



Dairy Cares News, October 2022

California Dairies and Partners Nationally Recognized for Saving Billions of Gallons of Water

California's most precious resource today is water. Making every drop go further couldn't be more important. Water conservation has been an ongoing endeavor for the state's dairy farmers, who have reduced the water footprint of a glass of milk by more than 88 percent over the last 50-plus years. One newer strategy that California dairy farmers are adopting is helping to save billions of gallons of irrigation water. The effort has been nationally recognized as a partnership that's making a splash in water efficiency and conservation, among other significant environmental benefits.

A growing number of dairy farms are saving about 36 percent of the water needed to grow feed crops by using a Subsurface Drip Irrigation system to apply dairy effluent (known as SDI-E). Using this method, dairy farmers apply a mix of fresh water and manure-nutrient water directly to the plant's roots via drip lines. The approach increases the nutrient use efficiency of crops, meaning more of the applied fertilizer makes it into the plant, better protecting groundwater. Already, 26 California dairy farms are implementing the system on one or more fields, resulting in a collective annual water savings of more than 1.3 billion gallons of water.

The innovative irrigation model allows dairy farmers to tap into an existing resource and use it most efficiently. California dairy farms use recycled water to flush manure from barn floors, and finally to irrigate feed crops. Combining the advantages of a traditional sub-surface drip irrigation system with dairy effluent applications required some work. The technology was developed through a pilot project and further [proven through a three-year commercial demonstration](#), which led to eligibility for federal cost-share opportunities to promote on-farm adoption.

The significance of this water-saving effort has not gone unnoticed. This July, the national [Irrigation Association \(IA\) recognized the SDI-E](#) project as the winner of its Vanguard Award, aimed to pay tribute to innovation in efficient irrigation. Project partners include the technology provider, [Netafim USA](#), along with dairy farms and others, including [Sustainable Conservation](#), a nonprofit that works with farms and other businesses around the state.

“Some of our industry's best work comes through partnerships comprised of different companies, experts and perspectives,” said Irrigation Association CEO Natasha Rankin in the Vanguard award announcement. “The SDI-E project is a great example as it uses new innovative technology to accomplish sustainability and water use efficiency goals, while also supporting essential economic and operational needs of the dairy industry.”



Manure-nutrient water from a storage lagoon goes through an advanced filtration system and is mixed with fresh water before being applied to feed crops via sub-surface drip line.

Adoption of SDI-E on California dairy farms to date has resulted in a total annual water savings of 1.3 billion gallons of water.

Adoption of the SDI-E system is being made possible through public and private investments. The U.S. Department of Agriculture Natural Resource Conservation Service (USDA NRCS) funded the original demonstration project, which resulted in the system being eligible for cost-share incentive funding through NRCS' [Environmental Quality Incentives Program](#) (EQIP). The California Department of Food and Agriculture (CDFA) is also promoting adoption by providing cost-share funding through its [State Water Efficiency and Enhancement Program](#) (SWEET). These incentive opportunities are helping farmers to make the significant capital investments needed.

Dairy farmer Michael Vander Dussen of Merced County was awarded SWEET funding and is installing the effluent irrigation system, matching the program funding with the farm's own investment. The Vander Dussen family has been dairy farming in California since the late 1940s, when they immigrated from the Netherlands. Many new technologies have been implemented at Double Diamond Dairy over the years, and the family sees this project as another important investment in environmental resiliency and economic sustainability.

"To say we are concerned about California's water situation is an understatement. We want to continue to farm here in our home state, so investing in our irrigation technology and doing everything we can to conserve is critical," Vander Dussen said.

Beyond seeing a total water savings on his feed crop, Vander Dussen said he also looks forward to seeing the other practical benefits that the SDI-E can provide, including water efficiency gains (more crop per drop), better protection of groundwater, more efficient application of nutrients and reduced need for synthetic fertilizers, and decreased greenhouse gas emissions. These are all critically important benefits, as California's 1,100 family dairy farms work to further improve sustainability.

California dairy's development and adoption of the effluent irrigation system is a shining example of how, through partnership, new ideas can come to fruition and make a positive impact. Dairy farmers, university researchers, conservationists, technology providers, government agencies, and others are continually working together to advance planet-smart and water-smart dairy farm practices. All parties play an important role in helping family farms cope with increasing water scarcity and better protecting our precious natural resources. The SDI-E project and other irrigation award winners will be honored at the 2022 Irrigation Show and Education Week in Las Vegas on Dec. 5-9.

Water-smart dairy advances are coming to life via innovation and partnerships, bringing hope and resilience to the nation's leading dairy state.

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**- Michael Vander Dussen
Merced County Dairy Farmer**

Dairy Cares is a statewide coalition supporting economic and environmental sustainability and responsible animal care. Our members include Bar 20 Dairy Farms, 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, Hilmar Cheese Company, Joseph Gallo Farms, Land O'Lakes, Inc, Milk Producers Council, Ruan Transport Corp., Valley Milk, LLC, Yosemite Farm Credit, Zenith Insurance Company, and others. For information, visit DairyCares.com. To subscribe to the newsletter, contact news@dairycares.com.

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