon | 0.47 fl oz/1000 ft ² | 14 day | EGIKM | 6.8 ab | 6.8 a |
| 4 Maxtima | 0.4 fl oz/1000 ft ² | 14 day | EGIKM | 6.5 ab | 6.8 a |
| 5 Maxtima | 0.6 fl oz/1000 ft ² | 14 day | EGIKM | 7.0 a | 6.8 a |
| 6 Maxtima | 0.8 fl oz/1000 ft ² | 14 day | EGIKM | 7.0 a | 6.5 a |
| 7 Velistar | 0.5 oz/1000 ft ² | 14 day | EGIKM | 5.5 c | 6.8 a |
| 8 Torque | 0.6 fl oz/1000 ft ² | 14 day | EGIKM | 6.3 b | 7.0 a |
| 9 Banner Maxx | 1.0 fl oz/1000 ft ² | 14 day | EGIKM | 6.5 ab | 7.0 a |
| 10 Enclave Foursome | 3.0 fl oz/1000 ft ² 0.4 fl oz/1000 ft ² | 21 day | EHKN | 6.3 b | 7.0 a |
| 11 Enclave Foursome | 3.0 fl oz/1000 ft ² 0.4 fl oz/1000 ft ² | 14 day | EGIKM | 5.5 c | 7.0 a |
| LSD P=.05 | | | | 0.71 | 0.77 |

^a Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

^b Application dates: E = June 10th, G = June 27th, H = July 3rd, I = July 10th, K = July 25th, M = August 6th, N = August 14th