



Formulating for function

Creating new products to meet varied consumer needs for functional food and beverages

The rise of technology – including smartphones, the internet and social media — has provided instant access to health information, allowing consumers to do their own research. As a result, views about what constitutes a healthy diet have become increasingly individualized.

Coupled with declining trust in health experts and rapidly changing dietary philosophies, the food and beverage market is now widely fragmented, according to the editors of New Nutrition Business (NNB). In fact, in NNB's annual report, "Ten Key Trends in Food, Nutrition and Health 2022," they named "Fragmentation of Health Beliefs" as a mega-trend, along with other broad product development patterns, including "Inherently Natural" and "Snackification."

This means that there is now no single definition of health-minded consumers, whose interests may range from plant-based eating or following a keto diet, to looking for healthier carbs or any number of other health benefits. For brands, this is creating plenty of niche opportunities, as well as the potential to develop products with multiple benefits that may appeal to a broader audience.¹

Overall, the idea of developing foods to support a specific function is becoming big business. According to data from Fortune Business Insights, the global functional market has powerful prospects, with expectations that it will grow from \$281 billion in 2021 to reach \$529.6 billion in 2028, on a CAGR of 9.5%.² The North American market is expected to drive a lot of this growth, contributing about 63% of the increases through 2026 and expanding by \$32.5 billion.³

Despite all the opportunity, brands also have distinct challenges: They must make careful decisions that not only reflect the nuances their customers care about, but also formulate with ingredients that reflect clean and natural perceptions while delivering on expected taste and texture attributes.

Consumers: Clear as dishwater

As consumer views on health, nutrition and wellness continue to evolve, they are becoming increasingly personal and dependent on age and life stage, according to Mintel research insights.⁴ Consumers of all ages are trying functional foods and beverages, but also expressing interest in a wider range of benefits and ingredients.

Plant-based consumers illustrate how complex adding function can be. This highly segmented category uses a variety of product positionings to appeal to consumers who may prioritize plants and vegetables' nutritional value, desire high-protein products that don't contain animal-based ingredients, or pursue plant-based products for their more sustainable footprint. These variables are shaking up protein ingredient selection, as consumers seek products made with more sustainable proteins and using new technologies like fermentation.⁵

The pandemic also moved the needle with respect to consumers taking a more proactive approach to their health.

Source: Innova Market insights. "Future Opportunities in Functional Nutrition." July 15, 2021.

Many people are now putting more emphasis on products that offer positive nutrition, as opposed to more reductionist concepts like diet control.⁶

- **More than 7 in 10 consumers** now say it is important, or very important, to choose food and drinks that positively boost nutrition or benefit bodily function.
- **Generational groups have varying needs.** Those under 35 focus on physical appearance and performance, while those aged 56+ zero in on targeted, age-specific health benefits.



Not surprisingly, immune health has been a big topic in the functional food space, as consumers felt more aware of and responsible for prioritizing their immune function.⁷ While immunity was already an emerging trend prior to the pandemic, the category is expected to maintain strong opportunity going forward – even as pandemic-prompted immune anxiety wanes, according to Innova. Analysts suggest that an overall-preventive approach that considers all elements of immune wellness, including physical, mental and emotional support, will continue to propel the category.⁸

Consumers also indicate growing interest in foods and beverages that address other specific needs, from active lifestyles to gut health and mental fitness. For example, as understanding grows around the importance of digestive function to overall health, the market is seeing new products boasting a variety of claims, including overall gut health and more specific benefits like skin health, immune and mood support.⁹



Formulation: Where the rubber meets the road

Starting with a strong grasp of consumer perceptions, success in the functional category demands that shoppers believe that a product will deliver on promised health benefits, together with strong credentials for minimal processing and sustainable sourcing. Thus, ingredient choices are critical.

Products that can document a more sustainable supply chain and are perceived as “clean” or natural will be increasingly appealing, especially as consumers hone in on concepts around positive nutrition. This also means that people want to see products with reduced sugar.

Inherently functional products that already contain beneficial ingredients, like the probiotics in fermented foods and many yogurts, will help advance this understanding and evidence around ingredients and their benefits. For example, fiber and protein already have strong consumer perceptions as to what they do and how well they work.

However, taking out ingredients that can be perceived as negative (like sugar), or adding ingredients to create targeted benefits is a whole different ballgame. For example, adding plant-based protein to a dairy alternative product can create challenges in taste, texture and solubility. So, while it’s important to choose a plant-based protein that delivers strong protein content, it also needs to be highly soluble to create a smooth, creamy texture.

Higher protein content can also affect flavor, creating off-notes that are difficult to hide. Pea protein has proven to be a good choice for many applications, as it provides robust protein content, is highly soluble and has a mild flavor profile. Yellow pea varieties work especially well, as they have been specifically selected for their minimal off-flavors, which are common in many other pulse-based ingredients. Peas are also a sustainable choice, serving as an increasingly popular cover crop in North America, which can reduce the need for nitrogen input to help support soil and environmental health.

Botanical ingredients are becoming more popular, especially for products positioned around specific health benefits like mood, cognition and immune support. However, while these ingredients have growing evidence around their efficacy for certain conditions, they can often introduce earthy or grassy notes to a formula that can be off-putting, especially at higher usage levels. Some of these issues can be addressed with natural flavors and label-friendly alternative sweeteners.

There are many good choices in this category, including the latest generations of stevia-based sweeteners. Many product formulators and suppliers already know that reducing sugar or eliminating it from a product is complicated and seldom a one-to-one substitution. But science has made important strides in how these ingredients function in food and beverage applications.

Stevia, from the South American stevia plant, is well-recognized and widely perceived as a natural alternative sweetener. However, it has still been challenging when used at high levels for full-sugar reduction.

The latest innovations in the stevia space address both taste and formulation issues. Cargill's EverSweet® stevia sweetener produces the sweetest components of the

plant, Reb M and Reb D, in a more sustainable way using fermentation. And its latest offering, EverSweet® stevia sweetener + ClearFlo™ natural flavor, offers enhanced sweetness and flavor-modifying properties. EverSweet® + ClearFlo™ dramatically improves solubility and sweetener dissolution, stabilizes colors and flavors, plus reduces bitterness and linger in low- and no-sugar formulas. All of this comes in a sustainable package that is GRAS, non-GMO* and label-friendly.

Formulation challenges vary depending on the ingredients used, so ultimately, it is important for brands in the functional space to develop a comprehensive strategy that considers their customer profile, prioritizes benefits and chooses appropriate ingredients that provide strong functionality with evidence-based benefits. Working with a supplier that brings those tools to the table is a good place to start.

Position yourself for success in functional foods and beverages with Cargill.

Learn more at cargill.com/labelfriendly.



*There is no single definition of "non-GMO" in the USA. Contact Cargill for source and processing information. EverSweet® is a product of Avansya, a joint venture of DSM and Cargill.

SOURCES:

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- ³ Technavio. "Functional Food and Beverages Market in North America to Record 5.10% Y-O-Y Growth Rate in 2022." January 20, 2022. <https://www.prnewswire.com/news-releases/functional-foods-and-beverages-market-in-north-america-to-record-5-10-y-o-y-growth-rate-in-2022-nestle-sa-offers-crunchy-flakes-crunchy-granola-nesquik-nestea-nestle-milo--nescafe-technavio-301464898.html>
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- ⁸ Ibid.
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