Crop Drying

Coopeldos, Costa Rica

A black roof mounted SolarWall® crop drying system used for coffee in Tilaran, Costa Rica

Background

The coffee drying cooperative Coopeldos R.L., located in the province of Guanacaste in Costa Rica, installed a SolarWall® coffee drying system on the entire roof of their building. Coopeldos, an ISO 9000 and ISO 14000 registered company, was the perfect candidate to demonstrate state-of-the-art solar crop drying technology, since maintaining the ISO 14000 designation necessitates meeting certain energy conservation standards.

Natural Resources Canada was excited about the potential for "Solar Dried" coffee and offered to provide independent third-party monitoring of the performance. The goal was to show other coffee producers the energy savings that occur with solar drying technology.

This project was also included in the International Energy Agency Task 29 program to demonstrate solar drying as an alternative to burning fossil fuels. Displacing wood as the primary energy source for drying yields substantial benefits for the facility, including lower operating costs.

Solution

A 860 m^2 (9,250 ft^2) black SolarWall® system was installed on the roof at the Coopeldos facility. The warmed air that is collected from the system 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,

The all-metal SolarWall® system at the Coopeldos cooperative drying facility, which is owned collectively by over 500 local coffee producers.

U.S.A.
Conserval Systems Inc.
4242 Ridge Lea Rd, Suite 28, Buffalo NY 14226
P: 716-835-4903 F: 716-835-4904
E: info@solarwall.com
www.solarwall.com

Canada
Conserval Engineering Inc.
200 Wildcat Road, Toronto, ON M3J 2N5
P: 416-661-7057 F: 416-661-7146
E: info@solarwall.com
www.solarwall.com

Europe
SolarWall Europe Sarl.
66 Avenue des Champs Elysees
75008 Paris, France
E: info@solarwall.eu
www.solarwall.eu

SolarWall® systems are patent protected. SolarWall® is a registered trademark of Conserval Engineering, Inc.