

The secrets to sweet success: *Reformulating for sugar reduction*



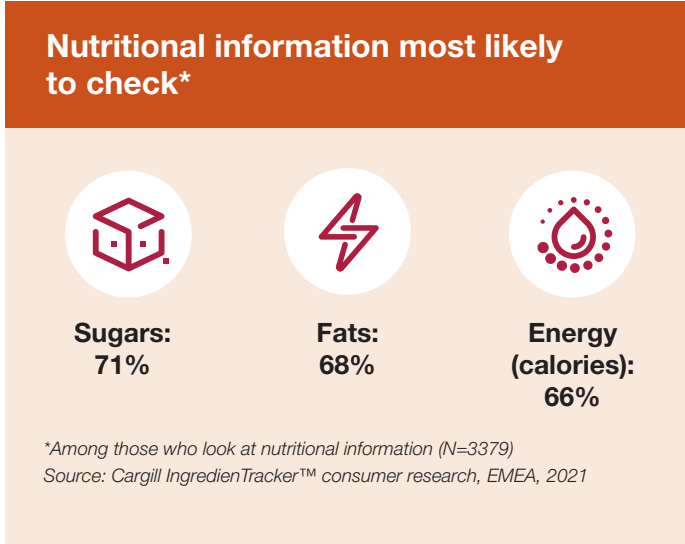
The pressure to reduce sugars in food and beverages continues to rise, especially with expanding government policies. Factor in a consumer mindset centered on balance and healthy nutrition, then add in greater scrutiny of product labels, and it's easy to see why manufacturers are scrambling to reformulate. This reality brings new challenges – and opportunities – for brands that are ready to embrace consumers' evolving expectations.

Consumers continue to watch sugars

In recent years, health has come to the forefront of consumer's minds, with many now taking a more holistic, proactive and preventative approach to well-being. With a wealth of information at their fingertips, consumers feel empowered to make their own decisions about what's healthy and what's not¹. They're emphasizing their focus on ingredients – especially sweeteners – seeking out those they perceive as natural, while avoiding those that they are unfamiliar with or those they consider to be “artificial”.

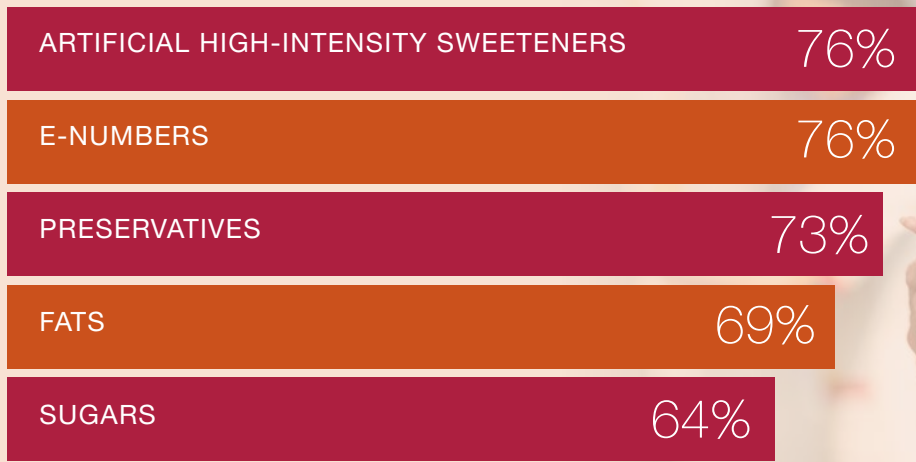
However, while consumers may give sweetener choices greater scrutiny, they remain unwavering in their flavor expectations. “Taste” remains shoppers’ top priority when buying food and drink, though “free of sugars” falls closely behind². Sugars are the on-pack nutritional information they're most likely to check.³

To better understand consumer attitudes toward sugar reduction, Cargill recently conducted a study with more than 3,000 respondents in France, Germany, and the UK.



This proprietary research found nearly two out of three consumers aim to avoid sugars, with the majority also reportedly bypassing artificial sweeteners.

Top ingredients avoided in packaged food & beverages



Source: Cargill proprietary research conducted with 3082 consumers in France, Germany & UK, 2022.



Sugars avoiding consumers have different preferred strategies when it comes to limiting their sugars intake. The majority preferred buying similar food and beverage products with a lower sugar content, while others opted for products that used natural sweeteners (with no or low calories), products without added sugars or simply buying reduced quantities of the full-sugar products they enjoy. Just one in 10 said they would buy products made with artificial sweeteners.

Perhaps not surprisingly, most sugars avoiding consumers prioritized limiting their consumption of the sweetener in the food and beverage categories typically associated with the highest sugar intake levels. Rather than swear off the sweetener completely, they focused on avoiding sugar in beverages, followed by sweet bakery and confectionery.

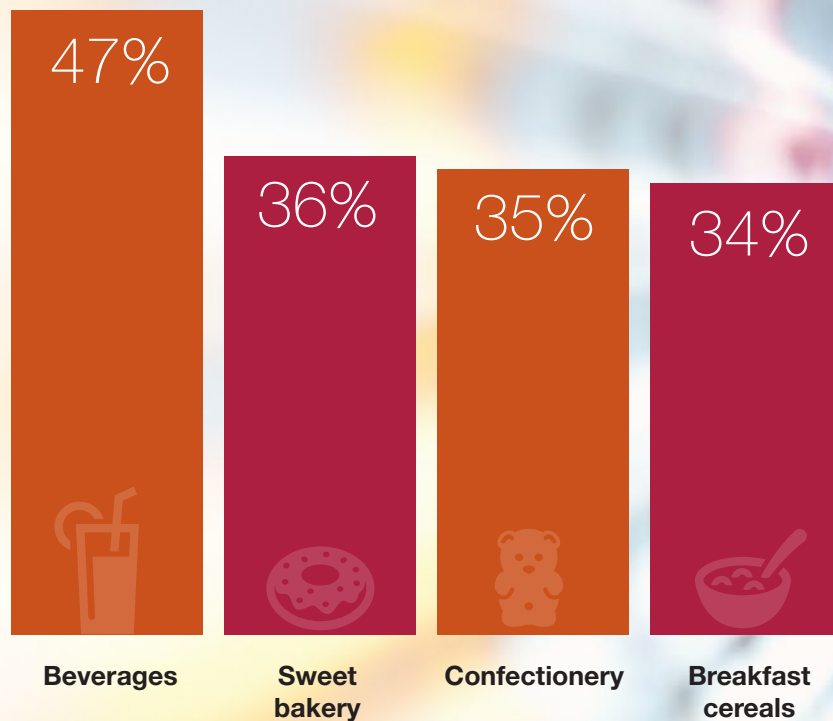
The study also examined consumer sentiment regarding no- and low-sugar products. Not surprisingly, taste was a big factor. Most consumers of such products either expected their taste to be equivalent to their full-sugar counterparts, or allowed for taste differences, but had little appetite for products that tasted worse. However, not all consumers made these full-sugar comparisons.



Nearly a third said they evaluated a no- or low-sugar product on its own merits.

Source: Cargill proprietary research conducted with 3082 consumers in France, Germany & UK, 2022.

Sugars avoidance by category



Source: Cargill proprietary research conducted with 3082 consumers in France, Germany & UK, 2022.



Brands step up for sugar reduction

As consumers look to reduce their intake of sugars, food and beverage manufacturers are scrambling to respond. Many companies have committed to reducing sugars and their progress is evident in the proliferation of sugar-related front-of-pack claims. Innova Market Insights finds European product launches with sugar-related claims* delivered a 7% combined annual growth rate since 2017, as brands race to position themselves for today's health-conscious shopper. It's worth noting that the adoption of sugar-related claims varies per application.

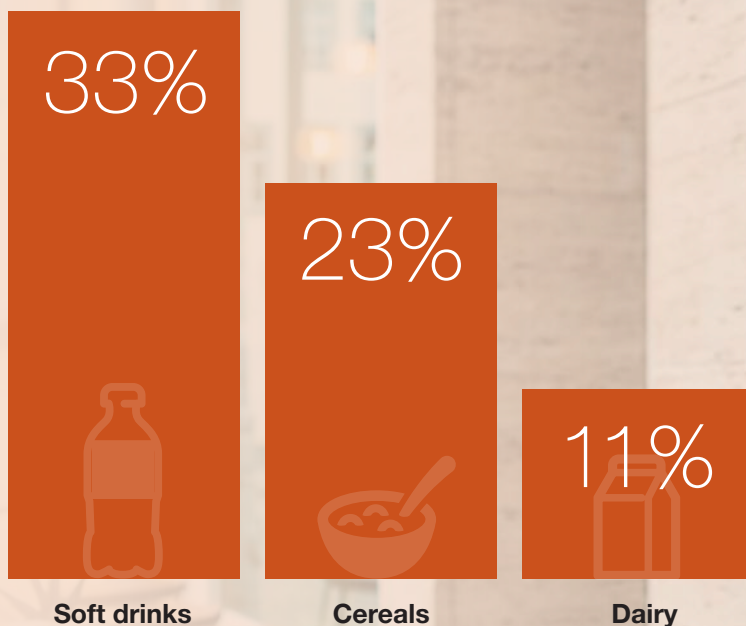
Beverages have a high incidence of sugar-related claims, with more than one in three launches in 2022 containing such a claim.

For formulators considering sugar reduction, the first step is determining just how low to go. No-added-sugar claims are still the most popular and show the most growth. Launches with low-sugar and sugar-free claims are also on the upswing, while reduced-sugar introductions have dwindled, perhaps reflecting brands' heightened focus on improving Nutri-Scores and delivering products with balanced nutrition.

Once manufacturers have decided upon their sugar-reduction targets, the real work begins. After all, sugars play many roles in formulations, impacting taste, appearance, physical and textural attributes, shelf life and more. There is no single ingredient that can replicate all of sugar's functional benefits.

Therefore, determining which sweetener to use will depend on many factors, including product application, price, regulatory requirements, and consumer perceptions.

Incidence of sugar-related claims* per category (2022)



Source: Innova Market Insights, 2022
Excluding sports nutrition and baby & toddler food

*Includes sugar free, reduced sugar, low sugar, no added sugar, low/no/reduced calorie

Sweet solutions inspired by nature


Successful reductions in sugars can require complex formulations. Fortunately, Cargill's broad range of nature-derived sweetness solutions can help product developers navigate the dos and don'ts of reformulation.

Our portfolio covers all the bases, with full-calorie syrups made from corn and wheat, low-calorie polyols and no-calorie options such as erythritol and stevia.

As a result, we're able to partner with brands to identify the best solution for their unique needs.

With the addition of Cargill™ soluble fiber, we now offer a complete toolbox to help customers meet their most challenging sugar-reduction targets.


Our portfolio of sweetener solutions



Full-calorie Sweeteners

These sweeteners all contribute metabolizable energy to the diet (4 kcal/g). Our solutions include caloric syrups, C☆Dex® Dextrose and SweetPure™ Wheat & Barley Malt Syrup.

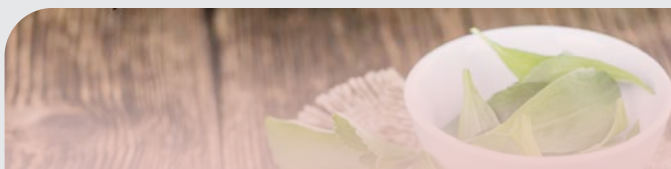
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Low-calorie Sweeteners

Polyols are versatile sweeteners that offer the potential for great-tasting reduced-sugar and sugar-free products, while contributing important sensory and functional benefits. We offer IsoMaltidex™ Isomalt, Maltidex® Maltitol, C☆Mannidex® Mannitol and C☆Sorbitidex® Sorbitol.

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No-calorie Sweeteners

Achieve great, sugar-like taste with our range of stevia solutions. Zerose® erythritol, our zero-calorie bulk sweetener, can be used alone or with stevia for a clean, sweet taste.

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Soluble Fiber

Label-friendly ingredients like Cargill™ soluble fiber can help achieve sugar and calorie reduction and enable fiber enrichment. It is a great solution to improve the nutritional profile of food and beverages.

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In sugar-reduced foods and beverages, removing sugars can impact the mouthfeel and body. Our range of nature-derived texturizers enable us to build back those missing elements. Pectin, for example, plays a pivotal role in many reduced-sugar fruit beverages, replicating sugar's feeling on the tongue.

Stevia fanbase continues to grow

Consumer attitudes toward sugars are well established, but not just any sweet substitute will do. They're drawn to recognizable ingredients, especially those they perceive as natural – criteria that makes stevia a perfect fit as a plant-sourced alternative to sugars.

For a deeper understanding of consumer attitudes toward stevia, Cargill fielded research in France, Germany, and the UK. More than half of respondents were already familiar with the nature-derived sweetener and the vast majority, 80%, were "interested" in products made with stevia. For the small minority who expressed reservations, common barriers included perceptions around taste, limited knowledge of how stevia is produced or a preference for full-sugar products.

Overall, stevia had a positive net purchase impact (NPI) of +16%, highlighting that most consumers were more likely to purchase a product if it had stevia on the ingredient list. Stevia's image was also generally positive and was most often associated with no calories, natural, healthy, environmentally sustainable and safe.

With a +16% net purchase impact, most consumers are more likely to purchase products made with stevia.

Source: Cargill proprietary research conducted with 3,061 consumers in France, Germany & UK, 2022.

Top 5 consumer associations for stevia

For each of the following: move the slider (more to the left, or more to the right) to indicate your opinion on STEVIA.



Source: Cargill proprietary research conducted with 3,061 consumers in France, Germany & UK, 2022.

Our study also examined consumer perceptions of three stevia production methods: extraction, fermentation, and bioconversion. All respondents were given a concept description to ensure they had a full understanding of each production method. While all three methods gave a boost to net purchase impact (NPI), “extraction” offered the most significant positive impact, followed by “fermentation”.

In August 2021, “steviol glycosides (E 960)” were renamed “steviol glycosides from stevia (E 960a)” with regulation coming into force February 3rd 2023.

Manufacturers that have placed food into the market before this date are permitted to use the old labeling until these food stocks have been exhausted.

Our study examined the effect of different stevia labeling on purchase decisions. We found that adding details on stevia production methods to ingredient labels generally raised NPI. “Steviol glycosides from stevia” and “steviol glycosides produced from fermentation” improved net purchase impact compared to “stevia” alone; however, NPI for “enzymatically produced steviol glycosides” decreased, likely because this process was unfamiliar to most consumers.

Stevia spotlight

Truvia® and ViaTech®

Truvia® stevia leaf extract is our high purity Reb A stevia sweetener; ViaTech® stevia leaf extracts are patented combinations of sweet stevia components, optimized for specific applications. These zero-calorie, high-intensity sweeteners are derived from the stevia leaf and offer a clean, sweet taste. With Truvia®, product developers can achieve sugar reduction of 30% or more, while ViaTech® enables even deeper reductions, up to 50% and beyond, depending on the percentage of sugars in the reference product.

truvia



EverSweet®

EverSweet® is our most advanced stevia sweetener yet. Cargill and partner Royal DSM, through their joint venture Avansya, developed EverSweet® by pioneering the fermentation approach to stevia sweetener production. It is currently sold in the U.S. and several other markets around the world, and it is in approval route in Europe and the UK.

EverSweet®
Stevia Sweetener

EverSweet® benefits:



Life Cycle
Assessment



Zero calories



Sugar
reduction



Label-friendly



Ethical &
Sustainable



The Cargill advantage

It's clear that brands now have a mandate to offer products with less sugars. But landing on a winning formula is no easy task. After all, consumer demands for great taste and texture remain unwavering, and their expectations around label-friendliness further limit ingredient choices.

Cargill can help brands navigate these challenging waters, partnering with them to identify the best sweetening solution for their unique product, market, and consumer segment. By collaborating with us, brands gain access to our broad ingredient toolbox, deep technical expertise, and proprietary consumer understanding, further supported by our nutrition, sensory and regulatory specialists.

Learn more about reformulating for sugar reduction at cargill.com/food-beverage/emea/fibers/reformulation-toolbox.

References

¹ Cargill TrendTracker™ 2022

² FMCG Gurus, 2021

³ Cargill IngredientTracker™ 2022

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