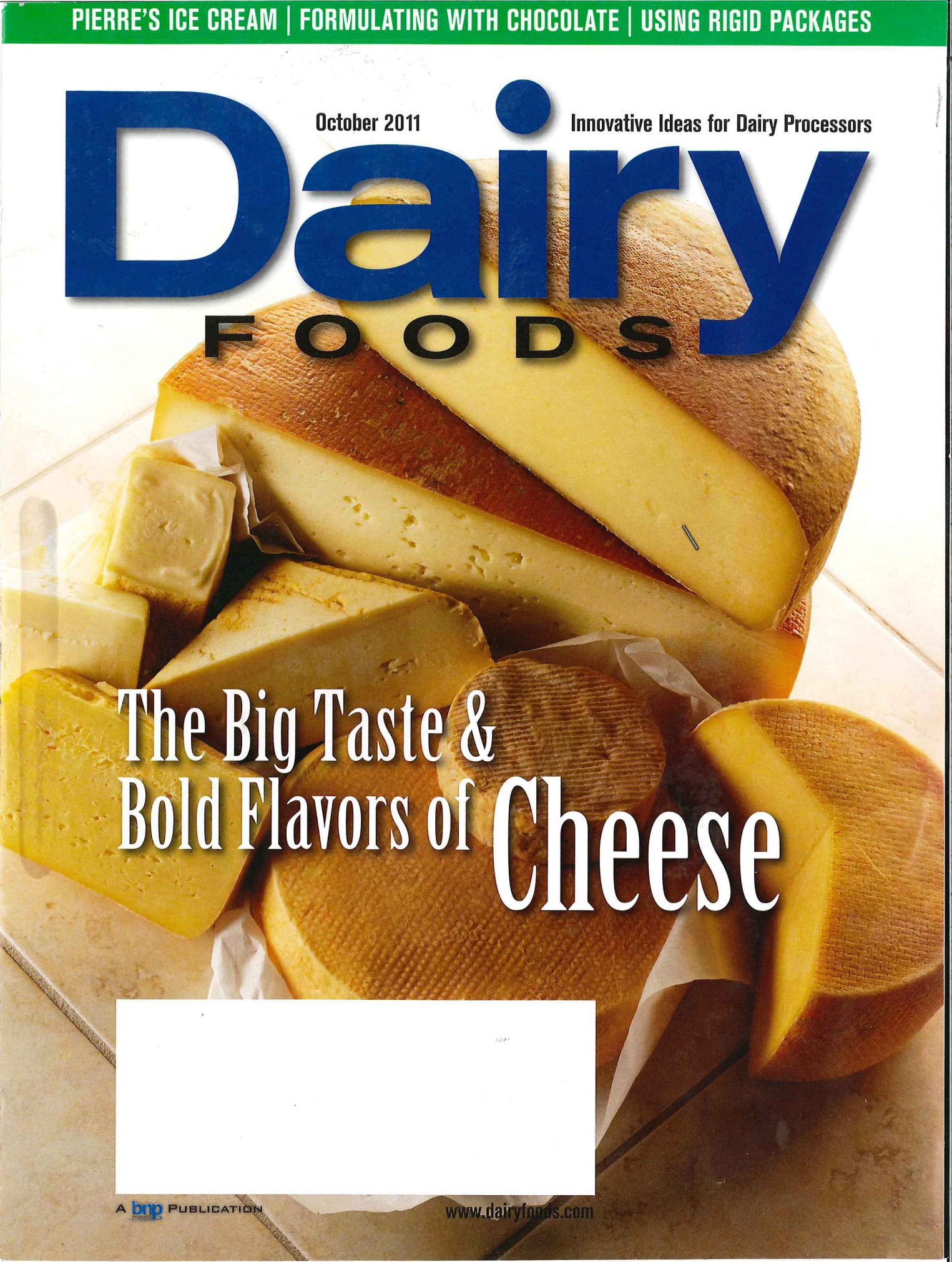


October 2011

Innovative Ideas for Dairy Processors

Dairy

FOODS



The Big Taste &
Bold Flavors of Cheese





Jim Carper

72 Hours in Atlanta

Ask 100 people why they go to a tradeshow and you can get 100 different answers, among them: to find new equipment, to find new ingredients, to find new vendors, to network, to chair committee meetings, to get educated on the latest trends.

The International Dairy Show ran in Atlanta last month. I was there to look for articles, sources, ideas and to further my education on product formulation, processing techniques and current research. The International Dairy Foods Association, Washington, D.C., put on the three-day event. Here's a (very) brief overview of what I picked up:

MilkPEP CEO Vivien Godfrey said her organization will undertake fewer but bolder campaigns in 2012. The No. 1 priority is the Breakfast at Home program. She charged processors to "defend breakfast" by making sure consumers have a bottle of milk on the kitchen table in the morning.

MilkPEP's second campaign is positioning chocolate milk as a recovery beverage. Godfrey told me that the target audience is the active 18- to 24-year-old engaged in strenuous sports, like marathons, triathlons and serious body-building. MilkPEP, Washington, D.C., sees some of these athletes as fit-

ness proselytizers who will tell their friends about refueling with the beverage.

Be careful (very careful) about on-pack claims. Shoppers have specific notions about what it means for a product to be natural, real, fresh and simple. They are seemingly non-plussed by naturally occurring fats, added Vitamin D and sodium. But use the wrong packaging or messaging, and all bets are off. Shoppers rejected a spreadable butter because its package resembled one used for margarines.

Heather Collins of Touchpoint Consumer Insights, Evanston, Ill., and Rachel Kylo of Kemps, LLC, St. Paul, Minn., presented the results of focus groups in Chicago and Denver in which young adults, mothers and baby boomer women sorted a variety of dairy and non-dairy foods from "least to most" real. They highly rated whole white milk, organic 2% milk, natural cheese and Greek yogurt as "real." Canned whipped cream, processed cheese, jarred cheeses and Parmesan cheese in a shaker were least "real." Brick cheese in a plastic wrapper is considered less real than an irregularly sliced chunk of cheese in a deli-style wrapper.

Milk processors lag in product innovations. Gary Hemphill of Beverage Marketing Corp., New York, said there is more innovation in soft drinks and fruit beverages than there is in milk-based beverages. Single-serve beverages created for immediate consumption hold promise for dairy processors. Such beverages are less price-sensitive than beverages intended to be taken home and consumed there. Convenience stores are a natural channel for single-serve, drink-right-now beverages. I sipped a variety of flavored milks in aluminum bottles from the Upstate Niagara Co-operative at the Dairy and Beverage Bar on the show floor. I liked the strawberry-chocolate flavor.

Individual processors cannot succeed alone. They need strong programs from associations to promote milk sales and partnerships with vendors to find better ways to formulate and process.

Schools want to work with you, not fight with you. Jessica Shelly, director of food services for the Cincinnati Public Schools, told me how she worked with Trauth Dairy, Newport, Ky., to reformulate chocolate milk into a version with fewer calories and less sugar. She got out in front of the issue, did some research of her own and was able to neutralize criticisms of the product from a vocal minority of parents.

What did you learn in Atlanta? Send me a note or call me. ■

Jim Carper is chief editor of Dairy Foods Phone: 847-405-4009. Email: carperj@dairyfoods.com.

BRIEFLY...

Byrne Dairy Receives Gold Medal

With a perfect score, Cornell University's Department of Food Science, Ithaca, N.Y., named Byrne Dairy, Syracuse, N.Y., the first place winner of the 2011 New York State Fair Fluid Milk Quality Competition.

Byrne Dairy's Fresh Plant received the highest possible rating after all of the results were recorded, judged and totaled for the following categories: Flavor, Bacteria, Butterfat and Freezing Point.

Dairy Research Institute, Cornell Establish Partnership

The Dairy Research Institute, Rosemont, Ill., and Cornell University, Ithaca, N.Y., established a partnership with the Northeast Dairy Foods Research Center, a cooperative research and extension effort between Cornell University and the University of Vermont.

The center will focus on fluid milk and dairy ingredient research, provide applications and technical support for improvements in milk powder quality and help establish the next generation of dairy ingredients. The center also will provide new learning opportunities for the industry with short course training in dairy food safety, Hazard Analysis and Critical Control Points (HACCP) and dairy processing with a particular focus on fluid milk processing, cheese making and artisan dairy production. For more information on the Dairy Research Institute, visit www.USDairy.com/dairyresearchinstitute.

NDC, NFL and Top Chef Alum Kick Off Back-to-School Program

The National Dairy Council (NDC), Rosemont, Ill., the National Football League (NFL) and Carla Hall, Top Chef alum and co-host of ABC's upcoming lifestyle series, *The Chew*, are jump starting the new school year by motivating students to take charge of their well-being through Fuel Up to Play 60, an in-school nutrition and physical activity program launched by the NDC and the NFL in collaboration with the U.S. Department of Agriculture.

To ensure parents make their children healthy lunches and encourage exercise throughout the school week, Fuel Up to Play 60 and Hall offer the following tips.

- **Don't get hung up.** Don't get frustrated by trying to create the perfect meal for children, as long as you work toward balance. Even the occasional chocolate chip cookie works, especially when served with milk.
- **Create a game plan.** Prepare in advance by planning out the weekly lunches and snacks.
- **Make good food the easy way.** Food doesn't have to be homemade to be nutritious. Reach for healthy packaged options like string cheese or yogurt.
- **Have fun.** Making meals together can be a fun activity to teach children about the value of building a colorful and nutritious meal for themselves, and letting them co-own their own health and wellness.
- **Prioritize family time.** Plan activities that help you and your child work toward achieving at least 60 minutes of daily physical activity – from taking a walk after dinner to playing catch or dancing in the backyard.

Sustainability Awards Highlight Excellence Across Dairy Supply Chain

The Innovation Center for U.S. Dairy, in affiliation with the Dairy Research Institute, announces the U.S. Dairy Sustainability Awards, a new program that recognizes dairy farms, businesses and collaborative partnerships for efforts that deliver outstanding economic, environmental and/or social benefit, thus helping to advance sustainability of the dairy industry.

The awards are divided into three categories: dairy farm, dairy processing/manufacturing and energy conservation/generation.

Nominations are being accepted at www.USDAiry.com/Sustainability/Awards through Dec. 1. There is no fee to enter.

Winners of the U.S. Dairy Sustainability Awards will be announced in February 2012. In addition, honorees will share their stories and passion for sustainability on a national scale in forums and venues, and will be featured on www.USDAiry.com/Sustainability.

All nominations will be evaluated based on the program's or project's results as measured by triple bottom-line success — economic, environmental and social. Judges also will assess the potential for adoption of the idea by other dairy farms and businesses, demonstrated learning, innovation and improvement and scalability.

Judging will be completed by an independent panel, including Jim Carper, chief editor of *Dairy Foods* magazine, representing the full spectrum of the dairy supply chain, as well as academia, government, media, business and non-governmental organizations. The distinguished panel of judges will be announced in October.

For more information or to nominate, go to www.USDAiry.com/Sustainability/Awards. ■

Dairy Ingredients Add Nutrition to Snacks

We are a snacking nation. Almost 87% of U.S. consumers snack between meals. In 2009, domestic consumers spent more than \$93 billion for foods eaten during a snack occasion. Given the increase in snacking, controversy now rages as to whether snacking abets or abates the obesity crisis in our country.

Snacks, including calorie-laden beverages, now comprise almost 25% of our daily caloric intake according to 2007-2008 NHANES data. At the 2011 IFT annual meeting in New Orleans, Rick Mattes of Purdue University, West Lafayette, Ind., explained that the data is contradictory as to whether snacking is positively or inversely associated with body mass index. Harvey Anderson from the University of Toronto in Canada noted that the composition and resulting physiological effect of between-meals snacks are important. Both Mattes and Anderson agreed that there is no clear definition of a “snack,” and that the lines between meals and snacks are blurred. Anderson and colleagues conclude that increased frequency of eating is not associated with body weight and/or other parameters of obesity, and may in fact be beneficial in this regard.

At the 2010 Dairy Ingredient Symposium in San Francisco, Dan Benardot of the Department of Nutrition at Georgia State University, Atlanta, highlighted several important points on energy balance. “Muscle catabolism (breakdown) does occur with inadequate fuel, as an adaptation to the poor fuel delivery. Infrequent eating and large meals result in higher fat storage, even if total caloric intake is the same. Insulin, blood sugar and leptin (an appetite-suppressing hormone) are best controlled with frequent small feedings that dynamically match energy requirements.”

Nancy Auestad, vice president of regulatory affairs, Dairy Management Inc., Rosemont, Ill., said at the 2011 IFT sym-

posium: “Given the nutrient and caloric contributions of snacks to the American diet, there is a clear opportunity and challenge for food manufacturers to create more nutrient dense snacks.”

When we snack

A study by the Innovation Center for U.S. Dairy found that the world of snacking occasions is almost evenly split between consumers seeking “nutritious” solutions (51%), and those trolling for “fun munching” options (49%).

Looking at retail sales of UPC-coded foods considered to be snack foods reveals that five categories are basic dairy foods — ice cream (3.1% of retail snack dollars), frozen novelties (2.5%), milk (1.3%), yogurt (0.9%) and cheese (0.9%). There are also opportunities to formulate dairy ingredients into several snack categories — candy and gum (7.3%), salty snacks (3.9%), cookies (2.3%), crackers (1.8%) and bars (0.9%).

The greatest compound annual growth rate from 2004-2009 has been seen in yogurt (5.9%) and salty snacks (5.3%). Adding more naturally nutritious dairy ingredients allows snack manufacturers to play on both the “healthy” and “fun” sides of the snacking occasion.

Dairy ingredients contain a variety of nutrients — including protein, calcium and other dairy minerals — that boost the nutritional content of snacks. Research has shown that diets higher in protein can promote satiety. And while snacks contribute 25% of total energy, they only contribute 14% of daily protein intake. An excellent way to boost the protein content of snacks is by fortifying them with concentrated whey and milk protein ingredients. For those looking for crunchy dairy treats, extruded versions of whey protein concentrate, whey protein hydrolysate and milk protein concentrate are now available. These crisp inclusions are frequently used in nutrition bars such as the new Eat-Smart

Chocolate Peanut Caramel Crunch Bars, produced by iSatori, Golden, Colo.

Several companies are now producing freeze-dried yogurt, including Watershed Foods, Gridley, Ill., and Nurture Inc., Devon, Pa., which produces Happy Melts organic freeze-dried yogurt snacks for babies and toddlers. Yogurt powder is also a popular coating for snack items.

Cheese crisps are a crunchy new way for the dairy industry to capture market share in the salty snack category. Kitchen Table Bakers, Syosset, N.Y., won three 2011 Silver Sofi awards from the National Association for the Specialty Food Trade, New York, for crackers made entirely of cheese. Real cheese and cheese powder also add flavor and nutrition to a wide variety of iconic snack crackers, including Pepperidge Farm Cheddar Goldfish (made by Pepperidge Farm Inc., Norwalk, Conn.), Sunshine Cheez-It (manufactured by Kellogg North America Co., Battle Creek, Mich.) and Frito-Lay Cheetos (owned by PepsiCo’s Frito-Lay North America, Dallas).

At the IFT Expo, the U.S. Dairy Export Council featured Cheesy Crunchers, made with reduced-sodium cheese, butter, whey protein concentrate, whey protein crisps, cheese powder and whey permeate. Whey permeate can be added to a wide variety of bakery and snack products to boost flavor and reduce sodium content.

The formula for Cheesy Crunchers and a new monograph on whey permeate for sodium reduction can be found at www.InnovateWithDairy.com. These versatile crunchers are a great example of the power of dairy to create snacks that are fun, tasty and nutrient dense. ■

Food industry consultant Sharon Gerdes works with the U.S. Manufacturing & Ingredient Marketing program at the U.S. Dairy Export Council to promote the use of dairy ingredients in food and beverage formulations.



Sharon Gerdes

Tapping Into the Artisan Cheese Opportunity

Dairy research centers provide short courses and hands-on training, spurring new companies and new products for cheesemakers.

By Bill Graves

The opportunity is as ripe as the rich aroma from a block of hand-crafted artisan cheese. With their oftentimes unusual names, smooth textures and unique flavors, artisan cheese has grown in popularity. Varieties from feta to Gouda to Asiago have become a must on any savvy host's appetizer platter.

Today, across the United States, almost 1 billion pounds of specialty cheese is produced annually. Cheesemakers everywhere are tapping into this growing market and consumers' love affair with these unique cheeses. Many, new to the cheesemaking process, are learning the ropes of specialty cheesemaking at the university-affiliated National Dairy Foods Research Centers located around the country.

The National Dairy Foods Research Center program is a dairy checkoff-funded initiative supported by the Dairy Research Institute, Rosemont, Ill., established by America's dairy farmers who have a commitment to product, nutrition and sustainability research. The program provides the dairy industry with product and ingredient research and technical resources to help increase sales and demand for dairy. There are five research centers across the country that annually offer 13 artisan/specialty/farmstead cheese courses with more than 350 attendees. The centers are located in California (Cal Poly State University and University of California-Davis), the Midwest (University of Minnesota-St. Paul, South Dakota State University-Brookings and Iowa State University-Ames, Utah State University and University of Wisconsin-Madison) and the Southeast (North Carolina State University and Mississippi State University).

Research center short courses, training spur growth

The dairy centers' significant efforts to promote the making of artisan cheese through short courses and training are making an impact on the bottom line. In Wisconsin alone, specialty cheese production has more than doubled in the last decade to more than 500 million pounds.

Dairy center technical training and short courses have helped artisan/specialty cheese companies develop domestically produced, high-quality specialty cheeses for this growing market.

Consumer interest and demand for new and complex flavors also has helped artisan cheesemaking grow exponentially, according to Dave McCoy, vice president of product research for the Dairy Research Institute. "The Dairy Research Institute is in step with growing consumer interest and the potential this means to cheesemakers," he says. "We are committed to providing the valuable resources and on-going training needed to be competitive."

From 2005 to 2010, specialty cheese growth in Wisconsin jumped 26%, based on Chicago-based SymphonyIRI data, equivalent to a 35% increase in dollar sales. Specialty cheese represents 21% of Wisconsin's yearly total 2.61 billion-pound overall cheese production. The Master Cheese Maker Program at the Wisconsin Center for Dairy Research (WCDR) at University of Wisconsin-Madison, has been a major driver of specialty cheese growth. Seventy-three percent of winners at the U.S. National Cheese Champion contest at WCDR and almost 45% of the winners at the World Cheese Champion Cheese contest attended short course training.

On the other side of the country, the Dairy Products Technology Center at California Polytechnic State University, San Luis Obispo, Calif., offers a basic cheesemaking short course to artisan and farmstead cheesemakers. The center's annual artisan/farmstead cheese course includes hands-on cheesemaking, where attendees make five varieties of cheese in the center's pilot plant cheesemaking facility.

Interest has definitely spiraled upward, according to Phillip Tong, director of the dairy research center at Cal Poly and a contributing columnist for *Dairy Foods*. "It is great to see so many of the dairy processors from this course now making and selling high-quality cheeses throughout the country," he says. "Of the 60-plus cheesemakers that showcased their cheeses at the American Cheese Society Meeting in Seattle last year, nearly half of them had taken our course at Cal Poly."

Artisan cheese food safety training

In addition, the dairy centers will be offering artisan cheese-focused food safety short courses and training. The Innovation Center for U.S. Dairy's Food Safety Operating Committee is partnering with the dairy centers to develop a dairy food safety training program for small dairy processors, including specialty artisanal/farmstead operations, on the processes needed to ensure the highest dairy food safety in their unique operations.

With more consumers interested in the unique and broad range of flavors offered in the artisan cheese market, the dairy centers will continue to provide cutting edge technical insight and knowledge to help increase artisan/specialty cheese growth for the industry.

To learn more about these short courses, visit www.usdairy.com/DairyResearchInstitute/Pages/UpcomingEvents.aspx.

Bill Graves is the senior vice president of product research for Dairy Research Institute, Rosemont, Ill.

