



CASE STUDY

Natural fungus fights coffee pest, improves worker safety



Photos by Fintrac Inc.

A field worker in Ahuachapan, El Salvador is on the lookout for the coffee berry borer.



Bags of rice are sterilized in a USAID-funded autoclave. Procafe grows the *Beauveria* fungus on the rice.



Ramiro Gonzales, a coffee farmer of 20 years, with his assistant/grandson, is using *Beauveria*.

Challenge

With coffee production on the rise in El Salvador, endosulfan, a dangerous chemical pesticide, is being used more and more to control the coffee berry borer, an insect responsible for damaging up to 35 percent of annual coffee harvests.

Endosulfan, however, harms the environment and poisons many people every year. "Five of my workers went to the hospital during last year's application period. ...They stop fumigating at 2 p.m. and they're sick by 5 p.m.," said Ramiro Gonzales, a coffee grower of 20 years.

Salvadoran coffee growers and field workers needed to find a safe, effective and inexpensive alternative to endosulfan.

Initiative

USAID's Agricultural Diversification Program (ADP) recommended *Beauveria*, a fungus found in tropical soil, as the alternative to endosulfan. The program is helping Procafe, a private Salvadoran coffee organization, produce *Beauveria*, distribute it nationally and train farmers how to use it. The fungus can be grown on rice in a laboratory, isolated, and then mixed with water and sprayed on coffee berries to kill the coffee berry borer.

USAID-ADP, through Procafe, is working to make this safe, organic remedy available to coffee farmers throughout El Salvador, reducing the use of endosulfan and the environmental damage and cases of poisoning it causes. USAID-ADP co-financed Procafe's new, \$260,000 laboratory, which opened in October 2007, and provided technical assistance and training on producing *Beauveria* in large quantities.

Results

Procafe is now able to produce more than 36,000 pounds of the product each year, enough to protect more than 25,000 hectares and prevent an estimated \$2.1 million in annual losses. Procafe is currently distributing it to coffee farmers across El Salvador for trial use. Next year the organization will sell the product at a competitive price and will use the profits to expand production.

USAID-ADP's preliminary field tests of Procafe's *Beauveria* showed a 60 to 70 percent reduction in damage caused by the coffee berry borer and is helping Procafe to train coffee farmers in how to use it. Procafe has already distributed more than 1,530 pounds of the product, which will help protect more than 1,070 hectares during the 2007 coffee harvest.

USAID-ADP, which started in June 2006, is a three-year project that increases sales and rural incomes, generates employment, improves farming and food safety practices and boosts Salvadoran exports. The program also links farmers to processors, supermarket chains, importers, and other marketing agents, strengthening the commercial sustainability of El Salvador's agribusiness value-chain.