



Dairy Cares News, February 2023

California's Water-Smart Dairy Farmers Double Down on Resiliency

Dairy farmers are addressing water challenges to protect the well-being of their communities.

Water scarcity is one of the greatest challenges facing California. State leaders and stakeholders are taking important actions to improve water resilience. Dairy farmers are also doing their part to understand how climate change and the path toward groundwater sustainability will impact their farms and communities, and what opportunities exist to improve smart water use.



Dairy Cares and the California Cattle Council commissioned an [economic assessment](#) of the Sustainable Groundwater Management Act (SGMA) on the San Joaquin Valley dairy and cattle industries. The report—performed by [ERA Economics](#) and released on February 3—analyzed local-level data and documented a total anticipated economic loss of \$2.2 billion to the state's dairy and beef sectors, with 388,000 acres fallow, and 7,530 jobs lost by 2040. Recognizing how these changes are likely to occur—primarily through higher feed costs—dairy farms and allied businesses are aiming to alleviate the expected impacts.



One key finding in the economic report is that dairy feed crops are economically significant per unit of water used. When silage and hay production are recognized as inputs to milk and dairy foods, these crops are equivalent in value to commonly cited “high value” crops such as nuts and vegetables. Growing some of their own nutritious animal feed is an effective strategy for family dairy farms that aim to ensure economic sustainability. Furthermore, dairy feed crops play an important role in the San Joaquin Valley economy, in addition to their [contribution to ecosystems](#), and ultimately in supporting the health and nutrition of people. Part of the value to society is that milk and dairy products are one of the most cost-effective sources of under-consumed nutrients—including potassium, calcium, and vitamin D. Therefore, as competition for water increases and acres are fallowed, dairy forages remain an important crop in California.

The report recognized that SGMA will impact San Joaquin Valley farms disproportionately, depending on local access to and availability of surface water. Furthermore, last week, the Department of Water Resources determined that the Groundwater Sustainability Plans for six of the twelve local basins will need to do more to assure state agencies that their efforts are on track to achieve groundwater sustainability. This represents another bump in the road as farmers and other stakeholders continue working diligently to make difficult decisions with the goal of long-term water sustainability and resilience.

“On average, groundwater provides roughly half the water we use as Californians, so implementation of the Sustainable Groundwater Management Act is crucial to achieving future water resilience,” said Secretary Karen Ross of the California Department of Food and Agriculture (CDFA). “The Groundwater Sustainability Plan determinations demonstrate the extremely complex issues within critically overdrafted basins and the importance of collaboration to secure a future of reliable groundwater supplies. Though more work is needed to address difficult conditions in some of the subbasins, important progress is being made in a part of the state facing the biggest challenges of balancing water availability and demand. Agriculture, communities, and local

economies will all benefit from California’s commitment to sustainable groundwater management as we face a hotter, drier future in a changed climate.”

A key focus for California is building better water conveyance and storage systems to better capture and utilize water when available. This remains a key strategy on dairy farms too, where farmers continue investing in ways to better reuse water—including captured rainwater—and improve manure management to protect groundwater and reduce need for synthetic fertilizers. California dairy farms reuse water an average of four times, ultimately reusing it to irrigate feed crops.



Recognizing the complex ways that dairy farms use and reuse water, Dairy Cares is coordinating a new study with Milk Producers Council that will help to better understand net water usage on dairy farms and opportunities for further conservation. The study is being performed by engineers at 4Creeks, Inc. with funding from the USDA Natural Resources Conservation Service. By metering water usage on three dairy farms for one year, the work will help to better understand dairy’s water footprint and what practices, devices, and projects may help further improve conservation. In the meantime, dairy farms are already employing new technologies and strategies to reduce water use, including the [adoption](#) of subsurface drip irrigation systems that can more efficiently apply water and manure nutrients to feed crops.

Protecting groundwater quality is another key area of focus for California’s dairy farmers. Providing safe drinking water in areas where groundwater supplies do not meet safe standards for nitrate is the top priority, while they also work toward longer-term solutions. Dairy farmers are participating alongside other water users in [local management zones](#) that have been conducting outreach and encouraging people to apply for free well testing and drinking water if needed. More than 1,400 rural residences have received free well testing, and nearly 1,000 households are currently receiving free drinking water deliveries, in addition to more than 800 gallons delivered daily to Central Valley families via free bottle-filling stations.

Unprecedented collaboration and support is at work to help improve the long-term protection of groundwater quality and water quality outcomes from the dairy sector. Much investment and research is under way to develop new tools and solutions. For example, beginning this spring, the CDFA will offer millions of additional dollars in incentive funding to dairy farmers through a USDA [Partnerships for Climate-Smart Commodities](#) grant secured by CDFA’s partnership with the California Dairy Research Foundation, Dairy Cares, and other California dairy organizations. The new [“Dairy Plus”](#) program will provide financial assistance to adopt advanced manure management practices that reduce methane emissions and improve how manure nutrients are managed and utilized to protect water quality.

Water-smart dairy farming in California is multifaceted and continually progressing. As recognized in the economic assessment and another recent [UC study](#), California dairy farms continue to produce more milk using fewer resources. The amount of water needed to produce each gallon of California milk has already decreased [more than 88 percent](#). The state’s dairy farmers are world leaders in planet-smart practices, continually increasing productivity and efficiency. Building water resilience for California will be critical to maintaining a vibrant agricultural economy and making nutritious foods—including milk and dairy products—more accessible to all.

California dairy farmers are all in to do their part to further advance responsible water use to protect the health of people, animals, planet, and communities.

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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