



## **A Summary of the Inaugural Meeting of the Alliance for Research and Innovation in the Rendering and Pet Food Industries May 17-18, 2017; Fort Collins, CO**

On May 17<sup>th</sup> and 18<sup>th</sup>, members of the rendering, pet food, and academic community convened at Colorado State University in Fort Collins, Colorado for the inaugural meeting of the Alliance for Research and Innovation in the Rendering and Pet Food Industries. This inaugural meeting begins a collaborative process intended to bring professionals from the pet food, rendering and meat industries together with research scientists with the intention of advancing the pet food and rendering industries. During the short day and a half meeting, those present (list below) discussed previous and ongoing research in the field, as well as collaboratively discussed current and future challenges and identified potential solution. We believe the tremendously cooperative discourse and rich exchange of ideas will lead to fruitful results for all involved. A brief overview of the meeting, and outline of future plans, is below.

Following a welcome from Dr. James Pritchett (Associate Dean of the Colorado State University College of Agricultural Sciences) and Dr. Kevin Pond (Department Head, CSU Department of Animal Science), Drs. David Meeker and Jessica Meisinger presented updates from the Fats and Protein Research Foundation and National Renderers Association. After brief introductions, the core of the meeting began by discussing the results of attendee surveys aimed at identifying industry challenges. Small groups identified the top two challenges in each sector of the industry, which were later used as prompts for targeted small group discussions. The results of the survey—and the consequent discussions—are below.

## Group Discussion and Establishing Priorities

### **Group Discussion of Packer/Renderer Concerns:**

- Accuracy of analytical and oxidation testing
  - Is there a better representation of oxidation than Peroxide Values?
  - Identification of more accurate methods
  - Challenge: New technologies have no set of standards
    - What is a true zero level of detection?
    - Antibiotic residues, hormone residues (thyroid hormone, particularly)
- Oxidation Testing
  - Current markers aren't reliable
  - Industry as a whole needs to agree on how we value the product
  - What is the definition of quality?
    - How were PV thresholds determined?
    - Are they relevant?
- *Salmonella* levels in animal fats and meals
  - The rendering process is lethal to pathogens, but the product is being re-contaminated by the time pet food producers get it
  - Transportation – the grey area – how are they cleaning, are they cleaning?
- Perception and Education of the Consumer
  - This topic encompasses the following concerns:
    - Perception of the quality of raw materials
    - Millennial's pet food demands
    - Nutritional Information
    - Labeling
  - Communicating the sustainability of the rendering and pet food industries
  - Perception of the materials at the packing house
  - What is the definition of quality?
    - Removing vocabulary with negative connotations (i.e. by-product, grease)
- Labeling regulations

**After group discussion and voting, the top two Packer/Renderer Concerns were:**

- 1. Perception of the quality of raw materials**
- 2. Oxidation testing**

### **Group Discussion of Pet Food Industry Concerns:**

- Reduced pathogen levels in meat and poultry by-products (“RTE” status)
  - Strategies to reduce post-processing contamination
  - Survival versus growth of *Salmonella*
  - Contamination during transport: Rendering and pet food are not the only industries using bulk liquid transportation. Can we learn something from them?
  - Pet Food industry wants an RTE product from the supplier
    - Is this realistic?
    - Where is the middle ground?
    - What are the measures that need to be taken on all sides to make it happen?
- Basic knowledge regarding the three fats and their relative risk of *Salmonella*
  - Where is the *Salmonella* coming from?
  - How is it being re-introduced into the product after the rendering process?
  - Where are the knowledge gaps and how can we fill them?

#### **After group discussion and voting, the top two Pet Food Industry Concerns were:**

1. Ensuring RTE through the supply chain – from cooker to kibble
2. Basic knowledge regarding the 3 fats and relative risk of *Salmonella*

### **Group Discussion of Rendering Industry Concerns:**

- Labor shortages, cost of energy, odor inhibitors
  - All cost elements
- Antioxidant efficacy
  - How much to use?
  - Appropriate testing methods to measure antioxidant deliver and efficacy
  - Consumer misconception of antioxidants and other processing aids
- Near food grade regulations
  - If the by-product is safe, there should be a home for it to be used in the industry
  - There is a general desire to have “RTE” product maintained post rendering
- Antimicrobial resistance
  - Will the VFD help with this?
  - Is it possible to keep “No Antibiotics Ever” product separate from conventional product starting in the plant?
  - Has there been any updated research on withdrawal times?
    - Are they the same as they used to be?
    - What are the methods by which residues are tested?

#### **After group discussion and voting, the top two Rendering Industry Concerns were:**

1. Near food grade regulations
2. Antioxidant efficacy

## **Group Discussion of Academic/Research Concerns:**

- Research Funding
  - Privately funded versus federally funded research
    - Many companies conduct their own research.
    - NIH and USDA aren't funding pet food research right now
- Public perception of animal use
  - Is there a way to develop models and predictors for companion animals without having to actually use them as test subjects?
- Clarity on industry challenges and access to industry professionals
  - Are we maximizing the utilization of our students and preparing students for careers in the rendering and pet food industries?
  - Getting a clear, direct research question is almost harder than finding the funding
  - Developing closer relationships between academic and industry professionals
  - **Need for independent research to gain consumer trust**
  - Opportunities for students → career fairs, internships, in-class lectures and visits from industry

**After group discussion and voting, the top two Academic/Research Concerns were:**

- 1. Clarity on industry challenges/access to industry professionals**
- 2. Research Funding**

## **Breakout Sessions:**

From the eight identified critical concerns, five major topics were selected for targeted group discussion on Wednesday, May 17, and two on Thursday, May 18. Attendees elected which “breakout” group discussion they would participate in and each “breakout” group was charged with developing a series of “action items” or “research priorities” that might address the given challenge.



### **Perception of Quality of Raw Materials**

- Strategies to better research consumers
  - Develop more infographics
  - “Ag Day” informational events (Pet Day Event)
  - An overall slogan for the industry
  - Social Media – reaching all outlets
  - Make the story personal
  - Use traditional media (Radio, TV, Print)
  - Get info to Pet Food retailers (i.e. Petco, Pet Smart)
  - Focus on sustainability of the products

### **Ensuring RTE from Cooker to Kibble**

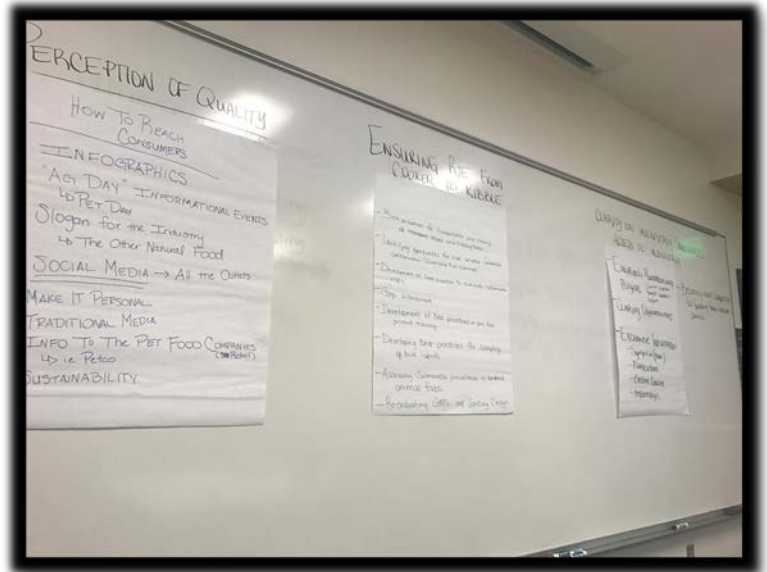
- Best practices for transportation and cleaning of transport vessels and holding tanks
- Identifying opportunities for relative risk of *Salmonella* contamination (Quantitative Risk Assessment model)
- Development of best practices to eliminate contamination risks
- Gap assessment—*identifying, and addressing, current research gaps*
- Development of best practices in pet food product receiving
- Developing best practices for sampling of bulk liquids
- Industry assessment of *Salmonella* prevalence in rendered animal fats
- Re-evaluating GMPs and Sanitation Designs

### **Clarity on Industry Challenges/Access to Industry**

- Engaging multidisciplinary players
  - Chemists, Biologists, Engineers, Business/Economics, Animal Scientists
- Clarify opportunities and exchange information
  - Symposia and/or Tours; Publications; Online Courses; Internships
- Becoming more competitive for funding from federal sources
  - Collaborative efforts to obtain federal funding

## Oxidation Testing

- Alliance hosted Oxidation Symposium
  - Oxidation was largely discussed by the meeting attendees. As a result, plans were made to develop an Oxidation Symposium aimed to bring industry and research members together to collectively address validation of new methods, as well as establishing a new oxidation threshold for the industry.
  - Prior to Symposium, the Alliance members will coordinate:
    - Review of methods for collection, extraction, and analysis
    - Review of antioxidants and their application
  - Reviews should go beyond application for rendering/pet food (e.g. petroleum and other food industries)
  - A committee was established to facilitate Symposium planning:



## Relative Risk of Salmonella

- Tremendous need for industry risk assessment
- Identify common practices in order to develop best practices
- Industry need to adopt new sampling and analytical methodologies
- Short term goals: Established and practical *Salmonella* mitigation
- Long term goals: Scientifically validated practices and completion of risk assessment

## **Future Plans for the Alliance for Research and Innovation in the Rendering and Pet Food Industries**

Following a highly successful initial meeting, there are many future plans for the Alliance for Research and Innovation in the Rendering and Pet Food Industries. Most importantly, the Alliance aims to solicit involvement by more industry members and scientists from multiple disciplines in future meetings. By doing so, we foresee an even more fruitful discussion and strategy development. In the short term, other Alliance plans include:

- A Fall 2017 follow-up meeting (link to identify dates: [AllianceFall2017MeetingSurvey](#))
  - Voting on a meeting date will close on August 30<sup>th</sup>, 2017
  - Meeting will be held in Colorado
- Web-Based discussion of Oxidation Symposium (*tentatively planned for early Fall 2017*)
- Collaborative drafting of Strategic Plan for the Alliance (*will occur at Fall 2017 meeting*)
- Facilitate research/scientist tours of pet food and rendering establishments