

# The Fresno Bee

## Valley dairies go green, harness methane for energy -- and cash

By Robert Rodriguez

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ERIC PAUL ZAMORA/THE FRESNO BEE

Renee Rippchen, vice president of sales and marketing for BioEnergy Solutions, walks on top of thick sheeting covering a special lagoon for anaerobic digestion of manure at the 2,800-cow Vintage Dairy in western Fresno County.

The battle against global warming may turn out to be a boon for a California industry long targeted by environmentalists -- dairies.

Some dairy farmers have been so successful in reducing air pollution from animal waste that they are earning revenue from other industries that need help meeting their own emission goals.

Those transactions are tied to a controversial idea called "cap-and-trade," a system that lets companies meet air-pollution requirements by getting credit for reductions that other companies achieve.

Some critics on the conservative right, often skeptical that global warming is even a real problem, call cap-and-trade a pointless and expensive government intervention. Some critics on the left say the practice allows industrial polluters to buy their way out of tighter emissions controls.

But both state and federal governments are pushing cap-and-trade systems all the same, backed by supporters who say the practice creates a practical, market-driven tool to reduce emissions.

That has created a potential revenue source for California's struggling dairy industry -- and it could offer a glimpse of how the battle against global warming will be fought nationwide.

"Cap-and-trade does get a lot of people excited," said David Albers, president of the 2,800-cow Vintage Dairy in western Fresno County.

For years, dairies have come under scrutiny because cow manure releases methane as it decomposes. Methane is among the greenhouse gases blamed for global warming.

Across California, however, some dairies have been able to reduce the emissions with methane digesters, which work by capturing gas for use as fuel instead of allowing it to be released.

Albers uses a system that collects methane in covered manure lagoons and processes it. The refined natural gas is fed into a pipeline and sold to Pacific Gas & Electric Co.

Albers also operates a company called BioEnergy Solutions, which helps build digesters. He is trying to raise money to build a network of 40 digesters on dairies throughout the region, and he has been approached by several brokers interested in selling his clean-air credits, also known as "offsets."

"We get lots of offers, but we haven't moved on any of it yet," Albers said. He's waiting for the price to go up.

Brokers and investment firms are taking notice.

"We think the potential for dairies to profit is very good," said Yves Legault, a representative of Financial Solutions Consultant, a Quebec-based firm.

Legault's company is working with 28 dairy operators in the Valley to participate in the offset market.

California is ahead of the rest of the country in the effort to create a cap-and-trade system. While Congress continues to debate how it will reduce greenhouse gases, California passed landmark legislation in 2006. The state has set an ambitious goal of achieving an 80% reduction in 1990 greenhouse gas levels by 2050.

To help meet that goal, the state's cap-and-trade program will go into effect in 2012. That program will set limits on emissions and allow for credits to be traded.

The effort reflects a national movement. Even though there is no mandatory national cap-and-trade program yet, voluntary sales already are taking place on the Chicago Climate Exchange, North America's only cap-and-trade market.

Industrial polluters and investors are hedging their bets and have begun buying credits now in anticipation of a mandatory program -- and a potential price hike.

Dairies aren't the only likely beneficiaries. Other agricultural industries also have found ways to reduce their carbon footprint, through methods such as planting more trees or tilling farmland less often. Credits from those efforts also can be traded.

But to Valley dairy farmers in particular, any potential for extra revenue is welcome. Last year was one of the worst for dairy farmers, who struggled with record low prices. Many dairies shut down.

There are challenges. Unlike most commodities, carbon credits are difficult to quantify.

"This isn't like selling corn that you can touch and feel," said Carl Morris, general manager of Joseph Gallo Farms in Atwater. "Your system has to be verified and measured."

Dairy credits are sold on a per-ton basis, and verification by a third party is necessary to ensure that practice is authentic and the amount of greenhouse gas is measurable.

Another difficulty is that some dairy operators have been forced to shut down their digesters because, ironically, of pollution concerns.

The San Joaquin Valley Air Pollution Control District has placed restrictions on exhaust from engines, including engines on generators powered by the biogas produced by the digesters.

Ron Koetsier -- an early adopter of methane digesters -- recently shut down his system because he could not afford the \$150,000 in upgrades needed to meet the district's air-quality regulations.

Before he shut his system down, Koetsier had produced \$12,000 in offsets.

"I know that a lot of people are excited about this cap-and-trade program, but I am not so sure about the whole thing," Koetsier said. "The one thing I know for sure is that the offsets are not going to pay for the upgrades I need."

Indeed, it's still not clear how much farmers might earn from the offset market.

"We are proceeding cautiously," said Greg Tevelde, who runs a dairy in Tipton. "But if someone wants to give me money for something I am already doing, then I'll take it."

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