In this Issue

About YIIFSWA-II
An overview of the project rationale and strategy and framework

Behind the scenes
An update of project activities implemented so far

Stories from the field
Mr. Joy Ogunbiyi’s YIIFSWA’ experience
From the Project Leader

Welcome to the first Issue of the newsletter for the Yam Improvement for Income and Food Security in West Africa Phase 2 project (YIIFSWA-II). We produce a newsletter on a bi-annual basis, sharing progress. The objective is to provide you with key information regarding development of the formal seed yam system in Nigeria and Ghana.

The YIIFSWA-II project began on 1 January 2017 after the signing of the grant between Bill and Melinda Gates Foundation and International Institute of Tropical Agriculture. YIIFSWA was granted Phase 2 to scale out the breakthroughs on high ratio propagation technologies, virus indexing and elimination, and quality management protocols. IITA and partners seek to develop and prove a functional commercial seed system in Nigeria and Ghana to benefit smallholder farmers through timely and affordable access to high quality seed yam tubers of improved varieties.

We intend to share the YIIFSWA-II approach with you and the strategies used for improving access and utilization of quality seed yam by farmers and the innovations that happen along the way in ensuring that effective formal seed yam systems are established to support the yam value chain in Nigeria and Ghana.

In Nigeria, the partners include National Root Crop Research Institute (NRCRI), National Centre for Genetic Resources and Biotechnology (NACGRAB), and National Agricultural Seed Council (NASC); In Ghana, they are Crop Research Institute (CSIR-CRI), Savannah Agricultural Research Institute (CSIR-SARI), and Plant Protection and Regulatory Services Directorate (PPRSD). At the end of June this year IITA and Context Global Development / SAHEL Capital selected the first three seed companies that have expressed their interest in establishing Aeroponics for foundation seed yam production.

So far, the project has initiated the promotion of its technologies including the validation of the performance of the three improved and released yam varieties in 80 locations in six States in Nigeria. YIIFSWA-II at IITA is focusing efforts towards generating 35,000 plantlets using the Temporary Immersion Bioreactor System (TIBS) and one-node vines to establish 5ha for demonstration by December 2017.

On behalf of the project happy 50th anniversary,

Warm regards,
Dr. Norbert.G. Maroya
YIIFSWA-II Project Leader

About YIIFSWA-II
Project rationale, strategy, and framework

The recent developments on yam, particularly the promotion of yam for exports by the Federal Ministry of Agriculture and Rural Development (FMARD), are an indication of the need for intensification of yam production in Nigeria. To this end, the interventions of YIIFSWA-II are very timely because seeds are the entry point for promoting productivity.

The unavailability of disease-free seed yam tubers of improved varieties has been inhibiting farmers from raising productivity levels in Nigeria and Ghana. Although 21 improved varieties have been officially released in Nigeria, farmers are yet to benefit from the advantages of using quality seeds due to a combination of factors including inefficient seed production, distribution, and quality assurance systems.

It is against this backdrop that the YIIFSWA-II project is channeling all efforts towards formal yam seed system development to facilitate the intensification of production in Nigeria and Ghana to increase incomes and improve seed and food security. For farmers to gain access to quality seeds of varieties of their choice, constraints in the formal seed sector need to be addressed, particularly the mass production of seed tubers. The use of conventional cultivation is inefficient because yam has a low multiplication ratio of 1:5.

Snap shot: the potential of high quality seed yam of improved varieties

Federal Government recently reported a 2,000,000 tons production Gap (The agriculture promotion policy 2016-2020)

Nigerian Farmers are producing well below the estimated yield potential of yam

If farmers had access to high quality seeds of improved varieties and realized 30% increase in production then:
- Production yam will increase from 36million tons to over 41.4 million tons annually.
- Production value of yam will increase from $13.7 billion to $18 billion
YIIFSWA-II seed system initiative was developed based on the key breakthroughs of YIIFSWA-I. These included the proven novel high ratio propagation technologies such as TIBS for pre-basic seed yam production and the Aeroponics System (AS) for basic seed yam production; seed yam quality management protocol (YQMP) for sustaining seed quality, health, and certification of pre-basic, basic and certified seed yam; improved seed health management methods incorporating virus elimination techniques and virus indexing, especially for pre-basic seed yam production.

YIIFSWA-II seeks to develop a sustainable system in Nigeria and Ghana that uses a market-based integrated approach to deliver clean quality seed yam of improved varieties to at least 320,000 smallholder farmers for long-term benefits. This will contribute to an increased income for farmers and an increased number of rural households that are seed and food secure.

The project’s objects are as follows.

• Increased adoption of improved varieties by 320,000 smallholder farmers, men and women, in Nigeria and Ghana by 2021.
• Development of a functional, and sustainable seed system that delivers sufficient quantities of high quality seeds of improved varieties to farmers at the right time and at prices that encourage adoption.
• Empowerment of women to profitably participate in the commercial seed yam value chain within the context of the appropriate socio-cultural system.

The IITA-led project is being implemented with an integrative concept. The project brings together the formal seed sector stakeholders to jointly address key issues hindering the development of the seed sector in Ghana and Nigeria.

The strategy is based on a three-pronged approach:

• Demonstration of the profitability of the business opportunity in using the AS system for basic seed yam production.
• Provision of technical and business advisory services for private seed companies to engage in production of high quality basic seed yam using AS.
• An increase in the supply of certified seed yam tubers from vibrant and profitable seed entrepreneurs at an affordable price to ware yam producers.

YIIFSWA-II Project Framework

YIIFSWA-II project is implemented by IITA in partnership with Context /SAHEL, National Agricultural Research Institutes, and agencies and private seed companies in Ghana and Nigeria.

IITA is working with Context /SAHEL to demonstrate the profitability of AS through the development of a business case that prospective private companies producing basic or foundation seeds will use as demonstration for the adoption of the technology for basic seed yam production.

For the yam seed system to be sustainable and viable YIIFSWA-II is targeting existing private seed companies with the capability and resources to efficiently produce quality basic seed tubers of improved varieties to market to commercial seed enterprises, thus creating access to quality seeds. However, IITA will provide technical seed production and Context/SAHEL will contribute Agribusiness expertise to support the business development of seed enterprises with the hope that all seed companies will become technically, organizationally, and commercially autonomous in seed production and marketing.

At the national level, YIIFSWA-II will be working with National Agricultural Research Institutes (NARIs) with the mandate to efficiently produce high quality pre-basic plantlets and seed tubers using TIBS. YIIFSWA-II will also work with the National Regulatory Services whose mandate is seed quality control and certification.
Behind the scenes

Inaugural implementation planning workshop

The YIIFSWA was granted Phase 2 by the Bill and Melinda Gates Foundation (BMGF) to scale out key breakthroughs developed in the project for yam seed system development.

The inaugural Implementation Planning Workshop was the first opportunity for partners to meet as a group to discuss the modalities of project implementation and undertake detailed planning of activities based on the project’s objectives and outcomes for the development of the formal yam seed system.

Hosted by IITA, the three-day planning workshop was conducted at the Conference Center in IITA-HQ, Ibadan, Oyo State, Nigeria, 21 - 23 February 2017.

The event was attended by more than 60 participants from IITA, Context/Sahel, NASC, Plant Protection and Regulatory Services Directorate (PPRSD), National Root Crop Research Institute, (NRCRI) NACGRAB, CSIR-CRI, SARI, and three seed companies from Nigeria: Biocrops Biotechnology Ltd, Da Allgreen Seeds Co. Ltd, Nwabudo Seed Co. Ltd, and heritage seed company from Ghana.

At the opening session Dr. Robert Asiedu emphasized the need for participants to focus on and critically consider project outcomes and develop activities that would bring about an appreciable impact for yam farmers during the next five years.

The planning session began with Dr. Norbert Maroya’s presentation of the project proposal approved by BMGF and an outline of the project management strategy. This allowed a shared understanding of what the project involves and how this will be achieved. This was followed by a series of detailed project planning group sessions resulting in the following key deliverables for Year 1:

- Establishment of 5ha of seed yam using AS vine cuttings by the end of 2017 for seed-to-ware yam demonstration in 2018.
- Production of 35,000 plantlets for pre-basic seed yam production.
- Attainment of signed MOU from at least three seed companies with a minimum aggregated production capacity of 30ha of basic seed yam.
- Establishment of 80 validation trials for the appraisal of the performance of the three promoted improved varieties against the local best.
- Development of a business case for the commercial production and distribution of pre-basic and basic seed yam.
- Establishment of one bioreactor in NARIs in Nigeria and one AS Ghana.

YIIFSWA-II project Launch

IITA and partners launched YIIFSWA-II, a five-year seed yam system development project, on 24 February 2017 at IITA-Ibadan Conference Center, Oyo State, Nigeria. The flagship initiative will ensure the scaling out of YIIFSWA’s breakthroughs in high ratio propagation technologies and virus indexing and elimination, and the quality management protocols for the timely availability of adequate quantities of high quality improved seed yam tubers on a commercial basis for smallholder farmers in Nigeria and Ghana.

Present at the inaugural event were the delegates and representatives from Context/Sahel, All Farmers Association of Nigeria (AFAN); NASC, Abuja Nigeria; NRCRI, Umudike, Nigeria; NACGRAB, Ibadan, Nigeria; Plant Protection and Regulatory Services Directorate (PPRSD) Accra, Ghana; CSIR-CRI Kumasi, Ghana; CSIR-SARI, Tamale, Ghana; the Yam Development Council; IITA Management including Dr Nteranya Sanginga, the Director General; and CEOs of three seed companies from Nigeria (Da Allgreen, Biocrops, Nwabudo) and one from Ghana (Heritage Seed). The regional coordinator of CAy Seed Project and the Project Leader of AfricaYam also presented their goodwill messages.

The unavailability and exorbitant cost of high quality improved seed yam are the foremost production constraints for yam in West Africa. The formal seed yam system has been non-existent due to inefficient seed production, distribution, and quality assurance systems.

The issue of inadequate seed production has stalled yam development across West Africa. Yam multiplication ratios are low and seed tubers are prone to contamination with pests and diseases.
in the traditional systems of production. However, YIIFSWA has developed new technologies such as TIBS and AS as tools for high ratio propagation of seed yam to address some of the challenges.

Chairing the occasion, Dr. Sanginga welcomed participants to IITA and urged them, particularly the implementing partners, to contemplate how to reach the masses with quality seed yam of improved varieties.

“In 2011, when I was DG elect, I had the opportunity of meeting Bill Gates during his trip to Nigeria. In our discussion, he asked me how I was going to reach millions of farmers with the Aflasafe and rhizobium technologies that we have developed. In response, we built the Business Incubation Platform (BIP) center to showcase how to produce inoculum and Aflasafe at scale. It is a factory and it is probably unique for the moment in Africa. We are not experts in marketing and commercialization so we had to link up with the private sector. With the institution of enabling policies, the transformation was rapid across Africa. So, the question to ask now is whether we can do the same thing for yam. I know that we have reduced the breeding cycle for yam; we have new seed propagation technologies such as Aeroponics. All these things are admirable. Can we do the same thing for yam as we did for Aflasafe technologies? The AS in the screen house can produce enough vine cuttings for seedlings for 10 ha; what will it take to produce seeds for 200,000 ha? How do we scale these technologies and what means are we going to use to do it?” Dr. Sanginga challenged project implementers.

In his introductory presentation, the Project Leader Dr. Norbert Maroya stated that YIIFSWA-II would be based on the implementation and scaling out of key breakthroughs of YIIFSWA specifically, the use and promotion of novel high ratio propagation technologies, i.e., TIBS, for pre-basic seed yam production by NARIs and AS for basic seed yam production by the private seed companies.

“To realize the vision of an economically sustainable commercial yam seed system in Nigeria and Ghana,” Dr. Maroya said, “the project through its partners will provide business advisory support towards the establishment of appropriate business models and strengthen the business skills of the private seed companies engaged in using AS for high quality basic seed production. This will be helpful particularly to women who are engaged or interested in seed production for commercial purposes.”

Chief Tola Adepomola, President of Roots and Tubers Committee of AFAN, thanked the project for the much-needed intervention. “I want to thank IITA and the Gates Foundation for this project. We farmers know what we go through to get seed yam. Seeds are very scarce. This is a much-needed intervention, getting improved seed tubers to farmers, I say thank you.”

YIIFSWA-II’s proactive promotion of yam developments at ISTRC-AB

A strong YIIFSWA-II delegation from Nigeria and Ghana participated in the triennial symposium of the International Society for Root and Tuber Crops - Africa Branch (ISTRC-AB) to promote the project’s novel technologies and initiatives for seed yam production.

The one-week event which took place in Dar es Salaam, Tanzania, 6-10 March, had the theme “Expanding collaboration and catalyzing innovation of root crops for accelerating Africa’s economic growth.”

YIIFSWA-II certainly made its mark at the symposium with a passionate presentation by Dr Norbert Maroya on “Basic seed yam tuber production using pre-rooted one-node vine cuttings from Aeroponics.” Other oral presentations on YIIFSWA-II included the following:

• Comparative efficiency of positive selection and tissue culture for generating pathogen-free planting material of yam (Dr. Morufat Balogun)

• Ensuring sustainable availability of seed yam for smallholder farmers: lessons from a community of dedicated seed producers and marketers (Dr. Beatrice Aighewi)

• Yam miniset technology: re-emergence in West Africa creating new value from a former innovation (Dr. Djana Mignouna)

Also on display were the following posters.

1. One-node vine cuttings from aeroponics for seed yam tuber production, (Dr. Morufat Balogun et al.)

2. The Temporary Immersion Bioreactor System for clean pre-basic seed yam plantlet production, (Dr. Morufat Balogun et al.)


YIIFSWA-II’s first encounter with the Minister of Agriculture and Rural Development

On 27 March, YIIFSWA-II Communication Specialist Ms. Oliwo Odihi presented the project to the Federal Minister of Agriculture and Rural Development, Chief Audu Ogbeh, at the commissioning of the youth training center of the Agricultural Transformation Agenda Support Program (ATASP-1). This was an opportunity to showcase the seed yam production technologies promoted by YIIFSWA-II to the Federal Minister. As a result of this encounter, the project was invited to participate in the development of the Yam Export Forum at Makurdi, Benue State.

On 27 March, YIIFSWA-II and AfricaYam participates in the first technical Committee on Nigeria Yam Export Program in Benue.

Following IITA’s achievement on yam value chain development particularly the novel technologies for high ratio propagation of seed yam and yam breeding, YIIFSWA-II and Africa Yam were invited to participate in and contribute to the first meeting of the Technical Committee on the Yam Export Program in Nigeria.

The aim of the 2-day forum was to create awareness for the Nigeria Yam Export initiative and to identify areas in need of strengthening for effective marketing and comparative competitiveness to become key players on the international market.

Dr Beatrice Aighewi, YIIFSWA-II Seed System Specialist, representing the project, gave a presentation on the yam research for seed system value development at IITA.

Participants were taken to ZakiBiam the world’s largest yam market on Day 2 and to an uncompleted yam processing center at Katsina-alu, Benue State.
Establishing private partnerships for formal seed system development

Tasked with the responsibility of spearheading private sector involvement in the development of the yam seed system, Context/SAHEL have hit the ground running while networking and establishing a “trust-based” relationship with Nigerian seed companies interested in exploiting the profitable niche market. Prior to project launching, the organization funded by IITA conducted a due diligence study of 12 Nigerian seed companies that had expressed an interest in participating in the establishment of the formal yam seed system during Phase 1 of YIIFSWA. These evaluations were conducted in order to provide information for the selection of eligible seed companies for the YIIFSWA-II project. The analysis focused on the organizational and operational capacity of seed companies as well as their willingness and ability to establish an AS and basic (foundation) seed system.

Based on the recommendation of SAHEL, three seed enterprises were selected for partnership in YIIFSWA-II. Da-Allgreen Seeds Ltd, Biocrops Biotechnology Ltd (Biocrops), and Nwabudo Agro Seeds Ltd. Currently, discussions with several other prospective seed companies are ongoing to increase the number of private companies in the system.

In the wake of project launching and other foundational activities being carried out by IITA and other partners, Context/SAHEL have focused on working with the selected companies on developing business models that strengthen the marketing and operational skills of private seed companies engaged in using AS for basic seed yam production. The project team worked closely with the private companies to develop business plans. Focusing on business model optimization the organizations intend to improve pre-basic (breeder) and basic (foundation) seed system economics, localize seed production, and enable the scaling-up of private seed companies.

Another major activity of the agribusiness team has been the development of the Pro Forma Financial Model. This consists of production assumptions, projections, and sensitivity analysis. The Model will help seed companies to analyze the assumptions upon which they build their seed yam business around production volumes, costs, and sales.

Context/SAHEL has worked extensively with the three initial companies to outline model functionality, analyze model assumptions, and support their interpretation of the financial metrics. In a debriefing meeting in June at IITA-Ibadan a sample sensitivity analysis was conducted to assess the impact of key production and sales assumptions on profitability. Based on IITA productivity in the AS and AS vine cuttings in the field, the sensitivity analysis clearly showed that profitability requires individual seed yam prices in excess of N100, with each AS producing more than 250,000 one-node vine cuttings annually. These levels would enable AS expansion as companies reinvest their profits back into the business.

YIIFSWA-II enhanced Nigeria pre-basic seed production

Access to quality seeds of improved varieties is the basis of sustainable crop production systems. This can be achieved only if there is a viable supply system incorporating efficient seed multiplication and distribution within an organized formal seed system.

For yam, a formal seed system is gradually being developed through the YIIFSWA-II project. The IITA-led project is equipping institutional partners with infrastructure, technical know-how, and clean planting materials from the project’s promoted varieties that will enable key research institutions such as NACGRAB to participate in the commercial multiplication and dissemination of yam planting materials.

In 2016, IITA used the SETIS Temporary Immersion Bioreactor (TIB) technology for pre-basic seed yam production. In Phase 2, this technology will be scaled out to national partners involved in pre-basic seed yam production.

In April, YIIFSWA-II, assisted by IITA’s Facilities Management Services (FMS) installed 24 units of the SETIS Bioreactors at NACGRAB for mass propagation of high-quality, pre-basic yam plantlets of the three improved varieties promoted by YIIFSWA-II. These would be made available commercially to private seed companies for basic seed yam production. According to YIIFSWA’s Principal Investigator on TIB technology, Dr. Morufat Balogun, each unit of NACGRAB’s SETIS bioreactor can hold at least 50 plantlets making a total of 1200 plantlets at a time for the 24 units. This is less than a quarter of IITA’s 128 units installed in 2013. A 10-KVA inverter system and programmable logic control (PLC) were also installed by YIIFSWA alongside the bioreactors for sustainable utilization.

According to the Head of Tissue Culture at NACGRAB, Dr. Afolayan Adegbedun, prior to this installation, NACGRAB was using recycled mayonnaise containers (Bama bottles) which held about 15 plantlets per unit. In addition, the Bama bottle system was not cost-effective because they often had to change containers as the bottle caps became loose, allowing contamination.

The SETIS Bioreactor comes fitted with silicone gaskets for the screw caps allowing perfect sealing of the bioreactor in addition to a PLC amenable to both research and production. Each unit of the new SETIS bioreactor can hold six times more plantlets per production cycle.

On 10 May, Dr. Balogun visited the center to inspect what had been installed and also handed over 40 disease-free tissue culture plantlets of the three improved varieties being promoted (TD789/02665, TD79/19177, TD79/01176). NACGRAB already has in its stock 900 plantlets of both landraces and improved varieties earlier introduced by YIIFSWA.

The center is expected to provide NRCRI with 1960 disease-free pre-basic plantlets this year for planting in NRCRI’s aeroponics facilities, also installed by YIIFSWA.

Top: YIIFSWA’s Morufat Balogun (second from left) handing over clean yam plantlets for multiplication in the Bioreactor.

Left: Newly established SETIS bioreactor system at NACGRAB

Right: New SETIS containers vs Bama bottles.

Seed Company Partnership Framework
YIIFSWA-II trains NACGRAB Scientists on operating Bioreactor for high ratio propagation of pre-basic yam plantlets

With the installation of a new SETIS bioreactor facility at NACGRAB, two senior research officers, Felix Ejiroghe Lawyer and Toyin Olabisi Omoshola, were trained on using the high ratio propagation (HRP) technology by the bioreactor team from YIIFSWA-II.

The Project Leader Dr. Norbert Maroya welcomed the participants and explained that the three-day training program on the HRP technology for quality yam plantlets multiplication was important because it would help advance yam production in Nigeria. The training was based on three sequential procedures beginning with the establishment and sustainability of the establishment and stability of the yam seed system by multiplying and commercially distributing sufficient quantities of high quality plantlets of improved varieties to NRCRI for the supply of pre-basic seed yam for basic seed yam production along the seed yam system.

According to Felix Ejiroghe Lawyer, a training participant, “the training has been very educative. Through it I have been able to identify loopholes that have been causing contamination of our plantlets. ... you are very organized here in IITA. When we get back, my colleague and I will get together with the team at NACGRAB to address our inadequacies so that we can start achieving tremendous results. Thank you, IITA, for giving us this platform. This training has given us the boost we needed to achieve our goals.”

NACGRAB is well versed in propagating and commercially distributing pineapple plantlets using the “Banana bottle” type of TIB for multiplication, but yam is a new crop for them and it uses a new propagation system. According to Dr Morufat Balogun, YIIFSWA-II’s Principal Scientist on TIB technology, as the focal point for HRP of pre-basic seed yam in Nigeria, the national scientists needed the training on using the SETIS bioreactor; implementing quality standards approved by the regulatory bodies of Nigeria using the seed yam quality management protocol (YQMP) for sustaining seed quality, health, and certification of pre-basic plantlets; and implementing improved seed health management methods that incorporate virus elimination techniques and virus indexing, especially for pre-basic seed yam production.

YIIFSWA-II hosts a farmer field day during the harvest of seed yam tuber from AS Vine Cutting

During the YIIFSWA-II Field Day held at IITA in Ibadan on 2 May, yam farmers from Oyo and Osun States in need of high quality seed tubers witnessed and appreciated the yam harvested from the vine cuttings-to-tuber technology that could potentially boost seed yam production of improved varieties for mass commercial distribution in the coming years. This will also release more tubers for use as food.

More than 85 participants including partners, collaborators, journalists, IITA staff, and farmers from yam growing communities participated in the harvest of tubers grown from one-node vines cut from plants of the improved variety TDr 95/19177 growing in the AS system. This is one of the three improved varieties being promoted by YIIFSWA-II.

The vines were planted in October 2016 at IITA, Ibadan, and were harvested after six months of field growth. Farmers were also given the opportunity to see the source of the vines growing in the aeroponic system. According to the YIIFSWA-II Project Leader and the Principal Investigator of this technology, the essence of the event was to showcase the use of pre-rooted vines for seed yam tuber production. Vine cuttings from AS have been proved to be quite effective in the mass production of quality seed tubers of improved and released varieties in Nigeria and Ghana.

The dense canopy of yam plants derived from TIB and grown in AS can generate after six months on average 300 one-node vine cuttings per plant; this is the highest propagation ratio for yam. These cuttings are pre-rooted in nursery bags or trays under shade and nurtured for three to four weeks to develop roots and shoots before being transplanted in the field.

Over 12,000 rooted vines were planted in October 2016, tubers were harvested after six months in the field. Dr. Beatrice Aighewi, YIIFSWA-II Seed System Specialist, and Dr. Morufat Balogun, YIIFSWA-Tissue Culture Specialist, briefed farmers on the essence of the event, the importance of using high quality seed yam and promoted the technologies developed by IITA to boost the production of quality seed tubers. Preparing and planting of vine cuttings was demonstrated to participants using vines from the field. Farmers happily noted that the boost in seed production for commercial purposes is a timely intervention to reduce the production costs of yam, given that farmers pay as much N2500 ($8) for three seed tubers during the planting season. They were overwhelmed by the novel technologies exhibited. Joseph Fajimi, a yam farmer of 30 years, said: “This new way of producing yam is very surprising. I can’t believe it. They are growing yam from vines and without soil. If you only told me this I wouldn’t believe it. But I have seen it and I am convinced. Seeing is believing! I have to experience it in my farm.”

High profile visit to YIIFSWA-II Aeroponic system at BIP

Top: Two top officials of the Bill & Melinda Gates Foundation were in IITA on the 13 June 2017, to discuss ways to address food security in Africa with impact at scale. The team compromising Dr. Tom Kehoe and Dr. Audu Grema also visited the Aeroponics system at BIP, a key breakthrough technology of a Gates funded project.

Bottom: Chief Audu Ogbeh, Federal Minister of Agriculture and Rural Development at the Aeroponics during his state visit to IITA. Nigeria’s honorable Minister of Agriculture, Chief Audu Ogbeh, visited IITA in Ibadan, Nigeria, on 10 July, and said that he is “impressed” by the many commendable agricultural technologies developed by the Institute because they hold promise to quadruple production and export for a crop like yam.

Audu Ogbeh, visited IITA in Ibadan, Nigeria, on 10 July, and said that he is “impressed” by the many commendable agricultural technologies developed by the Institute because they hold promise to quadruple production and export for a crop like yam.
Early Generation Seed production at IITA

One of the conditional clauses of the project is to transform the research system to business and produce 35000 plantlets using TIBS and establish Sha of land using AS one-node vine cuttings.

IITA has focused all efforts towards achieving success in this clause to proceed with the development of the seed system. So far 17357 plantlets have been produced using TIBS.

The project has not been able to establish Sha of land with vine cuttings because of the excessive heat damage recorded from December to February.

Impact Story

Oyo State Yam Farmers, Marketers and Processor association pays YIIFSWA-II project a visit

On 22 June 2017, the Executive Committee of Oyo State Yam Farmers Association and two representatives from the Ministry of Agriculture and Rural Development paid a courtesy call to YIIFSWA-II project. The purpose was to create awareness of their existence and to discuss the opportunity of collaboration with IITA through YIIFSWA-II.

In his opening remarks YIIFSWA-II Project Leader Dr. Norbert Maroya stated that although Nigeria is the largest producer of yam and the production value of yam surpasses the value of cassava, rice, maize, and sorghum put together, Nigeria has one of the lowest yam yield levels in the world. One of the major constraints inhibiting Nigerian farmers from realizing the yield potential of yam has been the unavailability of quality seed tubers of improved varieties. However, because of YIIFSWA’s key breakthrough technologies for the high ratio propagation of quality yam seed tubers IITA was awarded YIIFSWA-II to ensure the availability and accessibility of high quality seed tubers of improved varieties.

Outlining the purpose of their visit the representative from the Oyo State Ministry of Agriculture and Rural development (OYSADEP) Mr. Kola Badmus indicated that the Oyo State Yam Farmers Association was created to foster and promote the general development of all those involved in the yam value chain in Oyo State to key into the promotion of yam exports. “Oyo State tried it (yam export) once, but our approach was wrong,” he said.

“We failed in that aspect and this time around we don’t want to fail. They say once bitten, twice shy. It is on this note that we want to group some of our farmers to be producing seed tubers using your technologies.”

Speaking on behalf of the Association Mr. Isa thanked the Federal Ministry, the State Ministry, and IITA for proposing the development of the Association. “Your technologies have been brought to our attention, and we are baffled by them. If we were to tell farmers at home that you can produce yam using vines they would ask us if we are okay in the mind,” Mr. Isa said. “We are used to the orthodox way of producing big tubers because that what the domestic market dictates but you have brought to our attention that the export market wants smaller tubers that can be constituting a yam development forum under YIIFSWA and brought several farmers, marketers, and processors together to create awareness on the project and the importance of farmers’ organizations for development.

Cynical to the idea, Mr. Joy reiterated several instances in which such ideas were suggested and implemented by the Government but only to fall short of the vision conceived. However, his YIIFSWA experience has been very different and has yielded dividends. The following paragraph is his account of his YIIFSWA experience and the impact it has had on him.

“YIIFSWA developed my interest in yam production. I didn’t like yam cultivation because it was expensive, time consuming, and labor-intensive. Moreover, how can you put yam in the ground and then wait for nine months, only for it to yield little profit? But from my first meeting with YIIFSWA and the first training we got on AYMT and vine cuttings for good seed production, I was really impressed with the project and its technologies and decided that I was going to practice it. They have been consistent in their farmer development initiatives. Apart from trainings, the project sponsored me and other farmers from all over Nigeria and Ghana to twice visit Illushi seed market in Edo State to learn how to produce and market good seed yam from farmers who produce seed yam tubers for business. I was included on several project activities in Oyo State and it has been worthwhile. Because of all these activities I was encouraged to go into yam production for business. They have been sponsoring trips, but this year I took it upon myself to sponsor my trip to Makurdi in Benue State to participate in the first technical meeting of the Yam Export Forum. To my surprise, Dr. Beatrice Aighewi and the Communication Specialist were at the Forum representing the project and I was so happy to see them. I said to myself, “If they are here then it is serious.” Moreover, because of my involvement with the project and of the knowledge I have gained, I was called upon to serve my State on the Commodity Development Board as Vice-chairman of the Yam Farmers Association of Oyo State. I would like to thank the YIIFSWA team for their efforts and their work with grassroots farmers. You see some scientists hide their research but IITA doesn’t do that. They bring it down to us to learn. I would like to implore them to continue the good work and help Oyo State become a major contributor to the global yam market.”

YIIFSWA-II handing over seed tubers to Oyo state Yam Farmers, Marketers and Processors Association packaged. All in all, we still need your guidance to forge ahead. Since Nigeria is focusing on agriculture for economic development and yam is being promoted as an export commodity, we will take all that we have seen here and inform our members back at home so that we can spur them into action for Nigeria to take its rightful place in the export market.”

Mr. Joy Ogungbiji, Vice President of the Association informed the group of the ongoing activities of the Yam Export Promotion Forum and implored IITA to consider developing yam fertilizer, having learnt that the current fertilizer (NPK) is for grain and not tubers. After the meeting, YIIFSWA-II project gave a total of 2225 seed yam tubers of the following varieties - TDr 95/19177, TDr 95/18544, TDa 98/01176, TDr 89/02665, Meccakusa - to the Association to multiply using the adapted yam miniset technique (AYMT) for distribution among their members.

However, the inside story in all this is the impact YIIFSWA has had on him. The project’s first training we got on AYMT and vine cuttings in Oyo State to participate in the first technical meeting of the Yam Export Forum. To my surprise, Dr. Beatrice Aighewi and the Communication Specialist were at the Forum representing the project and I was so happy to see them. I said to myself, “If they are here then it is serious.” Moreover, because of my involvement with the project and of the knowledge I have gained, I was called upon to serve my State on the Commodity Development Board as Vice-chairman of the Yam Farmers Association of Oyo State. I would like to thank the YIIFSWA team for their efforts and their work with grassroots farmers. You see some scientists hide their research but IITA doesn’t do that. They bring it down to us to learn. I would like to implore them to continue the good work and help Oyo State become a major contributor to the global yam market.”

Mr. Joy Ogungbiji, YIIFSWA beneficiary
YIIFSWA, IITA & yam in the News

A selection of local news:

The Guardian: BMGF, IITA and Others inaugurate New Yam seed development Project

The Guardian: IITA seedling breakthrough to yield 600m yam seedling for nigerian Farmers

Punch: Nigeria, ghana to Benefit from IITA’s N3.6bn yam project

Nigerian Tribune: Nigeria Set to Surpass ghana in annual yam export

Nigerian News Agency: IITA, Partners inaugurate N.4.2bn yam seed improvement programme

Business day: IITA urges more investment in research to boost agricultural production

Daily Trust: export yanking yam out of common man’s reach

Sundiata post: Nigeria begins registration of yam farmers for export

Business post: Yam Export: Farmers begin registration process

The Tide: yam farmers want FG to Subsidies inputs

Vanguard: Before we start exporting yam

Vanguard: mixed reaction trail nigeria’s yam export

Voice of Nigeria: Nigeria to surpass Ghana in Yam export – Minister

A selection of international news:

Spore: Aeroponics High quality seed yam production

AfricaScience news: IITA Research eases Fears over yam Supplied as Nigeria kicks off export

Meridian Institute: Scientist Try to break Nigeria cycle of Replanting bad yams

NPR: Scientists Try To Break Nigeria’s Cycle Of Replanting Bad Yams

The Conscientious Omnivore: Will yam replace meat someday?

WBEZ91.5 Chicago: scientist Try to Break Nigeria’s cycle of replanting bad yams

Next Issue

• Performance of improved varieties (validation trials)
• New private seed companies engaged in YIIFSWA-II
• Output of AS at NRCRI and CSIR-CRI
• New AS at CSIR-SARI Northern Ghana

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