AWARD
African Women in Agricultural Research and Development

Profile

Naomi Ketter Chelimo
2015 AWARD Fellow

Position	Teaching Assistant
Institution	Jomo Kenyatta University of Agriculture and Technology (JKUAT)
Country	Kenya
PhD	Ornamental Science and Landscaping, 2011
Mentor	Professor Kamau Ngamau, Principal, Academic Affairs, Cooperative University College, JKUAT
Research Area	Use of cocopeat soil-less media to enable collection of drain water to grow commercial roses, thus saving water, reducing fertilizer application, and conserving the environment around Lake Naivasha, Kenya.

Naomi Ketter Chelimo enjoyed her undergraduate studies so much that she felt she should further her knowledge in horticulture, enrolling for an MSc at JKUAT soon after she graduated. "I like the subject because it is very practical and I get to use all of the skills I have learned," she says, adding that this makes her work easy.

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Chelimo, a Teaching Assistant at JKUAT, has come a long way. She is the seventh of nine children, whose parents are subsistence farmers who worked hard to provide for their children. She received financial aid for much of her education because she performed well at each stage, culminating in a PhD scholarship to study in Germany. She is now educating and facilitating training for her siblings, and is helping her parents intensify their farming activities using available technologies.

Her current research, for her master's degree, is on managing water use and re-using the drainage water in flower farms. This work is important as the farms use a lot of water, which in turn degrades the environment, a major issue in this country. "Kenya is a water scarce country because we have not achieved the global benchmark of water use per person," Chelimo explains. "The country is at 647 cubic meters per person per year, as opposed to 1,000 cubic meters."

Chelimo is using cocopeat media rather than soil to manage soil-borne diseases, and is reusing the drainage water to introduce new technologies that increase production and flower quality. The study is using water from boreholes, which is cleaned through reverse osmosis. The results show that production cost in terms of fertilizers

and water reduced by about 20 percent and 56 percent respectively. The production numbers—calculated as total number of stems—increased by 65 percent.

"I measured the quality of the flowers by examining the physiological aspects of the leaves in terms of chlorophyll content, which is related to nutrition," says Chelimo. The chlorophyll content of plants grown in the cocopeat system was higher than that of plants in the soil system, indicating better quality flowers.

Chelimo is waiting to defend her MSc thesis at JKUAT so she can proceed to the University of Hanover in Germany for her PhD with a scholarship under the Horticultural Innovations and Learning for Improved Nutrition and Livelihood in East Africa (HORTINLEA) program. She hopes to start the PhD later this year and will be working under a sub-project on water use efficiency.

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Chelimo's interest in using technology to improve the livelihood of smallholders led her to work with a community-based organization that was encouraging farmers in a village to grow vegetables for sale. Although their first harvest was destroyed by hail, she plans to continue with this effort to help these farmers find reliable markets. This work will help her achieve her aim of moving into research in food crops and disseminating the results into action at the village level. This type of research will move her a step closer to her career goal of being a policy maker in agriculture who will steer the country toward production with policy backing, so that communities can use their land to the maximum. "My home area has plenty of rain, but people go to sleep hungry because policy has no impact there," she states.

Chelimo expects the AWARD Fellowship to help her build her confidence and develop fundraising and leadership skills. She believes these skills will help her in her career progression. "The increased confidence and enhanced skills from this fellowship will help me fully exploit my potential," she says.

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