



2013 AWARD Fellow
Matilda Dela Dzomeku

Position	Research Scientist
Institution	Food Research Institute Council for Scientific and Industrial Research (CSIR)
Country	Ghana
MPhil	Biological Sciences, Kwame Nkrumah University of Science and Technology (KNUST), 2009
Mentor	Dr. Emmanuel Ohene Afoakwa Associate Professor, University of Ghana

Research area: Research, development, and technology transfer for edible and medicinal fungi cultivation in Ghana, particularly the development of low-cost, environmentally friendly technologies to provide jobs for rural women, and also the collection, classification, and preservation of mushrooms found in Ghana.

Matilda Dela Dzomeku has long been interested in promoting edible and medicinal mushrooms among Ghanaians, confident that this will help reduce the incidence of malnutrition among children. “My father had wanted me to enter his line of work—accounting—but that didn’t interest me. I resolved to put my heart into my chosen program, biological sciences, and I haven’t looked back,” she says.

Dzomeku joined the CSIR directly after graduating from university with an MPhil in Biological Sciences following her first degree in the same discipline. “I was placed in the mushroom lab. I had never even eaten mushrooms before then, but I found them so fascinating,” she says. “For instance, the antioxidants (phenol) in mushrooms are the highest of any vegetable.”

She is part of a team teaching village women new mushroom-cultivation technique, such as how to grow them on various agricultural wastes. “For women, raising mushrooms is a form of income generation, and they also eat them at home. However, so much patience is required, because they must be harvested every single day within a cropping house.”

Dzomeku has travelled to China twice for advanced training in mushroom cultivation, most recently for nine weeks in 2009 on a partial scholarship from CSIR and U.S.A.-based Aloha Medicinals, where she learned about spawn technology—producing seeds to grow mushrooms. “I am now using spawn technology in my current job, and am working in partnership with other scientists in Germany who taught me more about mushroom identification techniques and taxonomy,” she reports.

Today, Dzomeku is delighted to continue working with farmers. “Malnourishment is a big issue in Ghana, so it’s very rewarding to provide women with the technology that enables them feed their children better while earning extra income.” She wants to reach out to all corners of Ghana to promote the health benefits of mushrooms. “Traditionally, coastal people don’t eat them, calling them “the umbrella of the ghost,” but they have so many nutritional and medicinal properties,” she says. She is also looking at postharvest issues,

especially in the rainy season, and hopes to liaise with other researchers to discover better ways to keep mushrooms fresh and available throughout the year.

Another focus of Dzomeku's research involves domesticating foreign species, for example from the U.S.A., to see if they are suitable for cultivation in Ghana. "There are heat-loving and cold-loving mushrooms—some can be produced here, and others can't," she reveals. She and her team are looking at which varieties can grow on grass, in collaboration with Brazilian scientists in Ghana. They are also growing mushrooms on rice straw, husks, and other waste from the rice industry. "I'm hoping to study the genetic coding of mushrooms some day if I get the opportunity," she continues. "My unit manages the mycelium bank for Ghana, where more than 200 species of mushroom culture reside. Mushroom farmers from across West Africa and beyond the region depend on us for the regular supply of viable spawns."

Dzomeku plans to start a PhD in the near future, and hopes to become a consultant in mycology with the Food and Agriculture Organization of the United Nations. She sees the AWARD Fellowship as a valuable and unique opportunity that will help her reach her goals. "Although I'm quite a reserved at first contact, I'm going to grab the chance to connect with people in my field with everything I've got," resolves Dzomeku, who eagerly anticipates being mentored by leading food scientist Dr. Emmanuel Ohene Afoakwa. "I want to do meaningful research, and I know the AWARD Fellowship will equip me to write winning proposals to push my work forward."

Dzomeku 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.

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