

Mozambique farmers enjoy greater yields as a result of IITA's research

IITA's research in Mozambique has made much impact in rural and national development by ensuring that the agricultural sector is competitive, sustainable, gender-balanced, and resilient to the stress and impacts of climate change. IITA Seed System Agronomist, [Canon Engoke](#), outlined the details at IITA-Nampula during a seminar titled "Agricultural technologies demanded for change in Mozambique" on 14 May.

Mixed cropping systems characterize the agricultural production locations in the northern and central highlands. These



Shelling of soybean by farmers and field workers.

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AU-IAPSC Director visits IITA-Abuja ahead of International Plant Health Conference

As part of preparations for the forthcoming International Plant Health Conference to be held in Nigeria 21-25 October 2019, the Director of the Africa Union-Inter Africa Phytosanitary Council (AU-IAPSC), Dr Jean Gérard Mezui M'ella, paid a courtesy visit to [IITA](#) Abuja Station on 16 May. His visit aimed to ascertain the level of IITA's preparedness to conduct a field tour during the conference.

The Head of IITA-Abuja Station, [Gbassey Tarawali](#), received the Director, who was with senior officials from the Nigeria Agricultural Quarantine Service (NAQS). He told the visitors about the long-standing collaboration and partnerships between IITA and the NAQS.

The NAQS Director of Plant Quarantine, Mr Obaje John Abah, on his third visit to the Station this year in preparation for the conference, agreed that IITA and NAQS have had a long-standing relationship over the years. He went on to highlight key areas where IITA, through [Dr Lava Kumar](#), has supported the Service with the provision and installation of laboratory equipment.

On his part, the AU-IAPSC Director informed attendees that IITA will be part of the Conference Steering Committee and would be hosting about 35 international delegates and numerous other national participants.

Dr Mezui M'ella explained that he was in Nigeria to meet with critical stakeholders and follow up on issues surrounding immigration clearance, logistics, and other arrangements that

need to be made for the conference. He praised IITA for the cutting-edge technologies being developed by the Institute to transform African agriculture and appealed to the Head of Station and all IITA Staff to put the good image of the Institute on display at the event.

Partners from NAQS had visited IITA-Abuja Station twice recently in preparation for the Conference that will be held in the Nigerian capital, Abuja.



Members of the council in a group picture with IITA staff.

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locations have continuously experienced declining and irregular distribution of rainfall coupled with incidences of drought. Other challenges of agricultural production in Mozambique include low soil fertility, over-reliance on rainfall, increasing susceptibility to pests and parasitic weeds, and poor farming practices (inferior varieties and technologies).

Despite these challenges, data indicates that IITA crop production in the region experienced a steady increase from 2002 to 2018.

Through research evidence and advocacy, changes have occurred over the last two years. Tested and existing technologies for crop yield improvement include use of inoculants, judicious application of phosphorus fertilizer, and system management such as crop rotation and intercropping. Some of the tested inoculants were imported from Brazil, Kenya, Malawi, South Africa, Zambia, and Zimbabwe.

The increase in gain on input/ha for the inoculant is attributed to improved capacity as well as adequate field management practices. IITA has played a key role in this

by providing research-based information on the importance of using P fertilizer in soybean production.

Yields of farmers working with IITA on cowpea, sesame, and soybean have also shown a trend of increase over the last three years. Farmers' field yields of cowpea, sesame, and soybean were 800, 500, and 1600 kg/ha, respectively, in the 2018 season.

Engoko noted "There is room for improvement through the use of several improved varieties and technologies developed by IITA for Mozambican

agriculture. There is evidence that through research activities and interventions of IITA, the yield potential of these crops can be increased to 1500 kg/ha for cowpea, 5000 kg/ha for maize, 1000 kg/ha for sesame, and 3000 kg/ha for soybean."

In furtherance of these, IITA scientists are working on trials to determine the best P fertilizer application rates across different agroecologies in Malawi, Mozambique, and Zambia. They expect to generate data on region-specific P application rates, which would be available to the public once the trials are complete.



Cowpea field in Ruace, Nassa, Mozambique.

IITA wins top exhibitor award with research innovations and technologies at TARI-Kibaha farmers' day

[IITA's](#) innovative technologies that address challenges facing smallholder farmers in Tanzania impressed participants at a Farmers' Day organized by the [Tanzania Agriculture Research Institute](#) (TARI)-Kibaha on 31 May.

IITA participated at the event, showcasing some of its research innovations and technologies, and came in as the top exhibitor and the second in financially supporting the event.

The technologies exhibited by IITA included Aflasafe, a natural product to control aflatoxin; NURU, a smartphone app that uses artificial intelligence

and machine learning to diagnose crop pests and diseases; and legume inoculants and value-added products by [IITA-Tanzania Youth Agripreneurs](#) (ITYA).

Among those who praised IITA's work was the event's guest of honor, Hon. Mrs Assumpter Nshunju Mshama, Kibaha District Commissioner. She appreciated the work by research

institutions including IITA in supporting the development of the Tanzanian agriculture sector, one of the pillars of the country's economic development. She particularly singled out the NURU app and ITYA as great initiatives for addressing challenges in the sector.

She noted that youth unemployment was one of the pressing challenges in the country and that their involvement in agriculture was one of the sustainable solutions. "Youth should realize the potentials and such opportunities in agriculture and make use of them to create their own employment," she said.

However, she said that these technologies were still not well-known and used and urged research institutions to make extra efforts in disseminating their research findings and technologies to make sure they reach the targeted beneficiaries.

The event brought together TARI research centers and partners such as IITA to share the findings and outputs of their research with various stakeholders in the agricultural sector value chains including farmers, farmers' associations, NGOs, and the private sector. The IITA team was led by the Eastern African Hub Director, [Victor Manyong](#) and IITA senior Agronomist [Frederick Bajjukya](#). The IITA Youth Agripreneurs also exhibited and sold their products.



IITA staff explaining some of the technologies and innovations from IITA's research on boosting legume production.



IITA's exhibition team showing off their winning certificates.

Biodiversity focus: IITA-Ibadan Campus is a hotspot for bird conservation

By supporting about 270 different species of birds, the 1000-ha [IITA](#) Campus in Ibadan remains one of Nigeria's hotspots for bird conservation. The campus is blessed with different kinds of habitats, including forest, wetland, farmland, and residential areas.



Red-cheeked Wattle-eye *Platysteira blissetti* is an uncommon bird species restricted to the Guinea-Congo Forests Biome.

"This huge diversity of birds is attributable to the different kinds of habitats found within the campus," said Adewale Awoyemi, Ornithologist and IITA Forest Center Manager. According to him, "Birds evolve morphological, physiological, and behavioral features that enable them to adapt to different habitats, with some showing a high level of specialization.

Some of the bird species within the campus, may be found in one habitat but not in others. For instance, the Red-cheeked Wattle-eye *Platysteira blissetti* is a skulking species found only in the forest and not in any other habitats within the campus. The same applies to the Laughing Dove, an urban bird species, which is hardly found in other habitats."

The [AG Leventis Foundation](#) is renowned for supporting biodiversity conservation worldwide. Answering questions about what motivates the foundation to support bird and forest conservation within the IITA-Ibadan Campus, Phil Hall said, "The campus is rich in bird diversity, and is home to the Ibadan Malimbe, *Malimbus ibadanensis*, an endemic and endangered weaver bird. The IITA Forest Reserve, which is about 35% of the campus land mass, has been recognized by [BirdLife International](#), as an Important Bird Area (IBA) by supporting about 70 different species of birds, which are restricted to the Guinea-Congo Forests Biome. The AG Leventis Foundation has been supporting bird monitoring within the campus for the past 30 years and will continue to do so."

Asked how birds are monitored, Awoyemi added, "Basically, birds are monitored using various census techniques such as point counts, line transects, and mist-netting. In doing these, different kinds of equipment such as binoculars, telescopes, and guidebooks are used to enhance identification."

He continued, "After identifying birds, the number of individual species, the habitats where they are found, time of day, and date are noted throughout the year. This data

is compared across years to understand population trends."

Speaking on IITA's commitment to bird conservation, [Hilde Koper-Limbourg](#), IITA Deputy Director General, Corporate Services (DDG-CS), said, "We are working closely with the [Forest Center](#) to create awareness within and outside the campus, and are also revising our environmental policy, which favors biodiversity conservation. Although I am not an ornithologist, I think the numbers of birds are increasing within our campus in Ibadan, especially around the lakes and forests."

Awoyemi agrees, "The numbers of many bird species are increasing, which may be associated with the sustainable habitats found within the campus. Although some species have been lost, others have been gained for the campus. Species such as raptors that are declining in numbers are likely to be affected by factors outside the campus. Urbanization is one of such factors as the IITA-Ibadan Campus is almost isolated from surrounding forest patches, most of which are no longer healthy and safe.

"The IITA Forest Reserve still retains significant bird diversity for which it was designated an IBA," Awoyemi concluded.



Phil Hall from the AG Leventis Foundation holds the Capuchin Babbler *Phyllanthus atripennis*, a Near Threatened Bird Species.

Got a story to share?

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