



2013 AWARD Fellow  
**Martina Mariki**

<b>Position</b>	Student
<b>Institution</b>	Nelson Mandela African Institute of Science and Technology (NM-AIST), Tanzania
<b>Country</b>	Tanzania
<b>BSc</b>	Information Systems, University of Dodoma, Tanzania, 2010
<b>Mentor</b>	Professor Burton Mwamila, Vice Chancellor, NM-AIST

*Research area: Designing a mobile phone-based enterprise resource planning system for smallholder poultry farmers that will be used for information transfer, data collection, and daily communication.*

Martina Mariki is a young woman of vision. The daughter of an agricultural scientist and a business woman, she is developing a mobile-phone based record keeping system to enhance the performance of poultry farmers, most of whom are women.

“I’ve always wanted to do something that connected IT and farming,” says Mariki, who is pursuing a master’s degree in Information Technology at NM-AIST. “I like talking to farmers and am enjoying this work immensely.”

Farmers need to manage their enterprises by tracking information about their production and running costs, says Mariki. “Currently, most farmers don’t keep any kind of data file, but they need information on production and sales in order to analyze their businesses if they want to get bank loans, for instance. However, they don’t have modern tools to facilitate information management or access to computer systems, but almost everyone has a mobile phone. Considering the availability of cellular network signals and the opportunity of ICT infrastructure, a mobile-phone based record keeping application offers the ideal solution whereby farmers could capture, store, and retrieve vital information.”

Sub-Saharan Africa has experienced a boom in mobile phone users over the past decade. According to the World Bank, the total number of cell phone subscriptions on the continent increased from just over 11 million in 2000 to 463 million in 2011 and is expected to grow even further.

Tanzania has seen an impressive increase in mobile phone use over the last few years. In 2011, the country had 56 mobile phone subscriptions per 100 inhabitants—almost a threefold increase within four years, and just above the sub-Saharan Africa average (53).

Mobile phones are no longer confined to urban areas, but have helped remote or forgotten rural areas by providing them with virtual connectivity. In 2010, more than one third of rural households owned a cell phone, up from a mere 17 percent in 2007. This brought first-time connectivity to more than 5 million

individuals, including at least 2 million poor. Yet more still needs to be done to reduce access inequality, for instance by reducing costs, especially for the poorest.

The good news is that with about half of subscribers using their phone to send or receive money, Tanzanians has become among the fastest users of mobile money services in the world, just behind Kenya. In agriculture, a growing number of agricultural information service providers offer technical advice and market information to farmers through bulk SMS messages, call centers, or specialized apps.

Mariki is making measurable progress toward her goal of developing a new application. Together with two fellow students in a mobile application development and entrepreneurship class, she participated in the Washington State University Business Plan Competition this year. Her team placed among the top 10 finalists in this global competition, chosen from 40 groups, only four of which were from abroad (two from Tanzania, one each from Switzerland and China.) The contestants presented their plans to a panel of judges from the business community, who awarded the winning team (Switzerland) \$15,000.

“Our team did not win the cash, but the experience was extremely rewarding and motivating,” says Mariki.

An ambitious student, Mariki enjoys the academic world and hopes to teach in the future. “After graduation, I plan to stay at NM-AIST and work as an assistant lecturer for two years to acquire the necessary teaching skills, gain experience, and build networks,” she says.

Mariki sees her AWARD Fellowship as a rich opportunity for networking and professional growth. “I am not an agricultural researcher, but I am learning so much from the other women in the program about farmers and their needs. I want to understand more about their way of thinking—what works for them and what doesn’t.”

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*Mariki 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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