BINDURA UNIVERSITY OF SCIENCE EDUCATION

FALL ARMYWORM BIOPESTIDE DEVELOPMENT

INTRODUCTION

The fall armyworm (FAW) *Spodoptera frugiperda* is an invasive pest of maize, which was first reported in Africa in 2016. Damage is manifested in loss of photosynthetic area, structural damage in the whorl, lodging, impaired reproduction, and direct damage to grain. Yield loss ranges from 15-73% at 55-100% infestation.

RESPONSE TO FAW IN AFRICA

The first response to FAW threat in Africa was indiscriminate application of synthetic pesticides. The indiscriminate use of synthetic pesticides promotes pest resistance to the pesticides; endangers human and animal health; and causes environmental pollution.

Intensive use of synthetic pesticides in maize was not common until the advent of FAW.
Crop damage by pesticides now common

BIOPESTICIDES AN ALTERNATIVE TO SYNTHETIC PESTICIDES

Biopesticides are biorational viable alternatives. They have multiple active ingredients with different modes of action, hence they are less prone to pest resistance development.

BIOPESTICIDE DEVELOPMENT STAGES

Test efficacy of plant extracts → Identify bioactive compounds → Formulate pesticide → Conduct field trials

Department of Crop Science: Prof. R. Mandumbu, +263 772 919 821
Prof. C. Karavina, Prof. IW Nyakudya
Email: faesfacultyoffice@buse.ac.zw; Tel: 02716505
Department of Biological Sciences: Dr N Mgocheki, +263 771 121 823

Promoting Science for Human Development