

# Subgroup #3: Research Needs, Including Enteric Fermentation

## Mission Statement

Propose a detailed research plan—including a funding plan—to fill the following gaps in our knowledge about non-digester methane emissions reduction measures

- Potential to reduce GHG, considering cross media impacts on air and water quality.
- Impacts of measure adoption on dairy economics

# Subgroup #3: Research Needs, Including Enteric Fermentation

## Mission Statement (cont.)

Propose a detailed research plan—including a funding plan—to fill the following gaps in our knowledge about enteric fermentation emissions

- Potential of available measures to reduce GHG emissions
- Short and long-term Impacts of available measures on
  1. Dairy product quality and consumer acceptance
  2. Animal health and welfare
  3. Dairy (and livestock) economics
  4. Water and air quality

# Subgroup #3: Membership

- Paul Sousa (Co-Chair), Western United Dairymen
- Prof. Ermias Kebreab, UC Davis
- Dolores Weller, Central Valley Air Quality Coalition (invited)
- Dr. Deanne Meyer, UC Davis
- Dr. April Leytem, USDA – ARS Idaho
- Curt Gooch, Cornell University
- Robert Parkhurst (Co-Chair), Environmental Defense Fund
- Prof. Alex Hristov, Penn State University
- Cynthia Cory, CA Farm Bureau Federation
- Dr. Craig Frear, Regenis
- Dairy Farmer(s) (TBD)

# Subgroup #3: Key Question Areas

- Non-digester manure methane emission reduction measures
  - GHG reduction potential, including consideration of cross media impacts on air and water quality
  - Impacts of measure adoption on dairy economics
- Enteric fermentation emissions
  - GHG reduction potential of available measures
  - Short and long-term Impacts of available measures on:
    1. Dairy product quality and consumer acceptance
    2. Animal health and welfare
    3. Dairy (and livestock) economics
    4. Air and water quality

# Subgroup #3: Process and Timeline

- Process
  - Focus on achieving consensus among subgroup members where possible and identify recommendations where full consensus was not reached
  - Meetings open to the public with minutes recorded
- Timeline
  - Report progress at next Working Group in Fall 2017
  - Draft research plans - early 2018 Working Group meeting
  - Final research plans - late 2018 Working Group meeting.

# Subgroup #3: Deliverables

- Manure Management
  - Deliverable(s): Research recommendations and/or a comprehensive, inter-agency research plan (including potential funding sources) designed to close knowledge gaps concerning the effectiveness of available non-anaerobic digestion manure management strategies at reducing methane emissions.
- Enteric Fermentation
  - Deliverable(s): Research recommendations and/or a comprehensive, inter-agency research plan (including potential funding sources) designed to close knowledge gaps concerning the effectiveness of potential enteric fermentation methane-emissions-reduction strategies.