Managing scale insects in fresh fruits in East Africa

The overall goal of this project is to enhance regional collaboration in managing scale insects by sharing pest reports of invasive species; improving cross-border inspection regulations and practices; sharing pest interception reports; providing training to the staff of national plant protection organization (NPPO) in Burundi, Kenya and Uganda to identify and monitor incursions; and using biological control as part of an integrated solution to produce safer produce, reduce pesticide residues and maintain trade.

Specifically, the project will target: in Kenya, the avocado mealybug, affecting trade of fresh avocados to China, and the papaya mealybug, affecting internal trade with loss of entire pawpaw orchards; in Uganda and Rwanda, the mango mealybug, which may cause crop failure of mango (and may spread eastwards); and across Eastern Africa, the papaya mealybug, impacting cultivation and yields of pawpaw, cassava, vegetables and others crops, as well as the citriculus mealybug impacting citrus crops.

STDF/PG/807

Status
On-going

Start Date
10/04/2023

Project Value (US$)
$1,009,625

STDF Contribution (US$)
$885,116

Beneficiaries
Burundi
Kenya
Rwanda
Tanzania
Uganda

Implementing Entities
Centre for Agriculture and Bioscience International (CABI)

Partners
Kenya Plant Health Inspectorate Service (KEPHIS)
Kenya Forest Research Institute (KEFRI)
County Government of Mombasa
Kenya
County Government of Kwale Kenya
Kenya Agricultural and Livestock Research Organization (KALRO)
National Museums of Kenya (NMK)
Ministry of Agriculture
Animal Industry and Fisheries (MAAIF)
Uganda
Uganda National Plant Protection Organisation (NPPO)
Institute of Agronomic Sciences of Burundi (ISABU)
International Centre of Insect Physiology and Ecology (ICIPE)

Background

The export of fresh fruits significantly contributes to the economic growth of Eastern African countries. However, quarantine pests in exported produce are affecting the growth of this sector.

The project will increase compliance with phytosanitary requirements for target horticultural products by improving surveillance and management of scale insect pests, thus leading to improved production and market access for fresh fruits, such as pawpaw, mango, avocado, and citrus.

Results

Taxonomists, NPPO staff and extension officers trained in the identification of invasive scale insects

Train taxonomists, NPPO officers and extension officers on pest diagnostics, identification and management. Specific outputs expected:

- Two training curricula developed.
- 15 inspectors and taxonomists trained per country.
- 24 agriculture extension officers trained in the three countries.

Strengthen the NPPO’s capacity in identifying, surveilling, and monitoring invasive scale insects.

- Develop and update surveillance and monitoring protocols.
- Conduct pest status surveys, delimiting surveys and reports on scale insect occurrence.
- Produce and update a checklist of scale insects for each country.
- Create a database of scale insects and associated organisms at national, regional and global levels.
- Share information on invasive scale insect pests at a regional level.
- Update the Pest Information Management System (PIMS).

Enhanced capacity to manage invasive scale insects at the farm level

This will involve the development of awareness and training materials on managing scale insects, certifying nurseries for the production of clean planting materials, and releasing biocontrol agents for Papaya Mealybug in Kenya and Uganda.

Specific outputs include the development of awareness materials for at least 30 priority scale insects, management decision guides for 10 invasive scale insects, published training curricula, and 10 nurseries meeting certification requirements.

Enhanced stakeholder dialogue and application of a systems approach for the management of scale insect pests

Conduct a series of workshops to sensitize and train stakeholders on the systems approach and biosecurity, enhance linkages between the public and private sectors, create broader awareness of the project’s findings and recommendations, and publish proceedings of the final seminar and communication products.