



2014 AWARD Fellow
Chinelo Vanessa Ezeocha

Position	Senior Research Officer
Institution	National Root Crops Research Institute
Country	Nigeria
MSc	Food Processing and Preservation, Michael Okpara University of Agriculture—Umudike (MOUAI), 2006
Mentor	Professor Philippa Ojimekwe, Food Science and Technology, MOUAI
Research Area	Development of value-added products and improved storage methods for <i>Dioscorea dumetorum</i> (yams) to improve food security and livelihoods of farmers.

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Chinelo Vanessa Ezeocha and her siblings learned about growing food on their mother’s large farm in southeastern Nigeria. Early on, she developed a curiosity for cooking and experimenting with ways to transform foods. “By the time I was ready for university, I knew I wanted to study courses related to food or nutrition,” she says.

Ezeocha completed a BSc in Food Science and Technology at MOUAI and was then assigned to a crops research institute as part of her compulsory national service. There, she learned about food processing and preservation, and became interested in root and tuber crops.

“Yam, cassava, sweet potato, and cocoyam are major food staples in Nigeria, grown primarily by women,” says Ezeocha. “But a large percentage of crops are lost after harvest due to spoilage and storage problems.” Her aim is to help farmers develop ways to process these crops, preserve their benefits, and increase their value. This has been the primary focus of her work throughout her MSc and PhD research.

The range of processed products that can be made from root and tuber crops is extensive. “We have come up with cocoyam chips, drinks from sweet potato, cassava starch salad dressing, and confectionery flour,” notes Ezeocha, citing some examples. She also has ongoing work to analyze possible pharmaceutical uses of these crops.

Currently, Ezeocha is especially focused on yams (*Dioscorea dumetorum*) and on improving postharvest storage and product development with farmers in southeastern Nigeria. The crop is high yielding and a good source of carbohydrates, minerals, and proteins (relative to commonly consumed yam varieties), but it begins to harden 24 hours after harvest.

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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.

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She is investigating conventional and non-conventional storage methods and materials, along with processing solutions that could extend its uses and shelf life.

Ezeocha's work is very participatory and greatly enriched by what she learns in the field. "I discover innovative methods that farmers are using to store or process crops, like hanging yams upside down, or alternative methods for producing *garri* from cassava, which we take back and test in the lab to better understand the science behind them," she says.

Ezeocha also conducts training sessions with women and youth on processing technologies, such as manual chipping machines. She encourages them to be creative and adapt what they have to produce value-added products that can generate employment and income. She also recommends that they form cooperatives, which may enable them to achieve more than they can do alone, such as opening a shop or accessing market outlets.

Reaching women farmers can be a challenge, however. "When we announce trainings, we frequently get only male participants," says Ezeocha. "Often, men will not let their wives attend, in part because they think there will be money involved." Her solution is to conduct trainings specifically for women, generally through church and village-based women's groups.

Some of Ezeocha's greatest satisfaction derives from women's responses to the trainings. "Sometimes, they will call me afterwards to thank me for helping them find a source of livelihood," she notes. "They also come and give testimonials during our in-house reviews."

Following her PhD, Ezeocha aims to broaden her experience through a post-doctoral fellowship in an institution abroad. Being an AWARD Fellow is helping her to develop the networks and skill sets she needs to achieve that goal, along with her longer-term vision of becoming a leading researcher and influential decision maker.

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