

Tanzanian Prime Minister lays cornerstone of IITA's state-of-the-art science building

Tanzania's Prime Minister, Honorable Mizengo Kayanza Peter Pinda, on Tuesday last week laid the cornerstone and time capsule for IITA's state-of-the-art science building to be constructed in Dar es Salaam, Tanzania. The building will complement the institute's research activities in the country and the East and Central Africa region.

Speaking during the cornerstone laying ceremony where he was also the guest of honor, Hon Pinda said the building would generate much needed scientific research to provide solutions to problems of food security and poverty.

He said that while agriculture was the backbone of Tanzania's economy and plays an important role in the livelihood of its people, he also admitted that its productivity was still very low and falls short of the goal of ensuring adequate food for local consumption and producing surplus for export.

He said there were many factors to the low productivity which needed scientific solutions.

"Research plays an important role in increasing productivity. This is particular in the development of cost-effective and socially acceptable technologies that are suitable under prevailing environments," he said.

"Therefore, the importance of agricultural research should be emphasized," he added.

He also noted there were still more challenges ahead posed by a booming population coupled with changing climate. This called for more investment of resources - financial, human, and infrastructure - and greater collaboration in agricultural research among local, regional, and international institutions.



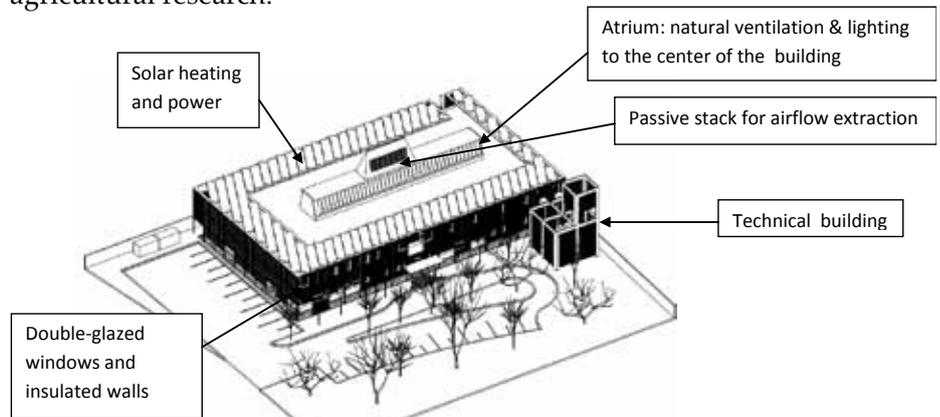
Tanzania's Prime Minister Pinda pouring concrete over the time capsule laid at the foundation of IITA's soon-to-rise modern science building in Dar es Salaam.

In welcoming the Prime Minister, outgoing IITA Board Chair Bryan Harvey, in a speech read on his behalf by Bruce Coulman, incoming Board Chair, thanked the Government of Tanzania for its commitment to agriculture and agricultural research.

He said that IITA had been operating in Tanzania for many years, primarily through special projects, but the country had been elevated as the institute's regional hub for East and Central Africa in 2005 to support the expansion of IITA's activities in the region. He said this expansion created the need for more space and resources and hence the decision by the Board of Trustees to acquire the present property of 2.3 acres and to invest in new research facilities. This includes the modern and energy-efficient science block, the first of its kind to be constructed in Tanzania.

The IITA science building, which has been dedicated to the fight against hunger and poverty, is expected to be completed in October next year.

It will be an ultra-modern and environment-friendly building with state-of-the-art, energy-efficient construction and renewable energy-powered utilities such as solar water heating, solar power points, and natural lighting. Its design is also envisioned to use 65-70% less energy through efficient ventilation handling and control.



Design rendition of IITA's science building in Tanzania once it is completed, depicting energy-efficient facilities.

DG Sanginga meets partners in Tanzania

IITA DG Nteranya Sanginga, who was in Tanzania for this year's second Board of Trustees meeting, paid a courtesy call to the Regional Commissioner for the Coast Region, Mrs. Mwantumu Mahiza. Mahiza is an important partner overseeing a region where the institute has a number of ongoing research activities.

During the visit, he congratulated Mahiza on her recent appointment as a Regional Commissioner and also thanked her for her support to the institute.

In response, Mahiza indicated that the coast region and herself, as a cassava farmer, had benefitted immensely from interactions with IITA. She said IITA opened her eyes to the potential of cassava as a money-making crop and she had had first-hand experience of the benefits of IITA's research work to develop high yielding varieties.

"Last year I planted an IITA variety, and for the first time I was able to make money from cassava. And all I did was sit in my farm and all the traders came, harvested and paid me. This year, I have grown even more cassava and I am looking forward to harvesting in a few weeks and get more money," she emphasized.

She added she was initiating a youth project in the region to use cassava to fight poverty and unemployment and was counting on IITA's support. She said they would need the improved

high yielding varieties and training on processing and value addition.

"There is no reason why our youth should now be idle or poor. I am urging all of them to get involved in cassava farming and processing."

Sanginga, who was accompanied by Victor Manyong, R4D Director for East and Central Africa, assured Mahiza that she could count on IITA's support for her project in the two areas.

The new DG also met with editors of the major media houses in Tanzania at a breakfast forum to create more awareness about IITA's research activities in the country and in the region, and make known his vision for the institute.

He explained that the already shaky food situation in Africa would get worse as the population doubles and food production is further complicated by climate change, thus making research critical to provide sustainable workable solutions.

He observed that although research had an important role to play in boosting agricultural production, it has not always been highly placed in the agenda of many countries. He added that even though this is slowly



(Top) Sanginga and Manyong meeting with Regional Commissioner Mahiza; (bottom) The DG meeting with Tanzanian press.

changing, more must be done.

Manyong, who also accompanied the DG, told the journalists present at the forum that they, too, have important roles to play in the fight against hunger and poverty by educating the public and raising awareness among policymakers on on-going research activities and new technologies that need support.

Banana transformation research by IITA featured in 'Transgenic Research'

IITA's research into developing banana that is resistant to the deadly *Xanthomonas* wilt (BXW) through genetic transformation has been featured in the elite peer-reviewed journal 'Transgenic Research'. The research is being undertaken in collaboration with the National Agricultural Research Organization (NARO) in Uganda.

The article, entitled "Transgenic banana expressing Pflp gene confers enhanced resistance to *Xanthomonas* wilt disease", is authored by Leena Tripathi, IITA Plant Biotechnologist, who is also the lead scientist of the BXW-resistance research. It presents in detail work being carried out in the research – from discussions of basic principles of genetic transformation and laboratory experiments to initial evaluation of the transgenic lines in confined field trials.

"This is the first report showing that over-expression of green pepper *Pflp*



Tripathi at work in her laboratory.

gene in transgenic bananas can provide resistance against BXW, which is one of the most devastating diseases of banana and currently considered the biggest threat to banana production in the Great Lakes region of East and Central Africa," says Tripathi about the significance of the research being featured in the journal.

The research, on which the article is based, aims to develop banana that is resistant to BXW by infusing the crop with a resistance gene from green pepper. The green pepper *Pflp* gene enhances resistance to deadly pathogens and also provides effective control against other wilt-like bacterial diseases. The gene was acquired by IITA through the African Agricultural Technology Foundation (AATF) under an agreement from the Academia Sinica in Taiwan.

'Transgenic Research' (<http://www.springer.com/biomed/molecular/journal/11248>) is the only journal to comprehensively cover animal and plant transgenic technology, and bridges the gap between fundamental and applied science in molecular biology and biotechnology. It is published by Springer (www.springer.com), a world renowned provider of specialist information for scientific and professional communities.