



IITA DG presents to Senate and House Committees on Agriculture, Nigeria

In an historic milestone, Director General [Nteranya Sanginga](#) on 9 March, made a presentation before the joint sitting of the Senate Committee and House of Representatives Committee on Agriculture, House of Assembly, Abuja. For the first time in its almost 50 years of existence, IITA was invited by the Senate Committee on Agriculture and Rural Development to speak about IITA and its work. The DG's presentation was titled "Repositioning IITA for impact in Nigeria." The purpose of the visit was to interact with the lawmakers for better collaboration between the Institute and the Federal Government of Nigeria.

Senator Abdullahi Adamu, Chair, Senate Committee on Agriculture and Rural Development, in his remarks, said "This government can only succeed if research is there. Research is fundamental to our success... IITA is all about research." Sen Adamu was reacting to the DG's presentation, which made a case for agriculture as a strategic driver of development in Nigeria.

In his concluding statement, Sen Adamu raised a wake-up call: "We must go back to agriculture! IITA is an institute that can greatly impact our efforts to improve the



DG Nteranya Sanginga visits the joint Senate and House Committees on Agriculture in the National Assembly, Abuja.

agricultural sector..." The senator had visited IITA for the first time in 2012 during a workshop organized with IITA Goodwill Ambassador, former President Olasegun Obasanjo.

The IITA contingent consisted of DG Sanginga, Deputy Director General

[Kenton Dashiell](#), [Alfred Dixon](#) (Partnerships Coordination Office), Gbassey Tarawali (Outreach Coordinator, Abuja Station), Toyin Oke (RMPEL), Ayo Omopaola (IT Officer, Abuja), Bode Olaoluwa (Communication Office), Thereza Agada Ene (IYA), and Abe Baggi Zaccheaus Isuw.

Farmers give feedback on Climate Smart Agriculture practices and project implementation in Uganda

A project seeking to promote the adoption of locally appropriate climate-smart agriculture (CSA) in Uganda organized a farmers' reflection workshop for sharing of information and experiences across various project sites, and to get feedback on the project's on-farm demonstrations. The feedback will inform the planning for subsequent seasons.

On-farm demonstrations facilitate outscaling of practices among farmers through "learning by doing" and help to capture information about preferred CSA practices since farmers suggest their own training content.



Farmers take part in an exercise to give their feedback on the CSA and demonstration farms.

The project, "Increasing food security and farming systems resilience in East Africa through wide scale adoption of climate-smart agricultural practices", is led by the International Center for Tropical Agriculture (CIAT) and funded by the International Fund for Agricultural Development (IFAD). IITA is co-implementing the project in Uganda.

The project applied the [Climate Smart Agriculture Rapid Appraisal \(CSA-RA\)](#) to prioritize CSA practices with stakeholders in Nwoya district. In August 2015, five on-farm demonstrations were set up in four subcounties to build on these efforts. IITA in partnership with CIAT organized a farmers' reflection workshop on 2 February 2016 at Nwoya District Council Hall.

Farmers ranked the following CSA practices highly: improved varieties, row

planting, minimum tillage, mulching, and intercropping. Improved varieties are those that are high yielding, early maturing, disease tolerant, and marketable. Row planting was good for spacing, requires less seeds, and makes it easy to weed, harvest, and control pests and diseases. Minimum tillage on the other hand reduces costs, kills weeds, and saves time, in addition to requiring little skills, retaining soil nutrients, and reducing erosion.

The feedback received on the demonstration sites was that location was found to be a major factor with farmers citing poor attendance due to long distance. Farmers also cited theft of crops, stray animals, pest and disease infestation, and time as barriers to demo success.

However, farmers were pleased with the

training, which they said was helpful, and their involvement in decision making, because the facilitator gave them opportunities to choose the training content. As a result, they said, they had learned new practices and how to manage the demonstration plots.

Farmers consider their knowledge and skills in making decisions about whether or not to undertake a specific CSA practice. Therefore an important step in the adoption process is knowledge of a practice, which might not necessarily translate into actual uptake, as revealed by a study conducted by CIAT in Northern Uganda and Southern Agricultural Growth Corridor of Tanzania (SAGCOT). Farmers use indicators like yield, income, labor, cost, time, farm size, equipment, and inputs to prioritize CSA practices.

Special feature: Seed yam using one node vine cuttings generated from plants in aeroponics system

IITA initiated the aeroponics system (AS) in February 2013 as one of the high ratio propagation technologies for seed yam tuber production. After nearly three years of experimentation, it was discovered that the AS can generate three types of planting materials for seed yam propagation. These are the mini yam tubers harvested in AS boxes, the aerial tubers known as bulbils in both water yam and white yam varieties, and vine cuttings.

On average three tubers are harvested per plant on AS every 3 to 4 months. The water yam varieties were more prolific (up to 150 per plant) than the white yam (30 per plant for some varieties) in bulbil production. The abundant development of canopy in temporary immersion bioreactor (TIB) yam plants grown in AS has prompted the testing of rooting of vine cuttings. The results of these tests conducted in June and July 2015 showed that at 4 weeks almost all the vine cuttings planted in nursery bags had successfully rooted (98%) and more than 95% of the rooted vines had developed new shoots and grown into normal plants with new leaves.

These results have reoriented the AS experimentation to production of one node vine cuttings. In fact the number of vines per plant is very high as the plants continued to grow and the vine cutting induces a speedy recovery of the canopy. The number of one node vine cuttings averaged 300 per plant



One ware yam tuber from plant issue of one node vine cutting weighing 3.2 kg with the shape of a human foot.

in AS and turned out to have the highest propagation ratio among all the planting materials. From June to October 2015 we generated a total of 13,148 one node vine cuttings from eight varieties (5 *Dioscorea rotundata* and 3 *D. alata*). The one node vine cutting plantlets were transplanted to the field under irrigation between August and November 2015.

Variety TDr 95/19177 transplanted in August was harvested in February 2016. A total of 262 tubers were harvested on 45 m², weighing 109.9 kg in total and corresponding to 24.4 t/ha. Eighty six percent of the tubers harvested, ranging from 41g to 999 g, are considered as yam tubers with an average of 358 g. Only 19 tubers representing 7% of

the total tubers and weighing 28.93 kg are ware yam tubers ranging from 1.03 kg to 3.20 kg with an average of over 1.5 kg. The mini tubers represent 7% with an average weight of 24 g.

This good field performance of one node vine cuttings in a 6-month period is attributed to the use of virus-free TIB plantlets directly planted in AS. The majority (86%) of the seed yam tubers harvested from these one node vine cuttings weighed an average of 358 g which is much higher than the 150 g size recommended for seed yam tubers.



Two ware yam tubers of over 1 kg each harvested from one plant of one node vine cutting.

Got a story to share? Please email it with photos and captions every Wednesday to Katherine Lopez (k.lopez@cgiar.org), Jeffrey T. Oliver (j.oliver@cgiar.org), Catherine Njuguna (c.njuguna@cgiar.org), or Adaobi Umeokoro (a.umeokoro@cgiar.org).

IITA research fellow awarded Borlaug LEAP Fellowship

Ijeoma Akaogu, a PhD research fellow at IITA, Ibadan and Senior Scientific Officer at the National Biotechnology Development



Agency (NABDA), has been awarded the prestigious [Norman Borlaug LEAP Fellowship](#) funded by United States Agency for International Development (USAID). Ijeoma completed her course work at the University of Ghana under the [West Africa Centre for Crop Improvement](#) (WACCI) program and is presently conducting her field research at IITA with [Baffour Badu-Apraku](#), IITA Maize Breeder, as her in-country supervisor as well as CGIAR mentor.

She is studying “Linkage mapping for *Striga* resistance genes in early

maturing tropical maize lines” as part of her PhD thesis research project. Her goal is to locate the regions in the maize chromosome conferring the *Striga* resistance alleles in her mapping population for validation, and easy and speedy transfer of the resistance alleles into farmers’ preferred varieties using marker assisted backcrossing (MAB).

This would boost maize production and productivity in *Striga* endemic areas of West and Central Africa and contribute to poverty alleviation, and improved livelihoods of resource-poor farmers.

Commenting on the award, Akaogu said, “The fellowship will go a long way in helping me to realize my dream of using new and high throughput technologies in plant breeding to enhance and complement the conventional tools of crop improvement”.

The fellowship will provide an excellent platform for collaboration between Cornell University, IITA, University of Ghana, and NABDA.

Akaogu will study at Buckler’s Laboratory, Cornell University, for 5 months with her USA mentor Ed Buckler.

The Borlaug LEAP Fellowship honors Nobel Laureate Norman E. Borlaug who has been hailed as the father of the Green Revolution. Borlaug’s work virtually eliminated recurring famines in South Asia and helped global food production outpace population growth. His distinguished career epitomized the qualities of leadership, scholarship, scientific achievement, international cooperation, mentoring, and passion. Akaogu is one of only a few outstanding graduate students who are being recognized for their promise and potential.

Youth—the future of global food supply

Ensuring the provision of sufficient nutritious food to a growing population in the face of climate change is a major challenge facing the global community. With the world population expected to exceed 9 billion by 2050, driven largely by growth in sub-Saharan Africa and South Asia, solutions must be found for guaranteeing food and nutrition security.

The nature of these solutions and how they serve to ensure food and nutrient security was part of the agenda at the Nestlé convened “[Planting Seeds for the Future of Food: The Agriculture, Nutrition and Sustainability Nexus](#)” conference in June 2015. The multidisciplinary international conference which brought together 165 experts from diverse ranges of expertise and organizations from all over the world identified the youth as critical players in the future of the world’s food supply. The publication resulting from that conference has been published in the *Journal of the Science of Food and Agriculture*.

Specifically, the conference recognized that it is important for the future of food that agriculture be made more attractive to a younger generation especially as the average age of farmers and urban migration rates continue to increase globally. It praised the [IITA Youth Agripreneurs](#) (IYA) initiative as an interesting model for achieving this quest.

IYA attracts young graduates into agriculture by providing them with support, training, and possibilities of exploiting agriculture for business. By helping young people set up businesses, the initiative addresses unemployment as well as guarantees a long-term source of income. In addition it facilitates the adoption of sustainable agro-practices required to meet local food and nutrition needs.

Many landmarks have been achieved by the youth in the IYA scheme since inception. These achievements range from using world-class technologies for producing improved staple crops, exotic vegetables, and value-

added snacks and drinks to serving as mentors and facilitators of agribusiness workshops for other youth across Africa.

Ultimately, creating a system that integrates a range of scientific tools with sustainable agro-practices for ensuring the future of food will require concerted efforts and broad partnerships between local and international private sectors supported by government actions and investment

Annual symposium of IITA research scholars and fellows slated

The 19th annual symposium of the International Association of Research Scholars and Fellows (IARSAF) titled “*Research Innovations and Sustainable Entrepreneurship for Food Security and Growth*”, will be held 30–31 March, at the IITA Conference Center, Ibadan, Nigeria.

IARSAF is an international body of postgraduate students in the areas of agriculture and related disciplines, conducting their research at IITA under the co-supervision of IITA researchers and their respective universities across the globe.

