

IMPROVING BANANA AGRONOMY PRACTICES FOR SMALL SCALE FARMERS IN EAST AFRICA

Locations	Tanzania, Uganda
Dates	01/07/2018 - 31/07/2020

Summary

Over 50 million people in East Africa depend on highland bananas for their food and/or income. Annually, the crop's production is worth around $4.3 billion, However, pests and diseases, nutrient deficiencies and drought stress continue to affect average productivity of banana. This project is working with private and public partners to help farmers bridge the yield gap by providing appropriate knowledge and skills in good management practices that will improve farmers' productivity with the aim of reaching 25,000 households in Uganda and Tanzania and creating a value of over $14.3 million.

The problem

Highland bananas are worth approximately 5% of the East and Central African (EAC) region's GDP. They are depended on by over 50 million EAC people for food and income, and with population rates continuing to rise at almost 9.1 million people per year (AfrDB, 2012), the value and demand for the crop is high.

However, a combination of complex biotic (pests and disease), abiotic stresses (nutrient deficiencies and drought stress) and available land are impacting productivity and can significantly affect food and income security if not addressed.

Over the last 50 years, there have been attempts to increase production by increasing the land area under banana cultivation, however, this is not sustainable since available arable land area is limited.

The reason for low productivity is associated with challenges such as poor management and production constraints including low soil fertility, drought, pests and diseases. These are due to:

- Limited basic knowledge on banana agronomy for smallholder banana farmers in ECA
- Intensification of banana cropping systems are not informed by appropriate decision support tools

Limited uptake of banana agronomy recommendations by research, extension systems and development organizations

What we are doing

This project aims to bridge the productivity yield gap from the current annual average of 10ton/ha/yr to 25ton/ha/yr by improving banana agronomy practices for small-scale banana farmers in East Africa, specifically targeting key areas in Uganda and Tanzania. The project will:

- Generate basic information on the interaction of banana growth, pest and disease management, moisture and nutrient requirements which enhance the development of improved agronomic recommendations
- Develop site-specific recommendations based on smallholder farmer resources and production objectives which enable farmers to reduce banana yield gaps
- Develop a decision support framework for development partners interacting with smallholder banana farmers that brings recommendations to scale – a deliverable CABI will lead on
- Develop capacity within the zonal research and extension systems by engaging them in banana multi-stakeholder innovation platforms

Decision support tools will guide scaling partners and agricultural extension workers on how best to select intensification practices that will inevitably improve banana productivity.

To ensure the sustainability of productivity, CABI will develop and deliver information products and tools which will allow scaling partners to access this knowledge and share with farmers; build on existing scaling partner networks to increase reach and value; provide a prototype for increasing banana productivity in all major growing areas, nationally and regionally.

These practices will also improve household incomes, livelihoods and ensure adequate food for the households.

Results so far

The Africa Soil Health Consortium (ASHC) has supported the CABI project team in developing and scaling out of communication materials for Uganda and Tanzania.

Before the type of materials and targets were agreed, a workshop was held with scientists, extension workers and farmer representatives. A hands-on capacity building approach was taken whereby participants helped to package the materials – a key role in validating research outcome messages. In Uganda, 27 participants attended (70.4% research scientists, 22.2% public and private

extension (scaling agents) and 7.4% farmers) and 25 participants in Tanzania (76% researchers and 24% scaling agents).

A technology brief, story chart and banana agronomy extension guide with pest management decision guides have been developed for Uganda in addition to mini factsheets on pests and diseases which have been translated into two local languages and used at the project sites. Likewise, for Tanzania, a technology brief, a banana calendar, a poster and a banana agronomy extension guide have been developed.

To disseminate the information materials, three field days were conducted at each of the project sites in Uganda in which CABI participated in. These provided a platform where communication materials could be launched and distributed to farmers. In total, 1,522 (833 males, 689 females) farmers were reached. A 12-week radio campaign was also carried out, reaching 20,525 farmers (24.5% females, 75.5% males) through poll questions. In Tanzania, two field days were conducted in the two project sites that enabled reach to 371 farmers (230 males, 141 females) and 229 school children in Rombo district and 346 farmers (232 males and 114 females) in Izimbya district.

In order to increase the reach and value of the communication materials, scaling agents were given copies of the materials and have been trained in the use of them. Thirty agents, comprising of public and private extension, and lead farmers participated in training in Uganda (5 females and 25 males), whilst in Tanzania, 22 scaling agents were trained (5 females and 17 males).

In addition to scaling agents, training extended to those delivering the training – project partners from national agriculture research institutes of both countries (12 scientists from partner organizations (10 males, 2 females) in Uganda and 15 scientists in Tanzania (10 males, 5 females)).

A banana agronomy video drama has also been produced in Uganda. It has been screened 15 times across the project sub-counties in Uganda (Birere in Isingiro district, Rwimi in Bunyangabo district and Nakaseke sub-county in Nakaseke district), reaching a total of 2266 men, women, teenagers and children in banana farming communities.

Results show that yields were increased by 64% – from 10mt/ha/year to 19mt/ha/year – worth an extra USD $8.15m a year. In total, 47,650 people were reached.

Donors	Bill and Melinda Gates Foundation
Partners	Tanzania Agricultural Research Institutes (TARI), Bioversity International, International Institute of Tropical Agriculture (IITA), National Agricultural Research Organisation (NARO)
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