

DG Sanginga graces handover of aflatoxin laboratory and launch of Aflasafe in Malawi...

During the recent handover of the Aflatoxin Research and Training laboratory in Malawi on 10 April, [IITA](#) Director General [Nteranya Sanginga](#) challenged players in the agricultural industry to vigorously fight aflatoxin, which contaminates up to 30% of groundnut and maize in Malawi.

Dr Sanginga was joined by the Deputy Chief of Mission for the US government to Malawi, Mr Andrew Hurrup, and the Controller of Agriculture Services in the Ministry of Agriculture, Irrigation and Water Development, Dr Alexander Bulirani who represented the Honorable Minister

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Showing off Aflasafe products: (L-R) MISST Project Advisor, Dr Patrick Okori; US Deputy Chief of Mission, Andrew Hurrup; Controller of Agriculture Services, Dr Alexander Bulirani; and DG Sanginga.

...and inaugurates renovated IITA-Malawi offices

On his recent visit to Malawi, on 8-10 April, IITA Director General [Nteranya Sanginga](#) inaugurated the newly refurbished offices and laboratories, applauding the hard work of the staff. The renovated offices now consist of a spacious reception area, 20 offices that can accommodate up to 35 staff, a new Semi-Autotrophic Hydroponics (SAH) laboratory for rapid multiplication of cassava planting materials, a general pathology laboratory that will soon be equipped, a soybean seed store, general store, and a conference room.

Country Representative, [Arega Alene](#), welcomed and briefed the DG who was



DARS Director, Dr Wilkson Makumba (left) joins DG Sanginga for the ribbon-cutting ceremony.

accompanied by the Director of the [Department of Agricultural Research Services](#) (DARS), Dr Wilkson Makumba, and the Director for IITA-Southern Africa hub, [David Chikoye](#). Sanginga was informed that the station used internal revenue to renovate and transform the offices.

The DG could barely contain his joy on this visit to the Malawi station: "You really represent my vision for IITA; you are the best in IITA and I will try to find the means to support you."

IITA came to Malawi in 1987 at the request of the then Southern Africa Centre for Cooperation in Agricultural Research and Training (SACCAR) on behalf of the [Southern African Development Community](#) (SADC) to coordinate the East and Southern Africa Root Crops Research Network (ESARRN). ESARRN was responsible for coordinating activities in East and Southern Africa and maintaining an interdisciplinary approach to deal with major constraints to production and productivity of root crops in

the region, such as the cassava mealybug. The first notable success achieved through ESARRN was the IITA-led biological control of the cassava mealybug in Malawi. The

success of the program brought cassava into the mainstream of food policy debates in Malawi and neighboring countries such as Zambia and Mozambique.



Dr Gbenga Akinwale (in red golf shirt) presenting on soybean research and upscaling activities in Malawi.

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of Agriculture, Irrigation and Water Development. He noted that aflatoxin is strictly monitored in crops sought by domestic and international premium markets. For these markets, crops with aflatoxin above safety limits are a health hazard, thus, have zero or greatly reduced commercial value and should be destroyed.

"The goal of IITA's Aflasafe initiative is to develop, promote, and commercialize a natural, biological control product in the groundnut and maize value chains to improve food safety and public health, increase trade, augment smallholder income, and enhance food security and food safety in the country," said Dr Sanginga.

The colorful event had in attendance Malawi government officials, CGIAR partners, private sector actors, and farmers. It was marked by an Aflasafe exhibition and launch, traditional dances, and a tour of the aflatoxin laboratory led by IITA pathologist and Aflasafe Program Manager in Malawi, [Joseph Atehnkeng](#). The dignitaries unveiled a plaque to mark the official handover and launch.

Aflasafe for Malawi was developed by IITA through the Malawi Improved Seed Systems and Technologies (MISST) project with funding from the [United States Agency for International Development](#) (USAID) and in partnership with [US Department of Agriculture, Agricultural Research Services](#), the [Malawi Department of Agricultural Research Services](#) (DARS), and several other institutions. After three years of testing,

Aflasafe MWMZ01 and Aflasafe MW02 have now been cleared for release by the Agricultural Technical Clearing Committee (ATCC) and need to be registered and commercialized so that farmers can use them in their fields.

To combat the negative health and economic impact of aflatoxins, USAID through the MISST project has invested over MK1.5 billion (US\$2 million) to reduce aflatoxin contamination in food. Hirrup noted, "Malawi now has one of the best laboratories in the region with capacity to comprehensively test for aflatoxins in maize and groundnut. The next step is to register the new Aflasafe products, enter into partnership with the private sector, and create awareness about aflatoxins among farmers."

Aflatoxin is responsible for 30% of all liver cancer cases globally. In 2017, the African Union estimated that the risk of aflatoxin-induced liver cancer cases was 11.89 per 100,000 humans, which translates to a total of 2,171 aflatoxin-induced liver cancer cases per year. Malawi is also losing over MK64 billion (US\$88 million) in exports due to aflatoxin-contaminated groundnut.

"We need to make the message on the health aspect for people to understand that they are consuming highly contaminated maize and groundnut, which endangers their lives. We will also need to partner with the private sector so that they can make the product readily available to farmers," said Bulirani.



Dr Joseph Atehnkeng explaining the process of Aflatoxin analysis to the dignitaries on a tour of the facility.

DG meets with staff; looks at IITA's work with partners

During the meeting with staff, the DG discussed issues of gender, youth in agriculture, staff welfare, and career development.

"Consider yourself as part of the global staff and that you are an ambassador of IITA right from your communities to the airport. IITA stands in good shape with your support," remarked Sanginga.

Following an overview presentation and discussion on IITA's work in Malawi, Sanginga proceeded to the exhibition

organized to showcase IITA's work with partners. The [International Center for Tropical Agriculture \(CIAT\)](#), [International Crops Research Institute for the Semi-Arid Tropics \(ICRISAT\)](#), [International Maize and Wheat Improvement Center \(CIMMYT\)](#), and International Potato Center (CIP) all took part in the exhibition and poster session demonstrating IITA's strong partnerships with public and private sector partners in Malawi. Other participating partners were the World Agroforestry Centre (ICRAF), National

Smallholder Farmers' Association of Malawi (NASFAM), Malawi Fertilizer Company, Multi Seed Company (MUSECO), Agro-Input Supplies Limited (AISL), and Associated Center for Agro-based Development (ACADES).

The DG also met IITA-Malawi women's group to discuss their activities, constraints, and opportunities. IITA-Malawi hosted a cocktail reception and dinner for IITA staff and partners in honor of DG Sanginga.

IITA introduces flexible data citation in CKAN

The IITA Communication Unit's Data Management section has been working extensively to increase the visibility of [IITA](#) research outputs. DataKind, United Kingdom, took note of the achievement along with an exceptional high-quality dataset with the repository.

One of the concerns of open access is that open data that is reused under a Creative Commons Attribution License (CC-BY) may never receive any credit unlike most extracts taken from academic papers, which can easily be cited in a bibliography. There are online tools that can be used to generate citations depending on the standard or format a writer prefers. Apart from the online tools, several papers have been written in the past to guide writers on how to cite properly using any format. To ensure that academic and research activities are protected and promoted online, plagiarism tools are available to ensure that proper credit is given to authors.

Citation is also available for datasets. Data citation is the practice of providing a reference to data in the same way that books or journals are referenced in research publications. The practice will create a better measurement of the validity of reused data or the generated data. However, data citation will be useless if there is no digital persistent identifier attached to the data. The Digital Object Identifier (DOI) is a major tool that ensures that data deposited in an open access repository is unique. It gives research the credibility it deserves.

Although there are different formats of data citation, it has been observed that

most repositories have fixed citation unlike what is obtainable in paper citation where a writer can adopt a format. This limitation sometimes discourages data users when using it for research or academic purposes. IITA identified this gap among [CGIAR](#) research centers and enhanced its CKAN (<http://data.iita.org>) to allow data users to choose their preferred citation formats. The option ranges from APA, Chicago,

Harvard, IEEE, MLA, and Vancouver. This has made IITA's CKAN stand out among all data consumed by GARDIAN.

DataKind has expressed its readiness to support IITA to dive into datasets in CKAN and gain more insight for the development of new digital agricultural products. Visibility is increasing as more scientists have identified CKAN as the future of data archiving and institutional memory.

Definition taken from <https://www.ands.org.au/working-with-data/citation-and-identifiers/data-citation> and <https://www.usgs.gov/products/data-and-tools/data-management/data-citation>

The screenshot shows the CKAN interface for a dataset titled "Nutritional evaluation and consumer preference of legume in Eastern Zambia". The page layout includes a navigation bar with "DataSets", "Organizations", "Groups", "About", and "API". The dataset page features a "Citation" dropdown menu with options: APA, Harvard, MLA, Vancouver, Chicago, and IEEE. Below the citation menu, there is a "Data and Resources" section with a file icon and a download button. The "Additional Info" section includes an "Export Metadata" button and a table of metadata.

Field	Value
Creator	Alamu, Cladej
Creator ID Type	ORCID
Creator ID	0000-0001-6263-1359
Subject Vocab	Legumes, Consumer preferences, Nutritional assessment
Subject(s)	Legume relish
Publisher	International Institute of Tropical Agriculture (IITA)
Contributor Person	Brookta Popoola, Busie Mazhya-Dixon, Therese Gondwe, Chikoye David

The new look of CKAN, with its many enhanced features.

DDG-R4D visits IITA's field research activities in Southern Africa Hub locations

From 23 to 31 March, [IITA Deputy Director General-Research for Development \(DDG-R4D\), May-Guri Saethre](#), had a successful field visit to Malawi, Mozambique, and Zambia in the Southern Africa Hub to appreciate the advancement of new research and technologies.

She appealed to scientists to take a more vigorous approach to deal with pests and diseases particularly on crops that are being evaluated for release, or that are already released to see if they maintain resistance or tolerance to disease pressure over the years.

The DDG-R4D was accompanied by Regional Director for Southern Africa, [David Chikoye](#); the IITA Country Representative for Mozambique, [Steve Boahen](#); and the IITA Country Representative for Malawi, [Arega Alene](#), along with other scientists from Malawi, Mozambique, and Zambia. She also interacted with various public and private sector partners including Afri-Nut, which processes and exports groundnut and is working with IITA to promote the use of Aflasafe by farmers to reduce aflatoxin contamination in groundnut.

The DDG also met with farmer groups including the Lifidzi Smallholder Farmers Association in Dedza. The group, which has a membership of 1500 farmers, is one of the seven smallholder associations to have deployed the Aflasafe technology in their groundnut fields. The group plants groundnut, maize, soybean, common bean, and potato.

Saethre visited various IITA trial sites across central Malawi and Angonia in Mozambique. At these locations, scientists explained activities being conducted on cassava breeding, clonal evaluation and preliminary yield trials, and uniform yield trials. She also visited soybean



Dr Saethre interacting with scientists at one of the soybean fields in Malawi, Chitedze Research Station.

breeding, agronomy, and technology upscaling activities at various sites. The DDG-R4D also learned about the IITA-Malawi Soybean Seed revolving fund for the production and distribution of soybean basic seed through contractual arrangement with private seed multipliers under the Malawi Improved Seed Systems and Technologies (MISST) project.

While commending the great work IITA scientists are doing in the region, Saethre emphasized that more needs to be done on surveillance, monitoring, and screening of diseases, more specifically soybean rust and witches' broom, cassava brown streak virus, and cassava mosaic virus disease to identify resistance or tolerance. Cassava mosaic disease (CMD), cassava brown streak disease (CBSD), soybean rust, cowpea viruses, and banana bunchy top virus are some of the diseases prevalent in Southern Africa that cause major yield losses.

From Malawi, the DDG-R4D continued her visit to Zambia where she was received by a team of scientists. Here she visited different research and outscaling activities such as Aflasafe, cowpea, cassava, soybean, fall

armyworm compact in TAAT, and the youth program, as well as available research facilities at Kabangwe station.

The key highlight of her visit in Zambia was participation in a field day attended by over 70 stakeholders representing the donor community, seed companies, graduate students, and government officials. During the tour of research activities, she noted the impacts of drought and heat, which has been experienced in the southern half of the country, where most of the maize and soybean had dried up. Officially opening the field day, she reminded the stakeholders of the serious impacts of climate change, manifested as drought, heat, and invasion of new pests such as fall armyworm. She encouraged partners to embrace new technologies and diversify into more climate smart crops such as cassava and cowpea.

Malawi, Mozambique, and Zimbabwe have been affected by the worst tropical cyclone to hit Africa where more than 1000 people died. Agriculture plays a huge role in the livelihoods of farmers in these countries. IITA's research work is greatly appreciated in this region.



Dr Saethre meeting farmers' group in Malawi.

TAAT success story: Empowering women farmers through Urea Deep Placement Technology

Kadiolo is a town in the Sikasso Region of southern Mali, which lies about 13 km north of the border with Ivory Coast and 30 km west of the border with Burkina Faso. The town is an agrarian community with nearly everyone engaging in agriculture at the subsistence level.

Faced with a family to feed after the death of her husband, Nabintou Ouattara, a 57-year-old widow, and 65 other Kadiolo women came together and established what is now known as the "Dabakala Association." This farming association exploits the Folona inland valley of 29 ha. These women have one goal: to produce rice and feed their families.

Although full of courage, they were in a cycle of poverty and food insecurity. For example, Nabintou had been harvesting not more than nine bags of paddy rice or 675 kg in 0.40 hectare of land over decades.

During the past 2018 cropping season, the members of Dabakala Association were brought together by the local agriculture sector of Kadiolo for training in and upscaling of the Urea Deep Placement (UDP) technology.

This agricultural input-based technology, promoted by the [International Fertilizer Development Center](#) (IFDC) under the [Technologies for African Agricultural Transformation](#) (TAAT) program, uses less fertilizer and seeds per hectare for better crop harvest and income.

TAAT is implemented by [IITA](#) in close partnership with other [CGIAR](#) Centers and specialized technical centers like the African Agricultural Technology Foundation (AATF), IFDC, Forum for Agricultural Research in Africa (FARA), national agricultural research and extension systems, and private sector partners.

TAAT promotes and disseminates proven, high-performance food production technologies to millions of farmers in a commercially sustainable way through a



Nabintou Ouattara, in her inland valley rice field, transplanting rice, Kadiolo (Sikasso District), Mali.

network of people and institutions forming a Regional Technology Delivery Infrastructure (RTDI) within an enabling environment.

Launched in 2018, the program is already increasing agricultural productivity in Africa through the deployment of proven and high-performance agricultural technologies at scale along selected value chains such as rice, maize, cassava, wheat, sorghum and millet, orange-flesh sweet potato, high-iron beans, livestock, aquaculture.

As a volunteer through the Dabakala Association, Ouattara conducted a demonstration plot to evaluate the UDP technology.

"I used half of my field for the test. With less seed and less fertilizer, yields far exceeded the other half grown in our traditional broadcasting fertilizer practice. Nowadays, from 675 kg in the past, I harvest up to 1725 kg of paddy rice in my small plot of 0.40 ha," she says.

Ouattara takes pride in the changing situation of women in Dabakala Association after the adoption of the UDP.

"We never thought of selling our rice one day. But since we adopted UDP, our returns have increased so much that we are selling some of them for our cash needs. Today, many of our women are independent. They no longer depend entirely on their husbands. Besides, we are mostly widows," she added.

Ouattara and members of her Dabakala Association are grateful to the [African Development Bank](#) (AfDB)-funded TAAT program which identified their challenge with low yields and proffered the appropriate technology (UDP) that is putting smiles on their faces.

Designed for resource-poor farmers cultivating lowland rice, UDP is a nutrient management technology that accomplishes what agriculture must do in a changing climate: increase yields and profitability and reduce pollution.

Find full story on the TAAT Featured News post: [How TAAT is Empowering Women Farmers through Urea Deep Placement Technology](#).

Got a story to share?

Please send your story 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 Africa, Catherine Njuguna (c.njuguna@cgiar.org) for Eastern and Southern Africa, and David Ngome (d.ngome@cgiar.org) for Central Africa.