



Dairy Cares News, July 2023

Climate-Smart Cows: California Boosts Efforts to Reduce Methane with \$25 Million Investment

California's dairy sector is on a path to [achieving climate neutrality](#) by as early as 2027. Progress has been made through decades of advancing production efficiency and the [unprecedented, ongoing investments](#) in improved manure management. [Researchers anticipate](#) that the adoption of methane-reducing feed additives will soon be an added boost on this journey to climate neutrality. The state is advancing efforts with \$10 million in research funding and \$25 million to create a new, early adopter program to incentivize reductions of enteric methane emissions in the dairy and beef cattle sectors.

The new program will add momentum to multi-stakeholder efforts to turn cows into climate solutions. About 30 percent of California's total annual methane emissions come from beef and dairy cattle enteric releases (i.e., belching or enteric methane). Extensive university research demonstrates that promising feed additives are being developed to significantly reduce these emissions when included in feed rations. Seaweed, fatty acids, oregano, essential oils, and tannins are just a few of the materials being explored.

It is estimated that these feed supplements, when commercially available, could reduce dairy and beef cattle emissions by 30 percent or more. Given methane's short-lived nature, its reduction goes a long way in quickly reducing atmospheric warming. In California, stakeholders are addressing barriers and preparing to make climate-smart cows a reality.

As Forbes described it, "[the cow burp phenomenon](#)" is very complicated and has merited its own climate action summit. This past May, the UC Davis College of Agricultural and Environmental Sciences, The UC Davis CLEAR Center, and the California Department of Food and Agriculture (CDFA) hosted a [State of the Science Summit](#). All hands were on deck, as researchers from public and private institutions, staff from state and federal agencies, and professionals from throughout the dairy and livestock supply chains discussed their current work and short and long-term goals. The global non-profit Environmental Defense Fund (EDF) has been a [leader in assessing](#) the challenges, interviewing farmers and ranchers, and developing recommendations to maximize funding and resources.

"Understanding the needs and challenges of farmers is extremely crucial because these solutions have to be, at the end the day, deployed at the farm," said Vrashab Kapate, Manager- Dairy Industry of EDF+Business during a panel discussion at the summit.

Given the long list of potential solutions and the long checklist of requirements to ensure effectiveness without negative unintended consequences, rigorous research is key. Solutions must be safe for animals and people, acceptable to consumers, capable of being included in daily rations, and economically viable. The CDFA has been working hard to keep up with the "the state of science," so they can help to fill gaps as they administer the new 2023 [Livestock Enteric Methane Emission Reduction Research Program](#) (LEMER-RP). The California Budget Act of 2022 provided \$10 million to fund demonstration trials to evaluate additives and dietary modifications that have the potential to reduce enteric methane emissions in the dairy and livestock sectors.



State and federal agencies play several important roles in preparing for widespread adoption of such strategies, especially since the beef and dairy industries are highly regulated to ensure quality and food safety. Government can also assist with offsetting adoption costs through incentive funding, as California is now aiming to do. The EDF believes that incentivizing farmers and financing implementation is an area where all parties can work together: government, food and beverage companies, philanthropists, and other private investors. Verifying and accounting for emission reductions is critical in making this possible.



Dairy Cares, with support from the California Dairy Research Foundation, Nestlé, Starbucks, and California Dairies, Inc., has been coordinating an effort to utilize expertise from Verra and leading researchers in developing a protocol and calculator for the California Air Resource Board (CARB)'s consideration. Creation of a CARB-approved calculator will provide a highly credible way to monetize reductions achieved through voluntary adoption. It will also allow for verification of emission reductions within the supply chain.

Global food and beverage companies are acknowledging methane-reducing feed additives as a significant opportunity to invest in emission reductions within their supply chain (insetting). Chocolate manufacturer [Barry Callebaut](#) is already compensating dairy farmers who feed Agolin, which reduces enteric methane by about 10 percent. Other food companies are aiming to do the same as additional feed additives become available. A new company, [Athian](#), has created the world's first carbon marketplace for the livestock sector. Athian's mission is to help the beef and dairy value chains to capture and claim carbon credits earned through sustainability efforts.

As pieces of the puzzle are coming together, Governor Newsom signed a budget this month that includes \$25 million for kick-starting adoption. The CDFA will be developing and administering the new program. The goal is to incentivize California dairy farmers and other livestock producers to incorporate feed additives or other strategies to reduce enteric methane emissions as they become available. Discussions are taking place to leverage funding with additional federal and private dollars that would help maximize the potential for emission reductions. The new program will hopefully be ready to start by the second half of 2024.

While everything seems to be ramping up in California, the feeding of methane-reducing additives is also a hot topic in other places around the globe. Bovaer® is an example of one feed additive product proven to reduce enteric methane by about 30 percent in dairy cattle. It is approved for use in Europe, Brazil, Chile, and Australia, and it is expected to receive U.S. approval by first half of 2024. Other solutions are in various stages of research and development. It will be important for farmers and ranchers to have a variety of options.

A feed additive strategy makes sense for California and other dairy regions where cows are already receiving high quality diets and milk is produced with a high level of efficiency (more milk per cow). [Attaining California's current level](#) of production efficiency in all dairy regions across the globe would reduce total global greenhouse gas emissions by as much as 1.73 percent. Given this leadership, it is important that California's family dairy farms continue to be successful as they begin this next chapter in planet-smart dairy.

California's dairy farmers are climate leaders, and they are poised to achieve even greater success through ongoing collaboration, investment, and dedication.

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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