

Effects of wetting agent use on Anthracnose on annual bluegrass

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Anthracnose is an important turfgrass disease caused by the fungal pathogen *Colletotrichum graminicola* that is particularly damaging to annual bluegrass putting greens, especially during periods of heat and drought stress under low nitrogen fertility conditions and low mowing heights. Currently, traditional fungicide applications are the only known method to control this disease. In recent years, increasing pesticide bans and restrictions have generated concern regarding management of turfgrass pathogens like *C. graminicola*. The objective of this research was to evaluate the effects of the application of the wetting agent Revolution (modified alkylated polyol, Aquatrols) at different timings and frequencies in order to quantify any effects on the incidence of anthracnose.

A field experiment was initiated in February 2015 on an annual bluegrass putting green. Factors included rate and frequency of wetting agent applications (8 levels) and aerification (aerified or not on April 20, 2015). Wetting agent applications consisted of Revolution applied at 6oz/M twice a week, once a week, once every two weeks, once every three weeks, once every four weeks, 3oz/M applied every two weeks, 1.5oz/M applied once a week and a control (the labeled rate is 6.0 oz per month).

At the peak of disease, the untreated check plots averaged 31.3% disease cover. On this date, all wetting agent timings and frequencies were able to provide some disease control, with the twice a week rate of 6oz/M resulting in the least amount of overall disease (0.2%). Turf quality was greatest and was only considered acceptable when Revolution was applied twice a week at 6oz/M. Aerification has no effect on disease severity or turf quality.

Treatment and rate (per 1,000 sq. ft.) [‡]	-----September 08, 2015 -----	
	Disease severity (%) [†]	Turf quality [±]
Revolution 6.0 oz twice a week.....	0.2 a	6.6 a
Revolution 6.0 oz once a week.....	3.9 ab	5.0 b
Revolution 6.0 oz every two weeks...	13.9 abc	4.4 bc
Revolution 6.0 oz every three weeks..	14.0 abc	4.3 bc
Revolution 6.0 oz every four weeks..	22.5 bc	3.9 cd
Revolution 3.0 oz every two weeks...	16.5 abc	4.1 cd
Revolution 1.5 oz once a week.....	10.9 ab	4.5 bc
Control.....	31.3 c	3.4 d

[‡] Initiated 03 Feb 2015.

[†] Mean disease severity ratings are based on a 0 to 100% scale in four replicated plots. Means followed by the same letter are not significantly different according to Fisher's protected LSD ($\alpha=0.05$).

[±] Turf quality is based on 1 to 9 scale (9 = best, 6 is acceptable). Means followed by the same letter are not significantly different according to Fisher's protected LSD ($\alpha=0.05$).