

## Nigerian farmer: 'Give us the chance to use agricultural biotech'



igerian farmer Patience Koku has issued a rallying cry: African farmers must be given the opportunity to use genetically modified (GM) seeds as the sure way to enhance agricultural productivity.

"We have to give people a choice," [Koku](#) said in a Wednesday night speech at the Cornell Club in New York City. "Let the farmers in Nigeria or Africa be empowered to choose whether or not to use the technology."

Koku, speaking at a Cornell Alliance for Science event held to discuss the role that agricultural biotechnology can play in reducing world hunger, expressed concern that farming is more difficult in Africa, compared to the rest of the world. "The tools people have all over the world, like good tractors, planters and sprayer,s don't exist [in much of Africa] and we don't have the kind of seed that will make things better for us. When you have all these challenges with pests, weeds, drought and you have a bad crop, then you know a lot of people will go to bed hungry," she said.

Nigeria is on the verge of commercializing its first two GM crops, pest-resistant Bt cowpea and cotton, in a bid to address its low agricultural productivity, growing population and major food security challenges. In order to surmount these challenges, Koku said, "you need all the tools in the box working with everybody in every part of the world."

The event, which followed the theme "Justice, Evidence, Urgency: GMOs in a Changing World" sought to raise awareness about the work the Cornell Alliance for Science is doing to help farmers in developing nations gain access to the improved seeds that can help them reduce poverty and hunger.

[Modesta Nnedinso Abugu](#), a 2015 Alliance for Science Global Leadership Fellow from Nigeria, told the audience the story of her "own difficult experience growing up on a failed family farm because of challenges with weather and pests. It was expensive to buy the chemicals needed to control maruca (pest) attacks which led to the loss of several crops.... Then mum eventually lost the farm," recalled Abugu, now a graduate student at the University of Florida.

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Attendees listen to speakers at Cornell Club.

Biotechnology can help solve these challenges, Abugu noted, and improved seeds must be made available to farmers. "The recent approval of Bt cowpea in Nigeria will make a great difference in the lives of people... Ag biotech, although not a silver bullet, is a vital tool that can improve our food systems and help millions of people all over the world."

Dr. Sarah Evanega, director of the Cornell Alliance for Science, said there is already evidence agricultural biotechnology is changing the lives of many across the world. The commercialization of Bt brinjal (eggplant) in Bangladesh, for example, “has resulted in reduced spraying of unhealthy insecticides, which made farmers sick and leached into the environment.”

“Now farmers can bring their eggplant to the market and earn higher price because its pesticide-free,” she said. “In 2014, Bt eggplant was grown by 20 farmers. Today, that number is 30,000.... And on the average, their pesticide use is down by 62 percent. Some farmers report as much as 90 percent less pesticide use on their eggplant.”

Evanega said that Bt eggplant is improving the livelihoods of many people in Bangladesh. “Farmers are reporting a six-fold increase in their incomes... and it’s transformative for the entire family. It opens up opportunities like being able to go to school and promises children pathways out of poverty,” she explained.

“Biotech is moving ahead, and we are witnessing its inspiring success stories around the world,” Evanega noted. “But we still have a lot of work ahead. GM crops can help meet the enormous challenges of feeding the 10 billion people who will inhabit this world in 2050. GM climate-resilient crops can prevent hunger during increasing periods of drought and intense heat that withers conventional crops.”

Ian Gazard, the Alliance advisory board member who hosted the event, told the gathering that “what the Alliance is doing can improve the lives of millions of people. I am happy to say that Sarah’s program is a game-changer... Sarah’s Fellows’ program is innovative science communication at its best,” he said.

“Speaking out on biotech, GMOs, in 2019 is a hard thing to do,” Gazard added. “Go to the supermarket and look at all the non-GMO packaging. Sarah has to grapple with so many misconceptions. That’s leadership.”

Evanega said a lot of progress has been made over the last five years since the program was launched. “The Alliance for Science has grown. And with help from Ian and other like-minded people, we are really beginning to thrive,” she said.

The Alliance for Science Fellows program has empowered “tireless champions” who are “working in their own cultural contexts to help people get on the right side of evidence-based decision-making,” Evanega noted.

Koku, who attended an Alliance for Science communications training program specifically for farmers, said the experience gave her the voice to speak out about her difficulties in farming and advocate for solutions. “So I was grappling with all the challenges of farming and then I bumped into the Alliance for Science... it started a fire in me that made me realize that I had a voice and I could use it to make farming easier for people in Nigeria and Africam” she said.

Veteran science communicator Alan Alda, who opened the event, offered his observations on why some people fear scientific innovations, like GM crops. “Most of the people here tonight are on this mission with

the goal of bringing to the world the scientific vision of biotechnology and how it can help farmers in poorer countries and the population of those countries. Science is advancing faster than our ability to communicate what it really is, so it scares some people. Some people don't understand and see the value of it."

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