# Food & Beverage Insider

Ingredients and formulation

# Taking the "guilt" out of guilty pleasures

by Melissa Kvidahl Reilly



hough most food and beverage categories have been impacted by the COVID-19 pandemic, few have experienced the roller coaster ride of the indulgence market.

On one hand, consumers have a renewed interest in sweets and snacks, with almost 9 in 10 adults globally saying they're snacking the same or more often during the pandemic than they were before it, according to a 2020 report on the state of snacking from Mondelez International Inc. More than half even said snacking has been a "lifeline" for them during this time.

Why?

According to a recent desserts and confections report from Mintel, the uncertainty and disruption of 2020 and beyond left consumers turning to familiar and comforting products for emotional support. As a result, sales of chocolate, cookies and cookie dough, prepared cakes and pies, and non-chocolate confections all saw sales increases each year from 2018 to 2021. Another 2021 Mintel report revealed the same was true for salty snacks: Nearly 100% of households already consume these products, and one-third of snackers increased their consumption when at-home eating occasions spiked over the past two years.

But this isn't the whole story. In addition to increased demand, the indulgence market is also seeing a major transformation as the pandemic slogs on.

According to John Powers, marketing director of snacking and baked goods at ADM, while people are certainly indulging more, they're also beginning to shift away from purely impulsive decisions to more purposeful ones as they realize their quarantine treating habits are, in the long run, incompatible with healthy eating goals. In fact, data from The Hartman Group showed 6 in 10 consumers are now seeking what they consider to be healthy and nutritious snacks, rather than cutting them from their diets altogether in an effort to recalibrate.

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"In the past, the desire to live a healthy lifestyle and enjoy indulgences may have caused internal conflict for consumers," said Gary Augustine, vice president of marketing at Van Drunen Farms/FutureCeuticals. "Now, it seems like people are indulging more often, but in guilt-free ways. They are looking for claims like less sugar, natural fruit and vegetable ingredients, and nutritional and wellness benefits in their favorite confectionery and snack products. The key to resonating with consumers is to formulate products that are 'guiltless' guilty pleasures."

Brands will find innumerable swaps are available, capable of transforming purely unhealthy snacks and sweets into acceptable indulgences. And, when done right, these swaps will largely find favor. "Consumers are much more likely to try something with a 'twist' from a more recognizable source," assured Mathias Bohn, product portfolio manager at Sensient Flavors & Extracts. This opens the door for beloved snack and confectionery brands to substitute unwanted ingredients for better alternatives, and even boost formulations with functional ingredients.

### Swap: Sugar

According to the previously mentioned desserts and confections report from Mintel, consumers are transitioning into their postpandemic lifestyles (even as variants continue to surge), and many are aspiring to make improvements to their diets. One significant way to cut some of the guilt associated with traditional "guilty pleasures" is to cut sugar—at least partially.

Proprietary ADM Outside Voice research showed that 8 out of 10 U.S. consumers are engaged in sugar reduction and, of those, about 80% find sugar reduction important for bars and snacks, 70% for baked goods, and 54% for chocolate and candy. In response, ingredient suppliers are stepping up to offer options that can decrease sugar content while maintaining the indulgent taste consumers expect, whether it's easy swaps or pre-formulated sugar-alternative blends.

ADM's SweetEdge toolbox was created to help product developers formulate appealing reduced-sugar treats, and includes ingredients like SweetRight Reduced Sugar Glucose Syrup (RSGS), which serves as a swap for traditional corn syrup.

At Batory Foods, Sweet Essentials is a blended swap for sugar, containing allulose, erythritol, stevia extract and steviol glycosides for "a simple, clean label, drop-in solution that functions and tastes like sugar," shared Melissa Riddell, head of innovation and technical services.

Other simple swaps include BENEO's Palatinose, a low glycemic index (GI) carbohydrate from sugar beet, which has already made headway in the sports nutrition space as an alternative to sucrose. Kyle Krause, the company's North American product manager of functional fibers and



carbohydrates, suggested Palatinose can also be used in place of higher glycemic sugars in many snacks and baked goods since it provides a slow release of sustained energy without sacrificing the technical or sensory effects of sugar. And isomalt from BENEO (also made from sugar beet) can replace sugar, gram for gram, in most confections and snacks.

At Synergy Flavors Inc., allulose is trending for both confectionery and snacks. The "rare sugar" behaves like sugar, is a 1:1 replacement and is 70% as sweet, but is also low-calorie, appealing to consumers looking to make healthier choices. The downside? "Manufacturers use allulose to reduce calories and improve the product's taste, but it's a rare ingredient and availability is scarce," explained Margaret Walther, applications specialist.

Other brands are meeting clean label trends with natural syrups. "Some of the simplest ways labels can be made cleaner and more attractive is removing some of the less customer-friendly sweeteners, such as high fructose corn syrup (HFCS), and replacing them with brown rice syrup or tapioca syrup," said Amy Targan, president of Malt Products Corp. "Similarly, sugar and brown sugar can be replaced with molasses-based sweeteners such as CaneRite Panela, which not only imparts similar sweetness as sugar but provides additional nutrients and complex flavor notes." The company's MaltRite (malted barley extract) and OatRite (oat extract) sweeteners lend a nutty, toasted flavor profile and are recognizable on the label, providing "positive, nostalgic and healthy associations with consumers at a time when comfort is key," she added.

Paul Whitman, fruit and vegetable category manager for Global Organics, has noticed increased interest in chocolate sweetened with organic coconut sugar, which offers a low glycemic index (35 versus cane sugar's 50) as well as a caramelized, brown sugar flavor that resonates well for the category.

#### **Rethink: Fats**

Snack and treat brands looking to remove some of the guilt from their offerings may be tempted to go the low-fat or fat-free route. But that's not necessarily the right approach for today's clean label consumer who is wary of artificial ingredients. Fats, once the "big bad" of the food industry, are now tolerable and even acceptable—as long as they come from preferred sources. Cargill's TrendTracker, which identifies the global trends that influence how and what consumers buy, found "healthy for me" and "conscious consumption" trends will have the biggest impact in the coming years when it comes to fats and oils. What does this mean for formulators?

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The "healthy for me" trend reflects consumer preference for health benefits and the rejection of foods they consider "bad" for their health; "conscious consumption" trends denote those that align with consumer values—namely, sustainable supply chains and a commitment to the betterment of the environment. For Cargill, an ingredient that checks these boxes and will help consumers feel good about treating themselves is sunflower oil.

Cargill FATitudes research showed nearly 1 in 4 U.S. shoppers would be more likely to purchase a product if they saw that it was made with a substantial amount of sunflower oil, and about the same amount identify sunflower oil as extremely or very sustainable. Low in saturated fat, it's also a better-for-you option that appeals to the 44% of consumers who said they're more likely to purchase products with a low saturated fat claim.

Another clean label fat that's especially appropriate for chocolate applications and flavors is nuts, whether nut butters or whole nuts. Jeffrey Fine, senior director of customer innovation at AAK, pointed out that nuts deliver flavor, texture and healthy fat content all from a recognizable source. However, they aren't always the easiest approach for formulators. "Nut butter fillings can lead to oil migration, which is caused by liquid oils already present in the ingredients not being bound by any structure or solids," he stated. "Whole nuts have a solid structure strong enough to significantly limit the migration of naturally present nut oils, but when they are ground into nut butter, the structure is destroyed and liquid oils are released." The solution at AAK is adding palm-free ingredients like Neutresca 7911, which appears on ingredients lists as hydrogenated soybean oil.

Cocoa butter meets demands for recognizable ingredients, but can fall short on sustainability. In response, Bunge Loders Croklaan offers Karibon, a 100% shea-based premium cocoa butter equivalent that has all the processing benefits and versatility of leading cocoa butter equivalents on the market, but offers the nutritional and sustainability benefits of shea. It's currently only offered in Europe, and is patent-pending, but offers lower levels of saturated fats, improved bloom stability and strong compatibility with cocoa butter, maintained Tyronna Capers, director of marketing. She added, "Plant-based and label-friendly, Karibon indulges formulators seeking fast crystallization, trending attributes and a fantastic taste experience."

Another easy way to appeal to consumers who want to include with a lower fat content is aeration. According to Fine, AAK's Confao 82BR can be aerated to nearly half the density of non-whipped fillings, and provides excellent shelf-life stability compared to traditional filling fats.

## Fortify: Plant-based protein

Once limited to the sports nutrition sector, protein is becoming a must-have ingredient for foods across the market. In the sweets and snacks category, boosting a product with protein can alleviate concerns about empty calories. "Now that the sports nutrition sector has gone mainstream, we have seen a wider

range of consumers buying products such as protein-rich snacks and bars," noted Joe Katterfield, business development manager of protein ingredients for sports nutrition and health foods at Arla Foods Ingredients. "These products are guick and easy to consume and, because protein delivers satiety, they've become a popular tool for weight loss and overall wellness." At the same time, he mentioned, consumer demand for products with natural and wholesome positioning means that some protein ingredients are more desirable than others. And when it comes to minimizing guilt, it's all about plant-based protein, as ADM Outside Voice research showed that 70% of consumers rated protein from plant sources as healthy.

Although Katterfield said peanut butter checks many boxes as a familiar ingredient with good flavor and a healthy dose of plantbased protein, it can also be problematic in many formulations because it tends to harden over time. To address this, Arla Foods Ingredients created a dairy and whey protein ingredient called Lacprodan SoftBar, which allows bars to reach up to 37% protein content while also delivering a soft texture. Katterfield stated it works well alongside peanut butter, and can help brands deliver that flavor profile and protein content, as well as a whipped texture.



In snack foods, protein-rich ingredients like ancient grains (including sorghum, quinoa and others) can reduce carb counts and increase nutrition; they also tend to meet gluten- and allergen-free demands. Chickpeas, in particular, are gaining traction as chickpea flour proves to be both nutrient-rich and versatile. "Chickpeas have a slight bean- and nut-like flavor, so it pairs well with amaranth and corn," shared Hailey Rogers, research and development (R&D) chef at Ardent Mills. "They can also help increase a product's appeal to lifestyle diets with vegan and plant-based characteristics." Pea protein is also growing in popularity, since it offers 80% protein alongside a neutral flavor profile.

The challenge? "When formulators replace traditional ingredients, such as wheat or corn, with legumes or other protein-forward ingredients, it brings new levels of difficulty regarding the protein/peptide content (which cause bitterness), mineral content like potassium and calcium (which can also taste objectionable), and acids and sugars (which taste different from traditional products)," detailed Terry Miesle, master flavorist at Sensient Flavors & Extracts. In extruded snacks, added Cargill principal scientist Chad Rieschl, proteins can impede puffiness; in snack bars, they can cause hardness. As such, these ingredients typically require the use of masking agents and additional flavors.

That's why, at Sensient Flavors & Extracts, palatability improvers like Smoothenol (a bitterness blocker), Entice and the TrueBoost line are so important, in that they allow formulators to include high-protein ingredients, but also offset some of the undesirable drying effects. At Cargill, PURIS pea protein is hydrolyzed, which provides added flexibility around texture.

# Include: Fruits and vegetables

According to the CDC's most recent data, just 12.3% of American adults are meeting fruit intake recommendations, and 10% are getting enough vegetables. This isn't lost on consumers, 74% of whom would be influenced to purchase products with fruit and vegetable serving claims on the front label, per data from Van Drunen Farms/FutureCeuticals. To help brands easily communicate whole fruit and







vegetable serving claims right on the label, the company launched TruServ, a program that exclusively connects its whole fruit, vegetable and greens powders and pieces to USDA-recommended fruit and vegetable servings. This approach would do well in the sweets and snacks sector, as it would provide a healthy value add for consumers seeking permissible indulgence.

"Consumers want to see products that contain only ingredients they know and trust. Well-known fruits, vegetables, and plants are ideal and also help to provide a health halo," agreed Jeannette O'Brien, vice president, GNT USA.

Mintel data showed fruit flavors are still top in confections and baked goods, especially tropical fruits and those popular in Asian and Latin cultures, and powders and purees are a healthy option for formulators and brands, Riddell said. "Even though frozen purées come with a higher price, they provide a fresh, more natural flavor profile and a bright color to any confection, compared to artificial flavors which can come across unpleasant and even medicinal in taste at times," she explained.

For many consumers, artificial flavors and colors and becoming a non-starter.

"Natural colors are more important than ever," O'Brien noted. "Today's consumers want to understand exactly where ingredients come from and feel a sense of reassurance when reading the label." She touted the brand's EXBERRY line of natural food colorants made from non-GMO ingredients. "Due to the way they're created, they're perfect for clean and clear label declarations," she added. "They might be described on the ingredient list as 'Fruit and Vegetable Juice for Color' or 'Carrot Juice for Color,' which provides instant reassurance."

Fruit flavors like strawberry, cherry, orange, lemon and watermelon are all trending, and mango and red raspberry are emerging. As far as vegetables go, Rogers suggested pureed veggies like zucchini and carrots are go-to choices that may provide additional nutrition benefits and a pop of color. O'Brien noted GNT use red potatoes in two of its newly launched red coloring products, which can be utilized in confections ranging from gummies and chewing gum to chocolates and marshmallow.

However, warned O'Brien, adding or substituting natural colors and flavors into a product isn't always a simple plug-and-play.

"For a product to be successful, it has to look and taste great throughout the shelf life," she noted. "Plant-based color concentrates aren't a plug-and-play solution, so it's vital to work with a knowledgeable supplier that can provide support every step of the way."

#### **Trends to come**

Looking ahead, innovations making the sweets and snack space more acceptable for consumers on a health journey will likely center around new and trendy flavors pulling from cocktail and global trends, as well as functional ingredients that target specific conditions. Augustine contended herbs are an upcoming trend, as they achieve both: Alongside vegetables and spices, herbs provide a savory flavor profile that reimagines classic sweets and snacks with a new twist; and, when used as functional ingredients, they offer condition-specific benefits that may not only ease consumers' guilt about consuming snacks and candy, but actually give them a good reason to indulge.

He also predicted functional snacks with multiple benefits will gain traction with people who are increasingly busy, noting, "These consumers look for foods that address as many of their concerns as possible."

#### **Quick wraps**

| Instead of      | Try   | Why?  |
|-----------------|---|---|
| Refined sugar   | Organic banana paste  | Organic banana paste can replace some or all of the sugar in a formula, and is a promising newcomer to the scene for 2022.  – Paul Whitman, Global Organics   |
| Modified starch | Rice starch   | BENEO's Remypure rice starch has a similar tolerance level as other modified starches, and is recognizable on the label. According to the company's independent market research, 73% of consumers consider rice to be a familiar product and, when shown an ingredient label, respondents indicated a preference for labels without additives or modified starches.  – Kyle Krause, BENEO |
| Sodium          | Potassium chloride     (on the label as     potassium salt)      Flake salt | Potassium chloride is not only a 1:1 salt replacement (up to 50% in certain applications), but it's also a potassium booster, which may appeal to consumers seeking nutrient benefits.  Tiny, multifaceted salt crystals offer a large surface area and low bulk density. The result? Up to 20% less salt is needed to achieve the same salty quality.  – Janice Johnson, Cargill         |
| Gelatin         | Pectin  | Vegan-friendly pectin, derived from citrus, pairs well with trending fruit flavors, and offers a cleaner bite with less elasticity than gelatin. It also comes with a higher melting point, superior for warner climates where melting in transit is an issue.  -Chad Rieschl, Cargill  |
| Butter          | Nut butters   | They're plant-based, dairy-free and can often pack a protein punch.   |
| Palm oil        | Coconut oil   | Palm oil has come under fire in recent years for potential rainforest impacts such as deforestation, habitat destruction and harm to endangered species.  |



Augustine also held that ingredients addressing low energy and sluggishness will trend in 2022 and, in response, Van Drunen Farms/FutureCeuticals offers Coffeeberry Energy natural whole coffee fruit extract. It delivers 70% caffeine and 5% antioxidant polyphenols, appropriate for a range of snacks and candy, including gummies. It will appeal to sustainable consumers, as well, since the coffee fruit is sourced from Rainforest Alliance Certified farms. But increasing energy isn't the only concern consumers have. At Synergy Flavors, it's all about calming ingredients, as well as those that are fermented to support gut health, like kimchi.

Organic snacks and candy also appeal to sustainability demands, and Arla Foods Ingredients recently launched its first organic range, Lacprodan MicelPure Organic, to meet the growing demand for organic functional protein products.

Regenerative organic agriculture is also up and coming in the sweets and snack space, maintained Andrew Martino, cane sugar category manager at Global Organics. "As extreme weather events become more the norm, consumers are linking the benefits of organic agriculture and climate change mitigation," he said, adding that the company recently announced the first-to-market Regenerative Organic Certified cane sugar. "Regenerative organic improves soil health, sequesters carbon, fosters biodiversity and ensures social fairness. These are complex issues and, before this Regenerative Organic certification was launched, it had been difficult for brands to engage their consumers on all these topics."

Ultimately, taking some of the guilt out of guilty pleasures like snacks and sweets will be about offering something beyond just an indulgence, whether it's added nutrition, less (or alternative) fat or sugar, or sustainable sourcing. "Snacking, both salty and sweet, has become an occasion in its own right—no longer a quick bite meant to tide you over," offered Matt Schueller, director of marketing insights and analytics at Ardent Mills. "Considering the diversity in consumer diets, preferences and lifestyles, CPG brands must continue to proactively identify and diversify their offerings to meet an ever-shifting standard for consumer microdemands."



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