AWARD
African Women in Agricultural Research and Development

Profile

2011 AWARD Fellow

Jacqueline Kazembe

Position	Deputy chief fisheries officer
Institution	Department of Fisheries Ministry of Agriculture, Irrigation and Water Development
Country	Malawi
MSc	Biology, University of Waterloo, 2000
Mentor	Daniel Jamu, Senior scientist, World Fish Center

Research area: Identifying locally appropriate aquaculture production technologies for adoption by smallholder fish farmers contributing toward increased production of fish in Malawi.

Aquaculture has long fascinated Jacqueline Kazembe and she has dedicated her career to helping small-scale fish farmers in Malawi—most of whom are women—to increase their production and thus improve their livelihoods.

"I was always good in biology and it was almost an automatic decision to major in this in university," says Kazembe. She graduated with a BSc in 1994 from the University of Malawi, Chancellor College, and went on to do a BSc Honors specializing in fishery science at Rhodes University in South Africa. She later joined the Department of Fisheries, working on a biodiversity conservation project in Lake Malawi with experts from Belgium, Canada, and South Africa.

In 1998, Kazembe was awarded a scholarship from the Canadian International Development Agency to do an MSc at the University of Waterloo in Canada. The scholarship was part of a CIDA initiative to build capacity in the region's fisheries sector.

"In Malawi, people are very dependent on maize," she notes. "We want farmers to integrate fish farming into their activities and to make families more food secure through diversification."

Fish production in Malawi has tremendous potential, says Kazembe, but aquaculture (fish farming) needs to be developed in an environmentally friendly manner using appropriate production technologies. "The demand for fish is huge due to high population growth and urbanization, and what people catch alone cannot satisfy the demand," she explains. "Through the adoption of appropriate aquaculture technologies, we could increase production from the current estimates of about one tonne per hectare to more than three tonnes. Fish is not only an important source of food and nutrition, but can also provide incomes for farmers."

Kazembe works with small-scale and commercial fish farmers, as well as fish feed and fingerling producers to increase fish production from aquaculture systems. "Since there are many stakeholders involved in the development of the aquaculture sector, my work also involves coordinating their activities and providing policy direction and support," she says.

Recently, Kazembe introduced the community fish farming village scheme in a district in Malawi. "We taught people the importance of working together, and trained people who had never done fish farming how to dig and manage their ponds, produce fish feed, and stock and harvest the fish," she says. "It was very satisfying to work with them through the whole process. Now we're looking at what kind of management structures they need to put in place so the project can be sustainable."

Kazembe hopes to replicate these techniques into other appropriate areas. She is also experimenting with cage culture aquaculture in Lake Malawi, where farmers grow fish in enclosed structures. "We are seeing if the community can manage this kind of fish farming—feeding the fish, keeping the cages secure—and assessing how the Department of Fisheries can best support them."

Kazembe says farmers are currently dependent on research stations to provide sufficient fingerlings for their ponds, but she wants to empower them to produce quality fingerlings for themselves. She is also looking at how to promote catfish—a common but less popular species—to farmers and help them produce it efficiently. "In Malawi, we must work with indigenous species and so we need to culture fish that naturally occur here," she explains.

Career-wise, Kazembe—one of only two women at management level in the department—plans to obtain a PhD so she will be equipped to take on more responsibilities. "I hope to be given a greater role in coordinating agriculture Investment initiatives to improve the livelihoods of smallholder farmers, and to enhance the role of small and medium-sized enterprises in agricultural production and marketing," she says. "Marketing is a new area for me, but one that really interests me."

Kazembe would also like to write a book based on her research on freshwater fish in Malawi. As an AWARD Fellow, she is confident that she can reach that goal with the help of her mentor. "It is excellent to have a mentor who is an expert in aquaculture with many years of experience," she says enthusiastically. "He will be able to guide me and help me access the opportunities that are there."

Kazembe is eager to network with other AWARD Fellows in her discipline. "I want to make linkages with some of the fish scientists and learn from them, especially those from Nigeria, since fish production from aquaculture there is one of the highest in Africa. Fish products are in demand and we need to be strategic as a region and work together." She sees AWARD as a good platform for such collaboration.

"It's such a privilege to see people interested in fish farming, who want to learn and work together," concludes Kazembe. "It's encouraging to know that I'm actually making a difference."

Kazembe is one of a growing number of African women agricultural scientists who have won an AWARD Fellowship. AWARD is a professional development program that strengthens the research and leadership skills of African women in agricultural science, empowering them to contribute more effectively to poverty alleviation and food security in sub-Saharan Africa. AWARD is generously supported by the Bill & Melinda Gates Foundation and the United States Agency for International Development. For more information, visit www.awardfellowships.org