



2011 AWARD Fellow
Martha Mueni Sila

Position	Principal agricultural officer
Institution	Ministry of Agriculture
Country	Kenya
PhD	Agricultural entomology/Pest control South China Agricultural University, 2010
Mentor	Margaret Jesang Hutchinson, Senior lecturer Department of Plant Science and Crop Protection University of Nairobi

Research area: Formulation, implementation, and monitoring of crop legislations, regulations, and policies to ensure agricultural productivity and improve food security.

Soft-spoken entomologist Martha Mueni Sila has a clear career goal—“to be a force to be reckoned with in terms of bio-pest control”—and she is well on her way. “I want to put my efforts into environmentally friendly pest control in order to protect the health of our families,” she says.

Sila has travelled broadly in pursuit of that goal. The first time she ever boarded a plane, she was heading to Guangzhou, China for three years on a PhD scholarship from China Scholarship Council at South China Agricultural University. Her studies focused on the Asian corn borer (*Ostrinia furnacalis*), a polyphagous insect pest found on more than 70 plant species, which affects crops and vegetables especially in Asia. “My work looked at the role of chemical cues that affect its oviposition selection behavior, especially olfactory and contact response to corn leaves and the influence of extracts of some non-host plants.”

Initially, Sila found the cultural adjustment challenging. “Then I said to myself, ‘I’m not going anywhere so I’d better adapt,’” she says, laughing. “I learned some Mandarin and quickly made friends, but there wasn’t time for much socializing because the work was so rigorous. We were often in the lab until 1 or 2 a.m.,” she recalls. “I learned so much. The Chinese have a lot of bio-pesticides that are environmentally friendly, and they are very advanced in this area.”

In Kenya, as the head of Roots and Tubers Crops Branch within the Ministry of Agriculture, Sila is not currently conducting research, but she hopes to get back to the lab soon. “I want to look at how pests are attracted to the chemicals in leaves, and specifically what effects plant extracts have on corn borers. However, for the moment, I’m passionate about making a difference where I am.”

At the ministry, Sila is involved in building the capacity of field staff and farmers by organizing training and crop demonstrations for members of farmers’ groups, young farmers’ clubs, community and faith-based organizations—most of whom are women. She was the first officer to head the new pulses branch that was created to increase the production of pulses. At that time, her goal was to ensure that farmers increase the average production of beans from 2.2 bags per acre to the recommended 7 to 10 bags per acre. “Very few

farmers use quality legume seed, nor do they follow the recommended agronomic practices, taking into consideration our declining soil fertility, and this results in low production,” she explains.

She is also trying to promote drought and pest-resistant crop diversity. “Many Kenyan farmers believe that if we have maize, we have food, but when the maize fails, there’s no food,” she notes. “I want to promote other crops, such as cassava, which is typically considered a poor man’s crop, to be used not only as food, but also as an industrial crop.”

Sila is confident that attitudes can be changed. “I want to push cassava to the commercial level as they’ve done in Brazil and Thailand, introducing byproducts as well such as starch and animal feed. As a country, if we are to go from subsistence to commercial farming, then we need to help farmers see farming as a business.”

Sila is involved in training farmers’ groups in cassava commercial villages where producers grow and process their crops together at the village level, using a processing machine provided by the government and stakeholders. She believes that cassava has great potential for use as a raw material for the manufacture of animal feeds, starch, glue, food (composite flours, chips, crisps, confectionery), pharmaceutical products, bio-fuels, and for the textile industry. “This can only be achieved if farmers increase cassava production,” she says. “We are tackling poverty by lifting farmers to the next level of production.” She is pleased to see more Kenyans consuming cassava and other high-fiber tubers such as sweet potato, thanks to public-awareness campaigns about their value.

As a woman scientist, Sila has struggled with choosing between family and career in the past. “My son was 12 years old when I left for China,” she recalls. “I almost declined the scholarship, but my family encouraged me to go. In Africa, few girls go into science because of the notion that it is a male-dominated profession, but I’m glad to see this changing. As women, we need to believe in ourselves, that we can make it and achieve what we set our minds to.”

Sila has accomplished much in her career, but this entomologist has ambitious future plans, which she believes AWARD can help her accomplish. “I need to improve my leadership, mentoring, and staff supervision skills so I can be a more powerful, effective leader who encourages other women and brings them along,” she says. She has influenced other female extension officers in the ministry to pursue further studies to build their careers. Since she returned from China, five colleagues have applied to do their doctorates.

In addition to building her leadership capacity, Sila plans to compete for an AWARD-sponsored research attachment at a renowned institution, preferably in South Africa, where she can hone her technical skills, equipping her to serve farmers even more effectively.

“I know that I’ve had an impact when farmers increase their production, and as a result, improve their livelihoods. Seeing such change is very satisfying,” Sila concludes.

Sila is one of a growing number of African women agricultural scientists who have won an AWARD Fellowship. AWARD is a professional development program that strengthens the research and leadership skills of African women in agricultural science, empowering them to contribute more effectively to poverty alleviation and food security in sub-Saharan Africa. AWARD is generously supported by the Bill & Melinda Gates Foundation and the United States Agency for International Development. For more information, visit www.awardfellowships.org
