

CONTROL OF FALL ARMYWORM IN EASTERN AFRICA

Locations	Burundi, Ethiopia, Kenya, Rwanda, Tanzania, Uganda
Dates	31/08/2017 - 30/06/2019

Summary

In Africa, the fall armyworm is a pest causing significant destruction and devastation to crops. It is estimated to cause 8-20 million tonnes of maize losses each year and due to little knowledge of the pest and ways of managing it, the impacts can be catastrophic. With partners, CABI developed an emergency response strategy that empowered local communities of six target countries to effectively manage and monitor outbreaks in their respective localities, helping to prevent further spread.

The problem

The fall armyworm (*Spodoptera frugiperda*) is a pest affecting key staple food crops, such as maize, sorghum and rice in Africa, and can cause considerable destruction and yield loss if not managed promptly. Studies conducted by CABI in 2017 estimated potential losses of up to 8-20 million tonnes of maize each year for 12 of the biggest maize producing countries of Africa.

Farmer awareness and knowledge on the destructive nature of the pest, alongside the urgency for its effective and timely management, is often lacking. This is further worsened by inexistent or fragmented community level coping strategies with the resulting impacts from crop losses directly affecting food and nutritional security.

Monitoring, forecasting and an early warning system would help reduce the impacts of the pest, for both smallholder farmers and their respective countries,

and carrying this out at a community level would be advantageous. However, institutional capacities of National Plant Protection Organizations (NPPOs) to support these community-level type management strategies for new or migratory emerging pests are often inadequate or under pressure from competing plant health system demands, that further exacerbates the problem.

What we are doing

CABI, FAO Sub-regional Office for Eastern Africa (FAOSFE), Desert Locust Control Organization for Eastern Africa (DLCO-EA) and International Centre of Insect Physiology and Ecology (ICIPE) developed and implemented this project between 2017-2019.

As part of an emergency response to the threat posed by major outbreaks of the fall armyworm and to help prevent further spread of the pest and crop losses in the region, the objective of the project was to establish an innovative community-based monitoring, forecasting and early warning system that enabled early management of fall armyworm.

Six East African countries, Kenya, Uganda, Tanzania, Ethiopia, Rwanda and Burundi, were targeted with the aim of strengthening the plant health institutional capacities within these through the development of early warning and pest information management systems. This included building community level resilience and response to emergencies arising from migratory and invasive pest with a focus on the fall armyworm.

The CABI-led activities contributed to the following specific objectives in the project:

- Increased resilience of livelihoods to threats and crises through strengthening community-based fall armyworm monitoring and reporting systems. This included the development of safer management technologies that reduced risks posed to the environment, human and livestock health through pesticide use
- Enhanced the capacities of national fall armyworm management units across six countries enabling them to establish early warning systems and knowledge sharing/management structures
- Enhanced farmer awareness on processes and procedures for effective community management of fall armyworm through continuous situation monitoring, data gathering and reporting.

Results so far

The project successfully enhanced fall armyworm early warning system capacities across the rural communities of the six target countries. The communities were empowered to effectively monitor fall armyworm infestations levels in their respective localities, and initiate timely and effective management actions to minimize or avoid crop losses.

The initiative validated the need for an effective early warning and monitoring system supporting timely detection, rapid containment and management of migratory and invasive pests such as fall armyworm.

Activities in detail:

A Training of Trainers (ToT) manual entitled *'Community-Based Fall Armyworm (Spodoptera frugiperda) Monitoring, Early Warning and Management'* was published and an additional set of 28 fall armyworm communication and extension materials (13 flyers and 15 posters in nine languages) were developed and used by respective NPPOs in the six countries for capacity building.

Farmer networks and linkages were also strengthened. Over 600 community focal persons and 2,000 farmers in the six countries were trained using the ToT training manual and communication and extension materials.

The same training materials are also currently used by extension staff during field trainings organized by other institutions and to-date over 400 copies of the fall armyworm field handbook for extension staff and farmers is in use in Rwanda, Kenya and Ethiopia, with more scheduled to be delivered in the other project countries. Electronic copies of the fall armyworm resources developed under this project are accessible via the fall armyworm portal and the Plantwise Knowledge bank.

Field days and community meetings took place in the six participating countries where approximately 10,000 farmers were informed. These farmers continue to use the knowledge gained to effectively manage the Fall armyworm.

Over 2,640 pheromone traps, 15,840 lures and 9,000 kill strips have boosted community-based fall armyworm monitoring and reporting. There was a notable increase in the use of non-chemical management and control options thereby reducing risks posed to the environment, human and livestock health through pesticide use.

Donors	United States Agency for International Development (USAID)
Partners	National level, Ministries of Agriculture of implementing countries of Burundi, Ethiopia, Kenya, Rwanda, Tanzania and Uganda, Desert Locust Control Organization for Eastern Africa (DLCO-EA), International Centre of Insect Physiology and Ecology (ICIPE), FAO Sub-regional Office for Eastern Africa (FAOSFE), Food and Agriculture Organisation of the United Nations (FAO) in Rome
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