

**From:** [Paul Sousa](#)  
**To:** [CDFA EO OEFI Dairy Plus@CDFA](mailto:CDFA EO OEFI Dairy Plus@CDFA)  
**Cc:**  
**Subject:** 2023 Dairy Plus Program Comments  
**Date:** Tuesday, May 23, 2023 2:42:35 PM

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**CAUTION: [External Email]** - This email originated from outside of our CDFA organization. Do not click links or open attachments unless you recognize the sender and know the content is expected and is safe.

These comments are provided on behalf of Western United Dairies. First, I would like to thank the California Department of Food and Agriculture (CDFA) and the California Dairy Research Foundation (CDRF) for your hard work in making the Dairy Plus Program possible. California dairy families are facing unprecedented challenges, which include meeting strict environmental mandates. This funding allows California dairy families to rise to the challenge and meet our goals to both reduce GHG emissions and protect water quality. That dual purpose of addressing both methane emissions and nutrient surplus is the shining star of this program.

The Dairy Plus Program is limited to the main advanced manure management practices of vermifiltration, weeping walls, and advanced solid-liquid separation assisted by flocculants and/or bead filters, but there are other advanced manure management practices that are included in the CDFA AMMP program and the ARB benefits calculator that could easily be included in the Dairy Plus Program. These include; conversion from flush to scrape and centrifuge. To ensure that these practices meet the standards of the program that are more stringent than AMMP there could be minimum limits set, for example on what percentage of the flushed manure must be collected through scraping/vacuuming. Perhaps these practices were considered and not accepted, but that is not clear.

On page 6 of the Dairy Plus RGA one of the eligible project components is “Advanced solid-liquid separation assisted by flocculants. . .” However, on page 9 in the first row of the table the word “polymer” appears before the word flocculant. There are various types of flocculants other than polymer based and I wonder if those other flocculants would be eligible for funding under this program.

One of the project readiness criteria is to obtain any necessary permits so that if awarded funding the project will be ready to commence. This is straightforward with air district and county build permits, but not as straightforward with water board permits. Perhaps CDFA should confer with the water boards on what the expectations of the program are and the water board’s ability to deliver something that meets the needs of the program before releasing the solicitation so that applicants have a clear path to satisfying that requirement.

The recent Dairy Plus Program webinar was very helpful and answered a lot of questions. We are still not clear on the distinction between an application to AMMP and Dairy Plus and where there is overlap or separate requirements. It is important that before the solicitation opens, it is clear what needs to be completed if a dairy is applying for AMMP only and what else is needed if they are also applying for Dairy Plus. Will the applications be submitted to the same webpage, or each to its own. The fact that the attachment numbers do not correspond between the two programs may be a source of confusion. Specifically, attachment 5 in AMMP is the GHG calculator, but that attachment

is number 4 in Dairy Plus. I understand why there is a difference, but if there was a way to align the attachments it would help remove confusion.

Again, thank you for your hard work on this and I look forward to working with dairy farmers, CDRF, USDA and CDFA on the successful implementation of this important program.

Paul Sousa  
Western United Dairies



May 23, 2023

Leadership Counsel for Justice and Accountability (LCJA) submits these comments to express grave concerns with CDFA's continued incentivization of dairy digesters, a false solution that perpetuates and exacerbates pollution in nearby communities.

LCJA works alongside the most impacted communities in the San Joaquin and Eastern Coachella Valleys. In particular, we work alongside residents who live near the largest dairies in the state, and by extension, some of the largest dairies in the country. They live with the daily impacts on their quality of life and their health. These industrial operations contaminate their drinking water and the air they breathe. They stay inside with the windows shut to avoid the deluge of odor and flies surrounding their community.

Digesters have not addressed these impacts. In fact, in many ways they have made the problem worse. Digesters do not address any of the pollution or nuisance impacts from industrial dairies. The facilities continue to pollute the air and water of nearby communities. Residents who live near digesters report continuing and even worsening odors from a dairy after it installs a digester. It is unconscionable that CDFA does not require ongoing demonstration from projects of no impact to air or water quality.

CDFA vastly overstates the purported climate benefit of digesters. First, the modeling presupposes the most GHG intensive herd and manure management practices, including an open liquid manure cesspool, as the baseline. Any capture above that is considered GHG emission reductions, even other, less GHG intensive management practices are available. Second, this accounting does not consider the full lifecycle of emissions, including feed, enteric emissions, and post-digestion emissions. Finally, DDRDP claims all of the supposed methane emission reductions from facilities that received funding. However, these same reductions are being claimed by CARB, the CPUC, the CEC, and the Aliso Canyon Mitigation fund. This undermines CDFA's assertion that its investment is an effective or cost effective climate investment.

CDFA now proposes two alarming expansions of investments in this false solution. First, it would be a mistake to fund digesters on dairies that have received AMMP funding. Public funds have already paid for interventions aimed at methane reductions and sustainable and

environmental herd management practices. CDFA must not encourage these facilities to maintain wet manure storage, which produces methane emissions and pollutes groundwater. These layered investments disproportionately benefit the largest dairies that can afford and accommodate both AMMP and DDRDP projects.

Second, the new Dairy Plus program would provide federal investments to reduce nitrate and methane pollution. LCJA takes no position on the efficacy of the interventions. We do, however, question the funding model CDFA proposes. California dairies already have an existing regulatory mandate to stop polluting groundwater with nitrates. They are failing to meet this mandate because they concentrate their herds and manure in order to maximize profits through multiple revenue streams: milk, gas, and LCFS credits. California dairies already have the ability to stop causing and contributing to nitrate contamination through improved management practices, bringing herd sizes into balance with available cropland on which to dispose resulting nitrogen, lining lagoons and corral areas, denitrification through vermifiltration and other methods, and by reducing nitrogen applications to cropland such that applications do not exceed the crop's ability to remove the nitrogen. While the draft Dairy Plus guidelines propose to incentivize some of these management practices, there is no need to incentivize pollution control activities that are already required under applicable waste discharge requirements issued and enforced by the Central Valley Regional Water Quality Control Board.

This is not the first time that we have raised these issues. As one example, attached please find comments regarding the Dairy Digester Research and Development Program that we submitted on October 16, 2019. In these comments, we noted that:

“The DDRDP is based on a false premise that by capturing methane from cow manure produced by large, industrial dairies with extremely expensive technology, the State will curb greenhouse gas emissions and help dairy farmers remain in business, all while benefiting local communities. Unfortunately, this premise is misleading and taking California down the wrong path.”

Unfortunately, CDFA chose to ignore these comments in 2019. We submit these comments to again raise the alarm that using public funds in the way that CDFA proposes will continue to perpetuate pollution in nearby disadvantaged communities. We urge CDFA to reconsider its approach. This is an opportunity to refocus on the agency's mandate to transition agricultural producers toward practices that steward the land, air, water, and climate that we all share.

Jamie Katz  
Staff Attorney  
Leadership Counsel for Justice and Accountability



Via Email: [cdfa.oefi@cdfa.ca.gov](mailto:cdfa.oefi@cdfa.ca.gov)

California Department of Food and Agriculture  
Attn: Secretary Karen Ross  
1220 N Street,  
Sacramento, CA 95814

October 16, 2019

**Re: California Department of Food and Agriculture Dairy Digester Research and Development Program**

Dear Secretary Ross,

We, the undersigned organizations, are deeply committed to tackling our state's climate crisis, while simultaneously improving air and water quality throughout the state. We envision and support investments, programs, and policies that create environmentally sustainable and just agricultural systems and truly clean energy solutions. We write in response to a recent request for comments on the Dairy Digester Research and Development Program (DDRDP), which misses the mark by instead doubling down on the problem of intense consolidation in the dairy industry that has contributed to harmful local impacts, and will delay a transition away from dirty energy. CDFA should support manure management practices for dairies that shift farmers away from the dependence on extremely high herd densities, which cause manure excess and result in over-application on cropland. The agency should additionally ensure that dairy farms receiving State funds meet water and air quality standards as a prerequisite. A holistic approach to manure management that accounts for methane, groundwater quality, and air quality is desperately needed.

The largest dairies in the state are concentrated in the Central Valley, which suffers from widespread groundwater contamination, poor air quality, heavy truck traffic, and high rates of asthma, among several other chronic and acute health vulnerabilities. Large industrial dairies contribute to these problems. These operations result in nitrate contamination in groundwater and produce air contamination beyond methane, that have local and basin-wide impacts. In the San Joaquin Valley, dairies are the largest source of ammonia, which is both a toxic air contaminant and a main precursor to fine particle pollution, and also a significant source of smog-forming volatile organic compounds (VOCs)<sup>1</sup>. A recent report on nitrate impacts from

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<sup>1</sup> San Joaquin Valley Air Pollution Control District. (Feb 2012). "Air Pollution Control Officer's Revision of the Dairy VOC Emission Factors."

[https://www.valleyair.org/busind/pto/emission\\_factors/2012-Final-Dairy-EE-Report/FinalDairyEFReport\(2-23-12\).pdf](https://www.valleyair.org/busind/pto/emission_factors/2012-Final-Dairy-EE-Report/FinalDairyEFReport(2-23-12).pdf) (p. 7)



Central Valley dairies documents elevated nitrogen concentrations beneath all dairies participating in the dairy representative monitoring program and notes significant nitrogen contamination of both deep and shallow groundwater under dairies<sup>2</sup>.

Dairy digesters do not address the dairy's contribution to air pollution and water contamination, which result in large part from dairy operations beyond manure lagoons; for example, contamination from land application of manure, silage, pre- and post-digester management of manure, and dust generally all contribute to local pollution. Approximately 96% of nitrate contamination is caused by nitrogen applied to cropland, 33% of which is from animal manure applications<sup>3</sup>. Similarly, digesters do not eliminate the noxious odors that impact nearby neighborhoods. Furthermore, digesters do nothing to address the massive climate impacts of enteric emissions which account for about half of the methane emissions from dairies<sup>4</sup>. In fact, digesters likely have a deleterious impact on the local environment by encouraging increased herd sizes to generate greater revenue from energy production and by incentivizing greater concentration of dairies around energy infrastructure. Concentrating cows and their waste will only increase the air, odor, and water impacts from dairies.

While we appreciate CDFA's consideration of incorporating programs and projects to reduce nitrate contamination of groundwater into the digester program, we cannot support an approach to this issue that relies on subsidizing dairies that continue to pollute the air and water. The dairy industry must be accountable to existing water and air quality regulations, and paying dairies to do so sends an inappropriate signal: that failing to protect water and air quality will be rewarded by State investments. Instead of paying dairies to comply with climate, air and water quality mandates, compliance should be a precondition for receiving funding from the State.

The State should refrain from putting more and more financial resources into operations in the form of dairy digesters, with no clear evidence of the benefits to disadvantaged, nearby communities. Awarded projects in the past were deemed beneficial to disadvantaged communities despite applicants' failure to demonstrate any meaningful or verifiable benefits to disadvantaged neighborhoods. While applicants for funding assistance for digesters through the DDRDP are required to demonstrate benefits to disadvantaged communities, these applications do not point to any direct reductions in air pollution from dairies as a result of digester

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<sup>2</sup> Central Valley Dairy Representative Monitoring Program. 2019. Summary Representative Monitoring Report (Revised). April 19, 2019

<sup>3</sup> Harter, Thomas. Addressing Nitrate in California's Drinking Water With a Focus on Tulare Lake Basin and Salinas Valley Groundwater Report for the State Water Resources Control Board Report to the Legislature. Feb 2012.

[http://watermanagement.ucdavis.edu/files/2214/5886/6964/Harter\\_et\\_al.\\_2012\\_Addresssing\\_Nitrate\\_in\\_CA\\_Drinking\\_Water.pdf](http://watermanagement.ucdavis.edu/files/2214/5886/6964/Harter_et_al._2012_Addresssing_Nitrate_in_CA_Drinking_Water.pdf) page 3

<sup>4</sup>CA Air Resource Board. (2019). GHG Current California Emission Inventory Data, <https://ww2.arb.ca.gov/ghg-inventory-data>



installation and operation. Instead, we find that existing DDRDP applicants rely on the purported air quality improvements from the use of biomethane to replace diesel in trucks. Unfortunately, this relies on several unsupported assumptions: that these vehicles would not transition away from diesel without the digester project, that diesel replacement is based on sure contracts with fleet operators, and that the diesel emissions reductions will take place locally. We remain deeply concerned that the most recently awarded 2019 projects will follow in the same footsteps, without any demonstrable contribution to the environmental, social, and economic wellbeing of nearby residents.

The State has invested hundreds of millions of dollars in the development of dairy digesters that will create new revenue streams in the form of gas sales and credits (e.g. Low Carbon Fuel Standard Credits) for the largest, most intensively polluting dairy farms, while the vast majority of smaller dairies are left out of both the investments and the resulting revenue streams. Biomethane production depends on massive operations and only makes sense for dairies that produce large amounts of manure handled through wet storage lagoons. Based on our estimates from the information that we have been able to obtain, dairies that received funding for digester awards averaged ~7,000 cows, though this number could be higher as data has not been made easily available to the public. By further incentivizing methane creation, biomethane production, and markets for biogas, the State is choosing winners and losers: large industrial dairies as winners, and smaller dairies as losers. From an environmental and environmental justice perspective, investments in digesters will have the perverse effect of further intensifying herd densities, further solidifying the unsustainable practice of lagoon manure management, and driving small family owned operations out of business.

Not only are the State's investments into dairy digesters only accessible to the largest dairies in the state, they are also concentrated among only two digester developer companies, California Bioenergy LLC (CalBio) of Dallas, Texas and Maas Energy Works, Inc. (Maas Energy) of Redding, California. These two developers have received all but one of the 62 California DDRDP awards in 2017 and 2018, and 100% of the funding, and have captured 100% of the funds for DDRDP's 2019 awards.<sup>5</sup>

Furthermore and despite misleading statements to the contrary, biomethane is not a clean fuel.<sup>6</sup> Burning manure-produced gas emits the same air contaminants as the combustion of fossil gas. Moreover, biomethane production costs are too high, and the supply is too constrained, for it to be a sustainable or financially feasible long-term solution. Even in the most optimistic

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<sup>5</sup> CDFA. 2019 Dairy Digester Research and Development Program Projects Selected for Award of Funds. [https://www.cdfa.ca.gov/oefi/ddrdp/docs/2019-DDRDP\\_ApplicationsAwarded.pdf](https://www.cdfa.ca.gov/oefi/ddrdp/docs/2019-DDRDP_ApplicationsAwarded.pdf)

<sup>6</sup> Food and Water Watch. Issue Brief: Biogas From Factory Farm Waste Has No Place in a Clean Energy Future <https://www.foodandwaterwatch.org/insight/biogas-factory-farm-waste-has-no-place-clean-energy-future>



renewable gas scenarios, pipeline gas blends would remain 56% fossil in 2050.<sup>7</sup> Subsidizing the production of biomethane on the backs of rate-payers and tax-payers locks California into maintaining a costly gas distribution system that the State must transition away from to meet its climate goals and protect consumers.<sup>8</sup>

The DDRDP is based on a false premise that by capturing methane from cow manure produced by large, industrial dairies with extremely expensive technology, the State will curb greenhouse gas emissions and help dairy farmers remain in business, all while benefiting local communities. Unfortunately, this premise is misleading and taking California down the wrong path. CDFA should focus instead on ways of helping the dairy industry reverse the trends that have caused severe pollution and economic challenges that will only become increasingly unsustainable in the long term.

Sincerely,

Leadership Counsel for Justice & Accountability

Kevin Hamilton

Allen Hernandez  
Executive Director

Erica Martinez  
Earthjustice

Genevieve Gale  
Executive Director  
Central Valley Air Quality (CVAQ) Coalition

Rebecca Spector  
West Coast Director

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<sup>7</sup> Energy and Environmental Economics, Draft Results: Future of Natural Gas Distribution in California (Slide 15)  
[https://ww2.energy.ca.gov/research/notices/2019-06-06\\_workshop/2019-06-06\\_Future\\_of\\_Gas\\_Distribution.pdf](https://ww2.energy.ca.gov/research/notices/2019-06-06_workshop/2019-06-06_Future_of_Gas_Distribution.pdf)

<sup>8</sup> Energy and Environmental Economics, Draft Results: Future of Natural Gas Distribution in California (Slide 6)  
[https://ww2.energy.ca.gov/research/notices/2019-06-06\\_workshop/2019-06-06\\_Future\\_of\\_Gas\\_Distribution.pdf](https://ww2.energy.ca.gov/research/notices/2019-06-06_workshop/2019-06-06_Future_of_Gas_Distribution.pdf)





Center for Food Safety



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May 23, 2023

TO: [cdfa.oefi\\_DairyPlus@cdfa.ca.gov](mailto:cdfa.oefi_DairyPlus@cdfa.ca.gov)

Re: Biofiltro's comments on the draft 2023 Dairy Plus Program Request for Grant Applications (RGA).

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Biofiltro ([www.biofiltro.com](http://www.biofiltro.com)) appreciates the opportunity to comment on the CDFA OEFI "**2023 DAIRY PLUS PROGRAM.**"

Biofiltro offers a greenhouse gas (GHG) reduction, water filtration, and nutrient capture vermifiltration system that provides the environmental benefits sought by the dairy industry and the State of California. Biofiltro vermifiltration technology is an alternative manure management practice and complementary to dairy digesters in achieving the goals set forth by USDA and CDFA. It reduces not only emissions of methane (CH<sub>4</sub>) but also of ammonia (NH<sub>3</sub>) and nitrous oxide (N<sub>2</sub>O). It removes nutrients from wastewater, including otherwise fugitive nitrogen, reduces odors, and produces reusable water and a highly biologically active product well suited as a fertilizer replacement and soil health amendment.

We are happy that the program will address not only the CH<sub>4</sub> emissions but also the excess nitrogen that generates additional GHG emissions that should be addressed when assessing the effects and benefits of state-funded projects aiming to reduce CH<sub>4</sub> emissions. Reducing CH<sub>4</sub> emissions without considering the effects of the proposed practices on NH<sub>3</sub> and N<sub>2</sub>O emissions and excess nutrients is reductive. We hope that the five-year program will result in the inclusion of the assessment of excess N and N-related emissions to the standard AMM and DDRD programs. They should be part of net benefits and scoring criteria.

The program testifies to the importance that the government and the state of California give to the impact that excess nitrogen has on the dairy sector. However, these N-related losses are not included in the AMM and DDRD programs and quantification tools. The tools assess the effects on GHG and air quality of fossil fuels and electricity, but not of the most significant manure N-related losses.

Our detailed comments follow:

- The Request for application state that "*Practices projects must go beyond the usual GHG emission reduction and benefits already provided by the AMMP and DDRDP programs* (Page 1). However, the AMMP already includes some practices eligible for the Dairy Plus program (for example, vermifiltration).

- In the eligibility criteria, on page 3, previous AMMP recipients from 2017 to 2022 are eligible. However, it is unlikely that 2022 recipients will have a completed project (projects started in January 2023). We understand that changing the proposed practice and adding additional equipment can be difficult when a project is under development. However, this would not be true for AMMP projects proposing practices now included in the Dairy Plus program. Could this scenario be added to the eligible 2022 projects?
- If the project has/plans an AMMP separator and will install a second separator with the vermifilter. The second separator is designed to add efficacy to the vermifilter, and its effects are beyond the standard AMMP project. Can this second separator be eligible for the Dairy Plus program?
- It is unclear whether the proponents will apply for AMMP/DDRDP and Dairy Plus by submitting a common narrative, budgets, and project plans for the state and Dairy Plus funds. Or if all these documents will be duplicated and address only the portion covered by the different funds. Can the narrative be in common for the state and federal parts?
- Scoring criteria. It is not clear if Dairy Plus projects will be prioritized and scored using the additional GHG reduction and the excess N removal they will provide. Alternatively, if projects that will document an additional GHG emission and excess N removal will be ranked on other parameters, independently of the size of the extra GHG/N benefits offered.
- Language should be carefully chosen to describe the extra GHG methane benefit assigned to AMMP + Dairy Plus projects. The AMMP already included the Dairy Plus practices of vermifiltration and solid-liquid separation assisted by flocculants and/or bead filters. Maybe the proponents could assign activities that are exclusively eligible for the Dairy Plus program to this program and assign the residual activities to the AMMP.
- Can the program confirm the difference in weeping walls eligibility among programs? Weeping walls eligible for AMMP must have 2 cells, for Dairy plus program 3 cells. Also, are weeping walls mechanical separators? If not, they can't be considered as the separator required by vermifiltration systems or solid-liquid separation assisted by flocculants and/or bead filters (page 3 a and c).

Biofiltro appreciates the opportunity to comment on the draft and looks forward to seeing the implementation of this simple but effective practice/technology to reduce CH<sub>4</sub>, N<sub>2</sub>O, NH<sub>3</sub>, and excess nutrients in California dairies.

Respectfully,



Cheri Harrington, Chief Business Officer



May 23, 2023

Dr. Tawny Mata  
Office of Environmental Farming & Innovation  
California Department of Food and Agriculture  
1220 N Street  
Sacramento, CA 95814  
[cdfa.oefi\\_DairyPlus@cdfa.ca.gov](mailto:cdfa.oefi_DairyPlus@cdfa.ca.gov)

**RE: Draft Dairy Plus RGA Comments**

Dear Dr. Mata,

Thank you for the opportunity to provide comments on the draft RGA for the new Dairy Plus program. We appreciate the leadership of the Department and your partners in securing these critical resources in the face of the many challenges facing the dairy industry.

We are in general support of the program goal of achieving improvements in both methane emissions and nutrient management. We are also pleased that the program provides new resources for the dairy industry to support a transition towards greater economic viability as well as meaningful and sustainable environmental stewardship. This is especially important considering the fact that state funding for dairy methane reduction has fallen far short of demand and has been fluctuating and unreliable.

However, we are disappointed that the Dairy Plus program as proposed perpetuates a pattern of stacking up more incentives for anaerobic digesters and creating a competitive disadvantage for small and medium-sized producers to modernize their manure management strategies and deliver a multitude of co-benefits. This stark disparity is apparent in Attachment A which summarizes the financing options available to digester projects compared to alternative manure management projects.

Small and medium-sized dairies are in crisis. An economic analysis conducted by UC Davis predicts that over the next two decades, dairy herd sizes will increase and the number of farm businesses will decrease, especially for dairies with fewer than 500 cows<sup>1</sup> (mainly pasture-based operations located on the North Coast). Most organic dairies in the Central Valley have gone out of business over the past decade as the price premium on organic milk has not kept pace with the higher cost of feed and land. Dairy producers tell us that they worry about their ability to stay in business, and they are watching the fabric of their communities change as more and more dairies close.

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<sup>1</sup> California Dairy: Resilience in a Challenging Environment. Chapter 6 in California Agriculture: Dimensions and Issues, Chapter 6, pp 133-161. [https://s.giannini.ucop.edu/uploads/pub/2021/01/21/chapter\\_6\\_dairy\\_2020.pdf](https://s.giannini.ucop.edu/uploads/pub/2021/01/21/chapter_6_dairy_2020.pdf)

Funding for AMMP projects can be part of a survival strategy for this sector of the industry, and they have numerous benefits to rural communities, the dairy labor force, and the environment. These include reduced nitrate leaching and nitrous oxide emissions, reduced odors, the production of valuable fertility products and/or bedding materials produced on site, and sometimes fuel, water and labor savings.

For all of these reasons, we urge you to consider using the Dairy Plus program as a tool for extending funding to AMMP projects rather than digesters, recognizing that dairies seeking digester funding have many more financing options. As currently designed, we are dubious that many producers in the North Coast or the smaller operations in the Central Valley will benefit from this opportunity.

We offer the following specific recommendations:

- Tiered prioritization of projects — We recommend the following prioritization of funding, in this order:
  1. New 2023 AMMP project + Dairy Plus Program project — The AMMP program to date has reached only approximately 13% of the state’s dairies, and is consistently oversubscribed by two to three times the available funding. These producers should be put at the front of the line.
  2. Previous AMMP recipient proposing a Dairy Plus Program project — Producers cannot re-apply to AMMP, so Dairy Plus provides a source of funding for those who have additional opportunities available on their operations to achieve additional methane emissions reductions and improve nutrient management. Further, we recommend removing the 50/50 cost share for these projects – unlike digesters, AMMP projects have few if any sources of revenue available to offset the expense of installing the equipment.
  3. Previous DDRDP recipient proposing a Dairy Plus Program project — This project type should be the lowest priority for Dairy Plus funding. Dairies that have already installed digesters may have methane emissions<sup>2</sup> and nutrient management problems associated with the digestate that can cause air and water quality impacts on neighboring communities, and this funding can help mitigate these harms.

We urge you to remove the following projects from the eligibility list. Given the numerous other sources of funding for digesters, we believe these projects should not be eligible for this additional source of public investment:

- New 2023 DDRDP project + Dairy Plus Program project
- Previous AMMP recipient with a new 2023 DDRDP project + Dairy Plus Program project — This option in particular is problematic since it could result in one producer

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<sup>2</sup> A study by Bakkaloglu et al. (2022) finds that digestate accounts for more methane emissions than the original manure. [Methane emissions along biomethane and biogas supply chains are underestimated](#). One Earth 5, 724–736. June 17, 2022.

receiving three separate grants while the majority of small and medium-sized producers have had no resources available to them to reduce methane emissions.

- Broaden eligible solid separation practice — We are unclear on the rationale for including only weeping walls as an eligible practice in Dairy Plus. Weeping walls are typically used as a primary solid separation method. Instead of restricting the options to only weeping walls, we recommend including “Addition of a secondary solid separation technology” that could be added to any eligible AMMP-funded project.
- Reduce the cap — We recommend a reduction of the \$1.25 million to \$1 million or less to improve the competitive odds for producers with dairy sizes smaller than the state average.
- Amendment to prohibitions on changes to the operation — In order to clarify that the farmer is not agreeing to forgo changes to their operation in perpetuity, we ask you to make the following edit (in italics) to the section in the middle of page 4: “Once a project has been awarded funds, *for a period of five years*, the project may not...”

Thank you for your consideration of these comments.

Sincerely,

Sandra Nakagawa  
Policy Director, California Climate & Agriculture Network

## Attachment A: Subsidies for Digesters vs. Manure Management

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### **Funding Sources for Alternative Manure Management Infrastructure**

CDFA's AMMP program — \$88.4 million in grants has funded 147 projects to date

### **Funding Sources for Anaerobic Digesters**

#### **California:**

CDFA's DDRDP program — \$203.7 million in grants has funded 131 digesters to date

CDFA's AMMP program — Dairies can apply first for AMMP and then they can then apply for a digester subsidy afterwards

California's Cap-and-Trade Carbon Market — \$14.25 per credit was the median price in 2019 when more than 2 million credits were purchased from dairies (approximate total that year = \$28.5 million)

Low-Carbon Fuel Standard (LCFS) Credits — Prices ranges widely from over \$50 to over \$200 per MTCO<sub>2</sub>e

Aliso Canyon natural gas leak legal settlement — At least \$26.5 million to fund infrastructure to capture and pipe methane from Central Valley dairies

Electric Program Investment Charge (EPIC), California Energy Commission — CEC has funded [numerous digester R&D projects](#) (most recently for a \$8.9 million project completed in 2020)

California Public Utilities Commission — Has funded pipeline infrastructure for clusters of dairies using digesters, totaling hundreds of millions of dollars

#### **Federal:**

U.S. EPA details the numerous funding options for digesters as part of their AgStar program. For a complete list, see: <https://www.epa.gov/agstar/project-planning-and-financing>

USDA Environmental Quality Incentive Program (EQIP) grants — Cost share of up to \$450,000 per project

USDA Rural Energy for America Program (REAP) grants and loans — Guaranteed loan financing and grant funding up to 25% of the project cost

Numerous other federal programs offer grants and loans for digesters including Conservation Loan Program; Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program; Bioenergy Program for Advanced Biofuels; Biomass Research and Development Program; Biodiesel Fuel Education Program; and Carbon Utilization and Biogas Education Program.



May 23, 2023

Dr. Roberta Franco  
Office of Environmental Farming and Innovation  
California Department of Food and Agriculture  
1220 N Street  
Sacramento, CA 95814

Re: 2023 Dairy Plus Program Draft Request for Grant Applications (RGA) Comments

Dear Dr. Franco:

Thank you for the opportunity to submit comments on the 2023 Dairy Plus Program Draft RGA. We appreciate that CDFA is helping to support the implementation of advanced manure management practices that address both methane emissions and nutrient surplus, particularly in light of recent groundwater regulation and potential disruption and challenges presented to land application and nutrient utilization systems that depend on irrigation water supply. These issues are particularly acute in the southern San Joaquin Valley. Bennett Environmental has been engaged in the important and difficult work of bringing new management tools and technologies to market to achieve greater sustainability. We greatly appreciate CDFA's interest, assistance, and support.

We have been working with and gathering data on several promising technologies and would like to participate in the CDFA DairyPlus Program. From our review of the draft Request for Grant Applications (RGA) and participation in the webinars, it appears that the list of approved practices is quite limited. We believe that we have identified commercially available technologies that have established design and installation procedures and practices, and that should be considered for funding by CDFA and USDA. What are the requirements for qualifying additional technologies for funding? What is the timeline and process? We understand that candidate technologies must be supported in the CARB Benefits Calculator Tools. What data is necessary to facilitate incorporation into the tools?

Thank you for your important work in this area. We look forward to your feedback so that we can help provide additional options and solutions for dairy producers in California.

Sincerely,

John Schaap, PE



**From:** [Stephen Hatley](#)  
**To:** [CDFA EO OEFI Dairy Plus@CDFA](mailto:CDFA EO OEFI Dairy Plus@CDFA)  
**Cc:**  
**Subject:** Dairy Plus Program - Draft RGA - Public Comment  
**Date:** Tuesday, May 23, 2023 4:56:21 PM

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**CAUTION: [External Email]** - This email originated from outside of our CDFA organization. Do not click links or open attachments unless you recognize the sender and know the content is expected and is safe.

Good afternoon CDFA team,

Thank you for the opportunity to comment on the draft Request for Grant Applications (RGA) pertaining to the 2023 Dairy Plus Program. The existing list of eligible project types for a Dairy Plus application submitted in conjunction with a past or current DDRDP project is currently limited to treating digester effluent with two relatively rare technologies: either vermifiltration, or dissolved air flotation with flocculent or bead separation. We recommend that CDFA expand the list of eligible project types to include other proven manure digester effluent technologies for reducing greenhouses gases and repurposing nutrients.

One such technology is the use of centrifuge equipment to separate solids from liquids in manure digester effluent. Centrifuge separation would remove volatile solids from digester effluent before the effluent pond. The draft DDRDP benefits calculator provided by CARB ([https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/cdfa\\_ddrdp\\_draftcalculatortool\\_4-26-23.xlsx](https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/cdfa_ddrdp_draftcalculatortool_4-26-23.xlsx)) includes centrifuge as a pre-analyzed separation technology whose benefits are already quantified. The separated centrifuge solids are a concentrated, organic manure nutrient that can be transported and deployed where most needed, which would also result in less volatile solids ending up in manure effluent pond leading to reduced greenhouse gas emissions. We recommend adding centrifuge separation of digester effluent solids as an explicit eligible project type for a DDRDP + Dairy Plus application.

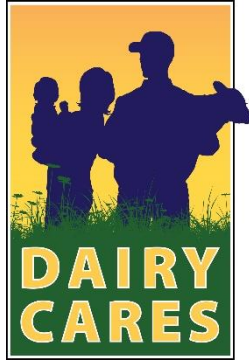
Furthermore, other commercial technologies exist that could also concentrate manure nutrients for beneficial use, while also reducing volatile solids in the digester effluent pond—thus reducing greenhouse gas emissions. Although the CARB DDRDP calculator does not specifically include them, the CARB LCFS Tier 1 Calculator for Dairy and Swine digestion (<https://ww2.arb.ca.gov/resources/documents/lcfs-life-cycle-analysis-models-and-documentation>) does include VS reduction for technologies including Roller Drums, and Belt Press/Screen. We believe the following solids removal technologies could also be added post-digester and should therefore be considered for eligibility under the Dairy Plus program to increase program participation and technology diversity:

- Dissolved air flotation (without necessarily using a flocculent)
- Coagulation with clarifiers
- Aeration tanks (if nutrients are captured)
- Advanced filtration including membranes
- Reverse osmosis membranes

Finally, because the above recommended separation mechanisms and the ones currently included in the RGA do not remove 100% of GHG emissions, we think one of the most powerful solutions for a Dairy Plus application would be to combine a hybrid of one or more of the above post-digester separation technologies with an effluent pond cover, which is an NRCS recognized practice (practice 367 and others). The use of a post-digester nutrient removal system (centrifuge or other technology listed above) that subsequently sends the resulting non-separated liquid effluent to a covered storage lagoon would achieve near total GHG emissions reduction. We recommend CDFA also consider adding this hybrid approach as an eligible practice under the Dairy Plus program.

Thank you for your consideration and continued support of the dairy industry.

**Stephen Hatley** | Chief Financial Officer  
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By email to: [cdfa.oefi\\_DairyPlus@cdfa.ca.gov](mailto:cdfa.oefi_DairyPlus@cdfa.ca.gov)

Date: May 23, 2013

Attn: CDFA Office of Environmental Farming and Innovation

Re: Comments on draft Request for Grant Applications (RGA) for California Department of Food and Agriculture's (CDFA) Dairy Plus Program

Thank you for the opportunity to comment on the above-referenced draft RGA on behalf of Dairy Cares, a coalition of California's dairy producer and processor associations, including the state's largest producer trade associations (*California Dairy Campaign, California Farm Bureau Federation* and *Milk Producers Council*) and the largest milk-processing companies and cooperatives (*California Dairies, Inc., Dairy Farmers of America-Western Area Council, Hilmar Cheese Company, Joseph Gallo Farms, Land O' Lakes* and *Producers Bar 20 Dairy*). Formed in 2001, Dairy Cares promotes the long-term sustainability of California dairies by working together to address environmental and other sustainability issues.

The proposed program offers an excellent opportunity for dairy producers to develop projects on their farms with multiple benefits, including reduced greenhouse gas emissions and other air emissions, improved water quality outcomes, and economic opportunities such as the ability to market "climate-smart" commodities and produce valuable products and co-products resulting from improved manure management, such as vermicompost, manure compost, other fertilizer and soil amendment products, renewable energy and fuels. We particularly appreciate CDFA's willingness to partner with the U.S. Department of Agriculture, the California Dairy Research Foundation, and many other groups across the dairy industry to produce a robust program that considers how best to achieve multiple environmental and economic benefits in a thoughtful way that considers the entire food chain, from farm to consumer. We strongly support this program.

We are commenting today in hopes of achieving some minor modifications in the scoring criteria for this program. Specifically, we are concerned that the scoring rubric in Appendix E allocates 15 of 50 possible points for a proposed project's "estimated greenhouse gas reduction," while placing what appears to be comparatively less emphasis on water quality outcomes. The "Project Description" section also includes 15 points, but they are divided across 11 different criteria, only two of which appear to be linked directly to water quality, section (g), "How are nutrient

management issues addressed in the dairy operation within the proposed initiative, and what co-benefits does it provide beyond greenhouse gas reduction?” and (h), “Does the description demonstrate how this project will positively impact both local communities and environmental conditions? Will the project provide benefits to priority populations? Is this project benefitting a SDFR?”

This structure suggests the possibility that less points and emphasis are being awarded for water quality benefits than for GHG benefits. We suggest CDFA reconsider this scoring system to award more points and/or place additional emphasis and priority on water quality benefits from proposed projects. Specifically, we suggest that CDFA consider:

- a) Carving out at least 10 points specifically for water quality benefits considerations, and
- b) Awarding additional points to projects that provide water quality benefits and are located within active Nitrate Management Zones<sup>1</sup> within the San Joaquin Valley or elsewhere in the Central Valley, as these are particularly sensitive areas for water quality and projects that by definition “will positively impact both local communities and environmental conditions.”<sup>2</sup>

We are happy to meet and discuss potential revisions to the scoring system to achieve the goal of elevating improved water quality outcomes while maintaining the integrity of the overall application system.

**Conclusion.** Once again, we thank CDFA for moving forward with implementation of this important program, and for the opportunity to provide comments on behalf of Dairy Cares. We are happy to answer any questions or provide other assistance as needed toward ensuring the continued success of OEFI’s climate and environmental programs.

Sincerely,



Michael Boccadoro, Executive Director



J.P. Cativiela, Regulatory Director

C: Charles “Chuck” Ahlem, Chairman, Dairy Cares  
Denise Mullinax, Executive Director, California Dairy Research Foundation

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<sup>1</sup> <https://www.cvsalinity.org/nitrate-program/management-zones/>

<sup>2</sup> Draft RGA, Appendix E, p. 26 (h).



May 23, 2023

Dr. Tawny Mata  
Office of Environmental Farming & Innovation  
California Department of Food and Agriculture  
1220 N Street, Sacramento, CA 95814  
[cdfa.oefi](mailto:cdfa.oefi) [DairyPlus@cdfa.ca.gov](mailto:DairyPlus@cdfa.ca.gov)

RE: Draft Dairy Plus RGA Comments

Dear Dr. Mata,

California Dairy Campaign and California Farmers Union appreciate the opportunity to comment on the draft Request for Grant Applications (RGA) on the Dairy Plus Program. We support the proposed changes in the draft RGA which will expand the participation of dairy farms throughout the state in the Dairy Plus Program.

California Dairy Campaign (CDC) is a grassroots organization of dairy farm families who work together on a range of issues, including efforts to address climate change. CDC is a member organization of California Farmers Union (CFU), a state chapter of National Farmers Union (NFU), representing more than 230,000 farmers who are at the forefront of the nationwide effort among farmers to mitigate and adapt to the effects of climate change.

The Dairy Plus Program will enable dairy farmers to innovate in their manure management practices by providing critical funding to overcome the economic challenges caused by weakening milk prices and high production costs. To further enhance the program's impact, we recommend prioritizing funding for those dairy farmers who are applying for the Alternative Manure Management Program (AMMP) and past AMMP grant recipients. While AMMP projects reduce methane emissions and improve water quality, they do not generate revenue, making such investment even more crucial. We urge the elimination of the Dairy Plus cost-share requirement for past AMMP recipients to ensure that economic challenges do not hinder participation. To broaden the scope of eligible practices, we advocate including secondary solid separation technologies.

The Dairy Plus Program is an important initiative for California dairy farmers to enhance their manure management practices, which can decrease GHG emissions and improve water quality. Importantly given the challenges in the dairy marketplace today, this program also enables dairy farmers to earn extra income by adopting advanced climate-smart practices on their farms and selling their products in the market.

We thank you for your consideration of our comments on the draft Dairy Plus Program RGA. We consider the Dairy Plus Program to be a valuable opportunity for California dairy farmers to achieve climate goals and sustain their farms by generating income.

Sincerely,

Lynne McBride  
Executive Director

California Dairy Campaign      California Farmers Union  
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[www.californiadairycampaign.com](http://www.californiadairycampaign.com)

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Sustainable Conservation

May 23, 2023

California Department of Food and Agriculture  
Office of Environmental Farming and Innovation  
1220 N Street  
Sacramento, CA 95814

**RE: Dairy Plus Program Draft Request for Grant Applications - Comments**

To Whom It May Concern,

Sustainable Conservation applauds the Department of Food and Agriculture for its work in administering the Dairy Plus Program, which will prove to be a valuable tool in addressing nitrate contamination and greenhouse gas emissions through the funding of advanced manure management projects. We support the Department's efforts in overseeing this funding, as well as the programs that Dairy Plus will supplement, the Alternative Manure Management Program (AMMP) and the Dairy Digester Research and Development Program (DDRDP).

We support the efforts of programs such as Dairy Plus and others to achieve meaningful reductions in greenhouse gas emissions. We also recognize the importance of projects that result in reductions of methane emissions, in keeping with existing efforts under SB 1383. However, the greenhouse gas benefits calculator tool used for this Draft Request for Grant Applications (Draft RGA) and others does not adequately reflect the benefits gained from projects that reduce other greenhouse gas (GHG) emissions, such as nitrous oxide, a highly potent GHG for which manure represents a substantial portion of the state's inventory.

While we do not recommend any changes related to the calculator tool used in the Draft RGA at this time, we encourage the Office of Environmental Farming and Innovation to consider as part of the guidelines for any future funding programs eligibility for projects that conduct research to further gauge the benefits of projects that reduce greenhouse gas emissions beyond methane. In addition, we recommend that the California Air Resources Board develop greenhouse gas calculator tools that quantify benefits of reductions in nitrous oxide and other additional greenhouse gases.

We do recommend that the Draft RGA be revised to allow eligibility for standalone subsurface drip irrigation (SDI) projects. As currently written, the Draft RGA only allows for funding for SDI projects that have also incorporated either vermifiltration, weeping walls, or advanced liquid-solid separation practices. While each of these are beneficial practices meriting funding assistance, SDI projects tend to be time and cost-intensive for dairy operators to undertake, and represent a major investment on their own. Requiring dairy operators to incorporate additional elements on top of a proposed SDI project is almost certain to drastically reduce the pool of potential applicants for these projects. This would represent a substantial missed opportunity to fund projects with demonstrated greenhouse gas emission benefits, as well as water conservation and quality co-benefits.

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Sustainable Conservation

CDFA has recognized the importance of SDI projects in previous rounds of funding, including a \$2 million allocation for SDI in the most recent round of funding for the State Water Efficiency and Enhancement Program (SWEET). We ask that CDFA continue its practices of encouraging SDI projects by decoupling SDI from other eligible practices, and revising the Draft RGA to allow standalone projects to receive funding.

Additionally, we recommend that other advanced practices such as algae raceways and evaporative liquid waste processing systems that were included in the Climate Smart Commodities proposal be eligible for funding as standalone Dairy Plus projects. They were included in the proposal because they have been identified as solutions that can achieve greenhouse gas reductions and nutrient benefits, although they are not yet approved under AMMP. Existing data suggest these projects will help to achieve similar environmental outcomes as those already listed for eligibility in the Draft RGA, and having systems installed in California combined with monitoring and verification would provide a clearer pathway to a CARB calculator.

We also recommend revising Appendix E to include a category in the scoring criteria that addresses equity. All of the elements of the scoring criteria set forth in Appendix E are important factors for prioritizing projects for funding. However, an additional dimension of priority should be added to the scoring criteria to allow for socially disadvantaged farmers and ranchers and those from disadvantaged communities to have fair access to the application process.

In order to achieve maximum environmental benefits with these funds, the widest pool of applicants must be established. Many opportunities for projects that achieve beneficial outcomes exist at dairies that may not have the resources to hire grant writers, consultants, engineers, or other sources of third-party assistance that larger, more established operations may make use of. Advanced manure management projects are frequently complex, and involve practices that may not yet be common in a given region, increasing the learning curve for practitioners who do not have the resources to design and implement projects using these practices.

Adding a category to the scoring criteria to recognize those applicants that are under-resourced would be a helpful step to ensuring that the maximum possible environmental benefit is realized through Dairy Plus. It is also essential that this prioritization be paired with adequate technical assistance for applicants, including through technical assistance programs provided by CDFA and other state agencies. Special effort should be made to ensure that outreach on this program and technical assistance is targeted to reach those that may not have the networks and/or resources to know about and apply for this funding, in line with findings and recommendations in CDFA's Farmer Equity Report.

If you have any questions about our feedback, please feel free to contact me at 916.469.5159, or [cdelgado@suscon.org](mailto:cdelgado@suscon.org).

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Sincerely,

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Policy Director

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