



ses

school of environmental sciences

The Research Seminar Presentation by

Jared Stoochnoff

will be held on

Tuesday November 17, 2015

At 11:45 am

ALEXANDER HALL 337

Title: Developing Optimal Irrigation Schedules for Ontario Nurseries

Abstract:

Excessive irrigation practices produce economic strain on growers and can have negative implications on water quality. Current irrigation practices in Ontario's horticultural nurseries are excessive due to the lack of optimal application schedules and reliable scheduling technology. An optimal irrigation schedule should apply water to the plant just before the leaves wilt to minimize application frequency without negatively impacting plant productivity. The stem psychrometer sensor can directly monitor how the plants water potential responds to changes in environmental conditions and can reliably estimate the leaves' wilting point. However, the stem psychrometer sensor is an expensive research tool that is unsuitable for industry distribution. Fortunately, there is a linear relationship between cumulative water potential (cWP) measured by stem psychrometers and cumulative vapor pressure deficit (cVPD) measured by conventional weather stations. The slope of this linear relationship will allow nursery growers to reliably estimate the leaves wilting point using simple weather station technology. Optimal irrigation schedules, dictated by conventional weather stations and the linear cWP/cVPD relationship, will dramatically reduce the nurseries water consumption without negatively impacting plant growth and productivity.

Everyone is welcome to attend

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