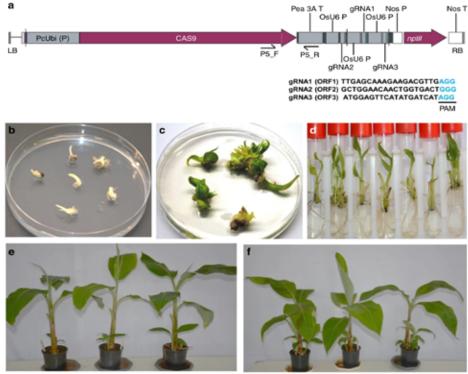




IITA paper on genome editing among most read Open Access journal

A paper by an <u>IITA</u> Principal Scientist, <u>Leena Tripathi</u>, on '<u>CRISPR/Cas9 editing of</u> <u>endogenous banana streak</u> <u>virus in the B genome of</u> <u>Musa spp. overcomes a</u> <u>major challenge in banana</u> <u>breeding</u>' was the second most downloaded paper in Communications Biology, an open access (OA) journal.

The paper has had more than 12,000 downloads to date, 51 citations, 245 tweets, 16 news outlets, two Facebook pages quoting it, three blogs, one Wikipedia page, and 113 Mendeley citations. *Communications* Biology released these details in celebration



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Regeneration of genome-edited events by delivering CRISPR/Cas9 construct through Agrobacteriummediated transformation of cell suspension of Gonja Manjaya. (Figure from the paper).

Joint agribusiness park activities commence in Oyo State, Nigeria

IITA and Oyo State have commenced activities on an agribusiness center in Awe, Oyo Town. On 7 October, the project's Joint Committees' meeting agreed to change the center name from Rural Community Development Center (RCDC) to IITA-Oyo State Agribusiness Park Center, Awe.



An overview of the center with proposed offices.



Earlier, IITA's Facilities Management Services (FMS) commenced construction work at the processing center, aiming to introduce a modern cassava processing structure. Identified office spaces, training rooms, the pen for sheep and goats, as well as poultry facilities will also be rehabilitated.

On 12 October, mechanized cassava planting began on 43 hectares of land in the community. The team purchased 3,000 cassava stem bundles and 172 bags of fertilizer in preparation for planting.

IITA's Supply Chain Unit processed the purchase of small farm machines for use at the center, including a rototiller, four brush cutters, one power weeder, two power sprayers, and one pushing type lawnmower.

Technical Adviser to the IITA Youth in Agribusiness Office, <u>Paul Woomer</u>, led discussions on drafting the center's masterplan and a first draft is being reviewed by the IITA team.

An IITA and Oyo State Government (OYSG) joint team visited the Agribusiness Park to analyze the present state of the facilities and decide on the way forward to implement activities. The delegation agreed on the modalities for renovating office blocks, including inputs from Oyo State Agribusiness Development Agency (OYSADA). The state government will also renovate the 750-person capacity training hall, with backstopping from FMS.

When full activities start, the Agribusiness Park will include livestock operations for sheep, goats, small ruminants, a cashew plantation, an oil palm plantation, and agroprocessing facilities.



Top: Hub Manager, Waheed Oni conducting the team on a tour. Middle: The planter working on the field in Awe. Bottom: A model of the proposed processing center.

Take responsibility! Stop the spread of COVID-19!

Always clean your hands; practice physical and social distancing; wear face masks properly; avoid crowds and public places; keep a 2-meter distance from the next person; and practice general sanitation and hygiene.

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.agha@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.



IITA paper on genome editing among most read Open Access journal

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of Open Access Week. Open Access journals do not charge subscription fees, i.e., the publications are available to the public free of charge.

The article is about the integrated endogenous banana streak virus (eBSV) in the B genome of plantain (AAB). Banana Streak Virus presents a significant challenge for breeding and disseminating hybrids since it activates into infectious viral particles under stress. Seventy-five percent of the edited events were asymptomatic compared to the non-edited control plants under water stress conditions, confirming the inactivation of eBSV into infectious viral particles. The study paves the way for improving B genome germplasm and its use in breeding programs to produce hybrids that can be globally disseminated.

Tripathi highlighted how OA publishing has helped advance her career: "Open Access has enhanced the visibility, accessibility, and the impact of my research and development activities and improves the speed, efficiency, and efficacy of the research. With Open Access, I am just one click away from advanced science-related publications without any financial burden on my publicly funded research. Open Access articles have provided publicity for my research, which, in return, have increased my connections and funding for our research."

For Tripathi and other CGIAR researchers, publishing in Open Access is also about compliance. "We need to follow the CGIAR Open Access Policy. Publishing in Open Access enables compliance with an increasing number of donor policies (e.g., Bill & Melinda Gates Foundation Open Access Policy, USAID Open Data Policy). It also empowers researchers to improve efficiencies and enhance innovation and impact in an era of complex and large data sets. Several funding agencies supporting research can achieve more prominence through Open Access," Tripathi said in a <u>recent</u> <u>interview</u>.

"Open Access seeks to return scholarly publishing to its original purpose, which is to spread knowledge and allow that knowledge to be built upon. Price barriers should not prevent students (or anyone) from getting access to the research they need. Publishing in Open Access Journals increases the visibility of one's research since more people can download and read the paper," states their website.

Belgian Ambassador commends IITA's efforts to transform Ugandan agriculture sector

His Excellency Rudi Veestraeten, the Belgian Ambassador to Uganda, visited the <u>IITA</u>-Uganda substation at Sendusu on 30 October. The Ambassador was accompanied by the Deputy Head of Mission and Head of Belgian Development Cooperation, Mr Koen Van Acoleyen.



Showcasing IITA's banana research to Belgian Ambassador to Uganda, H.E. Rudi Veestraeten, during his tour of IITA-Uganda substation at Sendusu.

The visit was on the invitation Swennen. IITA's of Ronv senior banana breeder. The Ambassador and his deputy were received by the banana and cassava breeding and research teams, the IITA Youth Agripreneurs, and Dr Chris Omongo, who was representing the Director of the National Crop Resources Research Institute (NaCRRI), the institute of the National Agricultural Research Organisation (NARO) that hosts IITA Sendusu.

During the half-day visit, the IITA research team showcased efforts by IITA and partners to improve livelihoods, enhance food and nutrition security, employment, increase and natural preserve resource integrity in sub-Saharan Africa. This was done through а presentation, an exhibition of the

banana and cassava breeding programs and the Ugandan Youth Agripreneurs, and a tour of the laboratories and fields.

The banana and cassava breeding programs gave the visitors a visual walkthrough of the importance of the two crops as the primary staple foods in Uganda and the region, the production constraints, the breeding goals, the breeding process, and the milestones achieved since the start of IITA-Uganda in 1992. The Agripreneurs showed the visitors some of their products, such as the orange-fleshed sweet potato flour, which is popular with children as a good source of vitamin A.

The visit ended with a meeting with the IITA staff in Sendusu, where the Ambassador commended the IITA Youth program as a good way to encourage the youth to join the agricultural sector. "I saw this program on youth, where you teach them not only to grow these crops but also to sell and process them into various products," the Ambassador said while addressing staff at Sendusu station.

The Ambassador encouraged the youth to venture into value addition and processing of agricultural products such as coffee but emphasized skills development and experience sharing. He noted that, although

85% of Ugandans are involved in agriculture, the vast majority are still practicing rudimentary forms of farming that have spanned generations. Also, one of the effects of COVID-19 is that many people have left cities, where they earned their living, to return to their small farms for survival. The Ambassador promised to support IITA-Uganda in its mission in the region.





Top: Prof Rony Swennen explaining IITA banana research to H.E. Rudi Veestraeten and Deputy Head of Mission, Mr Koen Van Acoleyen, as they toured the Institute's laboratories at Sendusu. Bottom: IITA team exhibiting the Institute's work to Ambassador Rudi Veestraeten and Deputy Head of Mission, Mr Koen Van Acoleyen, during the tour.

IITA conducts farmers' Green Field Day in northeast Nigeria

IITA, through the Feed the Future Integrated Agriculture Activity funded by USAID, is contributing to the economic recovery in northeast Nigeria in the wake of the devastation caused by the ongoing insurgency in the region. The Activity supports vulnerable populations disenfranchised by the conflict and reengages them in basic farming activities. To this end, 62,666 farming households were registered in Adamawa and Borno states, out of which 52,734 smallholder farmers were trained in climate-smart and improved agricultural practices through the private and public sector Extension Agents.

To reinforce learning and expose the farmers to new technologies and practical aspects of good agricultural practices (GAP) in the target seven crops (maize, rice, sorghum, millet, cowpea, soybean, and groundnut), the project held Green Field Days for the registered farmers on the demonstration plots established by lead farmers in their communities. This activity aims to increase the adoption of new technologies and improved agricultural practices in the region, which is expected to result in increased yield and sustainable income for the farmers to improve their livelihoods.



The event, which took place between 12 and 22 October in collaboration with ICRISAT, was conducted simultaneously in the 12 implementing local government areas (LGA) in Adamawa (Guyuk, Demsa, Fufore, Yola South, Gombi, Hong, and Song) and Borno (Biu, Shani, KwayaKusar, Hawul, and Bayo) states with 1,627 (1,000 male and 627 female) participants in the two states.

Green Field Days serve the dual purpose of demonstrating best practices and providing inputs for further research. They demonstrate and encourage the adoption of GAP and create avenues for farmers to share knowledge and experiences among themselves. Farmers have the opportunity to observe and compare the performance of different varieties and improve their farming skills.

The event was also used to promote information exchanges and create market linkages for the farmers.

At the event in Purokayo, Guyuk and Ngurore community in Yola South, traditional leaders (Gibson Zaleza Village Head-Purokayo and Sarki of Ngurore, Alhaji Abubakar Baba Lawan) thanked IITA for helping the community, especially after their devastating experience with the insurgents, which was a huge setback to their farming activities.

They then urged IITA to do more in terms of providing access to inputs and more training on GAP. They also agreed to provide more plots for demonstrating improved practices by IITA as needed.



Top: Participants on groundnut demo plot at Guyuk LGA, Adamawa State. Bottom: Participants on rice demo plot at Biu LGA, Borno State.