

CHEMICAL TRIALS FOR STIMULATED FAIRY RING DISEASE CONTROL SUMMER 2000

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ABSTRACT

A Heritage treatment for the control of stimulated fairy ring was evaluated on a 6 year old sward of Penncross7 creeping bentgrass (*Agrostis palustris*) at the Guelph Turfgrass Institute in Guelph, Ontario during the summer of 2000. The treatments with Heritage did not significantly reduce the outward rate of growth (movement) of the stimulated ring, but there was however a decrease in the intensity of the ring in the area of the Heritage treatment for some plots in September and October. No phytotoxicity from any of the treatments was observed during the trial.

METHODS

Heritage (12g/100 m²) was evaluated for stimulated fairy ring control in a natural infection on a 6 year old sward of Penncross7 creeping bentgrass (*Agrostis palustris*) at the Guelph Turfgrass Institute in Guelph, Ontario. Turfgrass cultural treatments were similar to those used for maintenance of golf course putting greens in Ontario. The plots were irrigated as needed, and mowing height was set at 5 mm. The green was constructed of native sand in 1994. Sulphur-coated urea (N-P-K: 25-4-10) was applied three times annually in spring and early and late summer at a product rate of 2 kg/100 m². Experimental design consisted of a block design with 4 replications. Each treatment block was a 1.5m length of a stimulated fairy ring divided into three, 50cm sections that were 25cm wide, with the ring centred within the 25cm. These were spiked using a garden fork 15cm deep and tines 8 cm apart within the 50 X 25cm sections before treatment application. If the weather

was dry, the area was irrigated the day before treatment with 2cm water (20L/m²). One section of each block was left untreated and the remaining two were treated with Primer 604 at a rate of 130mL/100m², in 7.5L of water using a hand sprayer prior to application of Heritage at a rate of 12g in 11L water/ 100m² on one of the sections. The area was then drenched with 2cm water. If no rainfall occurred, the area was irrigated every other day for two weeks to keep the thatch moist. Treatments were applied on 1 June and 29 June 2000. Disease was evaluated every four weeks by observing intensity of the stimulated green ring and the distance of outward growth of the stimulated ring. Significant yellowing due to phytotoxicity was noted if present. Analysis of variance was performed with PROC ANOVA in SAS7. When a significant treatment effect was found, mean separation was done with the test of least significant difference (LSD, p=0.05).

RESULTS AND DISCUSSION

During the summer of 2000, the weather was wet and cooler than average. Stimulated fairy ring disease pressure was average and turf growth was good. The treatments did not show significant reduction of disease, but both the drench alone and drench plus Heritage displayed a reduction of growth distance on 21 June and 20 September. The leading edge of the stimulated ring was less dense in the area treated with drench plus Heritage than the other treatments in blocks 2 and 4, on 20 September and in blocks 1, 2 and 3 on 18 October. No phytotoxicity from any treatments was observed during the trial. Results are presented in Table 1.



Table 1. Treatment, application rate and schedule, and progress of the stimulated ring during summer 2000. Growth distance is expressed as centimetres of growth during the evaluation interval in each 25cm by 50cm plot based on 4 replicates.

Treatment	Rate/ 100m ²	Growth Distance (cm) For Interval Ending On Evaluation Date				
		June 21	July 27	Aug 17	Sept 20	Oct 18
Untreated check		16	12	12	16	4
Primer 604	130mL	13	12	12	12	4
Primer 604 + Heritage	12g	13	13	12	11	4
LSD (p= 0.05)		6	2	2	6	3

