

Coffee Drying Café Duran







A black SolarWall[®] system over two roof sections at a new beneficio in the coffee-drying region of picturesque Sona, Panama.

Displaced fuel

Background

Cafe Duran is Panama's largest coffee producer. In 2004 the company began an expansion process which included planting thousands of acres of new coffee plants. A new state-of-the-art beneficio was also built to dry the coffee, and it is projected that this new facility will process 700 tons of coffee each year.

In Panama it is still common for drying facilities to use wood as the source of fuel. This is problematic because a consistent level of heat cannot be guaranteed, and burning wood is harmful to the environment in terms of carbon dioxide emissions and deforestation. This was the motivation for the company to explore a secondary drying option, and the SolarWall® technology met all their requirements in terms of being able to deliver a consistent supply of energy from a clean source.

Solution

The SolarWall® solar drying system, totaling 900 m² (9670 ft²) was installed on two roof sections of the new drying facility. The coffee is processed in two stages; first in mechanical dryers, then in storage silos, where additional heat is added to complete the drying process.

The Low Roof SolarWall[®] section provide 40,000 cfm of solar heated air to the first oven for the vertical coffee dryers. The High Roof SolarWall[®] section provide 20,000 cfm of solar heated air to the heated coffee storage silos.

The solar system works in conjunction with a traditional wood drying system, with the SolarWall® being used during the day, and wood at night. Solar drying remains the preferred energy source at Café Duran since it supplies heat at a temperature that will not burn or harm the coffee beans. As well, the system provides free heating now and for decades to come.

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