# PROSPECTS OF BIOLOGICAL CONTROL STRATEGIES FOR INSECT PESTS AND DISEASE-CAUSING PATHOGENS

Professor Macquin Maino PhD FPAS
Dean, Faculty of Natural Resources
PNG University of Technology
Taraka Campus, Lae.

## ABSTRACT

Plants are plants. The names we assign to them may vary depending on purposes for which we utilize them. The uses may be in the areas of agriculture as crops, or forestry for various forest products, or floriculture as decorations, and the like. Whatever their purposes and utilization may be, they have a fair share of challenges posed by insect pests and pathogens. The seriousness of these antagonists has progressively increased throughout the world owing to phenomena associated with the global climate change. Control and management systems involving the application of synthetic chemicals has been the most effective so are widely used. However, negative impacts observed on users, environment, biodiversity, and residues found on harvested products, have caused the need to derive alternative strategies. The use of biological control agents, such as micro-organisms and byproducts of macro-organisms has drawn much interest based on advantages associated with users, environment and effectiveness. A number of micro-organisms, such as *Metarhizium anisopliae* (fungus), *Trichoderma harzianum* (fungus), *Glomus* spp. (mycorrhiza fungus), *Steinernema riteri* (entomopathogenic nematode), and *Photorhabdus* spp. (entomopathogenic-associated bacteria), have been studied. In this presentation, work involving entomopathogenic nematodes will be covered.