



Alternative Manure Management

OPPORTUNITIES TO PREVENT & REDUCE METHANE EMISSIONS
FROM CALIFORNIA DAIRY AND LIVESTOCK OPERATIONS

Jeanne Merrill, Consultant, Representing the Center for Food Safety
August 25, 2023

Dairy and Livestock Methane Emissions Prevention & Reduction

- ▶ CA Dept. Food & Agriculture (CDFA) Short-lived Climate Pollutants Recommendations, 2015:
 - ▶ “The amount of manure stored in water and, therefore in anaerobic conditions, is significantly less and methane emissions can be dramatically reduced – perhaps by more than **90 percent** – when dry systems are used.”
 - ▶ Source: Owen, Justine and Whendee Silver. 2015. "Greenhouse gas emissions from dairy manure management: a review of field-based studies." *Global Change Biology* 550-565. doi:10.1111/gcb.12687

CDFA Alternative Manure Management Program

Eligible practices include the following:

- Compost Bedded Pack Barns

Is Compost Bedding Pack right for your dairy?



Brown Swiss on compost bedding pack. She is clean and comfortable.

- # Flush-to-Scrape

in combination with dry manure storage (e.g. composting, solar drying, etc.)



- Solids Separators with dry manure storage



Photo credit: UCANR

- Pasture Based Systems: More time on pasture, conversion to pasture



AMMP Funding, 2017 - 2020

Table 1. Funds Allocated and Awarded, 2017-2022.

% Funding Allocations to AMMP						
	2017	2018	2019	2020	2022	TOTAL
Total funds for digesters and AMMP (millions)	\$50.00	\$99.00	\$99.00	\$29.00	\$37.65	\$314.65
Funds allocated to AMMP	\$9.87	\$18.25	\$30.00	\$8.93	\$18.94	\$85.99
% allocated to AMMP	19.7%	18.4%	30.3%	30.8%	50.3%	27.3%
% AMMP Applications Funded						
	2017	2018	2019	2020	2022	TOTAL
Number of AMMP applications	53	63	91	79	62	348
Number of grants awarded	18	39	50	13	27	147
% funded	34.0%	62.0%	55.0%	16.5%	43.6%	42.2%

Source: CA Climate & Agriculture Network (CalCAN)

Top Counties for AMMP projects:

Table 2. AMMP Project Awards by County, 2017-2022.

	2017	2018	2019	2020	2022	TOTAL
Merced	3	19	10	6	9	47
Stanislaus	6	5	7	2	3	23
San Joaquin	3	3	11	1	2	20
Tulare	2	3	7	3	6	21
Sonoma	0	3	3	0	3	9
Humboldt	1	1	4	0	1	7
Madera	0	2	2	1	1	6
Kings	0	1	3	0	1	5
Marin	1	0	1	0	0	2
Fresno	0	1	1	0	1	3
Glenn	0	1	1	0	0	2
Sacramento	1	0	0	0	0	1
Del Norte	1	0	0	0	0	1
TOTAL	18	39	50	13	27	147

Source: CA Climate & Agriculture Network (CalCAN)

Questions?

Jeanne Merrill, consultant

Jeanne@jeannemerrillconsulting.com

916-600-0083

Rebecca Spector, Center for Food Safety

rspector@centerforfoodsafety.org