

## SAA to extend partnership with IITA to other hubs across Africa

Representatives from the Japan and Kano office of [Sasakawa Africa Association](#) (SAA) visited [IITA](#) headquarters on 18 May. The team, led by SAA President and General Manager Dr Makoto Kitanaka, came to strengthen the relationship between IITA and SAA. To achieve this, SAA decided to identify new areas of partnership and extend the existing partnership to other countries where SSA and IITA hubs are located.

[Kenton Dashiell](#), Deputy Director General, Partnerships for Delivery, welcomed the team and introduced IITA's activities and technologies through a video documentary.

Following the documentary, Kitanaka shared the purpose of the visit. He explained that the Memorandum of Understanding (MoU) that IITA and SAA signed in 2019 is not limited to Nigeria but cuts across Africa. Hence, the team wants to explore how this partnership can extend to other SAA and IITA hubs in Africa, such as Ethiopia, Mali, Uganda, and the Sahel region. "The link between research and extension services is great in [One CGIAR](#). So, we want IITA to work with us on strategies to increase soil health and production for farmers," he said.

The team went on a tour of the IITA campus to see the activities and technologies in areas of interest.

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Dr Kitanaka and Dashiell discussing final steps for the partnership.

## Annual CocoaSoils Week highlights achievements toward sustainable cocoa production in Africa



Left: Bernard Vanlauwe commending the participants on the success of the program's first phase. Right: Jean Paul Nlend-Nkott giving a recap of the P4D achievements.



Researchers, civil society organizations, and private and public sector stakeholders from Cameroon, Côte d'Ivoire, Ghana, and Nigeria converged at the Annual CocoaSoils Week 2022 at [IITA](#) headquarters, Ibadan, from 9 to 11 May.

The event aimed to facilitate expert discussions on progress towards closing knowledge gaps in cocoa production and outline the priority areas for the program's next phase.

It also aimed to mobilize partners' support to facilitate the adoption of the program's Integrated Soil Fertility Management (ISFM) recommendations by smallholder cocoa farmers for increased cocoa productivity in Cameroon, Côte d'Ivoire, Ghana, and Nigeria.

Director of Research for Development (R4D), Central Africa and Natural Resource Management, [Bernard Vanlauwe](#), commended the project team for the success of the program's first phase.

According to Vanlauwe, the program receives continued interest and support from global stakeholders in the cocoa sector as it transitions into the new global initiative Excellence in Agronomy (EiA). "We are looking forward to getting the transition managed as efficiently as possible," he said.

The forum covered the Partnerships for Delivery (P4D) session, where they discussed activities and lessons learned from Cameroon, Côte d'Ivoire, Ghana, and Nigeria. In addition, discussions on how to mobilize partners' contributions to facilitate the adoption of recommendations for increased cocoa productivity in target countries.

The R4D session focused on sharing preliminary results from Core and

Satellite field trials, feedback on the experimental process, and charting the future of CocoaSoils' research work. Also, discussions on progress towards new fertilizer recommendations and how these can enhance soil health, productivity, profitability, and reduce deforestation in cocoa systems.

The participants went on a field trip to the Core and Satellite trials in Ondo State on the third day of the event to see firsthand the progress of the research trials.

### About the CocoaSoils Program

CocoaSoils is a global R4D and P4D program led by IITA in collaboration with Wageningen University and Research (WUR) and the Sustainable Trade Initiative (IDH). CocoaSoils focuses on developing the latest knowledge in ISFM and Good Agricultural Practices (GAPs) for cocoa farmers in Africa to

create a sustainable cocoa sector. The research on ISFM and GAPs is being disseminated to smallholder cocoa farmers in Ghana, Cameroon, Côte d'Ivoire, and Nigeria using the extension channels of private sector partners.

The program benefits from partnerships with the National Cocoa Research Institutes of Cameroon (IRAD), Côte d'Ivoire (CNRA), Ghana (CRIG), and Nigeria (CRIN); international research centers, including the International Centre for Tropical Agriculture (CIAT), the World Agroforestry Centre (ICRAF), the UN Environment World Conservation Monitoring Centre (UNEP-WCMC), and Climate 42; cocoa companies such as Barry Callebaut, Sucden, Cargill, Kuapa Kokoo, Mars, Mondelez, Nestlé, Olatunde International, and Tulip Cocoa; fertilizer companies—ICL, Yara, and Bayer; and the World Cocoa Foundation (WCF). *Contributed by Anita Akinyomade*



*Top left: The participants on a visit to the research trials in Ondo State. Bottom: Stefan Hauser presenting on the preliminary results and key lessons from the R4D session.*

They visited the soil laboratory, the Genetic Resources Center, Nodumax, and the Youth in Agribusiness center.

The SAA team gave good feedback from the tour. Prof Sani Miko, Country Director for SAA Nigeria, said that the team had seen the footprint of IITA on smallholder farmers through innovations such as the AKILIMO project, genebank, and the youth program.

Highlighting the identified areas of partnership, Prof. Miko stated SAA's interest in entrepreneurship, especially in the youth sector, technology generation in regenerative agriculture, and revitalization of the existing partnership in mechanization. "Our partnership with IITA is open-ended because we do not want it limited to one area. We are willing to co-innovate with IITA when necessary," he said.

Discussing the final steps of the partnership, Kitanaka informed IITA that the critical points of discussion would be communicated to the Director of Partnerships for SAA, who will work with IITA to kick-start the process of activities. Dashiell also suggested the need for IITA and SAA to hold periodic meetings to follow up on progress.

*Contributed by Favour Eleta*



*Top: The SAA team at the in-vitro bank in the Genetic Resources Center.  
Bottom: SAA team, Dashiell, and the IITA Youth in Agribusiness team.*

## Study finds diverse microbial communities across agroecologies enhance plantain productivity

Plantain (*Musa spp.*) is a staple food crop and a key source of income supporting the livelihoods of millions of smallholder farmers in sub-Saharan Africa (SSA). However, pests and diseases, synthetic chemicals, and climate variation threaten production and productivity.



*Plantain is an important food and cash crop in sub-Saharan Africa.*

A recent study titled "[Subterranean Microbiome Affiliations of Plantain \(Musa spp.\) under Diverse Agroecologies of West and Central Africa](#)" published in *Microbial Ecology* explored bacterial and fungal diversity, an important aspect in increasing plant performance in plantains.

The study revealed significant differences between the High rainfall forests and derived Savanna agroecologies among the most abundant bacterial communities, and some specific dynamic responses were observed in fungal communities.

In considering the lack of knowledge on plantain-microbe associations and the need for a holistic approach to increase productivity and identify a more efficient and robust system for long-term food security and economic concerns for smallholder farmers, the study explored the self-supporting microbial ecosystems and distribution in agroecologies and seasonal regimes in the SSA.

"Ascomycota, Basidiomycota, and Zygomycota are the three most dominant fungal species in both agroecologies. Moreover, an immense array of beneficial microbes in the roots and rhizosphere of plantain, including *Acinetobacter*, *Bacillus*, and *Pseudomonas* spp., were found," said [Manoj Kaushal](#), Systems Agronomist at IITA.

*Acinetobacter*, *Bacillus*, and *Pseudomonas* spp. are common biocontrol agents that suppress pathogenic microbes, enhanced by the combined antimicrobial actions exerted among beneficial pathogenic microbes.

Manoj noted that the findings show that the diverse agroecologies and host habitats differentially support the dynamic microbial profile. This helps alter the structure in the rhizosphere zone to promote synergistic host-microbe interactions, particularly under the resource-poor conditions of sub-Saharan Africa.

For decades, soil microbes have been considered key for protecting numerous crops from various biotic and abiotic constraints. The increase in beneficial microbial diversity of soil can control various soilborne diseases and prevent the establishment of harmful pathogens in the rhizosphere and roots of a host plant.

In addition, for *Musa* spp., cropping practices tend to influence microbial community structure and compositions. These differ under diverse agroecologies and climatic conditions.

The study, led by IITA in collaboration with the International Maize and Wheat Improvement Center (CIMMYT), is the first to describe bacterial and fungal communities associated with plantain-based production systems in the humid tropics with different agroecologies and seasonal regimes in SSA. Also, the team established a model for studying plantain-microbe interactions and their mechanisms to serve as a baseline for future plant health and production studies. *Contributed by Gloriana Ndibalema*



*Pests and climate variation are some of the risks that threaten plantain production.*

## Take responsibility! Stop the spread of COVID-19!

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](mailto:iita-news@cgiar.org) or Katherine Lopez ([k.lopez@cgiar.org](mailto:k.lopez@cgiar.org)) and Uzoma Agha ([u.gha@cgiar.org](mailto:u.gha@cgiar.org)).



# IITA and partners engage fabricators in Oyo State

[IITA](#), in partnership with the [Innovation Lab for Policy Leadership in Agriculture and Food Security \(PiLAF\)](#) and [Oyo State Agribusiness Development Agency \(OYSADA\)](#), organized a one-day workshop with the theme, “Enhancing the Status of Agricultural Equipment Fabrication for Food Security in Oyo State”.

The workshop aimed to address the need for modern agricultural equipment manufacturers to strategically meet the demands of partners, investors, and farmers. It also targeted assessing various types of agricultural equipment fabricated domestically and understanding interventions required for quality and optimum equipment fabrication.

The workshop was held on 17 May at the IITA headquarters in Ibadan, Oyo State, Nigeria, and had 118 participants. These attendees included agricultural equipment fabricators, farmers, academia, and private sector investors.

In his welcome address, IITA Agribusiness and Mechanization Unit Head [Debo Akande](#) noted that the Institute’s mechanization unit,

under the Partnerships for Delivery (P4D) directorate, is moving towards a business-oriented mechanization approach to drive the involvement of the private sector. He further noted that the Oyo State government is investing in an agricultural system that encourages the private sector to invest in agriculture, including the local fabrication of agricultural equipment for mechanized agriculture.

In a keynote address, the Director of the IITA Development and Delivery Office, [Alfred Dixon](#), noted that Africa needs to develop its own agricultural machines industry by fabricating locally appropriate equipment that small-scale farmers can afford.

One of the Principal Coordinators of PiLAF, Professor Adegbenga Adekoya, said: “Agricultural mechanization

should be given a major space in the national agricultural budget for agriculture to thrive.”

Included in a panel discussion were Engr Kolawole Adeniji of Niji Group, Dr Michael Odeniyi of the National Centre for Agricultural Mechanization (NCAM), Dr Mobolaji Omobowale of the University of Ibadan (UI), and IITA Post-Harvest Specialist Peter Kolawole. They focused on the status of agricultural fabrication in Nigeria, particularly in Oyo State. They also talked about the technicalities around the choice of materials, pricing, and sustainability of agro-equipment fabrication. They discussed the need for drudgery-reducing equipment in Nigerian agriculture and the significance of production quality in enhancing agricultural equipment fabrication.

The session also premised the inauguration of coordinators of fabricators across the seven zones in Oyo State as pioneers and representatives. One of the newly inducted coordinators representing Oyo zone, Olusola Fasina, appreciated the organizers but lamented that erratic power supply, lack of funds, price and quality of fabrication materials, and unavailability of steel rolling company were some of the challenges faced by fabricators.

Prof. Dave Tschirley of Michigan State University (MSU), in his goodwill message, expressed satisfaction with the workshop and implored all stakeholders to expedite actions on the power supply, the size and quality of materials for fabrication, female-friendly equipment, formulation of policy, and unification of technology as some of the challenges facing fabricators in the State.

Stakeholders called for capacity strengthening for Nigerian fabricators and sought government support to access equipment that supports precision fabrication. Nigeria fabricators are good, but poor finishing does enable them to compete favorably globally, partly due to a lack of access to good raw materials for fabrication. Participants agreed that the fabricators and relevant stakeholders reconvene for further conversations. *Contributed by*

*Bolanle Olorode*



*Top: The Head of IITA Agribusiness and Mechanization Unit, Debo Akande, giving a welcome speech. Bottom: A cross-section of participants at the workshop.*

# Halleluya Farm Estate to scale crop production through IITA's expertise

On 24 May, the Halleluya Techno-based Agro Farm Estate team visited [IITA](#). The team, which launched its farm in 2018, seeks to partner with IITA and other agricultural institutes like the [International Livestock Research Institute](#) (ILRI) and [WorldFish](#) to scale agricultural production.



*Top: Halleluya Farm Estate team discussing the purpose of the visit with the IITA team.  
Bottom: Outgrower and Vegetable Trial Manager, Azeez Ejitola, taking the team through the process of vegetable production.*

The group consisting of Chairman Bosun Arebua, Business Development Manager Cliff Odogun, and General Manager Ezekiel Akingboye, met with IITA management staff.

The team expressed interest in three IITA mandate crops; cocoa, cassava, and plantain/banana. Arebua spoke about the challenges of growing these crops and asked about the possibility

of IITA experts visiting the farm and offering assistance on best practices and crops suitable for the soil. "We have just started, and IITA is our first point of call. We believe that IITA will give us the best advice and partnership opportunity possible," he said.

Deputy Director General, Partnerships for Delivery, [Kenton Dashiell](#), said that IITA would help in any areas possible

and link the team to institutes that specialize in these areas in Ondo State, where the farm is located.

Molecular Geneticist [Ranjana Bhattacharjee](#) shared two options for better production of cocoa. She stated that since the cocoa plant is old as it has been in the field for years, the team can either graft the plant or start the planting process afresh. IITA Outgrower and Vegetable Trial Manager, Azeez Ejitola, under the Business Incubation Platform (BIP), advised the team to take the second option because it is better to start afresh and get it right. He also suggested a soil suitability test to aid crop yield; the team agreed to the idea.

Dashiell assured the team that IITA would get its experts to conduct a soil suitability test on the farm and advised on best practices to engage. "Your success is in the soil," he said.

[Alfred Dixon](#), Director of Development and Delivery Office, suggested that the team establish a processing center for value addition to cassava and other crops. He also recommended the best companies to source processing machines. The team was excited about this discussion and the feedback from the IITA team. They committed to implementing the suggestions.

Following the meeting, the team took a tour of IITA's technologies. They visited the Plantain and Banana screen house, cassava field, and vegetable demonstration field. Going through the vegetable field, Ejitola took the team through the production process and enlightened them on the benefit of quick returns. The team showed an interest in horticulture as the quick returns, according to Arebua, will support investments in other crop production.

After the tour, the team concluded that IITA experts should visit their farm as soon as possible, based on the areas of interest specified, and give the best advice for production after testing the soil for crop suitability. "We will also leverage the outcome of this visit to rewrite our business plan," Arebua said. *Contributed by Favour Eleta*