



Juliana Mandha
2015 AWARD Fellow

Position	MSc Student
Institution	Nelson Mandela African Institution of Science Technology (NM-AIST), Arusha, Tanzania
Country	Uganda
BSc	Food Processing Technology, Kyambogo University, Uganda
Mentor	Dr. Linus Munishi, Lecturer School of Life Sciences and Bio-engineering, NM-AIST
Research Area	Development of a probiotic beverage from mango fruit juice through fermentation with Lactobacillus bacteria to increase shelf life, improve nutritional and market value of mangoes, and maximize profits.



“I want to move knowledge from the lab and peer-reviewed journals into farming households”

Juliana Mandha and her two siblings were raised by their single mother in Mukono, a peri-urban area in Uganda. In her early childhood, Mandha lived with her grandmother in rural Rukunjiri, where she saw farmers selling their matoke (bananas) at a throwaway price. During harvest season, all bananas would ripen at the same time, flooding the market. “Farmers would end up selling at a very low price—they would not even get enough to cover their costs,” laments Mandha. “Only the middlemen benefited.”

“I want to empower women to maximize profits from their produce,” says Mandha. She was inspired to pursue a career in life sciences after a career guidance session by alumni at her secondary school. In Uganda, farmers are considered poor. “I want to give women the skills and knowledge they need to improve food preservation and diversify their products, to increase production, and reduce postharvest losses,” she adds. “There are simple things women can do at home to make their produce last longer.”

Working as a team leader with a food consultancy firm, Mandha trained women to make a nutrient-rich food supplement using locally available ingredients in the Nakapiripirit district of northern Uganda. Using ghee, honey, peanuts, and sorghum, the women learned how to make a quick remedy for malnutrition in children under the age of five. Over the three-month period of the program, their nutrition improved but would lapse once their mothers stopped participating in the project. “This moved me—I felt that more needs to be done to cure nutritional deficiencies,” she recalls. To do this, Mandha felt she needed to be in a decision-making position. “This drove me to go back to school,” she

“I want to give women the skills and knowledge they need to improve food preservation and diversify their products, to increase production, and reduce postharvest losses”



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 and the Alliance for a Green Revolution in Africa. For more information, visit www.awardfellowships.org

says. In 2014, she won a two-year scholarship from the African Capacity Building Foundation and began an MSc in Food and Nutritional Sciences at NM-AIST.

Currently, Mandha is developing a probiotic beverage from mango fruit juice using fermentation with Lactobacillus bacteria. “Fruits in the market are sold at a low price, and I want to formulate a beverage that is available even when the fruits are not,” she explains. “Probiotics are microorganisms with health benefits that reduce diabetes and cardiovascular diseases.” The products she is developing target a specific market segment that is more health conscious. She also aims to diversify the product offering by increasing its shelf life and nutritional value. “With this, smallholder farmers will get a market for their raw materials with higher returns,” Mandha says.

Mandha’s career goal is to become a nutritional expert and consultant. After completing her studies, she would like to continue working directly with communities to share information on food preservation, nutrition, and how to avert postharvest losses. She is committed to ensuring that the knowledge she gains reaches farmers. “I want to move knowledge from the lab and peer-reviewed journals into farming households,” she asserts. To do this, she wants to work with local leaders to show them the relevance of the research work and draw them into finding solutions within their communities.

“AWARD will empower me with leadership and communication skills,” says Mandha. “I need interpersonal skills to learn to interact with people. AWARD has empowered me to think about my life and the impact I would like to have on society.”