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Dairy Cares Newsletter November 2014 DairyCares.com

Dairy biogas digester development gets boost from new programs, incentives, partnerships

California dairy farms are recognized the world over as models for efficiently producing safe, nutritious and high quality milk. In a not-so-distant future, more of our state's dairy farms have the potential to produce another important product for consumers and the planet: Clean, green, renewable energy through the use of biogas digesters.

Over the past two decades, there has been active public discussion and effort toward building biogas digesters on California dairies. If it can be demonstrated to be economically viable, this technology can create renewable energy and reduce environmental impacts while creating a new source of revenue for family farmers.

Dairy digesters capture biogas from enclosed dairy manure containment ponds or tanks. Much like natural gas, manure biogas can be combusted in engines to generate electricity or in furnaces, stoves and boilers to create heat. As the natural gas economy in the U.S. continues to develop, the opportunity to use renewable natural gas from dairies only improves.

Today, the potential for dairies to be part of California's green energy future is largely untapped, with more than a dozen biogas digester projects on dairies throughout California – about 1 percent of the state's total dairies. While the technological feasibility of producing biogas from manure digesters is well established, the key to greater adoption of this renewable energy source remains economic viability.

The California Department of Food and Agriculture recently announced the creation of a new <u>Dairy Digester</u> <u>Research and Development Program</u>, an important front-end boost for expanding the number of dairy digesters. With funding from the state's Greenhouse Gas Reduction Fund (cap-and-trade program), \$11.1 million in competitive grants will be awarded for the construction of new dairy digester projects in California. These grants can provide up to 50 percent of the total cost of a new project, with a \$3 million grant cap. An additional \$500,000 will be made available for research and demonstration projects that improve the economic performance of dairy digesters in California. Another key to achieving economic viability of dairy digesters is the price paid for green, renewable electricity generated on the farm. Today's dairy bioenergy market is new and underdeveloped. However, 2015 should see significant market maturation for dairy bioenergy with the expected full implementation of the California Public Utilities Commission's bioenergy feed-in tariff mandated by <u>SB 1122</u>. This law requires that California's three large investor owned utilities collectively procure 90 megawatts of bioenergy from dairy and other agricultural sources.

At the national level, the United States Department of Agriculture released the "<u>Biogas Opportunities Roadmap:</u> <u>Voluntary Actions to Reduce Methane Emissions and Increase Energy Independence</u>" earlier this summer. The report recognizes the U.S. dairy community's 2008 commitment to voluntarily reducing greenhouse gas emissions 25 percent by 2020 (above and beyond dairy's impressive <u>63 percent carbon footprint reduction since</u> <u>1944</u>). The report also identifies actions the federal government will take to increase the use of biogas to meet renewable energy goals, strengthen the economy and reduce methane emissions, exclusively through voluntary actions.

With multiple new opportunities evolving in the near future, the California dairy community remains optimistic about the potential to develop more cost-effective, environmentally friendly dairy digesters to our state. With the right economics, California dairy families will be able to add clean, green renewable energy to the list products they already provide for our state, nation and world.

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 Council, Dairy Institute of California, GHD, Inc., Hilmar Cheese Co., 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 DairyCares.com or call 916-441-3318.