On creeping bentgrass, brown ring patch caused by the fungus Waitea circinata var. circinata was discovered and named by Japanese scientists in 2006. Under similar environmental conditions a disease affecting Poa annua golf greens was known to exist in the United States but was called either Rhizoctonia yellow patch (R. cerealis) or Rhizoctonia zeae.

On Poa annua, Waitea infects the leaf sheath and symptoms are narrow bright yellow rings and are common from May to June. The rings vary in size, often 4-12 inches in diameter. Patch interior appears unaffected and ring symptoms are limited to the Poa annua component of the greenway. The disease is primarily cosmetic in Chicago because turfgrass injury does not progress to necrosis. However, golfers may find rings visually objectionable.

Since the mid-1980’s R. zeae had been reported affecting Poa annua putting surfaces in northern Illinois. In 1985 Randy Kane first observed with Dave Ward at Ravisloe Country Club in Homewood, IL (personal communication). Later, a Chicago isolate was identified as R. zeae given then-existing knowledge: multinucleate, mycelium growth characteristics, and embeds sclerotia in agar. Subsequent genetic testing of U.S. isolates found the anamorph name Rhizoctonia to describe the fungus and so the teleomorph name Waitea was adopted.

**Fungicide Field Study – Methods**

The fungicide study occurred on a golf green in play at Biltmore Country Club in N. Barrington, IL from 2008 to 2010. At initial symptom development, treatments were applied with a CO₂-powered backpack sprayer with 8004 TeeJet flat fan nozzles at 40 psi in water equivalent to 2 gal/1000ft². Individual plots were 4 ft x 6 ft and arranged in a randomized complete block design with 4 replications (4 x 3 ft plots with 3 replications in 2008). Waitea patch was quantified by estimating percent plot area damaged and counting the number of rings per plot. Visual quality was used to estimate acceptable health and to quantify any phytophthora.


**Fungicide Field Study – Results**

A collection of putative Waitea circinata var. circinata isolates began by sampling symptomatic Poa annua turf when reported by Chicago superintendents during onsite golf course visits (below), during May to June in 2006 and 2007. Isolation consisted of selecting yellow/infected Poa annua leaf sheaths, surface sterilizing with a 10% sodium hypochlorite solution, and placing on potato dextrose agar. Isolates were shipped for rDNA-ITS sequence identification (Frank Wong, UC Riverside in 2006 and Ned Tisserat, Colorado State Univ. in 2007).

**Geographic Distribution – Methods**

Contact

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Literature:

• Table 1. What was known as Rhizoctonia zeae in Chicago since about 1985 was found to be Waitea circinata var. circinata.

• Table 2. Aspergillus spp. isolated from Waitea patch on Chicago District golf courses, Waitea is well-distributed on fairways, greens, and green approaches.

• Conclusions. Fungicides for the curative control of Waitea patch on a Chicago Poa annua golf green.

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