



Harmonizing regulations and mitigating pesticide residues in the SADC region

This regional project seeks to address low export challenges experienced by some countries in the Southern African Development Community (SADC) region. This is due to noncompliance with existing maximum residue level (MRL) trade standards. The project combines the use of conventional pesticides with microbial-based biopesticides to control key pests informed by an integrated pest management (IPM) strategy. Among other things, the regulatory harmonization component of the project works with countries to develop common biopesticide regulatory standards. This enables them to benefit from reciprocal acceptance of data generated, or registrations concluded elsewhere and, as such, enhance the registration process and use of biopesticides.

The project complements two ongoing initiatives in the Asia-Pacific region ([STDF/PG/634](#)) and Latin America ([STDF/PG/753](#)). Through the strategic incorporation of non-residue producing biopesticides after conventional pesticides, the project's residue mitigation component helps reduce pesticide residue levels. The project also involves work for developing the skills, knowledge, attitudes and behaviors needed to ensure that individuals and organizations work effectively to achieve the project's objectives.

STDF/PG/694

Status

On-going

Start Date

01/03/2021

Project Value (US\$)

\$1,193,219

STDF Contribution (US\$)

\$798,493

Beneficiaries

Botswana
Mozambique
South Africa
Tanzania
Zambia
Zimbabwe
Kenya

Implementing Entities

International Centre for Genetic Engineering and Biotechnology (ICGEB)

Partners

Asia-Pacific Association of Agricultural Research Institutions (APAARI)
CropLife Africa and Middle East
IR-4 Project, Rutgers University
South African Bioproducts Organisation (SABO)
Southern Africa Network for Biosciences (SANBio)
Southern Africa Pesticides Regulators Forum (SAPReF)
United States Department of Agriculture (USDA)
Food and Agriculture Organization of the United Nations (FAO)
Inter-African Phytosanitary Council (IAPSC)

Background

The agricultural sector accounts for a large share (4%-27%) of SADC member states' GDP and roughly 13% of their overall export earnings. However, some countries in the region experience significant economic losses due to the rejection of produce by importing countries.

Exceeding established MRLs is common, especially for crops on which certain synthetic chemical pesticides are used to control late-season pests. The strategic use of biopesticides has the potential to significantly mitigate pesticide residues as most of these pest control products are not subject to MRLs within importing countries. However, despite the advantages of biopesticides, their adoption and use are hindered by challenges in their research, development, registration and commercialization.

Using biopesticides can go a long way toward reducing the overall use of pesticides, and, in turn, resolving residue violations. Compliance with MRL requirements would increase economic output through enhanced exports, promoting domestic employment, wealth creation and poverty reduction.

The primary project participants include national (bio)pesticide regulatory authorities, national plant protection organizations, researchers, farmers, industry associations, agri-food export companies and consumers.

Results

Harmonized biopesticide regulatory guidelines

Through this project, a set of harmonized guidelines are being produced to enable participating countries to achieve biopesticide regulatory harmony after a detailed assessment to determine requirements to obtain legal status for biopesticides, and the estimated timeline to successfully achieve this. Lawyers are working with participating countries to develop roadmaps to translate these guidelines into their respective national legislation. Training on implementing procedures for biopesticide registration under the harmonized framework are being also conducted.

System for biopesticide-based residue mitigation

Supervised field trials and laboratory analyses of pesticide residues are being implemented, followed by residue decline studies using biopesticides. This is to develop a system by which residue limits can be mitigated and compliance with MRL limits enhanced. An assessment of yield and quality criteria is also being performed as these are critical when developing recommendations for growers, especially export crops.

IPM and strategies for good agricultural practice

A toolkit on IPM guidelines, as well as guidelines on good agricultural practice, are being developed based on relevant training. Information on all biopesticides registered in the various countries is being consolidated into an easily accessible database. This ensures that farmers and other stakeholders are aware of biopesticides available on the market.

Harmonized regulatory guidelines

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System for biopesticide-based residue mitigation

Supervised field trials and laboratory analysis of pesticide residues are being implemented to be followed by residue decline studies using biopesticides to ultimately develop a system to mitigate residue limits and enhance compliance with MRLs. An assessment of yield and quality criteria is being performed, as these are critical when developing recommendations for growers, especially for export crops.