

Stakeholders strategize ways to prevent MLN in West Africa

Stakeholders came together in a workshop to discuss and prioritize action plans for preventive control of the [Maize Lethal Necrosis \(MLN\)](#) in maize production, on 26 September at IITA, Ibadan.

The workshop titled “Strategic planning to prevent spread of Maize Lethal Necrosis” aimed to raise awareness about the status of MLN spread and progress towards control in affected regions in East Africa.



Lava Kumar, Head, Germplasm Health Unit, emphasized the importance of collaborative effort, partnership, and commitment in developing a prevention and disease management strategy.

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IITA delegation calls on Tanzania’s Permanent Secretary in the Ministry of Agriculture

A team from IITA Tanzania recently visited the new Permanent Secretary (PS) in the Ministry of Agriculture, Food Security and Livestock (MALF) at the Ministry’s offices in Dar es Salaam, Tanzania.

The PS, Eng. Mathew Mtigumwe, was appointed towards the end of last year. The visit was intended to brief him on IITA and its activities in the country as well as highlight areas of future

collaboration and support needed from the government.

The delegation was led by Victor Manyong, IITA Director for Eastern Africa. In his briefing, Manyong extended IITA’s appreciation for the wonderful cooperation and support it had received from the Government and the Agriculture Ministry in its over 23 years of operations in Tanzania as he highlighted IITA activities in the country and its successes in the last five years.

He also raised some of the challenges that the institute was facing in the country and ways in which the Government can help address them.

Some of the successes he mentioned included the release of over 20 improved cassava varieties tolerant to the two deadly viral diseases and developed in partnership



The Permanent Secretary (left) and his team members briefing the IITA delegation.

with national researchers; the introduction of integrated soil fertility management practices including the use of biofertilizers for legume production, cassava processing and value addition; and building capacity.

Manyong said IITA had in the last five years invested over US\$57.6 million in the country including payment of salaries of the nearly 150 members of staff, infrastructure development as well as projects implemented in the country.

Under capacity building, the institute had hosted over 150 postgraduate (PhD, MSc) and undergraduate students for their research projects and internships and trained more than 50,000 farmers in various areas of crop production, value addition, and nutrition.

“We have also developed an effective and affordable technology to control aflatoxin contamination in the country. It is awaiting registration before being rolled out in the country,” Manyong said.

The PS was pleased to note that IITA's activities were well aligned to those of the Government's and tasked the various departments to address some of the issues raised.

He was accompanied by Nkuvilwa Simkanga, Director of Policy and Planning; Twahir Nzallawahe, Director of Crop Development, and Jakson Nkuba, Assistant Director of Research and Development.

Manyong was accompanied by Fred Baijukya, N2Africa Country Coordinator; George Mahuku, Plant Pathologist; Eveline Odiambo, Regional Administrator; Catherine Njuguna, Regional Communication Specialist; and Neema Lazaro, Procurement Officer.

On future plans, Manyong pointed out that IITA was positioning itself to address challenges in the agriculture sector including emerging diseases such as the new banana disease threat, Tropical Race4 or Panama 4 disease, which was already in Northern Mozambique, and the fall army worm which was spreading across Africa destroying maize.

Manyong concluded the visit by inviting the PS to visit IITA at its headquarters in Nigeria.

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Maize breeders, scientists, staff, and students from Plant Protection and Regulatory Services Directorate ([PPRSD](#)) Ghana, National Agricultural Seeds Council ([NASC](#)), Nigerian Agricultural Quarantine Services ([NAQS](#)), the International Maize and Wheat Improvement Centre ([CIMMYT](#)), and [IITA](#), attended the workshop with a shared vision of pulling together national, regional and international partners to combat the spread of MLN, support seed companies to produce Maize chlorotic mottle virus (MCMV)-free commercial seed, spread improved farming practices for disease control, and create a “community of practice” for disease diagnosis and management.

The MLN disease, which appeared in the region in 2011, was first reported in Kenya. The disease has caused major losses to maize crops of up to 90%, resulted in an estimated grain loss of 126,000 tons valued at \$52 million in Kenya alone, and decreased food security. This emerging threat is now endemic in much of East Africa, and has been reported and confirmed in DR Congo, Ethiopia, Kenya, Rwanda, South Sudan, Tanzania, and Uganda.

Speaking at the opening ceremony, [Robert Asiedu](#), Director, Research for Development, IITA-West Africa, represented by [Michael Abberton](#), IITA Deputy Director, Research for Development, West Africa, and Head, IITA Genetic Resources Center, commended all the participants for their efforts towards making the meeting a huge success, and urged them to seize the opportunity to integrate, educate, and exchange ideas on strategies to fight and prevent the menace.

In addition, [Abebe Menkir](#), Leader, IITA Maize Program, applauded the participants, as he said: “I welcome you all to this very important meeting; MLN has been a significant challenge affecting maize production. I am looking forward to seeing positive contributions and a solid approach towards preventing the further spread of MLN in Eastern Africa.”

[Lava Kumar](#), Head, IITA Germplasm Health Unit and focal point for the Conference, emphasized the importance of collaborative effort, partnership, and commitment in developing a prevention and disease management strategy. Director of CIMMYT's Global Maize Program, [Boddupalli M. Prasanna](#), was of the view that all stakeholders should prepare to learn, raise awareness, and replicate all the knowledge acquired to achieve a substantial result.

During the plenary session, there was a discussion on strategies for MLN prevention and preparedness. Stakeholders

deliberated on ways to identify and prioritize strategy, needs, partnerships, capacity development, and funding for improving phytosanitary policies, prevention and emergency control action in the areas of quarantine monitoring, safe production of maize seed, and preemptive breeding.

The disease is a result of infection by MCMV, and cereal viruses in the Potyviridae group, especially Sugarcane Mosaic Virus (SCMV), which causes an estimated 30% to total crop loss in farmers' fields depending on the severity of the incidence, posing a threat to regional trade. Hygienic practices, crop rotation, effective surveillance, monitoring systems, and use of pesticides for insect vector control, are some of the methods that could be used for MLN/MCMV control.

In concluding the meeting, the stakeholders embarked on a tour of the [Virology and Germplasm Health Unit](#), [Genebank](#), and [Bioscience Center](#) and expressed amazement at IITA's groundbreaking research.



Monica Mezzalama of CIMMYT (right) with one of the working groups during the MLN meeting in IITA.

IITA50 celebrations held in Uganda

IITA organized yet another colorful and successful event to mark its 50th anniversary. This time in Uganda at the National Crop Resources Research Institute (NaCCRI), Namulonge. The event had the theme: “Research and partnership for transforming African agriculture: Looking back and forward” and was held on 21 September. It also celebrated the Institute’s 25 years of agricultural research for development in the country.



Top: Edward Kanju explaining about cassava breeding during the field tour. Bottom: Rony Swennen leading guests on an inspection tour of the renovated banana laboratory. Photo by Chris Okello.

The event was graced by a wide spectrum of partners and stakeholders including representatives from the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), the Uganda Parliament, the National Agricultural Research Organization (NARO), the embassies of the Netherlands, Belgium, and Nigeria, District Local Governments, the private sector, NGOs, civil society, Makerere University, IITA alumni, and the other CGIAR centers (CIP, ILRI, and IFPRI).

A series of activities were organized including an exhibition of IITA’s research-for-development activities and products in Uganda, a field tour of IITA’s research experiments, and the commissioning of the renovated banana breeding laboratory.

Speakers at the event included representatives from the Government, NARO, development partners, donor organizations, the private sector, and IITA alumni. The Permanent Secretary of MAAIF, Pius Wakabi Kasajja, said that “research is extremely important to support the efforts of the Ministry towards increasing production and productivity in Uganda.”

Okaasai Opolot, the Director of Crop Resources at the Ministry, noted that the IITA selection of commodities was in line with priorities of the Ministry and Government. Other speakers included Yona Baguma, the Director General of the National Crop Resources Institute (NaCCRI), and the Nigerian High

Commissioner in Uganda, His Excellency Dr Etubom Nya Asuquo.

IITA’s Director for Eastern Africa, [Victor Manyong](#), said that IITA started working on agricultural policy areas as a way of ensuring that there is a favorable policy environment for linking technologies from breeding to implementation.

[Laurence Jassogne](#), IITA-Uganda Country Representative appreciated the valuable support from partners and donors, and emphasized that IITA will continue strengthening and widening its partnerships for greater research impact. She further thanked NaCCRI for hosting the celebrations and the guests for joining IITA to celebrate their silver jubilee.

Field tours and exhibitions

The guests visited one cassava and two banana fields where breeding and testing for improved varieties takes place. In the cassava field, [Edward Kanju](#) pointed out that IITA and NARO have developed and released NARO CASS 1 and NARO CASS 2, two widely grown cassava varieties in Uganda because of their resistance to both Cassava Mosaic Disease (CMD) and Cassava Brown Streak Disease (CBSD). He said this was made possible using germplasm from IITA.

In the banana fields, Brigitte Uwimana pointed out the banana varieties affected by Black Sigatoka and two fields with improved varieties that are resistant to Black Sigatoka. She said the banana breeding program which started in 1994 aimed not only to reduce the 60–70% yield losses as a result of Black Sigatoka, but also reduce the negative environmental impacts from excessive use of chemicals against Black Sigatoka.

The guests were informed that through a NARO and IITA research partnership, a Black Sigatoka resistant NARITA 7 banana hybrid had been released in Uganda and farmers have nicknamed it “Kiwangazi,” literally meaning “long lasting” because it stays longer in the plantation in addition to yielding more.

At the exhibition booths, the teams displayed products from breeding, agronomy, and value-addition work as well as outputs from the policy work such as publications, policy briefs, and climate smart zonal maps. The IITA Youth Agripreneurs also exhibited their activities and products that included their online marketing platform. This platform was found to be innovative and had contributed to increasing youth employment and skills in agribusiness.



Rebecca Nakabugo, the IITA Uganda Youth Agripreneurs Coordinator, describes how the youth business works. Photo by Chris Okello.

Honoring departed colleagues

IITA also took the opportunity to commemorate the three IITA banana scientists (Dirk R. Vuylsteke, Paul R. Speijer, and John B. Hartman) who tragically died in a plane crash on 30 January 2000. In their honor, [Rony Swennen](#) said: “It is important, as IITA, that we commemorate not just research achievements but also the people who have contributed to the achievements”.

As a way forward, the government, partners, and donors urged IITA to consider developing innovative ways, including working with the private sector, to translate research innovations and disseminate them to the farmers. IITA was also called upon to engage in



Vuylsteke



Speijer



Hartman

research on the pathways for linking policy to local implementation.

This event was well publicized including documentaries that ran in the mainstream media houses before the event

(<https://www.youtube.com/watch?v=xiUPw3sDxNY>), feature stories in the print media, and a live televised broadcast (<https://www.youtube.com/watch?v=aJjuP5NyZns>).

Stakeholders reveal significance of seed testing

Control measures against pests and diseases dominated discussions at a recent workshop in IITA, Ibadan, held 27-28 September, where stakeholders explored opportunities to interact, exchange ideas, and impart knowledge about major pests and pathogens of maize, risks to maize seed health, and seed-borne pathogens.

The 2-day workshop with the theme “Maize seed health and seed testing for pests and pathogens” was in line with the seminar on strategic planning to prevent the spread of Maize Lethal Necrosis (MLN) disease. The meeting, attended by maize breeders, scientists, staff, and students of IITA, the Plant Protection and Regulatory Services Directorate (PPRSD), the Ghana, National Agricultural Seeds Council (NASC), the Nigerian Agricultural Quarantine Services (NAQS), and the International Maize and Wheat Improvement Centre (CIMMYT), aimed to inform participants about techniques that can be adopted to produce disease- and pest-free seeds, and demonstrate laboratory methods of seed health testing.

Pathogens and pests can adversely affect germination, cause seedling infection, and damage mature plants. The transmission of fungal and bacterial pathogens from seeds to crops can vary considerably depending on growing conditions. Diseases caused by viruses usually have higher transmission rates than those caused by fungi or bacteria, and are less affected by seasonal conditions. Pest and pathogen diagnosis

and pest survey procedures are essential parts of seed health support.

In his opening remarks, [Lava Kumar](#), Head, IITA Germplasm Health Unit and focal point for the seminar, acknowledged the stakeholders for their collaborative effort, and encouraged them to continue curbing seed-borne pathogens to ensure food security in the region.

During the plenary session, presentations were made on virus threats to maize and diagnostic tools for seed health, preemptive breeding for MLN, surveillance for MLN, modelling for MLN spread, methods for the production of MLN-free seed, and diseases of maize.

According to [Monica Mezzalama](#), Head of CIMMYT’s Seed Health Unit: “Seed is the most efficient way of spreading diseases over long distances; because of that, we need to ensure that our seeds are tested and certified free before we can sow.”

[Boddupalli M. Prasanna](#), Director of CIMMYT’s Global Maize Program, highlighted the importance of improving MLN surveillance and diagnostic capacity in Africa to keep the virus from spreading through contaminated seeds. “Farmers also need to be sensitized on appropriate agronomic practices that reduce disease incidence and severity,” he added.

The best method to reduce the risk of disease damage is to source pathogen-free seed. Testing seed before sowing will establish whether seed is free of disease. It is also best to select seed from crops that show no sign of disease. Seed with high levels of seed-borne disease should not be used for sowing. For some fungal diseases, it may be possible to reduce the risk of disease by applying a fungicide to seed prior to sowing.

At the end of the workshop, participants were taken to the [Germplasm Health Unit](#) for practical demonstrations on how to test seed viruses and pathogens, and observe microbes.



Maize seed health workshop participants in a discussion.

How do we attract and retain youth in agriculture?

Batch B 2016 Youth Corps members in IITA organized a seminar on 20 September titled “Attracting and Retaining Youth in Agriculture” at IITA in Ibadan. The seminar was attended by corpers and members of youth Agripreneur groups, and dignitaries from different organizations.

The seminar aimed to create awareness and introduce youth to agribusiness and the agricultural value chain. It also addressed how the youth can get involved in agriculture, and learn from the experiences of other youths who have gone into agribusiness, and also identify how the youth can contribute towards agricultural development regardless of their discipline.

The seminar started with a welcome address from Kenton Dashiell, Deputy Director General, Partnerships for Delivery, IITA, who advised the Corps members to take the seminar as an opportunity to improve.

Miriam Umogah, the Coordinator for Oyo State NYSC Skill Acquisition and Entrepreneurship Development (SAED), representing Ifeoma Anidobi, NYSC State Coordinator for Oyo State, said: “... Today in Nigeria, the Federal Government has put so much importance on youth empowerment, and the most important part of it all is agriculture, in which IITA is doing very well. IITA has always been an NYSC partner. It has been helping us achieve the aims and objectives of the scheme, one of which is to instill in the youth the spirit of selflessness, surveillance, and nationalistic approach to issues.”

The keynote speech was given by Molayo Owoeye, Head of Capacity Development for IITA Youth Agripreneurs (IYA), on “Agricultural transformation in Africa: The role of youth”. She said that agriculture shouldn’t be a career for only old people, and youth should not think that being a farmer amounts to getting their hands dirty, since technology has made farming more attractive.



Corpors attentively listening to the motivational speakers.

Hon Kehinde Ayoola, former speaker, Oyo State House of Assembly who spoke on “Understanding the agricultural value chain: Seeing the big picture,” said that “government is getting more serious with agriculture and today, they are even providing start-up capital.” He further said that understanding the agro-value chain can help to “bind the nation together.”

“We would be able to retain a lot of youth in agriculture when we have youth that have sworn allegiance,” said Tope Omotolani from Farm Crowdy Nigeria, who spoke on “Becoming an agric entrepreneur: The basics.” In addition, she said: “We need to look for that area we are passionate about; agriculture is a big community. We welcome as many people in different sectors as possible. She advised the youth to “go through the value chain, and see where you can function properly.” She announced that Farm Crowdy would like to sponsor 50 Youth Corps members in IITA who love agriculture, by identifying any crop they would like to work with and 100 hectares of land, under the supervision of IITA.

Oludare Odusanya, IYA Head of Production, while giving a practical demonstration of a start-up business said: “Agriculture is cool and is very profitable to those who know what they are doing.”

Three young CEOs of agricultural organizations, Hammed Oni from Frotchery Farms Ltd, Jacinta Eze from Agropreneur Naija, and Adenuga Adeniyi from Tepebo International Ltd. talked about their success stories and their journey into the agricultural sector. They spoke about the challenges they had encountered and how they held on to their passion for their business against all odds. While advising the Corpors, Jacinta said: “Do not be afraid to work with people who are more experienced than you are; be humble to reach your dream.” Adenuga said that he would not be who he is today if not for agriculture.

The Director General of IITA, [Nteranya Sanginga](#), commended the Corps members for their zeal and initiative for organizing the seminar. He told them to come up with unique creative ideas. He said they should bring the ideas to him, and they will get all the support they need. He concluded by saying: “My advice is don’t wait for things to happen; go and make things happen.”



DG Nteranya Sanginga, flanked by youths, giving a talk.

Announcements

- **Training workshop on fall armyworm management** IITA, Yaoundé, Cameroon, 2-7 October
- **Modeling under Climate Change Scenarios Hands-on Training**, Abomey-Calavi, Benin, 16-20 October
- **World Food Prize 2017**, Downtown Des Moines Marriott, Des Moines, Iowa, USA, 18-20 October
- **Launch of Technologies for African Agricultural Transformation, World Food Prize 2017**, Downtown Des Moines Marriott, Des Moines, Iowa, USA, 19 October
- **Basic Bioinformatics Workshop**, IITA, Ibadan, Nigeria, 23–25 October
- **R4D Week**, IITA, Ibadan, Nigeria, 20–24 November
- **Board Meeting**, IITA, Ibadan, Nigeria, 20–24 November
- **Science Conference on Food and Nutrition Security: Foresight and Futures**, IITA, Ibadan, Nigeria, 24-25 November
- **Open Day**, IITA, Ibadan, Nigeria, 25 November

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 David Ngome (d.ngome@cgiar.org).