



SNAPSHOT

Organic Fertilizers Improve Coffee Production, Environment

Treating coffee pulp with effective microorganisms is an easy and low-cost alternative that helps mitigate contamination of the environment and generates organic fertilizer.



Photo by Fintrac Inc.

Ramón Alvarado produces effective microorganisms on his farm, which is now used as a demonstration site for other producers in the area. After saving money with the use of EM technology to treat coffee pulp, Alvarado has invested in a microorganism storage bank.

“My goal is to teach people and change the community.”

Ramón Alvarado
—Coffee producer

When coffee is “wet-processed” in rural Honduras, nearly 80 percent of the coffee fruit, in the form of pulp, is discharged into local waterways. This practice contaminates water supply downstream from coffee processing plants. Coffee pulp increases the organic loads, nutrients, and solids found in the rivers and streams, and can lower water pH – two changes that decrease watershed biodiversity. Decomposing coffee pulp also generates toxic gases such as methane that are harmful to the environment.

Since June 2011, USAID-ACCESO has been training coffee producers and processors, municipality officials, and environmental conservationists to treat coffee waste using effective microorganisms (EM). Effective microorganisms are natural microbes found in the local countryside and applied to coffee pulp to accelerate the decomposition process. When processors treat coffee pulp with these natural microorganisms, not only do they prevent water contamination from runoff, they produce organic fertilizer that can be sold or used to produce future crops.

Ramón Alvarado, a coffee producer in Intibucá began working with the project in March 2012. He had been receiving ongoing complaints from neighbors about the odors emanating from his coffee processing plant. After a few months of using effective microorganisms to treat his coffee waste, the odors and the complaints disappeared.

The pulp treatment – previously unknown to most producers – is also reducing fertilization costs. EM-treated coffee pulp can be used as organic fertilizer: for every 1,000 quintals of pulp, 700 quintals of organic fertilizer can be produced. The drastically lower cost of EM-based fertilizers (\$1.30/quintal compared to \$25/quintal for commercial fertilizer) increases the accessibility of ecofriendly inputs for small-scale producers.

Alvarado has already saved around 30 percent of his average annual fertilizer costs. “Thanks to the EM, I now purchase fewer expensive chemical products,” he said.

Effective microorganism production and use has already spread beyond the municipality where it was introduced. In San Isidro, Intibucá, the municipality’s environmental unit (UMA), trained by the project, is producing EM and selling it at \$1 per pound. “We had never heard of microorganisms, but now a lot of people know that EM fertilizer is more affordable,” said Carlos Martinez, coordinator at the UMA. With the new earnings, the UMA plans to increase awareness and demand for EM technology.

The project continues working with small-scale producers, promoting ecological alternatives at a low cost. More than 4,780 clients have been assisted in the adequate use of natural resources, benefitting approximately 28,689 people in the six departments where the project operates.