school of environmental sciences

The Research Seminar Presentation by

Sara Stricker

will be held on

Tuesday October 27, 2015

At 10:35 am

ALEXANDER HALL 337

Title: Activated resistance of bentgrass cultivars to *Microdochium nivale* under climate change conditions

Abstract

As the atmospheric CO_2 concentrations increase, Canada may experience a temperature increase of between 1.5 and 4°C within the next 50 years. These climate changes have the potential to increase plant disease severity. Bentgrasses such as creeping bentgrass are commonly used in the turfgrass industry in Canada. Cultivars of bentgrass are susceptible to the fungal pathogen *Microdochium nivale* (Fries.) Samuels & Hallett causing Microdochium Patch. A control method under investigation for this plant disease is resistance activators. These are compounds that are non-toxic to plants and fungi, but can activate a plant's natural resistance response before a pathogen is present. This project will examine the efficacy of Civitas/Harmonizer™ to control *M. nivale* on turfgrass cultivars under various temperatures and two CO_2 concentrations. Several cultivars of bentgrasses will be grown and artificially inoculated with *M. nivale* in growth chambers with CO_2 concentrations of 400 ppm and 800 ppm at 15°C. Results arising from this research will provide the basis for recommendations on selection of turfgrass cultivars for golf courses and on sustainable management practices to control *M. nivale.*

Everyone is welcome to attend

(This is a Research Proposal presentation by students in ENVS*6900)