

# IITA deploys aflasafe™ in northern Nigeria to battle aflatoxins

IITA has deployed about 10 tons of aflasafe™ to northern Nigeria as part of a broad multisector effort to tackle the menace of aflatoxins in the country.

The deployment marks the beginning of large-scale efficacy testing of the aflatoxin biocontrol product in close collaboration with the Nigerian government, various farmers' groups, non-government organizations, CADP, and international partners to safeguard maize and groundnuts against aflatoxin contamination.

The 12-ton lorry carrying a full load of aflasafe™ left IITA-Ibadan on Monday and was expected to arrive in Kano the next day via Kaduna.

"Farmers are eagerly waiting for the materials," say Ranajit Bandyopadhyay and Joseph Atehnkeng, IITA pathologists who co-led the research that resulted in the development of aflasafe™.

The target groups in these two states—Kaduna and Kano—are groundnut and maize farmers, whose crops are prone to aflatoxin contamination.

Between 2009 and 2010, IITA carried out farmer field trials of aflasafe™ in Kaduna state in north-central Nigeria. Farms that were treated with aflasafe™ showed substantial reduction — about 80% to 90% — in the levels of aflatoxin contamination. The Nigerian National Agency for Food and Drugs Administration and Control (NAFDAC) has given aflasafe™ a listing status pending full evaluation of its efficacy.

Bandyopadhyay says that the use of aflasafe™ by farmers will significantly reduce aflatoxin concentration in agricultural products and consequently improve the health of Nigerian consumers and provide safer products in the markets.

IITA staff packing aflasafe™ in containers for transport.



Loading aflasafe™ on the lorry that will take the aflatoxin biocontrol product to farmers in Kano and Kaduna in northern Nigeria.



"We also hope that this will help in reviving Nigeria's export market as well," he adds.

Produced by the fungus *Aspergillus flavus*, aflatoxins are contaminants that hinder international trade of food crops and endanger people's health. Several studies have shown that aflatoxins cause liver cancer and stunt children's growth, among other ill effects. In some cases they even lead to death, such as in Kenya where more than 100 people died after consuming aflatoxin-contaminated maize.

aflasafe™ is a safe and cost-effective biocontrol product that reduces aflatoxins in fields and stores. It contains a mixture of four non-toxigenic strains of *A. flavus* of Nigerian origin. A small amount of these strains are inserted in sorghum grains that act as carriers, which are then dispersed in the field. These "friendly" strains then go to work to displace their toxin-producing cousins and virtually eliminating them from the field.

# Capacity building on air: TV, radio stations in DR Congo to broadcast IITA/CIALCA video training material on banana

In a collaborative deal between the Consortium for Improved Agriculture-based Livelihoods in Central Africa (CIALCA), in which IITA is a key partner, and *Inspection Provinciale de l'Agriculture, Pêches et Elevages* (IPAPEL) a series of farmer training videos on bananas developed by the consortium will be aired by various broadcast houses in DR Congo to disseminate valuable information to small-scale farmers. The videos cover a number of topics on bananas from seed multiplication, integrated pest and disease management, to novel soil and crop management systems.

They will be broadcast starting 5 August 2011 on both TV and radio stations across the country. These include Radio and Television Network of Congo (RTNC), Radio and television network of Kivu (RTNK), Radio Okapi, Radio Maendeleo, and Radio Kamanyola.

According to Perez Mucunguzi, the IITA-Uganda staff coordinating the effort, the approach provides a visual method to reach many farmers at the same time in a region with high illiteracy and a poorly-equipped extension system due to years of civil conflict.

Topics covered by the videos are banana multiplication techniques (tissue culture and macro-propagation as ways of obtaining popular and healthier banana germplasm), common diseases (banana bunchy top disease, banana leaf spot diseases, banana fusarium wilt, and banana *Xanthomonas* wilt), and important pests such as nematodes and banana weevils. The sections on pests and diseases focus on symptom recognition, transmission pathways, prevention and control measures.

Another set of videos look at the best ways to utilize local mulch materials to improve soil nutrient



The videos will help farmers identify symptoms of banana diseases such as bunchy top (pictured above), among other topics.

stocks, conserve moisture, and suppress weeds. They advocate for farmers to combine mulching with zero-tillage practices to protect the shallow banana root system.

## Abuelgasim Elzein, new visiting scientist

Abuelgasim Elzein, has joined IITA as a visiting scientist under the Bill & Melinda Gates Foundation Project.

Prior to this appointment, Elzein was an associate professor at the Department of Botany and Agricultural Biotechnology of University of Khartoum in Sudan. He will be working with Fen Beed and Ranajit Bandyopadhyay.

Elzein, a North Sudanese, holds a PhD from the Institute of Plant Production and Agroecology in the Tropics and Subtropics of University of Hohenheim, Germany. He obtained his MSc in Biology from Addis Ababa University, Ethiopia in 1996, and his BSc degree in Agriculture from the University of Khartoum, Sudan in 1991. He has also a preliminary year biological section certificate from the Faculty of Science from the same university in 1986.

At various points in his career, he was a part time teaching assistant in the University of Khartoum and Sudan University of Science and Technology. From 1995 to 1996, he became a full time visiting research assistant at University of Hohenheim, Germany. He was a lecturer at University of Zalingei, Sudan in 1997; an assistant scientist at University of Hohenheim from 2002 to 2004; a visiting research scientist at Danish Governmental Institute of Seed Pathology for Developing Countries, Denmark in 2002; research scientist and postdoctoral fellow at University of Hohenheim from 2005 to 2008.

Elzein is married to Nujoud Eltahir. His office is at Room 20 in Building 401. He will reside at Apartment 4D, IITA-Ibadan campus.



Abuelgasim Elzein

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Before leaving the workplace at the 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.

### Contact us

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