

Storytelling event spotlights achievements in African agricultural research

A recent engaging storytelling event by African Women in Agricultural Research and Development (Award), saw four accomplished African researchers working on agriculture and food security share their personal journeys in agricultural research, and discuss how they are working to transform farming on the continent.



Source: CIAT via [Wikimedia Commons](#)

The virtually-held event was attended by 123 participants from across Africa, Asia and Europe. Dorothy Mukhebi, Award's acting director, explained that the event sought to spotlight research on African food systems and celebrate some of the outstanding researchers hailing from Burkina Faso, Kenya, Malawi and Senegal.

Since 2008, Award has invested in building a pool of capable, confident, and influential African scientists to lead critical advances and innovations in the agricultural research and development sector.

Award's motivation is to accelerate the careers of Africa's researchers and their capabilities, in order to lead the agricultural research and development agenda in the continent. AWARD's unique career development programs foster mentoring partnerships, build science skills, enhance leadership capacity, and catalyze networks and research collaborations. To date, 641 Fellows from 25 countries have participated in various Fellowships offered by the organization.

Putting farmers at the centre

Describing what stimulated their interest in science and agricultural transformation, the four Award researchers outlined how from a very young age, the desire to make a difference was sparked. "My background inspired me to become an agricultural scientist to find solutions to improve rural family living conditions, especially for smallholder producers like my parents," shared Dr Éveline Compaoré, an innovation systems expert and 2018 Award Fellow from Burkina Faso.

As one of 10 children, Éveline has a deep respect and admiration for her mother, who worked hard to support her family, but struggled with low yields and income. "There was no justice for what she was doing as a rural woman farmer; she couldn't afford to buy what she needed," Éveline continued.

Inspired to help other farmers – particularly women – overcome the kind of challenges her own family faced, Éveline now spends much of her time working alongside local communities. In doing so, she learns about their day-to-day farming practices, and works alongside them to help them enhance their activities and incomes. "When you use an inclusive approach in your research, the community is involved in the process. Now our project is working to involve everyone and give all voices a chance to be heard!" she enthused.

Miriam Karwitha, a plant pathologist from Kenya, also comes from a farming family and is passionate about collaborating with and engaging farmers to develop their own solutions. "Rural women farmers – and men – are very knowledgeable. By working with them, we learn from them, and they are very open to ideas, they embrace change," she stated.

Improving farmer access to certified, uncontaminated, disease-free seeds for enhanced crop yields, and highlighting the importance of achieving this, significantly influenced Miriam's own career path. Growing up on her family's coffee farm, she saw her parents struggle with common diseases such as coffee rust – and a desire to support other farmers in finding disease control solutions motivated her to study science, with a focus on crop diseases, at university.

Today, explained Miriam, part of her work includes supporting smallholders in forming community seed organisations, which enables them to identify which local farmers are producing certified seed. In turn, this allows them to buy affordable, 'safe' seeds at a lower price than from agro-dealers. "When farmers use these technologies, we see the change in their incomes, the change in their yields and we feel very happy because we have touched the lives of these farmers," she shared.

In Kenya's Laikipia County, where Miriam has been training bean farmers to adopt climate-smart varieties and good agronomic practices, she noted that the farmers have recorded a five-fold (and higher) increase in production.

Making ground with soil science

"Whilst studying for my master's degree, I realized that soil plays an important role in feeding people," emphasises Austin Phiri, a soil scientist and 2019 One Planete Laureate Candidate from Malawi. Working with sorghum farmers who struggle with frequent droughts and high temperatures, Austin provides training in techniques such as intercropping and fertilizer and manure application to enhance crop production.

Austin shares an anecdote from one particular farmer and his wife: "Mr Muari previously got six bags of sorghum grain per acre, but is now able to get 12 bags. His wife has also been able to improve her family's nutrition by harvesting the green bean crop that would otherwise go unused. Any surplus is sold at the market to earn additional income to pay for household needs."

Further highlighting the importance of soil to food security was Fatou Ndoye, a microbiologist from Senegal. Reflecting on the problem that first drew her to agriculture, she explained: "In Sub-Saharan Africa, more than 70% of the rural population

is active in agriculture. And yet, it does not feed the population... What happened to our agriculture? It is now known that growing one single crop, with excessive use of chemical fertilizers and pesticides, has completely destroyed our soils, which have become very poor."

Aiming to discover a solution to this issue, Fatou's work focuses on improving the productivity of key crops in Senegal, including groundnuts, cotton and fonio, by using sustainable and safe inputs. "By reducing chemical fertilizers and replacing them with organic fertilizers, the yields of these crops were equal or better. This exciting outcome provided an opportunity to train and sensitize rural farmers on these production techniques and improve their living conditions," she enthused.

Fatou also promotes the production of neglected and underused plant species (such as pigeon pea, which is nutritious and can enhance soil fertility) to a group of rural women farmers to support the food security of their families and local community. In doing so, she has been awed by their courage, determination and willingness to try something different. "These brave women learned how to cultivate this plant in the nursery and then in the field, and were made aware of the prospects for its development."

A hopeful future for agricultural production on the continent

Noting some of her achievements, Fatou smiled: "I have studied plants that have value to contribute to food and income security in Senegal, and develop agriculture in the country. I am very proud of this!"

Éveline ended the event with a poignant message for young women researchers in the audience. "A shout out to young women wanting to get into higher education – I did it despite my background. We can do it and we are the ones who must make the change – others cannot do it for us." She asserted that, whilst balancing family demands with a competitive career in science is hard, it is not impossible – as she has proven!

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