



M.Sc. Position

University of Guelph

School of Environmental Science (SES)

POSITION: M.Sc. STUDENT IN ENTOMOLOGY AND INTEGRATED PEST MANAGEMENT
ADVISOR: DR. CYNTHIA SCOTT-DUPREE
CO-ADVISOR: DR. LOONG-TAK LIM (FOOD SCIENCE)
START: SEPTEMBER, 2017
DURATION: TWO YEARS (6 SEMESTERS)
STIPEND: AVAILABLE

Project Description:

Efficacy of controlled release fumigants in active food packaging to control insect pests.

A M.Sc. position is available involving collaborative research with the School of Environmental Sciences and the Department of Food Science at the University of Guelph.

For many years, methyl bromide has been used as an effective fumigant to eliminate insect pests in fruits and vegetables imported into Ontario. The quarantine and pre-shipment treatment is essential to prevent the introduction of invasive insect species that can be detrimental to the environment and agriculture in Ontario. However, methyl bromide is in the process of being phased out due to its ozone depletion properties and high toxicity. The study you will be involved in will focus on finding an alternative fumigant process to methyl bromide. An innovative approach for fumigating fruits and vegetables at the individual packaging level using ethyl formate and other volatile compounds that possess generally-regarded-as-safe status, but exhibit synergistic insecticidal and antimicrobial properties, will be investigated. You will be responsible for conducting studies with identified surrogate insect pests to determine if this alternative fumigation process is effective. It is hoped that this technology will facilitate international and interprovincial trading for Ontario fruit/vegetable producers, allowing them to compete more favorably in the global market.

Pre-Requisites:

B.Sc. in Environmental Sciences or similar degree - with focus in entomology and sustainable pest management; a working knowledge of toxicology, chemistry and statistics would be looked on favourably.

Graduate Student Role & Responsibilities:

The graduate student will work closely with their advisor(s) to design and implement experiments that will address the goals and objectives of the project. Course work will be required; the nature of those courses will

be determined based upon experience and background. The graduate student is obligated to meet the codes of conduct set out by the university, the school, and the faculty advisor(s). All safety training will be provided.

Stipend & Awards:

The standard University of Guelph, SES stipend rate will apply. The successful candidate will be encouraged (and mentored) to apply for a range of scholarships. Please note that due to funding limitations, this position is open to eligible domestic candidates only. Only successful applicants will be contacted for an interview. Position to remain open until a suitable candidate is found.

To Apply, please send cover letter, resume/CV, a sample of your written work (e.g., undergraduate written report), a copy of your unofficial undergraduate transcript and statement of interest (i.e., which is your opportunity to tell us how your past education and other experiences have prepared you to be successful with graduate studies and what you hope to achieve as a graduate student; 1 page only) to:

Dr. Cynthia Scott-Dupree
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