



2013 AWARD Fellow
Aissata Traoré Thera

Position	Researcher, Fruit and Vegetable Program
Institution	L'Institut d'Economie Rurale (IER)
Country	Mali
MSc	Plant Pathology, Montana State University, U.S.A., 2007
Mentor	Anna Réjane Kone Dembele, Comité National de la Recherche Agricole du Mali (CNRA)

Research area: Developing the infrastructure and procedures for production of high-quality, pathogen-free potato seed to support sustainable production of potatoes by smallholder farmers.

Aissata Traoré Thera received the best score in her primary class for an essay she wrote on wanting to be an agronomist when she grew up. After completing secondary school in Bamako, she won a scholarship to pursue her university studies in Cuba. Not surprisingly, she chose to specialize in an area related to plants.

Thera spent six years in Cuba, one to learn Spanish and five to complete a BSc and MSc in phytosanitary engineering. "I studied phytopathology, virology, entomology, weed sciences—anything I could to learn about plant protection," she says.

Back in Mali, she worked with CARE Mali, training women to produce vegetables by introducing new varieties and technologies, and recipes to improve nutrition. She later led activities to fight diseases in crops, such as sorghum, in her role with ICRISAT. She also served with a local NGO to help women reduce millet-processing drudgery.

In 1996, Thera joined IER, where she developed a strong passion for working on potatoes, as head of the vegetable disease section of the Fruit and Vegetable Program.

Today, she is determined to help find ways for Malian farmers to access high-quality, disease-free potato seed to boost their production and food security. Potatoes are highly nutritious, providing iron, calcium, and vitamin C. They are vegetatively propagated, meaning they are grown from small seed potatoes or pieces of potato, rather than from botanical seeds. Small-scale farmers typically save some of the potato crop from one season to be planted as seed for the next crop, which increases the risk of transmitting pests or diseases across generations, potentially reducing yields and quality.

Thera is engaged in research to test different potato varieties selected from the International Potato Center for their tolerance to bacterial wilt disease, compared to the imported varieties currently used. She is testing plant samples for yields and disease levels in experimental fields, to be followed by testing in farmers' fields. The research is also assessing preferences and acceptance by farmers and consumers. The aim is to identify at least three varieties that perform well and meet user criteria, which could be used as a base for seed production and distribution.

One of the big challenges in Mali, as in many other sub-Saharan African countries, is to produce enough quality seed potatoes to meet demand. It requires the establishment of methods and locations for rapid multiplication of potato tubers in disease- and pest-free environments to reach the economies of scale for providing seed potatoes at prices that farmers can afford. "Buying seed potato accounts for about 50 percent of production costs," explains Thera. "If we can reduce the price of the seed, it will make a huge difference for farmers."

She wants to test the feasibility of using solar-powered aeroponics as a method of addressing this challenge. Aeroponics is a soil-less technology, which eliminates the risk of pests and diseases and promotes rapid and plentiful growth of seed potato tubers. The tubers are grown suspended in the air and sprayed with a combination of water and nutrients that produces many more tubers per plant than the conventional soil-based method.

The project to produce quality potato seed for Mali is very dear to Thera's heart. "We have been trying unsuccessfully to make good potato seed available for farmers for 15 years," she says. "If I can help people to grow seed potatoes through aeroponics and to use better varieties, well then, I will have achieved my dream."

Another important goal for Thera is to obtain a PhD. She had hoped to do so previously, when she was awarded a scholarship to study at Montana State University. However, the two-year time limit was not enough for her to learn English and complete a doctoral program, so she used the opportunity to master English and obtain an MSc in plant pathology.

Thera notes that the professional path for women scientists like her, and many others, is not always easy. As a mother of six children, even with a very supportive husband, she has faced difficult trade-offs between her career and family responsibilities. She believes that cultural mores prevent the advancement of women and is determined to serve as a positive role model for her daughters and other Malian girls. She belongs to an association of women scientists in Mali that encourages girls interested in the sciences by organizing competitions, prizes, and other activities.

Thera is one of five African women who won a fellowship in the new AWARD Francophone Pilot Program, in partnership with CORAF/WECARD and Agropolis Fondation. She sees it as an opportunity to help her achieve her goals as an African woman scientist. "It is a good inspiration to continue, and it will help me access the links and connections to pursue my PhD, develop leadership skills, learn to write winning proposals, sharpen my scientific writing, and stretch my potential, not only in Mali, but also internationally," she concludes.

Thera 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