Bio-Protection

Bioprotection science for New Zealand

Developing accurate bioassay systems for insect killing bacteria

Principal Investigator: Professor Travis Glare travis.glare@lincoln.ac.nz

Location of Project: Bio-Protection Research Centre, Lincoln University

Abstract: Bioassay is the action of testing a pathogen or toxin against organisms. Insect pathogens are microbes that kill insects. In a screening programme using bacteria associated with seeds, a bacterial pathogen of the caterpillar of the diamondback moth was discovered. There are many techniques to bioassay bacterial cells against live insects, and the techniques vary depending on the insect and life stage. In this project, several standard methods will be compared to select the most effective method(s) for testing bacteria against caterpillar, flies and nematodes. The successful student will learn microbiological, bioassay, insect handling and data analysis techniques.