



GOING GREEN

FISCALINI CHEESE COMPANY

Merging Green Technology With Reverence For The Land

Fiscalini Cheese Company of Modesto, California, has recently initiated a green project of grand proportions, creating a methane digester that will help to reduce the 530 acre farm's carbon imprint by recycling manure, whey and feed waste into electricity. Currently under construction, it should be operational by this summer.

The methane digester—two large 14-inch thick concrete tanks, each 86 feet in diameter and 24 feet tall, with plastic tops—will act as incubators, keeping the fresh manure generated by Fiscalini's 1500 Holstein, Jersey and Brown Swiss herd at a constant 100 degree temperature. In addition, whey from their cheese making facility plus any feed not eaten by the cows each day will be pumped into the tanks. The digester is kept warm by the process of radiant heat: 1-inch plastic tubing that run under the floors and coil through the concrete walls. Fiscalini also plans to grow Sudan Grass, which requires much nitrogen (derived from the manure), to use as silage, feeding it directly into the tanks on a daily basis. This compost combination will further help to break down any material not fully digested by the cows, thus creating the methane gas that is captured under the plastic tank tops. The produced methane is then piped to an engine that will power a generator located near the cheese plant to produce electricity. Capturing and using recovered methane provides a valuable, clean-burning energy source that improves air quality for the local community, encourages industrial safety and reduces greenhouse gas emissions.

The generated electricity will be sufficient to power the dairy barn (which holds 54 cows at one time) plus 88,000 square feet cheese plant in addition to sending at least the same amount back to the grid, for community use. The engine will further minimize waste—specifically water—serving as a two-tiered heat exchanger, producing hot water and steam. The hot water will be recycled through the coils to warm the tanks and also provide preheated water for the farm's sanitary use. The steam will heat both vats and pasteurizer in the cheese plant.

The recycling does not end here. After the manure passes through tanks—this process takes about 40 days—whatever end product remaining will be dried and used as bedding for Fiscalini's happy Holsteins, Brown Swiss and Jerseys and sold as a nutrient-rich substitute for peat moss. All Fiscalini cheeses will soon wear a "green sticker" logo—bearing the acronym PURE (Produced Using Renewable Energy)—which John Fiscalini helped design.

Said John Fiscalini, "Our family dairying tradition goes back many generations. Acting as responsible stewards of the earth—tending both animal and land—is who we are. To be one of just a few dairies west of Michigan to research, evaluate and invest in green technology of this magnitude is a natural extension of our devotion. It's an achievement we're proud of and hope to share and educate others in our field, world-wide, who believe going green is the right, ethical thing to do. From a business perspective, it's the smart choice, too."



Is "Green Cheese" in our future?"

YES

Fiscalini Cheese is now creating their award-winning hand-crafted raw milk cheeses with electricity provided by methane digesters on their farm. The manure and whey are used to "feed" the methane digesters and enough power is produced to run the farm and cheese operation and sell back to the grid. Fiscalini is also the first dairy in the country to be awarded certification for animal welfare practices.

Fiscalini's raw milk, hand-crafted cheeses have won many national and world awards for the last eight years.



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