

Tanzania to improve cassava in Africa with NextGen Cassava project

Tanzania recently became a partner of the Next Generation Cassava Breeding project ([NextGen](#)), joining Nigeria and Uganda in the global effort to improve cassava breeding in sub-Saharan Africa. This partnership is expected to enhance the project's efforts to improve livelihoods for cassava farmers in Africa.

cassava brown streak disease, cassava mosaic disease, and cassava green mite. There is poor access to improved planting materials and processing technologies, limited use of fertilizers and herbicides, and low investment in cassava research and improvement.

To address these challenges, researchers in Tanzania's Ministry of Agriculture, Livestock, and Fisheries (DRD) will collaborate with scientists on the NextGen project largely through ongoing efforts at the Lake Zone Agricultural Research and Development Institute (LZARDI), the oldest agricultural research station in Tanzania. LZARDI scientists are well prepared to contribute to the efforts of NextGen partners through cassava-related research that includes breeding and improvement, molecular marker-assisted breeding for disease resistance, processing and product development, and agronomy studies.

The NextGen Tanzania team consists of Kulembeka Mtunda, cassava breeder and coordinator (coastal Tanzania); Geoffrey Mkamilo, national team leader of the Cassava Research Program in Tanzania; Kasele Salum, assistant cassava breeder (Lake Zone); and Caroline Sichwale, assistant cassava breeder (Eastern Zone).

NextGen is a global partnership led by International Programs in the College of Agriculture and Life Sciences at Cornell University, in collaboration with IITA and National Root Crops Research Institute breeding centers in Nigeria, the National Crops Resources Research Institute in Uganda, DRD in Tanzania, the West African Centre for Crop Improvement in Ghana, Makerere University in Uganda, the Boyce Thompson Institute, USDA-ARS and the US Department of Energy in the United States.

The Cornell-led project is funded by a \$25 million, five-year grant from the [Bill & Melinda Gates Foundation](#) and the Department for International Development of the United Kingdom, and is in its fourth year.



Members of the Next Generation Cassava Breeding team visit cassava trials at LZARDI in Tanzania. (Left-Right) Peter Kulakow (IITA), Kiddo Mtunda (Tanzania), Heneriko Kulembeka (LZARDI), Geoffrey Mkamilo (Tanzania), Kasele Salum (LZARDI), Jean-Luc Jannink (breeder from USDA-ARS), and Chiedozie Egesi (project manager, Cornell University).

"Partnering with NextGen should help us develop tools to address biotic stresses like [cassava brown streak disease](#), [cassava mosaic disease](#), and [cassava green mite](#), and improve cassava root yields that will serve to increase cassava production countrywide," said Heneriko Kulembeka, cassava breeder and NextGen coordinator in Tanzania. "The NextGen project will assist in determining good parental lines for different traits of interest."

"Tanzania has one of the foremost cassava breeding programs in Africa," said Chiedozie Egesi, NextGen manager of the Cornell University-led project. "Because Tanzania shares African cassava germplasm, they will benefit from the genomic predictions that NextGen

has already developed, use of the cassava database— [Cassavabase](#) and the capacity for improved phenotyping."

Cassava is a vital crop in Tanzania, second only to maize in volume produced. More than 80 percent of farmers in the country grow cassava, producing about 4.5 million tons of cassava roots annually. About three-quarters of the crop is used for human consumption. The rest is used for livestock feed and industrial purposes. A widely preferred and hardy staple, cassava is often stored in the ground and locally processed as a source of food in times of famine.

Cassava farmers face many challenges raising their crop. Tanzania loses an estimated 2.5 million tons each year to

IITA Cameroon participates in the CTA Cassava regional Forum in Yaoundé

IITA was very active and visible at the cassava regional forum in Yaoundé held from 6 to 9 December. The event was organized by the Technical Centre for Agricultural and Rural Cooperation (CTA) and PROPAC with support from various organizations including IITA. The main objective of this forum was to bring together actors of the cassava value chain from Central Africa in order to develop, using a participatory approach, a common agenda for the region that will address major challenges and identify opportunities in the sector.

On the first day, IITA hosted participants for a field visit on the campus. [Rachid Hanna](#), IITA-Cameroon Country Representative, welcomed the visitors and offered a guided tour of the experimental farm and the various laboratories. A mini food fair was organized at the end of the visit with cassava-based preparations, including the famous tidbits, which was highly appreciated. The Chad delegation and farmers' associations were impressed by the cassava manual chipper which IITA-Cameroon had developed and distributed through the IFAD supported PNDRT project.

Throughout the event, IITA manned a stand where we interacted with visitors and exhibited various posters and documents on ongoing cassava research as well as some cassava food products. In addition to various cassava



Hanna (Left) speaks about the challenges and opportunities offered by IITA for cassava farmers in central Africa.

publications that were exhibited, yellow root cassava was a major attraction to hundreds of visitors of the IITA stand. After tasting boiled yellow-root cassava (TMS07/0593), several officials asked that IITA should start promoting yellow root cassava for school lunches.

During the conference proceedings, Hanna participated in a panel broadcast live on the national television channel, CRTV, on the challenges and opportunities for cassava smallholders in Central Africa. Hanna and Apollin Fotso also held a mini-conference on cassava pest and disease management and cassava variety identification.

Following the presentations and discussions, participants prioritized actions needed in their respective

countries on cassava pests and diseases and variety dissemination and identification.

Mireille N'Simire (IITA-Bukavu) also presented the opportunities of using ICT throughout cassava value chains, and the challenges faced by cassava producers in Central Africa according to the early results of an ICT study in the root and tuber project (a research project founded under CTA grants). Both CTA and the Minister delegate of Agriculture and Rural Development commended IITA during the closing ceremony for its support in the preparation, the organization of the field visit, and the organization of the conferences, and promised to strengthen collaboration with both institutions. More information on the event can be found at www.cta.int

Ooni of Ife partners with IITA to improve cocoa production and youth employment

The Ooni (King) of Ife, Ooni Adeyeye Enitan Ogunwusi, has extolled [IITA](#) for its continuous efforts in the improvement and transformation of agriculture, and emphasized his utmost goal to partner with IITA in rejuvenating Africa's agriculture.

The Imperial Majesty made this known in his speech during his first coronation anniversary at his palace in Ile-Ife, Osun State on 10 December. The coronation anniversary was attended by some IITA staff and also attracted notable Nigerian dignitaries including IITA Ambassador and former president of Nigeria, Chief Olusegun Obasanjo, and the playwright, Professor Wole Soyinka.

The IITA representatives in attendance, [Ranjana Bhattacharjee](#), IITA Molecular Geneticist and [Frederick Schreurs](#), the



L-R: The IITA delegates comprising a youth Agripreneur, Frederick Schreurs, and Ranjana Bhattacharjee (far right) with Ooni of Ife.

Chief Executive Officer (CEO) Business Incubation Platform (BIP), used the medium to seek partnership with Ooni Ogunwusi in enhancing cocoa

production, and also make a case for the importance of establishing 12 Agro-Industrial Parks at Ile-Ife so as to engage the youth in agriculture.

“The situation of graduate unemployment is worsening by the year as universities are producing more graduates year after year, and the economy is not creating enough jobs to engage these youths. IITA is on course to empower about 6,000 youth to start their agribusinesses and earn N2.5 million annually, we want to work together with you to make this happen,” Schreurs mentioned, while giving the financial implication of establishing the Agro-Industrial Parks.

The proposal submitted to the Ooni “*Intensification of cocoa farming in Southwestern Nigeria*” by IITA in collaboration with the Cocoa Research Institute of Nigeria (CRIN), is targeted at the rehabilitation of old farms, adoption

of improved agronomic practices, and increased use of high quality planting materials of improved varieties, all in a bid to develop a more profitable cocoa production system in the Southwest of Nigeria.

The concept note received affirmative feedback, as Oba Ogunwusi assured the IITA team of working hand-in-hand with them to boost agriculture and encourage youth emancipation from unemployment. He stated: “Thank you for coming, thank you also for giving a stand to agriculture. I am impressed at your work. I have seen your proposal, it is perfect, and I have submitted to the government. We will work together as a team, we will launch the Agricultural reality show by next

year in which IITA will play a major role, and it will bring the young people to the market.”

The IITA team appreciated the traditional monarch, and Bhattacharjee expressed: “I am glad you liked the proposal and submitted it to the government. There is a sudden increase in the demand for cocoa planting materials. As we get enquiries from people, it is paramount that the supply meets the reality of the demand. I would like to thank you for inviting IITA to this prestigious grand celebration and congratulations on your one year anniversary. We look forward to continue the partnership and have another grand celebration next year”.

Welcome

Carlos Malita

has joined IITA-Mozambique station as a Project Manager. He is a Market Systems Development Practitioner with a background in Agriculture (BSc Hons)—Plant Entomology—and a Master of Business Administration (MBA) from the Catholic University in Mozambique. Over the last 12 years he has worked with the public sector and with non-government and private sector organizations in the coordination, management, design, and implementation of market systems development approaches and strategies aiming at improving relationships and functions of market actors, mainly private sector and smallholder farmers, to improve practices and knowledge for increased production and productivity in rural communities in Mozambique.



He has spent more than 5 years, overseeing the delivery of a market development intervention aiming at improving smallholder farmers’ incomes, productivity, and employment through functional linkages with the private sector for the supply of required inputs, services, marketing of their produce, and capacity building of farmers’ associations, using a Market Development Approach.

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Maria Geitzenauer is currently working as a socioeconomist in IITA-Cameroon in Yaoundé in the value chains of cocoa, Irish potato, and local chicken. She holds a degree in Agricultural Economics from the University of Natural Resources and Life Sciences, Vienna and has worked in rural development and value chain development in Africa for many years. Since 2010 she has been carrying out research on economic policy instruments in the field of nature conservation policy and forest policy for her PhD which she intends to finalize this year. Further, she is trained as an organizational development specialist with many years of expertise in this field.



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Godfrey Taulya has joined IITA Uganda as a Postdoctoral Fellow, CIALCA Modeler. He holds a PhD in Agronomy (Wageningen University, The Netherlands),

MSc in Soil Science (Makerere University, Uganda), and BSc in Agriculture (Makerere University, Uganda). He has a passion for improving the livelihoods of resource-constrained farmers without compromising the future productivity of the land and environmental health.



He has been with IITA since 2004 as a Research Assistant before being promoted to Research Associate in 2007 and then PhD Research Fellow in 2009 under the IITA-led CIALCA project funded by the Belgian Technical Cooperation. During these periods, his work focused on crop nutrition, general agronomy, and crosscutting socioeconomic issues affecting crop management in banana-based cropping systems of East and Central Africa. After his PhD, he worked with IITA as a consultant on climate change studies in East Africa in collaboration with CIMMYT and CIAT, prior to his current appointment.

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Got a story to share? Please email it with photos and captions every Wednesday to 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).