Preventive Control of Waitea Patch on a *Poa annua* Green in Chicago

Researchers: Chicago District Golf Assoc. - Derek Settle, Tim Sibicky, Nick DeVries with Brian Thomson

Goal: Evaluate fungicides for ability to suppress Waitea patch of *Poa annua.*

Location: Biltmore Country Club's 15 green in play – N. Barrington, Illinois

Background: Waitea patch is a common disease of *Poa annua* on greens in Chicago. May to June, the fungus infects *Poa annua* leaf sheaths and causes narrow bright yellow ring symptoms. Rings are about 4 to 12 inches in diameter. Dr. Randy Kane noticed it on a green about 1985 with Dave Ward in Flossmoor. Until 2006 it was called *Rhizoctonia zeae* in Chicago. In 2005 Japanese scientists renamed this *Rhizoctonia* disease. Today it is brown ring patch or Waitea patch. Confusion exists on how to control this disease and more research is needed.

Brief Material and Methods: Biltmore Country Club's 15 green using a randomized complete block design with 4 replications. Individual plot size was 4 ft by 6 ft. The *Poa annua* green is a push-up constructed green that receives some shade and is managed at a height of 0.110 inches. No symptoms existed when first applications were made on 19 May. Six fungicides were applied every 28 days and five others every 14 days (Table 1). Data collected included; Waitea ring number, Waitea percent. Additionally an outbreak of Microdochium patch occurred and data included; Microdochium infection center number, Microdochium percent. Visual quality assessed impact of disease / phytotoxicity.

Results: Visual quality, Waitea percent, Waitea number

- Untreated, peak Waitea patch development of 13% occurred on 25 May.
- Only disease negatively impacted visual quality, treatments were without phytotoxicity.
- All treatments suppressed Waitea patch except in two instances; Civitas + Harmonizer on 25 May and Daconil Ultrex on 9 June. (Fig. 1)
- Alone, nitrogen by urea was able to reduce Waitea and Microdochium patch.
- Only ProStar did not provide a level of control for Microdochium patch. (Fig. 2)
- Broad spectrum control of two different fungal diseases occurred in this study with all fungicides tested except ProStar, Daconil Ultrex, and Civitas + Harmonizer.

Table 1. Treatments for Waitea on a green at Biltmore Country Club, N. Barrington, IL in 2010.

Nbr.	Treatments	Interval	Rate per 1,000 sq ft	8 May	22 May	3 Jun
1	Untreated	….	....			
2	Civitas + Harmonizer	14 day	16.0 fl oz + 1.0 fl oz	x	x	x
3	Civitas + Harmonizer + Banner + Daconil	14 day	16.0 fl oz + 1.0 fl oz + 0.5 fl oz + 1.5 oz	x	x	x
4	BannerMaxx + DaconilU.	14 day	0.5 fl oz + 3.0 oz	x	x	x
5	DaconilUltrex	14 day	3.2 oz	x	x	x
6	Urea	14 day	0.25 lb N	x	x	x
7	28 day Tourney	28 day	0.37 oz	x		x
8	28 day HeritageTL	28 day	2.0 fl oz	x		x
9	28 day Tartan	28 day	2.0 fl oz	x		x
10	28 day Tartan then Triton Flo	28 day	2.0 fl oz then 0.75 fl oz	x		x
11	28 day Triton Flo	28 day	0.75 fl oz	x		x
12	28 day ProStar	28 day	4.5 oz	x		x

Figure 1. Following 8 May and 22 May applications, Waitea patch was suppressed by most treatments including nitrogen by urea at Biltmore Country Club, N. Barrington, IL in 2010.

Figure 2. An unexpected Microdochium patch outbreak damaged up to 4.5% plot area. All treatments except ProStar suppressed the disease at Biltmore CC, N. Barrington, IL in 2010.