

Project title: Biocontrol options for fall armyworm control in Southern Africa

Funding agency: South Africa National Research Foundation (*South Africa/Mozambique/Zambia Trilateral Joint Science and Technology Research Collaboration*)

Project budget: ZAR 299,360

Duration: 2019 - 2022

Project description

Over the last few years, significant yield losses in maize have occurred in Southern Africa due to damage by the fall armyworm, *Spodoptera frugiperda* (J. E. Smith). This has prompted some countries to introduce or increase reliance on pesticides, a development which has placed the economic viability of small-scale cropping systems at risk, while potentially placing smallholder farmers on an unsustainable "pesticide treadmill". Additionally, *S. frugiperda* is reported to be highly resistant to the common pesticides used in the region. There is therefore a need to reduce over-reliance on pesticides through Integrated Pest Management (IPM) programmes which could include the use of biopesticides (including insect baculoviruses, entomopathogenic fungi, entomopathogenic nematodes, bacteria, and botanicals). Being a novel pest in the region, not many biopesticides have been developed and/or evaluated for *S. frugiperda* control.

This trilateral research project (working in collaboration with University Eduardo Mondlane, Mozambique, University of Zambia, Zambia and various industry partners) seeks to identify potential microbes and botanical extracts with the potential for development into effective biopesticides for *S. frugiperda* control. Bioassays are also being conducted with commercially available biopesticides that may have the potential for *S. frugiperda* control but are not yet registered for the same. The project also incorporates a public education and outreach programme to promote the use of biopesticides in IPM.