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# MIZZOU

## Mentoring the World

**MU trains dozens of agricultural scientists a year from around the world.**

*Story by Erik Potter*

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**K**enya does not have an overabundance of food. Yet twice a year, during harvest season for upland taro root, the country is awash in the popular but quick-spoiling tuber. Prices for the starchy root plummet below the cost of production, but still much of the harvest spoils before it is sold.

The Jomo Kenyatta University of Agriculture and Technology in Nairobi has been working with farmers to solve this problem. Taro root can be processed into a shelf-stable flour, which, thanks to the tuber's sticky



A faculty exchange program at Mizzou helped Willis Owino find a potential funding source for his work on taro roots (above) in Kenya. Owino, a senior lecturer at Jomo Kenyatta University of Agriculture and Technology in Nairobi, is working to improve the technology rural Kenyan farmers use to turn quick-spoiling taro roots into shelf-stable flour. Photo by David Monniaux.

consistency, makes it a great thickening agent for cooking. The problem is a lack of money.

That's where Willis Owino, the U.S. Department of Agriculture and the University of Missouri come in.

Owino, a senior lecturer at JKUAT, was one of five African scientists in fall 2012 to come to Columbia under the Department of Agriculture's Faculty Exchange Program. The program is one of several that MU's College of Agriculture, Food and Natural Resources participates in that bring dozens of international scientists to campus each year.

The exchange program is designed to help international professors improve course curriculum. Owino spent the entire semester at Mizzou taking classes, attending seminars and being mentored by Azlin Mustapha, associate professor of food science and director of graduate studies.

One training session was about finding funding sources for work back home.

“While at MU, we were introduced to a number of funding agencies that could support collaborative work between the developing countries and U.S. counterparts,” Owino says in an email interview. One of the agencies was FINTRAC, a U.S. company that helps promote rural income and food security. It was looking for innovative agricultural technologies to

fund.

At JKUAT, Owino works with several small-scale farmer organizations to process taro root flour, which requires peeling, chipping, blanching, sun drying and milling. The farmers do most of that in small batches with basic equipment, and the sun drying facilities aren't sophisticated enough for the flour to pass national food safety standards, which means they can only sell it locally.

The grant would allow JKUAT to upgrade the farmers' equipment to produce the flour on a larger scale and have it certified for sale across Kenya and internationally. For the farmers, who are mostly poor, rural women, the extra income could mean the difference between sending their children to school or not.

Owino recently learned that the grant was not included in FINTRAC's initial round of funding, "But the comments were positive, which we hope to use in revising the concept and resubmitting it in the next round," he says.

Owino and the other faculty exchange members continue to work with Mustapha on future collaborations, including a grant application to improve food safety regulation and track who gets sick from contaminated food, especially corn contaminated by cancer-causing aflatoxins, which is a

major problem in East Africa.

Mustapha says the exchange program truly was a two-way experience. “It’s a back-and-forth process: We learn about what goes on over there, and they learn how we do things here, so it’s very enriching,” she says. “I enjoyed it, and I think they did, too.”

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