



2014 AWARD Fellow
Jelly Chang'a

Position	Veterinary Research Officer
Institution	Tanzania Veterinary Laboratory Agency
Country	Tanzania
PhD	Veterinary Medicine and Science, Norwegian School of Veterinary Science, Norway
Mentor	Professor Sebastian Chenyambuga, Animal Science and Production, Sokoine University of Agriculture, Tanzania
Research Area	Training of farmers on cost-effective approaches to calf management to increase productivity, hence improving smallholder livelihoods.

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Jelly Chang'a chose to study veterinary medicine on the advice of a friend, who suggested it was a promising field with good job prospects. As one of only four female students in a class of 34, she proved to be a determined trailblazer.

"Veterinary science requires a strong commitment; the initial bachelor's degree training takes five years and is quite demanding," says Chang'a. "Many women are reluctant to enter the field, but I encourage them to try, because it is very interesting—and very rewarding."

Chang'a obtained her bachelor of veterinary medicine degree at Sokoine University of Agriculture, followed by a master's degree there, specializing in parasitology. She studied the effectiveness of different medications on controlling parasites called helminths. They feed on their hosts, depleting the animal's nutrition, growth, and production. Chang'a's work focused on sheep and goats and on an array of anthelmintic medications, identifying parasite resistance.

"It was then that I really began to enjoy research," says Chang'a. For her PhD, she studied at the Norwegian School of Veterinary Science, where she increased her exposure to new models, methods, and research expertise.

Chang'a's research involved fieldwork in Tanzania with smallholder dairy farmers—most of them women. "Following independence, dairy production in Tanzania was large-scale and nationalized, and there was no culture of smallholder dairy farming," she explains. "But the

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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.

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industry collapsed, reducing food and nutrition security." In 1983, a new government livestock policy, supported by bilateral donors and NGOs, began to supply livestock and build market chains for small-scale dairy production to empower and improve the lives of smallholders, including women.

Chang'a gathered information from the dairy farmers on all aspects of their calf-management practices. This included data on calves born over an 18-month period, tracking their monthly growth, health, and development. She found that because the calves did not generate income for the farmers for many months, they were neglected, resulting in poor development and high mortality rates. "The calves' growth rate was low, and even declining as they aged," says Chang'a.

Chang'a found that the main culprit was inadequate feeding. "The calves need milk in their first weeks, then healthy supplemental feed and forage," she notes. "But the farmers are eager to sell the milk, so they move the calves to forage too quickly, and without taking into account its quality."

Although her PhD research centered on identifying the problem, Chang'a is interested in developing solutions through further research and outreach. "The use of farm-grown legume forages and feed storage could meet the calves' nutritional needs at a low cost," she says.

As an AWARD Fellow, Chang'a expects to sharpen her proposal-writing skills and obtain funding to translate her research findings into practice. She also looks forward to learning from other scientists and expanding her network of contacts. With AWARD's mentoring and leadership training, she hopes to achieve her long-term goal of moving into a management position as an organizational director or chief executive.

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