



2014 AWARD Fellow
Hellen Namaweje

Position	PhD Candidate
Institution	Nelson Mandela African Institute of Science and Technology (NMAIST)
Country	Uganda
MSc	Mathematical Modeling University of Dar es Salaam, 2011
Mentor	Professor Joram Buza, Senior Lecturer, NMAIST
Research Area	Determination of rotavirus risk factors in zero-grazed livestock near peri-urban households by using disease-modeling techniques to formulate disease-control strategies and influence policy.



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Hellen Namaweje developed an interest in mathematics in secondary school, eventually becoming the only girl in her second-year university mathematics class, since the other 17 dropped out after first year.

“Mathematics is theoretical and I want to make it practical,” says Namaweje. “My parents sold farm produce to pay my school fees, so I chose to apply mathematics to agriculture at university.” She is grateful to a lecturer who introduced her to this field. “She showed me that you can put mathematics to use in different areas of life, other than just working with symbols.”

Namaweje is currently applying mathematics to agriculture by modeling infectious livestock diseases.

In her research, she is trying to find the most cost-effective combination of control measures for rotavirus in zero-grazing systems in peri-urban Kampala, Uganda. This disease affects both animals and humans, specifically children up to age 5. Namaweje is working on the interaction between cows and pigs and humans. “Most small-scale zero-grazing units are managed by women, and sometimes the children help out,” she says. “Animal shelters are located close to the homesteads, so it is easy for children to contract rotavirus from eating food contaminated with the virus from infected animals.”

Rotavirus reduces milk production in cattle and causes livestock to waste away. It also removes mothers from farm work as they tend to sick children. The results of Namaweje’s research are being used to raise awareness of how the disease is spread and how it can be prevented. “Many strategies have been developed to

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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

control rotavirus, but they have not been effective,” she explains. “Finding the right combination of control methods will increase milk production and improve household livelihoods, as farmers will be able to sell livestock for income.”

Currently enrolled in a doctoral program at NMAIST, Namaweje recently won a Robert S. McNamara Fellowship to study at the University of Pennsylvania. She expects to finish her PhD and work toward becoming an international researcher who can influence policies in science and technology that will have a positive impact on farming communities.

In her free time, Namaweje volunteers for a youth development project in Kawempe, Uganda, where she was raised. The youth make bricks from agricultural waste and sell them to smallholders for cooking fuel in order to conserve forests and reduce desertification. She greatly enjoys interacting with students as they share their experiences and aspirations, encouraging them to be committed to their dreams.

Realizing her dreams has not come without its challenges. Namaweje admits that it can be daunting to be a woman working in a male-dominated field. “People tell me I am no longer a woman, but a man,” she says. “Although I sometimes feel offended, I have seen women in my field go up the career ladder, so I continue to pursue my goal.”

Namaweje believes that the AWARD Fellowship will help her to improve her leadership and communication skills, and increase her confidence and self-esteem. She expects that the opportunity to network through AWARD will also enable her to become known internationally, and she hopes to mentor fellow women scientists, building on the skills she gains through the fellowship. “I want to encourage women to join the field of mathematics and see how it can be applied in different areas of agriculture.”