



Getting the violet vampire off farmers' fields

The IITA-coordinated Integrated Striga Management in Africa (ISMA) project organized another series of farmers' field days in Western Kenya to show farmers the various options available to control the deadly parasitic weed, Striga, that is ravaging maize, their key staple food and income crop.

Striga attaches itself to the roots of cereals such as maize and sorghum, sucking the water and nutrients, hence its nickname the violet vampire; it also has beautiful violet flowers. Striga can cause farmers losses of up to 100% of their crop, thus, there is a need for different technologies to control it to secure the food and livelihoods of smallholder farmers in Africa.

The field days were organized in Migori and Busia Counties and were attended by hundreds of farmers, government officials from the Ministry of Agriculture, representatives from nongovernmental organizations, (NGOs), and the media.

The aim of the field days was to demonstrate to farmers and get their perception on the various technologies developed by various national and international research organizations and private companies, to control the weed. ISMA is testing technologies for sustainable solutions to the Striga problem.

These options include maize varieties developed by IITA and the International Maize and Wheat Improvement Center (CIMMYT) such as Striga-resistant maize, and maize that is coated with and resistant to Imazapyr—a herbicide developed by BASF that kills the Striga seed as it germinates and before it can cause any damage (IR maize), and various crop management farming methods such as maize-soybean rotation, maize-groundnut intercropping and



Joshua Owino from icipe explains the push-pull technology to farmers at the field day in Migori.

maize-desmodium intercropping (push-pull technology developed by the International Centre of Insect Physiology and Ecology, *icipe*), and partners to control pests and weed.

The groundnuts, soybean, and desmodium stimulate germination of the weed seeds and suppress its growth.

"The field days are important for the project as they enable us to get farmers' feedback on the various technologies. This helps us identify and disseminate the technologies which the farmers prefer to encourage adoption," says Joseph Ndwiga, Programme Officer with African Agriculture Technology Foundation (AATF), one of the project partners.

One of the sites for the field days was in George Martin Mitende's farm in Bonda village in Migori District. Mitende, 56, is one of the farmers taking part in the research and development efforts, having

donated a part of his farm for the project's demonstration site.

He says that he gets more maize from this parcel of land than from the rest of the farm and that the Striga has been dramatically decreasing.

"I had been harvesting up to four 90-kg bags of maize from this plot, whereas from the rest of my farm, I get about one to two bags per acre only because of *Kayongo* – the local name for Striga.

"My favorite technology is this WS303 (a herbicide-coated maize variety) grown together with Desmodium. I will extend this to my whole farm," he said.

According to Dr Mel Oluoch, ISMA project manager based at IITA Kano, one and a half year on, the initial outputs of ISMA have been encouraging. In Kenya, over 6,000 farmers in the western region now have access to new Imazapyr-resistant (IR) maize varieties and maize-legume rotation and intercrop Striga control technologies.

"Partner seed companies have produced 66 tons of seeds that use IR maize technology, with over 35 tons disseminated to more than 27,700 smallholder farmers through participating agro-dealer networks," he said.

He adds that community seed producers and partner seed companies have produced and disseminated some 3 tons of Desmodium seed to farmers and trained more than 14,000 farmers on the push-pull technology, with 6,800 of them using it in their farms.

Mr Jimmy Pittchar, a Research Scientist with *icipe* also present at the farmers' field days, notes that the Striga menace was expanding in the Lake Victoria basin of Western Kenya largely due to declining soil fertility and climate change, which has brought in a conducive environment for increased Striga infestation, making the need for a sustainable solution very urgent.

In addition, the Striga-infested maize farms have been hit hard by Maize Lethal Necrosis Disease (MLN), a serious new virus disease which has exacerbated the problem and has wiped out up to 100% of maize fields in Western Kenya, including many Striga technology demonstration and testing fields.

"We need to develop integrated solutions to tackle both problems, and CIMMYT and the Kenya Agricultural Research Institute (KARI) are currently screening hundreds of IR maize, Striga-resistant, other maize varieties, and many other inbred lines to help identify and develop possible MLN-resistant lines that could be used concurrently to control Striga, says Ms Edna Mageo, a researcher with CIMMYT.



George Mitende shows farmers maize in rotation with soybean, one of the farming methods being promoted to reduce Striga population in the project plot on his farm.

Farmers commend IITA for improved cassava varieties

Nigerian farmers have commended IITA for giving them improved cassava planting materials.

The dissemination of the improved varieties is part of efforts by the Nigerian government under the Agricultural Transformation Agenda to boost cassava production and the incomes of farmers.

In Benue State, home to cassava production, farmers say they anticipate good yields from cassava this year, thanks to the availability of improved planting materials.

"With these improved varieties, we are hopeful of improved yield," says Och' Otuipko, HRH Dr John Eimonye.

"We commend IITA and the federal government for initiating this program," he added.

Another farmer, Mr Boniface Eyimoga, who cultivated 15 hectares of cassava with improved varieties, noted that the program is already making a positive impact.

"As soon as we cultivated cassava, several people in the community joined. There is a kind of positive influence that the program is having on cassava growing areas. More people are seeing the potential in cassava and they want to be part of it," he explained.

He lauded the initiative, adding that it would create more opportunities for the

youths and women in the communities.

"When we talk of agricultural revolution, this is one of the ways to achieve it. It is a step in the right direction," he emphasized.

Like in Benue State, several parts of Nigeria last year received improved planting materials.

In the last 45 years, IITA working with national partners, have developed more than 40 improved cassava varieties with potential yields ranging from 20 to 40 tons per hectare as opposed to traditional varieties that give farmers less than 10



Farmer Eimonye's farm in Otuipko.

IITA donates 3000 books to Nigerian university

IITA has donated over 3000 books to Bowen University as part of efforts to boost learning and capacity development of both students and teachers in the country.

Dr Kenton Dashiell, IITA Deputy Director General for Partnerships and Capacity Development, said that the donation was also aimed at helping develop the knowledge management capacity of a potential local partner. IITA needs a local partner that can help provide agricultural research knowledge not only to the

country but to the region as well, he added.

Receiving the Vice Chancellor of Bowen University, Professor Timothy Olagbemi, Dr Dashiell described books as reservoirs of knowledge that are necessary for human advancement and development.

According to him, the books would offer students a platform to be better informed, stressing that they would also enhance the development of the necessary human capital needed for both socioeconomic and scientific transformation.



Dr Kenton Dashiell, Deputy Director General for Partnerships and Capacity Development (left) receives a plaque of appreciation from Bowen University's Vice Chancellor Professor Timothy Olagbemi (right).

tons per hectare.

Dr Richardson Okechukwu, scientist who coordinates the cassava transformation activities at IITA, said the deployment of the varieties would help Nigeria to maintain its leadership position in Africa and create wealth for farmers. It will also ensure that the demand of roots by industries does not affect food security of Nigerians.

"We are glad that farmers are getting these varieties across the country," he added.

In the early 2000, IITA played a similar role under the Presidential Initiative of Cassava. At that time, the Institute backstopped the cassava value chain development in the country, and provided farmers access to improved planting materials. These efforts pushed cassava production by 10 million tons in six years, making Nigeria the largest producer of cassava.

Dr Kenton Dashiell, IITA Deputy Director General for Partnerships and Capacity Development, says that IITA would continue to deploy its technologies to help the country maintain its lead in cassava production.

"What we are looking at in this project is to narrow the yield gap" Dr Dashiell said.

He added that farmers were key stakeholders in the cassava transformation program of the government, and that IITA recognizes them in its research agenda.

The Vice Chancellor commended IITA for the donation and pledged that the university would make judicious use of the materials.

"We thank you for this donation and we will make good use of the materials," Prof Olagbemi said.

The two institutions also discussed partnership opportunities with a view to boosting the quality of research, developing capacities of students and researchers, and improving food production.

Both institutions agreed in principle to work towards signing a memorandum of understanding for collaboration in the future.

Making a tour of the IITA campus, Prof Olagbemi lauded the work ethics at the institute. He said that the work attitude displayed by staff reflected a ray of hope for Africa and Nigeria.

"I am impressed with the commitment of staff to work. It shows that there is hope for Nigeria and Africa in general," he said.

Dr Robert Asiedu, IITA Director for West Africa, expressed the readiness of IITA to partner with Bowen University. "We will be very happy to work with you," he said.

According to him, IITA is set to open its doors to Bowen University's lecturers and students for research and training.