

ENT203:BIOPESTICIDES IN INSECT PEST MANAGEMENT

L:0 T:0 P:4 Credits:2

Course Outcomes: Through this course students should be able to

CO1 :: explain the principles and laboratory techniques of biopesticides and biorationals.

CO2 :: demonstrate the isolation, purification, mass multiplication, and formulation of biocontrol agents.

CO3 :: analyze the efficacy of botanical extracts and biorational biopesticides against insect pests.

CO4 :: develop biopesticide formulations and prepare a bankable project proposal for commercial production.

List of Practicals / Experiments:

Introduction to laboratory techniques and media preparations

- introduction and acquaintance with biopesticide and biorational laboratory.
- to prepare different culture media for the isolation and cultivation of entomopathogenic microbes.

Isolation, purification and mass multiplications of entomopathogens

- to study the isolation of bacterial biocontrol agents from soil and naturally infected insects.
- to study the purification and maintenance of bacterial biocontrol agents.
- to study the mass multiplication of bacterial biocontrol agents.
- to study the isolation of fungal biocontrol agents from soil and naturally infected insects.
- to study the purification and maintenance of fungal biocontrol agents.
- to study the mass multiplication of fungal biocontrol agents.

Formulations of biopesticides

- to prepare different formulations of microbial biopesticides.

Extractions of biorationals

- to prepare botanical extracts and study their efficacy against insect pests.
- to prepare biorational biopesticide formulations and evaluate their insecticidal activity.

Preparation of bankable projects

- to prepare a bankable project proposal for the commercial production and marketing of biopesticides.

Text Books:

1. BIOFERTILIZERS AND BIOPESTICIDES by SURI SHALINI, A.P.H.PUBLISHING CORPORATION

References:

1. BIOPESTICIDES AND BIOFERTILIZERS: CONCEPTS, PRACTICES AND APPLICATIONS by PROF. (DR.) NIRMAL MANDAL AND DR. TANMOY SARKAR, NEW DELHI

