



Successful Clean-Air Programs Await Continued Funding

A look at the California dairy sector, tractor replacement, and other clean-air innovations.

California farmers have made major strides to help clean the air. Over the past two decades, about [15,000 pieces of agricultural equipment](#) in the San Joaquin Valley have been replaced with newer, cleaner versions. This has been done in partnership with the state, with public and private investments totaling about \$2 billion throughout that timeframe. Replacing older farm equipment with newer models has provided major air quality benefits by drastically cutting diesel use and the resulting emissions.

Unfortunately, public funding to support tractor replacement has been largely eliminated in recent years, while the need for it continues to grow. Tractor sales across the United States have slowed significantly since 2024, largely attributed to economic conditions. However, farmers, including dairy farmers and other growers remain highly interested in newer equipment that provides benefits to both economic and environmental sustainability.



A robotic, electric-powered feed pusher moves feed closer on a Merced County dairy farm.

Incentive programs provided through the California Air Resources Board (CARB) and local air districts have been playing a major role in promoting innovation and equipment replacements. This includes CARB's Clean Off-Road Equipment Voucher Incentive Project (CORE) and the San Joaquin Valley Air Pollution Control District's Agricultural Tractor Replacement Program (which received funding from the FARMER program). Here's a look at some of the latest equipment innovations taking place on California's dairy farms, investments made possible with support from the incentive programs:

Electric Tractors and Feed Pushers

Dairy farmers have been among the early adopters of electric farm equipment. One of the daily tasks on a dairy farm is to push the feed back to being closer within the cows' reach, encouraging them to eat more before feed is replaced with a fresh batch. Feed pushing is traditionally done about every four to six hours by an employee using a small diesel-powered tractor. As a newer, alternative option, electric-powered robotic feed pushers (which stand about three-and-a-half feet tall) can complete this task on a more frequent basis—encouraging cows get their full nutrition, while saving time and fuel.

Another option is the use of relatively small electric tractors to perform this task. Michael Oosten, a third-generation dairy farmer in Los Angeles County, purchased four Monarch electric tractors in 2023 with support from the CORE program. The electric tractors are used to push feed, move irrigation pipes, and perform other farm tasks.

While the challenges remain in electrifying larger agricultural machinery for heavy-duty, continuous tasks like planting and harvesting, the equipment industry is working to address limitations through technological advancements and operational strategies. California dairy farmers have piloted such equipment, providing helpful feedback to manufacturers.

Methane-Powered Tractors

One of the latest technologies starting to pop up on California dairy farms is methane-powered tractors. These tractors run on refined biogas or compressed natural gas (CNG), such as the kind produced by dairy digesters. California dairies are leading the way, as the first methane tractor deployed in North America is on a Stanislaus County dairy, and it was [funded in part by the Agricultural Tractor Replacement Program](#). According to the manufacturer, New Holland America, the tractor has the same power and torque as its diesel equivalent engine, but with lower running costs, while producing 98 percent less emissions of particulate matter.



Wyeth Dairy in Stanislaus County uses a methane-powered tractor, purchased through the District's Agricultural Tractor Replacement Program. Photo courtesy of Kelly Burgess.

Electric Feed Mixing Program

Perhaps California's dairy's most impactful clean-air story remains the District's [Electrified Dairy Feed Mixing Program](#). Through this incentive program, 22 projects have now been implemented on California dairies, resulting in a total estimated annual emission reduction of 169 tons—equivalent to removing more than 1,000 heavy-duty trucks from the road. The program has also been utilized to [make further advancements](#) in automation, efficiency, and electrification.



Over Subscribed Programs

In July 2025, the District suspended new applications to the [Agricultural Tractor Replacement Program](#), noting it had received pending requests totaling about \$700 million, far more than that amount of funding available. The program's budget was reduced to \$2 million in the 2024-25 state budget, and no money was included for it in the 2025-26 budget. The program's webpage states that, "The District remains fully committed to working in close collaboration with the Governor's Office, the State Legislature, and Valley stakeholders to underscore the ongoing importance of this program in supporting clean air efforts in the San Joaquin Valley." The Agricultural Tractor Replacement Program [is credited with](#) removing 380,000 metric tons of carbon dioxide equivalent emissions and 27,500 tons of air particulate matter and nitrogen emissions since 2017. Additionally, CARB's [CORE program](#) is also fully subscribed but voucher requests are still being accepted for a waitlist. Given current economics, the availability of funding to help reduce costs to farms will continue to be critical to ongoing investments in cleaner equipment. This important conversation will be a part of the sixth [California Dairy Sustainability Summit](#), to taking place on March 24, 2026, at the Visalia Convention Center.

California dairy farmers are doing their part to invest in a clean-air future.

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Dairy Cares is a statewide coalition supporting economic and environmental sustainability and responsible animal care. Our members include Bar 20 Dairy Farms, Clover Sonoma, California Dairies Inc., California Dairy Campaign, California Dairy Research Foundation, California Farm Bureau Federation, Dairy Farmers of America, Dairy Institute of California, F & R Ag Services, Hilmar Cheese Company, Joseph Gallo Farms, Land O'Lakes, Inc, Milk Producers Council, Valley Milk, LLC, Saputo, Yosemite Farm Credit, Zenith Insurance Company, and others. For information, visit [DairyCares.com](https://dairycares.com). To subscribe to the newsletter, contact news@dairycares.com.

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