AWARD
African Women in Agricultural Research and Development

Profile

Frida Albinusi Nyamete
2015 AWARD Fellow

Position	Assistant Lecturer
Institution	Sokoine University of Agriculture (SUA)
Country	Tanzania
MSc	Food Science, Michigan State University, 2013
Mentor	Jovin Mugula, Professor, Food Science and Technology, SUA
Research Area	Development of cost-effective ways of reducing malnutrition and improving food safety in Tanzania through food science and nutrition research.

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Frida Albinusi Nyamete was separated from her siblings when she was seven years old after their father died. "All five of us children had to live with different relatives, but we met once a month to keep in touch," she says. This experience prompted her to work hard at school, and she did well enough to be accepted at university.

Nyamete enrolled in a BSc in Food Science and Technology at SUA. Her final year project was on assessing the nutritional value of fresh soybean for use as a vegetable. The aim of her project was to try to reduce malnutrition by encouraging people to eat soybeans—known as "meatless meat"—a source of protein that is less expensive than meat. "Tanzanians traditionally use dry soy products," she notes. "However, the boiled dry bean is bitter, so I was trying to encourage people to cook it fresh, especially because the fresh product has a higher nutritional value."

Even as an undergraduate, Nyamete "loved business" and felt that one day she would own a food-processing company. She therefore took a postgraduate diploma in management in the U.K. after completing her BSc.

Nyamete was hired as a tutor at SUA when she returned to Tanzania. After six months she won a competitive United States Agency for International Development (USAID) scholarship to pursue master's studies at Michigan State University. The scholarship was under the Innovative Agricultural Research Initiative (iAGRI) project based at SUA.

Her master's research focused on using probiotic bacteria (consumable bacteria with health benefits) to ferment infant porridge to reduce aflatoxin, a poison produced by moldy fungus Aspergillus flavus that is thought to cause liver cancer, and fumonisin, which is linked to stunting. In Tanzania, 40 percent of children are stunted and one of the reasons

for this a problem with food safety. Maize is the staple food even for infants and is susceptible to these toxins. "I found that some of the bacteria strains I studied reduced the mycotoxins by up to 60 percent," Nyamete says. When she completed the study, iAGRI encouraged her to carry out the second phase of the project: testing the use of the fermented food as a weaning food. She successfully conducted the trials and two of the four products tested were acceptable around Morogoro, where SUA is situated.

Nyamete's current project involves disseminating the fermented product to the wider community. iAGRI aims to link university research to industry to ensure that research products reach the community. "I identified a food company that is willing to produce the fermented maize flour on a large scale," she says. She is now developing malted and fermented flour for the company to mass produce and sell. "I am also developing an instant flour that doesn't need cooking, using a process called extrusion that sterilizes the flour," she says. "You just add water to the flour and stir."

Nyamete currently teaches undergraduates in the Department of Food Science and Technology and was recently admitted to a PhD program at Ohio State University, also sponsored by USAID. She expects to become more competent through acquiring skills and knowledge from the AWARD courses so she can write award-winning grant proposals. This will help her achieve her goal of one day owning a food-processing business that produces safe and wholesome food. She also expects to gain confidence, which will make her more assertive and help in her career progression. "Women are usually quiet during departmental meetings, but now my voice will be heard. I am a brand new Frida," she exclaims.

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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.

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