

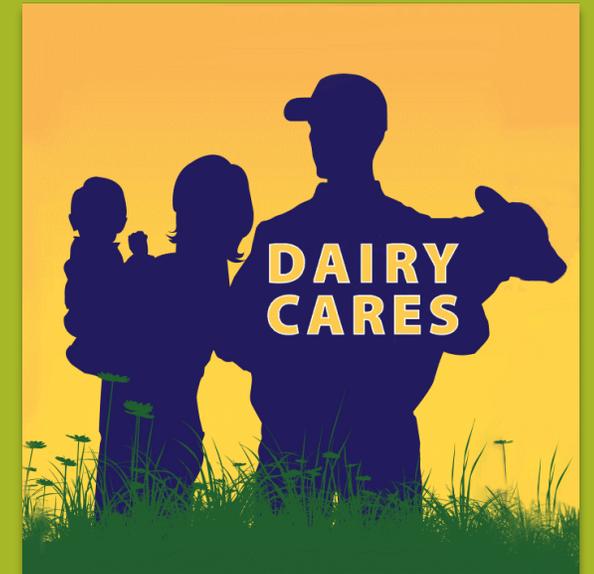
# FOSTERING MARKETS FOR NON-DIGESTER PROJECTS

---

J.P. Cativiela

*Regulatory Affairs Director*

Dairy Cares



# Recommendations of the Subgroup, 2018

- Continue incentives for non-digester manure management projects as a supplemental way to reduce methane and improve water quality
  - *Result: Incentives have continued through AMMP, EQIP*
- Better quantify the environmental benefits of non-digester projects (smaller benefits/higher uncertainty)
  - *Result: Studies have occurred, results limited, more work needed, uncertainty remains high*
- Study market for value-added manure-based products to facilitate export
  - *Result: Extensive work completed through California Dairy Research Foundation, CDFA Manure Recycling and Innovative Products Task Force and University of California Davis (ongoing)*



# Recommendations of the Subgroup, 2018

- Evaluate new types of non-digester methane-reducing projects
  - *Result: Numerous opportunities being examined including vermifiltration, algae raceways, evaporative systems, flocculent systems, improved composting*
- Build additional incentives for these projects as Compliance Offset credits
  - *Similar recommendation from CARB Offset Protocols Task Force in 2020, efforts under way*
- Outreach and education to let producers know their options



# Observations since 2018

- **No 'silver bullets'** – non-digester projects have limitations, environmental impacts and tradeoffs
  - **Maintaining lagoons important:** Complete conversion to dry systems (eliminating flush) creates significant new air emissions (NH<sub>3</sub>/N<sub>2</sub>o) and reduces nutrient use efficiency, harming water quality and increasing dependence on synthetic fertilizer
  - **Pasture systems limited:** Reduce MM GHGs but increase enteric emissions per unit of milk produced, only feasible where rainfall/water supply plentiful, CV would require irrigated pastures – significantly increasing land and water demand per cow
  - **Compost limited:** Reduces methane but significantly increases VOC and ammonia emissions that contribute to air pollution, significant market uncertainty due to landfill diversions
- **Important tool, part of a comprehensive strategy, but ...**
  - Collectively provide 10 percent of reductions on CA dairies – over-reliance a mistake
  - Must proceed carefully to minimize environmental impacts and negative economic outcomes