

## Project to build sustainable cassava seed system in Africa gets new phase



A BASICS Commercial Seed Entrepreneur inspecting her field in Benue State, Nigeria



IITA Director General, Dr Nteranya Sanginga speaking at the Launch of BASICS-II

To improve their yields and incomes, African cassava farmers need regular and reliable access to high quality planting materials of the newest and best varieties. Access to such cassava stems, however, is often a problem. Agrodealers don't sell them, and free distributions by NGOs and government programs are sporadic and unreliable. Consequently, many cassava farmers are obliged to save stems of older varieties grown in their own fields or buy uncertified stems in informal markets of questionable quality and unknown identity.

The International Institute of Tropical Agriculture and its partners are working to address this problem by developing a new and more sustainable cassava seed system that makes high quality stems of high yielding varieties available for sale to African farmers. This work started in Nigeria five years ago as a program called Building an Economically Sustainable, Integrated Cassava Seed System (BASICS). Some 150 cassava seed enterprises were created in Benue, Abia, Akwa Ibom, and Imo States to multiply and sell cassava stems, following a business model that is both profitable and beneficial to its farmer clients. A sister project in Tanzania nurtured a similar network of cassava seed entrepreneurs. Government agencies certify the stems to ensure quality.

In June, this program benefited from a new investment of \$14.3 million by the Bill & Melinda Gates Foundation to consolidate and expand this work in both Nigeria and Tanzania under the project name of BASICS-II.

The goal of the project is to provide farmers with access to affordable, quality-assured seeds of the cassava varieties in demand by local food and processor markets through the establishment of a commercially viable seed value chain operating across breeder, foundation, and commercial seed levels. BASICS-II will create a more efficient dissemination and trigger the adoption of new varieties to improve productivity; raise incomes of cassava growers and seed entrepreneurs; enhance gender equity and contribute to inclusive agricultural transformation in Nigeria and Tanzania.

"The approval of BASICS-II provides a window of opportunity for cassava farmers to create new lines of income while at the same time catalyzing the diffusion of new varieties," Dr Nteranya Sanginga, Director General, International Institute of Tropical Agriculture (IITA), said today ahead of the launch of the project on Thursday, 25 June 2020.

According to Dr Alfred Dixon, IITA Director for Development & Delivery, and Technical Adviser to BASICS-II, "the coming of BASICS-II would not only create seed enterprises, it would also spark the diffusion and adoption of improved disease-free cassava varieties that would offer farmers higher yield."

"To me, this is the most exciting part of the project," he added.

Over the years, IITA and its national partners have developed over 40 cassava varieties but the diffusion and adoption of these varieties have been low due to the absence of a

functional seed system to incentivize their multiplication, distribution, and sales.

The 5-year project will be led by IITA, working in partnership with Mennonite Economic Development Associates (MEDA), National Agricultural Seeds Council (NASC), National Root Crops Research Institute (NRCRI), Catholic Relief Services (CRS), IITA GoSeed, Umudike Seed, Sahel Consulting Agriculture and Nutrition Ltd., Tanzania Agricultural Research Institute (TARI), and Tanzania Official Seed Certification (TOSCI).

Lawrence Kent, Senior Program Officer, Gates Foundation, said "this new phase of the BASICS project will strengthen and expand its innovative approach to the supply of cassava planting materials, helping farmers in Nigeria, Tanzania, and eventually additional countries to access and purchase disease-free stems of the most productive, most demanded, and promising cassava varieties."

Known as a poverty fighter, cassava is grown mostly by resource-poor farmers, but its productivity has been constrained by lack of access to improved varieties with national average yield reported at less than 10 tons per hectare in Nigeria. Even when the best of agronomic practices is employed, yields remain poor if the seeds are not right.

Through the activities of BASICS-II, it is envisaged that this narrative will be changed, says Prof. Lateef Sanni, Project Manager, BASICS-II.

## AfDB, AGRA and PIND back IITA's BASICS-II project



L-R: BASICS-II Technical Adviser, Dr. Alfred Dixon; Project Administrator, Mrs. Ezinne Ibe and Project Manager, Prof. Lateef Sanni

The African Development Bank (AfDB) has pledged support for the newly launched Building an Economically Sustainable and Integrated Cassava Seed System, phase 2, (BASICS-II) project of the International Institute of Tropical Agriculture (IITA).

Speaking at the project's launch last Thursday, the Director, Department of Agriculture and Agro-Industry of the AfDB, Dr. Martin Fregene, stated that the development bank, through its flagship project, Technologies for African Agricultural Transformation (TAAT), was excited to be part of BASICS-II "to ensure the best varieties are put in the hands of farmers as soon as possible".

The project which was launched at the IITA headquarters in Ibadan, with key participants, including Dr Fregene attending virtually via Zoom, is aimed at creating "a more efficient dissemination of cassava stems that would trigger the adoption of new varieties to improve productivity;

raise incomes of cassava growers and seed entrepreneurs; enhance gender equity, and contribute to inclusive agricultural transformation in Nigeria and Tanzania."

Implementing partners include (Mennonite Economic Development Associates (MEDA); Catholic Relief Services; IITA GoSeed; Umudike Seed; Tanzania Official Seed Certification Institute (TOSCI); SAHEL Consulting; Tanzania Agricultural Research Institute (TARI), and the National Root Crops Research Institute in Umudike, Abia State, Nigeria.

BASICS-II will also work with the Alliance for a Green Revolution in Africa (AGRA) and the Foundation for Partnership Initiatives in the Niger Delta (PIND Foundation). While PIND pledged to be the project's sustainability platform in the Niger Delta of Nigeria; AGRA will help the project's replication in other states in Nigeria as well as other African countries.

In Dr Fregene's words, BASICS-II "will not only raise the productivity of African and Nigerian and Tanzanian farmers, but it will improve productivity along the value chain and make cassava to be a good business for anyone to invest in".

He urged the project managers to maximize public private partnerships to achieve maximum success and impact.

In his own remarks, the Executive Director of PIND, Dr. Dara Akala, assured that the Foundation would help BASICS-II outlive its duration in the Niger Delta.

His words: "Everything we do in PIND is centered around partnerships and partnerships is at the core of what we have achieved in the Niger Delta. Our collaboration with NRCRI Umudike towards the end of BASICS-I led to the pool of Village Seed Entrepreneurs in the Niger Delta.

"So, we are committed to partnering with BASICS-II to consolidate and scale up the results of those initial efforts made in BASICS-I."

He maintained that PIND's partnership with BASICS-II would broker an economically sustainable and commercially viable seed system in the Niger Delta.

"PIND being an institution and not a program that will end in five years' time, we are here in the Niger Delta region to sustain the results of BASICS-II as we served as the exit strategy for BASICS-I," he added.

The first phase of the project, BASICS-I, which lasted between 2015 and 2020, facilitated the development of more than 160 commercial seed entrepreneurs in Nigeria. These seed entrepreneurs are now growing cassava with the primary aim of producing and selling stems—an activity that is generating income and creating wealth in cassava growing communities.



IITA DG, Dr. Nteranya Sanginga, speaking at the launch of BASICS-II

# Nigeria thumbs up IITA's impact in cassava seed sector



The Federal Government of Nigeria has commended the International Institute of Tropical Agriculture (IITA) and its partners for their impact on the Nigerian seed system especially in the cassava sector. The commendation came during the IITA launched second phase of the Building an Economically Sustainable and Integrated Cassava Seed Systems (BASICS II).

The first phase of the project, BASICS-I, which lasted between 2015 and 2020, facilitated the development of more than 160 commercial seed entrepreneurs in Nigeria. These seed entrepreneurs are now growing cassava with the primary aim of producing and selling stems—an activity that is generating income and creating wealth in cassava growing communities.

Speaking during the launch which held virtually and on the campus of the IITA in Ibadan, Nigeria's Minister of Agriculture and Rural Development, Alhaji Sabo Nanono, lauded BASICS-I, saying it did not only achieve its set objectives within its duration period, but also led to the development of such novel ICT technologies like National Seed Tracker which makes it easier for stakeholders to monitor seed quality, cassava Third Party seed certification system which will guide the process of decentralized seed certification in Nigeria; and establishment of a molecular diagnostic laboratory for virus testing at the National Agricultural Seed Council (NASC) headquarters in Sheda, Abuja.

He said that the birth of BASICS-II accentuates the fact that the BASICS financier saw the need to consolidate on the

achievements of BASICS-I, adding that it also meant Nigeria's seed industry was garnering the necessary attention and intervention from other global seed stakeholders.

"On behalf of President Muhammadu Buhari, I want to express our deepest appreciation to the Bill and Melinda Gates Foundation for funding this great project, IITA for leading this project and other stakeholders, like the Nigerian National Root Crops Research Institute (NRCRI), Catholic Relief Services (CRS) and FERA (UK)" he added.

Declaring the Federal Government's support for the new project, Alhaji Nanono said: "I want to assure you that in the implementation of this second phase, the Federal Ministry of Agriculture and Rural Development will continue to provide all the necessary support needed for the actualization of the project's mission."

He said the government would continue to support NASC to continue to play its role in the development and regulation of the National Seed industry. The signing into law of the Seed Act 2020 would widen the scope of NASC to play the true role of a regulatory agency and also strengthen the Nigeria's seed system.

In his remarks, IITA DG, Dr. Nteranya Sanginga, stressed the imperative of a sustainable seed system due to the importance of cassava in Africa's quest to attain food security. He urged the project team to ensure that the project is scaled and replicated to other African countries, adding that most of countries were already emulating Nigeria's steps in the cassava sector.

"Work has started and I hope that in a few years' time, BASICS-II will grow and become self-sustained", he counselled the project team.

While giving an overview of BASICS-II, the Project Manager, Prof Lateef Sanni, said the goal of the project was to provide farmers with access to affordable, quality-assured seeds of the cassava varieties in demand by local food and processor markets through the establishment of a commercially viable

seed value chain operating across breeder, foundation, and commercial seed levels.

According to him, "BASICS-II will create a more efficient dissemination and trigger the adoption of new varieties to improve productivity; raise incomes of cassava growers and seed entrepreneurs; enhance gender equity, and contribute to inclusive agricultural transformation in Nigeria and Tanzania."

Among those who attended the project launch via Zoom and on campus, included Dr. Martin Fregene, AfDB's Director, Department of Agriculture and Agro-Industry; Senior Program Officers of Bill & Melinda Gates Foundation: Lawrence Kent and Lauren Good; Ms Upendo Mdeme, representative of the Ministry of Agriculture in Tanzania; Dr. Dara Akala, Executive Director, PIND; Dr. Graham Thiele, RTB Director; Dr Kenton Dashiell, Deputy Director General, Partnerships for Delivery, IITA; Dr. George Bigirwa, Deputy Vice President for Program, Innovation and Delivery, Alliance for Green Revolution (AGRA) and Dr. Dorothy Nyambi, CEO/President, MEDA.

## About BASICS-II

The five-year Building an Economically Sustainable. Integrated Cassava Seed System, Phase 2, (BASICS-II) project aims to transform the cassava seed sector by promoting the dissemination of improved varieties thereby creating a community of seed entrepreneurs across the cassava value chain. The project will focus on Nigeria and Tanzania with spin off to other African Countries.

The project is implemented by the International Institute of Tropical Agriculture (IITA) in collaboration with partners: Mennonite Economic Development Associates (MEDA), National Agricultural Seeds Council (NASC), National Root Crops Research Institute (NRCRI), Catholic Relief Services (CRS), IITA GoSeed, Umudike Seed, Sahel Consulting, Tanzania Agricultural Research Institute (TARI), and Tanzania Official Seed Certification (TOSCI).

# ACAI partners establish 492 training plots for scaling AKILIMO



Tanzania Food and Nutrition Centre (TFNC), one of the ACAI primary partners, has established and planted 492 validation trial sites for AKILIMO and additional 46 demonstration sites across the ecological zones where ACAI is operating in Tanzania.

These plots were planted between October 2019 and April 2020 because of the varying ecological and climatic conditions across the country that dictate the planting and harvest windows. The regime used in planting and monitoring the plots follows the AKILIMO recommendations of the Six Steps to Cassava Weed Management and Best Planting Practices use case.

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While the validation trials will be used to check the effectiveness of the AKILIMO recommendation when applied practically, the demonstration plots, on the other hand, will be used as a training location for farmers of the various aspects pertaining to practices advocated by the AKILIMO tools. The organization will also use the validation trial plots for training farmers.

Rhoda Mahava from TFNC proudly says “despite having our focus on best planting practices we have received increased interest for the whole of the AKILIMO

tools recommendation and therefore will include other use cases in our training”. AKILIMO tools provide cassava farmers with tailored fertilizer recommendation, land preparation methods, weed management, planting densities and fertilizer application for intercropped cassava fields as well as planting and harvest dates for high cassava root starch quality and continuous supply of raw material.

Due to the coronavirus pandemic, TFNC has resorted to training individuals rather than groups with respect to the guidelines issued

by health officials to avoid infection and transmission of the disease.

The trials and demo plots were established and planted in collaboration with select secondary partners, local government authorities, extension agents, and strategic farmers. The secondary and primary partners working with ACAI are required to be active players in the cassava value chain.

Source: [AKILIMO UPDATES](#)

## State governments in Nigeria offer land to ACAI for demonstration and training



Demonstration plot

Four state governments in the south of Nigeria have allowed the African Cassava Agronomy Initiative (ACAI) and its partner Sasakawa Africa Association (SG2000) to set up cassava demonstration and training plots for the AKILIMO decision support tools at their zonal skill development locations.

The ACAI project which is implemented by the International Institute of Tropical Agriculture (IITA) has developed the AKILIMO decision support tools to provide agronomy advice for cassava growers. The space allocated by state governments will create 14 additional demo and training locations in Anambra, Cross River, Edo and Ogun states and will provide training to more than 200 new extension agents who were not originally part of the project.

The new sites will be included in the ongoing establishment and planting of other demonstration sites previously earmarked for scaling and dissemination of the AKILIMO tools. Between March and May 2020, SG2000 established 80 sites in the four states that are going to provide training for 2400 farmers.

According to the ACAI scaling and dissemination program, demo plots will play a key role in showing the targeted farmers, extension agents and other relevant entities the step-by-step process of deploying and applying the AKILIMO recommendation as well as the expected results when these recommendations are properly applied.

The ACAI coordinator for West Africa, Christine Kreye, attributed the successful collaboration with the SG2000 team to their close association with the State Agricultural Development Program (ADP) which has been significant in enabling ACAI activities at the state level.

“This kind of progress has become a norm from our colleagues from SG2000 and we as ACAI are very pleased with the new opportunity to scale AKILIMO tools,” said Christine.

SG2000 and ACAI work very closely with state governments in facilitating research trials, capacity building and utilizing the government extension services network.

Previously, SG2000 has facilitated meetings and discussions between IITA – ACAI staff with senior state officials for status updates and exploring collaborations in the field.

SG2000 state coordinator for Anambra, Chris Okoli, expressed optimism about the new development pointing out that the extra demo sites will help narrow the gap in the number of targeted EAs and farmers to mitigate dissemination challenges faced due to coronavirus pandemic. Sharing the same sentiments, ACAI Project Scaling Specialist Thompson Ogunsanmi, said the engagement of more partners to take up the use of these recommendations within their network is one of the sustainability arrangements with ACAI partners in Nigeria. The number of smallholder farmers in the network of SG2000 in Nigeria is huge and SG2000 has been in the forefront to ensure integration of all AKILIMO tools for use in their extension activities.

Source: [AKILIMO UPDATES](#)

# New models for cassava seed systems: Tanzania and Nigeria



A cassava varieties exhibition stand

Cassava is a vital crop for millions of farmers in sub-Saharan Africa. Once a food security crop, it is now transitioning to offer significant income generation for smallholder farmers — often outpacing the value of cereal crops on a per-hectare basis. With increasing climate variability, cassava has proven to be among the most resilient crops, lowering the risks for farmers associated with more rain-dependent crops.

However, pests and diseases cause significant production loss in cassava, and the most important of these are two groups of viruses — mosaic and brown streak viruses. Fortunately, breeders are developing improved varieties with better disease resistance, likely the most promising way to combat these problems. But how does a smallholder farmer get access to clean seed of these newer and improved varieties?

Traditionally, cassava, like most vegetatively propagated seed systems in Africa, were almost totally informal. Farmers saved and shared old and often disease-infected planting materials among themselves, while local government agencies and NGOs would sporadically multiply and give away free planting materials in an unsustainable and unreliable manner, but that is beginning to change.

Two of our grantees at the [Bill & Melinda Gates Foundation](#) posited a novel vision of economically sustainable cassava seed systems that would make new, clean planting materials available to farmers more reliably — by selling those materials. Revenues would encourage seed entrepreneurs to operate in a more sustainable manner, and farmers would have improved access to clean seed of improved varieties. The projects, [BASICS](#) in Nigeria, and [BEST Cassava](#) in Tanzania, started building these systems at the retail

level, encouraging the creation of more than 600 registered cassava seed entrepreneurs — essentially, farmers with special training who produce certified stems for sale locally. This work succeeded in demonstrating that small-holder producers are willing to pay for certified stems of desired varieties and that cassava seed enterprises can generate adequate revenues to become profitable.

While the disease and market challenges are different in Tanzania and Nigeria, we are learning from elements in these systems models that we believe are common and can be applied elsewhere.

Perhaps the most fundamental lesson we have learned is that commercially oriented farmers will invest in better seed if it is available and convenient for them to access, if it performs better than what they are now growing, and if the varieties are appropriate for and desired by their local off-take markets. This is, essentially, the business case for farmers or their return on investment. We are seeing this in Tanzania, where newer varieties with higher virus resistance provide a quick payback for farmers who purchase clean planting stems from the increases in usable root harvests. And we see it in Nigeria, where off-take markets — particularly processing plants — value some varieties above others, thus incentivizing the farmers to grow these varieties.

Also clear is the importance of a sustainable business case for the seed producer. The profitability throughout the seed production chain requires advances in seed multiplication technology, but it also requires new systems to manage quality of planting material and marketing plans to demonstrate that these new varieties are clearly superior to what farmers already have. Seed businesses need access to foundation seed (starter material to multiply) and structures

for its production and sale. In Tanzania, a new cadre of seed entrepreneurs was cultivated — foundation seed producers; in Nigeria, two new public-private partnerships were incubated to produce and sell early generation seed. The partnerships use new technologies developed by the program that greatly increase the multiplication rates in low-cost laboratories and screen houses. More recently, three private cassava processing factories in Nigeria have developed their own seed production capacities with a long-term plan to sell planting materials to out-growers.

One step further up the seed value chain, cassava breeding institutes also must evolve to produce the breeder seed that foundation seed producers need. The projects have worked with government research institutes to accelerate their production technologies of clean breeder seed and help them implement business operations to ensure that new, improved varieties flow into this seed system pipeline.

We could share many other lessons (such as—the need for strong linkages between breeding programs and the seed production systems; the importance of a fit-for-purpose seed quality assurance program at the national and local level; strong sector coordination with off-take markets as they mature; and many more). Nonetheless, we remain encouraged that despite this all being relatively new, we see strong evidence that seed growers can profitably produce and market their seed when connected to a high-functioning early generation seed production system. And more importantly, we see that it matters to farmers who are now able to increase their productivity and profitability from cassava.

**Source:** [AGRILINKS](#)