



MANAGING SCALE INSECTS IN FRESH FRUITS IN EAST AFRICA TO ENHANCE MARKET ACCESS

Locations Burundi, Kenya, Uganda

Dates 01/04/2023 - 30/04/2026

Summary

Trade in mango, avocado, papaya and citrus within the East African Community region, the European Union and China at import and export levels have been rising. However, meeting the increasing demand is being affected by a number of crop pests and diseases. In East Africa, scale insects – mealybug pests such as Papaya mealybug and fruit tree mealybug – are impacting cultivation and yields. To tackle these pests and increase trade, CABI is working with partners to increase compliance with sanitary and phytosanitary requirements through improved surveillance and management of scale insect pests in East Africa.

The problem

Agriculture is a mainstay of the East African economy employing up to 80% of its people and accounting for around 25% of the GDP.

Import and export levels of mango, avocado, papaya and citrus fruits within the East African Community region, the EU and China have been on the increase.

However, due to the presence of scale insect pests, the ability to expand the agriculture sector, and improve livelihoods and food security is impeded by sanitary and phytosanitary (SPS) systems.

The scale insects attack important crops and plants that are integral to the East African countries' economies and have been known to cause devastating crop yield losses of up to 91%.

In Eastern Africa, introduced mealybug pests include *Paracoccus marginatus* (papaya mealybug) which impacts cultivation and yields of pawpaw, cassava, vegetables and other alternative hosts, *Pseudococcus cryptus* (Citriculus mealybug) on citrus, and *Rastrococcus invadens* (fruit tree mealybug) which can cause crop failure on mango (the pest is currently in Rwanda and may spread eastwards). Introduced armoured scale insects in the region include *Pseudaulacaspis cockerelli* (false yellow scale), *Fiorinia proboscidea* (snout scale) and *Parlatoria ziziphi* (black parlatoria scale), all found mainly or exclusively attacking citrus plants.

In the market access negotiation for avocado exports from Kenya to China, scale insects such as Fix wax scale (*Ceroplastes rusci*), West Indian Red Scale (*Selenaspidus articulatus*), Stellate scale (*Ceroplastes stellifera*) and Cockerell scale (*Lopholeucaspis cockerelli*) are listed as major quarantine pests and contributed to the China-Kenya trade barrier on the export of fresh avocado.

Regional pest risks to production and trade include scale insects that damage not only crops but also other plant hosts species.

What we are doing

Mango, avocado, papaya and citrus are among the top priority fruits for export trade in East Africa.

The project will seek to increase compliance with SPS requirements (market and regulatory standards) for the fruits through improved surveillance and management of scale insect pests in East Africa, in particular Kenya, Uganda and Burundi. Through the work, other countries in the East African region will benefit.

Capacity will be strengthened to enable countries to monitor and mitigate risks before the export of the produce to help increase intra-regional trade and export to favourable global markets.

Staff of the National Plant Protection Organizations (NPPOs) and agronomists in exporter and producer companies will be trained on the identification and management of scale insects.

Planned project activities include:

- Baseline and endline assessments
- Training on scale insect diagnosis, identification and management for NPPOs, research institutions, governments, extension workers and farmers
- Delimiting and status surveys, awareness raising and implementation of management practices including biological control of papaya mealbug amongst producers
- Sharing of data on pest surveillance, diagnostics and reporting to enhance regional collaboration
- Monitoring and evaluation.

The scale insects that are being focused on in this project include false yellow scale (*Pseudaulacaspis cockerelli*), snout scale (*Fiorinia proboscidea*) and black parlatoria scale (*Parlatoria ziziphi*) and papaya mealybug, among others.

Results so far

An inaugural project steering committee meeting and project launch event took place in June 2023. The events brought together key project partners including public and private sector institutions.

Donors

Standards and Trade Development Facility (STDF)

Partners

Kenya Plant and Health Inspectorate Service (KEPHIS), Ministry of Agriculture Animal Industry and Fisheries Uganda (MAAIF), National Plant Protection Organisation, Institut des Sciences Agronomiques du Burundi (ISABU), County Government of Mombassa, County Government of Kwale, Kenya Forest Research Institute (KEFRI), Kenya Agricultural and Livestock Research Organization (KALRO), National Museums of Kenya (NMK)

CABI Project Manager Florence Chege

<https://www.cabi.org/what-we-do/cabi-projects/>