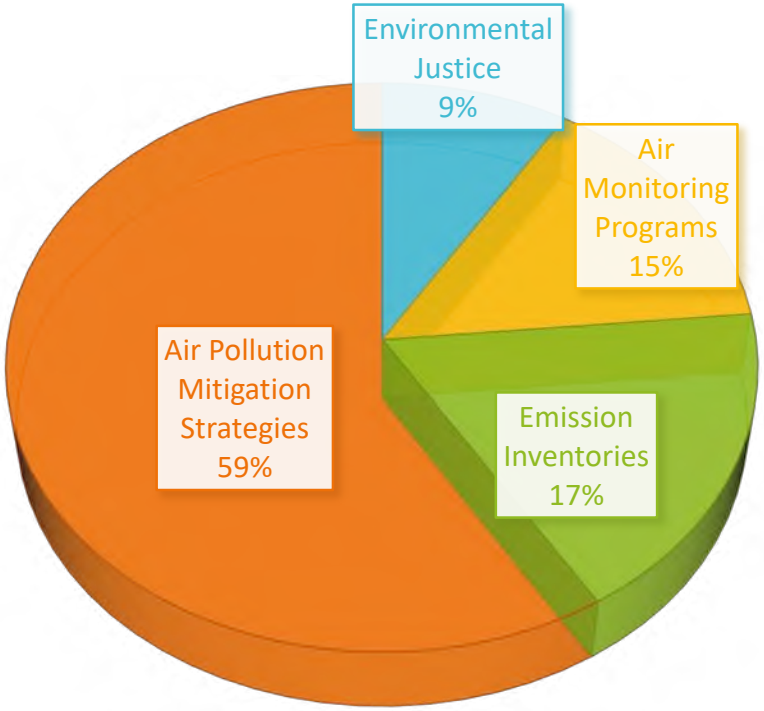
Request For Ideas (RFI) Process Update

Dairy and Livestock Subgroup #3

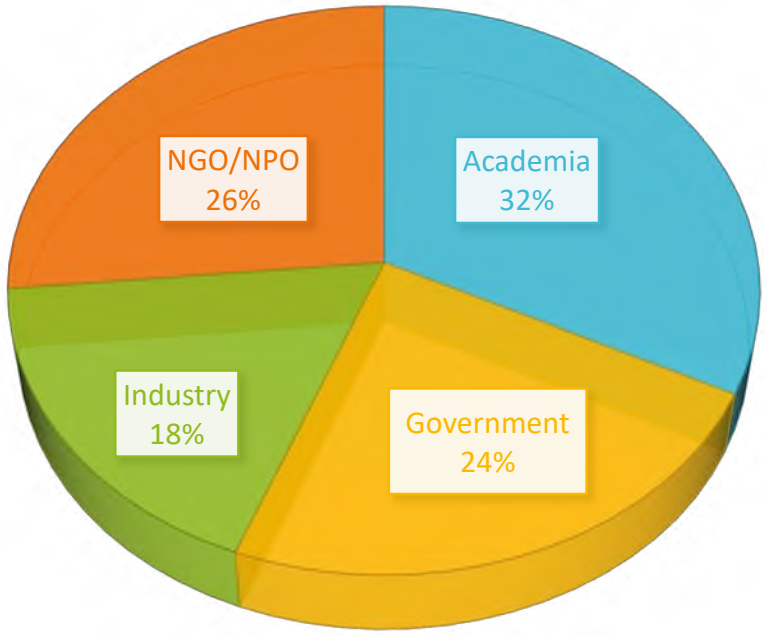
June 26, 2018

I. RFI Process Update

Breakdown of the RFI submissions:



RFI Submissions that passed Completeness Review = **34**



Participating Entities = **11**

I. RFI Process Update (cont.)

	Option 1	Option 2	Option 3
# of RFI Submissions	< 20	>= 20 and < 40	>= 40
# of Group(s)	1	2	3
# of Members in each group	12	6	4

Group #1	Group #2
Paul Sousa	Robert Parkhurst
Michael FitzGibbon	Noelle Cremers
Curt Gooch	Craig Frear
Ermias Kebreab	Alexander N. Hristov
April Leytem	Deanne Meyer
Dolores Barajas-Weller	John Capitman

Submission #1 – Submission #17

Submission #18 – Submission #34

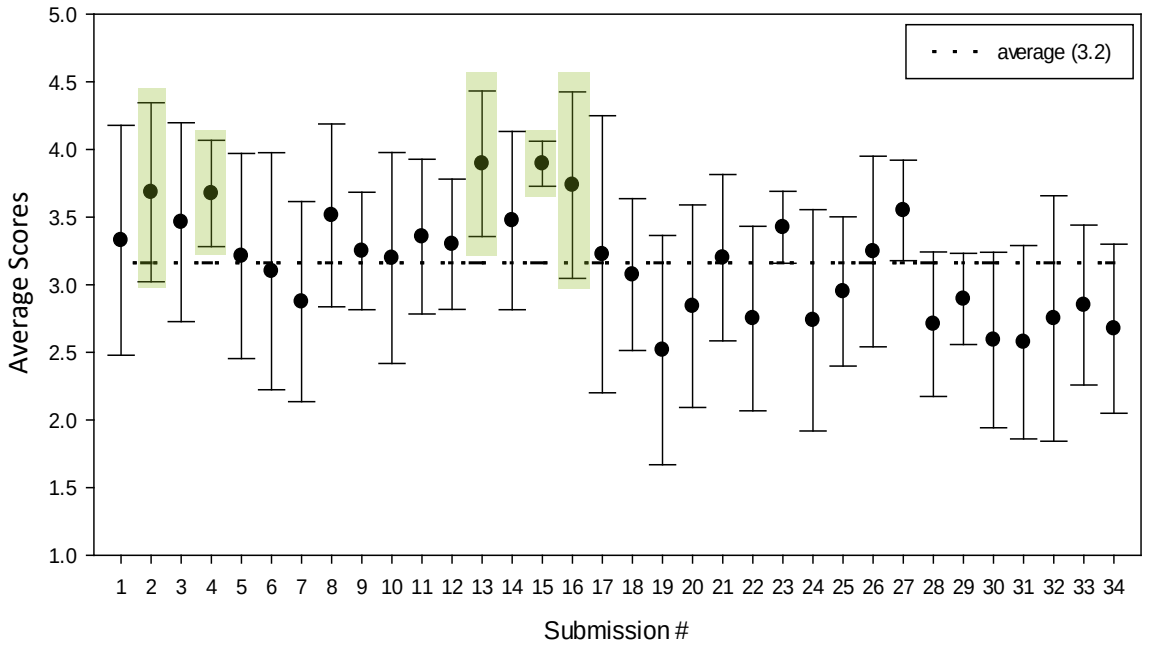
II. RFI Scoring Criteria Update

The following definitions have been developed to promote the consistency during the evaluation process (i.e., RFI survey).

1. **Strongly Agree** – The concept behind the RFI submission clearly pertains to the survey question(s)
   - **no improvement is required**
2. **Agree** – The concept behind the RFI submission pertains to the survey question(s)
   - **some modification could improve the concept**
3. **Neither Agree Nor Disagree** – The concept behind the RFI submission may not pertain to the survey question(s)
   - **has the potential to be relevant with significant modification**
4. **Disagree** – The concept behind the RFI submission do not pertain to the survey questions(s)
   - **significant modification will only lead to minor improvement**
5. **Strongly disagree** – The concept behind the RFI submission contradicts or goes against survey question(s)
   - the concept **will not pertain to the survey question(s) even with significant modification**

	1 - Strongly Disagree	2 - Disagree	3 - Neither Agree nor Disagree	4 - Agree	5 - Strongly Agree
a. Research focuses on methane emissions from dairies	○	○	○	○	○
b. Co-emitted air pollutants from dairies are considered and will be evaluated	○	○	○	○	○

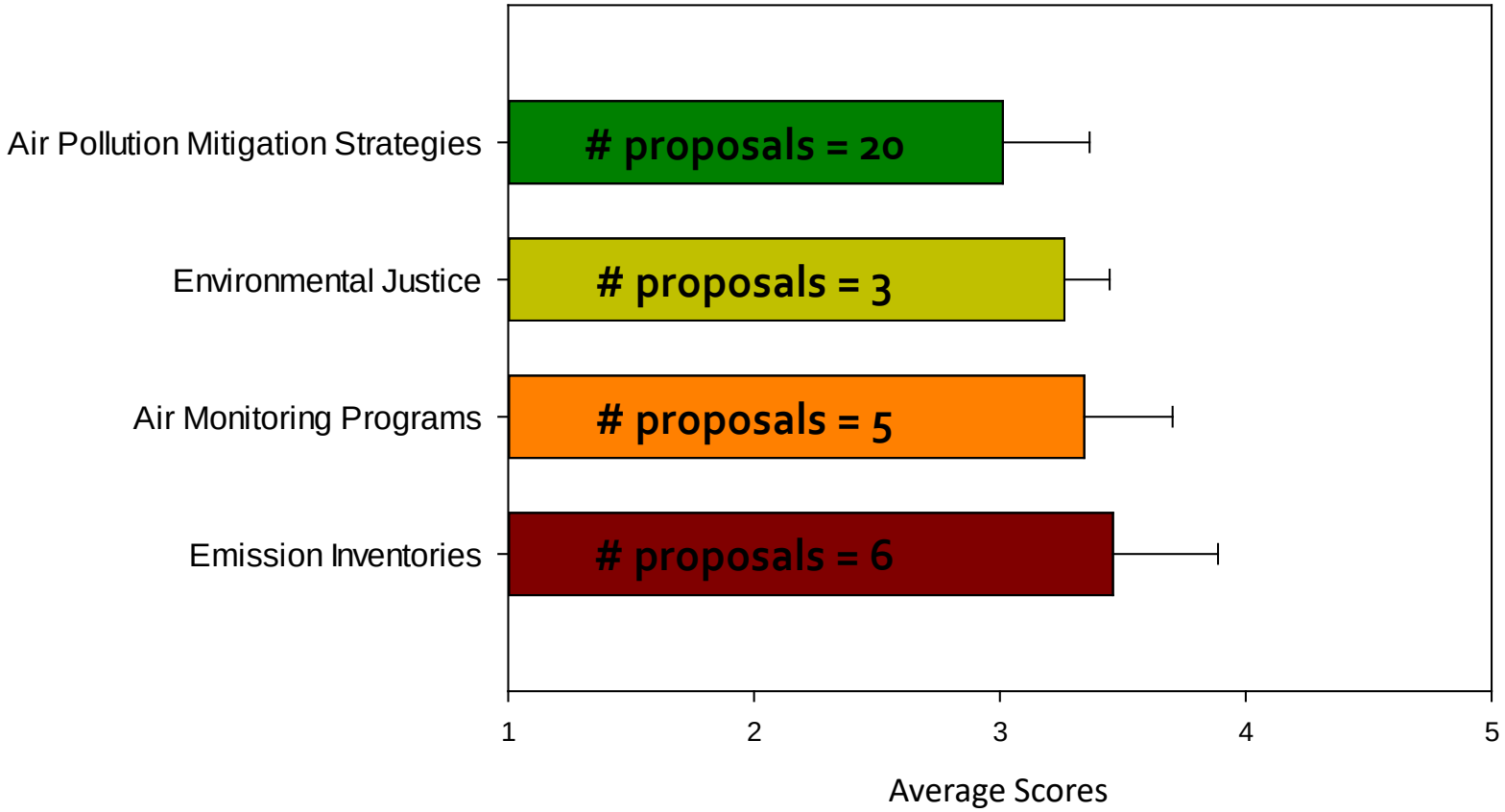
III. Preliminary RFI Survey Results



Top 5 ranked dairy research ideas in order (on a scale of 1 to 5):

- **Submission #15:** Establishing baseline of existing manure management practices
- **Submission #13:** Identifying best dairy practices to reduce methane and ammonia emissions
- **Submission #16:** Measuring and modeling GHG emissions from manure solids on dairies
- **Submission #2:** Improved inventory and modeling of GHG gas emissions from dairy lagoons
- **Submission #4:** California dairy lagoon gaseous emission reductions with SOP product

III. Preliminary RFI Survey Results (cont.)



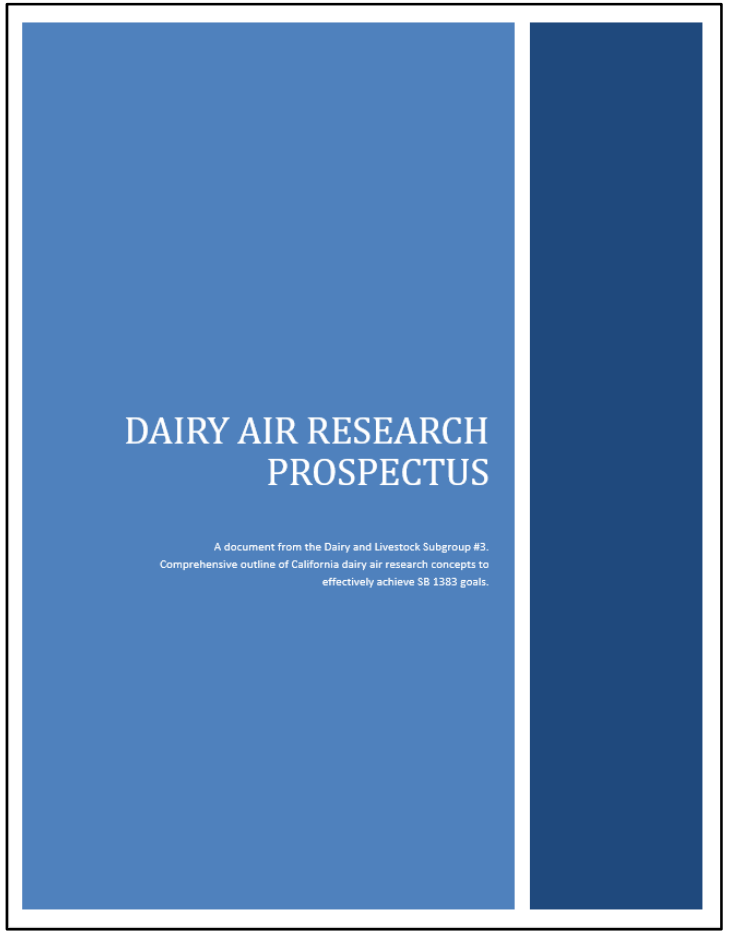
III. Preliminary RFI Survey Results (cont.)

Submission #	Title	Weighted Average	Standard Deviation
15	Establishing baseline of existing manure management practices	3.89	0.17
13	Identifying best dairy practices to reduce both methane and ammonia emissions	3.89	0.54
16	Measuring and Modeling the Greenhouse Gas Emissions from Manure Solids on Dairies	3.74	0.69
2	Improved Inventories and Modeling of Greenhouse Gas Emissions from Dairy Lagoons	3.68	0.66
4	California dairy lagoon gaseous emission reductions with SOP product	3.68	0.39
27	Comprehensive compost emissions cross-media analysis	3.55	0.37
8	Central database of manure management emissions data	3.51	0.68
14	Evaluation of supplemental strategies to reduce air emissions from dairy lagoons	3.48	0.66
3	Full Analysis of Local Air and Water Impacts of Biomethane Production	3.46	0.74
23	Environmental & Economic Assessment of Manure Management Systems	3.43	0.27
11	Dairy Methane Mapping	3.36	0.57
1	Towards a Comprehensive Inventory of Dairy Emissions Via Microsatellite Sensors	3.33	0.85
12	AMMP and digested-manure soil application	3.3	0.48
9	Best practices for managing and applying digestate	3.25	0.43
26	Long-term air emission quantification at dairy facilities using flux towers	3.25	0.71
17	Dairy air emission quantification and impact assessment of Small CAFOs on near by communities	3.23	1.02
5	Effect of nitrate and lipids on enteric CH4 emissions	3.21	0.76
21	Understanding value-added market opportunities for manure	3.2	0.62
10	Create spatially comprehensive dairy activities and CH4 emissions data for emission inventory	3.2	0.78
6	Assessment of dairy workers' exposure to on-farm air pollutant emissions	3.1	0.88
18	Enteric methane reduction by an inhibitor from dairy	3.08	0.56
25	Enteric methane reduction by seaweed in CA diets	2.95	0.55
29	Establishing a uniform experimental testing procedure for dairy air emission measurements	2.89	0.34
7	Developing cost effective methane mitigation strategies in the San Joaquin Valley's dairy industry	2.88	0.74
33	Grape pomace for feed and methane mitigation	2.85	0.59
20	Effect of condensed and hydrolysable tannins on enteric methane emissions from dairy cows	2.84	0.75
32	Pilot/California demonstration of nutrient recovery projects	2.75	0.91
22	Use of a methane inhibitor to decrease dairy enteric- and lagoon methane emissions	2.75	0.68
24	Survey CA Dairies & Identify Potential Reporting Method	2.74	0.82
28	Mitigation of enteric methane from dairy cattle through feeding of essential oils	2.71	0.53
34	Assessing the potential to combine manure with other ag wastes to reduce GHG and air impacts	2.68	0.63
30	Effects of co-supplementing NOP and NO3 on methane emissions from finishing beef cattle	2.59	0.65
31	Liquid/Solid Separation with High Pressure Membrane Filter Press	2.58	0.72
19	California bovine enteric gaseous emission reductions with SOP products	2.52	0.85

IV. Draft Outline of Dairy Air Research Prospectus

Table of Contents

- Introduction
- Background
  - Past Dairy and Livestock Air Research
  - Current Dairy and Livestock Air Research
- Request for Ideas (RFI) Solicitation
  - RFI Process
  - RFI Evaluation Results
- Recommendations
- References



V. Completing Dairy Air Research Prospectus

2/28:
Introduced Subgroup #3 2018 Strategies, including RFI Solicitation Process

4/2:
Introduced RFI submission form and initiated discussions on evaluation criteria

5/14
RFI Evaluation Strategies

6/26
Discuss RFI submission and review draft outline of Dairy Air Research Prospectus

7/26
Joint Meeting In Fresno

Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec

Research Concept Development

Research Concept Review

Compile Prospectus