



2011 AWARD Fellow
Francisca Aba Ansah

Position	Crop science (Postharvest technology) consultant
Institution	Agroteque Services Limited
Country	Ghana
BSc	Crop Science (Postharvest technology) University of Ghana, 2008
Mentor	Esther Sakyi-Dawson, Professor Department of Nutrition and Food Science University of Ghana

Research area: Enhancing rural livelihoods and food security through the use of environmentally friendly and sustainable methods of food storage and preservation.

Francisca Aba Ansah is a born organizer who thrives on bringing people together to solve a problem. Currently, this young researcher cum entrepreneur is brainstorming with farmers in northern Ghana about how to build a better plastic bag—a chemical-free, insect-proof, environmentally sustainable, and affordable storage sack liner that will help prevent the postharvest losses that cut deep into smallholders’ meager profits.

Effective postharvest handling is a costly challenge in Ghana, and in many parts of sub-Saharan Africa. Even if farmers manage to overcome the usual hurdles—seed shortages, erratic rains, and pest infestation—a significant portion of their crops spoil due to inadequate storage facilities. “Farmers end up selling at a loss because they can’t store their maize, for instance, until later in the season when there isn’t such a glut on the market and they could get a fairer price,” says Ansah.

To help address this problem, Ansah is conducting research on hermetic storage that small-scale farmers can afford—particularly women who perform the major postharvest activities, such as shelling, winnowing, storing, and selling. Ansah is working with researchers from the Forum for Agricultural Research in Africa and the University of Ghana in collaboration with Concern Universal (a non-governmental organization) and Bioplastics Limited, Ghana to develop a biodegradable sack liner that resists insect infiltration. “We already have some pilot bags that are reusable and they degrade after six years, but they keep the bugs out. The active ingredient is D2W, which doesn’t affect the quality of the food,” Ansah explains. “I am studying the effects of environmental factors such as temperature and relative humidity on the biodegradable material itself and on the quality of the food.”

The plastic liners could potentially create many more storage options for women farmers, says Ansah. In northern Ghana, traditionally women are not permitted to grow yams—one of the region’s largest cash crops—but they are involved in yam harvest and postharvest management, as well as in growing maize, cowpeas, groundnuts, and vegetables. “Women grow vegetables mostly for family consumption, but they do sell a few,” says Ansah. “However, they are shut out of the market at that point because they can’t store and protect their produce. Using our plastic liners, they could store sacks of grains safely right in their homes; they wouldn’t need any special storage facilities.”

Ansah is also researching the pathogens associated with onions during household use and storage, in order to provide women with safer, more hygienic, and appropriate methods of using them.

As a consultant, Ansah trained small-scale farmers on commercial development for the Millennium Challenge Account-Millennium Development Authority agricultural project in Ghana, which aims at reducing poverty and ensuring economic growth. She is helping participating farmers to develop new products, including a dried okra powder. "The powder is well-packaged and sealed under hygienic conditions to serve a niche market with a future aim of exporting to other countries," says Ansah. She linked the farmers with export companies and they are now doing business together. "These farmers are now not only producing high-quality okra and peppers for export, but have created market opportunities for neighboring towns in Ghana's Eastern Region," says Ansah. "They have a focus and a niche market."

Ansah believes that achieving food security is not only about increasing the supply or improving the availability of food, but it is also about ensuring access to quality food. "Developing a value-adding program, which involves food processing, preservation, new product development, food safety, and quality management practices, would improve both local and export markets."

Nutrition security and food safety depend on women, who spend most of their income and time disproportionately on food for the family. Ansah wants to promote the use of highly nutritious indigenous fruits and vegetables to women, which would in turn boost sales for farmers and improve food security among the poor.

"Despite the prominent role women play in subsistence agriculture in developing countries like Ghana, most of them do not get agricultural extension advice or other agro-based services," says Ansah. "Entrepreneurship development and technical training for women small-scale farmers and processors is critical to the survival of their businesses. It's also integral to our country's food security and economic growth."

By networking with postharvest specialists and with the assistance of funding agencies, Ansah hopes to set up a collaborative postharvest research and training center, where ideas, technologies, and innovations would be tested under local conditions for their effectiveness and efficiency. Ansah recently formed a voluntary advisory group to counsel farmers on postharvest handling. "We aren't formalized yet, but it's a beginning."

As an aspiring researcher, Ansah says the biggest challenge she faces in her work is being young. "Farmers used to ask, 'Who is this little girl?' It took time to win their trust, but now they call me up to ask for advice." She is growing in confidence, and says that AWARD has already helped her to develop a strategic plan for her career. "AWARD is pushing me to move faster than I would have done on my own," says Ansah, who plans to pursue PhD studies in the near future. "The coaching sessions have helped me to focus on what I really want to do and determine what steps I need to take to get there. I now know where I want to take my association. Watch out for me!"

Ansah 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
