

150 Farmer Promoters trained and empowered with a digital tool for BXW surveillance and control in Rwanda



Farmer Promoters using BXW App for BXW control and general banana agronomy.

“It was not easy to identify BXW symptoms on a banana plant. We confused it with fusarium wilt or any other banana disease that shows similar symptoms like wilting of leaves and rotting,” says Etienne Hakizimana, a Farmer Promoter from Rusizi District, Western Province. Hakizimana is one of the Scaling Champions, working with the ICT4BXW project to scale digital tools such as the BXW App and non-digital tools, mainly USSD, SMS, and chatbot, to curb the Banana Xanthomonas Wilt (BXW) disease in banana plantations in Rwanda.

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IITA amongst \$100,000 Growth Grant Finalist for the Seeding The Future Global Food System Challenge

The [Institute of Food Technologists \(IFT\)](#) has announced [IITA](#) amongst the Growth Grant finalists to be awarded \$100,000 for its project on integrating Arbuscular Mycorrhizal Fungi (AMF) as bio-inoculants to boost banana production in the East African Highlands. The announcement was published in a [press release](#) on the IFT website.

The award is part of the [Seeding The Future Global Food System Challenge](#)—an initiative seeking to inspire and support passionate, creative, diverse, and multidisciplinary teams to create game-changing innovations that will help transform the food system.

“The submitted ideas for all award categories are very innovative with

high impact potential to create a more safe, nutritious, sustainable, and equitable food system, resulting in trusted food that is affordable and accessible to consumers,” says [Seeding The Future Foundation](#) Founder Bernhard van Lengerich in the press release.

The project aims to introduce locally isolated AMF species into

banana-based production systems and catalyze the development of a commercially sustainable and scalable process for its production and distribution to smallholder farmers in Eastern Africa for a sustainable banana food system for food security and nutrition. The project is a multidisciplinary consortium from Africa and the European Union.

“The goal of this intervention is to have a commercially sustainable distribution of AMF primed micro-propagated banana plantlets. The investment in AMF will be offset by many benefits, both short- and long-term benefits that are highly reliant on each other, which will be tested throughout the project,” says [Manoj Kaushal](#), a Systems Agronomist at IITA.

The project path to scalability and economic feasibility is a multi-stage process through the private sector with capacity building and support from international donors/NGO partners and the government.

Seeding The Future Foundation funds the Challenge, which focuses on empowering transdisciplinary teams to develop scalable and high-impact innovations that reside at the intersection of three domains: safe and nutritious food for a healthy diet; sustainably produced; and accessible, appealing, affordable, and trusted by consumers.

Winners of the Challenge will be announced in January 2022.



The IFT award is for IITA's project on integrating AMF as bio-inoculants to boost banana production in the East African Highlands.

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 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.



He describes BXW as a threat to banana farming and productivity since its first occurrence in his banana fields. He highlights that the BXW App is an adequate solution to curb BXW disease and help improve banana farming.

A recent survey by Viamo, one of the ICT4BXW project partners, demonstrates that more than 89% of banana farmers find BXW disease the most devastating disease affecting banana production in Rwanda. Moreover, 87% of the banana farmers who contributed to the survey agree that digital tools can help farmers increase banana productivity.

The [ICT4BXW Project](#) Team, co-led by [IITA](#) and Rwanda Agriculture and Animal Resource Development Board (RAB), introduced digital tools to mitigate Banana Xanthomonas Wilt (BXW) disease—the most devastating disease for banana plants in Rwanda.

The Team and partners have developed, piloted, and deployed digital tools for surveillance and control of banana diseases in Rwanda, including a smartphone-based android application called the BXW App.

“After the introduction of the BXW App, I am now able to diagnose BXW disease on banana plants through photos and video that showcase the actual signs of the disease. And the App provides a tangible remedy to curb the spread of the disease, such

as the Single Diseased-Stem Removal technique,” Hakizimana continues.

The project’s first phase (2018–2020) focused on co-development and co-validation of this smartphone-based tool with various stakeholders and partners, including Farmer Promoters and RAB’s Banana Team. The BXW App has multiple functions, including information about BXW threat, a stepwise module for standardized diagnosis of BXW incidence, and best management and control of the disease.

Scaling the reach and use of ICT4BXW tools

Following the successful co-validation of the BXW App, the ICT4BXW project progressed into the second phase of implementation (2021–2023) to disseminate the BXW App nationally and diversify the reach of the tool’s multiple functions in digital and non-digital forms. This phase aims to reach 250,000 farmers and extension delivery personnel (including Farmer Promoters) across the country, empowering them with relevant decision-support knowledge and tools to control BXW disease and implement the best banana management practices.

To encourage access to the BXW App and other tools (such as Extension Remote Training and Banana Agronomy Guide), RAB and IITA equipped 150 farmer promoters and RAB Technicians with smartphones and training to

inspire and mentor their peers (and farmers) for broader tool adoption.

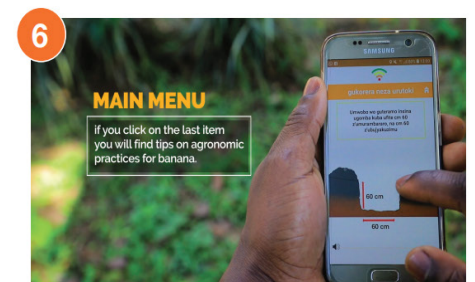
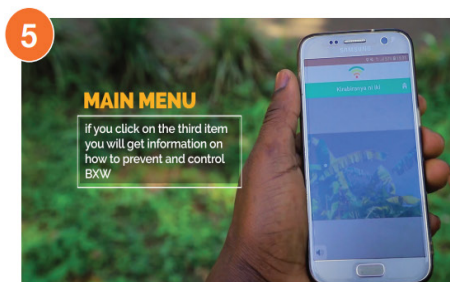
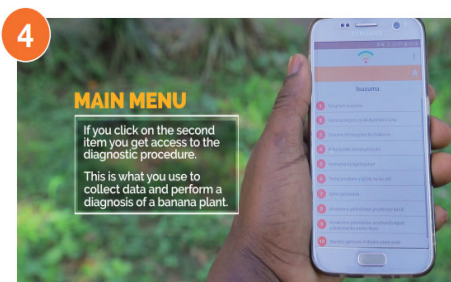
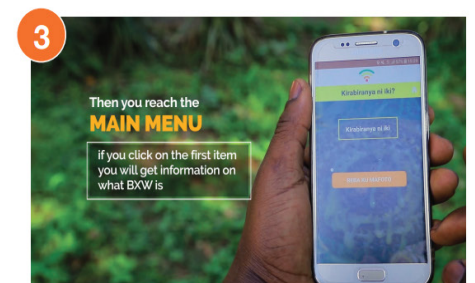
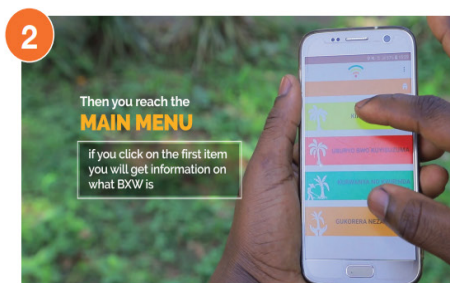
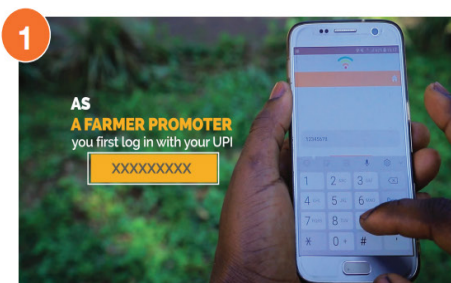
This cohort of farmer promoters, designated as “Scaling Champions,” were selected across 25 Districts of Rwanda based on a systematic survey that assessed their existing basic digital skills such as using a smartphone and level of literacy.

Before receiving the smartphones, the Scaling Champions were trained to use the BXW App and understand their critical role as mentors for their peers, designated as (Scaling Enablers), with major responsibility towards banana farmers within their respective villages.

Each Scaling Champion is to train and mentor seven to nine Scaling Enablers on using the BXW App in their banana farming. They will report monthly on progress, including the number of farmers who used the BXW App to diagnose and monitor BXW disease in their banana fields. The report will automatically be channeled into RAB’s system to support policy engagement and decision-making to improve banana farming in Rwanda.

Additionally, Scaling Champions will be engaged and progressively incentivized for nine months to maximize their support to scaling enablers.

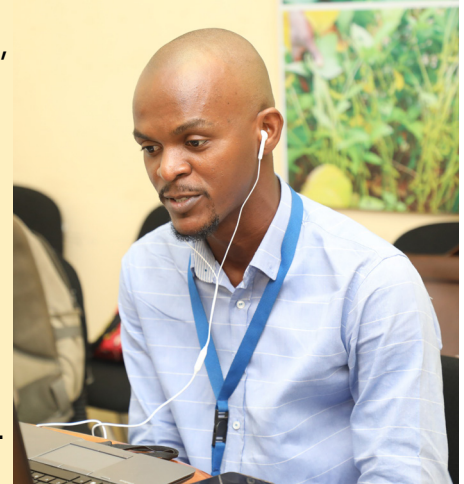
You can find more details about the BXW-App on <https://www.ict4bxw.com/>



The App is a stepwise digital approach that guides farmers, farmer promoters, and other users to diagnose and control BXW.

Research fellows call for partnership and research for agricultural transformation

In line with IITA's goal of transforming Africa's Agriculture, the International Association of Research Scholars and Fellows (IARSAF) of [IITA](#) organized a three-day annual symposium to discuss agricultural research to achieve sustainable food security across sub-Saharan Africa (SSA). The 2021 symposium held on 2–4 November was themed: "Exploiting Science, Technology, and Innovations for Building a Sustainable Agricultural Transformation in Africa." Mary Emeraghi, a PhD research fellow in the Virology and Diagnostics Unit, moderated the symposium.



IARSAF President Olakunle Sansa at the event.

Representing IITA Director General [Nteranya Sanginga](#), [Alfred Dixon](#), Director of Development and Delivery Office, stated that IITA is transitioning to One CGIAR with a collective vision of building sustainable and resilient food, land, and water systems, an important focus in SSA. "IITA will continue to contribute to the One CGIAR in parallel with the historical mandate of developing international public roles to enhance science and agricultural productivity in the region," he said.

[Chrysantus Akem](#), Coordinator, TAAT Program, representing [Kenton Dashiell](#), IITA DDG, Partnerships for Delivery, stressed the purpose of IARSAF. IITA has prioritized the training of graduate research fellows and made provisions for the program in project proposal development.

He said the research program enhances the research capacity of the national agricultural programs. "IITA is exploring new research areas

within the new thematic areas with One CGIAR relating to partnership, as scaling and delivering to complement our traditional theme," he said.

In his goodwill message, [Michael Abberton](#), R4D Director, IITA-West Africa, encouraged the research fellows to passionately develop their skills and knowledge and apply them in their careers.

Olakunle Sansa, IARSAF President, appreciated the management team. He said the association has focused on the capacity development of its members, creating avenues for networking with the National Agricultural Research Systems (NARS).

IITA Head of Breeding [Prof. John Derera](#) stressed the need for a cohesive partnership strategy among IITA crop breeding programs, key stakeholders, and partners to meet the needs of the smallholder farmers and improve their return on investment.

[Dr. Rose Gidado](#), Deputy Director Research, National Biotechnology Development Agency (NABDA) Nigeria, highlighted the challenges facing agriculture in Africa. She emphasized the roles and potentials of Science, Technology and Innovation (STI) as viable approaches to improving livelihoods, eradicating poverty and hunger, and creating jobs. She recommended that STI build human capacity, identify broad areas of science that can be developed in partnership, and create a favorable policy environment for science to attain sustainable agriculture.

Other presentations were made by Prof. Janice Olawoye, Department of Rural Sociology, University of Ibadan; [Alejandro Ortega-Beltran](#), IITA Plant Pathologist; Prof. Olajide Sobukola, Food Processing and Preservation, Federal University of Agriculture, Abeokuta; [Ranjana Bhattacharjee](#), IITA Molecular Geneticist; Dr Olufemi Alabi an Associate Professor, Texas A&M University, and [Bernard Vanlauwe](#), IITA Director R4D, Central Africa and Natural Resource Management.

Wrapping up the symposium, Dashiell commended IARSAF on a successful meeting and admonished the young researchers to set goals and focus on their pursuits. He encouraged them to cultivate the habit of seeking help and always showing appreciation for the help rendered to them. Sansa appreciated the management's unrelenting support to the capacity development of research fellows in IITA.



DDG P4D, Kenton Dashiell, encouraging the research fellows to stay focused in their career pursuit.

IITA and Reeyor fabricate agricultural processing machines to improve food processing

Reeyor Food and Beverage Processing Machines and Gelgoog Intelligent Technology Company Limited partnered with IITA's [Business Incubation Platform \(BIP\)](#) to launch the showroom of agricultural processing machines on 11 November, at IITA Headquarters. The partnership aims to involve IITA in the co-construction of the machines and create awareness for processors on their usefulness in Nigeria and sub-Saharan African. In addition, the event showcased different categories of processing machines, including fruit and vegetable processing, nut processing, pasta processing, food packaging, cone machines, and central kitchen. The Training Manager, Bolanle Olorode, moderated the event.

The Deputy Director General, Partnerships for Delivery, [Kenton Dashiell](#), appreciated Reeyor for partnering with the Institute in providing solutions to agricultural challenges. "Partnering with private organizations is the way forward in providing solutions to agricultural challenges," he stated.

Representing IITA-BIP CEO Frederick Schreurs, Victoria Ayeni, Assistant CEO-BIP, introduced the attendees to IITA-BIP. She stated that as part of the partnership signed with Reeyor, the Agriserve Unit of IITA-BIP will work more with Reeyor because they focus on smallholder farmers and youth agripreneurs.

The President, Reeyor Food and Beverage Processing Machines, Dr Julius Famoriyo, guaranteed the quality and durability of the machines for quality control of food. He excitedly applauded the experts in the Mechanization Unit for their initiative and for making the parts available.

The Managing Director, Reeyor Food and Beverage Processing Machines, Jackson Osuh, said that the company was established to manufacture processing machines for smallholder farmers to curb the challenges of food processing and preservation of farm produce. Also, to ensure quality assurance of food products at the international level of delivery. Furthermore, he assured the attendees that the spare parts were available; likewise, the technical and post-sales services of the machines will be provided by the experts.

Harvest Plus Cassava Breeder [Elizabeth Parkes](#) said that cultivation of agricultural produce is ongoing, and the value chain has to be looked at from farm to table, as this will lead to income generation for the farmers. She also suggested that the showroom be located outside IITA for easy access.

National Coffee and Tea Association of Nigeria (NACOFAN) Oyo State Chairman, Alhaji Imam Salihu, commended IITA and Reeyor's efforts to provide the machines for farmers and food processors.



Top left: IITA DDG P4D, Kenton Dashiell; Top right: Dr Julius Famoriyo; Bottom: Layout of photos showing categories of agricultural processing machines.