

DG Nteranya Sanginga meets DRC President in Kinshasa

[IITA](#) Director General [Nteranya Sanginga](#) met with His Excellency Felix Tshisekedi, President of the Democratic Republic of Congo (DRC), this week in Kinshasa, the capital of DRC. Dr Sanginga was part of the delegation led by President Akinwumi Adesina of the [African Development Bank](#) (AfDB) that went to DRC on a four-day official visit.

Sanginga used the opportunity to invite President Tshisekedi to the inauguration and naming of the IITA Research Station in Kalambo, Bukavu, DRC, as “The President Olusegun Obasanjo, IITA Research Campus” planned for October this year. President Tshisekedi, with former President Joseph Kabila, have been invited to grace the occasion and preside over the event.

According to Sanginga, the President is very excited about visiting the IITA Kalambo Station and was very impressed with the description of the semi-autotrophic hydroponics (SAH) technology. SAH is a low-cost licensed method for rapid propagation of virus-free cassava plants suitable for commercial cassava seed growing. Sanginga said, “The President wants to extend the technology to the whole of DRC to benefit the millions of cassava farmers.”

IITA-Bukavu is home to the second tissue culture laboratory for the production of healthy cassava seedlings using the innovative SAH technology. The first one in Ibadan, Nigeria, was inaugurated in November 2018.

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DG Nteranya Sanginga (left) with His Excellency President Felix Tshisekedi.

Biocontrol solutions to “Fusarium wilt of banana” emerge

The banana crop and industry has experienced extreme losses due to an epidemic of Fusarium wilt of banana (FWB), caused by *Fusarium oxysporum* f. sp. *cubense* (Foc). This was described in the recently published article “Biological control agents against Fusarium wilt of banana.”

FWB, also known as Panama disease, has plagued countries in Africa, Asia, and Australia. The disease is particularly difficult to control for several reasons including

being a soilborne fungus with a long survival rate in the soil (more than 20 years), even in the absence of plant hosts, or within alternate hosts, which do not necessarily show disease symptoms. Among other reasons, it is also a vascular pathogen, which escapes contact with control agents once it penetrates the plant.

Africa has had some cases of classical biocontrol successes, one of which was the use of biocontrol for cassava mealybug that reduced losses by over 90%. This



Close-up of Morong Princessa banana bunch.

initiative was led by IITA. Many interventions have been put in place by the Institute and partners, including [Food and Agricultural Organization of the United Nations](#) (FAO) and FAO's [World Banana Forum](#), to prevent the spread of FWB. These interventions include the Global Program on the Banana Fusarium Wilt Disease and ProMusa International Banana Symposium.

Plant diseases are usually managed by integrated frameworks with an emphasis on preventive measures, especially in the absence of highly effective control means. This is particularly true for soilborne diseases like FWB and Verticillium wilts, with causal pathogens that cannot be eradicated once they contaminate the soil.

A higher FWB incidence has been associated with low soil pH, but such an observation has not been reproduced experimentally. Also, ammonia fumigation and biofertilization have been reported to reduce FWB incidence in a pot experiment, with concurrent increases in soil pH, nutrient contents, and beneficial microbial community. Although no clear experimental evidence exists about the effectiveness against FWB of raising soil pH, it is known that Foc prefers low pH.

A suggested solution to the invasion of FWB is adequate irrigation and fertilization regimes, as well as monthly treatments with

zinc sulfate. Waterlogging and acidification of nutritive solutions should be generally avoided.

Also, crop rotation has provided attractive results in some cases. Lower disease control levels have been obtained by using rotations with maize, sugarcane, sunflower, or eggplant.

Biological control and host genetic resistance have been considered the most important strategies for the management of FWB. Findings of this research suggest that biocontrol can greatly limit the damage caused by FWB. However, biocontrol should not be considered as an independent tool, but adequately implemented in an integrated management framework.

Studies have shown that combinations of biocontrol organisms with silicon and mulching, or with neem cake can be advantageous compared to the individual applications, and therefore can provide a better control option for banana growers who have to deal with FWB in their plantations.

The research recommends that more efforts be put in place to further validate currently available outcomes, to deepen the knowledge on the most valuable biological control agents, and to improve their efficacy by setting up effective formulations,

application protocols, and integrated strategies.

This article was published in volume 10 of *Frontiers in Microbiology* - Open access Journal. Find the full article here <https://doi.org/10.3389/fmicb.2019.00616>



Typical symptoms of Fusarium wilt on a banana plant.

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Meanwhile, The President Olusegun Obasanjo IITA Research Campus is being named after Nigeria's former Head of State. President Obasanjo, IITA's Goodwill and Honorary Ambassador, has made lasting contributions to agricultural research not only in Nigeria but across Africa. He is spearheading the Zero Hunger Initiative in Nigeria, which is also relevant to DRC. Because of his contribution, the IITA Board

of Trustees has decided to name the IITA research station in Kalambo, Bukavu, after him.

In his address to the session with the Congolese Ministers on the second day of the official visit, Adesina described the impact of IITA's innovations—including cassava bread—in Nigeria and Africa. IITA received the [2018 Africa Food Prize](#)—the

first institution to do so—for its research leadership and scientific innovations in the last 50 years. In a surprise move, Sanginga was asked to make a statement about IITA and its work to the Ministers, who also expressed interest about visiting the IITA station in Kalambo and rehabilitating the Yangambi research station with its huge, unique, and historic library collection.

IITA is helping to transform Congolese agriculture from a self-subsistence sector into a powerful engine of global economic development and is working with the new government of DRC on the country's development and transformation through agriculture.

Earlier in Kinshasa, the DG also visited partners at the World Bank office and the Project to support the rehabilitation and revival of the agricultural sector (PARSSA), partners in the [Integrated Project for Agricultural Growth in the Great Lakes](#) (PCAGL). He was accompanied by Mpoko Bokanga, Head of the Clearing House, [Technologies for African Agricultural Transformation](#) (TAAT), a multi-partner program led by IITA and funded by AfDB.



DG Nteranya Sanginga (leftmost) with AfDB President Akinwumi Adesina (third from left) and His Excellency Felix Tshisekedi, President of the Democratic Republic of Congo (third from right) in Kinshasa.

TAAT collaborates with CORAF on implementation assessment of Harmonized Regional Seed Regulation

Major actors of the seed industry in West Africa met in the Senegalese capital, Dakar, on 11-12 June to assess progress made in implementing the harmonized regional seed regulation.



Dr Jonas Chianu of AfDB leading discussions at the workshop.
(Photo by TAAT/Atayi Opaluwah)

The [Harmonized Regional Seed Regulation](#) was adopted in 2008 by the [Economic Community of West African States](#) (ECOWAS) and in 2009 by the [West African Economic and Monetary Union](#) (WAEMU).

The primary goal is to create a favorable environment for the growth of the seed industry. All ECOWAS member countries, including Chad and Mauritania, have adopted the law.

The meeting was organized jointly by the Policy Enabler Compact of the [Technologies for African Agricultural Transformation](#) (TAAT) and the [West and Central African Council for Agricultural Research and Development](#) (CORAF).

Sponsored by the [African Development Bank](#) (AfDB) as part of its Feed Africa initiative, TAAT's main objective is to improve the business of agriculture across Africa by raising agricultural productivity, mitigating risks, and promoting diversification and processing in 18 agricultural value chains within eight Priority Intervention Areas.

The TAAT Policy Enabler Compact is led by the [African Agricultural Technology Foundation](#) (AATF). The compact operates to strengthen economic, trade, and institutional policies that contribute to higher productivity, competitiveness, and processing intensity across value

chains and agroecological zones by working closely with national and regional partners.

The Dakar meeting assessed the state of implementation, identifying bottlenecks as well as developing a road map to speed up implementation.

Specifically, the discussions addressed five broad areas namely certification for variety dissemination, quality control and certification of seeds, phytosanitary certification of seeds, institutional arrangements for the implementation of the seed policy, and private sector participation in the implementation of seed policy.

The close to 50 participants at the workshop were drawn from the national seed systems of the 17 participating countries, the regional economic communities, smallholder farmer organizations, research institutions, and funding partners.

Representatives from the [Common Market for Eastern and Southern Africa](#) (COMESA), the [Southern African Development Community](#) (SADC), and the [East African Community](#) (EAC) were also invited to share their experiences.

As a key technical partner of ECOWAS and other regional economic commissions, ECOWAS designated CORAF in 2013 to facilitate and coordinate the implementation of the harmonized regional regulation for seeds and seedlings in the Member States.

AATF, on the other hand, was founded in 2003 to address Africa's food security outlook through agricultural technology. AATF responds to the need for an effective mechanism that would facilitate and support negotiation for access to technologies and the provision of appropriate partnerships to manage the development and deployment of innovative technologies for smallholder farmers in sub-Saharan Africa.

AfricaYam visits BTI and NextGen ahead of the project's proposed second phase

The [AfricaYam](#) Project Leader, [Patrick Adebola](#) and IITA Yam Breeder, [Asrat Amele](#) recently visited [Boyce Thompson Institute](#) (BTI) and NextGen Cassava team in Ithaca, USA.

BTI is an independent research institute, which uses plant sciences to improve agriculture and has been involved in the AfricaYam project from inception. They created a database called YamBase that hosts pedigree data, phenotypic data from field trials, genomic resources and laboratory assays, as well as assemblage of curated historical phenotypic data from IITA and partner programs for analysis.

The Institute has also conducted numerous training for the user groups in both [IITA](#) and the breeding programs of the four target countries. YamBase so far counts over 54,000 accessions with over 1,500 genotypes, 7 breeding

programs, 197 assayed traits, about 414,000 phenotype scores, and over 325 trials.

Adebola said the one-week visit was aimed at meeting with the BTI YamBase

development team to review the progress made so far and to suggest areas of improvement and plans for AfricaYam phase 2.

He also noted that during the meetings with the BTI group, they made useful suggestions on how to improve the usability of the database and suggested additional traits to be added to yam ontology. "It is our hope that YamBase will be a one-stop-shop for farmers," he said.

They also met with the NextGen Cassava team in Cornell and explored areas of possible collaboration in preparation for AfricaYam phase 2. NextGen Cassava is a Breeding project that works with a number of institutional partners and collaborators for efficient delivery of improved varieties of cassava.



Dr Patrick Adebola (third from left) and Dr Asrat Amele (second from left) with Dr Lukas Mueller (leftmost) and his team at BTI.

Got a story to share?

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