

BIOFILTRO

worm powered wastewater solutions

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May 23, 2023

TO: cdfa.oefi_ammtp_tech@cdfa.ca.gov.

Re: Biofiltro's comments on the draft 2023 Alternative Manure Management Program Request for Grant Applications (RGA). [Draft Request for Grant Applications and Draft Supporting Documents](#)

Biofiltro (www.biofiltro.com) appreciates the opportunity to comment on the CDFA OEFI **Draft Request for Grant Applications and Draft Supporting Documents**"

Biofiltro offers a greenhouse gas reduction, water filtration, and nutrient capture vermifiltration system that provides the environmental benefits to achieve the goals set forth in the AMMP. It reduces not only emissions of methane (CH₄) but also of ammonia (NH₃) and nitrous oxide (N₂O). 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. Our comments follow:

- At page 9, in the paragraph starting "Once a project has been awarded funds, the project may not: "Change or alter the proposed manure management practice to be implemented as it may change the GHG estimates. This requirement contradicts the *Dairy Plus* and the 2023 DDRDP programs, which allow the addition of practices to existing AMMP projects. The implementation of the additional practices could alter the AMMP-funded manure management operations and will result in a modification of the GHG emission estimates of the dairy.
- The Co-benefits considered in the AMMP should also include other GHGs the project impacts. The IPCC assigns to manure management not only CH₄ but also N₂O emissions, which are based on the N content of the manure. Currently quantification tool and program don't assess the anticipated net GHG reductions of an AMMP project prior to implementation, as stated on page 12 (and several parts of the RGA and quantification tool) because N₂O emissions are missing. Even if the IPCC guidelines specify that the anaerobic lagoons do not emit direct N₂O, they cause ammonia emissions, which impact human health and cause indirect N₂O emissions. In addition, applying lagoon water to crop fields causes direct and indirect N₂O emissions. By avoiding manure entering the anaerobic lagoons, the AMMP practices will decrease the lagoon NH₃ and indirect N₂O emissions. Not all AMMP practices have the same effects on the N content of manure, and projects can affect these emissions in different ways. Therefore, the project co-benefits should include positive and negative effects on nutrients and NH₃ and N₂O emissions.

CDFA is a critical contributor to the *Dairy Plus* program, which aims to remove GHG and nitrogen from liquid manure. However, the AMMP program and tool do not address nutrients. The program includes fossil fuels/electricity and how they affect air quality, but not the principal, largest, and direct manure N-related losses (N_2O and NH_3).

- The manure treatment and/or storage practice should include *vermicomposting of separated solids inside the vermifilter*. Solids separated by a vermifilter are treated in the same filter where they are separated. They don't require additional treatment. Only solids separated by the separator required for vermifiltration will be subject to the treatments suggested by AMMP.
- Is the difference in eligible weeping walls between programs real? Weeping walls eligible for AMMP must have 2 cells, and for Dairy Plus program 3 cells.
- Vermifiltration is a high-efficiency solid separation practice. In the AMMP RGA is described as a solid separation practice. However, in the quantification tool, it is considered as a manure collection system that would be used as an alternative to flushing, which is incorrect.
- In the detailed scoring criteria, ESTIMATED GREENHOUSE GAS EMISSIONS REDUCTION, b. GHG reduction per unit of energy-corrected milk (ECM) produced by the dairy operation over 5 years (dairy applicants only); c. GHG reduction per animal (5 points - b or c). Could you clarify if the language means that a dairy would use the energy-corrected milk data and different livestock operations would use the reduction per animal data?
- Vermifiltration systems can offer similar GHG emission reduction of digesters and can't access the compliance carbon market or the low carbon fuel standard (LCFS) used when gas is used as a transportation fuel. Also, the program requires vermifilters to include a separator that the AMMP has historically financed for \$750,000. Therefore, vermifiltration should have access to an amount larger than what is available for other AMMP practices and similar to digesters.

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_4 , N_2O , NH_3 , and excess nutrients in California dairies.

Respectfully,



Cheri Harrington, Chief Business Officer



May 23, 2023

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RE: AMMP Draft RGA Comments

Dear Dr. Mata,

Thank you for the opportunity to provide comments on the draft RGA for the Alternative Manure Management Practices (AMMP) program.

The legislature has given a clear direction to CDFA that they want AMMP projects prioritized in the state's methane reduction efforts, and in keeping with this direction, we urge you to ensure more robust funding for AMMP. Under the current AMMP, DDRDP and Dairy Plus draft RGAs, \$20.9 million of the total \$123 million available from state and federal funding sources is specified for AMMP projects with an unknown percentage of funds going to AMMP projects under Dairy Plus. As we have in the past, we support no less than 50 percent (or \$61.5 million) of the dairy methane funds going to AMMP projects given the high producer demand for the program and the multiple environmental and public health co-benefits of the projects.

We also want to reiterate our ongoing request that the meetings of the Dairy Methane related Technical Advisory Committees be held publicly. To date, the AMMP and DDRDP TACs have not held public meetings, which is most unusual for a state advisory committee for publicly funded programs. We ask that this change in 2023 with all of the TAC meetings becoming public, including all the typical Bagley-Keene Act notifications of those meetings and posting of TAC membership. We also ask that CDFA include on the TAC those familiar with pasture-based systems in addition to traditional confinement operations.

We offer the following additional comments and recommendations for improvements to the AMMP draft RGA.

1. **Support extended project duration** — We support the increased project duration from 24 to 30 months, giving producers a realistic amount of time to prepare for and implement their

projects in the face of uncertain supply chain delays and contractor availability.

2. **Include maintenance costs** —After several years of experience with AMMP project implementation, we are hearing that there is a need for addressing the costs of maintenance on some solid separation equipment. Investing in the long-term operation of AMMP-funded technology is of high value in order to extend their climate and other environmental and health benefits. Unlike with digesters projects where the technology vendors cover operations and maintenance, AMMP producers alone bear this cost burden.

Producers may have a learning curve as they make the transition to alternative manure management practices that cause wear and tear (e.g., when moving away from sand bedding, residual sand can wear on solid separator screens and other parts). We encourage CDFA to consider including maintenance expenses as eligible costs in AMMP applications. This could be done by allowing for the inclusion of spare parts or covering the cost of vendor service agreements for the first five years of operation. The project currently underway at UC ANR may provide helpful data to assess these options. CDFA could also consult with vendors to identify which replacement parts are most common and what they cost, or to learn more about service agreements.

3. **Incentivize improved methane-reducing pasture-based systems** — AMMP has not successfully incentivized pasture-based systems. To better address the needs of dairies and livestock operations that include pasture in their management, we suggest that CDFA offer the option to fund a pasture-based management plan and related infrastructure, which supports improved management to reduce methane emissions.

The plans can be developed in conjunction with a Technical Assistance provider (e.g., UC Cooperative Extension, NRCS, RCDs, etc.). The plans may include extending the time animals are on pasture but also related pasture management that can improve access to high-quality forage, making it possible to extend the time animals are pasture-fed and not collecting manure in lagoons where methane is generated. By combining plan development with infrastructure purchase (e.g. watering stations, fencing, lanes for cattle) we think it more likely that grass-based producers will take advantage of the program and help meet its desired climate outcomes.

CDFA and CARB should also include in the QM for the program the carbon sequestration benefits of improved pasture-management.

4. **Support best management practices for compost bedded pack barns** — CDFA's proposed addition to the draft RGA that producers who want to install a compost bedded pack barn follow best management practices. While the article links on these issues are helpful, we think it is more likely that producers will be aware of and able to follow BMPs for the compost bedded pack barns if CDFA offers outreach and education on these issues. One option could be that CDFA co-host with UCANR and other partners a webinar (or two) on compost bedded pack barns and related BMPs, inviting past and current AMMP applicants to participate. This could occur right after AMMP awards are announced, working with dairy partners to find a time of the day and month that might work best for producers. We fully support the improved implementation of this practice so that the

state-funded compost bedded pack barns remain viable well beyond the five-year contract term.

- 5. Allow for 90-day application period** — The feedback we have received from TA providers who work with AMMP applicants is that the 90-day application period once offered by CDFA allowed for improved application development, compared to the 60-day application period. These are complex projects that benefit from good discussion and back and forth between applicants and their TA providers to strengthen AMMP proposals. Thus, we request a 90-day application period.

Thank you for your consideration of these comments.

Sincerely,

Sandra Nakagawa
Policy Director, California Climate & Agriculture Network (CalCAN)

Dave Runsten
Water Policy Director, Community Alliance with Family Farmers

Jo Ann Baumgartner
Executive Director, Wild Farm Alliance

Rebecca Spector
West Coast Director, Center for Food Safety