Label-Friendly Sweetness and Texture Innovation in Dairy

Cargill® Helping the world thrive

Today's consumers have high expectations. They want less added sugar and more transparency in their food. They expect fewer ingredients on the package statement, yet desire more nutritional value from every bite. The challenge for dairy product developers is to meet those seemingly conflicting requirements – all without sacrificing great taste or deviating from expected texture norms.

Sweet Alternatives

At first glance, it seems like an impossible task, especially after adding in the complexities of modern food processing techniques and extended shelf life realities. Fortunately, product developers are equipped with better tools than ever before. The dramatic improvements in stevia sweeteners are a prime example.

Historically, reducing added sugar in a dairy product like chocolate milk was a real challenge; since sweetness goes hand in hand with cocoa powder to deliver the chocolate flavor that consumers love. Just a few years ago, only a 25 percent reduction in sugar was feasible with traditional stevia sweeteners. Deeper sugar reductions were limited either by delays in sweetness onset or bitter aftertastes. Now, next-generation stevia products are making these deeper sugar reductions a reality. For example, Cargill's ViaTech® stevia sweetener delivers great-tasting chocolate milk with no added sugars that can satisfy our toughest critics, our kids.

Part of what sets the ViaTech® portfolio apart from other stevia sweeteners is Cargill's proprietary taste-prediction model, which can precisely predict which combination of steviol glycosides deliver optimal taste and sweetness. ViaTech's improved sweetness and flavor dynamics open the door to far greater sugar reductions in a wide range of dairy applications, including yogurts, ice creams and flavored milk drinks. Equally important, consumers know and trust stevia leaf extract, making it a label-friendly sweetener choice.

Functional Fibers

Still, as sweet as stevia leaf extract is, it can't replace all the functionality of sugar. Dairy product developers will likely need to use other tools in their ingredient toolbox to create a successful reduced-sugar product. One of those, chicory root fiber, is uniquely qualified to help address sugar reduction and clean label demands — plus deliver added health benefits.

Cargill's Oliggo-Fiber® inulin, which may appear on ingredient statements as chicory root fiber, is a soluble ingredient that easily incorporates into milks, yogurt, ice cream and other dairy products. Among its health benefits, Oliggo-Fiber® chicory root fiber is a prebiotic fiber that supports digestive health and supports bone heath through the increase in calcium absorption.

It also provides key functional properties, especially valuable in reduced-sugar applications. Mildly sweet in its own right, chicory root fiber can help modulate the flavor of some high-intensity sweeteners. Additionally, it acts as a bulking agent when removing sugar from a formulation. Chicory root fiber even offers benefits to reduced-fat dairy applications, mimicking the texture of fat and giving added richness and improved mouth feel.

continued

Texture Tune-up

Texturizers, which encompass a wide array of starches and hydrocolloids, are the final piece in the sugar-replacement equation. Because sugar plays a role in moisture control, mouthfeel, freezing-point depression and more, it is as important in dairy for texture as it is for sweetness.

Perhaps here more than any other product category, demands for simplified ingredient statements add a layer of complexity. Consumers want products made with ingredients they know and trust. In response, Cargill has developed a range of Custom Texturizing Systems developed from plant sources like pectin, native starches, citrus fiber and sunflower lecithin that deliver a wide range of label-friendly texture solutions.

For example, traditional yogurt options rely on modified food starch and gelatin to give the product its distinctive thick, creamy texture. Those texturant mainstays no longer fit some dairy processors' ingredient statement requirements, leaving product developers scrambling for new options.

Cargill developed a Texturizing System based on two simple ingredients: functional native starch and pectin. It stands up to the processing challenges of yogurt and delivers the creamy texture customers expect.

Carrageenan is another ingredient that dairy processors used for years to improve the texture and mouthfeel of a wide range of products. Its chemistry is tailor made for thickening, gelling and adding mouthfeel and texture to dairy products. However, some product developers are looking for alternatives. Here too, Cargill has developed organic-compliant solutions that can replace carrageenan without compromising performance.

At Cargill, we're fortunate to have a large portfolio of texturants at our disposal, backed by knowledgeable formulation experts. Our ready-to-use Texturizing Systems are tailored for specific dairy applications and ingredient replacement needs. We also have the expertise to develop custom solutions in partnership with our customers.

Delivering on Expectations

Dairy processors face a delicate balancing act, struggling to reduce sugar without sacrificing taste and maintain indulgent textures while keeping ingredient statements as clean and simple as possible. To succeed requires more than just the right ingredients; you need a partner with technical expertise in formulation along with a deep understanding of modern processing techniques. Cargill is that ingredient supplier. Together, we can create reduced-sugar products that deliver on consumers' expectations for taste and texture, and at the same time, reflect trends in ingredient preferences.