



Coopeldos R.L., Costa Rica

Coffee Bean Drying



SOLARWALL® panels cover roof of coffee dryer in Tilaran, Costa Rica

Background

The coffee drying cooperative Coopeldos R. L., located in the province of Guanacaste in Costa Rica, participated with Natural Resources Canada to demonstrate solar coffee drying. Coopeldos, an ISO 9,000 and ISO 14,000 registered company, was the perfect candidate to demonstrate state-of-the-art solar crop drying technology because maintaining the ISO 14,000 designation necessitates meeting certain energy conservation standards.

Natural Resources Canada provided funding under its Climate Change Program to monitor the site and show other coffee producers the energy savings that occur with solar drying technology.

This project has been included in the International Energy Agency Task 29 program to demonstrate solar drying as an alternative to fossil fuels.

Solution

860 m² (9,250 ft²) of black metal solar panels were installed on the roof at the Coopeldos facility. The warmed air that is collected from the panels is used for two purposes:

- It heats the vertical pre-drying silo, which dries the coffee beans from 60% moisture content, to 35%.
- It also heats the guardiolas, which are the rotating drums that carry out the final drying stage. Here, the beans are further dried to a 12% moisture content. Following this second drying stage, the beans are packaged in bags, and sent to market.



Close-up of rooftop panels and the surrounding Costa Rican countryside.

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