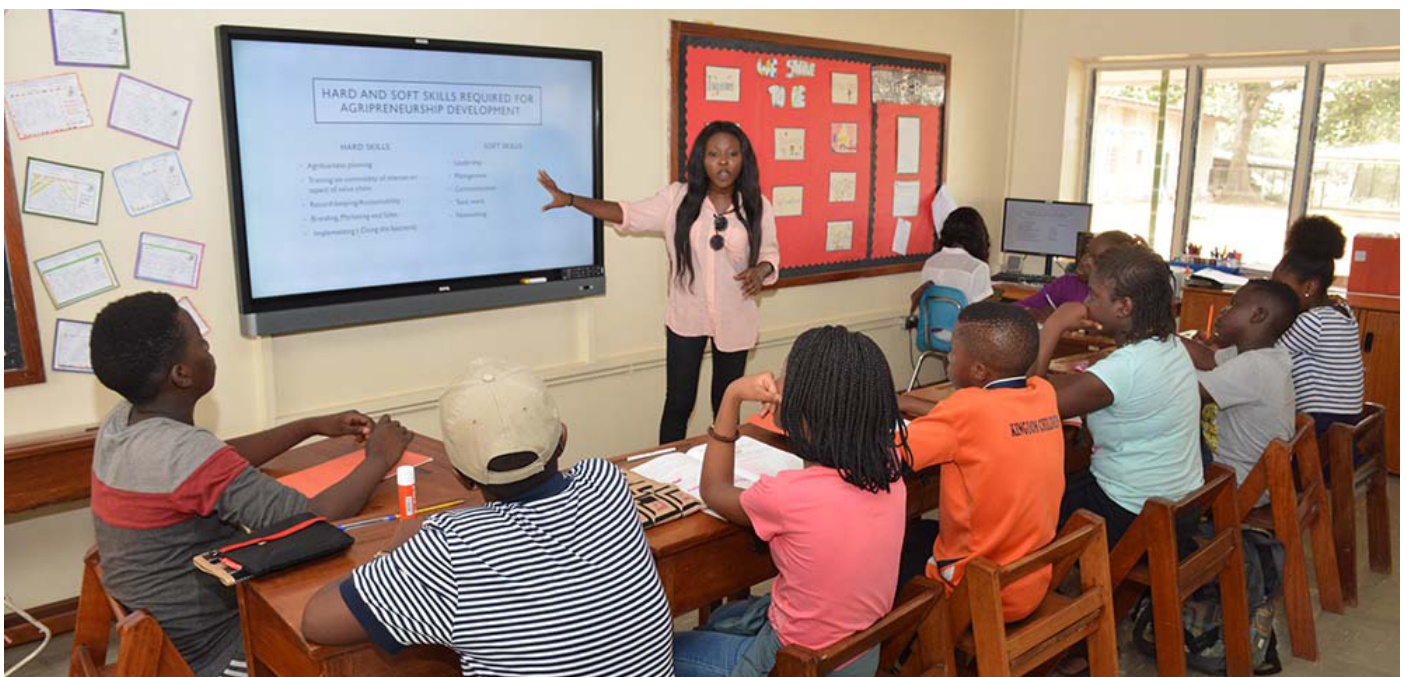


IITA initiates STEP to encourage participation of school children in agribusiness

At the 2018 [Africa Food Prize \(AFP\)](#) ceremony in Kigali, Rwanda, [IITA](#) Director General, [Dr Nteranya Sanginga](#) reiterated his commitment to invest in the future of Africa's younger generation and emphasized the importance of raising the ambition of primary and secondary school students to guarantee a food- and nutrition-secure continent. With the \$100,000 AFP prize money, Sanginga initiated the "Start Them Early Program" (STEP), an intervention designed to take agribusiness studies to primary and secondary school students, and engage them in agriculture club participation, course work, and experimental learning.

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Youth trainer Adedamola Adewole explaining about agribusiness to the pupils of IITA International School.

Aflasafe registration gets approval in Mozambique

After almost five years developing and field-testing an innovative but simple way to control [aflatoxin](#) in groundnut and maize in Mozambique, Mozambique's Ministry of Agriculture and Food Security on 20 February approved the registration of two Aflasafe products.

[Aflasafe](#) is a 100% natural solution to aflatoxin contamination. Each product is composed of four native-to-Mozambique, non-poisonous types of the fungus *Aspergillus flavus*. It is a case of sending

a thief to catch a thief to get rid of toxic relatives, because the poisonous and non-poisonous fungi are kith and kin. [The Aflasafe cousin multiplies and outnumbers these fungi, thus deliberately](#)

[overwhelming the toxic cousins in the field.](#)

Aflatoxin contamination in maize and groundnut is widespread in Mozambique.

This naturally occurring poison compromises public health and causes liver cancer. Child stunting and weakened immunity resulting in more illness have also been associated with aflatoxin. Economically, Mozambique's re-entry into the lucrative groundnut export market has been compromised by aflatoxin.

The two registered products—Aflasafe MWMZ01 and Aflasafe MZ02—were first extensively tested in farmers' fields in four main maize- and groundnut-growing areas in Central and Northern Mozambique, covering a swathe from low to high altitudes across 5 provinces and 22 districts. Results showed dramatically high aflatoxin reduction (by between 85 and 99%) for both groundnut and maize, compared to situations without Aflasafe.

Most importantly, nearly all (more than 90%) of the maize and groundnut harvested from Aflasafe-treated fields met the stringent European Union safety levels of 4 ppb maximum total aflatoxins for food destined for human consumption, this compared with only 49% in non-treated fields.

The five-year project was funded by USAID–Mozambique and the United States Department of Agriculture–Foreign Agricultural Service (USDA–FAS). The two products were developed by [IITA](#) in collaboration with USDA's Agricultural Research Service, [University of Arizona](#) (USA), Mozambique National Agricultural Research Institute and Mozambique's Ministry of Agriculture and Food Security.

Following Aflasafe registration, the Ministry of Agriculture and Food Security has asked IITA to organize awareness raising activities about aflatoxin issues as well as promote the use of Aflasafe in the country. These will include the organization of a workshop as soon as possible.

Several partners have already shown interest in manufacturing and commercializing Aflasafe in Mozambique. A very dynamic nationwide Groundnut Working Group comprising government and non-government actors including IITA has already pinpointed Aflasafe as its key strategy to control aflatoxin in groundnut. This heralds better times, and Mozambican farmers can look forward to



Muacheia Acacio Groundnut farmer applying Aflasafe in Muriaze, Nampula Province, Northern Mozambique, during field efficacy trials conducted during the 2016/2017 cropping season.

safer food, better health, and profitable crops.

Mozambique is the 9th country where Aflasafe has been registered after Nigeria (2014), Kenya (2015), Senegal and The Gambia (2016), Burkina Faso (2017), and Ghana, Tanzania, and Zambia (2018).

IITA initiates STEP to encourage participation of school children in agribusiness Continued from page 1

STEP aims to (1) provide primary and secondary schools with agricultural inputs, and (2) train and empower students to change their mindset towards agriculture as a business and as an opportunity for job creation.

STEP is designed to operate in DR Congo, Kenya, and Nigeria for over two years and in nine secondary schools. It partnered with a local organization of young people called NEWDAY Afrika to expand an already existing initiative and has been introduced in three secondary schools in Bukavu, DRC.

Currently, over 800 students have been reached in DR Congo. Thirty-three, pupil-initiated agribusinesses are thriving; some are involved in rabbit farming, guinea pig production, poultry, and vegetable production. School managers are also involved in agricultural production especially in poultry and rabbit rearing to improve school incomes and pupils' practical knowledge.

All DRC students involved in the project succeeded in their national examination with two girls among them scoring the best results, 88% and 84%. Most of them are committed to continue in agriculture at university level.

In Nigeria, the STEP team has reached out to more than 100 students from three schools and the IITA International School to educate them about the benefits of modern agriculture and the different viable opportunities along its value chain. The

group has also been working with IITA Women's Group made up of female staff and spouses, to engage more students in Ibadan, Oyo State, in the program.

At the IITA International School, Sanginga shared his passion for agriculture and his experiences in developing a career in the agriculture sector.

The students have also undergone a series of agribusiness training organized by the STEP team to commence activities on the program. The curiosity of the students to learn more about agribusiness grows day by day.

STEP builds on the [IITA Youth in Agribusiness](#) (IYA) initiative also started by Sanginga in 2012 to engage young unemployed graduates in agribusiness. IYA is currently active in six countries in sub-Saharan Africa with 385 members and 13 groups involved in 54 different enterprises and start-up businesses ranging from fish, livestock, and vegetable production to seed production, processing, and value addition. This program has been successfully adopted by the African Development Bank (AfDB) to create a Pan African Youth in Agribusiness Scheme called Empowering Novel AgriBusiness-Led Employment for Youth in African Agriculture (ENABLE Youth).



The founder of NEWDAY Afrika, Prince Bobo Tangabanga, talking to a secondary school student on the school farm.

ACAI and Cassava Weeds Management Project merge

The [African Cassava Agronomy Initiative](#) (ACAI) project and the [IITA](#) Cassava Weeds Management Project (IITA-CWMP) have become a single project. The [Bill & Melinda Gates Foundation](#) funds both projects under its Agricultural Development program.

The ACAI project has been carrying out research to develop tools that will increase the availability of appropriate and affordable technologies to sustainably improve cassava productivity in Nigeria and Tanzania.

IITA-CWMP, on the other hand, screened environmentally friendly and safe herbicides and explored agronomic factors including motorized mechanical options for weed control in cassava. After rigorous and intensive research, the project developed the Six Steps to Cassava Weed Management toolkit that, when applied, increases the productivity of cassava and reduces the drudgery of hand weeding.

Under the new arrangement, the two projects will operate as ACAI with an expanded mandate to include cassava weed management.

Project teams from ACAI and CWMP met in Nairobi in early February to develop an integration plan and a new implementation plan for 2019 and 2020. Components of weed management solutions will be incorporated into some of ACAI's decision support tools and then disseminated as a single composite package.

Commenting on the merger, IITA Director for Development and Delivery, [Alfred Dixon](#), said the move was in the right direction, adding that it offers the new ACAI team a more diversified and talented team that would transform cassava on the African continent.

"(The two projects) have a common goal; coming together is going to make the team more successful as they share experiences," Dixon said.

Last year, CWMP received a 2-year supplementary budget extension to join with ACAI in disseminating the technologies they have been developing. The weed management project began in 2014 aiming to generate relevant weed management options for cassava farmers to help them improve cassava production.

The knowledge outputs from the project include the Six Steps of Cassava Weed Management toolkit and the ABC of Weed Management in Cassava Production in Nigeria.

ACAI started in 2016 to develop decision support tools that would meet specific agronomic needs of partners actively involved in the cassava value chains in Nigeria and Tanzania. The tools are currently in the validation stage of development and are slated for dissemination from 2019.

The expanded ACAI project will be intensifying the dissemination and scaling of technologies developed by both teams.



Dr Friday Ekeleme giving a presentation.

ACAI given donor commendation at annual review and planning meeting

The donor and other cassava value chain stakeholders have given a glowing review of the [African Cassava Agronomy Initiative](#) (ACAI) project for its accomplishments within just three years of operation. The program officer from The [Bill & Melinda Gates Foundation](#), Dr Christian Witt, applauded the demand-driven and user-oriented implementation approach used by ACAI as unique and impressive for achieving results.

Witt made the comments at the ACAI 2018 Annual Review and Planning Meeting held

in Abeokuta, Nigeria. ACAI hosted different stakeholders drawn from Nigeria and Tanzania involved in the project to reflect on the work that the team has carried out over the previous years.

ACAI has been engaged in research activities to develop decision support tools (DSTs) aimed at revolutionizing cassava agronomy, intensifying farming of the crop, and creating a sustainable supply of high-quality cassava roots to processing companies. After three years of intensive research and development,

the project will increase evaluation and dissemination activities starting in 2019.

[IITA](#) Director for Natural Resource Management, [Bernard Vanlauwe](#), pointed out the progress that the team had made toward developing the final version of the DSTs.

"We have started translating information and knowledge gathered into applications that give recommendations and we are almost ready to go into scaling. This is a very good improvement," said Vanlauwe.

He further urged partners to evaluate the tools and see how they fit into their (partners') business objectives, the needs they meet, and what improvements they will require.

The meeting involved presentations from the ACAI core team on the activities carried out in 2018 and plans for the 2019 season. ACAI partners also shared their activities in the project, feedback on the versions of the DSTs presented to them as well as their expectations and plans for ACAI in 2019.

Participants paid a visit to a nuclear farm, model village, and a processing factory run by [Psaltry International](#), one of ACAI's development partners in Nigeria. They interacted with farmers running validation trials on their farms based on some of the ACAI DSTs.

Dr Ngozi Odunze from the [Federal Ministry of Agriculture and Rural Development](#) (FMARD) in Nigeria appreciated the Gates Foundation for supporting the ACAI project to improve the lives of smallholder cassava farmers.

"I am happy that the project is moving to dissemination. The farmers who are the end users targeted by this project will finally



Dr Guillaume Ezui explains to the participants the use of paper-based decision support tools developed by ACAI.

benefit from the technologies that have been developed," said Odunze.

Working with the national agricultural research systems in Nigeria and Tanzania, ACAI has carried out trials to establish proper nutrient composition for cassava growing. The project has also been investigating the best cassava crop management practices under varying ecological conditions and optimizing starch content in the roots for industrial processing.

During the annual meeting, the ACAI team demonstrated how the DSTs can be used in different formats based on the capacity of the end users to apply them. The project has developed four main outputs for the DSTs. These are the Unstructured Supplementary Service Data (USSD) short message service, a mobile application, the paper-based maps and table format, and the Interactive Voice Response (IVR) format. The development partners will be testing and providing feedback on their preferred format.

CocoaSoils partners discuss ways to strengthen agronomic research and dissemination

The maiden Annual [CocoaSoils](#) Forum was held in Accra, Ghana, on 24 January. The forum followed a three-day Science Committee meeting in which research and project partners came together to assess project implementation, assure transparent and accessible dissemination of research outcomes, and provide inputs into the research of the different partners.

The forum brought together program coordinators, representatives from national and international research institutes, government representatives, non-program industry companies, farmer organizations, in-country cocoa authorities, farmers, and the media, among others.

The annual forum aims at building a common understanding of the CocoaSoils program by sharing the outline and progress made so far, while engaging partners to further strengthen agronomic research in West and Central Africa.

The CocoaSoils program seeks to enhance cocoa productivity and nutrient-use efficiency through a sustainable intensification approach to enable the development and dissemination of integrated soil fertility management (ISFM) recommendations. [IITA](#) is one of multiple public and private partners in the consortium established to implement the program.

The program, which is funded by the [Norwegian Agency for Development Cooperation](#) (NORAD), is poised to translate

the results from the research into practical applications by highlighting public-private partnerships. The forum provided a platform to showcase its outputs and also to get inputs from various experts to improve the program.

Daniel van Gilst, the representative from NORAD, took the opportunity to explain the global impact the program will make with the results and implementation of the research. He further explained that *"the problem of poor soil management is an important one because too many people are affected by cocoa and too many households depend on cocoa."*

Speaking at the forum, Deputy Chief Executive of the [Ghana Cocoa Board](#) (COCOBOD), Dr Emmanuel Agyemang Dwomoh, emphasized that the Ghana COCOBOD is committed to the success of all the activities within the program. He said he hopes that the research component will filter down to the farmers and positively affect cocoa production in Ghana.

The forum had several presentations from various experts within the CocoaSoils program as well as a marketplace poster exhibition, where various trial managers and students on the project exhibited their research and progress.



(L-R) Opening by Dr Bernard Vanlauwe (IITA), Daniel van Gilst (NORAD), Dr Emmanuel Agyemang Dwomoh (COCOBOD), and Dr H.K. Dzahini-Obiatey (Cocoa Research Institute Ghana).

IITA, Bayer, NARS meet to modernize cowpea breeding

Representatives from the Global Breeding/ Analytics and Pipeline Design team of Bayer–Crop Science, met with IITA’s cowpea breeding program team and scientists from some national programs on 4-7 February to review ongoing collaboration. The meeting also aimed to fine-tune models through which IITA and national partners can benefit from Bayer’s expertise in modern crop breeding.

The delegation, comprising Development and Deployment Lead Dr Stella Salvo and Discovery Breeding Methodology Lead Dr Brian Gardunia, was received by Michael Abberton, the acting Director for IITA West Africa Hub. Abberton gave an overview of IITA’s activities and achievements over the past years while highlighting the importance of partnerships with organizations that seek to improve all aspects of agriculture.

The visit is part of an ongoing program that has been running for almost four years and was originally started by Monsanto, which has now been taken over by Bayer. Bayer works with the cowpea breeding program of IITA and the national programs in Nigeria, Ghana, Mali, and Burkina Faso, to modernize their breeding programs and enhance genetic gain annually. The program aims to ensure more effective use of molecular techniques, data management and data collection, enhanced use of mechanization, and field selection in general.

Ousmane Boukar, IITA cowpea breeder, emphasized the importance of engaging Bayer in the process of improving cowpea breeding in West Africa. He noted: “For effective and complete improvement in cowpea breeding, it is important to

learn from the expertise of professionals. Bayer is a big industry with knowledge of modern breeding, and so, the outcome of this collaboration will undoubtedly transform breeding systems.”

Christian Fatokun, IITA legume geneticist and breeder, revealed that, “The recent meeting between IITA, Bayer, and NARS partners from different West African countries was a huge success as the cowpea breeders were taken through the procedures for deploying quantitative trait loci (QTL) in modern breeding and facilitating genetic gains in improved varieties.”

Bayer is a life science company with over 150 years of experience in the aspect of health care and agriculture. Bayer continually contributes to finding solutions to some of the major challenges of our time.



Participants at the meeting.

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.