

## Stimulating cocoa production in Cameroon

An additional training on best practices in cocoa production in Cameroon is giving farmers the know-how on pre- and postharvest production techniques, which they can in turn pass on to farmers in specialized training centers across the country.

Organized by IITA-STCP, the training sought to improve farmers' production capacities on modern techniques that could result in improved quality and increased production of the cash crop.

The training covered topics such as the role of soil in the spread of black pod disease, impact of reducing shade in the spread of black pod, deciding which cocoa tree to rehabilitate or eliminate, making decisions about where to plant cocoa, use of improved planting material, understanding soil nutrients for improved management of cocoa farms, and shade management and pruning, among others.

Participants were drawn from the South and Center Region of Cameroon with the training held in Ngoumou, Mefou, and Akono Division.

IITA-STCP Master Trainer, Simon Bassanaga, said knowledge acquisition on modern techniques would reduce the use of chemicals which have adverse effects on cocoa quality and yield.

"We have also touched on spraying techniques, when, how, and which chemicals to use to protect our crops and other crops in our farms", he said. He added that this would reduce the cost of production and improve the quality and productivity.



*IITA scientist addresses participants on cocoa production in Ghana*

Like the trainer, participants hailed the training as a way to turn their backs on traditional production techniques which have compromised the competitiveness of the country's cocoa in national and international markets.

Records show that since 2002, the program, through its three-fold concepts of increasing professionalism, improving competitiveness, and ensuring sustainability, has trained over 9,248 cocoa farmers in integrated training centers on modern production techniques and how to curb common cocoa diseases.

Some 494 trainers from the Ministry of Agriculture and Rural Development,

22 agricultural cooperatives, three non-governmental organizations and others, involved in cocoa activities have benefited from the IITA-STCP training.

Over the years, IITA-STCP has provided a framework for collaboration among farmers, the global cocoa industry, local private sector, national governments, NGOs, research institutes and investors in Cameroon, Ghana, Nigeria, Liberia, and Ivory Coast.

As the trainers round off the training, farmers called for support from the Cameroonian government so they could conveniently enlighten other farmers across the country on better cocoa production.

## IITA welcomes new Programmer, Noah Matovu



*Matovu*

Noah Matovu has joined IITA as a Programmer. Matovu is a consultant who will be working with the MIS team as a Programmer – Systems Integration Project. He is from Uganda.

Prior to joining IITA, he worked with the Generation Challenge Program in CIMMYT, Mexico as a Software Consultant on bioinformatics data management and also handled genotyping data. Matovu has experience with Java programming language and possesses other computer-related skills in that field. He has a BSc in Mechanical Engineering degree from Makerere University in Kampala. He is married to Eva Kisaakye.

Matovu will be based in Building 500, room 224A, and can be contacted on ext. 2751. He lives in Apartment 1B.

### Help conserve electricity!

Before leaving the workplace at day's end, make sure that you have:

- (1) Powered off all unnecessary electrical office/lab equipment;
- (2) Turned off air conditioners; and
- (3) Switched off all lights.

# IITA, FAO, and PPRSD join forces to save Africa's papaya

A classical biological control program has been initiated in a joint effort between IITA, the Plant Protection and Regulatory Services Directorate (PPRSD), Ghana, and FAO to save Africa's papaya (pawpaw) from the ravaging mealybug (*Paracoccus marginatus*) that is spreading across the West African bloc.

Efforts to tackle the spread of the mealybug came after the PPRSD, in December 2009, sought assistance from IITA-Benin for the identification of an unknown mealybug that was severely threatening papaya in an orchard at Nsawam in the Eastern Region and Bawjiase in the Central Region, about 30 km north and 60 km east of Accra, respectively.

A preliminary determination pointing to the papaya mealybug *Paracoccus marginatus* (Williams and Granara de Willink (*Hemiptera: Pseudococcidae*), was soon confirmed by the Plant Pest Diagnostic Center of the California Department of Food and Agriculture, Sacramento, USA.

The papaya mealybug (PM) was first described in 1992 from samples collected in Mexico and Central America after it was introduced in the Caribbean and had become a pest in the early 1990s. Since then, it invaded most of the Caribbean archipelago in 1994 and spread to South America in 1999, the Pacific Islands in 2002, and southern Asia in 2008. More recently, papaya mealy bug has expanded to Bangladesh, Cambodia, the Philippines, and Thailand reaching the Reunion Island by 2010.

In West Africa, the first outbreaks of *P. marginatus* detected in Ghana were soon followed by further records in coastal regions of the neighboring countries. Thus, in early 2010 the exotic mealybug pest was observed attacking papaya both



Infested pawpaw tree

in Lomé, Togo and in Hilacondji at the Benin border. Limited surveys carried out in Benin in the late dry season in March 2011 demonstrated that papaya mealybug was already firmly established on various other host plants (mainly cassava and jatropha) along the main road running from Ouidah to Cotonou up to Porto Novo, showing a progression of more than 300 km within 16 months.

Since its first report, papaya mealybug has caused great concern in the four main papaya-producing regions of Ghana, namely, Greater Accra, Central, Eastern, and Volta regions, where about 2,500 ha were under cultivation prior to papaya mealybug introduction. First estimations indicate that to date 85% of all papaya farms in these regions have been devastated by *P. marginatus* causing average yield losses of 65% and the shrinking of the papaya orchards to 380 ha. As a result, export earnings for the papaya industry dropped significantly

and led to the unemployment of 1,700 people in the sector. The economic and ecological implications of an imminent papaya mealybug outbreak in Nigeria, where according to FAO, 94% of papaya produced in West Africa is grown, are likely to become even more dramatic.

According to Georg Goergen, IITA Scientist, papaya in West Africa often hosts other mealybug species such as *Ferrisia virgata* (Cockerell), *Maconellicoccus hirsutus* (Green), *Nipaecoccus viridis* (Newstead), or *Pseudococcus longispinus* (Targioni Tozzetti). Since field identification of papaya mealybug may prove to be difficult especially at low pest densities, initial infestations of this new pest mealybug therefore often go undetected.

Scientists from IITA and partners have put in place an emergency framework to tackle the outbreak with the US Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) being contacted to provide papaya mealybug-specific parasitoids from their mass rearing facilities in Puerto Rico.

Arrangements for first consignments to Ghana of the solitary endoparasitoids *Acerophagus papayae* Noyes and Schauf, *Anagyrus loecki* Noyes, and *Pseuduleptomastrix mexicana* Noyes and Schauf (Hymenoptera: Encyrtidae) have already been made to establish stock colonies at the biocontrol insectary of PPRSD prior to first field releases planned in 2011.

PPRSD has committed to serve as parasitoid source for Benin or any other African country that will be affected by papaya mealybug invasions.



A close-up of *Paracoccus marginatus* on cassava