

French delegation explores agribusiness collaboration with IITA Abuja

IITA, the French Embassy in Nigeria, and the [French Agriculture Research Centre for International Development \(CIRAD\)](#) held a meeting on 27 March at the IITA Abuja Station to strengthen existing partnerships among the three organizations.

The objective of the meeting was for all parties to better understand their respective areas of expertise and explore areas of collaboration for the implementation of potential projects as

a means of deepening IITA's relationship with the French Embassy in Nigeria.

[IITA](#) representatives at the meeting were [Gbassey Tarawali](#), Head of Abuja Station;

[Adebowale Akande](#), Senior Agribusiness and Development Specialist; Terngu Abur, Marketing and Visitors Service Officer; and Mary Mbafan Ukam, Project Assistant. They welcomed the French delegation, which comprised Patrice Grimaud, CIRAD Regional Director for Humid West Africa; Philippe Vernier, CIRAD Senior Adviser for International Organizations; and Root and Tuber crop Agronomist; Tancrede Voituriez, Economist and CIRAD Scientist; and

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French delegation with IITA Abuja staff.

USAID Mission Director to Nigeria visits IITA

The [United States Agency for International Development \(USAID\)](#) Mission Director to Nigeria, Stephen Haykin, paid a visit to [IITA](#) headquarters on 23 March, to discuss existing partnerships between USAID and IITA.



Stephen Haykin having a round-table discussion with top IITA management staff.

Haykin was received by senior IITA management including [Kenton Dashiell](#), Deputy Director General, Partnerships for Delivery (DDG-P4D) and [Hilde Koper-Limbourg](#), Deputy Director General, Corporate Services (DDG-CS).

In his welcome remarks, Dashiell expressed gratitude for the continuous support of USAID to IITA's research and development activities. He emphasized the commitment of the Institute towards ensuring sustainable and progressive development of the agricultural sector in Africa.

"The support of USAID to IITA for about 30–40 years, and to Africa for many years, has been very helpful in pushing agricultural research. We have established very strong partnerships in Nigeria as well," said Dashiell.

Haykin reiterated the mission of USAID to help developing countries move towards sustainable development. He also noted that USAID, which has had effective partnerships with IITA, believes in the prospects and expertise of the Institute, especially in improving livelihoods of farmers and farming communities in sub-Saharan Africa.

The Mission Director embarked on a tour of the IITA campus and facilities including visits to factories at the [IITA Business Incubation Platform](#) (BIP), the recently commissioned Tissue Culture Building, the Youth in Agribusiness Center, and the Tree Heritage Park.

According to Dashiell, funds from USAID have been valuable to agricultural research projects in IITA, such as the second 5-year phase of the [Africa Research in Sustainable Intensification for the Next Generation](#) (Africa RISING) which began in October 2016. Soon, another project also funded by USAID through the Feed the Future Initiative will commence.



Stephen Haykin, Nteranya Sanginga, and Ken Dashiell discussing at the Youth center.

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Professor Leila Mathieu, Science and Higher Education Attaché at the French Embassy in Nigeria.

In his welcome speech, Tarawali gave an overview of the activities of IITA, which had shifted from being a strictly research-based institute to research for delivery, with a strong focus on scaling out and commercialization of agricultural innovations through the [IITA Business Incubation Platform](#) (BIP). He emphasized the importance of IITA Abuja in building strategic partnerships, exploring how a partnership with CIRAD would further build other relationships across West Africa, not just Nigeria.

Akande highlighted IITA's strength in supporting food systems and food safety through aflatoxin control. He also noted IITA's work in breeding biofortified crops to enhance nutrition and ensure the competitiveness of agricultural production

in domestic, regional, and international markets.

In his response, CIRAD Senior Advisor Vernier noted the organization's long-standing relationship with IITA, affirming that IITA's objectives and priorities aligned with those of CIRAD, especially around partnerships for delivery. He stated that the delegation was interested in learning more about IITA's engagement with private sector companies in Nigeria and revealed that CIRAD was open to establishing a partnership with IITA, which has a reputable history in the agricultural sector in Africa. Therefore, CIRAD is willing to collaborate with IITA to develop new proposals and implement projects on diverse agribusiness and agric-financing-related issues.

To build this strategic relationship, it was proposed that a French delegation led by the

Ambassador, visit IITA leadership in Ibadan, Nigeria. This would be an opportunity for IITA to formalize a partnership with both the French government and CIRAD.

Furthermore, IITA Abuja has indicated its interest to participate in a one-day event, Campus France, organized by the French Embassy, scheduled to take place in Paris on 5 June. Campus France focuses on education and agriculture, and is a platform for universities and research centers in Africa to interface with French research centers and universities. Mathieu confirmed the successful award of the grant on Adaptation to Climate Change—a two-year project to build the capacity of seven universities in Nigeria. She also revealed her interest to facilitate bringing the [French National Research Institute for Development](#) (IRD) to Nigeria.

AfDB Vice President visits IITA

On 26 March, Dr Jennifer Blanke, Vice President of the [African Development Bank](#) (AfDB) paid a courtesy visit to [IITA](#) headquarters in Ibadan, Nigeria. She was received by IITA Director General, [Nteranya Sanginga](#), the Deputy Director Generals, and members of IITA management. The purpose of her visit was “to see how the collaborations were going and how both parties can do better.”

AfDB has been in partnership with IITA on projects such as the [SARD-SC Project](#) (2013–2017), [The ATASP-1 Outreach Program](#) (2016 till date), and the [TAAT](#) program (2018 till date).

In his welcome remarks, Sanginga expressed his delight about the visit and gave an overview of the history of the Institute, hubs and stations, achievements and recognition, annual budget, donors, as well as staff and diversities. He said, “We are very transparent because we

have no other agenda than to create positive impact, which everyone can benefit from.”

Speaking on the role of partnerships in achieving the transformation agenda of the Institute, IITA Deputy Director General, Partnerships for Delivery, [Kenton Dashiell](#) said, “The transformation of African agriculture is not done by IITA alone, it is achieved through partnerships.”

According to the Coordinator of [Technologies for African Agricultural](#)

[Transformation](#) (TAAT), [Chrys Akem](#), IITA has a very strong partnership alliance with the AfDB to transform agriculture and scale up agribusiness opportunities throughout 18 key agricultural commodity value chains via the Bank’s “Feed Africa” agenda. TAAT is essentially a knowledge and innovation-based response to the recognized need for scaling up proven technologies across Africa.

During a tour of IITA facilities, Blanke expressed her delight with the Youth in Agribusiness Center, congratulating the youth who had undergone training through the [Empowering Novel AgriBusiness-Led Employment for Youth in African Agriculture](#) (ENABLE Youth) program, and have now become CEOs. Other stops on her tour included the Aflasafe, Nodumax, and GoSeed facilities and the IITA Women’s Group Farm.



AfDB VP Jennifer Blanke in a round-table discussion with IITA senior management staff.

Got a story to share?

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IITA: Investing in tomorrow's researchers

For a long time, [IITA](#) has recognized gender equality in the workforce as an important ideal to pursue. To achieve this, the Institute has prioritized the development of women in research by investing in the next generation of women scientists and empowering them in their different roles.

One of such women being empowered today is Fatuma Musa, a Research Technician in Molecular Biology and Microbiology. Musa holds a degree in BSc Biotechnology and Laboratory Science from [Sokoine University of Agriculture](#) (SUA) in Morogoro, Tanzania. She is currently pursuing an MSc in Molecular Biology at the [University of Dar es Salaam](#) (UDSM) supported by IITA. Her study is focusing on beneficial endophytic bacteria that will be able to control fusarium wilt banana disease.

As a Research Technician in IITA, she has also been working to support research activities on controlling soybean rust diseases and black sigatoka disease of banana.

Musa says the findings of her study will contribute towards finding solutions to control disease and reduce their spread, thus saving farmers' production.

She likes her work because it involves controlling crop diseases—one of the factors that affects farmers' crop production.

She encourages other women to join science because "Women should become part of these solutions such as bringing in their expertise to combat crop diseases".

Another young female researcher, Research Associate Beatrice



Fatuma Musa, Molecular Biology and Microbiology Research Technician



Beatrice Bachwenkizi, Research Associate

Bachwenkizi, has been working in IITA for 8 years. She has worked in several projects such as the Common Fund for Commodities (CFC) and is now on the cassava COMPACT of the [TAAT](#) project analyzing the financial feasibility and profitability of farmers' activities.

Bachwenkizi, a mother of two, is an Agricultural Economist whose interest in agriculture started when she was young. Both of her parents were farmers so, "I have been helping my parents with agriculture activities and I understand the challenges they face and always wished to help."

She studied for her MSc in Agricultural Economics also at SUA, and has a PhD in Agriculture Economy sponsored by IITA.

According to Bachwenkizi, her work makes her feel good, as she is part of efforts to find solutions to challenges in agriculture and improve farmers' livelihoods.

"Working as an Agricultural Economist, I have been conducting a profitability analysis on cassava production and processing and providing information on the viability of the activities. We gather this information, analyze, and give feedback to the entrepreneurs whether they are making a good return on what they have invested."

She encourages other women to work and study to become agricultural economists because it will expose them to work closely with farmers and to solve their problems.

Research Technician Latifa Mustapha is a young scientist working as part of the team fighting aflatoxin contamination in food and grain. Aflatoxin is a poison that causes cancer, retards growth especially in children, and suppresses the immune system produced by *Aspergillus* molds in the field during crop growth or in storage.

Mustapha joined IITA in 2015 as an intern, one of many who receive extended industry exposure and training in the Institute. She was employed afterwards as a Research Technician in the Pathology laboratory where production of an all-natural product for aflatoxin ([Aflasafe](#)) takes place. Most of her work involves isolation of *Aspergillus flavus*.

Mustapha comes from a farming background in Kondoa District in Dodoma Region of Tanzania. This is one of the areas where aflatoxin has been reported



Latifa Mustapha, Aflasafe Research Technician

to have caused significant impacts such as death. According to her, she is happy to work with IITA in the production of aflasafe that will support her district and the country as a whole in addressing aflatoxin challenges.

"There are many opportunities in agriculture; women need to grab these opportunities. There are major challenges in agriculture such as plant diseases and pests, which need people like us to become a part of the solution. I encourage them to make use of these opportunities and take up agricultural sciences. People need food, but we must understand how to protect our food!"

Scientists discuss ways to improve RTB planting materials

The Roots, Tubers and Bananas (RTB) Cross-cutting Cluster 2.1 had its annual meeting on 14 to 16 March at [IITA](#) headquarters in Ibadan, Nigeria. The meeting objective was to discuss the progress and main findings on the development and validation of the RTB Toolbox. Present at the meeting were about 30 international experts who have been working on this topic for the past four years.

Scientists are leading a research program on RTB seed systems, working on five main crops—banana, potato, sweet potato, cassava, and yam. The research program is on a global level, covering countries in Africa, Asia, and South America. The goal is to improve

the livelihoods of rural people in the developing countries. They are also disseminating varieties of the five crops because the farmers need better varieties with better nutritional values and better yields, to improve their livelihoods.

The planting materials for RTB crops are very bulky and expensive and are not easily stored like maize. The RTB seed system usually has an accumulation of pathogens, especially viruses on the planting materials, causing poor seed quality and resulting in decreasing yields. This is usually caused by climate change and has a direct impact on the RTB seed system. However, scientists are looking at good progress on helping farmers to improve the quality of their planting material and access clean varieties.

Speaking about the Toolbox, Jorge Piedra-Andrade, Co-Leader of RTB Cross-Cutting cluster, said, “We aim to develop tools that can provide answers relevant to research questions in the seed value chain at different stages. We are partnering with the international universities like Florida and Wageningen and have a team of PhD students working with us and developing methodologies for improving these interventions. Furthermore, a team of young and talented scientists are working on RTB seed systems to increase the quality and access of clean planting materials to farmers.”

These methodologies will help NGOs and other national partners to improve interventions at the field level especially in improving the quality of seed and planting materials of these five crops by improving the multiplication rate of producing new clean planting materials and understanding the demands of clean seeds or new varieties from farmers. It will help scientists have a quick look at existing seed systems, identifying main partners, potential conflict among partners, and the major bottlenecks within the seed systems. The methodologies will also help with knowing what seed policies are in place in a country and provide recommendations to policy makers on how to improve these policies.

Presenting on policy studies, Margaret McEwan noted, “In Nigeria where the cassava seed system is predominantly informal, the source of planting materials is usually 87.4% family and friends, and 12.6% government. Towards a better cassava seed system, it is necessary to certify at breeder and foundation seed level; introduce lower quality for subsequent generations of seed; and improve distribution and marketing channels.”



Top: Jorge Andrade-Piedra making a presentation on the RTB Toolbox and Bottom: Group discussions.



Meeting participants in a group photo.

Using R: Seed health interventions and risk-based surveillance and mitigation strategies

An international workshop on using R packages for Seed Health was held on 18 March at the [IITA](#) headquarters in Ibadan, Nigeria. [Prof Karen Garrett](#) of the [University of Florida](#), Gainesville, organized the workshop as part of the RTB Seed System Cluster CC2.1., which had in attendance 20 participants representing eight countries, and was co-anchored by PhD students Kelsey Andersen and James Fulton.

After Andersen introduced the use of R, the team demonstrated the R seed Health package, which provides scenario analysis for evaluating outcomes for integrated seed health strategies. This program was built on the analyses and code from a study, “Risk assessment framework for seed degeneration: Informing an integrated seed health strategy for vegetatively-propagated crops” (Open access link for paper at <https://apsjournals.apsnet.org/doi/10.1094/PHYTO-09-16-0340-R>).

The second package was for impact network analysis (INA), designed to address multiple aspects of linked socioeconomic networks (spread of

ideas, money, influence, etc.) and biophysical networks (spread of new varieties, certified seed, pathogens, pests, etc.). (Open access publications at <https://apsjournals.apsnet.org/doi/full/10.1094/PHYTO-03-17-0108-FI> and <https://apsjournals.apsnet.org/doi/10.1094/PHYTO-03-18-0072-R>).

Risk-based surveillance strategies was used as an example to use INA to identify the best locations in a network for sampling to quickly detect a spreading pathogen or spreading new variety or technology. “A node is better for sampling if the pathogen is likely to be detected at that node before the pathogen has spread very far through the network,” said Prof

Garrett. For example, an isolated node would be a poor sampling choice because the pathogen could spread widely before it reaches the isolated node.

The functions for this analysis can also consider information about where the pathogen is more likely to enter the network to predict disease outbreaks. For example, nodes with little information available through communication networks may be more likely to be vulnerable to being entry points for pathogens.

[Lava Kumar](#), Head of Virology and Germplasm Health Units, thanked Prof Garrett and team for exposing workshop participants, many of whom are PhD students, to the R packages and their significance for ongoing research on emerging virus disease control, disease surveillance programs, and seed system interventions for mitigating the impact of seedborne diseases.

The workshop was supported by the [CGIAR Research Program on Roots, Tubers and Bananas](#) (CRP-RTB).