Submitted online, November 6, 2020

Dairy Cares appreciates the opportunity to comment to the California Air Resources Board (CARB) on the Compliance Offsets Protocol Task Force "Initial Draft Recommendations" report, dated October 7, 2020. Dairy Cares (www.dairycares.com) is a non-profit coalition of California's dairy companies and associations, including dairy producer trade associations, milk processing companies and cooperatives. Formed in 2001, Dairy Cares is dedicated to promoting long-term environmental and economic sustainability for California's family-owned dairy farms.

Dairy Cares has reviewed the draft report, which is lengthy and includes many recommendations outside the area of our organization's expertise. At this time, we have not identified any recommendations to which we are opposed; however, we wish to express strong support specifically for three of the report's recommendations related to the Livestock, Agriculture, and Rangelands Subgroup. Those recommendations are:

1) That CARB evaluate the Gold Standard and VCS voluntary market protocols and undertake, perhaps with partners, an effort to develop a technology-neutral regulatory protocol that will allow use of any feed additive, available now or in the future, that meets minimum standards for safety and effectiveness.[1]

2) That CARB pursue adapting its current regulatory Livestock Protocol so that it can be used to generate offset credits for practices that divert or convert cattle manure storage from anaerobic systems to aerobic systems (avoids or reduces emissions of methane, a GHG). Such practices are commonly known as Alternative Manure Management Practices (AMMP) and are incentivized under the California Department of Food and Agriculture (CDFA) program of the same name.[2]

3) That CARB pursue specific, prioritized research to quantify nitrous oxide (N_2O, a GHG) reductions achieved when growers adopt subsurface drip irrigation (SDI) – especially SDI systems that deliver water and manure together as fertigation – instead of baseline surface irrigation practices. As information becomes available to support reliable quantification of N_2O emissions reductions in different cropping systems, especially in dairy forage crops, we believe it will be useful for CARB, CDFA,

[1] Draft report, page 106
[2] Draft report, page 146

commodity organizations, or others to sponsor development of a protocol that can be utilized by California-based growers who are considering switching to conventional or manure SDI.[3]

The rationale for the above three recommendations is included in the report itself. We concur with the rationale provided and therefore will not repeat it here. However, we want to emphasize particularly the importance of regulatory offsets in assisting dairy farms and other cattle operations in making reductions in a particularly challenging area – enteric emissions of methane.

CARB has previously identified a range of measures needed to achieve the state's goal under Senate Bill 1383 to achieve a 40 percent reduction in livestock methane emissions reductions. In its May 2020 draft report on "Progress Toward Achieving Methane Emissions Target from Dairy and Livestock Sector," CARB's analysis recognized the need for additional incentive funding to achieve the state's livestock methane emissions reduction goals.

According to CARB's analysis, 2013 methane emissions from the livestock sector accounted for roughly 55% of all methane emissions in the state or about 22 MMTCO2e annually. Of these livestock emissions about 10 MMTCO2e is accounted for by dairy manure, 8 MMTCO2e is accounted for by dairy enteric emissions and the remaining 4MMTCO2e is accounted for by non-dairy livestock (primarily enteric) (CARB). CARB's 2030 goal is to reduce these emissions by 9MMTCO2e, or 40 percent of the total livestock emissions of 22MMTCO2e annually. Achieving the state's goals of reducing <u>all</u> livestock emissions by 40 percent will require appropriate contributions from each of these three components of the livestock industry.

Significant reductions in dairy manure methane are in process and significant progress continues to be made. According to CDFA, the 119 dairy digester projects and 115 alternative manure management projects (AMMP) funded to date will achieve 2.4MMTCO2e annually or roughly 24 percent of the 10MMTCO2e (CDFA). While significant progress is being made on dairy manure methane emissions under CDFA's Dairy Methane Reduction Programs, more progress will be necessary to achieve the state's goals. Progress will, in large part, be dependent on continuing investments (grants and other incentives) from the state. As the preliminary CARB analysis points out, the target of reducing all livestock emissions by 9 MMTCO2e annually by 2030 will require significant ongoing state incentive funding ($85 million/year).

Enteric Emissions

CARB's preliminary analysis also documented the need for significant enteric emission reductions from livestock ruminants in the state. As pointed out in the CARB preliminary analysis, significant research into controlling ruminant livestock enteric emissions is being conducted in California, nationally, and globally. This research is warranted to identify ways

[3] Draft report, page 138.

to achieve methane reductions not just here in California, but globally. Methane reductions represent one of the important short-term carbon mitigation tools available to offset continually accumulating CO2 emissions from the ongoing reliance on fossil fuels. Despite these global efforts, there is currently no proven commercially available technology to reduce ruminant livestock emissions. While feed additives such as 3-NOP, macroalgae (seaweed), and Mootral have shown some promise, none are currently available for commercial use in the United States (CARB). SB 1383 also requires extensive review of feed additives by CARB and CDFA including, but not limited to the following:

- Effectiveness
- Cost effectiveness
- Animal productivity
- Animal health
- Consumer acceptance

In anticipation of feed additives being available in the future the state should be looking to adopt carbon offset protocols, similar to the dairy digester protocol, to incentivize their voluntary utilization by California producers and ranchers. Without such protocols and widespread adoption of feed additives, it will be impossible to achieve the state's reduction goals.

Conclusion

Dairy Cares appreciates the opportunity to comment on the development of the analysis of progress toward dairy methane reductions. We look forward to the opportunity to provide further comments on the draft analysis before a final analysis is complete.

Respectfully Submitted,

Michael Boccadoro
Executive Director

References:

Compliance Offsets Protocol Task Force "Initial Draft Recommendations" report
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CARB 2019 Annual Report on Cap and Trade Auction Proceeds
https://ww3.arb.ca.gov/cc/capandtrade/auctionproceeds/2019_cci_annual_report.pdf

CDFA 2020 Dairy Digester Research and Development Program Report of Funded Projects
https://www.cdfa.ca.gov/oefi/ddrdp/docs/DDRDP_Report_April2020.pdf