



2013 AWARD Fellow
Catherine Kadogo Kitonde

Position	Graduate Assistant
Institution	University of Nairobi
Country	Kenya
MSc	Microbiology, University of Nairobi, 2012
Mentor	Professor Lucy Irungu, Deputy Vice Chancellor Research, Production and Extension, University of Nairobi

Research area: Phytochemical and anti-fungal evaluation of three selected *Vernonia* species in the management of *Fusarium* pathogens affecting wheat production in Kenya.

Catherine Kadogo Kitonde, orphaned at the age of two, credits the kindness of people at the Kajiado Children’s Home where she was raised, about 75 km south of Nairobi, as supporting her in every way, especially with her education. She is the first university graduate from the home, which cares for children from the Maasai community.

“When I finished high school, donors from the U.S. and U.K. sent me to university and paid all my fees,” she recalls. Always an excellent student, she completed a bachelor’s degree in Microbiology and Biotechnology before immediately beginning a master’s degree on a full scholarship, from the University of Nairobi. “I always liked very challenging subjects, and I like new discoveries, which was why I was drawn to microbiology and biotech,” she says. “Also, I have a passion to help people who are poor like I used to be.”

Today, Kitonde, a graduate assistant in Microbiology at the University of Nairobi’s School of Biological Sciences and a PhD student in Botany specializing in Microbiology, is focused on improving the livelihoods of smallholder farmers, especially Maasai women in north Narok, a constituency in Kenya. She would like to train and encourage them to use affordable and environmentally friendly bio-pesticides in the management of *Fusarium* fungal pathogens affecting wheat production.

“Farmers are using expensive chemical pesticides on their crops, but I have suggested an alternative form of natural bio-control,” she explains. “Rather than using products that are a negative burden on the environment, on humans, and on animals, it is possible to use less expensive, natural means of controlling crop diseases and pests.” And she believes that using traditional pesticidal plants as an alternative will not only result in better crops, but will also enhance food security and safety in the region, thereby reducing hunger and poverty among rural women and smallholder farmers, who depend on the produce as alternative source of income.

In wheat, for example, *Fusarium* pathogens cause “head blight”—preventing the wheat from producing grains. “They also produce mycotoxins, causing infertility in animals, and are poisonous and even

cancerous,” Kitonde explains. “If more natural bio-pesticides, which are less expensive, are applied in the right amounts, I believe pathogens can be controlled, and therefore no longer be present on wheat. Once we reduce the incidence, we can help smallholder farmers in Kenya to increase their wheat productivity and maximize their income.”

Traditionally, Maasai women are not allowed to own land or work in the fields. “Women should feel that they are part and parcel of agriculture,” she asserts. “I want to see them getting involved so they can begin to contribute to their family’s food security and incomes.”

She is also trying to educate Maasai men about the wisdom of welcoming women into agricultural work. “When I began my research, I went to the men first, of course, with a letter of introduction from my university,” she explains. She also hopes to advise and assist the community with other challenges they are facing, which she discovered via questionnaires and interviews, such as the lack of a banking system and the shortage of storage facilities. Concerned about early marriage among young Maasai girls, Kitonde is determined to be a role model in this region.

Kitonde is enthusiastic about the opportunities provided by the AWARD Fellowship. “As an AWARD Fellow, I hope to gain confidence and competence,” she says. She is particularly looking forward to enhancing her scientific, leadership, and communications skills. “I now have a mentor to give me direction and guidance, and also to follow up to ensure that I take advantage of AWARD activities that will promote my career development.” She hopes to collaborate with fellow researchers from different disciplines, as well as with policy makers, to share ideas, experience, and expand her research scope for the benefit of society.

Encouraged by AWARD Alumna Lillian Wambua, Kitonde says she is eager to increase her visibility and to mentor younger women as an AWARD Fellow. “Despite the fact that I’m an orphan, I’m achieving much through hard work,” she concludes. “Being focused helps a lot. I know I’m a fighter and I don’t give up. Once you are given the opportunity, use it—don’t waste it.”

Kitonde is one of a growing number of African women agricultural scientists who have won an AWARD Fellowship. 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, the Alliance for a Green Revolution in Africa, and Agropolis Fondation. For more information, visit www.awardfellowships.org