



Ngozi Catherine
Nwokwu
2015 AWARD Fellow

Position	Agricultural Officer
Institution	Federal Teaching Hospital, Abakaliki, Ebonyi State
Country	Nigeria
BSc	Crop Science, Ebonyi State University, Abakaliki, 2010
Mentor	Professor Happiness Oselebe, Director, Biotechnology Research and Development Centre, Crop Production and Landscape Management, Ebonyi State University, Abakaliki
Research Area	Use of molecular marker systems to develop high-yielding and drought-tolerant rice varieties to ensure bumper harvests for smallholder farmers, even in the face of climate change.

“It is my expectation that the AWARD courses will equip me with the necessary skills and increase my visibility so I can connect with people doing similar research”

Ngozi Catherine Nwokwu was raised with her six siblings in southeastern Nigeria by parents who were smallholder farmers. The challenges her family faced growing crops inspired her to study crop science at university. She raised the money to pay her university fees by growing rice, using the experience she gained from working on the family farm.

Nwokwu’s undergraduate research involved screening rice genotypes from 30 varieties for drought tolerance, as part of an AGRA grant project. She was motivated to pursue rice research because Nigeria is the highest producer of the crop in West Africa. The country is ranked third in Africa and 17th in the world. Nigeria produces an average of 4.5 million tons of paddy rice and 2 million tons of milled rice a year. Ebonyi State produces the highest yields of the most preferred variety—Abakaliki rice—in the country. “But little or no research has been conducted on these rice varieties,” she notes. “The smallholders struggle to produce the crop and are unable to meet the growing demand, and this is exacerbated by the effects of climate change, such as drought.”

Nwokwu was hired as a research assistant at Ebonyi State University and continued to work on rice for her MSc in Genetics and Plant Breeding, which she completed in early 2015. For her master’s work, she evaluated 61 rice genotypes for genetic diversity using Agronomical and morphological traits. Genetic diversity is important in plant breeding programs because crosses from varieties that have diverse origins generally display greater hybrid vigor. This research discovered varieties of desirable traits which could be introduced

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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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directly to farmers to help meet demand for the crop and to serve as donors in future breeding programs “This will eventually lead to the development of an improved variety of rice that is drought tolerant, high yielding, and acceptable to consumers,” she states.

Although Nwoku’s current job as an agricultural officer is administrative, during her spare time she works on women and youth empowerment projects with non-governmental organizations. She has designed a project to help rural farmers use farm waste to grow mushrooms, and has conducted advocacy visits to community leaders to get “buy in” for the project. She is involved in conducting a baseline survey while waiting for funding to embark on the larger project.

Nwoku has plans to begin PhD research later this year, and will continue to work on developing an improved rice variety. She hopes to return to the university as a lecturer once she has completed her studies. In fact, to reach her goal of becoming a university professor, she realizes the need to improve her publishing and research skills. She expects the AWARD courses to equip her with the necessary skills and to increase her visibility so she can connect with people doing similar research.

Nwoku says juggling family responsibilities and a career has been challenging. She had to postpone everything, including taking up her AWARD Fellowship, when she gave birth to twins just before the fellowship was due to start.

Nwoku looks forward to emulating her mentor by inspiring colleagues to work hard and mentor others. She has already made a mark with her research and hopes to build on this as she progresses in her career. “Now, when people talk about rice at the university, my name is mentioned,” she says proudly. “This makes me feel that people appreciate what I do and that I am doing well.”