

Orange maize hits Ghanaian market: success story of an orange maize revolution in Ghana

Amanase near Suhum in the Eastern region of Ghana is a market center serving several adjoining communities.

On one of its market days in February 2015 traders saw a “wonder maize” and its products displayed by Kwame Ani Amoako and Anim Amponsah—officers from the Crops Research Institute (CSIR-CRI) Ghana.

Seeing orange-fleshed maize was amazing to locals who had hitherto cultivated and consumed only white maize. Akosua Benewa and her sister Yaa Kwabea—both indigenes of Amanase, shared how their encounter with a group of scientists from CSIR-CRI prompted them to adopt the new and improved orange maize varieties that is making farming more profitable for their households.

“Before, farmers in Amanase cultivated only local maize varieties with a yield potential less than 1 t/ha. This local variety takes longer to mature (120-130 days), is very tall, and is susceptible to lodging, streak, drought, and is also less nutritious in terms of vitamin A content,” the sisters recounted.



Sisters Akosua Benewa and Yaa Kwabea trading orange maize in Amanase.

Earlier, in June 2014, a team of scientists led by Manfred Ewool from CSIR-CRI visited this community and introduced some recently released orange maize varieties from CRI. These new varieties were accepted by the farmers because they could mature in 110 days, had adequate levels of vitamin A for improved health and nutrition, and they possessed tolerance for all the stresses that affect the local variety. In addition, the new varieties also had a yield potential of up to 3 t/ha—three times the yields previously obtained from their fields. The new varieties also offered 10-20% higher price over the white varieties.

Farmers testified that the higher price was an incentive for them to adopt and grow more of the orange maize, providing additional incomes for the upkeep of their families. This high patronage has now provided an

incentive for many maize petty traders in the region to sell orange maize.

Akosua and Kwabea are among the first set of petty traders in Amanase to taste the orange maize. They testified that orange maize used in the preparation of local delicacies such as Banku, Kenkey, and Tuosafi was very palatable and preferred more than the white varieties.

Others also testified that food products from orange maize were sticky, so there was no need to add cassava dough in preparing local food, thus saving some money.

Undoubtedly, the introduction of the orange maize varieties to Amanase has resulted in such a visible and great impact on the lives of the locals to date. Orange maize and its products are progressively spreading throughout Ghana and this could be seen on the roadside—boiled and roasted



Maize dough

or in Banku, Kenkey, and Tuosafi.

In addition to the success of the new varieties in Amanase, most poultry farmers in Kumasi, Ejura, Kofiase, Nkoranza, and Sunyani where the orange maize has been introduced have said that the adequate levels of pro-vitamin A

have led to an improvement in the health conditions of their birds. They have also expressed confidence in the varieties' ability to improve the color of egg yolk and also increase egg production.

The new maize varieties were bred by scientists from IITA in collaboration with

HarvestPlus, CSIR-Crops Research Institute and CSIR-Savanna Agricultural Research Institute—all working to step up production of orange maize varieties in Ghana as an alternative to forestall the importation of orange maize estimated to cost the government close to US\$200 million every year.

Delegation from Ministry of Foreign Affairs and International Cooperation in Tanzania impressed with IITA research

A high level delegation from Tanzania's Ministry of Foreign Affairs and International Cooperation toured IITA in its Eastern Africa hub in Dar es Salaam to better understand the institute and its activities in the country.

The delegation was led by Ambassador Celestin Joseph Mushy—Director,

Department of Multilateral Cooperation and Ambassador Baraka Luvanda—Director of the Legal Affairs Unit, and other officials from the ministry.

The team was received by IITA staff led by [Victor Manyong](#), IITA Director for Eastern Africa. They briefed the visiting team on their research activities in

Tanzania and also took them on a tour of the facilities including the laboratory services.

Topics covered include IITA's research on key pests and diseases of cassava, efforts to tackle killer [aflatoxins](#) and to reduce postharvest losses, and efforts to sustainably manage natural resources including soils. By the end of the visit, the team praised the work going on at IITA saying it "is very important for the development of the country where agriculture was a major contributor to the economy."

They particularly hailed [aflasafe](#), a biocontrol technology IITA was developing for Tanzania that can sustainably reduce contamination of aflatoxin—a deadly chemical produced by fungi—on key staple crops. This was very much needed for a country like Tanzania especially following the death of five people and many others hospitalized after consuming aflatoxin-contaminated maize.



The team from Foreign Affairs Officials accompanied by staff at the hub on a tour of the laboratories.

CSIR seeks to strengthen partnership with IITA

Stella Ennin, Director of Crops Research Institute, ([CSIR](#)) Ghana, has applauded IITA for the recent developments and its research, during her visit and tour of the Institute's facilities.

Ennin, who visited on 22-23 February, said her mission in IITA was to get an update on the research and development activities of the Institute, and seek avenues through which CSIR can strengthen collaboration.

Ennin met with members of the IITA General Directorate and staff, and disclosed CSIR's intentions to foster partnership ties with IITA. She noted that CSIR is committed to research

as its core mandate, and so it would collaborate with stakeholders to sustain food security in Africa. She went on to commend the work being done at IITA and the technologies developed in recent times.

[Hilde Koper-Limbourg](#), IITA Deputy Director General, Corporate Services, welcomed Ennin to Ibadan and said that IITA is ready to provide the necessary support for collaboration with CSIR.

"We are glad to have you here. IITA is ready to collaborate with you on mutually beneficial areas," Koper-Limbourg said.



Ennin visiting the Bioscience Center.

While touring the Institute's facilities, Ennin showed interest in the activities of the [IITA Youth Agripreneurs](#) and Business Incubation Platform (BIP).

"I see a lot of opportunities for improved collaboration in crop breeding, capacity building of staff,

bioinformatics, and DNA sequencing. I also want to collaborate in the youth business due to the high rate of unemployment, and learn new ways... I am impressed with IITA. I have seen how seriously IITA takes partnerships with relevant organizations," she mentioned.

Going forward, Ennin expressed optimism that IITA-CSIR collaboration will help accelerate agriculture modernization, increase productivity, create jobs, increase incomes, and ensure food security.

IITA's research sparks interest of new British Deputy High Commissioner

The new British Deputy High Commissioner, Her Excellency, Laure Beaufils, who assumed duty on 20 February in Lagos, has expressed keen interest on behalf of the British government in partnering with IITA.

She made this statement during her first visit to IITA on 23 February.

Beaufils was accompanied by Wale Adebajo, the Communication Manager and Political Adviser, at the British High Commission in Lagos.

The duo was received by Kenton Dashiell, IITA Deputy Director General, Partnerships for Delivery. Beaufils enjoined IITA Directors to work out ways through which the British government and IITA can collaborate.

She also mentioned that she was keen to learn more about agriculture; the challenges of major crops in Nigeria, agriculture programs for youth, and the agriculture development programs of the Nigerian government.



The British Deputy High Commissioner with IITA staff.

Beaufils expressed her gratitude for the reception, "Thank you for hosting me, I am here to learn. The British government lays a lot of emphasis on collaboration with Nigeria. I am interested in developing the relationship between British businesses in Nigeria, and looking for an opportunity to support your work here. This is a fantastic way to start my journey," she said.

Beaufils is the first female Deputy High Commissioner, and is heading the UK Mission in Lagos. Before coming to Lagos she was the head of the UK Department for International Development in Rwanda (from August 2014), where she managed a \$100 million portfolio of programs focusing on economic development and governance.

IITA Deputy Director General visits IITA-Eastern Hub, Tanzania

Hilde Koper-Limbourg, IITA Deputy Director General, Corporate Services (DDG-CS) earlier this month visited the IITA East Africa hub in Dar es Salaam, Tanzania, where she met and held discussions with all the staff and scientists on issues related to Corporate Services.

Her visit is part of her efforts to understand the operations at the hubs, and get feedback on how to improve Corporate Services since taking over the directorate in October last year.

Koper-Limbourg informed the staff of the new Corporate Services strategy under development that was geared towards streamlining operations at the Institute to make them more efficient and provide value for money in the services offered by the units. These

include hospitality and travel, facilities management services (FMS), supply chain, human resources, research farm, and security.



Hilde (middle) interacting with some staff members during her tour of the facilities in Tanzania.

She also praised the hub, noting the many changes that had taken place since her last visit in 2013 during the official inauguration of the new science building.

During her tour, she visited the scientific laboratories where the staff explained about their ongoing research activities. These included the soil, molecular, pathology, and food science labs. She also visited the Tanzania Youth

Agripreneurs (TYA) incubation center at Kwembe, around 50 km from Dar es Salaam, to see their activities. These included processing of cassava into high quality cassava flour; processing soybean into soymilk and soy yoghurt; and growing and selling vegetables. They are also providing services such as weed management through the judicious use of herbicides and

training of farmers, and will venture into fish farming after they finalize the construction of the ponds.

Koper-Limbourg was received and hosted by the hub director Victor Manyong, who also congratulated her on the new position and assured her of the hub's support.

Agripreneurs undergo training on business startups

To further enhance the skills of IITA Youth Agripreneurs (IYA) in developing bankable business plans and in securing business start-up funds from financial institutions, Ekimiks Nigeria Limited in partnership with IITA, organized an 8-day workshop for Agripreneurs in Ibadan on 15-24 February.

The workshop is the second phase of a training that took place in October 2016 as part of the plan to better equip the youth ahead of the ENABLE Youth Program, which is set to kick off any time soon.

During the first phase of the training, Agripreneurs had developed 25 business plans in clusters along the value chains for pitching their businesses for funding.

The business plans are based on ICT, mechanization, logistics and storage, maize, cassava, tomatoes, fish, ram fattening, and value addition, among others.

The second phase gave the youth an opportunity to put some professional touches to their business plans, relate with experts from one of the best business schools in Africa—Lagos Business School in Nigeria, LA Consult, and seasoned bankers who in the past had offered credit facilities to potential entrepreneurs in Nigeria.

Agripreneurs who were gathered from Borno, Kano, Abuja, Onne, and DR Congo, went through practical sessions on market analysis, risk management in businesses, financial plans, and writing a convincing executive summary.

Agripreneurs were exposed to the realities in the business environment, and taught tactics behind the success of agribusiness enterprises.

With the knowledge gathered, the youth fine-tuned their business plans and presented them to the seasoned bankers for review.

The ENABLE Youth Program will allow Agripreneurs to develop business plans along the agricultural value chain and secure loans at a reasonable interest rate from banks to float their businesses.

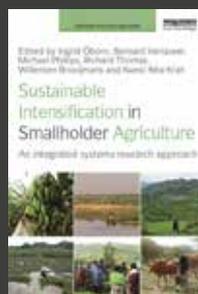
The establishment of the independent agribusiness enterprise is part of the expected outcomes of the IYA model for creating jobs for other unemployed youth.



Agripreneurs get a chance to fine-tune their business plans under the tutelage of seasoned bankers.

Humidtropics publication now out

20% Discount Available with discount code FLR40



February 2017: 384pp
Hb: 9781138668089
£95.00 £76.00*
\$145.00 \$116.00*
eBook: 9781315618791

*Offer cannot be used in conjunction with any other offer or discount and only applies to books purchased directly via our website.

Sustainable Intensification in Smallholder Agriculture

An integrated systems research approach

Edited by Ingrid Öborn, Bernard Vanlauwe, Michael Phillips, Richard Thomas, Willemien Brooijmans and Kwesi Atta-Krah

Earthscan Food and Agriculture series

Sustainable intensification has recently been developed and adopted as a key concept and driver for research and policy in sustainable agriculture. It includes ecological, economic and social dimensions, where food and nutrition security, gender and equity are crucial components. This book describes different aspects of systems research in agriculture in its broadest sense, where the focus is moved from farming systems to livelihoods systems.

Much of the work represents outputs of the three CGIAR Research Programs on Integrated Systems for the Humid Tropics, Aquatic Agricultural Systems and Dryland Systems. The chapters are based around four themes: the conceptual underpinnings of systems research; integrated systems improvements and sustainable intensification in practice; integrating nutrition, gender and social inclusion in research for improved livelihoods; and partnerships and institutional arrangements for innovation, scaling and impact.

While most of the case studies are from countries and agro-ecological zones in Africa, there is also some from Latin America, Southeast Asia and the Pacific.

Ingrid Öborn is Regional Coordinator for Southeast Asia at the World Agroforestry Centre (ICRAF) and Professor of Agricultural Cropping Systems at the Department of Crop Production Ecology, Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden.

Bernard Vanlauwe is Director of the International Institute of Tropical Agriculture (IITA) and leads the Central Africa hub and the Natural Resource Management research area.

Michael Phillips is Director of the Sustainable Aquaculture Program at WorldFish, Penang, Malaysia.

Richard Thomas is Director of the CGIAR Research Program on Drylands Systems at the International Center for Agricultural Research in the Dry Areas (ICARDA), Amman, Jordan.

Willemien Brooijmans is a rural development sociologist and a consultant at Humidtropics, International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria.

Kwesi Atta-Krah is Director of the CGIAR Research Program on Integrated Systems for the Humid Tropics (Humidtropics) at the International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria.

Routledge
Taylor & Francis Group

For more information visit:

www.routledge.com/9781138668089

Got a story to share? Please email it with photos and captions every Wednesday to Katherine Lopez (k.lopez@cgiar.org), Jeffrey T. Oliver (j.oliver@cgiar.org), Catherine Njuguna (c.njuguna@cgiar.org), or Adaobi Umeokoro (a.umeokoro@cgiar.org).