AWARD
African Women in Agricultural Research and Development

Profile

Position	Head, Crop Biotechnology
Institution	Kenya Agricultural and Livestock Research Organization (KALRO)
Country	Kenya
PhD	Biochemistry and Biotechnology, Kenyatta University, 2013
Mentor	Dr. Grace Murilla, Director, Biotechnology Research Institute, KALRO
Research Area	Improvement of food security and poverty reduction through genetic engineering of maize for insect resistance.

Catherine Ongecha Taracha

2015 AWARD Fellow

"I plan to start a mentoring program at the Biotechnology Research Institute that can be taken up by the other institutes in the organization"

Catherine Ongecha Taracha was brought up in Nairobi by her father, who was a strong pillar in her life. "He gave me direction and purpose, providing wise advice on all aspects of life," she says. Although her father was only educated to primary class five, he sent her to all the best schools.

Taracha was hired by the Kenyan Ministry of Agriculture after she completed a BSc in Botany and Zoology at the University of Nairobi. Her MSc research focused on using vegetable oils to control a crop pest, Acanthoselides optectus (Say), or bean weevil, because she was interested in increasing crop production to alleviate poverty for resource-poor farmers. "Farmers plant their crops, then the pests share the crop or destroy it completely," she explains. "My goal was to ensure that farmers are able to grow enough to feed themselves and to sell."

Taracha—an only child—put her career progression on hold for 10 years to raise her children. When she finally enrolled for a PhD in 1996 she chose to delve into genetic engineering, developing insect-resistant transgenic maize. Her research was delayed by the intellectual property issues surrounding working with genes. "My son, who joined university in 2010, nearly finished his undergraduate studies before I finished my degree," she laughs. With help from lecturers from foreign universities, she sorted out the issues and finished her work. It was well worth it: "This was the first time maize with insect resistance was developed in Kenya," she says proudly.

With her children now grown—two have graduated from university and two are undergraduates—Taracha now has more time for her career. She heads the crop biotechnology section at KALRO's Biotechnology Research Institute, and is also acting biosafety officer.

Her current research is aimed at improving the livelihood of farmers, and involves two tissue culture projects and two field evaluations. The aim of the coconut tissue culture project is to develop a method for mass

propagation. Coconut is difficult to propagate so the work involves producing disease-free planting materials. She also deals with tissue culture of the African potato, a medicinal plant used by herbalists for increased immunity to HIV.

Taracha is also field testing transgenic (genetically engineered) virus-resistant cassava. "Cassava mosaic and cassava brown streak viruses have wiped out cassava germplasm in Kenya," she says. "We are therefore working to produce disease-resistant germplasm."

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Kenya has a thriving flower-growing industry, focusing on foreign markets. Taracha is carrying out gene flow studies on a genetically engineered flower called Gypsophila (midnight star) a bouquet filler exported to Europe for auction. The flower is usually white, but environmental changes give the florets a purple/pink hue—and this variety fetches premium prices at auction.

Taracha also lectures part time at Kenyatta University where she teaches Climate change Ecological footprint and Biodiversity to MSc students.

The leadership skills she will acquire from the AWARD Fellowship will enable her to better perform her duties at KALRO, and eventually she strives to be a vice chancellor of one of the universities in Kenya. She expects to serve as a mentor to younger women colleagues and MSc students. "I plan to start a mentoring program at the Biotechnology Research Institute that can be taken up by the other institutes in the organization," Taracha states.

Her goal is to empower resource-poor farmers with effective agricultural practices. "The day I develop a transgenic crop that is adopted by resource-poor farmers will be the height of my career!"

AWARD is a career-development program that equips top women agricultural scientists across sub-Saharan Africa to accelerate agricultural gains by strengthening their research and leadership skills through tailored fellowships. AWARD is a catalyst for innovations with high potential to contribute to the prosperity and well-being of African smallholder farmers, most of whom are women.

AWARD is generously supported by the Bill & Melinda Gates Foundation, the United States Agency for International Development and the Alliance for a Green Revolution in Africa. For more information, visit www.awardfellowships.org