

Oyo State Governor commissions IITA projects

Former President of Nigeria and IITA Goodwill Ambassador, Chief Olusegun Obasanjo GCFR, together with the Governor of Oyo State, HE Senator Abiola Ajimobi, commissioned two key projects at IITA, Ibadan on 25 May. These include the Agricultural Transformation Building dedicated to research and delivery of innovations to farmers across Nigeria and Africa in general, and a 10.5-km ring road named after Senator Ajimobi, within IITA. In addition to the commissioning, IITA presented an Agricultural Policy Framework for Oyo State to the Governor for Oyo State.



At the commissioning of the Senator Abiola Ajimobi Ring Road. L–R: IITA DG Nteranya Sanginga; former Nigerian President, Chief Olusegun Obasanjo; and Senator Abiola Ajimobi, outgoing Governor of Oyo State.

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IARSAF holds 22nd Annual Symposium

The 22nd Annual Symposium of the IITA [International Association of Research Scholars and Fellows](#) (IARSAF) was held on 20-24 May in Ibadan. The annual symposium is a gathering of research fellows and early career researchers and provides an opportunity to showcase their research activities through posters and oral presentations.

Following the theme of the symposium: "Innovative Agricultural Research for Food Security and Climate Change Mitigation in sub-Saharan Africa," keynote speakers were selected to address the impact of climate change on food security and hidden hunger in sub-Saharan Africa. Climate change is already

affecting the continent, and predictions show that some of the worst impacts will be on agricultural production. Therefore, scientists in Africa and their partners will need to develop drought- and heat-resistant crops, improved livestock breeds, and new techniques of soil and water management.

Policymakers like the Governor-elect of Oyo State, Engr Seyi Makinde, were invited to discuss what is happening and the efforts being put in place to reduce the impact of climate change. This is expected to guide the incoming administration in the formulation of agricultural policies for the state, viz-a-viz what has been achieved, and a milestone of what is expected.



IARSAF President Sanni Afolabi giving the opening speech.

In his welcome address, IARSAF President Sanni Afolabi said, "IARSAF is an association of IITA graduate research fellows with the main aim of ensuring in-depth training of early researchers." Research fellows are expected to scale up their research to reduce the impact of climate change and ensure food security. In line with this, Janice Olawoye, Professor of Rural Sociology and IITA Consultant, working to improve the Institute's research said, "It is not research for publication alone but research to solve problems."

[May-Guri Saethre](#), Deputy Director General, Research for Development, stressed the impact of young scientists produced by [IITA](#)

and said, "Hopes are high that discussions like this will solve issues surrounding climate change and food security." Similarly, Taofeek Adegboyega, emeritus IARSAF President while representing Dr Akin Fagbemi, founder of Akin Fagbemi Foundation, said, "We are all aware that agricultural innovation can transform livelihoods and lift rural people out of poverty as exemplified by numerous research outputs by IITA and partners."

One of the keynote speakers, [Ghislain Tapa-Yotto](#), Coordinator of the [Biorisk Management Facility](#) (BIMAF), did a review of BIMAF's activities in the last few years, the effect of climate change

with regard to pests and diseases, and the importance of world health intelligence to climate-smart agriculture through BIMAF.

IITA Director General [Dr Nteranya Sanginga](#) encouraged research fellows to publish good articles and actively participate in all IITA programs. He also pointed their attention to bringing up creative and innovative ideas for IITA management to implement. Similarly, Carol Ibe, Founder of JR Biotek, said in her goodwill message, "I believe in hard work; therefore, I advise that any area of research one is into, it is necessary to make the most out of it."



Symposium participants.

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The building, which was funded by the African Development Bank through a Nigerian project—Agricultural Transformation Agenda Support Program (ATASP)—comprises 22 offices, eight large laboratory spaces, a conference room, and a utility facility. The 10.5-km road covers part of the perimeter fence of the 1000-hectare campus of IITA. The road was constructed by the Oyo State government as part of efforts to support agricultural research. Senator Ajimobi said that the support given to IITA was a confirmation of the importance of agriculture to Oyo State, and the contribution of IITA to agricultural development in the state. "Today Oyo state is the best place to invest and promote agriculture because we have IITA within the state," he said.

[Dr Nteranya Sanginga](#), IITA Director General, said "the rejuvenation of the IITA facility in Nigeria is crucial for the Institute's sustained efforts to transform agriculture on the continent. We are excited to see a state in Nigeria showing the example by supporting infrastructure in an international agricultural research center."

Concerned by the poor performance of agriculture, Governor Ajimobi last year requested IITA to produce a policy document that would provide direction to the transformation of agriculture in the state for the next 25 years. Based on this request, IITA worked with the [Nigerian Institute of Social and Economic Research](#) (NISER), the state ministry of agriculture, and Oyo State Agricultural Development Program to produce the framework. [Alfred Dixon](#), IITA Director for Development and Delivery, said the framework situated Oyo State agriculture in

context and examined the strengths, weaknesses, opportunities, and threats to key agriculture value chains in Oyo State.

"Our problem is not policy formulation but implementation," said Obasanjo. The IITA Goodwill Ambassador commended Governor Ajimobi for supporting IITA and called for the extension of innovations generated from research stations to farmers. He noted that there is a gap between research institutions and the ordinary smallholder farmers, "and we need to close that gap to bring about agricultural transformation," Chief Obasanjo added.

In his speech, Senator Ajimobi pointed to the fact that Oyo State not only has the highest

number of research institutes but is also the largest producer of cassava in Nigeria. "In the next 5 to 10 years, we believe Oyo State will become the food basket of the nation," he said. In agreement with this, Chief Obasanjo said "the technology, research, products of research, and innovation that will make Oyo State the food basket of the nation or Nigeria the food basket of the world are already available. However, to make this a reality, we must match these resources with human resources and funding."

[Robert Asiedu](#), Director of Research for Development (R4D) West Africa said, "I am optimistic that the positive impact from where we are starting today will be tremendous."



Representatives of IITA and NISER present Agricultural Policy Framework to Senator Ajimobi.

IITA attends flag-off of FCT 2019 farming season

IITA made a strong appearance at the Federal Capital Territory Administration Flag-off of the 2019 Farming Season on 21 May in Abuja. The IITA stand featured publications and products including Aflasafe, vine cutting technology, cassava stem varieties, rice, cowpea, maize, and soybean varieties.

The IITA exhibition facilitated the effective delivery of the FCTA partnership with IITA. In his opening remarks, the Secretary of Agriculture Hon. Nzekwe Stanley Ifeanyichukwu expressed optimism that the presence of IITA in the FCT will be harnessed for the benefit of its farmers.

FCT Flag-off Farming Season is organized yearly through its Agricultural and Rural Development Secretariat (ARDS) to assist FCT farmers with farm inputs and technologies, and facilitate access to knowledge and information on agriculture. The highlight of the 2019 event was the Hon. Secretary's announcement that, unlike in the past when middlemen pay and collect bulk products only to resell at high prices, this year's products have

been streamlined and regulated. He said that to ensure that the real rural farmers benefit from the sale of subsidized fertilizers at 50% discount, ARDS has decentralized the sale into six distribution centers including Bwari, Gwagwa, Gwagwalada, Kwali, Maje, and Tungan.

FCT Executive Secretary Engr Umar Gambo Jibrin, who represented the FCT Minister, disclosed that this year's farming was an improvement on last year's, as several innovations were introduced. He thanked major stakeholders in the FCT such as IITA for their continuous support.



FCT Executive Secretary Engr. Umar Gambo Jibrin representing the FCT Minister and the Secretary of Agriculture Hon. Nzekwe Stanley Ifeanyichukwu at the IITA stand.



Subsidized fertilizers at 50% discount and other farm inputs for farmers.

Got a story to share?

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TAAT and ACAI train stakeholders on Good Agronomy Technology Practice

The [Technologies for African Agricultural Transformation](#) (TAAT) project in collaboration with the [African Cassava Agronomy Initiative](#) (ACAI) conducted a training on Good Agricultural Technologies' Practices (GATP) and Mechanization for cassava stakeholders in Mkurunga, Eastern Zone Tanzania. The training is part of TAAT's core objective to empower project stakeholders for efficient and effective deployment of appropriate technologies.

The training was organized at the Central District Office, Mkurunga on 4-5 March. It was facilitated by ACAI East Africa coordinator and IITA Systems Agronomist [Veronica NE Uzokwe](#); ACAI and IITA Weed Scientist [Prof Friday Ekeleme](#); and Engr George Marechera, Business Development Manager for the [African Agricultural Technology Foundation](#) (AATF).

Participants in the training included representatives from the [Tanzania Agricultural Research Institute](#) (TARI), development partners: FJS starch company and Mennonite Economic Development Associates (MEDA), government representatives, extension agents (EAs), and cassava growers. The GATP and mechanization

of cassava production systems training aims to empower stakeholders, particularly EAs, who work very closely with cassava growers.

In her opening remarks, the guest of honor Madam Julitha Bulali, who is the District Agricultural, Irrigation and Cooperative Officer (DAICO) in Mkurunga District, hailed the training as a progressive step towards empowering smallholder farmers.

Uzokwe gave an overview of the objectives and the content of the training which covered topics including good agricultural practices, data capturing, proper use of herbicides, and alternative weed management options in cassava production. The facilitators also gave training sessions on mechanization in cassava production and record keeping, logistics management, and cost-effective tracking.

In her presentation, Uzokwe emphasized the importance of applying tailored GATP to increase productivity and profitability. Participants in work groups developed work plans to implement in the first project year of TAAT. A reward system for work delivery and payment modality was also designed for the EAs. Participants discussed and

agreed to establish several demo fields per district, site selection processes, plans for field activities, and sourcing of planting materials.

Ekeleme led a practical session on how to calibrate herbicide volumes to be used in knapsack spraying. In his presentation, Ekeleme emphasized the importance of considering the efficacy and safety of herbicides to be applied to manage weeds in cassava fields to optimize yield and generate income from cassava.

According to TAAT cassava-compact leader, [Adebayo Abass](#), the project will train a minimum of 4,000 smallholder farmers in Tanzania. Abass said the farmers will be taught to handle user-friendly mechanized tools from production to harvesting of cassava. Participants will also exchange experiences that would ensure that the training aligns well with the expected outputs.

Representatives from the cassava growers' group, TARI, government, and development partners expressed their gratitude to the training organizers and noted that the skills learned will empower them to carry out their duties effectively.



Veronica Uzokwe presenting on the importance of good agricultural practices to TAAT and ACAI stakeholders.

IITA scientists and partners screen up to 189 types of banana for provitamin A

Scientists have finalized the mammoth task of screening up to 189 banana genotypes to identify those with high levels of provitamin A for integration into IITA's banana improvement program as part of ongoing efforts to develop banana hybrids with enhanced vitamin A.

The fat-soluble vitamin A is essential for vision, reproduction, growth, and the body's immunity. Its deficiency leads to health conditions such as xerophthalmia (abnormal dryness of the eyeball characterized by conjunctivitis), anemia, and increased susceptibility to and severity of infections.

One of the effective ways to combat vitamin A deficiency in populations in developing countries with limited options for diverse diets is through biofortification of major staples.

Scientists have successfully biofortified maize, cassava, and sweet potato with vitamin A through conventional breeding. A lot of attention is now on biofortifying banana.

Scientists from IITA and the [University of the Free State](#), South Africa, successfully screened banana genotypes at the IITA banana breeding program in Nigeria comprising plantain, *M. acuminata* cultivars, and bred hybrids to determine levels of naturally occurring provitamin A carotenoid (pVAC) in fruit pulp using high performance liquid chromatography.

The findings were published in a paper, [Variability of carotenoids in a Musa germplasm collection and implications for provitamin A biofortification](#) the Food Chemistry: X journal last month.

Carotenoids are a diverse group of multifunctional plant pigments responsible for the yellow, orange, and red color seen in many fruits and vegetables including carrots. They are

important in plants for photosynthesis, but in humans they are important as biological antioxidants, and provitamin A carotenoids, in particular, are an important source of vitamin A.

The total carotenoid content in tested genotypes varied from 1.45 $\mu\text{g/g}$ for one of the hybrids to 36.21 $\mu\text{g/g}$ for the *M. acuminata* cultivar with a mean of 8.00 $\mu\text{g/g}$ fresh weight. Of the predominant carotenoids identified, about 78% are pro-vitamin A.

"This study demonstrates that crossbreeding in banana and plantain is feasible to obtain hybrids combining high yield and resistance with a high provitamin A content," said [Prof Rony Swennen](#), Head of banana breeding at IITA and one of the researchers involved in this study.

Selected plantain, *M. acuminata* ssp. *banksii*, and hybrids with high provitamin A carotenoid content will be useful in initiatives seeking to promote banana as a dietary source of vitamin A.



Provitamin A bananas.

Oyo State NIRSAL team visits IITA

Representatives from the Nigeria Incentive-based Risk sharing System for Agricultural Lending (NIRSAL) visited [IITA-Ibadan](#) on 23 May. The visit aimed to seek out opportunities for collaboration with IITA, especially in agribusiness.

NIRSAL, a subsidiary of the Central Bank of Nigeria, responsible for funding farmers for optimum agricultural production, has offices in all states of Nigeria. Kenneth Osanebi, Head of the Oyo State NIRSAL team known as the Project Monitoring, Reporting & Remediation Office (PMR) led his team to meet with IITA Deputy Director General, Partnership for Delivery, [Kenton Dashiell](#) and [Alfred Dixon](#), Director of the Development and Delivery Office, IITA. The team, which is the contact center and business development unit of NIRSAL has about eight field officers working on different projects such as poultry, maize, cassava, and soybean.

The team visited the facilities and projects of the Institute, having heard so much about IITA's work in promoting agriculture in Africa, especially in the areas of maize and cassava. "We hope to establish a partnership with IITA where we can aggregate farmers together and finance them, with technical assistance from IITA in terms of capacity building and extension services," Osanebi said.

"IITA loves to catch farmers in groups for better agricultural production. The Institute has great technologies on cassava, maize, and soybean that will help farmers and IITA would love to partner with NIRSAL to better agriculture in Oyo State as we have same aim of delivering technologies," Dashiell said.

Dashiell advised the team to visit the IITA facilities including factories producing products to get an idea on what NIRSAL and IITA can work on together. The team visited the Aflasafe and Nodumax production facilities, [IITA Youth Agripreneurs](#) (IYA), and Semi-Autotrophic Hydroponic (SAH) lab for yam.

At the Youth Agripreneur building, Business Development Officer Idowu Osun explained that IYA focuses on technical and entrepreneurial skill development, supporting youth with start-up loans for their own businesses to become employers of labor in agribusiness. He noted that IITA is working on the [Technologies for African Agricultural Transformation](#) (TAAT) program funded by the [African Development Bank](#) (AfDB), which also has a youth component, ENABLE-TAAT. "IITA Youth Agripreneurs would love to work with NIRSAL to get more funds for beneficiaries," he added.



The Oyo State NIRSAL team in a meeting with Dr Kenton Dashiell and Dr Alfred Dixon.