The sweet escape:

Insights Report

How sugar reduction is driving a new era of beverage innovation

The pressure to reduce sugar* in beverages continues to escalate, as brands face a growing litany of health concerns and expanding government regulations. Factor in a global pandemic, and it's easy to understand why consumers are scrutinizing food and beverage choices now more than ever before, prioritizing health and value. Beverages, especially non-alcoholic options, have been particularly hard hit, with sales down 5.3% after early pandemic-inspired stockpiling subsided.[1]

*Sugar reduction refers to a reduction in all declarable sugars, including both mono- (DP1) and di- (DP2) saccharides.

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Sugar's not so sweet associations

Consumers were wary of sugar-laden drinks before COVID-19. Now, as a growing body of scientific evidence ties obesity to a higher risk of serious complications or death from the virus, those concerns have only magnified.[2]

Perhaps the best example lies in the UK, where links between obesity and poor COVID-19 outcomes prompted the government to introduce a raft of regulations it hopes will help people lose weight.[3]

One thing is clear: The addition of COVID-19 to the list of disease risks associated with excess weight[4] adds new urgency to the ongoing battle to lower caloric intake and encourage healthier diets. Many, including the World Health Organization, suggest reducing sugar intake is key.[5]

Regulators aim to curb sugar

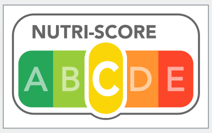
With medical and scientific communities focused on sugar, it's no surprise that regulatory bodies in Europe and around the world are following suit. Front-of-pack nutrition labeling schemes are one approach governments are wielding to limit sugar consumption. In Europe, two such efforts continue to gain traction: Nutri-Score and the UK's Traffic Light.

Introduced in France in 2017, Nutri-Score is a composite label, with all a product's nutritional information brought together in a single score, ranging from A (the presumed healthiest) through E. The voluntary scheme is spreading to other European countries and a number of prominent food brands have adopted the labeling system, including Danone and Nestlé.[6]

The UK's Traffic Light label takes a slightly different approach, using red, amber and green traffic light colors to show whether levels of sugar, salt and fat are high, medium or low. The intent of both efforts is clear – to help consumers make more informed food choices.

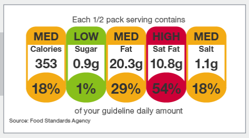
Front-of-Pack Labeling in Soft Drinks

Nutri-Score



- **A** Not possible for most soft drinks
- **B** 0% sugars
- **C** <3.5% sugars
- **D** < 7% sugars
- **E** >7% sugars

Traffic Light



Green	Orange	Red
</= 2.5% sugars	2.5-11.25% sugars	>11.25% sugars

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A taxing environment

It's not just front-of-pack labeling putting pressure on beverage makers. Sugar taxes are also gaining momentum. While these added levies have plenty of detractors, the World Health Organization recently touted Portugal's tax as a key factor in reducing sugary beverage sales.[7]

Other regulations impacting European beverage manufacturers include rules around sugar- and calorie- reduction claims. Products must deliver a 30% drop in sugar content to carry a sugar-reduced claim. Energy-reduced claims are also possible, provided a product reduces calories by at least 30% as compared with the original drink. It must also indicate the characteristics that reduced the beverage's total energy value.

Soft Drinks Tax in European Markets

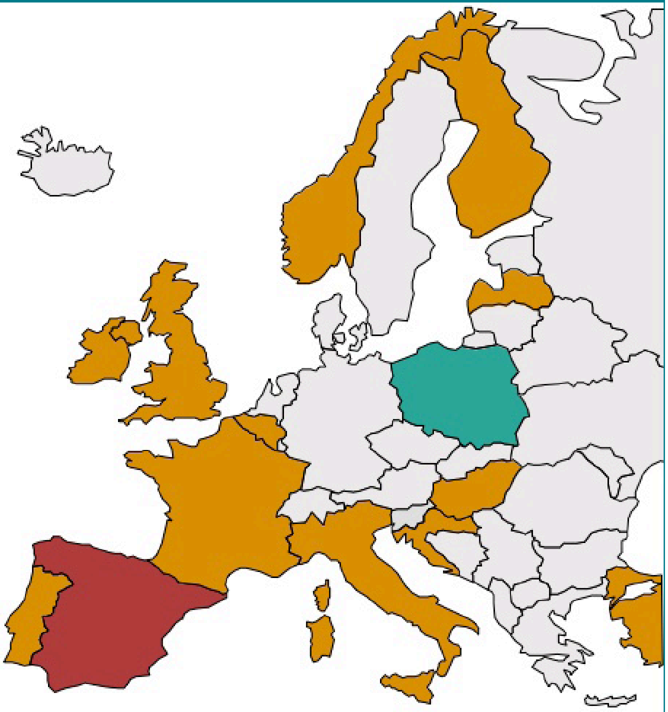
Soft drink taxes in force in:

- Belgium
- Catalonia (Spain)
- Croatia
- Finland
- France
- Hungary
- Ireland
- Italy*
- Latvia
- Malta
- Norway
- Portugal
- Turkey
- UK

- *Poland: Date of entry into force of the tax confirmed: 1 January 2021. Details of the tax pending publication (August 2020).*

**As of October 1, 2020*

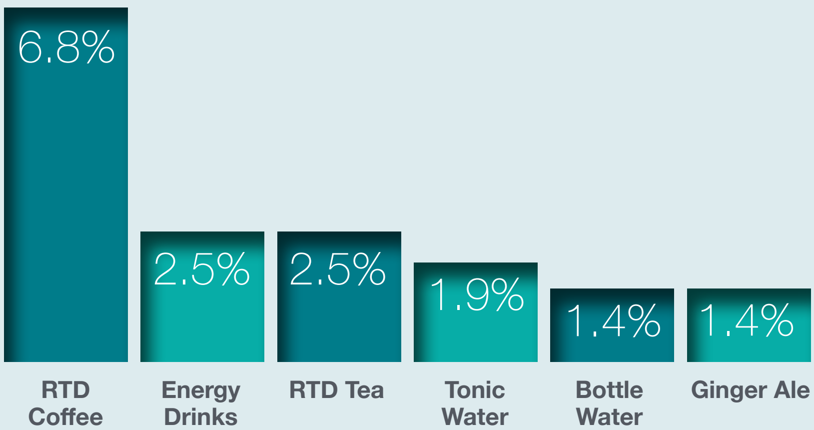
Tax in place
Ongoing discussions on future tax
Regional tax in place



An evolving market

Given the pressure, it seems the European beverage marketplace may be due for an overhaul. Data from Euromonitor concurs, predicting a steady shift toward healthier beverages, with bottled water, ready-to-drink coffee, energy drinks and ready-to-drink teas expected to deliver the highest compound annual growth rate (CAGR) between 2019 and 2024. Similarly, while the consumer research firm sees little growth for carbonates as a whole, it offers a more upbeat assessment for ginger ales, tonic waters and other less sweet options.[8]

Beverages Poised for Growth



Source: Euromonitor

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Impact on innovation

These adjustments in product offerings are already becoming evident on store shelves. For every new food or beverage product launched 2019, one in ten carried a sugar- or calorie- reduction claim.[9] In beverages, the number was even higher – 16% of these new products, alcoholic options included, featured sugar-related claims.[10]

In total, more than 2,300 beverages with sugar-related claims hit the market in 2019. Juices and nectars led the way in terms of sheer volume (see chart at right), but in other subcategories, sugar-reduction took an even larger percentage of the new product landscape. As the charts below illustrate, more than 60% of all new flavored bottled water drinks came with sugar-related claims. Meal replacement (49%), ice tea (42%), carbonates (37%) and energy drinks (36%) rounded out the top five.[11]

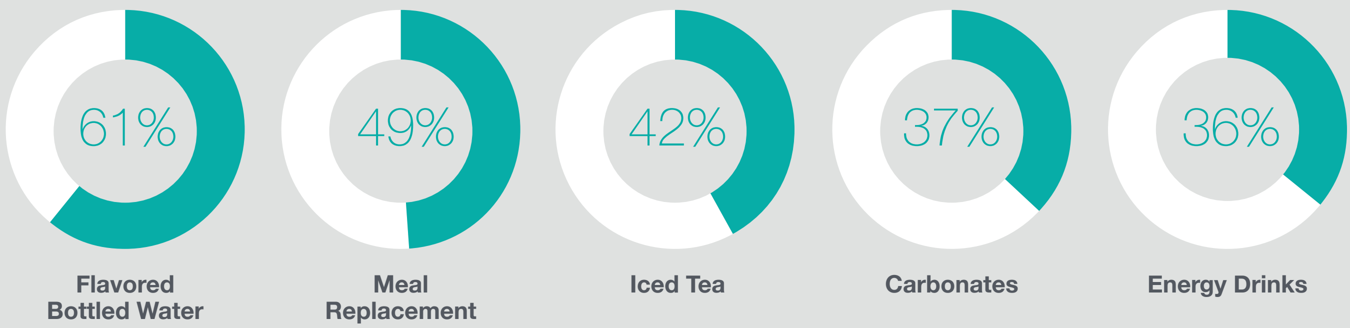
Top beverage categories for new products with sugar-related claims*

- Juices & Nectar**
- Ice Tea
- Flavored Bottled Water
- Energy Drinks
- Carbonates

** Based on total number of launches, Innova 2019*

*** Some sugar-related claims exclude sugars naturally present in fruit juices.*

Categories with Highest Prevalence of Product Launches with Sugar Claims



**Based on % of launches with a sugar claim on total launches per subcategory, Innova 2019.*

It's easy to understand why brands are racing to limit sugars in their new beverage entries. Research consistently shows the growing importance of sugar reduction – 54% of European consumers say it has become more important in their diet over the last year.[12] Beverage brands have responded, embracing the full spectrum of approved claims. In 2019, "no added sugar" held a slight lead over "low/no/reduced calorie" claims but "low sugar" and "sugar-free" claims saw a higher compound annual growth rate (CAGR).[13]

Differences in how brands approached sugar claims varied by beverage segment. Fruity drinks, be they juice and nectars or merely fruit-flavored still drinks, saw the highest use of no-sugar-added claims. However, this can be misleading as the sugars naturally present in their juice base aren't factored into this claim. Energy drinks and carbonates, along with drink concentrates and mixes, were more likely to carry sugar-free claims. For most other beverage categories, claims based on calories ruled the day.[14]

Sugar Claim Positioning (2019)

2019 Positioning	No Sugar Added	Low/No/Reduced Calories	Sugar Free	Low Sugar
Carbonates	22%	49%	49%	9%
Flavored Bottled Water	20%	63%	39%	12%
Iced Tea	17%	64%	23%	17%
Meal Replacement & Other Drinks	28%	38%	2%	44%
Energy Drinks	3%	56%	87%	3%

Source: Innova, 2019.

Label concerns complicate formulation

Still, while brands are trying hard to oblige consumer desires to limit sugar – too often, the sweetening solutions they're turning to carry baggage of their own. Of the top five sweeteners most often used in beverages, three are artificial sweeteners: acesulfame-K (ace-K), sucralose, and aspartame.[15]

Top Sweeteners in Sugar-Reduced Beverages

Ace-K	Aspartame	Sucralose	Granulated Sugar	Stevia
Purchase Impact:	Purchase Impact:	Purchase Impact:	Purchase Impact:	Purchase Impact:
↓-29%	↓-29%	↓-29%	↓-16%	↑+7%

Source: Innova, 2019; Cargill IngredienTracker™ proprietary research, 2018

The problem? Like sugar, consumers also have negative perceptions of artificial ingredients. Proprietary research from Cargill suggests nearly two-thirds (64%) of European consumers say they're "extremely" or "very likely" to avoid foods with artificial ingredients. Aspartame, ace-K and sucralose all received negative purchase impact scores.[16]

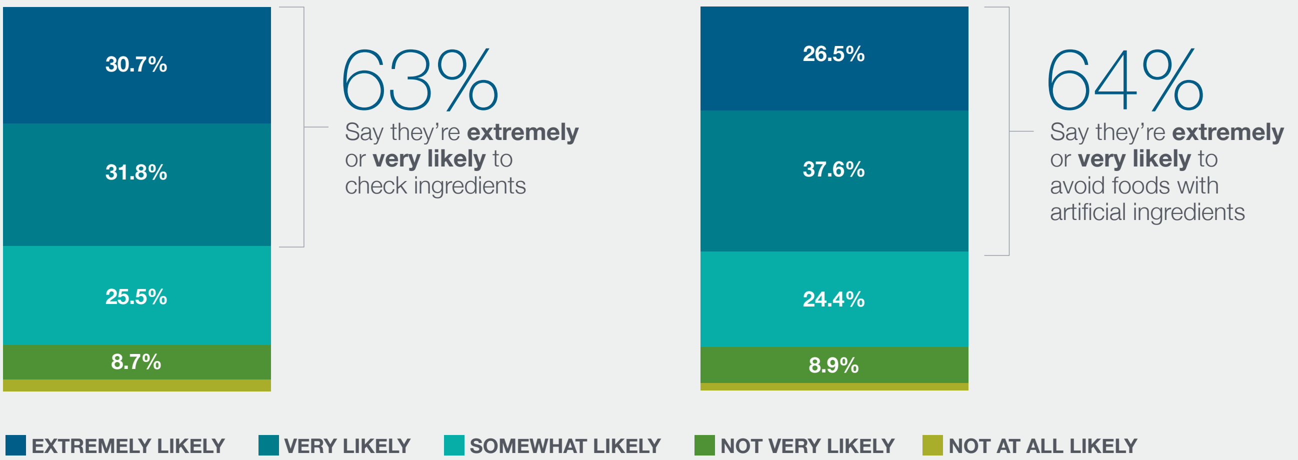
While sugar and artificial sweeteners have lost favor with consumers, there are sweetening solutions that fare better. The Cargill study found fructose is familiar to most consumers and scores positively in both health perceptions and purchase impact. Stevia is another well-received choice, especially among younger shoppers (13- to 34-year-olds). Just two sugars, honey and agave syrup, scored higher than stevia with this influential demographic.[17]

> "Fructose is familiar to most consumers and scores positively in both health perceptions and purchase impact. Stevia is another well-received choice."

Labels: A Lesson in Avoidance

In today's label-conscious world, ingredient statements matter. Cargill research suggests nearly two-thirds of European shoppers check ingredients. Most of those label-readers are on the lookout for ingredients to avoid. Artificial ingredients, including artificial sweeteners, are near the top of that dubious list.[18]

Consumers read labels ... **... to avoid certain ingredients**



Source: Cargill IngredienTracker® proprietary research, 2019.

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Sweet, nature-derived solutions

Consumers' evolving label expectations have created new formulation challenges. Fortunately, Cargill's broad portfolio of nature-derived sweetness solutions can help product developers navigate the do's and don'ts of today's beverage formulation realities, while still delivering great taste. With full-calorie sugars made from corn and wheat, and no-calorie options such as erythritol and stevia, we're able to partner with brands to identify the best ingredient formulation for their unique needs.

OUR SWEETNESS SOLUTIONS INCLUDE:

C☆TruSweet® 1795 fructose syrup

A 95% pure fructose syrup characterized by high relative sweetness and positive consumer perceptions. Made from either corn or wheat, it delivers a sweet taste at lower usage levels, enabling 30% sugar and calorie reduction. (More, if used in combination with high-intensity sweeteners.)

↓30% SUGAR REDUCTION

Truvia® & ViaTech® stevia leaf extracts

Truvia® 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, even in challenging applications.

↓50% SUGAR REDUCTION

Zerose® erythritol

Another zero-calorie sweetener, Zerose® erythritol offers similar functionality to sucrose. It pairs well with high-intensity sweeteners, masking off-flavors and rounding out their sweetness profile. While erythritol is widely found in fruits like grapes and pears, we use a natural fermentation process to produce erythritol affordably and sustainably.

↓15% SUGAR REDUCTION

Additionally, we offer a full complement of texturizing solutions to support a range of beverage formulation needs. In sugar-reduced beverages, removing sugar impacts the mouthfeel and body of a beverage. 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.

RECIPE: Peach Tea – 65% Reduction

	Standard recipe (%)	65% sugar & calorie reduction
Water	88.0	95.8
Sugar syrup	9.4	
C☆TruSweet® F95 fructose syrup (70%DS)		**2.7**
Peach compound	1	1
Acidity regulators	0.42	0.42
Preservatives	0.033	0.033
ViaTech® TS 300 stevia leaf extract		**QSP**
Energy (kcal/ 100g)	28	**9.9**
Carbohydrates %	7.0	**2.5**
of which sugars	7.0	**2.5**
	NUTRI-SCORE D	NUTRI-SCORE C

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Your partner for growth

For more than half a century, Cargill has been a leading supplier of sweetness solutions, earning our reputation as a trusted, reliable partner. We've invested hundreds of thousands of hours in R&D, formulation and production to develop some of the industry's most innovative sweetening solutions, including Truvia® and ViaTech® stevia leaf extracts. Soon EverSweet®*, a Reb M and Reb D stevia sweetener made via fermentation, will join that list, enabling sugar reductions up to 100%.

To speed your product development journey, we now offer INFUSE by Cargill™, a service that uses our extensive sweetness and texture acumen to rapidly create tailor-made ingredient blends. INFUSE has a range of no added sugar blends in its portfolio which can be easily tailored to meet your specific sugar – and/or calorie reduction targets.

Sugary beverages will continue to face heightened scrutiny but formulating reduced-sugar options can still be sweet. With more than 300 ingredients, deep technical expertise, a global supply chain and a commitment to sustainability, beverage manufacturers who partner with Cargill can still enjoy sweet success.

Advancing sustainability, every step of the way

An unwavering commitment to sustainability infuses everything we do. It starts from the ground up, with our farmer-partners, who embrace soil and water conservation practices and regularly evaluate and improve their farming practices.

We recognize the importance of transparency, which is why our sustainably sourced corn and wheat programs are externally verified and benchmarked Silver against the SAI Platform Farm Sustainability Assessment, an industry-wide recognized sustainable sourcing definition. Similarly, our third-party audited Stevia Sustainable Agriculture Standard ensures our stevia producers and manufacturing facilities follow best practices, protecting both the environment and our workers' welfare.

We also value local sourcing. We strive to use raw materials grown within 300km of our European sweetener production facilities. Our commitment continues through the processing plant, where we're working to reduce our Scope 1 and 2 greenhouse gas emissions through energy conservation, cogeneration and the use of offsite renewable energy.

Learn more about Cargill's sugar reduction ingredients and expertise at **cargill.com/food-beverage/emea/calorie-and-sugar-reduction.**

** Currently available in the U.S. only.*

References

[1] Euromonitor, 2020 vs. 2019 data.

[2] Southey, F. Food Navigator.com, "Researchers hit food industry with double blame: Obesity pandemic and COVID-19 severity." June 11, 2020. https://www.foodnavigator.com/Article/2020/06/11/Researchers-hit-food-industry-with-double-blame-Obesity-pandemic-and-COVID-19-severity

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[6] Southey, F. Food Navigator.com, "Nestle and Danone back bid to enforce Nutri-Score across Europe." April 4, 2020. https://www.foodnavigator.com/Article/2020/04/28/Nestle-and-Danone-back-bid-to-enforce-Nutri-Score-across-Europe

[7] World Health Organization, "Portugal brings down obesity by taxing sugary drinks." April 3, 2020. https://www.euro.who.int/en/countries/portugal/news/news/2020/3/portugal-brings-down-obesity-by-taxing-sugary-drinks

[8] Euromonitor.

[9] Innova database, Europe. Includes all food and beverage categories, excluding clinical nutrition, supplements, and sugar and sweeteners. 2019.

[10] Innova database, Europe, 2019.

[11] Ibid, Innova.

[12] HealthFocus International, 2019.

[13] Ibid, Innova.

[14] Ibid, Innova.

[15] Ibid, Innova.

[16] Ibid, Cargill IngredienTracker™.

[17] Ibid, Cargill IngredienTracker™.

[18] Ibid, Cargill IngredienTracker™.

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