



2013 AWARD Fellow
Alganesh Tola Gemechu

Position	Researcher I
Institution	Ethiopian Institute of Agricultural Research (EIAR) Holetta Agricultural Research Center
Country	Ethiopia
MSc	Animal Production, Alemaya University, Ethiopia, 2002
Mentor	Dr. Aster Yohannes Chakiso, Centre Director, EIAR Holetta Agricultural Research Center

Research area: Physical, chemical, and microbial qualities in postharvest dairy technologies.

Alganesh Tola Gemechu is devoted to studying the chemical and microbial qualities of milk and milk products in order to improve the livelihoods of smallholder farmers in her country. She credits an excellent secondary school education in western Ethiopia with attracting her to agricultural research from a young age.

“At the secondary school that I attended, we studied dairy cattle, swine, and poultry production, and I loved using the modern machinery,” says Gemechu, who was later one of only four women in her university class of 60 agriculture students.

From the time she first did laboratory analysis of the chemical and microbial properties of raw milk provided by local farmers, her interest in exploring and discovering improved processes has grown. Today, Gemechu’s focus at EIAR is on generating, adapting, and popularizing technologies that are relevant to smallholder milk producers, processors, and cooperatives. In particular, she is studying traditional milk-handling practices, including transport, handling, packaging, and containers.

“Over the past 50 years, the focus in Ethiopia was on increasing milk production, and little thought or policy was devoted to the quality and safety of milk products, including establishing standards,” she explains “As a result, research in dairy technology is at its infant stage. While we do need to increase our production of milk, it’s critically important to adhere to standards, such as those created by ISO.”

The lack of standardization affects the economy since unapproved products cannot be exported, says Gemechu. “Ethiopia is first in livestock production in Africa, and we have a temperate climate and huge potential for dairy production and exporting, so the potential for exporting is huge.” Gemechu and her EIAR colleagues are promoting clean and hygienic methods of production, processing, and packaging from the farm to the table. She is also currently collaborating on an East African Agricultural Productivity Program project, coordinated in Kenya.

Gemechu finds satisfaction in seeing people's lives change for the better. "I got a grant as a junior researcher and introduced the concept of churning milk to rural women's groups, and now they are making butter for their families," says Gemechu. "They learned how to make butter more efficiently, using a paddle-wheel agitator developed by the International Livestock Centre for Africa, that fits inside traditional clay pots. Using this internal agitator cuts churning time in half and increases the recovery of butterfat as butter. The technology also removed the gender bias, as boys and men could now also churn—traditionally considered women's work. Seeing this type of change is very rewarding."

Gemechu looks forward to developing her leadership capabilities as an AWARD Fellow, learning to write winning grant proposals, and conducting a role-modeling event for girls and women in her area. "I've already discovered that AWARD offers good networking opportunities. I am communicating with an AWARD scientist from Nigeria, and we had a rich discussion about aflatoxins."

Through her AWARD Fellowship experience, she also appreciates the opportunity to learn about new ideas, easily adoptable technologies, and funding opportunities for herself, fellow researchers in her team, and her whole institution. Gemechu also hopes to publish some of her findings and to become a member of a professional organization over the next two years.

An ambitious scientist, Gemechu was recently awarded a prestigious fellowship from the Norman E. Borlaug International Agricultural Science and Technology Fellowship Program. She will study for three months in Philadelphia, U.S.A for three months in 2013. This mother of two young children is thankful that her husband, also a researcher and former Borlaug Fellow, is supportive. Also on her radar is a PhD in Dairy Technology, and she is already preparing a designed experiment on butter, up to the level of microbe species identification, which she will submit as part of her application for a doctoral program.

Gemechu 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.

AWARD is generously supported by the Bill & Melinda Gates Foundation, the United States Agency for International Development, the Alliance for a Green Revolution in Africa, and Agropolis Fondation. For more information, visit www.awardfellowships.org