



2013 AWARD Fellow
Priscilla Adofo Boateng

Position	Research Scientist
Institution	Council for Scientific and Industrial Research (CSIR) Crop Research Institute
Country	Ghana
MAgric	Plant Breeding and Agronomy, Kwame Nkrumah University of Science and Technology (KNUST), 2010
Mentor	Dr. Frances Owusu-Daaku, Associate Professor, KNUST

Research area: Breeding of maize hybrids tolerant to low-nitrogen soil conditions.

Priscilla Adofo Boateng's heart was set on studying pharmacy, but a lecturer during her undergraduate program inspired her to pursue a career in agriculture. "She talked about how much we can do by using biotechnology tools to improve crops, and I was intrigued," Boateng recalls.

Boateng embraced the opportunities biotechnology offers to reduce the effects of plant diseases and improve outputs. While concentrating on cassava mosaic-free planting material during her master's studies, she is now focusing on breeding maize that tolerates low nitrogen levels in the soil. Her doctoral research is supported by the Alliance for a Green Revolution in Africa with a scholarship at the West African Center for Crop Improvement at the University of Ghana, Legon.

"Farmers need to fertilize their maize in March, or by April at the latest, but the government's subsidy for fertilizer doesn't reach them until June most years—which is way too late—and the fertilizer is still quite expensive, particularly for women farmers," Boateng explains. "When I received the news about my PhD scholarship, I was so happy that finally, I will be able to help farmers with this fertilizer problem."

Boateng learned from participatory research in Ghana's maize-growing areas that farmers actually prefer maize with smaller cobs and tighter grains that are more input efficient. This result was contrary to her expectations and to the larger cobs that traditional maize-breeding programs were trying to develop. Using molecular techniques, Boateng hopes to develop new maize varieties that are tolerant to lower soil fertility, particularly nitrogen, within two to three years, compared to the eight years it would take using conventional breeding techniques. "Maize that can produce a good crop, even with less fertilizer, is also more environmentally friendly, an aspect that is becoming increasingly important in Africa," she notes.

Maize is the main ingredient for kenkey, a traditional Ghanaian food made from fermented maize meal. It is traditionally prepared by boiling balls of fermented cooked maize meal and raw maize dough wrapped in cornhusk or banana leaves. Since it can be kept for about a week, women farmers are particularly interested in having the right kind of maize variety for this dish.

Boateng expects to discover and exploit her full potential during her AWARD Fellowship. She has already set goals for writing articles in high-impact journals and attracting research grant proposals. Looking forward to expanding her professional network, she hopes to collaborate with other AWARD Fellows and other scientists from Ghana, Nigeria, and Uganda on the potential of indigenous plants in those countries.

Boateng 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