IITA
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IITA donates equipment to Tanzanian Ministry

IITA's Victor Manyong handing the generator keys to SRI's Kiddo Mtunda

IITA in Tanzania has officially returned some of the office and laboratory facilities given to it by the Tanzanian Ministry of Agriculture Food Security through the Department of Research and Development after constructing its own Science Building. The building was inaugurated last year by the Tanzanian President, H.E Jakaya Mrisho Kikwete.

The Ministry donated office space and laboratories to IITA at the Sugarcane Research Institute (SRI) at Kibaha, north of Dar es Salaam–which is also the center for research on roots and tubers for the coast region–7 years ago and also provided land for field trials. IITA will continue to use the facilities and the field for joint research activities with the Ministry, its main partner in the country.

IITA also donated a generator, an inverter, and all the office furniture to SRI in appreciation of all the support given by the Ministry and for continued collaboration. At a small ceremony at SRI held on 17 July, the offices and equipment were officially handed over by Victor Manyong, IITA's Director for Eastern Africa, to Ms Kiddo Mtunda, Officer-in-Charge of SRI and the lead scientist for research on roots and tubers for the coast region.

Dr Manyong said IITA and the Department of Research and Development had enjoyed many years of good collaboration and partnership which had seen the implementation of many joint projects. This would still continue even as IITA handed back some of the offices and laboratories to SRI-Kibaha.

"The way I see it, we are simply changing the management of the facilities but we will still continue to use them. We will also together use the facilities at our new Science Building which we inaugurated last year," he told Ms Mtunda and the SRI staff present at the hand-over.

On her part, Ms Mtunda thanked IITA for its "generous support, and the generator and office furniture," which she said would assist the Institute's research activities in the region. The space that was released was very much needed as SRI was growing and strengthening its research activities on roots and tubers.

"On behalf of the Director for Research and Development, I also would like to thank IITA for this kind donation and for all its support throughout the years. We also look forward to continue working together to tackle food security challenges in the country."

IITA staff in the country were divided between SRI-Kibaha and the Mikocheni Agricultural Research Institute (MARI) in Dar es Salaam for many years until the Institute built its permanent facilities. All members of the IITA staff based in Dar es Salaam are now working under one roof.

Help conserve electricity!

Before leaving your workplace at the end of the day, 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.

Researchers from IITA and SRI-Kibaha in a group photo after the official handing over of some of the facilities and laboratories.

Got a story to share? Please email it with photos and captions to Andrea Gros (a.gros@cgiar.org), Katherine Lopez (k.lopez@cgiar.org), Jeffrey T. Oliver (j.oliver@cgiar.org), Catherine Njuguna (c.njuguna@cgiar.org), or Adaobi Umeokoro (a.umeokoro@cgiar.org)

Project on policy action for climate change adaptation launches activities in Uganda

The project *Policy Action for Climate Change Adaptation* officially launched its activities in the Ugandan capital, Kampala, on 8 July with a meeting that brought together its key partners in the country. These included representatives from the government, civil society, farmers' associations, and researchers.

This new project seeks to encourage the adaptation of climate-resilient food systems in Uganda and Tanzania through influencing the effective implementation of relevant climate change polices in the agricultural sector. The project is funded by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and implemented by IITA, CIAT, ICRAF, ILRI, and Bioversity International.

Country partners of the Ugandan 'Policy Action for Climate Change Adaptation'.

The meeting focused on taking stock of all the ongoing activities by different players on climate change supportive policies and the adoption of climate-smart practices to identify the gaps to be covered through the new project. It also identified the research needed to provide the right information to policymakers and implementers to enable them to take the best possible decisions.

Mr Joseph Epitu from the Ministry of Water and Environment said "The Climate Change Unit has been upgraded into a Department, emphasizing the need for policy that focuses on climate change. Everyone should work together to make sure that Uganda is climate resilient. Our new Department will facilitate these initiatives."

"We are facing many challenges here, most of them induced by climate change, resulting in food insecurity. Up to 80% of our people depend on subsistence farming which is seeing more and more soil, land and forest degradation, leading to a decline in output. Some adaptation actions are high level and expensive. We need to know which options will be successful when we implement them," said Mr Sunday Mutabazi, Chair of the Climate Change Task Force in the Ministry of Agriculture, Animal Industry, and Fisheries.

The Project Coordinator, Dr Edidah Ampaire, said that she hopes the project would unite all the different players focusing on climate change for maximum impact. "Together we can strengthen our human capacity and support policymakers to make better informed investment decisions for climate change adaptation. We can also ensure that policies are inclusive and effectively implemented. Together we can accomplish so much more than when all of us are working separately."

Cassava Weed Management Project hands over assets to the University of Agriculture Makurdi

The project *Sustainable Weed Management Technologies for Cassava Systems in Nigeria*, managed by IITA, on 15 July, handed over equipment to the University of Agriculture Makurdi to help tackle the menace of weeds in cassava farms.

Among the items were a Toyota Hilux vehicle, office equipment, a motorcycle, and 20 sprayers.

Prof Friday Ekeleme, Principal Investigator of the Cassava Weed Management Project, said the equipment would facilitate the research and called on the University to carefully use and maintain them.

He said IITA was happy to have the University as a partner in the project, and urged the University to redouble efforts towards ensuring that the problem of weeds in cassava is solved.

In his response, Dr Moses Egbe pledged the commitment of the University on the judicious use of the equipment, and promised to ensure that the project's objectives are achieved.

The University of Agriculture Makurdi is the third beneficiary of an assets transfer. The other collaborating institutions are the National Root Crops Research Institute Umudike, and the Federal University of Agriculture Abeokuta.

Dr Moses Egbe of the University of Agriculture Makurdi (left) receiving the car key and other equipment from Prof Friday Ekeleme in IITA Ibadan.

Launched early this year, the Cassava Weeds Management Project aims to increase productivity for at least 125,000 Nigerian farm families and find solutions to the labor-intensive weeding that is usually done by women and children in cassava farms.

The project, led by Dr Alfred Dixon, has the potential to serve as a template for livelihood transformation in cassava-growing areas not just in Nigeria but across Africa.

The 5-year project involves the three collaborating institutions. Other partners include government representatives, Agricultural Development Programs across the States, international cassava scientists, the donor community, and the private sector.

IITA agronomist speaks to journalists on new yellow-fleshed cassava

Dr Olufemi Aina, IITA's Cassava Agronomist, spoke with journalists in Ibadan recently. He extensively highlighted IITA's success and leading role in the breeding work on cassava in sub-Saharan Africa.

Dr Aina speaking with journalists during the interview session.

What are the differences between the former varieties and those newly released?
The major difference is that the first set of the yellow varieties that were released in 2011 has a level of beta-carotene between 6 and 8 ppm. So research addressed how we could increase the amount of available vitamin A that would benefit consumers. That is why breeding work is continuing to increase the vitamin A content.
In the second wave, the three newly released varieties have very desirable characteristics. Firstly, they have higher beta-carotene contents. Secondly, they have high dry matter content which means that they are capable of giving more when processed; they also have high yield potentials, between 30 and 40 t/ha. This is an improvement over the first set of released varieties.

What does the average Nigerian stand to gain from this?
We are all aware of what problems vitamin A deficiency causes pregnant women and among children, especially those below the age of five years. It reduces their immunity and makes them prone to sicknesses. It causes night blindness, and even infant mortality. These are all the results of vitamin A deficiency.
Taking the yellow-fleshed cassava will boost available vitamin A content and assure consumers that you can avoid conditions related to vitamin A deficiency. There is a very good hope that Nigeria can combat micronutrient deficiencies. Then we can have healthy living and food security which is what IITA is promoting. We can have a safer livelihood and better income. Once farmers plant these varieties, they will surely generate more income. They are in high demand now: many consumers want to get the yellow cassava. They want the yellow *gari* and *fufu.* If we go to supermarkets, very soon we will begin to see all those products on the shelf. So Nigerians, especially our farmers, stand to gain a lot.

Does the farmer need any special soil preparation to grow these varieties?
No. Usually, many farmers prefer to grow cassava without fertilizer. Even when the soil is not good, cassava will yield because it can tolerate infertile soils. It is an added advantage for them to produce under good soil conditions when they will get a very good yield. Even under moderate soil fertility cassava will do well. Cassava can be fertilized to produce higher yields. We recommend a fertilizer application that is between 400 and 600 kg/ha.

How many years of research produced these varieties?
Breeding cassava is a long story. It takes a minimum of 8-10 years. These newly released varieties are the result of a decade of work.

So how did IITA research produce this variety?
Let me explain the breeding procedures. We start first from identifying parents that can give the desirable trait. Then we make our crosses in the first year and start moving from that stage to another. In the second year we go to what is called a seeding nursery where we look at desirable attributes, make our evaluation, and then move to other breeding stages.
From the seeding nursery we go to what is called the preliminary yield evaluation trial. From there we go to the advanced yield trial and from there to the uniform yield trial. Each stage takes at least one or two years. At each of these stages, we are evaluating and selecting those varieties that meet our criteria. During selection, we knock out those that are not desirable. By the time we get to our uniform trial, we now move to what we call the National Coordinated Research Program (NCRP) where we evaluate with national research institutes. We ask farmers to participate and these activities take time. For those newly released varieties, the evaluation was done for about 4 to 5 years before approval. In a nutshell, we have close to 10 years of rigorous work and activities before we can come up with a variety.

How can the local farmer get these varieties?
Because the varieties have just been released, what we have now will reach the farmers' hands in the next 1-2 years. For now, the research institute with the mandate to release these varieties will make what we call the breeder seeds which will be used to generate "foundation seeds". The foundation seeds will also be multiplied. After that, farmers can begin to get them. So for now, we are doing the multiplication. We can give seeds to a few farmers but we also have outgrowers. Once we have the foundation seeds, we can give some to the out growers for multiplication.
There is a special project called HarvestPlus that has this responsibility. They ensure that they multiply and disseminate the varieties. For the varieties released in 2011, they had the target to distribute free yellow cassava varieties to 100,000 households, and they did that. For 2013 and 2014, they have increased the projection to at least 250,000 households. The effort is ongoing. They have distributed to some households and many farmers can testify that they have this material. What we advocate is that the farmers who have benefited should share the same opportunities to other farmers. Cassava has a multiplication ratio of 1:10. For instance, if you plant one hectare you can get sufficient materials to plant 10. So a farmer that has planted one hectare this year will have sufficient material after that year to plant 10 hectares. Those who have already been beneficiaries of the first set should be able to extend the material to others after harvest.

You said that farmers will not have the new varieties for about 2 years. What do you suggest they do in the meantime?
It will take before the new varieties become readily available. Currently there is a Federal Government program, the Cassava Transformation Agenda, that is targeted towards producing improved varieties for many farmers but these varieties have white roots. We are hoping that in the next few years, they will also incorporate the yellow cassava under this scheme. Many farmers are also benefiting now because the government is distributing the improved white-fleshed varieties. With time, many farmers will have access to the yellow root cassava.

What products can we get from the yellow cassava?
We get all the products, including yellow *gari* and yellow *fufu*. You can even go to our Processing Unit and see yellow *gari*. You will see how it is grated, pressed, and roasted without adding palm oil.

How can one differentiate the yellow *gari* made by adding palm oil and the *gari* from the yellow- fleshed cassava?
I believe our farmers will be very sincere in offering the real yellow gari once the yellow-fleshed varieties are available. What farmers have now as yellow *gari* is white cassava roasted with palm oil. When you taste or smell it, you notice the odor of the palm oil. But gari from the yellow-fleshed cassava is naturally yellow obtained through "biofortification".

Are there programs to teach farmers how to make the yellow *gari* on a small scale?
It is already being done. Anywhere HarvestPlus goes, they organize farmers' field days where they gather farmers and explain to them sustainable cassava management and what they stand to benefit, how to make quality *gari*, good quality *fufu,* etc.

Can this initiative address unemployment among the youth?
Yes. You can visit the Agripreneurs in IITA and see how they are benefiting from cassava production and processing. There is much awareness about the benefits of farming by young unemployed graduates. Farming is not only for uneducated people; educated youths can go into agriculture and earn from it. So I want to sound it out, loud and clear, for young educated Nigerians: They can take agriculture as a vocation; they will not regret it. In the institute we have the Agripreneurs who are young graduates engaged in farming activities and they are making a lot of profit.

Are there programs in place to reach women and involve them in the benefits of the technology?
Yes. We have a gender specialist and there are lots of activities on-going, not only for women, but also for men, women, and children. In the value chain of cassava, men and women and even children can be adequately engaged. There are many activities that involve women; there are activities that men can also engage in, and there are activities for young adults too. So there is gender sensitivity when it comes to cassava production and processing.

What role should government play to ensure that the technology reaches farmers?
There is a body, the Root and Tuber Empowerment Program (RTEP) that has the responsibility to multiply improved varieties and disseminate them as well to other agencies. Government can make funds available for these different agencies to multiply the varieties because without financing, they cannot do much.

University Kongo students see IITA's activities at INRA-Mvuazi Research Station

Dr Mahungu briefs the students in the cassava field.

Thirty-three final year students from the University Kongo in Mbanza-Ngungu, DRC, visited the research station of the National Institute of Agricultural Research and Studies (Institut National pour l'Etude et la Recherche Agronomiques, INERA) where IITA-DRC conducts its research activities. The visit focused on the cassava value chain and activities on food crops, such as banana and plantain, grain legumes, and maize.

Since IITA introduced modern cassava processing equipment, the diversification of the use of the crop has increased. The staple is being enjoyed in various forms in DRC and new and improved varieties are available in the market. On arrival, the group was welcomed by Dr Nzola Mahungu, IITA-DRC Country Representative and Coordinator of the Cassava R4D Project, and the acting director of the INERA station, and Ir Vangu Germaine, who explained to the visitors how research is carried out there.

The visit provided a platform for the students to link theory to practice. It provided answers to questions on how cassava varieties are developed, putting together productivity and end user's needs, how diseases and pests are tackled, how agronomic practices including soil management and cropping systems are tested, and how processed products are packaged.

The students were also taken on a tour of the facilities in the research fields, laboratory, and processing unit.

Announcement

The IITA Women's Group announces the annual scholarship competition for 2014. Applications are welcome from qualified candidates in the following categories:

- Junior secondary school (US$150)
- Senior secondary school (US$200)
- Polytechnic (US$250)
- University (US$250)

Qualified candidates will be paid in local currency.

The criteria for the awards are:
- Applicants must be children of IITA employees on Pay Grades 1-6.
- Parents of such applicants must have worked at IITA for at least two years and must be presently employed.
- Applicants must be above average academically and must have school reports to prove this.
- Applicants must be registered in schools or must have secured admission into a recognized school.
- Applicants will be expected to perform well during the interviews (both oral and written), which will be conducted for shortlisted candidates.

Forms should be completed and returned to the Employee Service Unit or Station Administrator on or before 10 September 2014. Late or incomplete applications will not be accepted. To get copies of the forms, contact HRS or the Women's Group.