

Feed the Future-supported Farmer-to-Farmer Trainings Pave the Way for Guatemalan Mushroom Production Lab

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Partners of the AmericasMembers of Visión Maya and Farmer-to-Farmer Field Officer Andrea Fión examine the quality of oyster mushrooms.

At Asociación Visión Maya, expectations for the Farmer-to-Farmer (F2F) trainings could not have been higher. Based in Sololá, Guatemala, Visión Maya is an association of almost 200 oyster mushroom producers - over half of whom are women. The group's members are dedicated to the production and marketing of fresh oyster mushrooms. However, despite the fact that mushrooms can be grown and harvested year-round, contamination and other issues prevented producers from being able to meet market demands. Visión Maya's producers were eager to learn how to improve their production facilities, reduce contamination at various stages of the process, and produce their own new mushroom cultures, or spawn. The farmers' simple goal was to improve their production and increase yields so that they could earn a better living and provide for their families. This is where Farmer-to-Farmer comes in. F2F is a knowledge-transfer program of the U.S. federal government supported by Feed the Future through USAID, and managed by Partners of the Americas in Guatemala. With the help of U.S. volunteers, F2F provides technical assistance to farmers, farm groups, agribusinesses, and other agriculture sector institutions in developing and transitional countries.

In February 2015, F2F volunteers Dr. Henry Van Cotter (Professor of Plant Pathology, Physiology and Mycology at Duke University) and Dr. Khalid Hameed (Visiting Scholar at the Mycology Lab at Duke University) visited the farmers to help address the problem. They trained the group on using and treating different substrates, or chemical molecules, to improve both production quantity and quality. Drs. Cotter and Hameed also taught the participants methods to evaluate and ensure optimal nutritional quality of the mushrooms. For the training on new mushroom cultures, the Farmer-to-Farmer volunteers had to improvise, since the group didn't have a lab to work in. Using the living room of a member's home as a makeshift lab, participants wiped down surfaces with alcohol to keep it sanitary and used available tools such as eyebrow tweezers for the demonstrations. The F2F volunteers taught the group how to make their own agar, a substance used to grow mushrooms in petri dishes, using boiled potatoes and baby food jars. After two weeks of training, the participants successfully prepared sterile fungal growth media, isolated pure oyster mushroom cultures, and prepared two batches of new growth, among other accomplishments. F2F arranged a visit to the Universidad del Valle de Guatemala (UVG), where participants observed and practiced their techniques with key equipment at the university's lab. The visit also served as a link between Visión Maya and the university, as UVG agreed to let members rent lab equipment when needed.

Four months after the initial training, Farmer-to-Farmer field staff returned to Visión Maya for a follow-up visit. What they found exceeded their expectations. To successfully improve their mushroom production, Visión Maya realized they needed their own laboratory. With support of a small loan issued by a local bank, group members built a mushroom spawn lab in their headquarters, modeled after the lab at UVG. On their first attempt at growing mushroom cultures in their new lab, Visión Maya members only produced two successful petri dishes out of twenty; but on their second try, the group successfully made nine of twenty. With the installment of their lab, Visión Maya hopes to become a leading local producer and distributor of mushroom spawn in Sololá and plans on using their profits to invest in the lab and their growing mushroom business.

Although the group still has a long journey ahead of them, this was a critical first step in their efforts to sustainably produce spawn and grow enough high-quality mushrooms to reach local and national markets. The president of Visión Maya, Carmela Sacuj, said, "We are grateful for the training and learned many things. We've wanted a training like this for many years, and we thank the volunteers who enabled us to learn production methods that are so important for our success. We will continue to implement the lessons from the training, and look forward to continued partnership with the Farmer-to-Farmer program." In a few months, with Feed the Future support, Farmer-to-Farmer plans to send other volunteers to validate Visión Maya's lab methods and teach them new skills that will allow the mushroom farmers to make the most of their new lab and equipment.