



2015 AWARD Fellow  
**Belinda Kanninga**

<b>Position</b>	Agricultural Research Officer
<b>Institution</b>	Zambia Agriculture Research Institute (ZARI)
<b>Country</b>	Zambia
<b>MSc</b>	Agronomy (Soil Science), University of Zambia, 2014
<b>Mentor</b>	Lydia Chabala, Lecturer, Soil Science, University of Zambia
<b>Research Area</b>	Development of appropriate soil fertility technologies to improve agricultural production and income for small-scale farmers.



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Belinda Kanninga began studying Agronomy at the University of Zambia even though she had not taken any related courses during secondary school. But she soon discovered how much she enjoyed taking courses related to soil science, and has hit her stride as a research officer at ZARI. “From the beginning, I was excited about soil science,” she says. “I quickly realized just how much the study of soil involves—there is chemistry, physics, microbiology—these are all part of soil science.”

Kanninga won a scholarship for a PhD program between the University of Zambia and University of Nottingham and expects to finish in 2019. Her current line of research includes promoting the concept of conservation agriculture as a technology to improve soil and enhance yields. “Conservation agriculture refers to soil-management practices that minimize the disruption of the soil’s structure, composition, and natural biodiversity,” she explains. “Not only does it have the potential to improve crop yields, but it will also improve the long-term environmental and financial sustainability of farming.”

Kanninga says poor soil is limiting agricultural advances in Zambia, so she is encouraging small-scale farmers to adopt conservation agricultural practices, which include the use of natural herbicides. “With conservation agriculture, we are bound to see improvements in the soil, which in turn will increase yields and incomes,” she states. Although conservation agricultural has been in Zambia for some time, small-scale farmers are reluctant to use it. “Conservation agriculture includes three principals: minimum cultivation, proper soil cover, and crop rotation,” she continues. “But most farmers are planting only maize, which means that the rotation aspect is not being complied with.” Another problem is failure by farmers to maintain

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soil cover because fields are open to grazing animals during off-planting seasons. “I realize that these constraints and habits are not deliberate—they are part of the culture,” she continues. “What I’m trying to resolve is how we can adapt conservation agriculture and make it work in the Zambian context. We need to fine-tune it—and this is the focus of my current research.”

Kaninga aspires to be in a position of influence that will create change in her country’s agricultural practices. “I hope to be among the group of scientists who come up with real solutions to issues experienced by farmers in my country.”

Although not working directly with smallholders at this point, Kaninga is committed to doing meaningful, demand-driven research that will improve the livelihoods of farming families. “Abstract research doesn’t benefit anyone,” she asserts. She is confident that she will gain valuable skills as an AWARD Fellow. “I have already been challenged to work hard and be ambitious. Even the first week of training I received has enhanced my communications skills, and I am particularly looking forward to learning how to write winning research proposals. As a researcher in a third-world country, I am constrained to find funding, and I think AWARD will really help me in this regard.”

Kaninga is certain that her renewed sense of motivation will trickle down to her peers at work. “My institution is bound to benefit due to the confidence I gain as an AWARD Fellow.”

As a mother of two young daughters, and expecting her third child, Kaninga has dealt with the need to juggle the responsibilities that come with a young family, and has had to take periods of leave as her family grows. In fact, she had to forego a fully funded fellowship to the British Geological Survey, United Kingdom, which was scheduled to start in 2015. “This would have been good for my career since it was directly linked to my area of research, but the timing wasn’t right,” she sighs.

Eventually, Kaninga hopes to begin a PhD addressing micronutrient deficiencies in tropical soils. For now, she is hopeful that her research work will help to move people’s lives from extreme poverty to a place where they have enough food to eat and they can even make money with their farming.