

Building regional capacity to contain Banana Bunchy Top Disease (BBTD) spread in West Africa

A training workshop on “[Banana Bunchy Top Disease](#) (BBTD) diagnosis, surveillance and emergency response” was held 14 to 16 January 2019 at IITA, Ibadan, Nigeria. The workshop, sponsored by the [CGIAR](#) Research Program on Roots, Tubers and Bananas (CRP-RTB), was attended by 20 participants from Togo - [Direction de la Protection des Végétaux](#) (DPV), [Institut de Conseil et d’Appui Technique](#) (ICAT), and Université de Kara; Ghana - Plant Protection and Regulatory Services Directorate (PPRSD); and Nigeria - [Nigerian Agricultural Quarantine Services](#) (NAQS), [National Horticultural Research Institute](#) (NIHORT), the [National Agricultural Seed Council](#) (NASC), and ECOWAS.

The purpose of the workshop was to strengthen national capacity in disease surveillance and diagnosis and implement an emergency response to eliminate infected plants. The course offered hands-on training in the application of on-field diagnostics for the detection of BBTV using methods such as LAMP (Loop-mediated Isothermal Amplification) and RPA (Recombinase Polymerase Amplification) and using the Crop Disease Surveillance (CDS) mobile app for real-time surveillance and reporting.

BBTD is a devastating viral disease of plantain and banana caused by BBTV transmitted by the banana aphid (*Pentalonia nigronervosa*). “BBTD outbreak in West Africa was first recognized in 2010 in Benin and 2011 in Nigeria,” said [Lava Kumar](#), IITA virologist and Head of IITA’s Germplasm Health Unit, and organizer of the workshop. Various actions by the national programs and IITA have resulted in preventing disease expansion in these countries,



Participants of the BBTD workshop at IITA.

he added. In September 2018, BBTV was detected for the first time in Togo, and the emergency response action implemented jointly by DPV-Togo and IITA had resulted in eradicating the disease detected in three locations in the country. “Inadvertent distribution of BBTV-infected planting material has led

to widespread occurrence of the virus in sub-Saharan Africa and the same factor may have led to the virus introduction in Togo,” said Kumar.

During the country presentations, Mr John Obaje, Director of Plant

Continued on page 2



Some participants testing the CDS app in a banana field.

Building regional capacity to contain Banana Bunchy Top Disease (BBTD) spread in West Africa

Continued from page 1

Quarantine, NAQS presented surveillance and eradication activities to contain the disease in Nigeria, while Sunday Akinyemi, Director of Research at NIHORT gave an update on banana production recovery using virus-free planting materials in the affected regions of Ogun State, Nigeria. Akinyemi emphasized the importance of providing farmers with incentives during the recovery period to encourage participation in the control measures.

Adam Iddrisu Alidu, Head of Pathology, PPRSD Ghana; Ayaba Sanvee of DPV Togo, and Atti Tchabi of University of Kara, Togo, expounded on existing frameworks for containing regulated quarantine pests such as BBTD, and needs for implementing effective surveillance.

Benoit Gnonlonfin, Sanitary and

Phytosanitary (SPS) Standards Adviser of the ECOWAS Commission, presented on the regional SPS framework for prevention, containment, and control of emerging diseases. He stated that implementation of SPS procedures was poor due to limited funding, weak technical capacities, and poor communication and coordination among the stakeholders. Gnonlonfin further emphasized that technologies, procedures, protocols, and experiences from Nigeria will come handy in tackling BBTD in the subregion and urged participants to work together to contain the emerging threat on banana and plantain in the subregion. Participants developed a BBTD containment plan based on ECOWAS SPS framework for prevention, preparedness, emergency response, recovery, and coordination.

Training on the BBTD surveillance and diagnosis was carried throughout the workshop. A visit to IITA banana fields was organized and the participants were trained on the use of the CDS and data submission by Busayo Ogunya of the IT Unit. The CDS app usable on Android phones allows users to rapidly diagnose and communicate about diseases from the field. In the laboratory, participants were trained on DNA extraction and the use of new tools, LAMP, and RPA, for the detection of BBTV in field condition by Adedamola Oresanya of the Virology Unit. He highlighted the pros and cons of both methods for disease diagnosis. Methods to eradicate BBTV infected plants was organized by Yao Colombia and Taiwo Oviasuyi of Virology Unit. At the end of the workshop, participants lauded efforts of IITA and appreciated RTB, for sponsoring this workshop.

IITA alumnus receives 2019 Japan Prize for outstanding achievements in soil management

On 16 January, [Rattan Lal](#), an eminent IITA alumnus and a University Professor of Soil Science at [College of Food, Agricultural, and Environmental Sciences](#) (CFAES), Ohio State University, was awarded the 2019 [Japan Prize](#), considered one of the most prestigious honors in science and technology. The award was for original and outstanding research on sustainable soil management and its role in improving global food security and mitigating climate change.

In announcing the award, the [Japan Prize Foundation](#) stated that the award recognizes scientists and engineers from around the world for outstanding accomplishments that “not only contribute to the advancement of science and technology, but also promote peace and prosperity for all mankind.” The Foundation cited Lal’s pioneering research on no-tillage agriculture, and also congratulated him for having managed both climate change and soil degradation “while improving environmental quality and addressing the critical issue of feeding the Earth’s population.”

Lal, whose career in science spans five decades and five continents, is the first Ohio State scientist and the first soil

scientist to ever receive the prize. He is a faculty member in CFAES’ [School of Environment and Natural Resources](#) (SENR), where he conducts research on topics such as soil processes, soil degradation, and sustainable management of soil and water. Lal also is the founder and director of SENR’s [Carbon Management and Sequestration Center](#) and is the past president of the 60,000-member [International Union of Soil Sciences](#).

While receiving the award, Lal emphasized that the issues of sustainable soil management, global food security, and mitigating climate change sum up his career. “I have a strong commitment to these ideas, and I am so glad that they were mentioned in the award.” He further added that the honor “emphasizes the importance of the farming profession and its tribute to farmers for their role as stewards of our natural resources and environment.”

Commending Lal for his soil conservation initiatives, [Bruce A. McPheron](#), Ohio State’s Executive Vice President and Provost, said, “The University is proud of your achievements and for being the recipient of the Japan Prize. Professor



Rattan Lal: IITA alumnus, Rattan Lal, during the award ceremony. Photo: John Rice, CFAES

Lal is one of the world’s preeminent soil scientists, and his research and insights will continue to have a profound and enduring impact on global food security in the decades to come,” he added.

“Those of us at CFAES are enormously proud of our colleague, Rattan Lal, and his incredible achievements. He is a distinguished scientist, with a prolific research portfolio, but considers his primary contributions to be the training of many graduate students who have worked in his lab,” said [Cathann A. Kress](#), Ohio State’s Vice President for Agricultural Administration and Dean of CFAES.

Source: <https://cfaes.osu.edu/>

IITA and Nelson Mandela Africa Institution of Science and Technology to strengthen relationship



Victor Manyong, IITA Director for East Africa, hands over an IITA diary and calendars to Vice Chancellor Emmanuel Luoga, NM-AIST during the courtesy visit.

[IITA](#) and [Nelson Mandela Africa Institution for Science and Technology](#) (NM-AIST) have agreed to strengthen their collaboration in efforts to build Africa's capacity for science and technology. The agreement was made during a courtesy visit to the University's Vice Chancellor, Emmanuel Luoga, at its campus in Arusha, Tanzania, by a delegation from IITA led by the Director for Eastern Africa hub, [Victor Manyong](#), on 7 January.

The two leaders, among others, agreed on the need to revise and renew the current memo of understanding (MOU) between the two institutions, which is based on a collaboration in a banana research project. The University currently houses IITA's banana research team and provides fields for the crop's breeding trials.

IITA further refurbished two laboratories at the University--tissue culture and plant pathology, which are being used by both IITA staff and students of the University. In the last

two years, 64 students have been trained in the facilities.

The VC praised the IITA banana breeding work, which among others, was geared towards breeding banana varieties resistant to Fusarium wilt, a deadly disease threatening banana production in the country and region, and assured IITA of the university's continued support in these efforts.

For his part, Manyong informed the meeting that IITA had indeed enjoyed very good collaboration with the university on the banana project for the last five years. He, however, noted it was time to strengthen the relationship with NM-AIST beyond the banana breeding project and update the MoU to reflect this.

He further conveyed greetings from IITA Director General [Nteranya Sanginga](#) whom he said was very happy with the partnership.

Accompanying Manyong from IITA at the meeting were [Regina Kapinga](#), Head of Advocacy and Resource Mobilization; [Allan Brown](#), Banana Breeder; [Eveline Odiambo](#), Head of Finance and Admin, EA

Hub; Scola Ponera, Project Assistant; and Hassan Mduma, Research Supervisor.

From the NM-AIST side were Charles Lugomela, Deputy VC for Planning, Finance and Administration; Gabriel Shirima, Acting Dean for the School of Life Sciences and Bio-Engineering (LiSBE)); P. Ndakidemi, Karoli N. Njau, and Akida Meya.

Kapinga commended NM-AIST for its tremendous growth over the years with the vision of bringing students from all over Africa.

She therefore suggested that since IITA works all over Africa, the new MoU should go beyond Tanzania. Ndakidemi added that the two institutions can join hands to develop joint research proposals to carry out projects to benefit the farmers and agriculture in Africa and act as training ground for NM-AIST students.

A task team was formed with members from both parties to come up with the draft agreement for the new MoU. The team consists of Meya and the DVC's office for NM-AIST, and Brown and Odiambo for IITA.

IITA-Cameroon Women's Group holds scholarship award ceremony

On 19 December, to mark the 2018 edition of the IITA Women's Group Award Scholarship program, 10-year-old Mbounda El-Hannah, a Junior Secondary School student, and Mbounda-Mbuh Samuel, 12-year-old Senior Secondary School student, received awards worth US\$450 each. The ceremony, which took place at the buckaroo in the [IITA Campus](#) in Yaoundé, was presided over by [Masso Cargele](#), the Country Representative. In his remarks, Cargele congratulated the awardees on their achievement and dedication that qualified them for the award. He also praised the IITA Women's Group (WG) for their humanitarian service, which he said is laudable and worthy of emulation.

Present at the event was the Central African Hub Director, [Bernard Vanlauwe](#), who coincidentally was on a working visit to Cameroon. He congratulated the beneficiaries for their excellent performance and bilingualism. He also enjoined them to continue working hard in school so as to win other awards in future. Vanlauwe expressed gratitude to the IITA WG for their initiative and challenged the group to help organize similar groups in the country.

In her presentation, Molute Lilian Bishi, the WG focal person, said, "We are very happy for the initiative of this program. The children wrote the exams just like last year under the same conditions with the other stations. Next year we are hoping to have more candidates. The recommendations from the Hub Director, Dr Vanlauwe, is an encouragement to us; we are planning to create a chapter of the WG here in Cameroon through which we can also get sister organizations involved thereby enlarging our scope."

Simila Boubakari, IITA Cameroon station administrator, said, "I have seen the emotion on the faces of



Bernard Vanlauwe, Central African Hub Director with one of the awardees.

the scholarship recipients Mbounda El-Hannah and Mbounda-Mbuh Samuel, while receiving their awards. I think that this initiative of the IITA WG has served its purpose, to inspire those young children to work harder and embrace a career in science. Congratulations to their parents and to Bishi Lilian for her commitment to

make this a success."

Mbounda Emerencia, the mother of the awardees and a consultant in IITA Cameroon, expressed her gratitude to the WG for the wonderful initiative, adding that it will help to encourage and challenge her children to work even harder in school.



IITA Station Administrator Simila Boubakari (center) with some IITA staff and the scholarship beneficiaries.

Got a story to share?

Please email it with photos and captions every Tuesday to iita-news@cgiar.org or Katherine Lopez (k.lopez@cgiar.org) and Uzoma Agha (u.gha@cgiar.org) for headquarters and Western and Southern Africa, Catherine Njuguna (c.njuguna@cgiar.org) for Eastern Africa, and David Ngome (d.ngome@cgiar.org) for Central Africa.