



Workshop and a Bagamoyo Farmer Make Seedling Health the Foundation of IPM

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On a normal day, Joseph Mbuji's business is managing the production, harvest, and delivery components of his diversified Bagamoyo vegetable farm. But recently, he found himself delivering a lecture about his farm to an international audience at a Seedling Health Workshop at Sokoine University of Agriculture (SUA) in Morogoro, Tanzania. The three-day workshop in February 2017 was part of the East African Vegetable Crops project through the Integrated Pest Management Innovation Lab (IPM-IL), sponsored by the U.S. Agency for International Development (USAID) and directed by scientists at SUA and Ohio State University. Ohio State has collaborated with SUA for more than 15 years, most recently through the iAGRI project, which along with other USAID-funded Feed the Future projects, has improved the Horticultural Farm at SUA, where some of the workshop training took place.



Joseph Mbuji (center) with workshop trainees during a seedling demonstration

The train-the-trainer workshop focused on methods for producing healthy seedlings that are free from disease, insects, and nematodes. Combining theory with hands-on demonstrations, participants learned how to begin the season with healthy seedlings so that farmers have the best opportunity to produce a healthy crop with less need for expensive and often toxic pesticides.



Workshop participants assess vegetable seedlings during IPM workshop in Tanzania

SUA's Department of Crop Science and Horticulture, who organized the workshop, recognized Mr. Mbuji as a farmer with unusual creativity and practical knowledge, and asked him to describe practices he uses on his farm to produce healthy seedlings as a business. Mr. Mbuji agreed to address the group of 63 farmers, agricultural officers, NGO and private company representatives, scientists, and consultants. He said he was happy to show how production of high quality seedlings is a business: it is real and profitable.

"To produce seedlings free of disease, insects, and viruses," he said, "I had to learn to give up

traditional methods and adopt improved IPM technologies.”

Dr. John Cardina, Principal Investigator of the project and Professor of Horticulture and Crop Science in Ohio State’s College of Food, Agricultural, and Environmental Sciences, sees these workshops as ideal ways for Ohio State faculty to collaborate with Tanzanian scientists in disseminating IPM technologies to smallholders in East Africa.

“These train-the-trainer workshops are a fantastic way to demonstrate and disseminate appropriate technologies that will ultimately improve smallholder horticultural production.”

These technologies include the use of sterile media for starting seedlings in plastic cell trays, watering methods that do not splash water on leaves, and netting or other materials to protect seedlings from insects, vectors, and diseases. The result is a product – healthy seedlings – that bring his customers back to him.

Mr. Mbuji described the importance of starting with the best quality seeds, saying “If you make all the effort needed to produce the best seedlings, don’t waste money on seeds that are not the best.”

He recommended the use of hybrid seeds whenever they are available. More important, he is not complacent– he believes in constant learning to improve on what he knows, and he is willing to learn from anywhere and to respect what has worked for others. He mentioned that relations with SUA are especially important to him. Keeping good records and using them to find ways to improve his operation has also helped him. Mr. Mbuji said he strives to be a role model in his area so that other farmers can learn that a quality process to produce seedlings gives you a quality product at harvest.



In evaluation of the workshop, many participants agreed that Mr. Mbuji’s presentation provided a real life example of practical ways to put classroom learning and demonstrations into practice.

“Before this, I thought IPM happened only in the field,” said one participant. “Now I know that it begins by using good seeds, and other simple practices that don’t involve pesticides, to produce healthy seedlings before they go to the field.”

A consultant from Arusha smiled at this: “If you put a seedling in the field that already has a root disease and insect eggs, you are just planting your headache for the season. Why would you do that? practices, beginning with seedlings,

*Dr. Matt Kleinhenz, Ohio State University,
with workshop trainees*

Good cultural
are where IPM begins.”

The workshop ended with participants devising work plans for extending what they learned at the workshop to over several thousand growers with whom they work or advise.