

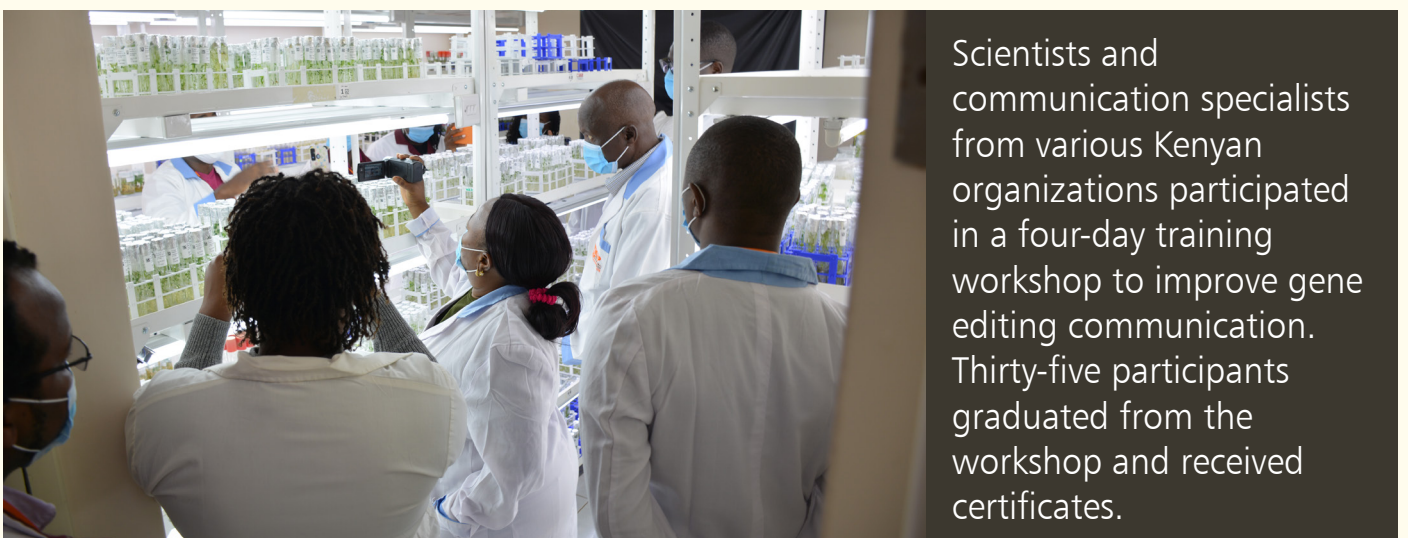
Experts highlight benefits of improved cassava varieties ahead of 2022 planting season

Experts from the Building an Economically Sustainable Integrated Cassava Seed System, Phase 2 (BASICS-II) have shared insights encouraging cassava farmers to access and benefit from improved cassava planting materials for the 2022 planting season. [to page 3](#)



New and improved cassava varieties are high yielding, climate resilient, and disease resistant.

35 learn about gene editing and its communication



Scientists and communication specialists from various Kenyan organizations participated in a four-day training workshop to improve gene editing communication. Thirty-five participants graduated from the workshop and received certificates.

The training participants visiting the gene-editing lab facilities in IITA-Kenya.

Participants, all of whom are from Kenya, included scientists conducting gene editing research, science writers, representatives from academia, MSc and PhD students in biotechnology and breeding, and [a representative](#) of a farmers' consortium.

The Alliance for Science Director for Africa, [Patricia Nanteza](#), congratulated the graduates on this milestone. She charged them to radiate the lessons learned in their work to foster greater public appreciation of gene editing and its benefits. Nanteza added that each participant had acquired the designation of Science Ally with the graduation, commissioning them as science ambassadors to the world.

IITA Eastern Africa Hub Director [Leena Tripathi](#) also called upon the participants to continue working together with the networks formed during the training.

"It was an excellent and informative training. As a student, I have learned a lot about gene editing applications in agriculture. Gene editing will go a long way to help farmers increase production

and protect the environment through reduced pesticide applications," said Dominic Mogere, a Molecular Biology & Bioinformatics MSc student at the Jomo Kenyatta University of Agriculture and Technology (JKUAT).

This was the second in a series of workshops tailored to forge closer ties between scientists and various stakeholders, held under the [Alliance for Science](#), [IITA](#), and the [Open Forum on Agricultural Biotechnology in Africa \(OFAB\)](#) collaboration. The inaugural workshop was held in August 2021.

The sessions helped participants understand gene editing better while equipping them with the skills to disseminate the concept to the broader public, including policymakers, farmers, and lay audiences. The training also focused on gene editing legislation, coming in the wake of Kenya's recent release of [guidelines](#) for determining the regulatory process of genome editing in the country.

Gene editing, also known as genome editing, is a tool that scientists use to

make targeted and precise changes in the genetic makeup of an organism to improve desired traits in the organism. Several [African countries](#) have paved the way for gene editing research to improve resilience and productivity in select crops and livestock against the background of a ballooning population and an increasingly erratic climate. Kenya is leading gene editing research for improved agricultural production among several African countries.

Former director-general of the National Environmental Management Authority in Kenya, Professor Ratemo Michieka, the founding Vice Chancellor of JKUAT, was the keynote speaker and called for integrity among the participants urging them to network to get the public to respect and listen to their message.

The seminar concluded with a visit to the BecA labs at the ILRI campus in Nairobi where IITA scientists research banana, cassava, and yam. Participants were shown some of the high-tech equipment used to execute various biotechnology projects at the facility. *Contributed by Joseph Maina*



The "Communicating gene editing" workshop attracted 35 participants from Kenya.

They highlighted these during a recent webinar for experts and farmers, organized with the GIZ Green Innovation Centres for the Agriculture and Food Sector (GIAE) and [IITA](#) Cassava and Maize Value Chain Project.

More than 200 participants attended the event, which was a deliberate effort to create demand and show cassava farmers where and how to access clean and quality cassava stems of improved varieties.

In his opening address, Prof Lateef Sanni, Project Manager of BASICS-II, said the webinar was an opportunity to ensure sustainability in distributing clean and quality seeds of improved varieties ahead of the new planting season.

Vegetative Seed Specialist with IITA GoSeed, [Mercy Diebiru-Ojo](#), spoke on the benefits of using new and improved varieties. According to her, the new varieties were high yielding, tolerant of environmental stress, and resistant to pests and diseases. “We have seen most improved varieties yield more than 30 tons per hectare, against the less than 10 tons farmers usually get from the old local varieties,” she said.

Diebiru-Ojo continued, “The improved cassava varieties are also disease-free, suitable for various agroecological zones, and have high starch content,

which industries require. Processors also look for some of these varieties because they have fantastic food qualities.”

She explained the role of IITA GoSeed in making the seeds available, noting that the company was using the Semi-Autotrophic Hydroponics (SAH) technology to speed up the multiplication process so that farmers could have access to the varieties they wanted.

Umudike Seeds General Manager ThankGod Nzenwa said that their company, an early generation seed company like IITA GoSeed, was entirely on the ground to make improved varieties available to farmers in the South East, South-South, and other parts of Nigeria. He said that Umudike Seeds also has an entrepreneurship program for interested seed producers.

BASICS-II Advocacy, Promotion and Outreach Lead [Godwin Atser](#), who is also the GIZ-GIAE/IITA Cassava and Maize Project Manager, said that the project developed an approach called the BASICS model to deliver improved varieties to farmers in an economically sustainable manner.

Atser noted: “The BASICS model links the cassava breeding programs with Early Generation Seed Companies that multiply breeder and foundation seeds and pass them on to cassava seed

entrepreneurs to produce certified seeds for onward dissemination to farmers. Through this model, we are able to increase cassava productivity, create new jobs and enterprises, promote quality and disease-free seeds, increase the rate at which new varieties are multiplied, and create avenues for feedback from farmers.”

Observing that some farmers still hold on tightly to local cassava varieties, Dr Kwesi Atta-Krah, Emeritus Director of Country and Regional Engagement at IITA, urged farmers to embrace the use of improved varieties. He described improved varieties as “‘Local varieties’ that have ‘stuff built into them’ to enhance their performance in the field. That is why they are called improved varieties.”

Farmers who attended the webinar learned about some of the new and improved cassava varieties available and their unique qualities. A link was provided for farmers to place their orders for cassava stems in advance. Requestors would also be linked to sources of certified, disease-free cassava stems of improved varieties nearest to them. Atser explained that IITA GoSeed in Ibadan and Umudike Seeds in Abia State have facilitated the establishment of several Foundation and Commercial Seed Producers across Nigeria. *Contributed by Godwin Atser*

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Always clean your hands; practice physical and social distancing; wear face masks properly; avoid crowds and public places; keep a 2-meter distance from the next person; and practice general sanitation and hygiene.

Got a story to share?

Please send your story with photos and captions every Tuesday to iita-news@cgiar.org or Katherine Lopez (k.lopez@cgiar.org) and Uzoma Agha (u.gha@cgiar.org).



Muhogo Bora Project trains local agricultural officers on management and gender integration in the Tanzanian cassava seed system

IITA and [Tanzania Agricultural Research Institute \(TARI\)](#), through the [Muhogo Bora](#) (Better Cassava) program, recently organized an intensive training for extension officers, district agricultural officers, and regional agricultural advisors working in the Western Zone of Tanzania. The training is part of efforts to support the development and expansion of seed systems in the cassava subsector.



Left: Participants noting the type of disease found on a cassava plant during the field visit. Photo credit: G. Ndibalema/IITA. Right: Trainees working on a problem tree analysis during the group work session. Photo credit: G. Ndibalema/IITA.



The five-day-long training was held from 14 to 18 March in Kasulu District, Kigoma Region, with 61 participants from Katavi, Tabora, and Kigoma regions and training facilitators from IITA, TARI, and the Tanzania Official Seed Certification Institute (TOSCI). The training introduced the commercialized cassava seed systems model. Extension workers learned about good agricultural practices, management of pests and diseases, cassava varieties identification, seed multiplication, seed quality control, and the registration process. They also learned about the seed business to help them understand the cassava seed system and better support the farmers they serve, and digital tools such as [Seed Tracker](#) and [PlantVillage Nuru](#).

The participants were also trained on gender integration in agricultural research. They understood basic concepts in gender research and

how they are linked to agriculture and cassava seed systems. They learned to embrace gender and social inclusivity in cassava seed entrepreneurs' work and became gender champions for the Muhogo Bora project and other related initiatives.

Training testimonials

Stephania Chiza is a female extension agent in Nsimbo District, Katavi Region. She welcomed more participatory sessions where trainers asked for feedback and input from the trainees. "I was surprised to be in participatory training where we were even tested on our understanding of the topics; many of us are not used to this style. I learned that a participatory meeting helps the participants have a sense of belonging and share their views openly," said Stephania.

Charles Lembo, Senior Agricultural Field Officer and Cassava Focal Person

in Uvinza District, Kigoma Region, thought he was fairly knowledgeable about good agronomic practices (GAP) in cassava management but was impressed with the newly gained knowledge on gender, of which he knew very little. "My take-home is the gender intersectionality, the real scenarios that are within our communities. Being aware of this will help us to be conscious and inclusive in selecting farmers to work with so that they all improve their livelihoods and community development. I will practice it starting with my family, then share it with people in my community," said Charles.

Toligwe Msongwe, District Agricultural Irrigation and Cooperative Officer (DAICO) in Uvinza District, Kigoma Region, was more interested in gender and how it closely affects agricultural activities. She noted that agricultural officers notice some activities and technologies not being implemented because of gender-related issues. Toligwe is looking forward to integrating gender into her work plan so that information reaches the respective person for action.

During the field visit, the Crop Officer in Kaliua District, Tabora region, said: "I am excited about using the digital tools. I had challenges understanding and identifying the symptoms of cassava diseases, especially the Cassava Brown Streak Disease (CBSD), but using PlantVillage Nuru will help solve the challenge. Also, using the [SeedTracker](#) tool will help locate the nearest seed producers for my farmers."

Funded by an anonymous foundation donor, Muhogo Bora is a three-year project aiming to provide support to develop and expand cassava seed systems in Tanzania, focusing on women, youth, and rural farmers' participation in cassava seed systems and the value chain. [Cornell CALS](#) leads the project in collaboration with IITA, TARI, and TOSCI. *Contributed by Gloriana Ndibalema*

AUC commends IITA's research activities

His Excellency, Prof. Mohammed Belhocine, the Commissioner for Education, Science, Technology, and Innovation at the African Union Commission (AUC), Addis Ababa, visited [IITA](#) Headquarters on 5 April. He was accompanied by the [Pan African University Institute of Life and Earth Sciences Ibadan \(PAULESI\)](#) staff and other dignitaries.

The purpose of the visit was to discuss partnership opportunities with the Institute's management team and meet with the researchers and scientists involved in training PAULESI students.

[Kenton Dashiell](#), IITA Deputy Director General, Partnerships for Delivery (P4D), welcomed the team and gave an overview of IITA's research activities. He said that the Institute ensures that research developments are

extended to the farmers and other beneficiaries.

In his speech, Prof. Belhocine spoke of his special ties with the Institute's focuses and goals. He commended the IITA agronomists, who have researched and helped the users understand the part of the soil that is good for germination to ensure Africa is food secure.

"I am very excited to be here and want to commend what the Institute is

doing to make Africa independent in food security to ensure a sustainable continent," Prof. Belhocine said.

Furthermore, he appreciated the Institute for the support given to the students of PAULESI in terms of building their capacities to produce healthy crops and improve the livelihood of farmers.

Prof. Kenneth Matengu, Pan African University President, said that hopes are high for both institutions to benefit from each other even though they currently have no memorandum of understanding (MoU) in place. Therefore, he urged for a multi-linkage of activities around agricultural engineering, seed technologies, and entrepreneurship. "We are fully embracing this partnership, and we will support it to the best of our abilities," he said. *Contributed by Anita Akinyomade*



Top left: Prof. Mohammed Belhocine commending IITA on their research activities that ensure food security. (Right) Prof. Kenneth Matengu explaining the urge for multi-linkage activities to ensure precise agriculture. Bottom: IITA management team with the dignitaries and PAULESI students.