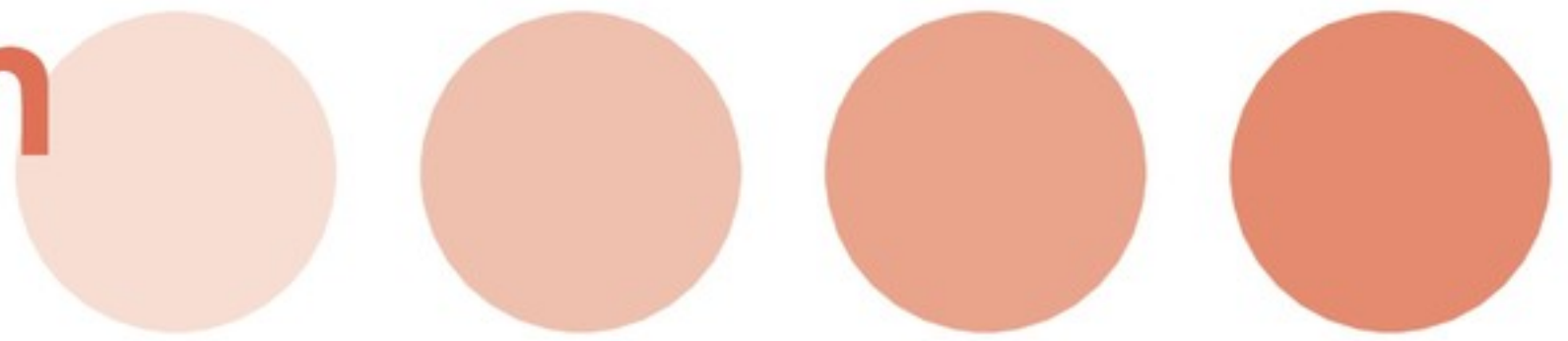


# Reformulation and calorie reduction



## Beverage industry leading the way

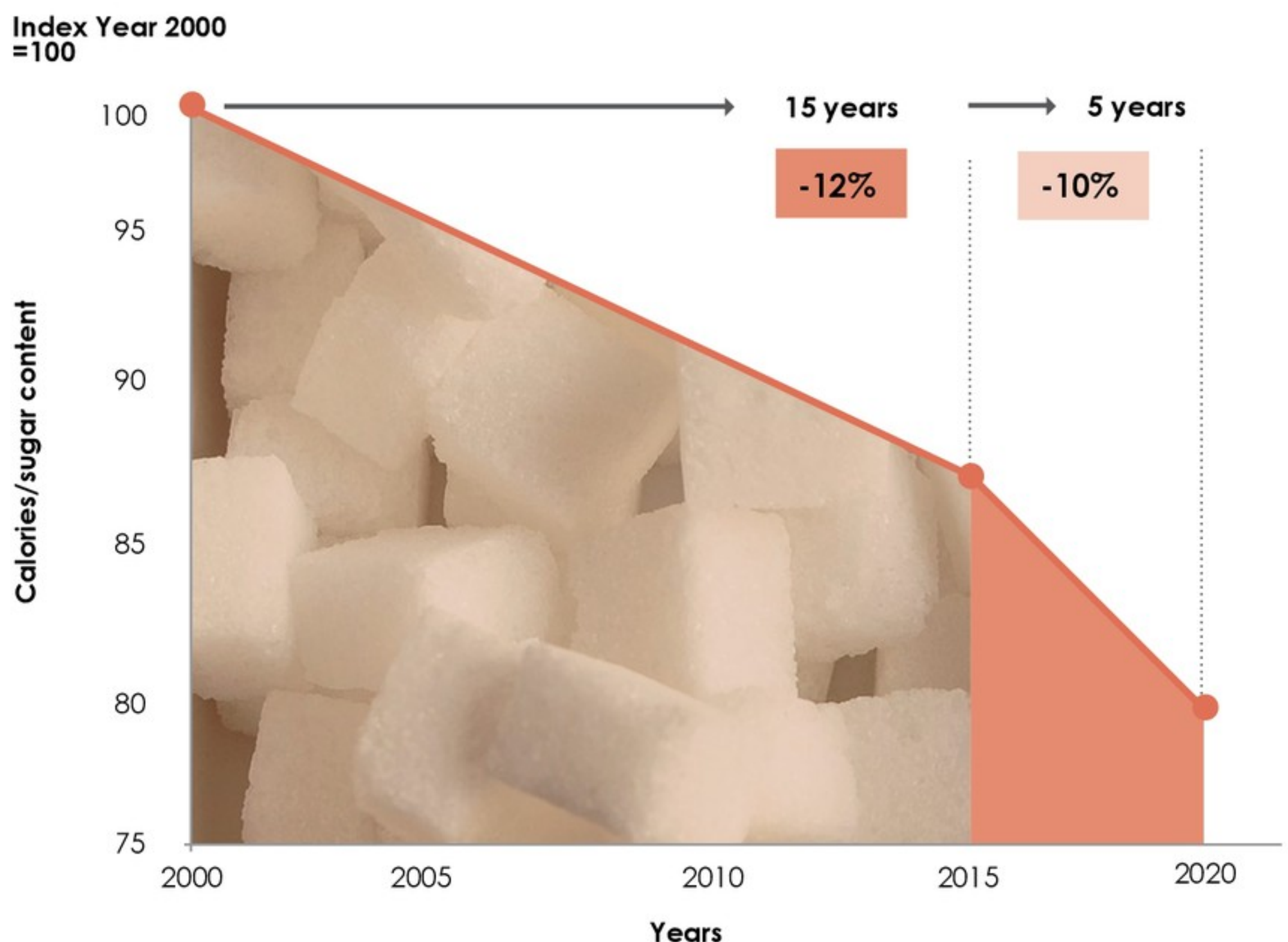
This has to be one of the biggest topics on everyone's agenda. With the global obesity crisis expected to escalate still further, many companies are ahead of government guidelines and have already reformulated their portfolios to meet the need for lower calorie drinks. But what are the results and what is happening with stevia?

The European soft drinks industry said it will reduce added sugars in its products by a further 10% by 2020 across Europe. This initiative responds to calls from Member States and the European Commission for a coordinated approach to reformulation and sugar reduction. The sector including Coca-Cola, Pepsi and Orangina – will innovate, reformulate, use smaller pack sizes and encourage consumer choice towards low and no calorie drinks.

The soft drinks sector is an early mover in added sugars reduction with its journey beginning in the 1970s when the first no sugar and calorie soft drinks were introduced. The industry reduced sugar in still and carbonated soft drinks by 12% from 2000-2015, so the new commitment will reduce sugars further -10% over the next five years.

Announcing the move UNESDA Soft Drinks Europe president Suntory Beverage and Food Europe CEO Stanislas de Gramont said: "We welcome the EU's policy approach to reformulation and sugar reduction which is based on partnership and allows us to deliver speed and scale and we hope other food categories will follow suit in order to generate critical mass."

Commenting on the initiative presidents of The Coca-Cola Company's business units in Europe Dan Sayre and Nikos Koumettis said: "We believe that this and the other actions we are taking will help more people make the right decisions for them and their families." In July last year Coca-Cola Great Britain launched its biggest new product campaign in a decade with Coca-Cola Zero Sugar, the new and improved sugar free



Coca-Cola new zero sugar recipe tastes even more like the original Coca-Cola Classic, and is supported by a multi-million-pound marketing campaign.

PepsiCo Europe and Sub Saharan Africa president Richard Evans sub-Saharan Africa said: "Companies like PepsiCo have a tremendous opportunity – as well as a responsibility – to not only make a profit, but to do so in a way that makes a difference in the world. We were first movers in reformulating products for lower calories but we recognise that more must be done to help people manage their calorie intake."

#### Working with fructose

Taste is the top driver for food and beverage purchase decisions but consumers worldwide calorie reduction a top priority. A recent survey found that 47% of consumer purchasing was impacted when products had low-/reduced-/no-sugar; claims with 44% influenced by low-/reduced-calorie claims.

Tate & Lyle Senior vice president global applications Luis Fernandez said of the widely misunderstood fructose: Fructose is a monosaccharide found naturally in many foods, including fruits, vegetables and honey. It is the sweetest of all naturally occurring carbohydrate sweeteners. Besides providing sweetness, fructose enhances flavour, mixes well with other sweeteners and starches, has higher solubility than sucrose, improves humectant levels and protects fruit textures in frozen foods.

The higher sweetness potency of fructose delivers a faster sweetness response enabling manufacturers to reduce total calories by using it in place of less-sweet carbohydrates and sugars. It also works with nutritive and non-nutritive sweeteners, allowing the same sweetness levels while using fewer total sweeteners overall. Fructose has a low glycemic response with a lower blood glucose rise compared to

**Fructose is a monosaccharide found naturally in many foods, including fruits, vegetables and honey**

sucrose or glucose, important to people with diabetes, so the number of food and beverages formulated with the ingredient has significantly increased over the past 30 years. In North America, alone, 15,226 products containing fructose have launched since 2010.

#### What is stevia?

Stevia is a plant that was originally from South America where the plant and leaves have been used for hundreds of years as a sweetener for food and drink. The active compounds are steviol glycosides – a type of carbohydrate – and they can be up to 350 x sweeter than sugar with none of the calories – an obvious benefit to people on certain types of diet.

Today, the status of stevia and its various extracts varies between countries. For example, the European Union and Canada have approved steviol glycosides as food additives whilst the United States has not. The US does accept that some extracts – such as the glycoside Rebaudioside A – are safe and can be used as a food additive.

To show that the molecules that give the stevia plant its natural sweetness are present in the commercially available food additive the team at the University of Bonn used chromatography. Dow Water & Process Solutions Global Marketing Director for Ion Exchange Resins Marlin Kinzey said: "The ion exchange resins used in chromatographic processes can separate 40 different sugars, sugar alcohols, organic acids and related compounds from one another. Strong acid cation resins, for example, can purify sugars and sugar alcohols, while ion exchange resins can enrich organic acids. There are usually no added chemicals needed for chromatography, and it purifies carbohydrates, acids, and other molecules that would degrade during more intense separation processes like distillation." ●

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