



Intelligent Energy Solutions for a Sustainable Future.

Sustainability focus in dairy moving from talk to action

[Cheese Market News](#)

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MADISON, Wis. — A decade ago, sustainability was a word few were familiar with. Now, it is a key buzzword in the dairy industry and marketplace at large, and manufacturers are beginning to move beyond defining sustainability and discussing its merits into implementing practices that show results.

With this in mind, Wisconsin's Dairy Business Innovation Center (DBIC) and Wisconsin Cheese Makers Association (WCMA) are hosting a panel discussion on sustainability April 14 during WCMA's 2011 Wisconsin Cheese Industry Conference next week in La Crosse, Wis.

The session, "Sustaining Sustainability: Retailer and Industry Activity," will include retail grocer and marketer perspectives on sustainability as well as proven examples of sustainable practices. Featured company speakers include Cathy Strange, global cheese buyer, national procurement and distribution, Whole Foods Market Inc., Austin, Texas; Vicki Decker-Smith, specialty cheese category manager, Schnuck Markets Inc., St. Louis, Mo.; Andrea Asch, manager of natural resources, Ben & Jerry's Ice Cream, South Burlington, Vt.; and H. Hulst, president, CONO Cheesemakers, Middenbeemster, Netherlands.

"We're moving beyond a discussion about defining sustainability or discussing its merits," says John Umhoefer, WCMA executive director. "This session is about implementing measures and learning how sustainability is selling at retail."

- Measuring environmental impact

Franco Milani, assistant professor of food science at the University of Wisconsin-Madison, also will be on hand to discuss an ongoing life cycle assessment (LCA) for cheese.

The dairy industry last year completed the first LCA for milk, which showed that the carbon footprint of a gallon of milk is 17.6 pounds of carbon dioxide equivalents per gallon of milk consumed. The study also found that, combined with data from additional studies, total U.S. dairy emissions are approximately 2 percent of total U.S. emissions.

The Innovation Center for U.S. Dairy commissioned the Applied Sustainability Center at the University of Arkansas to conduct the greenhouse gas LCA of fluid milk, also called the carbon footprint study, which was completed in July 2010 (see “New study ‘sets record straight’ on U.S. dairy industry emissions,” Sept. 24, 2010, in Cheese Market News’ article archive at www.cheesemarketnews.com). The study is part of the industry’s overall goal to reduce the carbon footprint of fluid milk 25 percent by 2020.

Now, a new LCA study focusing on the environmental impact of cheese is underway.

Milani says the Innovation Center still is looking for more companies to participate; there are about 17 plants participating now, but ultimately they would like to bring that number to 50. Researchers hope to release preliminary results this summer.

Regarding the conference panel, Milani notes that in the past, discussion has focused primarily on the environmental side of sustainability, or reducing the carbon footprint.

“This year, we’re focusing more on how environmental is only part of the total package for businesses,” he says.

Noting the retail focus of the session, Milani says that retailers today are looking for three major things when looking to select cheeses for sale at retail.

“For cheese companies, retailers now want to know that you are at least conversant in issues of sustainability related to your product; that you are aware of what it would take to provide baseline information on your operation; and that you are currently working toward a more sustainable bottom line,” he says.

- Practical application

One company at the forefront of helping manufacturers realize actual ways to gain operational efficiencies is EPS Corp., Costa Mesa, Calif., an energy intelligence company.

According to Jay Zoellner, president and CEO, EPS Corp., when it comes to helping manufacturers increase energy efficiency and reduce carbon emissions on a sustained basis, EPS Corp. has a three-step process: control energy use, replace inefficient equipment and shift to renewable energy.

EPS Corp. offers xChange Point, a software-as-a-service solution that transforms enterprise-wide energy usage data into real-time, actionable information for executives and managers at the corporate, regional and plant level.

The software identifies and presents low/no-cost energy saving opportunities, as well as areas that can be made more efficient with capital improvements, Zoellner says.

According to Zoellner, xChange Point enables manufacturers to quantify, monitor and compare energy use, down to the sub-system level, across facilities; identify, prioritize and track the best return-on-investment energy opportunities; calculate emissions data for carbon accounting requirements; and reduce energy costs and carbon emissions by up to 25 percent.

Once the software identifies where and how energy is used across a business enterprise, EPS Corp.'s Energy Solutions Team analyzes the information and provides no/low-cost and capital equipment recommendations to increase efficiency across the operation.

Zoellner notes that typically for dairy companies, the most energy-intensive sub-systems are steam boilers, refrigeration and compressed air. Some of the more common opportunities for improvements in these areas are setting the right discharge pressure in steam boilers, discharge pressure for refrigeration and overall pressure settings in the compressed air system.

He adds that it is not abnormal to find that set points are higher than what's needed for optimal production, and by optimizing those set points, companies can cut overall energy consumption by 2-3 percent.

In addition, once a baseline is established for a standard production cycle, minimum and maximum rules are set up, and an e-mail message is sent directly to a manager alerting him/her when operating data fall outside of these parameters.

"In this way, xChange point is almost like a technical social networking software, and it allows companies to monitor operations to realize the most savings long term," Zoellner says.

He notes that EPS Corp. also encourages companies with multiple plants to do an enterprise-wide assessment and implement changes across the board, rather than on a plant-by-plant basis.

"I think part of why energy efficiency is so slow to catch on is that for many companies, each plant tends to be its own profit/loss center, and each plant manager makes his own decisions, while we've found the most savings are realized when changes are made on an enterprise-wide basis," Zoellner says.

He also points out that xChange Point and the EPS Corp. team help companies who have good ideas bring those ideas to fruition.

Within the technical social networking aspect of xChange Point, a company has an idea — for example, operating boilers more efficiently by making the control system automatic instead of manual. EPS Corp. then does calculations to bring the idea to implementation.

"The software is a decision accelerator; it helps customers come to the final decision more quickly," he says. "Anyone can have a great idea, but it needs to be implemented."

EPS Corp. also recently released a new white paper on best practices for energy savings and reduced carbon emissions in the food and beverage industry.

The paper, “Making Sustainability a Reality,” identifies common barriers to success regarding sustainability and profiles “Best in Class” examples of companies who implement effective practices for energy efficiency.

The paper breaks down energy intelligence best practices into four basic steps:

- Establish a baseline to fully understand the company’s current energy usage;
- Set appropriate “Best in Class” goals, such as what level refrigeration systems should be operating at or a reasonable target for energy usage per pound manufactured;
- Focus first on low/no-cost opportunities to gain traction and maximize internal support; and
- Target capital equipment with a compelling return on investment. After pursuing the more significant low/no-cost opportunities, identify the biggest energy offending capital equipment and either upgrade, repair or replace it.

Zoellner notes that continuous monitoring throughout and following the improvement process is very important.

“Having a formal ongoing monitoring and reporting process also instills the perspective that energy is a core procured material resource, one that needs to be managed closely on a regular basis,” he says. “This works to raise awareness and counter the danger of unnoticed degradation of equipment performance over time, and establishes the foundation for continuous improvement over time.”

- Real results

Kraft Foods Inc., Northfield, Ill., is one company that has realized energy savings as a result of xChange Point technology. The company recently expanded the deployment of the software to all manufacturing facilities in its Grocery Business Unit.

According to Diane Wolf, global vice president of safety and environmental sustainability, Kraft Foods, the decision to roll out the software to additional sites was based on the success of its initial implementation in one facility.

“The test yielded significant savings opportunities as well as the desire to accelerate further reductions in the Business Unit’s energy use and carbon emissions as part of Kraft’s global sustainability efforts,” Wolf says. “We see xChange Point as a key tool to help us reach and exceed our corporate sustainability goals.”

Kraft Foods late last year also was named to the Carbon Disclosure Index, which recognizes companies that demonstrate good internal data management practices for understanding greenhouse gas emissions, including energy use. To be added to the index, companies also must demonstrate clear consideration of how climate change impacts their business.

The index is created by the Carbon Disclosure Project (CDP), an independent not-for-profit organization that collects the data on behalf of 534 institutional investors as well as purchasing organizations and government bodies.

“We hold the Carbon Disclosure Project in high regard,” says Steve Yucknut, vice president, sustainability, Kraft Foods. “Making the CDP’s Leadership Index is evidence of the important changes we’ve made and the actions we’ve taken, which we’ll continue to improve upon.”

Land O’Lakes, Arden Hills, Minn., also has made significant strides toward its sustainability goals through a partnership with EPS Corp.

The company has worked with EPS to create the Land O’Lakes Energy Management System (LEMS), a standards-based strategic system for guiding and achieving its energy reduction goals.

“Since beginning our relationship with EPS, we have seen very positive results in curtailing our energy usage and carbon emissions,” says Ken Litke, vice president of operations and supply chain, Land O’Lakes. “We’re looking forward to continued success as we work toward achieving our overall corporate sustainability goals.”

Download the white paper:

[Making Sustainability a Reality](#): Best Practices for Energy Savings and Reduced Carbon Emissions in the Food and Beverage Industry