

\$trategic value



Cost reduction has become increasingly important as food and beverage formulators try to develop more value-oriented products. Ingredients that may do more for less play an important role and some dairy ingredients, when protein in particular, offer several cost saving opportunities.

How important is the subject of cost reduction? One ingredient manufacturer, Danisco A/S, Copenhagen, Denmark, launched a web site aimed specifically at helping food makers identify product development savings.

"We can see that consumers have clearly become more cost-conscious since the end of last year," said Birgitte Mikkelsen, a group manager with Danisco and who led the development of the web site located at www.danisco.com/value. "But the focus is not only on economy products. Small, premium indulgences are also important to soften the hard times."

Danisco sells ingredients under its Grindsted line that includes stabilizers

that maintain creaminess at lower fat levels. Another Danisco ingredient, Cremodan 1200 MR, allows ice cream manufacturers to lower their skim milk use by as much as 70%. The company also sells stabilizers that enable lower-temperature processing and subsequently, some savings in energy costs.

Dairy ingredients offer numerous cost reduction options

At the same time that cost reduction has become a focus for food companies, many also appear to be coming out of the holding pattern that has slowed the introduction of new products, said Lucinda Wisniewski, vice-president of the product design group at The National Food Lab, Livermore, Calif.

"A lot of things were on hold in 2009 because of the economy," she said. "But the gates have opened a bit in 2010, and companies are taking on some new initiatives."

But those new initiatives have cost considerations.

"It's about balancing good quality
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Dairy ingredients offer numerous cost reduction options

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ingredients to hit the right price point," Ms. Wisniewski said. "We can think about it and use something like whey to balance all of the attributes."

Danisco is not the only ingredient company working to capitalize on the cost reduction trend. The Grande Custom Ingredients Group, Lomira, Wis., is a manufacturer of whey protein products. This past year the company introduced Bravo 600, a whey protein blend that has functional properties helping replace more expensive ingredients.

Bravo 600 has mild, creamy, milky flavor attributes that contribute heavy, tacky and smooth textures, according to the company. The product also may extend a product's shelf life.

Bravo 600 works best in applications such as cheese sauces, cheesecakes, and some Alfredo-type sauces, because of the improved mouthfeel it offers.

"For just about any food you can think of there is going to be some room to clean up the nutrition panel and to reduce some cost at the same time," said Steve Dott, sales and

marketing manager for Grande.

With soups it's the same as sauces, said Grande's Jeff Banes, applied technology manager.

"It offers cream reduction or replacement, and it adds some stabilization," he said. "It could be a retorted or frozen soup, and it will work just as well."

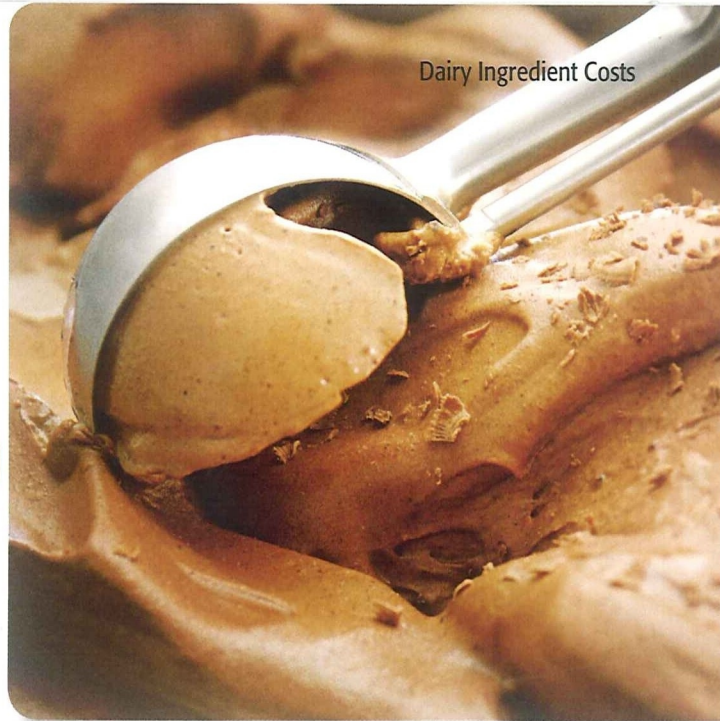
Bringing down costs

Whey's functionality and its relatively stable cost have made it a popular ingredient in recent years. Dairy ingredients in general provide superior value in terms of nutrition and

functionality to food and beverage formulators, said Kimberlee (K.J.) Burrington, dairy ingredient applications coordinator at the Wisconsin Center for Dairy Research.

"Also, sometimes changing from a higher-cost dairy ingredient to a lower-cost dairy ingredient can help achieve desired functionality in some applications," she said. "For example, food formulators can shift to lower-cost dairy ingredients like whey, whey permeate and lactose for cost-effective browning in foods

Dairy Ingredient Costs



Stabilizers that maintain creaminess at lower fat levels allow processors to improve cost management.

like cookies and muffins.”

Whey proteins are often used as part of stabilizer systems and work together with hydrocolloids to stabilize yogurt for texture, stability and reducing syneresis. Whey proteins also have the functionality to emulsify fat and may work jointly with chemical emulsifiers to provide emulsion stability in such products

Whey proteins used in conjunction with hydrocolloids may improve the stability and texture of yogurt.

as salad dressings, ice cream, and other high fat products, said Ms. Burrington.

“In both cases, the other ingredients are higher in cost so it is possible to use less of them to achieve the same goal,” she said. “Fat reduction using whey proteins is different than providing stabilization or emulsification — here you are using the water binding ability of whey proteins to mimic fat. You see W.P.C.s used a lot in reduced fat ice creams, especially slow churned products, to help with structure, stability, and mouthfeel.”

Kraft Food Ingredients Corp., Memphis, Tenn., a division of Kraft Foods Inc., offers a full line of dairy-based and dairy analog ingredient products for food manufacturers. The Kraft Dairy Flavors line is designed to work with the dairy components in a food formula to enhance flavor impact, according to the company.

Kraft Foods’ Exceed Plus line includes Exceed Plus 401ON, which the company said may improve flavor impact while lowering the level of cheese used. It may be used in all processes, including freezing, coating, batter/breading, retort and baking. Sauces, snacks, convenience pasta, rice and potato side dishes, frozen foods, soups and casseroles are among the applications for the cheese enhancers.

Flavor still first

The challenge faced by all



product developers comes in cutting costs without sacrificing quality attributes such as flavor and texture.

“It is absolutely critical,” Ms. Wisniewski said. “Whether it’s a new product under development or a reformulation, we can’t deviate from the level of quality.”

One of the biggest challenges may be found in the development of chef-signature prepared foods.

“When cooking for their restaurants, chefs can use very expensive ingredients like Asiago cheese, for example,” Ms. Wisniewski said. “When we translate that into a commercial prototype we are not usually able to use those kinds of ingredients, so we have to find a way to get the flavor of Asiago using other dairy ingredients.”

One option may include using lactose (milk sugar) to replace sucrose in a variety of applications, Ms. Burrington said. Lactose is unique in its low sweetness level and low solubility. The low sweetness level may prevent excessive sweetness in many products. Lactose is also an effective flavor binder, so there is less flavor loss during processing and storage. DBN

— David Phillips
editor@sosland.com