



Achieving Sweet Success in Sugar Reduction Across Europe

Translating consumer insights into winning formulations.



Contemporary consumer considerations

Future-forward innovation requires continual monitoring into consumer values, culture and behaviors. These trends shape the sub-conscious and impact consumption choices.

The current landscape of food and beverage innovation continues to be driven by the need for better nutrition, quality sourcing and the connection that has to human longevity. Sugars, among other vices, are at the forefront of this conversation.

To get a pulse on the current consumer attitudes and behaviors around sugars, ADM deployed a robust OutsideVoiceSM proprietary research study in Germany, United Kingdom, Spain, Poland, France, Italy, Netherlands, and Romania to better analyze the decision-making process that impacts purchase and consumption habits. These countries were chosen because they represent all 4 regions of Europe and also are some of largest users of sweetening solutions by volume.

This report contains actionable insights and your roadmap to successful formulation. Discover not just what consumers demand in terms of sugar reduction but how they are evaluating product labels, ingredient lists and how their perceptions and actions vary across categories.

It is our goal that this deep dive consumer analysis will spark new understanding and drive innovation to advance sugar reduction and sweetening solutions.

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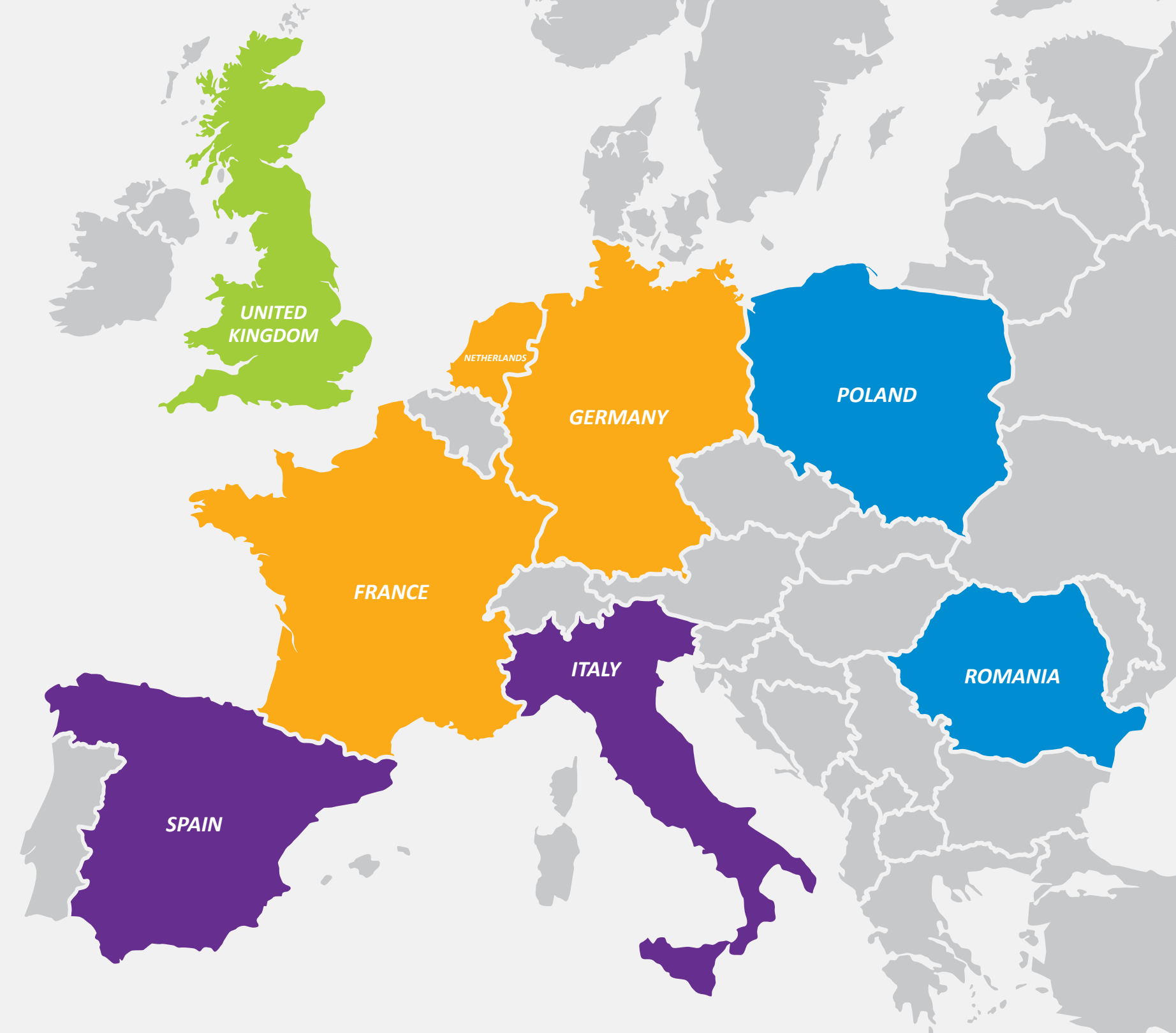
A rise in reduced sugar demand

Today's consumers are empowered, informed and selective. They have more transparency than ever into the ingredients they consume. They read labels, look for ingredients they consider "real" and even evaluate the impact their consumption has on the environment. They're deliberate with how they approach food and beverages, becoming increasingly more educated on the connection between what they put in their bodies and the direct impact on their physical, mental and emotional health. They also have more options than ever before with new channels to make purchases. And more choices mean the less consumers ultimately need to compromise.

Through ADM OutsideVoiceSM proprietary research, **it was found that an average of 8 out of every 10 EU adults now intentionally avoid or reduce sugar in their diets.** Of the 8 EU countries surveyed, some polled as high as 9 out of 10 consumers limiting sugars. Our research found that the primary reason for this limitation is due to more than half of the region aligning with the statement that 'I believe sugar is harmful to the body.'

% of EU Adults That Limit or Avoid Sugar by Region

- **United Kingdom - 77%**
- **Western Europe - 80%**
Germany, France, Netherlands
- **Eastern Europe - 86%**
Poland, Romania
- **Southern Europe - 89%**
Spain, Italy



Top 3 Reasons for Limiting Sugars

53%

Harmful to the body

30%

Watching calories

20%

Don't like how I feel



Reducing sugar is just as important as taste

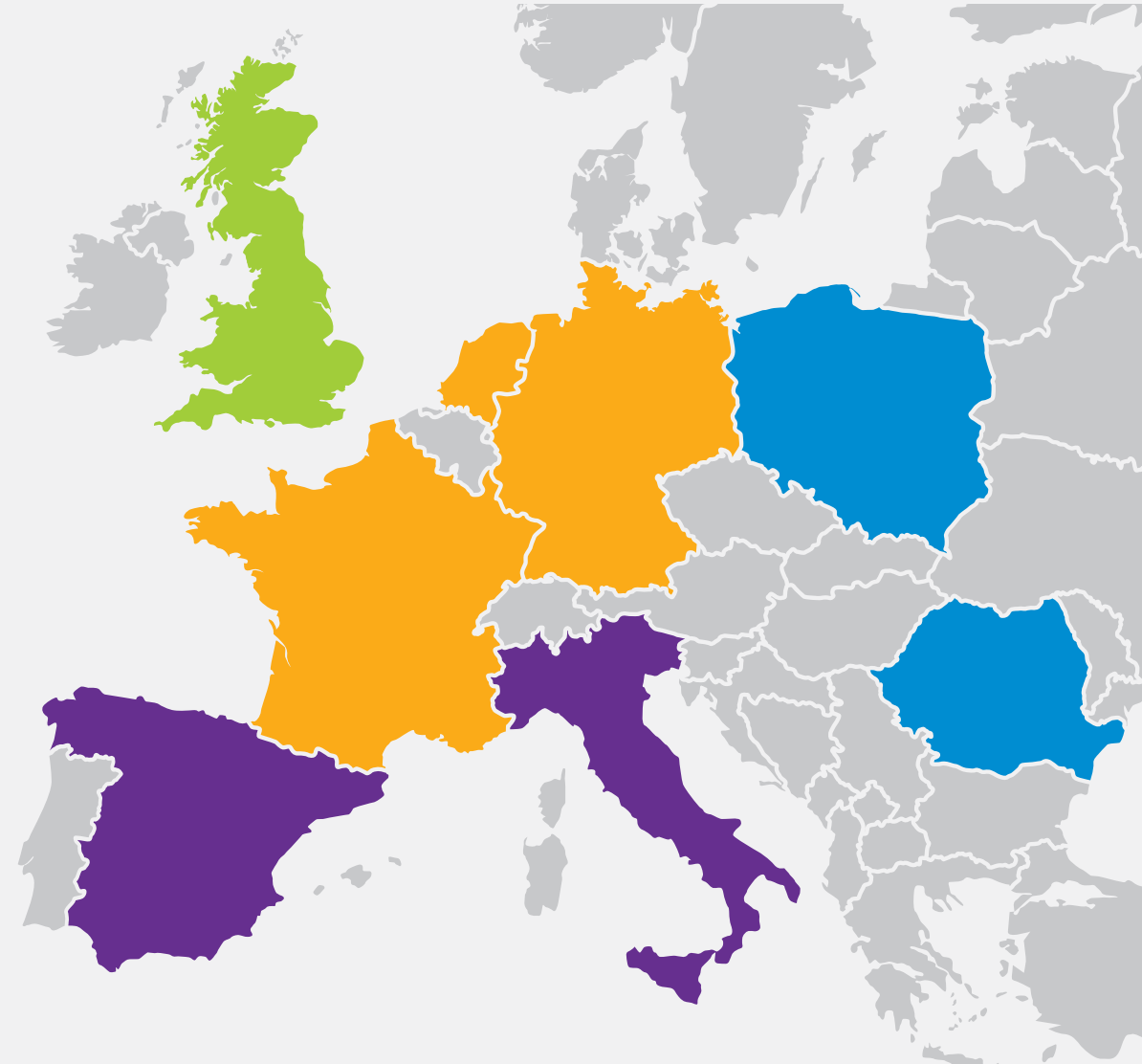
As consumers continue to monitor their intake, they are opting to consume less sugars to prioritize their health and wellness, now more than ever.

Taste has always reigned supreme when choosing food and beverages. But shoppers must consider many, and sometimes-competing, priorities when evaluating new options. Our research suggests that now, less sugar is just as high of a priority as taste when consumers make new consumption purchases meaning – they expect it and won't compromise.

When targeting specific European countries, we see some common themes. The United Kingdom shows a likeness in importance for both great taste and reduced sugars followed by naturality and healthy concepts. Western countries tend to value treats and indulgences with far more importance than other regions. Southern and Eastern countries show stronger emphasis on sugar reduction over all other attributes. The southern countries of Italy and Spain show the most significant difference from other regions, going as far to say that having an appealing taste comes second to meeting their wellness goals.

How do we achieve the appropriate balance of these attributes?

This is a challenge that ADM aids in solving through our SweetSavvy™ approach.

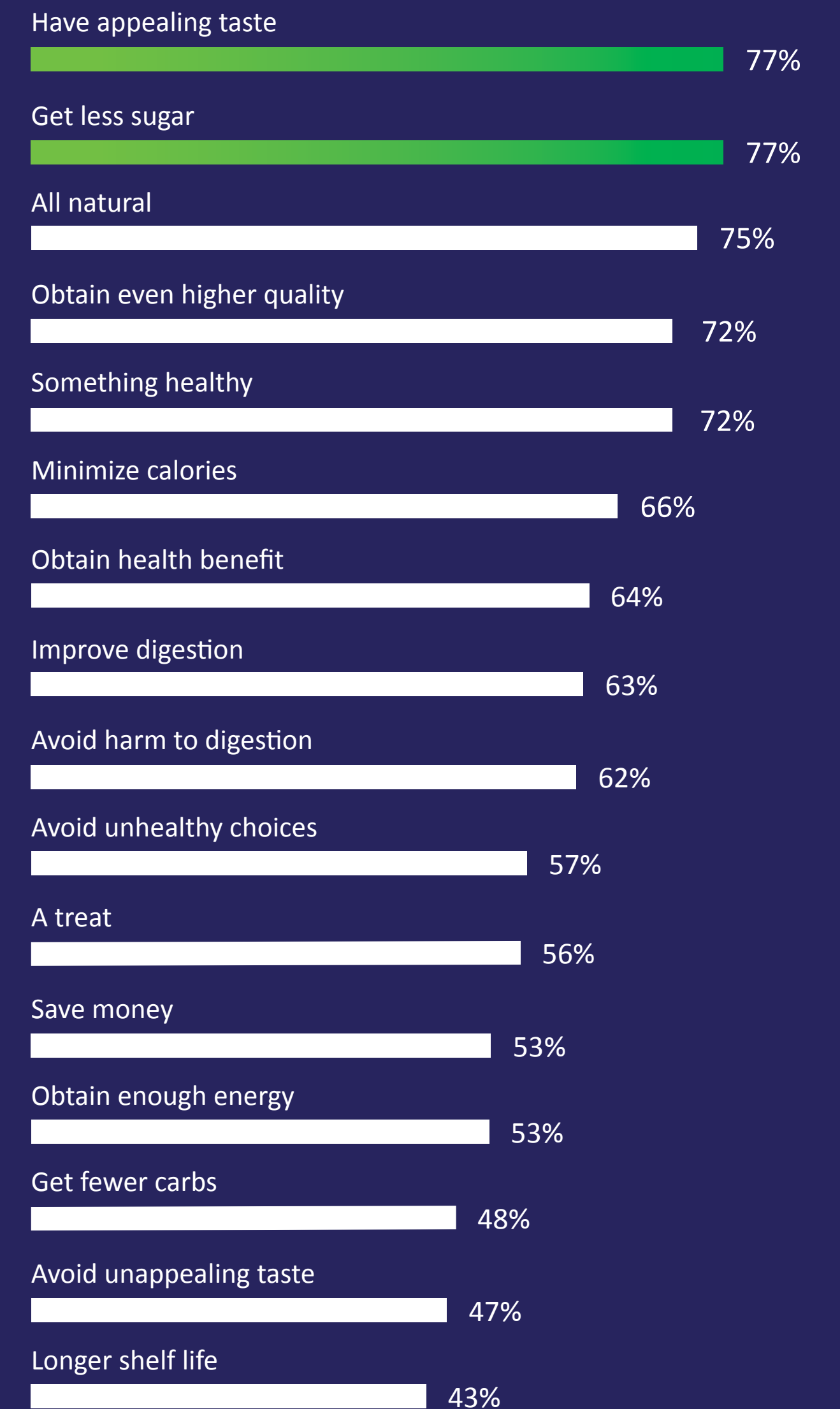


Priorities by Region

(Average Across 7 Categories, 4 Regions)

- United Kingdom**
 - Have appealing taste - 77%
 - Get less sugar - 76%
 - All natural - 74%
 - Something healthy - 70%
- Western Europe**
 - Have appealing taste - 79%
 - Get less sugar - 74%
 - All natural - 72%
 - A treat - 69%
- Eastern Europe**
 - Get less sugar - 81%
 - Have appealing taste - 78%
 - Obtain even higher quality - 78%
 - Something healthy - 78%
- Southern Europe**
 - Get less sugar - 79%
 - All natural - 78%
 - Obtain even higher quality - 77%
 - Have appealing taste - 75%

Priorities When Choosing a New Option (Average Across 6 Categories)



Consumers seek sugar reduction PLUS so much more...

Sugar reduction as a concept doesn't exist in a vacuum and not all consumers approach shopping the same way. While sugars impact purchase decisions, it's the unique need states of consumers beyond sugar reduction that make it imperative to dig deeper. Understanding these mindsets allows us to develop solutions that can fulfill, and exceed, their expectations.

Sugar Reduction PLUS...



Clean & Clear Labels

Looking for more 'positive' claims as they each define what clean label means to them. These shoppers focus on calorie 'quality' and food's intrinsic value.

Sugar reduction is **65%** more important to these consumers when seeking clean label foods and beverages.

- + Recognizable ingredients
- + Free-from products
- + Plant-based & botanicals
- + Search for sustainability



Nutrition Benefits

Choosing food and beverages that help them achieve a wide array of wellness goals, viewing it as part of the solution to a range of health concerns.

Sugar reduction is **54%** more important to these consumers when seeking low calorie foods and beverages.

- + Achieve wellness goals
- + Trade up for better nutrition
- + Support immune health
- + Obtain benefits from functional ingredients



Balanced Lifestyle

Believe their quality of life is enhanced by offering sensory pleasure, connection with others and stress relief.

Sugar reduction is **47%** more important to them when seeking indulgent foods and beverages.

- + Desire for nostalgia and comfort
- + Discovering new flavors and textures
- + Justifiable indulgence as reward
- + Balance in pre-portioned packaging

Sugar reduction is not one size fits all

How consumers limit their sugars varies. Some shoppers deliberately review carbohydrates because they believe they sabotage their weight-management efforts or contribute to other health concerns. Others avoid sugars, perceiving them as unnecessary given the belief that much of the food we eat already contains high levels of sugar. And lastly, consumers also approach sugar reduction by limiting the types of sweeteners they consume, either because they dislike the taste, or they deem certain sweeteners as unnatural.

Category plays a critical role too as broad categories vary in their sugar reduction requirements and constraints, with beverages, culinary sauces and sweet snacks most often under a higher level of scrutiny. Consumers are more forgiving on sugar content when interacting with indulgent categories, such as baked goods, confections and alcohol, but it's here where the quality of the sugar source becomes increasingly more important.

As formulators, it is our role to strike the proper balance among all the variables for the right consumer set.

Label Review Varies by Attribute

Nutrition Information	
Serving Size	40g
<hr/>	
Amount Per Serving	
Energy	170 kcal
<hr/>	
Carbohydrate: 5g	
of which sugars: 4g	
<hr/>	
Type of Sweeteners:	
ALMONDS, SOLUBLE CORN FIBER, HONEY, GLUCOSE SYRUP, PALM KERNEL OIL, SUGAR, RICE FLOUR, MILK POWDER, SEA SALT, CAROB POWDER, NATURAL FLAVOR	

Consumers are shopping intentionally and reviewing labels in accordance with how they choose to limit sugars in their diets.

- Carbohydrate
- Sugars
- Type of Sweeteners

Importance Varies by Category



87% Beverages



86% Sauces & Dressings



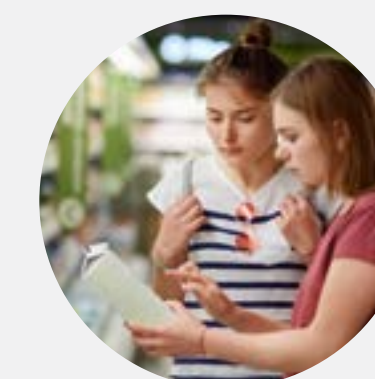
83% Bars & Snacks



79% Baked Goods



78% Candies & Chocolate



77% Dairy



65% Alcohol

Perception of sweetening solutions

While consumers are actively seeking foods and beverages to meet specific needs, they are also more frequently reading labels and monitoring intake to deliberately avoid specific ingredients.

Whatever the personal reason shoppers use to evaluate purchase options, **it's clear that only a handful of sweeteners are universally recognized.** As might be expected, awareness diminishes as ingredients move away from common and recognizable names.

Brands can significantly increase acceptance if the right messaging is aligned with a distinct sweetener type to boost ingredient education.



Four distinctive sweetener classifications

Tailored messaging and education increases consumer acceptance.



Foundational Sweeteners

Information about how and where bulk sweeteners are grown and the role they play beyond sweetness, which have led to their popularity, help these sweeteners gain acceptance with consumers.



Unfamiliar Sweeteners

Claims that compare unfamiliar or novel sweeteners like erythritol directly to sucrose in terms of comparable taste and sweetness while reinforcing nutrition advantages win with consumers.



Food-associated Sweeteners

Sweeteners with nominal food associations, like agave and tapioca syrup, often benefit the most from added insight into the distinctive taste profile and sourcing.



Branded Sweeteners

Sweeteners like stevia and sucralose are often known by consumers due to their recognizable brand names. Reinforcing their basic impacts on blood sugar levels and calorie content increase consumer acceptance.

Our SweetEdge[®] approach to sugar reduction

Meeting these evolving and nuanced consumer demands may seem daunting, but ADM is your single solution partner with the insights and innovation to meet consumer needs and formulation challenges head-on.

Our unparalleled sugar reduction toolbox is designed to not simply reduce sugars, but to replace, rebalance and rebuild the structural integrity lost to ensure sweet success every time. These building blocks deliver the taste, texture, stability and nutrition for winning food and beverages while delivering unmatched sweetness and label appeal.

Replace Sweetness

Rebalance Flavor

Rebuild Functionality

Discover insights to innovation across seven key categories



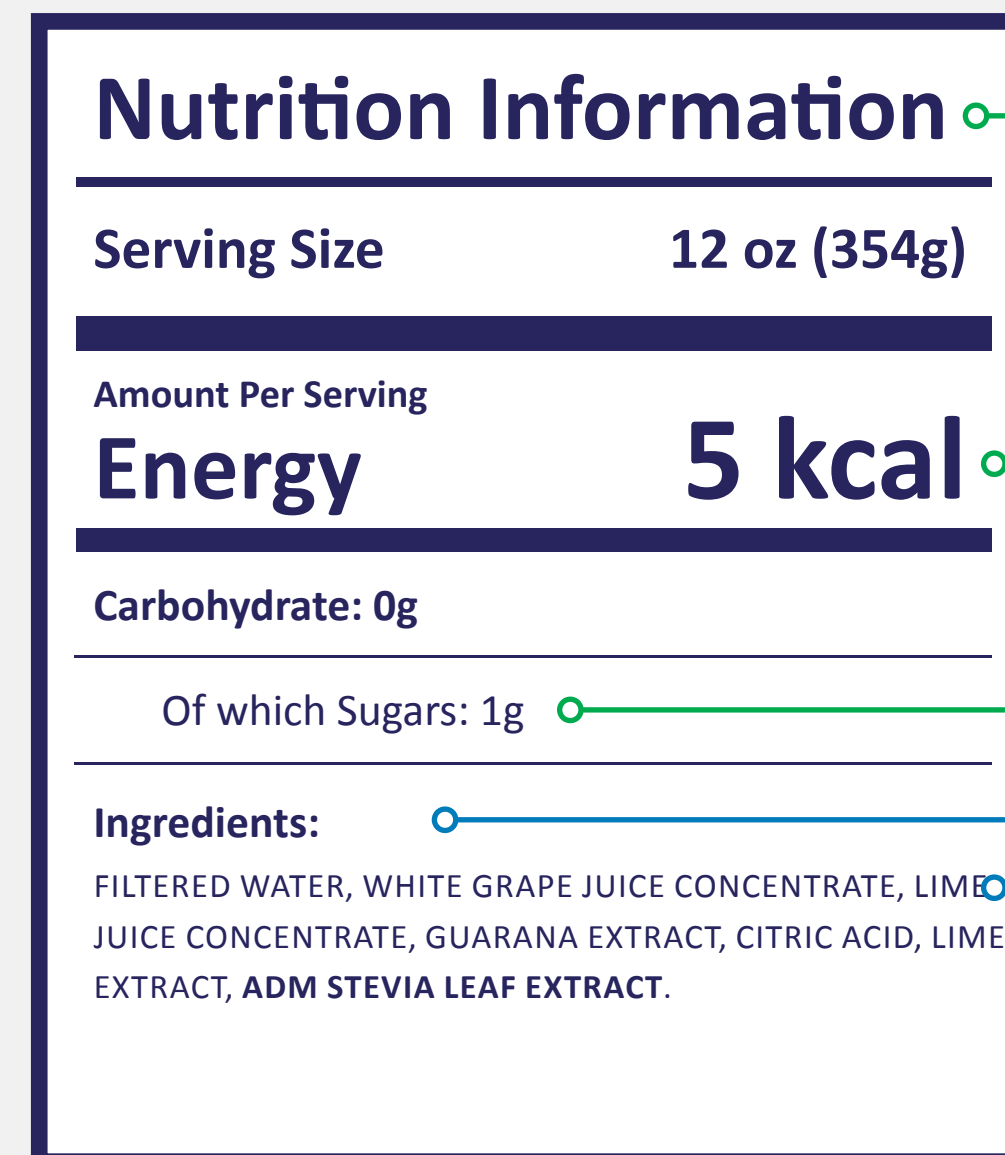
Beverages (non-alcoholic)

Beverages receive the toughest scrutiny out of all categories measured. They are a primary contributor of added sugars in the diet as well as the entry point for sugar substitutes, vetted for taste to gain acceptance into habitual consumption.

They also offer the greatest intentionality for sugar reduction with 87% of consumers stating sugar reduction is important for their beverages. Our research suggests that sugar content and sweetener type are the most reviewed nutritional information when selecting a new beverage.

Beverages play a variety of roles and consumers are constantly seeking options for both indulgence and positive wellness. This means successful beverage development is tied to a deep understanding of the consumer needs and purchase intent for an appealing taste and label.

When evaluating new non-alcoholic beverages...



39% say they review the nutrition information

38% review the calories per serving

45% review the sugars per serving

41% review the ingredient list

41% review the "type of sweetener used"



Case Study: Mid-Day Energy Drink

With refreshing juice, lime extract and guarana for a botanical source of caffeine, our mid day energy drink picks you up without sending you flying.

POTENTIAL FRONT OF PACK LABEL CLAIMS:

- + 5 calories per 12 oz serving
- + 1 gram of sugar
- + 48 mg caffeine
- + 3% fruit juice

KEY SUGAR REDUCTION INGREDIENTS:

- + SweetRight® Stevia EDGE Leaf Extract
- + Guarana Extract
- + Lime Extract
- + White Grape Juice Concentrate
- + Lime Juice Concentrate
- + Citric Acid

Reduced sugar consumer relevance by region:

United Kingdom - 75%

Western Europe - 82%
Germany, France, Netherlands

Eastern Europe - 92%
Poland, Romania

Southern Europe - 88%
Spain, Italy

Type of sweetener is most important when choosing a new:



Carbonated soft drinks: 42% of category buyers



Juice: 31%



Ready to drink tea: 17% of category buyers

Culinary

Sauces, dressings and syrups add crave-worthy flavor and texture to dishes, playing the supporting or sometimes leading role in culinary masterpieces. While they aren't consumed by themselves, and consumers do not expect substantial nutrition from these products, they are often scrutinized for having hidden downsides for unwanted ingredients and smaller serving sizes that lead to an excess consumption of calories and sugar.

Because consumers are aware of hidden sugars in culinary ingredients, 86% say sugar reduction is important in sauces, syrups and dressings - making it our second-most scrutinized category. Solutions are primed for flavor innovations that help formulators rely less on sugar and can help shoppers meet additional health priorities while keeping meals crave-worthy.



Case Study:

Sweet 'n Smoky Sugar-Free BBQ Sauce

A full-bodied, finger-licking good BBQ sauce with vibrant mahogany color, rich flavor and perfect texture - with no added sugars and just 15 calories per serving - an 80% calorie reduction.

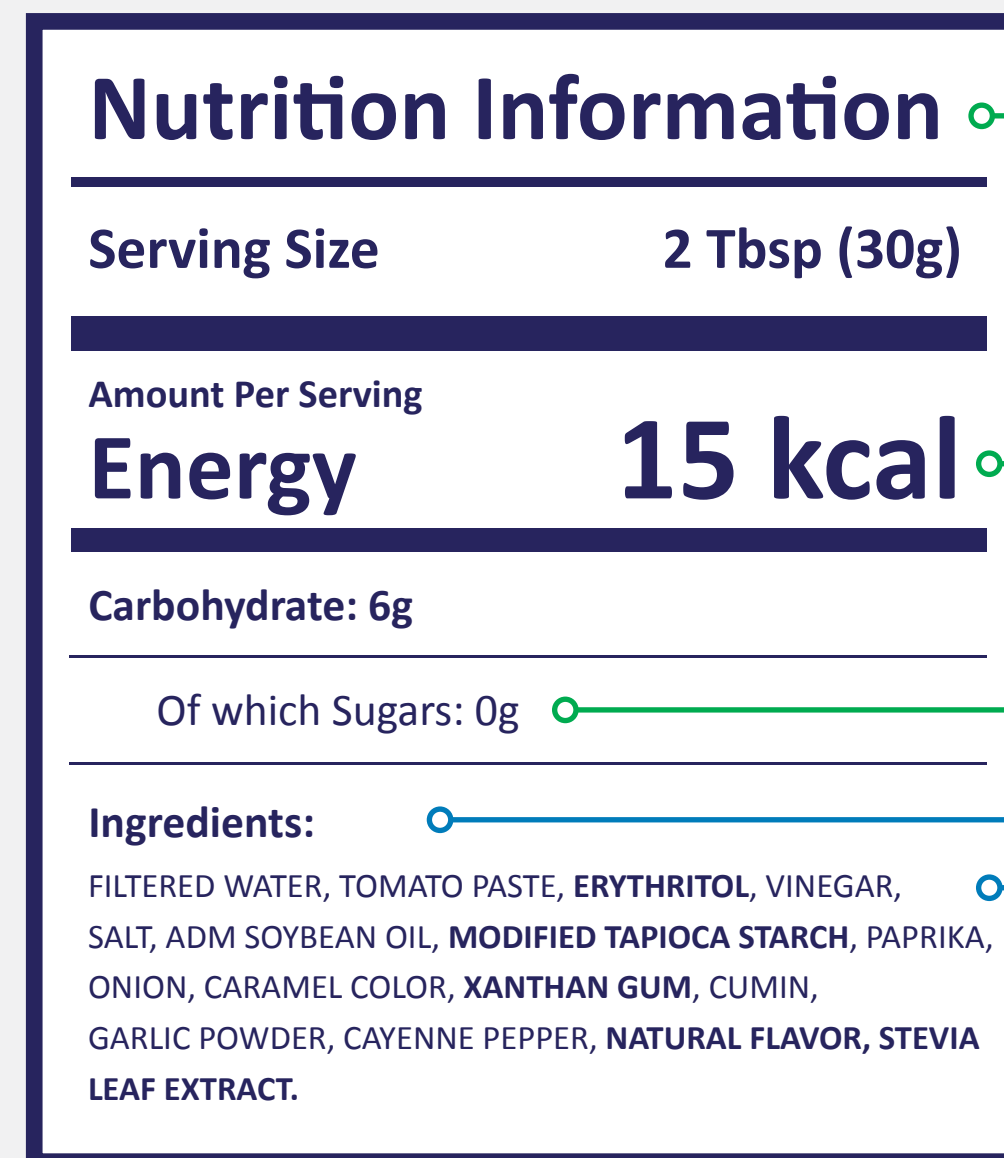
POTENTIAL FRONT OF PACK LABEL CLAIMS:

- + 0g added sugars
- + Non-GMO
- + Natural flavor

KEY SUGAR REDUCTION INGREDIENTS:

- + SweetRight® Stevia EDGE
- + SweetRight® Erythritol
- + Texperien™ Max Tapioca Starch

When evaluating new sauces, syrups and dressings...



46% say they review the **nutrition information**

40% review the **calories per serving**

45% review the **sugars per serving**

48% review the **ingredient list**

42% review the **“type of sweetener used”**

Reduced sugar consumer relevance by region:

United Kingdom - 74%

Western Europe - 81%

Germany, France, Netherlands

Eastern Europe - 93%

Poland, Romania

Southern Europe - 90%

Spain, Italy

Type of sweetener is most important when choosing a new:



Condiments: 34% of category buyers



Pasta sauce: 30%



Honey: 22%

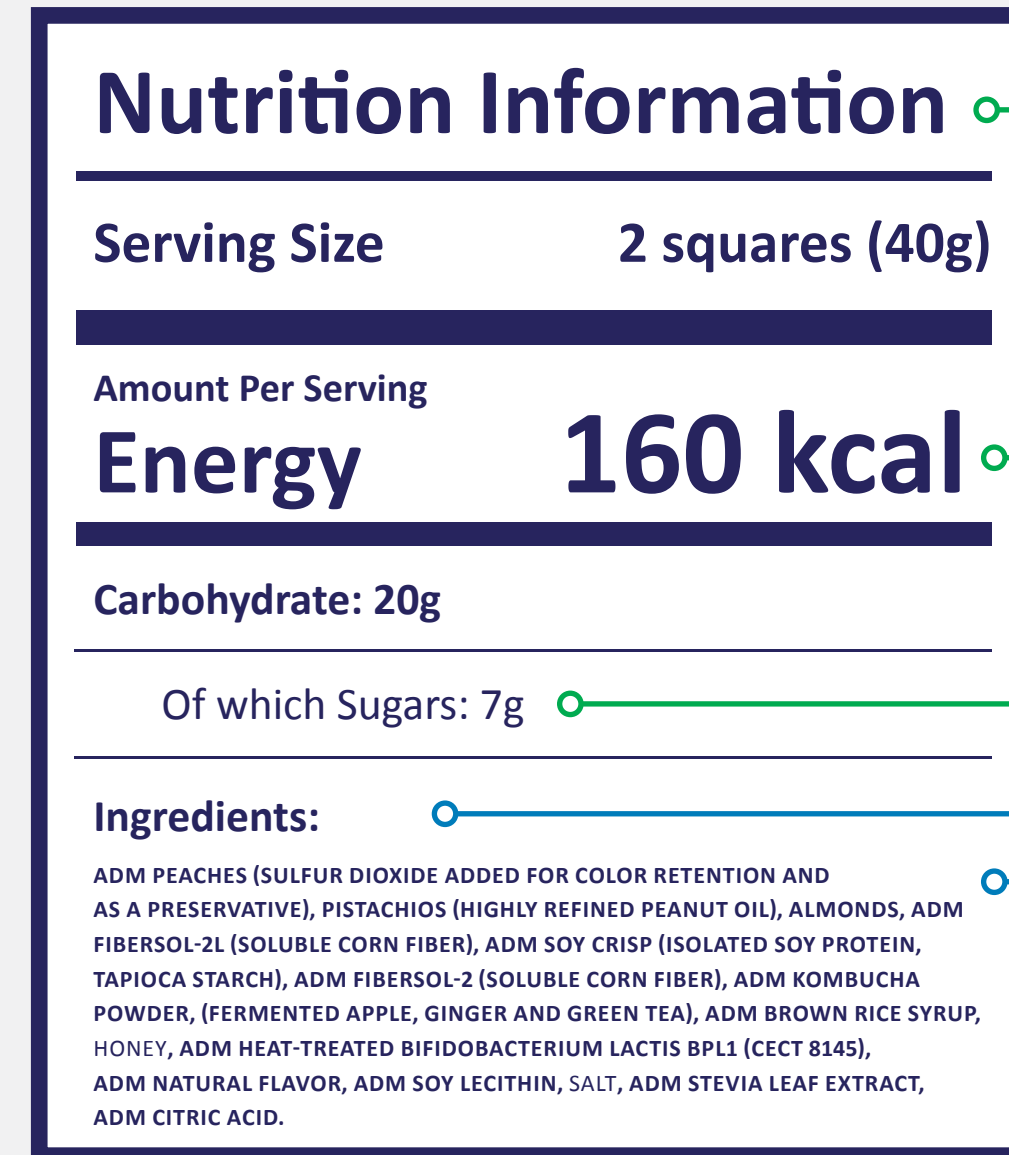
Bars & Snacks

Today's snack-food consumer often uses snacks for more positive health benefits, such as increasing energy or mental focus. Nutrition facts are highly reviewed by snack food consumers; only beverages receive more label reviews than snacks.

When asked to prioritize the most important characteristics in new snacks, 35% of shoppers report seeking to both obtain energy and minimize calories. This means the snack foods that are positioned with reduced sugars, while still promoting satiety and energy benefits are poised to gain greater acceptance with consumers.

The type of sweetener is more important when shopping for sweet bars or fruit snacks than for salty snacks. More shoppers review the "type of sweetener" than review the added sugars, suggesting an opportunity to call out the sweetener on the package.

When evaluating new bars and snacks...



42% say they review the **nutrition information**

36% review the **calories per serving**

41% review the **sugars per serving**

46% review the **ingredient list**

39% review the **"type of sweetener used"**



Case Study:

Kombucha Bar with Microbiome Support

This wellness bar is packed with rich flavors and wholesome ingredients you can see. You won't believe your taste buds when we tell you there's added benefits of kombucha powder, excellent source of prebiotic fiber and good source protein in every serving.

POTENTIAL FRONT OF PACK LABEL CLAIMS:

- + Good Source of Protein—7 grams
- + Excellent Source of Fiber—8 grams (Prebiotic claimable)
- + Single-digit Sugar

KEY SUGAR REDUCTION INGREDIENTS:

- + SweetRight® Stevia EDGE
- + SweetRight® Brown Rice Syrup
- + Fibersol® Prebiotic Dietary Fiber
- + Postbiotic BPL1
- + Kombucha Powder
- + Natural Flavor

Reduced sugar consumer relevance by region:

United Kingdom - 76%

Western Europe - 75%
Germany, France, Netherlands

Eastern Europe - 90%
Poland, Romania

Southern Europe - 90%
Spain, Italy

Type of sweetener is most important when choosing a new:



Chips: 24% of category buyers



Cereal/granola bars: 23%



Crackers: 21%

Baked Goods

Consumers have high expectations for the baked goods they purchase. They are prepared to enjoy indulgent desserts in moderation if they provide some benefit to overall emotional and mental health with consumers being more-forgiving on sugars in these joyful indulgences.

This category is often comparable to goods shoppers can make in their own homes, raising the bar for the ingredient panel. Consumers are looking for “real” quality ingredients, making it imperative that they are either familiar or justified to be fully accepted.

When evaluating new baked goods...



42% say they review the **nutrition information**

36% review the **calories per serving**

41% review the **sugars per serving**

46% review the **ingredient list**

39% review the **“type of sweetener used”**



Case Study:

Sugar Reduced Rainbow Pound Cake Minis

The use of Summerberry as a ‘mystery flavor’ and bright colors makes this a favorite for kids of all ages. A burst of vibrant optimism through flavor and color!

POTENTIAL FRONT OF PACK LABEL CLAIMS:

- + Social Media ‘Shareable’
- + Natural Colors & Flavors
- + 30% Less Sugar

KEY SUGAR REDUCTION INGREDIENTS:

- + SweetRight® Stevia RA80
- + SweetRight® Erythritol
- + HarvestEdge™ Pastry Flour
- + True Native Tapioca Starch
- + Fibersol®
- + Colors from Nature™
- + Natural Summerberry FI Type

Reduced sugar consumer relevance by region:

United Kingdom - 65%

Western Europe - 79%

Germany, France, Netherlands

Eastern Europe - 79%

Poland, Romania

Southern Europe - 79%

Spain, Italy

Type of sweetener is most important when choosing a new:



Cookies: 35% of category buyers



Sliced white bread or bun: 19%



Ready to eat cereal/granola: 19%

Confections

Taste is a top priority for consumers when shopping for candies and chocolates. Consumers acknowledge these products are high in sugar, and therefore demand each indulgence is “worth it”. These high taste standards are now joined by high-quality aspirations, with 67% of shoppers reporting that they’re looking to obtain higher quality ingredients when seeking a new candy or chocolate product.

Confections are the least scrutinized for sugar reduction, with 44% saying it is important for their candies, gums and chocolates. But while the amount of sugars may be less important, the quality of ingredients is where consumers focus. The type of sweetener used is often the single most salient marker used to evaluate product quality in confections. Opportunities to evolve in this category include confections sourced from plant-based ingredients, as well as claims that meet holistic wellness opportunities like the antioxidants found in dark chocolate.



Case Study:

Honeydew Heart Health

Gummy supplement with great taste for proactive health and wellness – with less added sugars and appealing active ingredients like plant sterols and plant-based vitamin E for health support consumers will love.

POTENTIAL FRONT OF PACK LABEL CLAIMS:

- + 200g Plant Sterols
- + 100% RDI of Plant-based Vitamin E
- + 27% reduced sugar

KEY SUGAR REDUCTION INGREDIENTS:

- + SweetRight® Stevia EDGE
- + SweetRight® Reduced Sugar Glucose Syrup
- + Natural honeydew flavor WONF
- + Colors from Nature™
- + Heart Health Blend (Cardioaid™ plant sterols and Novatol® vitamin E)
- + Citric Acid

When evaluating new confections...

Nutrition Information	
Serving Size	2 gummies (6g)
Amount Per Serving	
Energy	15 kcal
Carbohydrate: 5g	
Of which Sugars: 2g	
Ingredients:	
GLUCOSE SYRUP (REDUCED SUGAR GLUCOSE SYRUP), SUGAR, GELATIN, PLANT STEROLS (CARDIOAID® XF), CITRIC ACID, ALPHA TOCOPHEROLS (NOVATOL® VITAMIN E), NATURAL FLAVORS, TURMERIC EXTRACT FOR COLOR, HUITO JUICE FOR COLOR	

39% say they review the **nutrition information**

38% review the **calories per serving**

41% review the **sugars per serving**

43% review the **ingredient list**

39% review the **“type of sweetener used”**

Reduced sugar consumer relevance by region:

United Kingdom - 60%

Western Europe - 70%
Germany, France, Netherlands

Eastern Europe - 88%
Poland, Romania

Southern Europe - 86%
Spain, Italy

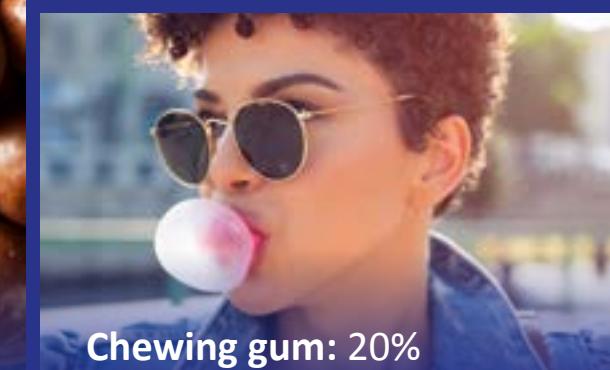
Type of sweetener is most important when choosing a new:



Chocolare candy: 39%
of category buyers



Non-chocolate candy: 25%



Chewing gum: 20%



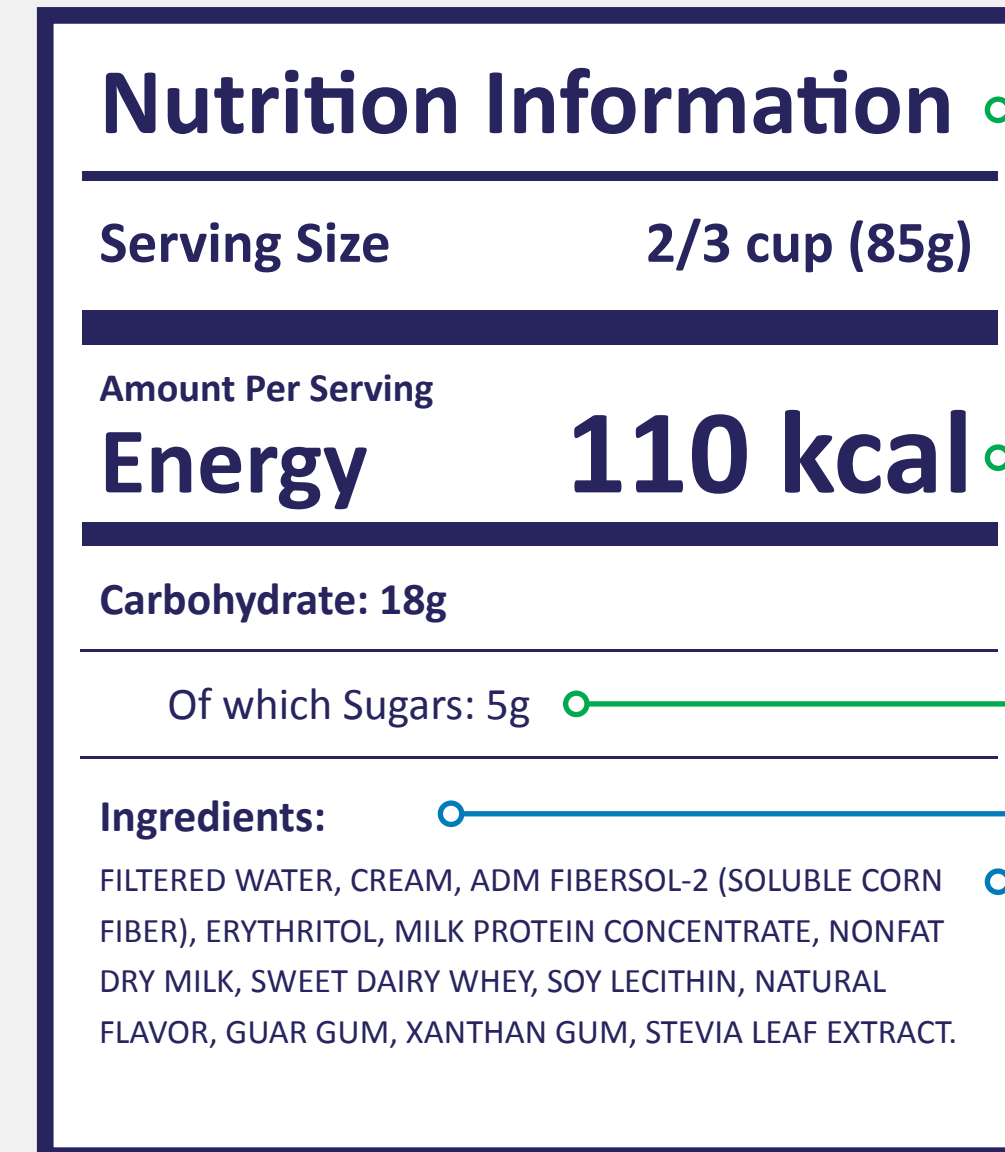
Dairy

From a category perspective dairy has seen a substantial perception shift over the past few decades. Consumers no longer focus on fat reduction in dairy products due to a new understanding of “good fats” and their importance in holistic wellness. That ingredient scrutiny has now shifted to sugar content, with 54% reporting sugar reduction as important for their dairy products.

The demands on dairy to provide nutritional requirements continue to grow. Dairy alternatives offer a wider range of options, and clear health-positive attributes. Additionally, the desire for obtaining both a health benefit while also avoiding unhealthy options is the highest among all categories, an opportunity for ingredients with added wellness benefits.

Sweetener sources are more likely to be reviewed in milk alternatives, however consumers focus most on the product’s nutritional composition.

When evaluating new dairy...



43% say they review the **nutrition information**

36% review the **calories per serving**

41% review the **sugars per serving**

44% review the **ingredient list**

40% review the **“type of sweetener used”**



Case Study:

Guilt-Free Creamy Frozen Dessert

A deliciously sweet take on better-for-you vanilla frozen dessert—with 0g added sugars—that still delivers the indulgent taste and creaminess consumers expect.

POTENTIAL FRONT OF PACK LABEL CLAIMS:

- + 0g Added Sugars per Serving
- + <1g Added Sugars per Pint
- + 5g Total Sugars
- + 6 g Excellent Source of Dietary Fiber

KEY SUGAR REDUCTION INGREDIENTS:

- + SweetRight® Stevia EDGE
- + SweetRight® Erythritol
- + Fibersol®

Reduced sugar consumer relevance by region:

United Kingdom - 65%

Western Europe - 72%
Germany, France, Netherlands

Eastern Europe - 85%
Poland, Romania

Southern Europe - 82%
Spain, Italy

Type of sweetener is most important when choosing a new:



Yogurt: 31% of category buyers



Milk (unflavored): 23%



Ice cream: 21%

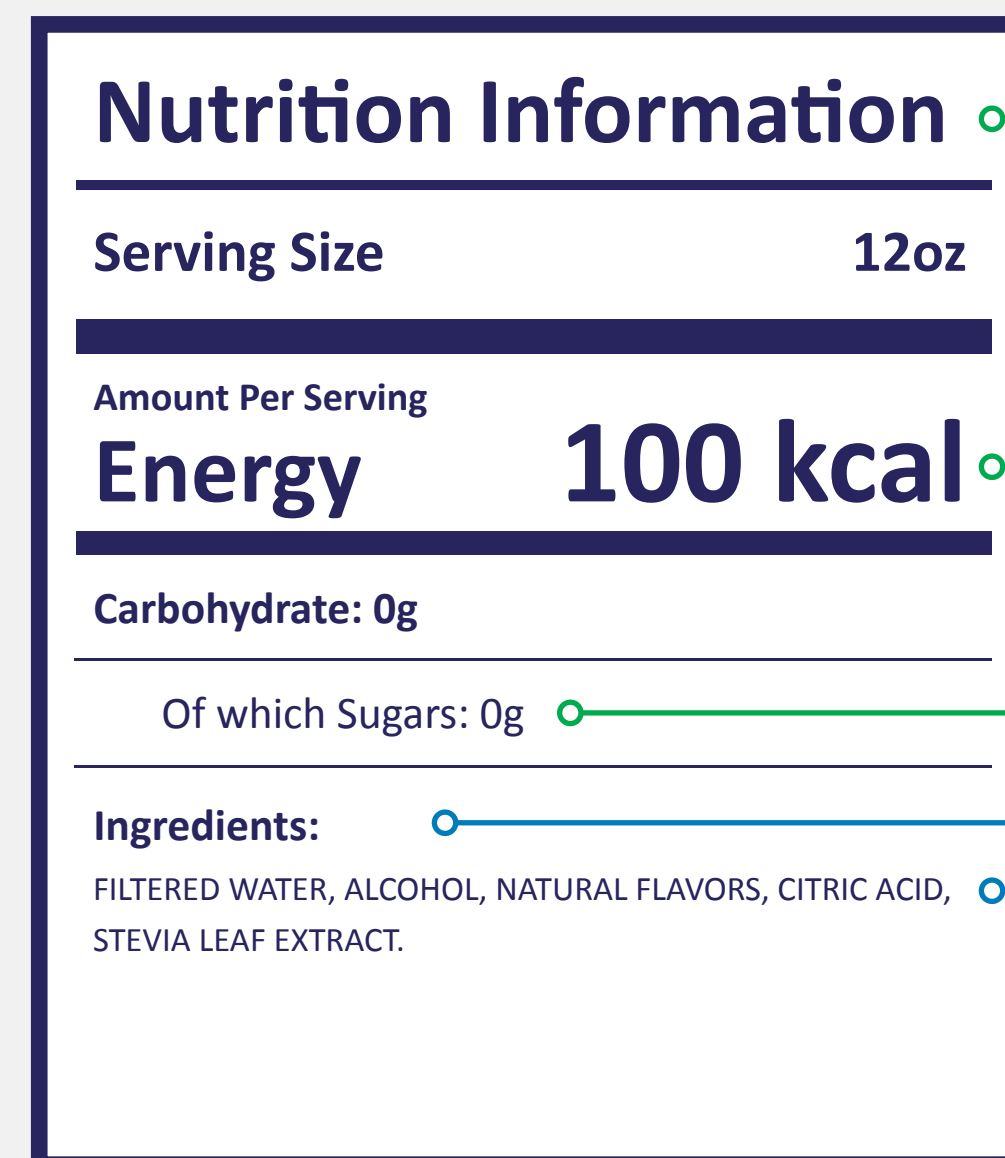
Alcohol

While alcohol is less likely to be scrutinized vs other categories, we still see a higher focus on the ingredient quality in alcoholic beverages among European consumers, much like we see in other indulgent categories.

Regionally southern and eastern countries are holding sugars from alcohol in importance much closer to other categories. Whereas the UK and western countries show more leniency on sugar content for this segment, with UK having the largest statistical difference at only 38% importance.

More than ever, consumers believe that indulgence enhances quality of life by offering sensory pleasure, connection with others, stress relief, comfort and beyond, all of which should be appreciated rather than suppressed.

When evaluating new alcohol...



31% say they review the **nutrition information**

29% review the **calories per serving**

34% review the **sugars per serving**

36% review the **ingredient list**

34% review the **“type of sweetener used”**



Case Study:

Sugar-Free Clementine Hard Seltzer

With a modest calorie count and 0g added sugars per serving, this hard seltzer is perfectly on trend. Proprietary stevia innovation achieves irresistible sweetness, while a refreshing clementine citrus flavor gives this beverage its sparkling personality.

POTENTIAL FRONT OF PACK LABEL CLAIMS:

- + 0g Added Sugars
- + 100 calories
- + 5% Alcohol by Volume (ABV)
- + Natural Flavors

KEY SUGAR REDUCTION INGREDIENTS:

- + SweetRight® Stevia EDGE
- + Natural Flavor
- + Citric Acid

Reduced sugar consumer relevance by region:

United Kingdom - 38%

Western Europe - 54%
Germany, France, Netherlands

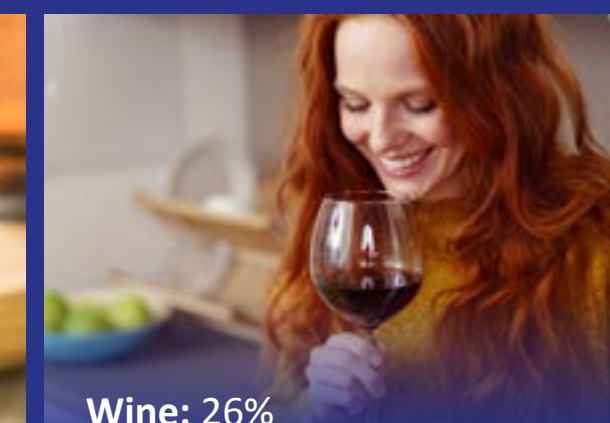
Eastern Europe - 81%
Poland, Romania

Southern Europe - 78%
Spain, Italy

Type of sweetener is most important when choosing a new:



Beer/cider: 31% of category buyers



Wine: 26%



Hard spirits: 14%

Sweetness without compromise

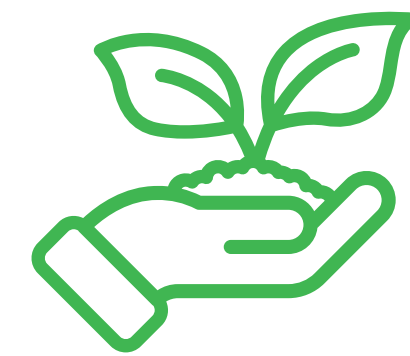
Better-for-you doesn't mean bland. We help you deliver delicious health-forward nutrition in delightful indulgences, with truly innovative solutions that give you an edge in today's dynamic marketplace.

ADM is your sweetening and sugar reduction innovation leader

- + SweetSavvy™ approach—equal parts technical expertise, ingenuity and innovation
- + Continued investment in our broad, unparalleled portfolio to help you meet changing market needs
- + Delivering the preferred sweetness, labels and sustainability consumers want next



ADM's vast portfolio of ingredients is **simply unmatched**



Sustainably sourced, non-GMO, organic and other options to meet all labeling and consumer preferences



A solution for every functional or nutrition-driven formulation **need**



The sugar reduction **tools and expertise** you need **for success**



Let's Collaborate.

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