



IITA management team visits northern Nigeria

A team comprising of Drs Ken Dashiell (DDG-Partnership and Capacity Development), Ylva Hilbur (DDG-Research), Chikoye (Director, Southern Africa Hub), and several scientists visited northern Nigeria on 1-4 October to look at research activities carried out by IITA scientists and collaborators in the region.

On 1 October the team visited the IITA research farm at Minjibr where they saw research activities on cowpea breeding, crop agronomy, and pest management. The team also visited Tundu Wada in Kano State to see mother and baby trials conducted by scientists to evaluate and disseminate Striga management technologies within the Integrated Striga Management project funded by the Bill & Melinda Gates Foundation. The visitors were taken to Daka Sallie to see commercial farms where over 50 ha of land is planted to the IITA-improved maize variety 99EVD TZE STR. The impressive performance of the variety known as SAMMAZ 27 confirmed the good performance of IITA maize varieties.

On 2 October, Station Representative, Dr Alpha Kamara took the team around the IITA station. The tour gave Dr Hilbur, who is visiting Kano for the first time, an opportunity to see research activities undertaken in the Station, including labs and the seed stores. Before leaving for Zaria, Dr Hilbur addressed the staff of IITA Kano Station and encouraged them to continue the good work they are doing. On the way to Zaria, the team visited a commercial farm at Tilga Dam to see large-scale production of maize and soybean. The team also met with Mr Kola Masha and farmers of the Babban Gona Agricultural Francise project at Ikara Local Government Area of Kaduna State. During the visit, Mr Masha presented on the activities of the project which helped the farmers improve maize productivity through acquisition of credit and inputs.

In Zaria, the team was welcomed by the Vice Chancellor of the Ahmadu Bello University Zaria and the Director of the Institute of Agricultural Research (IAR) Zaria. In a brief ceremony the two leaders thanked IITA for supporting IAR over the past 30 years. They were particularly grateful for IITA's investment in the development of capacity in soil microbiology research through the N2Africa project. Dr. Dashiell thanked the management of ABU and



IITA management team and scientists inspect improved cowpea varieties in the screenhouse.

IAR for their collaboration with IITA in developing and disseminating agricultural technologies for the benefit of farmers in northern Nigeria.

Dr Dashiell commissioned a brand new screen house, a new Mikano Generator, and equipment in the microbiology laboratory. These items were funded by IITA through the N2Africa project.

On 3 October, the team visited Chika farm where IITA scientists conduct research to develop technologies for the Guinea savannas of West Africa. Dr Kamara took them on a tour of the farm where they saw trials on cowpea, breeding, agronomy, cassava breeding, and seed multiplication. The team also visited the research farm of the Premier Seed Company Ltd where IITA maize breeders collaborate in developing maize varieties and hybrids adapted to the West African savannas. The team also saw

research activities of the N2Africa project in Zaria.

The team visited IITA-Abuja on 4 October. Dr Gbassey Tarawali, Head of Station and IITA's Representative in Abuja, introduced staff and partners that included representatives of the Department of Agriculture of the Federal Capital Territory (IITA's hosts who leased the land to IITA) and sister organizations, such as IFDC, and gave an overview on the Abuja Station.

The group toured the facilities, such as the new office building, bakery, yam barn, soil treatment shed, screen house, and multipurpose processing center. Debo Akande, project manager, also talked about the benefits of aflasafe to farmers in northern Nigeria. The IFDC and AfricaRice trials on rice, sorghum, and maize demonstrating the efficient use of urea using the Deep Placement Method were also visited.



IITA management team visits maize breeding plots in Abuja.

Tap IITA, DDG Ken Dashiell tells Zambian partners

On 15 October, Dr Ken Dashiell, IITA Deputy Director General, Partnerships and Capacity Development, kicked off the Southern Africa Research-for-Development Seminar Series, appealing to Zambian partners to “tap IITA’s expertise to reinforce the capacity of national agricultural research institutions to help Zambia’s agriculture sector reach its full potential”.

Dr Dashiell aired this message during his seminar-presentation titled “The University of Zambia (UNZA), Zambia Agriculture Research Institute (ZARI), and IITA: A partnership to develop agricultural solutions to hunger and poverty in Zambia”, which was held at the Omnia Lecture Hall 2 of the School of Agriculture of UNZA in Lusaka. More than 60 participants comprising of students, staff, and representatives from UNZA, ZARI, IITA, government, and private seed companies attended the seminar.

During the seminar, the DDG also laid out IITA’s plans to expand its capacity development and partnership efforts in Southern Africa. This includes increasing the number of students being trained by its scientists in the region, developing new agriculture-related training areas geared towards people with little or no formal education, linking with rural and urban schools to help them develop appropriate agriculture curriculum, and conducting training of youths to empower them to be agri-entrepreneurs.

He also emphasized the three essential components for these efforts to create impact. He said, “We need to mainstream



Dr Ken Dashiell during his seminar presentation at UNZA in Lusaka, Zambia.

gender in research and dissemination, develop appropriate capacities, and upscale technologies.”

“Definitely, IITA cannot do this alone. Therefore, I would like to highlight the importance of the partnership that we have with UNZA, ZARI, the private sector, and the government of Zambia. Together we would be able to achieve our common vision of reducing poverty and improving food security not only for Zambia and the Southern Africa region, but more so for the entire continent,” he added.

“And with the establishment of our Southern Africa Research and Administration Hub (SARAH) facilities a year from now, we would be able to more effectively deliver our R4D mandate in the country and in the region,” Dr Dashiell said. IITA-Zambia broke ground for SARAH on 12 September.

“I would also like to laud this collaborative Southern Africa R4D Seminar Series. This initiative will definitely become a centerpiece platform for UNZA, ZARI, and IITA to exchange and share expertise and information in the field of agricultural research and entice future agricultural researchers and scientists. I am confident that we will have more partners on board as this seminar series rolls on,” Dr Dashiell emphasized.

Dr Mick Mwala, Dean of UNZA’s School of Agriculture, shared the DDG’s views, saying that “on the part of UNZA, we will definitely be calling on IITA for support, not only for our students but also for our faculty and staff. I thank IITA-Zambia for having some of our students under its scientists’ wings, but I am also looking forward to seeing more being trained by IITA in the future.”

Former Commonwealth Secretary-General, Chief Emeka Anyaoku, impressed with IITA’s work

In his first visit to IITA, the former Commonwealth Secretary-General, Chief Emeka Anyaoku, said he was impressed with the research being done at IITA and the maintenance of the campus.

Chief Anyaoku was attending the third International Conference on Africa’s Indigenous Stimulants (ICAIS-31), organized by the Oyo State Ministry of Trade and Investment, in Ibadan, but decided to drop by IITA. He met with the Deputy-Director General, Corporate Services, Kwame Akuffo-Akoto and IITA Director, Western Africa, Dr Robert Asiedu.

DDG Akuffo-Akoto and Dr Asiedu explained the Institute’s vision, highlighting the importance of IITA to global food security.

“The work you are doing is important and I must commend you,” the former secretary-general said.

During the tour of the campus, Chief Anyaoku, accompanied by the High Commissioner, High Commission of the Republic of Trinidad and Tobago, Mr Nyahuma Mentuhotep Obika, and the



L-R: DDG Akuffo-Akoto with Chief Anyaoku

Commissioner for Agriculture for Kogi state in Nigeria, Dr Olufemi Bolarin, spent some time at the Genetic Resources Center.

Dr Michael Abberton, Head of the GRC, explained the benefit of the genebank to research and food security. He likened the genebank to a financial bank and its importance in the conservation of biodiversity.

The commissioner for agriculture commended IITA for its work on improving

the productivity of Africa’s key staple crops. In particular, he recalled that improved varieties from the Institute were improving the productivity of cassava in his state, and that most of those varieties helped farmers to tackle pests and diseases challenging cassava production in his area.

Chief Anyaoku’s contact with IITA was facilitated by the Head of Resource Mobilization and External Relations, Mrs Toyin Oke.

Improving food security in Africa through increased productivity of biomass-based value webs



Participants of the BiomassNet Inception Workshop pose for a group photo

Last week, 8-10 October, the Inception Workshop of a new research project took place at the Secretariat of the Forum for Agricultural Research in Africa (FARA) in Accra, Ghana.

Thirty-six scientists from universities and research institutions met to discuss and fine-tune the new project. The researchers came from Ghana, Nigeria, Ethiopia, and Germany and from international agricultural research organizations (IITA, icipe, INBAR) and FARA as a pan-African network with strong expertise and track record in transforming research into action. The initiative expects to contribute to enhancing the capacity of Africa to

participate in the emerging regional and international bio-economy.

The overall goal of the project is to raise food security in Africa by harnessing productivity and efficiency gains in the whole biomass-producing, processing, and trading system. This can be achieved according to the scientists by increased integration of all value web components and the cascading utilization of biomass. The initiative, with the name BiomassWeb, will address the three pillars of food security, i.e., (1) food availability, through enhanced biomass productivity; (2) access to food, through income generation from food and non-food biomass production, processing,

and trading; and (3) use of food, through increasing nutritional quality.

Scientists at the meeting came together with the mutual understanding that BiomassWeb will improve the understanding of the complex biomass-based value webs and that they will develop innovations in research and development in this crucial area for all African countries. Furthermore the researchers want to leave their “comfort zone” of solely conducting research, but want to see their research results find their way into the policy fora and thereby influencing policies for the benefit of the poor in their countries.

To guarantee a successful implementation of this challenging project, one Country Contact Person for each of the three countries was selected: Prof. Felix A. Asante, Director, Institute of Statistical, Social and Economic Research, University of Ghana, Legon; Prof. Victor Olusegun Okoruwa, Dean, Department of Agricultural Economics, University of Ibadan, Ibadan; and Tadesse Woldemariam Gole (PhD), Director, Environment and Coffee Forest Forum, Addis Ababa.

BiomassWeb is funded by the Federal Ministry of Education and Research (BMBF) as well as the Federal Ministry of Economic Development and Cooperation (BMZ) of Germany. In addition, partners are complementing the over-all funding with own funds and in-kind contributions.

IITA unveils maize varieties to tackle *Striga* at farmers' field day

A farmers' field day organised by the Maize Improvement Program of IITA at Mokwa research station in Nigeria showcased maize hybrids and varieties that are resistant to *Striga hermonthica*.

Farmers and other stakeholders attending the field day visited demonstration plots of different *Striga*-resistant maize hybrids and open pollinated varieties with different maturity rates.

The demonstration plots also included hybrids and varieties that were susceptible to *Striga* for good comparisons. The demonstration was arranged in two blocks, infested and uninfested, representing two distinct (stress and optimum) environments. Plots in the infested block were artificially inoculated with *Striga* seeds at the time of planting maize to ensure that the maize grows in a *Striga* endemic environment.

Results from the plots reinforced farmers' trust in IITA's research—a critical component that is necessary for technology adoption.

Drs Silvestro Meseka and Abuelgasim Elzein spoke on the problems caused by



Farmers at the demo plots

Striga on maize and its implication to maize yield in farmers' fields.

They pointed out that *Striga* and low levels of soil nitrogen were among the major problems to maize production.

To mitigate the effect of *Striga*, the researchers urged farmers to use improved planting materials and to also adopt best bet practices in maize cultivation.

The field day drew more than 57 farmers, including policy makers, opinion and traditional leaders women, and youths.

Known by some as the “violet vampire” because of its bright purple color, *Striga*

attaches itself to the roots of plants like maize and cowpea and sucks out nutrients, reducing yields and destroying entire harvests.

The weed primarily affects smallholder farmers who can't afford costly herbicides for fighting the parasitic plant. The most widespread *Striga* species is estimated to have infested up to 4 million hectares of land under maize production in sub-Saharan Africa, causing yield losses of up to 80 percent. According to researchers at IITA, this represents up to \$1.2 billion in losses for farmers and affects approximately 100 million people in sub-Saharan Africa.

The farmers' field day which was held on October 12, provided farmers the opportunity to ask researchers questions and also to get answers on how to tackle the weed which has become a menace.

Farmers commended the field day, pointing out that they had learned new things, and requested IITA to organize more field days that will serve as a learning platform for them and their children

Study offers tip into the complexity of begomo viruses in West and Central Africa

A study by Dr Walter Leke, IITA Virologist, has revealed a huge complexity of begomoviruses and DNA satellites previously largely unknown in West and Central Africa.

Begomoviruses are plant-infecting viruses, which are transmitted by the whitefly vector *Bemisia tabaci*. They have a genome of single-stranded DNA that consists of either a single (monopartite) or two components (bipartite) with a component size of approximately 2.8 kb. Many monopartite begomoviruses in the Old World have been found to be associated with betasatellite and alphasatellite molecules, which are about half the size of their helper begomovirus genome. Betasatellites have been shown to be necessary for inducing severe disease symptoms.

During the West Africa Seminar series, Dr Leke spoke on “Molecular characterization of begomoviruses and associated satellites in Cameroon – implications for plant virus research in Africa.”

The study found that in Cameroon, *B. tabaci* has been associated with suspected begomovirus infections in many crop and weed species. However, in spite of their growing importance, only begomoviruses



Dr Leke in the virology lab

infecting cassava have been studied in Cameroon in any detail.

Dr Leke said the study was inspired by the need for additional information on diversity and distribution of begomoviruses and satellites in vegetable crops and dicotyledonous weeds, which likely serve as virus reservoirs.

In field studies, a high incidence of okra leaf curl disease was found in Cameroon. Sequencing of viral genomes showed that the okra plants were infected by viruses of two previously known begomovirus species (Cotton leaf curl Gezira virus and

Okra yellow crinkle virus) as well as a new recombinant begomovirus species (Okra leaf curl Cameroon virus). In addition, a betasatellite (Cotton leaf curl Gezira betasatellite) and two alphasatellites (Okra leaf curl Mali alphasatellite and Okra yellow crinkle Cameroon alphasatellite) were identified. Also tomato plants with leaf curling were shown to contain isolates of a new begomovirus, Tomato leaf curl Cameroon virus, and an alphasatellite, Tomato leaf curl Cameroon alphasatellite (ToLCCMA).

Sequence analyses of begomovirus complexes infecting the weed, *Ageratum conyzoides*, showed that they were infected by isolates of a new begomovirus (*Ageratum leaf curl Cameroon virus*), two new betasatellites (*Ageratum leaf curl Cameroon betasatellite* and *Ageratum leaf curl Buea betasatellite*), an alphasatellite (ToLCCMA), and two types of defective recombinants between a begomovirus and ToLCCMA.

Dr Leke concluded that with this high diversity, recombination potential and transmission by *B. tabaci*, begomoviruses, and their associated DNA satellites pose a serious threat to crop production in the region and the African continent as a whole.

Second edition of the 2013 Sportsfest kicks off

IITA has commenced the second edition of the 2013 Sportsfest in Ibadan, with a kickoff ceremony by the Director General, Dr Nteranya Sanginga.

The sportsfest seeks to build team spirit among staff through different sporting activities including football, tennis, volleyball, and other board and indoor games.

The kickoff ceremony brought the IITA family together with colorful fanfare.

Besides Dr Sanginga, other dignitaries in attendance were Drs Kenton Dashiell, Kwesi Atta-Krah, and other management staff.

In his opening remarks, Dr Atta-Krah called on staff to redouble their efforts and commitment to IITA.

According to him “the IITA family must see themselves as members of an important team which contributes to solving the problems of Africa.”

He thanked the DG for the initiative which he said had helped to boost staff morale to work diligently and better.

“Take the spirit from here and continue in it because we belong to one big family. Individually we cannot solve the big problem IITA is positioned to solve; but together we can transform Africa,” he said.

The opening match of the event was between the Green Team and the White Team. Ninety minutes of play saw the Green Team winning by 3 goals to 1

ISTRC-AB gets new exco

The International Symposium of the International Society for Tropical Root Crops – Africa Branch (ISTRC-AB) has elected a new executive committee that will pioneer the affairs of the organisation in the next three years. The new exco has the following members: President, Prof. Lateef Sanni; Vice President 1, Dr. (Mrs) R.E.M. Entsua-Mensah; Vice President 2, 2016 Host Country LOC Chair from Tanzania or Uganda; Secretary General, Dr. Pheneas Ntawuruhunga; Assistant Sec. General, Dr. Eze Simon C; Editor-In-Chief, Dr. Richardson Okechukwu; Deputy Editor, Dr. G.N. Asumugha; Fund Raiser, Dr. Vincent Aduramigba; West Africa Rep., Dr. Joseph Manu-Aduening; East Africa Rep., Dr. Gorretie Ssemakula; South Africa Rep., Dr. Feslistus Chipungu; and Central Africa Rep. Dr Maurice Tindo. The position of treasurer is yet to be determined.

In his acceptance speech, Prof Sanni pledged to work with colleagues to improve the profile of root and tuber crops. He also solicited the cooperation of colleagues in running the organisation.

The next election of the Society will hold in 2016.



DG Sanginga kicks the ball.

Help conserve electricity!

Before leaving your workplace at the end of the day, make sure that you have:

1. Powered off all unnecessary electrical office/lab equipment;
2. Turned off air conditioners; and
3. Switched off all lights.