

New crop-livestock technologies to mitigate conflict between crop and livestock farmers in DRC

More than 20 farmers from Katogota and Kamanyola in the Ruzizi plain of South Kivu Province, Democratic Republic of Congo (DRC), took part in a participatory evaluation of intercropping trials of maize and Brachiaria grass. [IITA](#) organized this activity on 14 July as part of the Integrated Project for Agricultural Growth in the Great Lakes (PICAGL) in collaboration with the Consortium for Improving Agriculture-based Livelihoods in Central Africa (CIALCA) project.

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A farmer evaluating a maize and Brachiaria grass intercropped trial site in Katogota, DRC.

IITA and partners organize seed fair in Kano and Jigawa

From 10 to 15 June, [IITA](#) and partners organized a joint seed fair in the northern Nigerian states of Kano and Jigawa. The seed fair aimed to create awareness among farmers on the availability of seeds of improved crop varieties and help them to access quality seeds for enhanced productivity. Additional objectives are to provide market opportunities for the seed companies to market their seed and establish partnerships with different stakeholders along the crop value chains.



The IITA-Kano Station exhibition showcasing improved seeds.

The IITA-Kano Station exhibition showcased improved crop varieties that the Institute is promoting in the region. Among the most notable were the improved seed varieties of cowpea, soybean, and maize. They also provided information materials on improved crop management and IITA's work to support farmers with new technologies to help them realize high yields.

The implementing partners of the Accelerated Varietal Improvement and Seed Delivery of Legumes and Cereals in Africa (AVISA) Project organized the fair with the theme "Quality seed: the basis for enhancing product quality and achieving

better yields for smallholder farmers". The partners in Nigeria are IITA, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Syngenta Foundation for Sustainable Agriculture (SFSA), Institute for Agricultural Research (IAR/ABU), University of Agriculture Makurdi (UAM), Center for Dryland Agriculture (CDA-BUK), Kano Agriculture and Rural Development Authority (KNARDA), and Lake Chad Research Institute (LCRI). The 3-day event attracted over 1,200 participants, including researchers, seed companies, input suppliers, farmer-processors, buyers of improved seed, community leaders, and service providers.

The Fair took place in selected farmers' hubs established by the Syngenta Foundation at Tofa and Bunkure communities in Kano and Birni Kudu in Jigawa. The Fair was officially opened at each Center by the District Head of the Local Government Areas.

In her opening remarks, AVISA National Coordinator, Prof. Mary Yeye, stressed that AVISA aims to make available improved seed varieties to improve the lives of smallholder farmers. She said, "This will be achieved as farmers adhere to good agronomic practices. Achieving this will automatically translate to increased income and improve the standard of living of the farmers."

IITA-Kano Station Head [Alpha Yaya Kamara](#) emphasized the significance of quality seed as a prerequisite for increasing yields on farmers' fields. "Using high-quality seed is one of the most important elements in increasing agricultural production in any farming system," he said.

SFSA Country Program Manager Isaiah Gabriel said the foundation's mission was to facilitate commercialization and increase the adoption of specific varieties of cowpea and sorghum. They also aim to build a sustainable seed and grain production system in Nigeria. He encouraged the seed companies to capitalize on the one-stop-shop farmers' hub platform the SFSA established in several LGAs in Kano and Jigawa states for seed sale and grain aggregation.

IITA Seed System Specialist [Lucky Omoigui](#), explained that the AVISA project aims to develop a viable seed delivery system in Nigeria that will enhance farmers' access to quality seed of legumes and cereals. He noted that good seed interacting with a good environment would determine the crop's health and productivity.

Representatives from ICRISAT—Dr Ignatius Agaraiwa, Dr Ajeigbe Hakeem, Dr Michael Vabi; IAR Zaria—Prof. Daniel Abba; and Bayero University, Kano—Prof. S.G. Mohammed also delivered goodwill messages underscoring the increasing demand for quality seed of improved crop varieties. They applauded the opportunities the seed fair created for farmers within and outside the communities to purchase quality seeds of the various improved varieties.

In addition to improved seeds, many farmers purchased other inputs such as insecticides and fertilizers for this year's cropping season.



Top: Seed companies reached out to different stakeholders along the crop value chains. Bottom: Over 1,200 farmer-processors, researchers, seed companies, input suppliers, buyers of improved seed, community leaders, service providers, and agro-hobbyists participated.

The evaluation session came about 10 months after introducing the maize–*Brachiaria* systems in the Ruzizi plain. IITA Research Associate in Livestock, Samy Bacigale, explained the motivation for this research as the scarcity of livestock feed in the Ruzizi plain, especially during the dry season where cattle farmers opt for transhumance—migratory herding—looking for abundant pasture. Cows destroy crops on their path leading to conflict between crop and livestock farmers.

“These systems involve intercropping improved *Brachiaria mulato* with maize and soybean crops to have food for humans and feed for livestock while preserving the soil quality. These systems aim to mitigate the conflicts between pastoralists and crop farmers, which negatively impact the adoption of agriculture technologies,” said Bacigale. “These interventions target 600 primary beneficiaries who will extend the technology to more than 3,500 secondary beneficiaries when the members of local farmers’ organizations involved in the project duplicate this technology on their own farms,” he continued.

Brachiaria mulato, which is being promoted, was improved from already degenerating local strains of *Brachiaria ruziziensis*, native to the Ruzizi plain.

According to IITA Agricultural Production Systems Scientist [Kokou](#)

[Kintche](#), this technology will enhance maize production to feed people and provide fodder for livestock without altering the soil’s physical and chemical properties.

One of the beneficiaries of the PICAGL project from Kamanyola, Chakupewa Jacqueline Mugobozi, welcomed this new maize-fodder system with open arms as she feels it will improve their production which was already low due to migratory herding.

“This new technology comes at the right time to reduce conflicts between herders and crop farmers, caused by the straying animals,” said the secretary of Katogota locality, Bagalwa Muhara.

The same activity was conducted at three other sites in the Ruzizi plain, namely, Luvungi, Bwegera, and Runingu.

To scale out the crop-livestock technologies, IITA is partnering with Vétérinaire Sans Frontière-Belgium (VSF-B) to introduce improved livestock feed technologies and improve livestock breeds in eastern DR Congo. In South Kivu, more than 600 cows were artificially inseminated last year and are now calving hybrids of Jersey-Ankolé. They expect to double milk production from the adoption of improved forages and improved breeds.



A calf bred by artificial insemination (AI) in Walungu, South-Kivu.

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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) for headquarters and Western Africa, Catherine Njuguna (c.njuguna@cgiar.org) for Eastern and Southern Africa, and David Ngome (d.ngome@cgiar.org) for Central Africa.



YIIFSWA II hands over project outputs to GoSeed for post-project sustainability

The [Yam Improvement for Income and Food Security in West Africa Phase II \(YIIFSWA II\)](#) project has handed over some project outputs to [IITA GoSeed](#) to ensure the post-project sustainability of the technologies. In a short ceremony on 14 July, the project turned over 42 plant form temporary immersion bioreactors (TIS) and 40 plantlets, as a part of the exit strategy, with YIIFSWA II nearing its December 2021 end.



Dr Mercy Diebiru-Ojo, speaking to Radio IITA, highlights the advantages of the technology transfer.

YIIFSWA II Project Tissue Culture Specialist [Morufat Balogun](#) handed over the technologies on behalf of the project to GoSeed's Assistant Cassava Seed System Specialist [Mercy Diebiru-Ojo](#).

The materials are expected to enable GoSeed to build its production capacity. GoSeed staff have been in training for three months and will continue till December, so they can carry on the production of clean nuclear stock of yam planting materials for years to come.

"We want all innovations that YIIFSWA has done in terms of seed, planting materials—the bioreactor system, the aeroponic system, the hydroponic system—for production of yam to be run in a sustainable way; and having the business aspect involved which GoSeed can run through," said Balogun.

The YIIFSWA II project has worked on different new technologies for producing quality seed yam materials on a research level. According to Diebiru-Ojo, handing them over to GoSeed is an opportunity to increase the scale of what they have achieved and take it to a commercial level. Commercialization will drive down the cost of quality seed of yam materials, which will be a massive advantage for GoSeed. "We need the large quantity to help us meet the huge demand out there. So the products will go a long way in pushing us forward in terms of producing quality seed, which will help

our operations. So we are very grateful to the YIIFSWA II team," said Diebiru-Ojo.

The YIIFSWA project, led by [Norbert Maroya](#), has worked for 10 years to

develop a functional, commercial seed yam system in Nigeria and Ghana to benefit smallholder farmers through timely and affordable access to high-quality seed yam tubers of improved varieties.



Top: Tissue Culture Specialist Dr Morufat Balogun (right) signing over YIIFSWA technologies to GoSeed. Bottom: GoSeed's Mercy Diebiru-Ojo (left) receiving 42 plant form temporary immersion bioreactors (TIS) and 40 plantlets from YIIFSWA's Morufat Balogun.

A life-changing experience with I-Youth - Series 1

The [Innovative Youth in Agriculture \(I-Youth\)](#) project has completed year 1 activities across various project components in Kaduna, Kano, and Lagos states, Nigeria. [IITA](#) is implementing the I-Youth project in partnership with the Mastercard Foundation, cutting across six components: agricultural orientation, agribusiness internships, technical internships, young farmers' cohort, [Start Them Early Program \(STEP\)](#), and e-commerce.



Oluwaseun Evelyn Areo displaying her product.



Evelyn Areo harvesting fish for smoking.

The beneficiaries of the project already have tales to tell. These stories will be presented in a series to highlight the project's impact on beneficiaries across the six components within the next few weeks.

Oluwaseun Evelyn Areo is one of the project's beneficiaries under the agribusiness internship component in Lagos State. The agribusiness interns expressed an interest in the entrepreneurship track, where they were coached on establishing agribusiness enterprises along chosen value chains.

Areo, who studied animal nutrition and biotechnology at Ladoke Akintola University of Technology (LAUTECH), said the training was an eye-opener. She said she never knew she could achieve so much within a short period. Areo was trained in aquaculture, and during the training, she was already considering embarking on a small-scale fish smoking business.

"On the second week of the training, our facilitator trained us on fish value addition, and that was where I took an interest in catfish smoking. I approached the facilitator and mentioned that I would like to invest the initial 10,000 naira transport allowance given to us by the project into the business. She encouraged me, and that was how my journey into this business started," she said.

Enthusiastic about what she does, she participated actively during practical sessions and gained experience that allowed her to venture into her own business within two weeks of the training. She started using social media to advertise what she does.

"When I started, I posted pictures of my packaged smoked catfish, and advertised on my platform in jest. But I was amazed as people started contacting me and making inquiries about the price, location, and if I could deliver to them. The orders I got exceeded the 10,000 naira I invested and I added some personal funds and produced 20 kg of live catfish. I quickly made stickers and packaging nylon and started selling," she said.

Within two weeks, Areo had sold out all she produced. With her customer base expanding, she produced an additional 25 kg and recorded exports to Ghana through her relatives.

"I am so glad that this training has afforded me the opportunity to see agriculture in another dimension. Despite the fact that I studied something related to agriculture, I had never seen it in this way. My plan is to purchase my own smoking kiln because I am currently using the one provided by the project for practical sessions. I will also get my NAFDAC registration. I will incorporate more products by producing smoked chicken, snail, etc.," she added.