



## Maize revolution underway

A revolution in Nigeria is brewing, and it's the kind that will be good for all. In the next few years, Nigeria - the giant of Africa - aims to more than double its output of maize from the current 8 million tons to 20 million tons per year.

The move is part of the country's efforts to reinforce food security, create jobs, and more importantly, cushion the oil-rich nation from the instabilities of global food price spikes.

Honorable Akin Adesina, Minister of Agriculture and Rural Development, said the new efforts would transform maize and make farming more profitable

Consumed by millions of Nigerians, maize productivity has been stymied by low adoption of improved seeds, poor seed quality, little or no use of fertilizers, low investment in research funding, and poor extension services. In the 80s, Nigeria experienced a "silent" maize revolution in the savannah but the transformation was not sustained.

"We have begun a journey of transformation - a journey to reengineer Nigerian agriculture for high impact and success," the minister emphasized during a meeting with a team of maize experts in his office in Abuja on Sunday.

"Increasing maize production will ensure food security, and generate incomes and jobs," he added.

Adesina called on experts to translate research and innovations into tangible impacts in farmers' fields, adding that "we must do this at scale that can drive down hunger and poverty."

According to the minister, government has resolved to "rebuild the broken walls of Nigeria's agriculture.

"Our resolve is clear: Grow Nigerian Agriculture," he added.

The maize team, comprised of experts from IITA and partners



Honorable Minister of Agriculture and Rural Development Dr Akin Adesina, fifth from left, with maize experts from IITA and partners in his office in Abuja. The maize team met with the minister and presented to him a blueprint that will more than double the production of maize in the country in the next few years.

institutions, submitted to Adesina a blueprint on how to achieve the new targets during the meeting.

Sam Ajala, IITA Maize Breeder, said the focus on maize was a step in the right direction.

"If you look at maize, it has the highest return on investment compared to other crops. So if we are able to get it right in maize it will be great," he said.

Researchers will leverage on earlier successes of the IITA-led "Doubling Maize in Nigeria" project that proved that maize yield could indeed be doubled on farmers' field given the right treatment and support.

The new move will also benefit from the plethora of innovations that are still sitting on the shelves of national and international research centers.

For instance, high-yielding and disease-resistant varieties that are adapted to Nigeria's various

agroecological zones would be deployed to farmers. These will be reinforced with the deployment of drought- and *Striga*-resistant varieties that can withstand various stresses.

Early-, intermediate-, and late-maturing varieties that produces yields up to three times as much as traditional varieties will also be thrown into the mix to help farmers cope with the negative effects of climate change.

"If given the necessary support, we are optimistic that will achieve the 20 million-ton target," Ajala said.

### Help conserve electricity!

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.

# Local seeds, social networks crucial in rebound of crop diversity

Relief seed packets of local crop varieties and social networks are crucial in the recovery of indigenous crop diversity in areas devastated by natural calamities. This finding is highlighted in a recent study by IITA that looked into the loss and subsequent recovery of cowpea diversity in Mozambique after massive flooding, followed by severe drought, hit parts of the country about 11 years ago.

Here, farmers usually receive packets of relief seeds to help then restart production after natural disasters. However, most of the seeds are generally of introduced and genetically uniform varieties purchased from markets or provided by well-meaning seed companies or relief agencies. This slows the recovery of crop diversity.

The study also found that the speedy recovery of Mozambican cowpea diversity after the back-to-back disasters of 2000 was largely due to the exchange of seeds among farmers through gifting and other social interactions within the same community or with adjacent communities.

Morag Ferguson, IITA molecular biologist and one of the study's lead researchers, says farmers in Africa traditionally grow many crops and several varieties of each crop on the same plot to cope with economic or environmental instabilities. They also usually set aside part of their harvest as seed for the next cropping season.

They share or trade some of these seeds with friends and relatives. When natural disasters strike, many farmers often lose the seeds that they have saved and either rely on relief seed, buy from the market, or receive seeds from friends and relatives.

"We found that the substantial recovery of cowpea genetic diversity two years after the calamities was mainly due

to the informal exchange of seeds among farmers that served as a social-based crop diversity safety backup. It is therefore important that seed relief strategies recognize and capitalize on this existing traditional social network," she said.

The study was initiated in 2002, two years after disasters, in Chokwe and Xai Xai districts of the Limpopo River Valley that were among those severely affected. Its findings have been published in 'Disaster', a publication of the UK-based Overseas Development Institute.

Nearly 90% of the farmers in the affected areas received cowpea relief seeds. Two years later, only one in every five of the recipient farmers were still growing the seeds, while more than half sourced their seeds from markets. However, this did little in restoring cowpea diversity in the affected communities as the seeds bought, which came from other districts that grew just one or a few select varieties, were mostly uniform.

On the other hand, about one-third of the affected farmers obtained seeds from friends and relatives living within the same locality to restock their farms – the same people that they have been exchanging seeds with prior to the disasters. This practice was the main reason why cowpea diversity was restored in these areas, the study found.

Ferguson says that such a relationship-based seed distribution system is already in play in an approach developed and implemented by the Catholic Relief Services (CRS) and partner agencies in which seed vouchers are exchanged for seed in "Seed Fairs".

In this approach, farmers from nearby districts not affected by disaster and with excess seed, come to the Seed Fair to sell seed to disaster-affected farmers through vouchers, which they then cash-in with CRS.

"This recognizes that farmer seed systems are robust and resilient, and can provide seed even in emergency situations. And this study further proves that such an approach will be more effective in restoring diversity faster and more efficiently than a system based on direct distribution only," she says.

The study is the first of its kind to investigate in detail the effects of disasters on crop diversity and its subsequent recovery. It combined agronomic observations (i.e., seed color, size, pattern, and shape) with biotechnology tools to determine the seeds' genetic makeup.



Cowpea diversity.

## Kamara named acting Kano Station Rep...



Dr Alpha Kamara

DDG R4D, following the relocation of Ousmane Boukar to IITA Headquarters in Ibadan. Ousmane was Kano Station Representative when he was based there.

The IITA R4D Directorate has named Alpha Kamara as acting Station Representative in Kano, Nigeria. The announcement was made by Paula Bramel,

## ...as IITA welcomes new Striga Project Manager

IITA warmly welcomes Mel Oluoch, the new Striga Project Manager in Kano, Nigeria. Mel is Kenyan, and prior to joining IITA worked at CIAT/IFPRI



Dr Mel Oluoch

as a Product Delivery Manager - Africa for the HarvestPlus Challenge Programme of the CGIAR. He was also CIAT Site (Country) Coordinator in Tanzania where he was stationed. Previously, he worked at The World Vegetable Center's Africa Office as a Training Specialist, Liaison Officer for East and Southern Africa and Deputy Global Theme leader in Nutrition; and Plant Research International in The Netherlands as a Research Associate.

Mel has a BSc in Agriculture from the University of Eastern Africa, Kenya and Andrews University, Michigan, USA and an MSc in Horticulture from Central Mindanao University, Philippines. He completed his PhD in Horticulture in 1996 at Virginia Polytechnic Inst. and State University (Virginia Tech) in the USA.

Mel is married to wife Rose and they have three children. His contact details are as follows:

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