From:	Cynthia A Daley
To:	CDFA OEFI Alternative Manure Management Program Tech@CDFA
Cc:	hannahwrenn96@gmail.com
Subject:	AMMP eligibility
Date:	Thursday, December 12, 2019 10:08:23 AM
Attachments:	Outlook-hvzhflas.png

Hello - I'd like to confirm that the CSU Chico University's dairy is eligible for AMMP funding. Our dairy is a commercial dairy, held to all the same regulations as privately owned dairies. I did notice that other campuses have applied.

Can you confirm that we can apply for these funds.

Also, can you confirm deadlines?

Thank you
Cindy Daley
Dairy Supervisor

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

December 23, 2019

RE: AMMP Program Comments

Dear Dr. Joshi,

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

We were glad to see CDFA that will host a new practice review process for AMMP in 2020. Related to that we would like to see the Dairy Methane Technical Advisory Committee participate in that process through public meetings of the TAC. To date, the Dairy Methane TAC has not held public meetings, which is most unusual for a state advisory committee for publicly funded programs. We ask that this change in 2020 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 other dairy methane experts in the new practice review process, including those familiar with pasture-based systems in addition to traditional confinement operations. We look forward to working with you on this in the new year.

We also appreciate CDFA's ongoing efforts to improve AMMP, including offering advance payment opportunities and continuing demonstration project funding.

Given the success of the program and the multiple environmental and producer benefits of the program, we ask that CDFA reconsider the funding split on the Dairy Methane programs so that a greater number of producers can be reached with AMMP funds. We seek at least 50 percent of the Dairy Methane dollars to go towards AMMP projects.

Below we offer additional comments on the draft RGA for your consideration. We look forward to discussing this further with you.

Sincerely,

Jeanne Merrill, Policy Director, California Climate & Agriculture Network

Rebecca Spector, West Coast Director, Center for Food Safety

David Runsten, Policy Director, Community Alliance with Family Farmers

William Hart, Program Manager, Gold Ridge Resource Conservation District

Jo Ann Baumgartner, Director, Wild Farm Alliance

Comments:

1. Ensure $250,000 Project Funding Level for Demonstration Projects. In the draft RGA for the AMMP Demonstration Projects (Farmer-to-Farmer) there are two project funding levels listed. We support $250,000 as a project cap. This will allow project coordinators to reach dairy and livestock producers across county lines to bring them to AMMP demonstration sites as well as do other necessary outreach activities over diverse and large regions of the state.

2. Require Annual Reporting, Not Quarterly Reporting for Demonstration Projects. We recommend that CDFA require annual reporting for the AMMP Demonstration projects and not quarterly reporting as suggested in the draft RGA. Quarterly reporting is burdensome for project coordinators and takes away from project implementation. Annual reporting, in our experience, provides a fuller picture of the project's achievements. In place of quarterly reporting, CDFA could require that project coordinators notify the Department in advance of field days so that CDFA staff or other partners could attend.

3. Ensure Year-Round, Continuous Technical Assistance for Improved Program Impact. We want to reiterate our comments from this fall about technical assistance and the need for year-round support. We were very glad to see this technical assistance program expanded to include outreach, project development, grant application assistance and project implementation. However, under the current TAP guidelines, TA providers can only work with 2019-20 applicants and awardees and not those who were funded in prior years or those considering applying later. This is a significant constraint, which will impact the effective delivery of technical assistance. AMMP projects are complex and those funded in prior years may still be working through project implementation and would be served well by ongoing assistance from TA providers. Similarly, not all producers will be ready to apply to AMMP in January/February 2020 but may begin to consider projects later in the year for a future application period. They would benefit from TA provider input. We urge CDFA to allow for consistent, year-round TA under the program that is not limited to the 2019-20 applicants and awardees, as intended and allowed by AB 2377.

4. Increase AMMP Funding, Allocate 50 percent of FY 2019-20 Funds. We also reiterate our fall comments on funding as the proposed funding split on the Dairy Methane projects does not adequately reflect the needs or impacts of AMMP.

We understand from CDFA staff that how the department determines the division of funds among the two dairy methane programs, AMMP and the Dairy Digester Research & Development Program (DDRDP), is based on program impact. CDFA argues that digesters have

a greater benefit than AMMP projects because digesters achieve a greater methane reduction. We would argue that this analysis is based on some problematic assumptions, including the longevity of the digester technology.

As CDFA considers how to divide the $34 million in available funding for dairy methane projects in FY 2019-20, we urge the department to re-consider the current measure of impact across the programs. For example, CDFA calculates the GHG emission reduction impacts from AMMP projects on a 5-year project basis whereas the DDRDP projects are calculated on a ten-year basis. This difference in timeframe makes it difficult to compare AMMP and DDRDP impacts. A similar timeframe for measuring GHG emissions reductions is needed across the two programs.

For example, a recent analysis conducted by Sustainable Conservation found that when the GHG reductions associated with the two project types were consider across similar timeframes, the two main projects types under AMMP – solid separation and flush-to-scrape conversion - had lower estimated costs per metric ton of CO2e (both under $20/MTCO2e) compared to digester projects which ranged in the $30-40 /MTCO2e average. Only compost pack barns were higher at about $50/per MTCO2e (and this cost did not consider the CO2e sequestration benefits of applying compost from compost pack barns to grazed pastures). GHG emission reduction is just one of several potential measures of program impact and effectiveness.

Additionally, AMMP outperforms DDRDP on geographic impact. AMMP projects are much more accessible to the average dairy and livestock producer than the capital-intensive digester projects. As a consequence, AMMP projects can be found now in 13 counties on 107 dairies while digesters are in only 7 counties, also on 107 dairies. (We note that many more AMMP applicants are turned away from program funding compared to those applying for DDRDP).

The longevity of digester projects also remains unknown, calling into question the long-term impact of state investments. Digester developer contracts do not guarantee the technology's lifespan beyond ten years. The AMMP projects are not subject to such technology uncertainties as they are using less complex and more easily maintained project components. Will the methane reductions that are associated with digesters last beyond ten years? Or will additional investment be needed to replace aging digester systems?

Finally, many communities remain concerned about digester impacts on air and water quality. AMMP projects have been found to be more beneficial and less controversial among impacted communities.

AMMP is a more cost effective and far-reaching investment than dairy digesters. Thus, we urge CDFA to invest no less than 50 percent of the FY 2019-20 funds for dairy methane into AMMP projects.

2020 Alternative Manure Management Program

COMMENT:

SOLID SEPARATION TREATMENT SYSTEMS THAT UTILIZE PAM POLYMER ENHANCED TREATMENT METHODOLOGIES SHOULD BE RECOGNIZED BY THE AMMP PROGRAM AS A VIABLE ALTERNATIVE METHOD THAT CAN BE UTILIZED TO REDUCE METHANE EMMISSIONS. THESE SYSTEMS ARE COMMERCIALLY AVAILABLE FOR DARIES IN CALIFORNIA AND WILL HELP REDUCE METHANE EMMISSIONS.

IN ADDITION, REDUCTION EFFICIENCIES COEFFICIENTS SHOULD BE ASSIGNED FOR SYSTEMS UTILIZING PAM POLYMER ENHANCED TREATMENT METHODOLOGIES IN THE ARB EMMISSIONS REDUCTION CALCULATOR SO THEY CAN BE USED TO CALCULATE EMISSIONS REDUCTIONS IN THE DOCUMENT TAB OF THE AMMP CALCULATOR.

BACKGROUND

According to the ***2020 Alternative Manure Management Program*** document, for a proposed project to be awarded funding, the project shall demonstrate that it is has the following traits:

1) **Specific Management Practice that Provides Long-Term Emissions Reduction and Environmental Benefits**: The California Department of Food and Agriculture's (CDFA) Alternative Manure Management Program (AMMP) awards competitive grants to California dairy and livestock operations for technologies and specific management practices that result in long-term methane emission reductions and maximize environmental benefits.

2) **GHG Reduction Quantification**: “AMMP supports several project types for which there are methods to quantify GHG emission reductions” and that “to be eligible, the current baseline manure management practices must include the anaerobic decomposition of volatile solids stored in a lagoon or other predominantly liquid anaerobic environment.”

3) **Reduction in Time While Stored in Wet Anerobic Conditions**: “Methane is produced when volatile manure solids are stored in wet, anaerobic conditions”.

The 2020 Draft AMMP document recognizes several separator systems that reduce baseline methane emissions but barely recognizes (in notes and in the AMMP Calculator) other commercially available proven systems that utilize enhanced flocculation and coagulation treatment that provide significantly higher separation efficiencies than currently recognized practices. These systems have proven the capability to quickly and effectively separate volatile manure solids from manure water before they become stored in wet, anerobic conditions such as lagoons.

Specifically, commercially available proven systems available in California utilizing PAM polymer enhancement treatment have shown that they can remove 78-85% of volatile solids from manure water.

JUSTIFICATION*: *USDA Part 637 Environmental Engineering National Engineering Handbook - Chapter 4 Solid-Liquid Separation Alternatives for Manure Handling and Treatment

The USDA has prepared a detailed document outlining the performance capabilities of solid-liquid separation alternatives for manure handling and treatment (https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=43926.wba)

As discussed above, commercially available proven systems available in California utilizing PAM polymer enhancement treatment have been recognized by the USDA to show that they can remove far more volatile solids (78-85% - Table 4-50) from manure compared to separation systems currently recognized in Section 3 of the ***AMMP Eligibility and Exclusions Document.***

Here are the values that the USDA recognizes for the following systems:

a) **Weeping Wall** – Table 4-73
   Volatile Solids Removal Rate = VSin -VSout/VSin x 100 = 59% removal

b) **Stationary Screen** – Table 4B-4
   Volatile Solids Removal Rate = 63% removal

c) **Vibrating Screen** – Table 4B-7
   Volatile Solids Removal Rate = 62% removal max (for swine)

d) **Screw Press** – Table 4B-8
   Volatile Solids Removal Rate = 77% removal

e) **Centrifuge** – Table 4B-9
   Volatile Solids Removal Rate = 60-65% removal max (for beef)

f) **Roller Drum/Press** – Table 4B-6
   Volatile Solids Removal Rate = 41% removal

g) Belt Press/Screen – Table 4B-6
   Volatile Solids Removal Rate = ---% removal

The following table shows a recap of removal efficiencies of systems:

System	Volatile Solid Removal Efficiency	AMMP Calculator Reduction Values
	(%)	
Systems Utilizing PAM Polymer Treatment – Table 4-50	78-85	**NOT RECOGNIZED**
Weeping Wall – Table 4-73	59	45
Stationary Screen – Table 4B-4	63	17
Vibrating Screen – Table 4B-7	62	15
Screw Press – Table 4B-8	77	25
Centrifuge – Table 4B-9	60-65 (beef)	50
Roller Drum – Table 4B-6	41	25
Belt Press/Screen – Table 4B-6	----------	50

Additionally, the 2020 AMMP Document supports solid separation systems that provide additional benefit in terms of nutrient management. Separation systems that utilize PAM treatment has been proven by the USDA to provide excellent nutrient reduction that should also be recognized by the CDFA.

Here are the various removal efficiencies recognized by the USDA

System	Nutrient Removal Efficiency			
	TKN (%)	**Organic-N (%)**	**P (%)**	**K (%)**
Systems Utilizing PAM Polymer Treatment – Table 4-50	44-54	70-84	59-67	3-5
Weeping Wall – Table 4-73				
Stationary Screen – Table 4B-4	49	52	53	51
Vibrating Screen – Table 4B-7	----			
Screw Press – Table 4B-8	24	29	24	
Centrifuge – Table 4B-9	23-28		58-68	
Roller Drum – Table 4B-6	15			
Belt Press/Screen – Table 4B-6	10			

CONCLUSION:

The CDFA should recognize and add Solid Separation Treatment Systems that utilize PAM Polymer Enhanced Treatment Methodologies to Section 3 of the ***Eligibility and Exclusions*** and add it to the AMMP Calculator based on the ability of these systems:

1) **Specific Management Practice that Provides Long-Term Emissions Reduction and Environmental Benefits**: Separation Systems utilizing PAM Polymer Treatment have been in operation throughout the US for several years. Not only are they extremely efficient in volatile solids but work well to remove excess nutrients such as nitrogen, phosphorus, and potassium from post-manure water that is often used for irrigation purposes.

2) **GHG Reduction Quantification**: The USDA Document has documented an 78-85% volatile solids removal efficiency rate from aqueous phase by PAM polymer enhanced treatment systems.

3) **Reduction in Time While Stored in Wet Anerobic Conditions**: The ability of polymer enhanced separation systems to quickly remove a higher percentages of volatile solids immediately from flush or scape water before this water enters separation pits, lagoons

or is recirculated back through a flush system prevents these compounds from undergoing anaerobic decomposition reducing methane generation.