



IITA gets new training facilities for cassava processing in Tanzania

IITA's efforts to promote the processing of cassava in Tanzania have received a major boost with the completion and handing over of newly constructed facilities for a training center on cassava processing on 27 January. Facilities included an equipment fabrication workshop, a cassava processing center, and offices.

The construction of the buildings, which are on land donated by the Government of Tanzania to IITA in Kwembe, about 30 km from Dar es Salaam, was funded by the Support to Agricultural Research for Development of Strategic Crops in Africa (SARD-SC) project. This is a multinational, CGIAR-led project, funded by the [African Development Bank](#) and led by IITA.

The buildings are part of the project's efforts to support the generation of agricultural technology and innovations through the construction of improved facilities that support efficient dissemination of postharvest cassava processing technologies to the farming communities.

On hand to receive the building was [Edward Kanju](#), a senior Scientist at IITA-Tanzania on behalf of the IITA Director for the Eastern Africa hub, [Victor Manyong](#).

Also present at the event was [Veronica Uzokwe](#), the Country Coordinator of the IITA/SARD-SC project. Uzokwe emphasized that the center would go a long way in supporting IITA's efforts to disseminate cassava postharvest innovation/technologies and value

addition. This in turn is expected to contribute to improving food security to overcome hunger, improve livelihoods, and lift the country out of poverty.

She said the training center will bring together stakeholders from across the country for theoretical and practical lessons on postharvest cassava processing technologies.

"The project is complete and ready to operate; we hope that IITA will get more funds for operational efficiency," said Uzokwe.

According to Bakari Abdallah, IITA/SARD-SC Research Assistant, the project has purchased improved cassava postharvest processing machines that will be installed soon.

"We have already purchased equipment such as a hammer mill, fryers, hydraulic presses, and peeling and chipping machines ready for installation in the cassava processing building. The machines will speed up the processing of high quality cassava products compared to local technologies," said Bakari.

Others present at the handing over ceremony were Zulfawu Yahaya, IITA/SARD-SC Procurement Specialist; Clare Ruhweza, IITA Regional Maintenance Officer; Gilbert Kimboka, Assistant Maintenance Officer at IITA-Tanzania; Davis Mwakanyamale, SARD-SC Country Supervisor; and Onugbolu Onyekachi, a consultant Quantity Surveyor from IITA-Ibadan, Nigeria.



New cassava processing facilities in Kwembe, Tanzania.

New partnership celebrates scientific innovations shaping global agriculture today

The global agriculture coalition Farming First and the [CGIAR](#) have joined forces to highlight the powerful impact that investments in science and innovation can make on global development. A new [interactive essay](#) compiled by the partnership demonstrates how these investments can go beyond simply meeting food security needs, but contribute to broader interlinked goals such as natural resource management, improved nutrition, and resilient rural livelihoods.

"Scientific discoveries and innovations are helping farmers make breakthroughs every day," comments [Robert Hunter](#), Farming First co-Chair, "helping them feed their families, earn a better living, and look after the natural resources we all rely on. This collection of case studies illustrates how science and technology can help lift a farmer from poverty to prosperity".

According to the United Nations Food and Agriculture Organization (FAO), 793 million people in the world are still undernourished. Despite reductions in poverty levels in recent years, World Bank research estimates that 100 million people could be pushed back into poverty



due to climate change. Farming First and CGIAR intend for the interactive essay to demonstrate how effective investments in scientific research and innovation for agriculture can be used in meeting these challenges.

“Studies have demonstrated for decades that agricultural research is the most cost-effective investment that exists for development,” comments [Frank Rijsberman](#), CEO of CGIAR. “Our planet is under unprecedented pressure to simultaneously ensure healthy diets for all, boost rural incomes and employment as well as protect vital natural resources. As we begin our path towards the Sustainable Development Goals, agricultural research for development must play a central role”.

The interactive essay explores, through photographs and videos, the scientific advances that are transforming rural lives all over the world today. The 28 case studies sourced from Farming

First supporters and CGIAR Centers are organized into five themes: natural resource management, agricultural extension, improved inputs, resilience, and market access. They include:

- Drones and satellite mapping systems that are tracking plant health and land use change.
- Improved crop varieties that are more nutritious, resilient to disease, and able to survive under extreme weather conditions.
- Innovative extension models that are delivering training via mobile, video, and radio to farmers in remote locations.
- Faster, more efficient electronic systems that digitize tracking and payment information for small to mid-size agribusinesses.

The infographic is the latest in Farming First's multi award-winning [creative products](#) in support of sustainable agriculture around the world.



Investment in research has been helping our farmers attain a better quality of life.

IITA builds capacity of staff and partners in Tanzania on aflatoxin control

IITA recently trained its staff, partners, and farmers in Kongwa District, Tanzania, on how to control aflatoxin using [Aflasafe](#), an effective and safe biological control product developed by researchers at the Institute and partners.

Kongwa is a major maize and groundnut growing and consuming area. Both are important basic ingredients in complementary weaning foods in Tanzania.

Consumption of [mycotoxin](#)-contaminated complementary foods by children under five years has been implicated in the high rates of child growth impairment in Tanzania, manifested as stunting (42%), being underweight (16%), and wasting (5%).

Before the training, the IITA team paid a courtesy call to Jackson Shija, the District Agricultural, Irrigation and Cooperatives

Officer (DAICO), who appreciated the Institute's efforts in supporting them to tackle the aflatoxin problem in the District.

“We are very concerned about aflatoxins because maize and groundnut are staple crops in the area. Our district has the highest stunting rates in the country; 56% compared to 42%, the national average,” he said.

“Although we have been encouraging farmers to grow small grains, especially bulrush millet and sorghum, they are not willing to grow these crops, preferring instead to grow maize and groundnut. Since we have failed to persuade farmers to grow these other crops, efforts to manage aflatoxin are very welcome. Let us find a solution to make the product safe, as we know that farmers will always grow and consume maize and groundnut.”

In addition to creating awareness on aflatoxin and its health threats, the training, held 21–22 January, focused on how to conduct efficacy trials for Aflasafe. Kongwa is one of the target districts where field trials to develop an effective aflatoxin biological control product for Tanzania are being conducted.

According to [George Mahuku](#), IITA Plant Pathologist who led the training, the participants were trained on how to set up trials, how to handle the Aflasafe product, how to apply it on maize and groundnut, what to do or not do after the application, and the types of data to collect.

For example, he said, the farmers or researchers should keep off the fields, and suspend weeding or any farm activities for two to four weeks after application to avoid burying the product in the soil and affecting its efficacy.

A total of 17 participants were trained. They included extension agents from the Ministry of Agriculture, Livestock and Fisheries, Kongwa District Council, the National Biological Control Program (NCPB), and farmers on whose fields validation trials were being conducted. Also conducting the training was Greg Ogbe from IITA-Nigeria, who shared his experiences from similar activities conducted in Nigeria, Ghana, and Senegal.



Stakeholders at Kongwa prepare to be shown how to apply the aflasafe in the field.

Enhancing soybean production in Nigeria through the SARD-SC maize system

The IITA/SARD-SC maize system soybean production enhancement planning workshop was held 1–4 February in Abuja to promote soybean cultivation and utilization in Nigeria. The workshop became imperative because of the huge deficit in the annual demand for the crop. Demand is currently estimated at 2.2 million tons; the annual production of 600,000 tons is grossly inadequate to meet this demand hence the need for a concerted effort to bridge the gap.

The project is expected to mobilize the strength and expertise of stakeholders in the maize–soybean value chain to support production of soybean, a complementary crop to the maize commodity value chain in the SARD-SC project.

In his opening remarks, [Chrys Akem](#), SARD-SC Project Coordinator, reiterated the importance of soybean and bemoaned the current low cultivation of the legume in the country.

“This workshop is an opportunity for us to walk our way back to the days when we had a surplus and strengthen soybean cultivation as a companion crop to maize.” Akem enumerated the many advantages of soybean as a food and nutritional security

crop in Africa and the many existing high yielding varieties with good resistance to rust. He mentioned the opportunity for market linkages through the innovation platforms while challenging the soybean growers and poultry feed millers to maintain the sustainability of the soybean industry.

[Sam Ajala](#), Maize Commodity Specialist, emphasized how the workshop participants could help map out a focused and clear goal for the crop in the next five years, and introduce business-led models to market soybean.

In his paper, titled Enhancing Soybean Production within the SARD-SC Maize Project in Nigeria, [Kolawole Ojo](#), SARD-SC Soybean Scientist, pointed to the economic importance of the crop and the complementarity of maize–soybean production. “Soybean improves soil fertility through atmospheric nitrogen fixation. Processed soybeans are the world’s largest source of animal feed and the second largest source of vegetable oil,” he said.

Ojo said that the SARD-SC project will help generate improved maize and soybean production/utilization technologies; ensure



Chrys Akem reiterates the importance of promoting soybean at the workshop.

dissemination/promotion of improved technologies; enhance food and nutrition security; and contribute to poverty reduction in Africa. Ojo emphasized the importance of partnership with national and international scientists, seed companies, processors, farmers, NGOs, and extension workers as part of the operational strategy to achieve these projections. Some of the steps to enhance soybean production include capacity building of the value chain actors, and generation and promotion of preferred maize/soybean varieties that could be adapted to various agroecologies and that are tolerant to major biotic and abiotic stresses.

Soybean scientists from research institutes, soybean farmers, poultry farmers, representatives of seed companies, and other interested stakeholders attended the workshop and brainstormed on the strategies to enhance soybean cultivation. They also deliberated on the way forward for soybean production enhancement.



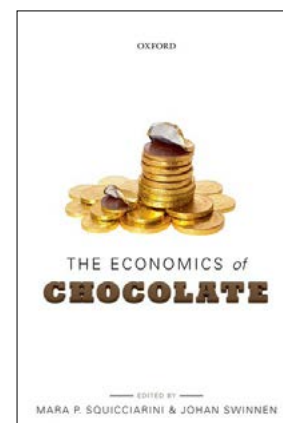
Participants at the soybean workshop.

Off the press: New book on chocolate

Oxford University Press book has recently released a new book on Chocolate entitled [The Economics of Chocolate](#). This innovative book is the first of its kind to provide a comprehensive economic overview on chocolate. The book has a worldwide appeal with chapters on Europe, the US, China, India, the former Soviet Union, Ghana, Côte d'Ivoire, and Ecuador. It is also multidisciplinary, focusing on areas in economics, business, psychology, history, government, nutrition, and

geography. It also includes a wide range of topics including the history of cocoa and chocolate, sustainable sourcing, production and consumption, consumer choices, the nutritional, psychological, and health effects of chocolate consumption, government regulation, rich consumers and poor producers.

Chapter 13 on Policy Reform and Supply Chain Governance: Insights from Ghana, Côte d'Ivoire, and Ecuador was co-written by IITA’s [Sander Muilerman](#) with Sietze Vellema, Anna Laven, and Giel Ton.



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).

Polish investors visit IITA-Abuja

Agricultural investors from Poland have indicated interest in partnering with IITA to help in improving Nigeria's agricultural development. This was announced during the visit of a three-person team of Polish investors led by Ewa Olszewska, the International Project Manager, Poland–Africa Partnership and Cooperation, to IITA Abuja station on 3 February.

The visitors expressed satisfaction with the structures at the IITA Station, and requested to use the facilities for the demonstration of their farm machinery. In addition, they invited IITA to pay a learning visit to Poland and offered to help the Institute in deploying world-class technologies on mechanization and commercial agriculture. They also invited IITA scientists to the ground-breaking opening ceremony of their manufacturing plant for agricultural implements,



Polish investors went around the IITA-Abuja station.

machines, tractors, and vocational center in Kaduna State later in the year.

[Gbassey Tarawali](#), Head of the Abuja station, who received the visitors, assured them of IITA's readiness and willingness

to collaborate in efforts to complement the Nigerian Government's initiatives at promoting food security and employment generation in the country.

Study finds gaps in Nigeria's extension system

A study on the training needs assessment of extension agents in Nigeria has revealed several gaps and constraints that have limited the effectiveness of the extension service in the country.

While presenting a paper on "The capacity of extension staff in managing weeds in cassava systems in Nigeria" in Nanning, China, during the [World Congress on Root and Tuber Crops](#), the Communication and Knowledge Exchange expert of the Cassava Weeds Project at IITA-Nigeria, [Godwin Atser](#), said that "Maximizing the benefits of improved weed management technologies in cassava systems by farmers entails that extension workers must have the capacity to transfer the improved knowledge from research stations to farmers."

Put at 1:3011, the ratio of one extension worker for over 3000 farmers drastically fell short of the target of the Nigerian Government to have one agricultural extension worker attached to 800 farmers, posing a serious challenge to the agricultural transformation agenda of the government.

Atser said that apart from the grossly inadequate number of extension workers, the study indicated that the existing workers were older and lacked capacity as a result of underfunding

and basic requirements, causing inefficiency.

The study specifically investigated the capabilities of extension staff of Agricultural Development Programs (ADPs) in weed management in cassava systems in Nigeria.

"The findings of the study," Atser said, "showed that more than 80 percent of extension staff has not had training that specifically targets weed management in cassava.

"There is a knowledge gap on weed identification, types of herbicides, cassava varietal identification, and computer skills among extension staff.

"Furthermore, the extension system in Nigeria is male dominated and most extension agents are 50 years and

above. Radio, telephone, and group discussions were the most used communication channels for technology transfer to farmers by extension staff."

He recommended training extension staff in sustainable management of weeds in cassava systems with specific emphasis on weed identification, herbicide use and application, cassava varietal identification, gender, and computer skills.

Atser concluded by calling for the recruitment of young, educated, and upwardly mobile agricultural extension workers in Nigeria, with intensive capacity development to meet the need for effective dissemination of information to farmers on new technologies, varieties, and market opportunities.



Atser, presenting the findings of the extension study in China.

TAMASA conducts workshop on nutrient expert

Partners in the Taking Maize Agronomy to Scale in Africa (TAMASA) Project have successfully concluded a two-day workshop to enhance the development of Nutrient Expert (NE) – a computer-based package, which will aid in developing fertilizer recommendations suitable for variable soils and climatic conditions taking into consideration farmers' socioeconomic status.

The NE for Maize decision support tool was developed by the International Plant Nutrition Institute (IPNI). NE uses site-specific nutrient management principles to quickly and systematically formulate fertilizer recommendations for maize tailored to a specific field or growing environment. It determines fertilizer requirements for specific growing conditions based on multilocation, on-farm nutrient omission trial data, and existing site agronomic and soil information.

NE has been adapted for use in the TAMASA project to support extension service providers in making efficient and effective site-specific fertilizer recommendations to farmers that will help to increase and sustain maize yield and profitability. The adaptation of NE will be done together with users for service providers and researchers to co-generate and co-learn in the process of developing the fertilizer recommendations.

The workshop achieved its various objectives through presentations, question and answer sessions, and group discussions after which feedback was provided.

During the workshop, soil fertility constraints and the common practice of blanket fertilizer application by farmers were discussed. The importance of NE



TAMASA training group discussion.

in limiting this problem was identified as the tool has the capacity to recommend a site-specific fertilizer rate. The tool was evaluated to be very important in supporting farmers to make appropriate agronomic decisions in production. Participants explored the use of the tool coming up with feedback on its value, challenges faced on its use, and suggestions on how the tool can be improved. The use of the NE tool was evaluated by different partners to understand their specific needs in reaching out to farmers. Finally, action plans were developed for the adaptation of the NE tool and suitable extension products in relation to the specific needs

and demands of different extension service providers.

The workshop took place in Kano on 3–4 February and was organized by IITA, in collaboration IPNI. IPNI scientists headed by Shamie Zingore, Regional Director, sub-Saharan Africa, facilitated the proceedings for about 45 participants from Bayero University/Center for Dryland Agriculture, Agricultural Development Programs (Kaduna, Kano, and Katsina states), Sasakawa Global 2000, NOTORE, Doreo-partners, the National Agricultural Extension and Research Liaison Services (NAERLS), SARD-SC, and IITA.

Announcement

- **Joint World Cowpea and Pan-African Grain Legume Research Conference 2016**, co-organized by IITA and the Feed-the-Future Legume Innovation Lab, Livingstone, Zambia, 28 February to 4 March 2016. For more information, visit the conference [website](#) or download the conference [announcement](#).
- **Training of Trainers (ToT) on ITC's Trade Intelligence Tools** (Market Access Map, Standards Map, Trade Map), 10-13 May 2016, IITA Ibadan. For more enquires, contact info@ieom-ng.org; op.akande@gmail.com; IITA-TrainingUnit@cgiar.org.
- **7th International Nitrogen Initiative Conference**, Melbourne, Australia, 4–8 December 2016. More details on the conference are available [here](#).