

CLIMATE SMART AGRICULTURE ALTERNATIVE MANURE MANAGEMENT PROGRAM (AMMP)

California is home to the country's largest dairy industry, with more than 1,300 dairies and more than 1.7 million cows. With the high volume of milk and other dairy products produced in the state, there can come with it environmental impacts, including methane emissions from manure and the belches of cows. Half of the state's agricultural emissions come from livestock. Methane is a greenhouse gas that is between 28 and 84 times more potent than carbon dioxide. In 2016, Governor Brown signed legislation to require a 40 percent reduction in methane emissions from the dairy industry by 2030.

In 2017, California launched the Alternative Manure Management Program (AMMP) to provide grants to dairy and other livestock producers to support their transition to manure handling and storage strategies that reduce methane emissions. These strategies include composting manure, shifting from a liquid flush system to dry scraping, advanced solids separation, and improved pasture management.



IMPACT OF AMMP

- Number of projects awarded: **57**
- Number of counties with AMMP grants: **13**
- GHG reductions: Methane equivalent to more than **711,400** metric tons CO₂e over 5 years, or to removing more than **151,000** cars from the road for one year*



FINANCES

- Awarded to date: **\$31 million**
- Budget for FY 2018-19: CDFA proposes between **\$19 to 33 million** for AMMP out of the total of \$99 million for Dairy Methane programs



ADDITIONAL BENEFITS TO CALIFORNIANS

- Improved air and water quality
- Reduction in odors caused by ammonia release
- Production of aged manure and compost, valuable soil amendments
- Reduction in pathogens that can cause food safety issues

TOP SEVEN COUNTIES AWARDED

COUNTY	TOTAL AWARDS
Merced	22
Stanislaus	11
San Joaquin	6
Tulare	5
Sonoma	3
Humboldt	2
Madera	2

AMMP is administered by the California Department of Food and Agriculture (CDFA).

*More information is available on their website:
www.cdfa.ca.gov/oefi/AMMP*

* Calculated with CDFA data and US EPA's Greenhouse Gas Equivalencies Calculator

AMMP PROFILES

Counties with AMMP Grants



ALEXANDRE FAMILY FARM Crescent City, Del Norte County

Award Amount: \$749,746

Blake and Stephanie Alexandre along with their five children operate an organic dairy and pasture-raised chicken business on a total of 7,000 acres in three Northern California counties. They attribute the high level of involvement of their children in the family business to the fact that they have made it interesting by diversifying, bottling and marketing their own milk, and hosting youth programs on the farm. The AMMP program will give them resources to upgrade some of their aging infrastructure. They will build a compost bedded pack barn to house their young stock. Rather than flushing the manure out of the alleys with water, they will instead use large amounts of bedding to produce compost underneath the cows. They will combine this material with crab shells, fish waste and wood shavings from the area to enhance the compost, then apply it to their 3,000 acres of pasture to improve soil health. This system will keep their calves healthier during the wet winters, and enables them to build a new facility that is organized and appropriately-sized.

"Our business model is to do the right thing at every turn. This project is good for our cattle, our employees, our brand identity and the environment."

- Blake Alexandre



MANUEL DASILVA DAIRY Escalon, San Joaquin County

Award Amount: \$575,000

Jerry DaSilva's father bought their dairy more than 40 years ago when he was a toddler. They have grown the business to a total of 2,000 head of cattle and 500 acres of feed production. Jerry planned to upgrade his manure handling system but did not have the financing. Now, with his AMMP grant, he will install "weeping walls" that trap manure solids in the water used to flush his barns behind a wall of slats, which allows relatively clean water to seep through into storage ponds to be recycled. This will separate up to 85% of the manure solids to be spread on fields as fertilizer after drying on concrete pads.

In addition to cutting methane emissions and reducing nitrate leaching into groundwater, there are practical advantages such as requiring less labor and avoiding handling of the sludge in his ponds that is difficult to spread and clogs pipes.

"When this opportunity came around, I hopped on it. This system will be better for my crops, better for water quality and will make me a better farmer in the long run."

- Jerry DaSilva



MAGNESON DAIRY Delhi, Merced County

Award Amount: \$559,703

Scott Magnuson's family has been running a farm near Ballico since the 1890's, and he hopes to pass the business along to his son and grandson. In 2004, they put a permanent conservation easement on the property which is on the banks of the Merced River, and in 2008 he converted to organic production. With his AMMP grant, Scott will make a number of improvements. He will install a mechanical screen separator that pushes manure solids onto a screen, moving the water out to be recycled and dropping the solids onto a concrete slab where he can shape them into windrows for composting. He will spread the compost on his pastures after the cows have rotated through to increase fertility and improve forage quantity, thereby increasing pasture time for the cattle and avoiding manure accumulation in the barns. Finally, he will also build a compost pack barn for his heifers, producing compost right underneath them by adding large volumes of bedding and aerating frequently.

"What I like about this program is that there are all kinds of innovative new ways for managing dairy emissions that help our business and the land. Hopefully our project will make our dairy more sustainable for decades to come."

- Scott Magnuson

