



TEXTURE IS THE NEW TASTE:

Creating textures that meet
consumer expectations

Most product developers understand all too well the importance to a product's success of meeting consumers' expectations about taste – it has long outweighed most other product attributes for a majority of consumers in many products. But as with taste expectations, the conversation about textures is now equally prevalent in product developer circles... and just as polarizing for many people.

For better or worse, texture has a strong impact on product experience and comes into play in many applications. Coupled with the demand to create products that are new and different – and the increasing emphasis on products that contain more nutritious and label-friendly ingredients – texture is now a particularly tricky space, and controlling it is important in product manufacturing.

Paige Ties and Michelle Kozora, both technical services managers at Cargill, know this very well and point out that texture is now an extremely emotional topic for many consumers, providing both a first and last impression. “It is a factor in dairy, reduced-sugar beverages and a feedback point in many snack foods as well,” said Ties. “Texture can invoke emotional feelings in people – it can make them think of when their Grandma used to cook. It can provoke an experience that is either positive or negative, so we are seeing a lot of drive toward creating textures that will meet consumer expectations.”



Texture trends

In general, companies are looking to push the envelope in textures for many kinds of products. Some of the more unique and non-U.S. texture trends include tapioca pearls that are popping up from trends in Asia, according to Kozora. However, translating some of these trends to U.S. consumers is often not an easy sell, she said. “This is more of a niche gel texture in ball form that doesn't always work for Americans. Asian cultures have a lot of unique textures, but U.S. consumers are just not used to them.”

Other current trends include creating certain textures from plant protein ingredients, re-creating textural experiences in a vegan product versus a non-vegan product, or a meat analogue as compared to an actual meat. “There can be pros and cons,” Ties said. “One thing popping up is meat alternatives that now taste and feel much more like meat. Products like Beyond Meat and Impossible Burger now have a textural experience like real meat. Before, it was distinctly different in texture and more vegetable- focused. Now you bite in and you can feel the different particulates that you would expect in a meat.”

The drive for products with label-friendly ingredients is also creating texture challenges. Many traditional texturants, such as modified starches, synthetic emulsifiers and gums, have long been used for their functionality and cost efficiency, but product developers are now looking for simple, label-friendly ingredients that can create similar textures.

Dairy is one of the applications that is seeing a lot of innovation in texture. “Lots of different textures are gaining popularity in yogurt,” said Ties. “Everybody is looking for the next Greek yogurt, so we will continue to see evolution in this category,” added Kozora. “We now even have Aloe yogurt, which is a very different textural experience – it has actual chunks of aloe in it, which is what the customer expects.”

A lot of innovation has to do with the changes to textures as a result of adding protein content to the products. “While a pudding-like creaminess is often associated with yogurt, we are now seeing a lot more yogurts with a strong gel texture,” added Kozora. Changing the viscosity and texture can have wide impacts on the overall product experience, beyond making the product thicker or thinner. “A drinkable yogurt, versus a spoonable yogurt, has an impact on product consumption, the time of day it is eaten and ease of consumption,” she said.

“Dairy alternatives are another area where we can leverage ingredients for texture, like pea protein, which has a really clean flavor, or chicory root fiber, which can be used to build back bulk or provide a creamy mouthfeel, if you are looking for a fiber option,” Kozora said.

Lecithin is another ingredient that works well in dairy and dairy alternative applications. “You may not get the rich fatty, creaminess using a starch or hydrocolloid on its own,” said Ties. “But lecithin, from sunflower, canola and soy, can be used to emulsify to create a fatty texture and simulate mouthfeel and functionality.”

Health and “clean label” trends are driving innovation

Formulators have traditionally relied on gelatins and modified starches to create the mouthfeel and structure consumers expect in yogurt. But now, they are looking for options that can meet label requirements, while also standing up to common processing techniques. They might also be required to reduce the sugar in these products.

Beverages are another area in which these trends are prompting innovation in texturizing. “The demand for reduced sugar is trending in beverages now because people are concerned with the level of sugar they are consuming,” noted Ties. “But when people switch to a diet product, they may not realize that removing the sugar changes the mouthfeel, perception and experience of the product. When they switch to a diet product, they want the same creamy indulgent viscosity from full sugar.”

When you remove sugar from beverages, Ties continued, you get a thinner texture and higher carbonation than people are used to. “So, we have developed capabilities and ingredients to build back the mouthfeel. For that we use pectin and Trilisse™,” she said. Trilisse™ is a proprietary synergistic mouthfeel stabilizer system designed for taste optimization in reduced-, mid- and zero-calorie beverages. It can also be used in juice applications to maintain a full-juice mouthfeel.



Texture is also critical in the snacks category and there are a lot of tools to alter crunch, Kozora pointed out. “There are a different variety of starches, ranging from waxy to dent corn, because the composition of the starch gives a different texture to the snack.” The dent corn starches can create more of a hard crunch, while the waxy starches provide a lighter, flintier bite. “We can also create almost a dual texture snacking experience using Cargill’s native starch ingredients.”

We can use them to create a coating for snacking, as well as to create different textured layers.

The confectionery category is also seeing some novelty with respect to texture, Ties noted. Ingredients like pectin, starch, gelatin and carrageenan are all being used in this category to provide different experiences. “Gelatin would be for the standard gummy, which gives it a particular bounce-back, but if you look at pectin, it has a bit smoother consistency and will help the flavor pop,” she explained. “You see it in label-friendly snacks, and it provides a unique texture experience. Carrageenan is less seen in the U.S., but it is also being used to create more diverse textures in some of these confectionery applications.”

A new mindset

With so many new tools, the key point about formulating new products for texture is developing a new mindset for the project. A good partner in creating innovative textures will have a diverse portfolio of ingredients ranging from starches and hydrocolloids to sweeteners, Ties noted. “With the rapid changes in the market, it is also valuable to have a partner that can provide consumer insights,” she added.

A vendor that has a lot of technical capabilities in-house is another important quality to look for in a supplier, added Kozora. “A company that can do things in-house is a huge advantage, because you can try things on a small- or medium-sized scale and leverage those capabilities,” she said.

But, perhaps most important, is a company that takes a collaborative approach to texture. Oftentimes, textural goals are poorly defined. It is better to start at the end and work backwards to best deliver on textural objectives, according to both Kozora and Ties. “Look for a vendor that has a broad tool box and has the expertise to dip in and get something to work,” Kozora said.

When looking to a supplier to address texturizing challenges, it is a good idea to work with a company that does not just tell you what to use, but will work through the challenges to determine what is important for the texture of the product and then work together to achieve those goals,” Ties said. “We are now working with ingredients in new ways. In the past, we didn’t need a very collaborative approach,” she added. “But now, it takes both a vendor who knows the ingredients well and a finished-product customer who knows the brand and company. Blending these two sets of expertise to drive success is critical.”

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