



2013 AWARD Fellow
Nessie Dietrich Luambano

Position	Principal Agricultural Research Officer II
Institution	Ministry of Agriculture, Food and Cooperatives Sugarcane Research Institute, Kibaha
Country	Tanzania
PhD	Plant Nematology, University of Nairobi, 2010
Mentor	Dr. Danny Coyne, Soil Health Scientist International Institute of Tropical Agriculture, Tanzania

Research area: Testing pest and crop management strategies with a focus on nematodes for safe and profitable vegetable production.

Nessie Dietrich Luambano was drawn to agriculture from a young age, having grown up in a village in southern Tanzania, where she helped her mother, a capable small-scale farmer. “In secondary school, I chose to study agriculture, and I was proud that I could help my mother buy the right medicine for our chickens when they were sick,” she recalls.

While pursuing her first master’s degree in Soil Science and Management at Sokoine University of Agriculture in Tanzania, and later during her second MSc studies in Tropical Agricultural Development at Reading University in the U.K., she became particularly interested in nematodes and later obtained a PhD in Plant Nematology. AWARD Alumna Professor Waceke Wanjohi, a renowned nematologist and Dean of Kenyatta University’s School of Agriculture and Enterprise Development, was one of her PhD supervisors, and became an inspiring role model.

Luambano is among the few plant nematologists in her country, yet these microscopic wormlike pests are a considerable problem in Tanzania, particularly for vegetable crops. She finds that farmers frustrated by the problem often apply insecticides to their crops to no avail, not understanding that nematodes reside in the soil.

Luambano’s goal is to enable farmers to grow clean seedlings in clean soil in order to ensure safe and profitable vegetable production. She will demonstrate to women’s groups, who run plant nurseries, how to sterilize soil before planting seeds, by heating the soil in a metal drum over a fire. “Sometimes I use a bucket if nothing else is available to show a simple way of protecting the plants from nematode infection,” explains Luambano. “This can help to reduce early infection not only by nematodes but also by other soil born pests affecting tomato and capsicum seedlings.”

Working with the World Vegetable Center, she is screening varieties of tomatoes and capsicum by inoculating root-knot nematodes on seedlings so she knows which one are tolerant and what best to recommend to farmers. Sometimes the women ask her questions about how to control root-knot nematodes—or *minyoo*

fundo, as they are known. They realize that nematode infection affects production and water availability for their crops.

Luambano deeply enjoys the practical aspects of her research and plans to focus on nematodes throughout her career. She wants to become a renowned nematology expert in Tanzania, using her AWARD Fellowship to further her knowledge and skills.

“I carefully chose my mentor, a well-known nematologist from an international research center, and I look forward to benefiting from his vast knowledge and network,” says Luambano. She would like to learn molecular tools to characterize nematodes, to fundraise for research projects, and to improve her leadership skills.

Completing her PhD in just three years, Luambano attributes some of her focus to her supportive supervisors, especially Professor Wanjohi. She wants to pass along that same support to other scientists. “I love to see people acquire knowledge and skills,” she says. “I am proud of the two excellent, newly employed staff members—a scientist and a technician—who I trained in basic skills in the nematology lab that I started last year in our institute.”

Luambano 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.

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