

Insecticides and ecotoxicological risk assessment for pollinators

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June 2017

Description

This module will examine the nature, use, and impacts of pesticides in agricultural systems, with emphasis on insecticides and impacts on pollinators. The content will overview insecticide origins, classifications, modes of action, basic principles of toxicology, and the fate and movement of pesticides in the environment. Methods of characterization of insecticide hazards and risks for pollinators will be emphasized. Each student will conduct an assessment of the risk to pollinators from the use of a specific insecticide.

Format

The module will consist of 10, one-hour sessions, twice per week. Sessions will be a combination of lecture, discussions, and project work.

Evaluation

Risk assessment paper	75%
Quiz	25%

Prerequisites

None

Overview of the Risk Assessment Paper

Pesticide risk assessment is a critical process regularly undertaken and overseen by major federal environmental agencies all over the world, including Health Canada, the United States Environmental Protection Agency. There is increasing concern over the potential risks pesticides pose to pollinators. Each student will learn about the foundational elements of performing a pesticide risk assessment for pollinators and prepare their own “mini” risk assessment for an insecticide of their choice, using data from the peer-review literature. The risk assessment paper will incorporate problem formulation, exposure characterization, effects characterization, and risk characterization sections. Preparation of the risk assessment will in part be conducted during class time, with assistance and guidance from Dr. Cutler.

Due Date for Risk Assessment

TBA

Please contact Chris Cutler if you have questions about this module: chris.cutler@dal.ca; 902-896-2471