



Dairy Cares Newsletter

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California dairy farmers step up efforts to protect groundwater

Farm nitrogen use and its potential impact on the environment, particularly on water quality, has recently received considerable attention from university researchers. Few of these academic assessments, however, provide an objective overview of the comprehensive efforts by dairy farmers to more efficiently, effectively and sustainably apply nitrogen fertilizer.

California dairy sustainability efforts have long included protecting water, and our farms comply with extensive groundwater protection requirements. The ongoing drought has increased concerns about the state's water supply and quality, making the conservation and protection of water resources all the more important.



The most comprehensive agricultural water-quality monitoring program in the U.S.

Dairy families have stepped up to the challenge of managing both livestock and croplands to protect water quality. Regulatory requirements in California's Central Valley, where 91 percent of the state's dairy cows are located, include annual testing of irrigation and domestic wells. In addition to the requirement to test all existing wells, dairies also participate in the

Central Valley Dairy Representative Monitoring Program (CVDRMP), a first-of-its-kind effort in the U.S. to evaluate dairy farm management practices and develop recommendations for future improvements where needed.

Established in 2010, the CVDRMP has built a network of designated monitoring wells in the Valley and has more than 1,000 participating farms that pay monthly fees to support ongoing monitoring and research in

improved management practices. The program includes 443 wells on 42 dairies from Orland south to Bakersfield, representing the range of soil, climate and cropping conditions of Central Valley dairies. Wells are monitored monthly, and a quarterly analysis is conducted for nine constituents, including nitrate. Monthly, quarterly and annual testing provides more than 16,000 raw data points each year.

By regulation, all Central Valley dairies must have a Waste Management Plan prepared by a licensed professional engineer. These plans include measures to prevent flooding and runoff, along with proper drainage and manure handling and storage. In addition, Nutrient Management Plans (NMPs) prepared by a certified agronomist help ensure healthy, high-yielding crops and water quality protection by balancing fertilizer applications to crop needs. NMPs include sampling of manure, irrigation water and harvested plant material so that an application/removal ratio for nitrogen can be calculated for each crop in every field.

World class education, outreach and innovation

Continuing education is a mainstay of California dairy sustainability efforts. For almost 20 years, the California Dairy Quality Assurance Program (CDQAP) has assisted dairy farm families with identifying and implementing environmentally friendly practices and complying with water and air quality regulations. Funded by dairy farmers through the California Dairy Research Foundation, CDQAP has provided thousands of hours of free education and training to California dairy farm owners and employees. It also offers an environmental certification program to verify compliance with applicable environmental regulations. These ongoing services are provided online and through classroom sessions, newsletters, and multi-media presentations.

Ongoing work by agricultural researchers with the University of California Cooperative Extension and others continue to provide new scientific-based management options effective in California's dairy land. Innovative management practices and technologies such as water flow meters, conservation tillage, water recycling systems and soil nitrate quick-tests are being used to improve crop management and water quality protection on-farm.

California dairy farmers have long been stewards of clean water, and that stewardship will steadfastly continue into the future. Learn more about these efforts in this Dairy Cares [video](#).

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 Farm Bureau Federation, Dairy Farmers of America-Western Area Council, Dairy Institute of California, GHD Services, Inc., Harris Construction, Hilmar Cheese Co., HP Hood, Joseph Gallo Farms, Land O'Lakes, Merck Animal Health, Milk Producers Council, Ruan Transport Corp., Western United Dairymen, Yosemite Farm Credit and others. For information, visit our web site or call 916-441-3318.