Alliance for Innovation & Operational Excellence

GMA Science Forum
May 19, 2011

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About AIOE

Who's In It?

• Alliance members are small, mid & large cap consumer products companies and other stakeholders including associations, suppliers, scientific & regulatory professionals, technical service providers and academic institutions.

Why Join It?

• Alliance members work together through communities of practice established to address key issues and solve critical problems within and across vertical markets without compromising proprietary interests of any one company.

How Can I Participate In It?

• You can participate in The Alliance through the Communities of Practice, the Marketplaces or any of the Education & Research Formats:
Participating Companies

Anheuser-Busch InBev
ACH Foods
American Italian Pasta Company
Ball Corporation
BIC
Boston Beer
Bush Brothers
Cadbury
Campbell’s
Cliffstar
Clorox
Coca-Cola Enterprises
Coca-Cola NA
Colgate-Palmolive
Dean Foods
Del Monte
Dial Corporation
Diamond Foods
Ecolab
Energizer
Fristam Pumps
Frito-Lay
Heinz
Hershey’s
Hormel
Interbake Foods
Johnson & Johnson
Kellogg’s
Keystone Foods
Key Technology

Kliklok-Woodman
Kraft Foods
Kroger
Mars Petcare
MASSMAN Automation Designs LLC
McCormick
Mead Johnson Nutrition
Merck
Mettler-Toledo
MGS Machine
MillerCoors
Morrison Container Handling Solutions
Nation Pizza
Nelson-Jameson
Nestle Prepared Foods
Nestle Purina
Pfizer
Sargento
The Schwan Food Company
Scotts Miracle-Gro
Siemens
Snyders-Lance
SPX Flow
Sunny Delight Beverages
Tetra Pak
Walker Stainless
W.M. Sprinkman
Communities of Practice

**Product Safety Solutions Group (PSSG)**
- Currently focused on thermal processing guidelines to enhance food safety, and upstream food safety communications with suppliers to help diminish recalls.

**Sustainability Solutions Group (SSG)**
- Currently focused on upstream supplier sustainability guidelines to extend gate-to-gate reporting further upstream, and effects of production variability in order to validate sustainability reporting.

**Operational Reliability Solutions Group (ORSG)**
- Currently focused on developing core operational metrics that improve reliability of making shippable product when you want it and at the pace you want it every single time.

**Workforce Development Share Group (WDSG)**
- Currently focused on plant level technical training, competency modeling and recruitment and retention best practices to help meet the challenges of the manufacturing workforce of the future. More details will be posted as they become available!

**Manufacturing Excellence Share Group (MESG)**
- Currently focused on a variety of operational, technological and organizational challenges with output designed to help improve operations.

**Packaging Management Council (PMC)**
- Currently focused on key packaging challenges including sourcing, production, product safety and security, sustainability and consumer demand.

**Product Security**
- Now forming and will be focused on protecting the supply chain from counterfeiting. More details will be posted as they become available!
Product Safety Solutions Group

Purpose
- To improve the ability of manufacturers to extend the development & implementation of critical food safety initiatives further upstream into manufacturing, engineering and operations and into their broader supplier community.

Current Focus
- In-plant thermal processing improvement, and communication of key food safety information to suppliers.

Problem 1
The industry continues to suffer product recalls due to recurring food safety issues that adversely affect manufacturers and their suppliers that could be thwarted through improved food safety communications in the upstream supply chain.

Solution
- Educate the upstream supply community on evolving product safety regulations:
- Survey manufacturers and suppliers to establish baseline for current food safety communications;
- Develop a methodology for communicating current and emerging food safety information, so that the thousands of “upstream” suppliers—ingredients, flavors, materials, co-packers, co-manufacturers, OEM, system integrators—are aware of the changing requirements, all in an effort to strengthen the weakest link;
- Link this methodology to comply with relevant sections of the FDA Food Safety Modernization Act;
- Educate and train manufacturers and suppliers on “best practices” in a variety of forums and formats.
Problem 2

Product recalls are periodically initiated because of insufficient validation data related to thermal processing, especially in low-moisture foods. There are currently no uniform guidelines and there is no single place for manufacturers to access thermal inactivation data. Additionally, there is limited collaboration among stakeholder groups and there is no industry-wide effort to close the gaps in available data.

Solution

Validate critical process steps in formulated low moisture foods that will enhance manufacturers’ food safety programs for shelf stable and ready to eat products and to close any existing gaps in data collection and analysis:

- Develop guidelines to validate thermal processes for formulated low moisture foods;
- Summarize current availability of Thermal Inactivation Data (D-values and z-values) for formulated low moisture foods;
- Summarize additional D-values and z-values developed through industry collaboration in data sharing;
- Plan to conduct scientific challenge studies where gaps in data exist;
- Publish guidelines for broad stakeholder use;
- Consider applications for other processes.
AIOE
Product Safety Solutions Group

Process Validation Team Update
GMA Science Forum
May 19, 2011

Mike Hayes
Director of Food Safety & Quality, Del Monte Foods
Agenda

- Describe industry need
- Review goals & objectives
- Define deliverables
- Discuss synergies with other Industry initiatives
- Review timeline of project
- Q&A
Industry Need

- Enhance food safety.
- Eliminate recalls due to lack of kill step validation data.
- Develop standard practices to minimize risk:
  - No standard guideline exists for thermal process validation of formulated low-moisture foods;
  - Thermal inactivation data exists in multiple places;
  - A significant amount of D- and z-value information exists, but limited collaboration between groups, e.g., universities, food manufacturers, low-moisture process authorities;
  - There is no industry-wide effort to conduct new challenge studies.
Process Validation Team

**Project Name:** Guidelines for the Validation of Thermal Process Kill Steps for Formulated Low-Moisture Foods.

**Strategic Goal:** Enhance food safety programs within the formulated, low-moisture food industry (shelf stable and ready-to-eat).

**Objective:** Provide common guidelines to industry in the validation of thermal process kill steps for formulated low moisture foods and to reduce the gaps in scientific data currently available.
Deliverables

1. Guidelines to validate thermal processes for formulated low-moisture foods;

2. A summary of currently available thermal inactivation data (D- and z-values);

3. A summary of additional D- and z-values through industry data-sharing;

4. A plan to complete scientific challenge studies where gaps exist.
Industry Project Synergies

Publications
- GMA Industry Handbook for Safe Processing of Nuts
- GMA Control of Salmonella in Low Moisture Foods, Feb. 2009
- Almond Board of California (ABC) protocols
- Codex Guidelines for the Validation of Food Safety Control Measures CAC/GL 69 - 2008

Working Groups
- GMA Microbiology committee
- Ongoing research in the food industry, at universities and by low-moisture process authorities
Timeline Summary

2010        2011
Q4  Q1  Q2  Q3  Q4  End date

1. Establish the team  
   12 Oct '10
2. Publish guidelines to  
   validate thermal  
   processes in low-
   moisture foods  
   30 Aug '11
3. Publish existing  
   D- and z-values  
   30 Nov '11
4. Summarize D- and z-
   values from data  
   sharing  
   30 Nov '11
5. Develop a plan for  
   further studies  
   ...  Jul '12
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Marketplaces

PACK EXPO

- Packaging. Processing. One Powerful Show.

Open Innovation Forums

- Large, open forums conducted at PACK EXPO where a panel of CPG companies present their respective innovation needs followed by introductory meetings with suppliers where mutual interest exists.

Custom Innovation Forums

- Unique, single company forums where CPG companies share with pre-qualified suppliers some of pressing innovation needs followed by targeted follow-up meetings where mutually agreed.

Become a part of the solution – join today!
Custom Innovation Forum

Problem

- The discovery of breakthrough solutions to challenging manufacturing issues can be expensive in upfront and ongoing costs. In addition, while there is confidence with their known suppliers, manufacturers are constantly searching for innovative ideas beyond what they currently know. Many subscribe to the belief that “you don’t know what you don’t know.”

Solution

- Custom innovation forums provide a solution this belief. The process for conducting them follows:
  - In collaboration with AIOE, the manufacturer develops the scope of the innovation project;
  - Potential solutions providers are identified and a request for information is issued to suppliers (maintaining the manufacturer’s anonymity);
  - Suitable candidates are determined in collaboration with the manufacturer;
  - A custom innovation forum is conducted at the manufacturer’s location;
  - Findings are summarized and next steps determined;
  - Manufacturers:
    - Maintain confidentiality;
    - Host the event;
    - Incur no financial cost beyond hosting costs;
  - Suppliers:
    - Maintain confidentiality;
    - Pay an application fee;
    - Pay a presentation fee, if selected;
    - Provide valid innovation solutions.

- All activities beyond the custom innovation forum are between the manufacturer and the supplier(s).
Education & Research

Conferences & Workshops
- National and regional conferences and workshops conducted on a variety of manufacturing, engineering and operational topics – especially product safety, sustainability and operational reliability – in conjunction with PMMI and GMA. More details will be posted as they become available!

Webinars
- Online and on time virtual educational opportunities on many of the onsite conference and workshop topics, but with the added benefits of greater distribution, lower registration costs, no travel costs and less time out of the office. More details will be posted as they become available!

Thought Leadership Research
- Thought leadership group of senior manufacturing, operations & engineering executives that take a three-to-five year forward look on the key issues and challenges facing the industry in the future. More details will be posted as they become available!

Become a part of the solution – join today!
Contact

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