

Dairy farmers and regulators “mixing” their way toward cleaner air in the San Joaquin Valley

Dairy farmers in the San Joaquin Valley have a long history of working with the San Joaquin Valley Air Pollution Control District (SJVAPCD) to improve air quality. Through this partnership, regulatory officials and dairy farmers have created innovative pathways to decrease the use of fossil fuels and significantly reduce air pollution. Through the SJVAPCD’s latest incentive-based program, dairy farmers will continue to make tremendous progress.

This cooperative partnership was an important part of the conversation at the inaugural [California Dairy Sustainability Summit](#), held November 27-28 in Sacramento. Through a panel discussion, SJVAPCD Executive Director Samir Sheikh and leading officials from other state and local agencies shared their visions for helping dairy farmers continue to achieve milestones in environmental stewardship. Sheikh noted that research and cooperation have been critical to implementing effective technologies and strategies for reducing emissions on dairy farms. He noted that while there are still significant challenges ahead, much progress has been made.



Through the San Joaquin Valley Air Pollution Control's Electrified Dairy Feed Mixing Program, dairy farmers will continue making significant improvements to air quality.

“The dairy industry and the ag industry in general have been great partners over the years in developing what are considered the most innovative regulations in this area,” Sheikh said.

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Todd DeYoung, Manager of Strategies and Incentives for the SJVAPCD, also spoke at the summit. He discussed efforts to work with dairy farmers in designing cost-effective incentive programs that will play an important role in achieving aggressive goals to reduce smog-form emissions, known as criteria pollutants.

“A number of clean air milestones can be largely attributed to efforts and investments made by Valley dairy farmers,” DeYoung said. “Despite significant reductions, more reductions are still needed to meet ever-



Todd DeYoung, Manager of Strategies and Incentives for the SJVAPCD spoke at the California Dairy Sustainability Summit, November 27-28.

tightening state and federal air quality standards. Incentive-based programs are critical for achieving further reductions in new attainment strategies.”

The SJVAPCD’s most-recent incentive program was inspired by dairy farmer Phillip Verwey’s idea to electrify the daily feed-mixing process on his farm. With help from Milk Producers Council, the initial project was designed and implemented, utilizing funding from the SJVAPCD’s Technology Advancement Program, which encourages the development of innovative technologies and strategies.

Through this initial pilot project, regulatory officials worked to understand the farm’s daily operations. Each day, dairy cattle are fed a carefully calculated mixture of forages, grains, and other feed ingredients, designed to be both appetizing and highly nutritious for cows. About 41 percent of feed ingredients used on California dairies are agricultural byproducts, such as almond hulls, cotton seed, citrus pulp, and brewer’s grain, which could otherwise be wasted. Traditionally, these meals are mixed and delivered in diesel-powered trucks and tractors. By implementing a large electric-powered stationary mixer, Phillip Verwey Farms in Hanford created a more efficient system, greatly reducing the number of hours tractors are operated.

The electric feed mixing system has been operating at Phillip Verwey Farms since October 2015. By replacing diesel powered equipment and making the feeding process more efficient, the conversion eliminates the emission of 20 tons of criteria pollutants each year—equivalent to the emissions from 7,800 passenger vehicles. This project became the model for the SJVAPCD’s current [Electrified Dairy Feed Mixing Program](#).

The program provides financial incentive in the amount of 75 percent of the total cost of eligible equipment and infrastructure, up to a maximum cost effectiveness of \$30,000 per ton of emissions reduced. Once approved, grant applications are fulfilled on a first-come, first-served basis. The first project was installed on a dairy farm in Chowchilla in December 2018.

Next in line, Bar 20 Dairy of Fresno will soon be implementing the new system. Like other dairy families, the Shehadey family applied immediately when the pilot program became available.

“We’re always looking for new ways to improve on our farm, and we’re excited to take this next big step,” said Steve Shehadey of Bar 20 Dairy. “Our family and our employees live and work in the Valley, so we care a lot about helping clean the air.”

To date, 15 dairy farmers have submitted applications. The program’s total expected reduction so far—with just four farms under contract—is estimated to be more than 293 tons of criteria pollutants over 10 years. That’s an annual reduction of criteria pollutants equivalent to the emissions from 11,500 passenger vehicles. The SJVAPCD will continue working with a growing number of dairy farm families to implement electrified feeding projects, helping the SJVAPCD achieve measurable air quality goals and allowing California dairy families to continue doing their part to improve the Valley air.

California dairy families remain dedicated to improving air quality.

Dairy Cares is a statewide coalition supporting economic and environmental sustainability and responsible animal care. Our members include Bar 20 Dairy Farms, California Cattlemen’s Association, California Dairies Inc., California Dairy Campaign, California Dairy Research Foundation, California Farm Bureau Federation, Dairy Farmers of America-Western Area, Dairy Institute of California, F & R Ag Services, GHD, Inc., Hilmar Cheese Co., Joseph Gallo Farms, Land O’Lakes, Merck Animal Health, Milk Producers Council, Ruan Transport Corp., Yosemite Farm Credit, Zenith Insurance Company, and others. For information, visit DairyCares.com or call 916-441-3318. To subscribe to the monthly e-newsletter, contact dairycares@gmail.com.