



California's Planet-Smart Dairies: A Model for National Climate Efforts

2020 has been a historic year, and the only thing for certain in 2021 is more change. President-elect Joe Biden will reenter the U.S. into the Paris Climate Agreement, renewing national commitment to reduce greenhouse gas emissions and shift toward a clean energy economy. The new federal administration plans to address climate change, relying heavily on executive action through agencies, including the United States Department of Agriculture (USDA). This will be a monumental effort, on top of the countless far-reaching challenges the pandemic has created. Tom Vilsack, Biden's nominee for USDA Secretary, is fully aware of the role dairy farms play in a sustainable and nutritious food system, their track record of reducing GHGs, and what it will take to achieve further reductions.



With support from incentive programs and through public-private partnerships, California dairy farm families have adopted many climate-smart practices, including the use of anaerobic digesters and solar panels.

Vilsack, whose nomination is still subject to Senate confirmation, has spent the past four years serving as the president and CEO of the U.S. Dairy Export Council (USDEC). He has been a part of the conversation as the national dairy sector has been voluntarily developing goals and working strategically to reduce its climate impact. At a time when dairy foods are especially critical as a source of affordable nutrition, it is reassuring that Vilsack understands the great challenges and opportunities facing the nation's dairy farmers.

"With an estimated one in six Americans and a quarter of U.S. children facing a hunger crisis, farmers reeling, and rural communities struggling to weather the pain and economic fallout of the pandemic, Vilsack will bring the experience and bold thinking needed to deliver immediate relief to farmers, ranchers, producers and families all across the country," Biden said in a news release announcing the nomination.

While food availability is paramount, there is also no doubt that the dairy sector will continue to shrink its climate footprint. Vilsack recognizes that American dairy farmers have already made tremendous achievements—reducing the carbon footprint of a gallon of milk by 19 percent since 2007 (63 percent since 1944). "I think it's important to set the stage by indicating that the dairy industry has always been committed to sustainability," Vilsack said [during a panel discussion at the virtual California Dairy Sustainability Summit](#) this past November. He then described the national dairy industry's ambitious net zero initiative, an industry-wide goal to achieve carbon neutral or better (net zero climate impact) by 2050. Vilsack noted that resources, including research and incentives, will be needed to make it affordable for dairy farms of all sizes to implement climate-smart practices and technologies.

"The federal government can be a strong partner in this [national dairy industry's net zero initiative] by providing resources, providing incentives, and providing research dollars," Vilsack said.

California is already demonstrating that incentive-based programs are highly effective in reducing GHGs, particularly methane, from the dairy sector. The state's two dairy manure methane reduction programs—the Dairy Digester Research and Development Program and the Alternative Manure Management Program—are collectively estimated to reduce 2.3 million metric tons of GHGs (MTCO_{2e}) per year, more than any other individual program in the state's climate investment portfolio. The reductions are being achieved by installing technologies and adopting new manure management practices, including anaerobic digesters, solid separators, and vacuum trucks. The state has invested a total of \$265 million to date, with more than \$422 million being provided in matching private funds.

While California's dairy methane reduction programs have been achieving much success, additional opportunities for even greater reductions can be created through research and development. One example is the area of enteric emissions, or the release of methane directly from the digestive systems of cattle. A number of feed additives are demonstrating promise to reduce enteric methane emissions from ruminant animals by 30 percent or more. As these products are further verified and eventually become commercially available, it will be critically important to ensure that these feed additives are economically viable for farmers and ranchers to incorporate into daily feed rations.

Another tremendous opportunity would be to increase the use of manure nutrients as natural soil amendments—something Biden mentioned during an October town hall. California's dairy community is currently working with researchers, non-governmental organizations, and technology providers to explore expanding the use of manure nutrients in ways that help sequester carbon. California dairy farmers have long been applying manure to build soils and fertilize their forage and grain crops, which are fed to cows. Now, dairy farmers are looking for new ideas to create a circular fertilizer economy, in which manure-based soil amendments can be used to grow even more crops. Much more research is needed to fully explore how a promising list of technologies and strategies could potentially serve the needs of dairies and other farms. This area of research and development represents a significant opportunity for public-private partnerships.

The change in federal leadership is expected to promote the public-private partnerships needed to advance the sustainability of the dairy sector. From his time at USDEC, Vilsack has seen firsthand the global demand and implications of sustainable farming practices. The market is already demanding that dairy farm and food production practices become more climate friendly, the dairy sector has already pledged its bold commitment to do so, and California has created a model to build upon.

As the U.S. embarks upon renewed efforts to fight climate change, it is imperative that initiatives remain financially feasible for family farms. That will not only ensure the viability of our culturally-rich dairy farm legacy, but also a continued, reliable supply of delicious, nutritious milk and dairy foods for the American people.



Center, Tom Vilsack spoke on a panel with national dairy industry leaders during the virtual California Dairy Sustainability Summit on November 6, 2020.

The federal government can follow California's lead—taking bold steps to nourish families while fighting climate change.

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, Dairy Institute of California, F & R Ag Services, Hilmar Cheese Company, Joseph Gallo Farms, Land O'Lakes, Milk Producers Council, Ruan Transport Corp., Yosemite Farm Credit, Zenith Insurance Company, and others. For information, visit DairyCares.com or call 916-441-3318. To subscribe to the e-newsletter, contact news@dairycares.com.