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Raise a glass: Innovation in healthy beverages

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Cheers to healthy beverages

Globally, the nearly US$2 trillion beverage market's cup is running over with innovative launches in both nonalcoholic and alcoholic sectors. What's more, rising consumer attention to health and wellness—particularly due to the COVID-19 pandemic—is helping the functional beverage category recover from a few years of declining sales.

As reported by Research and Markets, the global functional beverages market reached a value of nearly $128.66 billion in 2019, having increased at a compound annual growth rate (CAGR) of 4.6% since 2015. The market experienced a decrease from 2019 to 2020 due to lockdown and social distancing norms resulting from the COVID-19 outbreak; however, the functional beverage sector is expected to recover and grow at a CAGR of 8.07% from 2021, reaching $158.28 billion in 2023.

As consumer interest grows in the healthy beverage category, brands are launching drinks that are superior in form, function and taste compared to their predecessors. While caffeine-laden energy drinks remain one of the largest segments of the functional beverage market, demand is increasing for drinks offering benefits such as immunity, relaxation, hydration, cognition, digestion and more. This creates opportunities for functional ingredients such as nootropics; botanicals; pre-, pro- and postbiotics; zinc; magnesium; protein; fiber; iron; vitamins C, D and A; and so on. Additionally, brands are turning to natural colors, flavors and sweeteners to deliver a true clean experience.

But functional beverages are just one piece of the global beverage sector witnessing incredible innovation across myriad categories. This digital issue is only part of our thematic Healthy Beverages Month that explores opportunities and innovation in the beverage sector. Throughout the month, we've been providing industry insight into growth categories, investigating novel clean ingredients and formulation strategies, examining product trends, addressing regulatory compliance, and toasting successes.

Finally, I invite you to explore SupplySide Network 365, our always-on industry hub that enables you to find and connect with people, companies, ingredients, services and expertise. It includes many virtual events throughout the year, each focused on unique topics and designed to enable you to connect with other members of the SupplySide community.

Drink up friends,

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Healthy beverages in 2021

by Howard Telford

The beverages industry, as with most areas of consumer goods, retail and wider society, has experienced the most tumultuous year anyone can remember.

According to Euromonitor International, total volume growth across all channels tracked was down 3% globally in 2020. While this may not sound like a lot, the figure is significant in an industry where some degree of volume growth continued even during the recession spanning December 2007 to June 2009.

On-premise, generally away-from-home soft drinks volume in restaurants, bars or elsewhere in foodservice bore the brunt of this disruption. On-trade volume was down a staggering 26% globally. On-trade channels represented about 18% of global soft drinks volume in 2019, excluding fountain sales. In some European markets, such as Spain, these channels can represent up to half of total volume and a much higher percentage of revenue. This high-margin business simply disappeared for a large portion of 2020 in those markets most affected by the COVID-19 pandemic and consequent mobility restrictions.

One key facet of the long-term recovery in global nonalcoholic drinks will be the importance consumers now place on functional drinks and healthy living. If refreshment is the primary source of volume within soft drinks, functionality—defined as beverages that move beyond their basic nutritional value or taste to address a need state or benefit territory—has been the primary source of value creation in the beverages industry over the last two decades.

Functionality begins with energy—particularly caffeine—in energy drinks or the coffee category, which is growing in both packaged and ready-to-drink (RTD) formats. It also extends to sports hydration, where the U.S. and Western Europe have seen consistent

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growth in sports drinks, athletic nutrition, pre-workout and recovery. But why might functionality, wellness and the priority placed on healthy living matter more moving forward than it did prior to the pandemic? In short, the consumer's notion of health and wellness is constantly changing—not just in terms of the soft drinks sector, but across food and supplements, as well. The daily routines and health regimens of consumers have been (and continue to be) adjusted and reset.

Many people can point to a meal occasion today that did not exist in their routine 12 months ago—perhaps a food, vitamin or packaged drink that's been added to the diet or removed. Some of these changes may enter the new routine on a permanent basis. Changes in routine have moved some meal and beverage occasions into the home on a full-time and perhaps permanent basis as more work-from-home arrangements turn into permanent flexible working schedules.

New strains on well-being have also resulted from the pandemic. Demands on productivity have not lessened, with many people working longer or more irregular hours, particularly stay-at-home parents during lockdown. Reported stress, anxiety and insomnia have all increased, according to recent surveys. Food, beverages, nutrition and functional ingredients play a vital role in the wellness routines people have built to try to manage their lives.

The expanding functional territories for beverages include continued growth in caffeinated drinks and the introduction of new caffeine alternatives. They also include reduced sugar, natural alternatives and increased consumption of packaged, flavored sparkling water. This expanding territory for functional drinks also means supporting immune health and digestive health in new ways. Finding success in these new territories will require accessible refreshment flavors and mainstream branding.

Olipop, for instance, is a U.S. brand positioned as a prebiotic tonic containing as much as a third or more of dietary fiber from chicory and other soluble root fibers. But the brand, resembling a canned seltzer, maintains very accessible flavors similar to a sparkling drink. Similarly, brewer Molson Coors—in partnership with the L.A. Libations incubator in the U.S.—introduced Huzzah, a flavored, nonalcoholic seltzer that contains probiotic strains. The product is low-calorie, naturally sweetened, and marketed in interesting fruit flavor combinations, certainly resembling more of an everyday refreshment than a health and wellness tonic.

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Another example is Imuse, a brand of probiotic drinks and yogurt from Kirin in Japan that contains the only lactic acid bacteria Japanese regulators have approved to make immune function support claims—again, linking the digestive health space and immune support with a powerful on-pack claim. Immune support and digestive health are two sides of the same coin, and both are very important in the near term considering how consumers are thinking about their nutrition.

Another fruitful area of functional innovation in beverages is products and ingredients to relieve stress, manage moods and promote sleep. Brands are attempting to address these allied benefit territories, and beverages are a preferred format over pills and potentially harmful alternative formats.

For instance, PepsiCo launched Driftwell in 2021, a canned "enhanced" water beverage. The still, functional water drink contains L-theanine to promote relaxation and sleep. This represents the company's first foray into the relaxation drinks space in the U.S., followed by Soulboost in May. In the same benefit space is Recess, a brand with an expertly crafted social media presence in the U.S. The product is a sparkling water with adaptogens (ginseng [*Panax quinquefolius*]), L-theanine and CBD from hemp extract. The product, brand and online presence is built around the notion of relaxation, promoting calm as well as focus.

Looking ahead to the rest of the year, Euromonitor expects continued growth in the resilient energy drinks category. But this growth will be increasingly diffused across product categories, ingredients and flavors, and these products will now reach a wider audience. This may include focus and cognition products, with ingredients for brain health and nootropic beverages, as well as plant-based sources of energy like yerba mate (*Ilex paraguariensis*) and guayusa (*Ilex guayusa*).

Functional beverages remain a primary source of value growth in the global nonalcoholic drinks industry. During the recovery period this summer and into 2022, the ability to capitalize on new routines being formed and the "great reset" in consumer routines will go a long way in determining the strength of the industry's recovery and ultimate success on the shelf.

Howard Telford is head of soft drinks research at Euromonitor International.

It's complicated: Managing the many facets of functional beverage formulation

by Kimberly J. Decker

Functional beverages exert a near-gravitational pull on consumers both health-conscious and hedonistic for one simple reason: They make nutrition … well, *simple*. Just pop the top, insert straw (reusable, of course) and fill up with wellness.

At least that's the idea.

But if draining a bottle of lion's mane-pineapple-turmeric kombucha is all it takes to "awaken your mind with every refreshing sip," observed Brian Zapp, creative director, Applied Food Sciences (AFS), "here's the rub: Getting a gram of functional extracts into a beverage and actually having it taste great and stay stable is another story altogether."

Fortunately, it's a story that beverage brands are rewriting with every good-for-you launch—and two themes that keep showing up are ingredient innovation and research and development (R&D) ingenuity. As Zapp said, "Functional shakes, shots, coffees and more can really take off when done right."

Leaning into function

Of course, functional beverages aren't new. From chamomile tea to old-fashioned milk, some drinks have always struck consumers as natural vectors for nutrition.

What *is* new is the extent to which consumers are leaning into functional beverages—and functional formulations more generally—to bolster wellness.

"The pandemic really accelerated demand for functional products as concerns increased around immunity, digestion, cognitive health and more," said Rebecca Shurhay, marketing analyst, Flavorchem. "Consumers are embracing holistic lifestyles that encompass more than just diet and exercise, and they're turning to foods and drinks to address their needs."

Consumers are embracing holistic lifestyles that encompass more than just diet and exercise, and they're turning to foods and drinks to address their needs.

Functional beverages address those needs better than most—and not by accident. As Mathias Toft Vangsoe, sales development manager, health and performance, Arla Foods Ingredients, put it, "It's a thriving sector. And while there're many reasons for that, to put it broadly, consumers seek products with protective and preventive properties, and beverages offer that in a convenient format."

Beverages are also more fun to gulp down than tablets or capsules. Thus, noted John Quilter, global proactive health technology vice president, Kerry, "Another big picture here is the growing demand for gaining health benefits from formats other than supplements."

To wit, proprietary Kerry research found 65% of U.S. consumers opted to get their functional perks from foods and beverages rather than pills—a decision that helped goose 2020 functional beverage sales to US$102 billion globally, per Euromonitor Passport, with a compound annual growth rate (CAGR) of 3.2% projected through 2025.

Diversifying sector

Also goosing growth is the sheer creativity the sector displays.

"We're seeing a lot of innovation," Quilter said. "In addition to relatively new formats like kombucha, detox drinks and waters with beauty benefits, more mainstream applications are incorporating functional benefits, too."

Witness energy drinks, where formulators are building in "a gentler, more natural functionality than the high-sugar, high-caffeine options that predominated traditionally," Quilter continued. "They're increasingly formulating with whole-food ingredients like ginseng and gingko biloba, which lends credibility as well as a cleaner label."

James Oliveira, account executive, ingredients division, Aiya America Inc., has witnessed green tea bloom as both an inherently functional beverage and—in its powdered form, matcha—natural energy boost. "Recent trends have shown increased interest in drinks that calm rather than cause jitters," he noted. "So matcha green tea is showing up in everything from smoothies and juices to shakes, energy drinks and more for its versatility and health benefits as a functional ingredient."

Coffee, the original energy drink, is surfing a similar wave. Shurhay considers it a fitting companion for functional adds like fiber, antioxidants, botanicals, adaptogenic mushrooms, probiotics and more—all of which "expand the category beyond the expected caffeine boost."

And given that so many people drink so much coffee so often, it "presents a delivery format that could impact health at the population level," noted Greg Paul, marketing director, North America beverages and dairy, IFF. "It's also an inherently natural product, opening the door to capitalizing on the plant-based trend with plant-based creamers," he added. "Emerging functional ingredients like CBD as well as established ones like protein can all now be found in RTD [ready-to-drink] coffee."

And while RTD formats take the cake for convenience, Cori Satkowski, manager, color technology, California Natural Color, emphasized the value of ready-to-mix (RTM) options, as well. “Dry-powdered drinks are easy to store and to blend with liquids,” Satkowski pointed out. “In addition, they don’t require refrigeration and have a longer shelf life. One example that’s gaining popularity is enhanced hydration powders.”

Emily Hallock, primary research manager, insights, Glanbia, added, “We’re seeing strong performance in functional and enhanced waters primarily because their water base capitalizes on a key need driving beverage consumption: hydration. Adding functionality without much in the way of color, sugar, calories or taste improves the value equation, increasing consumers’ willingness to trade up from a general bottled water to a functional water-based beverage.”

And Micah Greenhill, beverage marketing director, ADM, sees shades of the recent hard seltzer boom in the rise of soft sparklers like functional carbonated waters spiked, so to speak, with probiotics or protein. “Along with these emerging formats, fermented beverages and yogurt drinks that naturally contain probiotics will have staying power thanks to their connection to gut health,” he predicted.

Blurring benefit boundaries

“A point to keep in mind here,” Hallock noted, “is that boundaries within the functional beverage category are blurring more than ever. If we add green coffee bean extract to a water for increased energy, does it become an energy drink? Functionally, yes; in terms of category, no.”

All of which underscores both the fluidity of the medium (apologies) and the liberties that beverage brands are taking in delivering on-trend benefits.

For example, while energy claims have long dominated functional beverages, immunity benefits—riding COVID’s coattails—are now “top of mind,” Paul said. “In addition to those fast-growing immunity claims, brain and digestive health are also gaining popularity. Other claims that interest consumers include eye health and stress or anxiety relief.”

June Lin, global vice president, marketing, health and wellness, ADM, pointed to March 2021 FMCG Gurus’ “How Has COVID-19 Changed Consumer Behaviour” research indicating 87% of U.S. consumers showed interest in products with immune-boosting ingredients. “Shoppers are reaching for offerings with vitamins C, D and A, probiotics, protein, iron, omega-3 fatty acids, zinc and fiber,” she noted. “We expect to see brands increasingly highlight immune-supporting nutrients, particularly vitamin C, across a variety of nutrient-dense drinks like smoothies, sports beverages and tea.

"Additionally," she continued, "consumers are growing more aware of how the gut microbiome contributes to overall wellness—immune function, metabolic and digestive health and more." She pointed to ADM Outside Voice research indicating 48% of U.S. consumers agreed good digestive health is important for overall well-being.

A relatively new goal for functional formulations involves brain benefits: cognition, mood, focus, attention, memory, even improved sleep. Shurhay pointed out that searches for "brain food" grew 355% from 2019 to 2020, per Google Trends, prompting brands to launch beverages that "boost cognitive performance, calm the mind and recharge the body." Ingredients like L-theanine, lion's mane mushroom and adaptogens such as ashwagandha (*Withania somnifera*), ginseng (*Panax ginseng*), holy basil (*Ocimum tenuiflorum*) and Schisandra (*Schisandra chinensis*)—"all known for counteracting stress's effects on the body"—are attracting attention. Even GABA (gamma-aminobutyric acid), chamomile (*Matricaria chamomilla*) and melatonin remain in the spotlight, she said.

Further fixing brain benefits on the public's radar is the esports phenomenon, said Alexandre Massumoto, marketing associate, Synergy Flavors Inc. "Although almost 50% of gaming products are energy drinks, there's a lot of room for innovation," he offered. "Gamers are looking for products that enhance focus, reaction, speed, cognitive function and mental toughness, and as gaming products rise in popularity, so does the market for nootropics."

Stacking the deck

Because those gamers—and the rest of consumers—are busy, they need functional beverages that multitask as well as they do. And as Zapp said, "One of my favorite observations lately is what I call 'functional stacking.' Essentially, it's the intelligent pairing of ingredients to generate synergies." He offered the "classic pairing" of caffeine with L-theanine as an example, the idea being that the former's energy balances the sense of relaxation that purportedly comes from the latter.

"Over the last five years, we've seen functional stacking get even more complex," Zapp continued. "Our customers have been pairing our organic caffeine with a slew of adaptogens such as ashwagandha, ginseng eleutherosides, various mushrooms and even CBD."

Stacking also happens when prebiotics, probiotics and now postbiotics (basically a byproduct of probiotic activity) combine to generate benefits beyond the gut. As Lin pointed out, "Health-conscious consumers connect a healthy microbiome to how they feel physically, mentally and emotionally"—and they connect their microbiome's health to the "biotics" arena.

In its August 2019 Digestive Health – US report, Mintel found online searches for postbiotics, prebiotics and probiotics up 91, 83 and 41%, respectively, Lin noted, adding that "beverages are convenient solutions for incorporating these ingredients more effortlessly into consumers' lives."

And stacked or not, protein remains a top ingredient of interest in functional drinks, perhaps because its potential benefits—"energy, satiety, weight management, immune health, muscle health and development and more," Paul said—are stacked already. In fact, he doesn't think any functional ingredient can compare with protein "for its breadth of scientific documentation and lasting power to generate sales and drive innovation."

Toft Vangsoe agreed. "In the sports nutrition category in particular, consumers are always on the lookout for products that pack a lot of high-quality protein into a convenient format," he noted. "That's driven demand for applications like clear protein waters, which fill the need for refreshment, functional benefits and convenience."

And now plant-based proteins can help fill consumers' need for feeling green. "We're seeing all kinds of plant proteins promoted in beverages, from tried-and-true soy to newer choices like pea, chickpea, faba bean, oat and rice," said Pam Stauffer, global marketing programs manager, Cargill.

Whole-food formulation

Consumers gravitate toward plant proteins partly for their clean connotations. And as Hallock emphasized, "What we're ultimately seeing is a trend toward more natural ... products. Whether that's cold-pressed juice, botanical shots or waters that support immunity, consumers want functional beverages with limited ingredients from natural sources that they feel comfortable consuming regularly."

Julie Pizzey Faber, director of marketing and compliance, Pizzey Ingredients, applauded the trend. "We're big proponents of a whole-food approach to nutrition," she said, "even, or maybe especially, in functional beverages."

The company offers its BevPur finely milled flaxseed as "an easy-to-use, whole-food powder that blends seamlessly into ready-to-mix shakes, meal replacements, smoothies and nondairy milks," she said.

And it offers all the nutritional benefits of whole flaxseed—omega-3s, fiber, protein, lignans—while also contributing thickness and creaminess and serving as a partial clean label replacement for carboxymethyl cellulose (CMC), too.

Oliveira added praise for matcha powder as a plant-based ingredient with whole-food cachet. "Consumers receive 100% whole-food nutrition from matcha," he suggested. "That includes caffeine, L-theanine, plant protein, antioxidants and other nutrients. Compare that to the one component—typically caffeine—that comes from green tea extract."

Complexity creates challenge

But don't be fooled by whole-food ingredients' apparent simplicity. Like everything in the functional beverage space, even simple ingredients introduce complications.

As Vicky Fligel, senior product manager, functional beverages, Glanbia, noted, “Functional beverages are definitely getting more complex. Consumers expect more ingredients and multiple functional benefits *plus* great texture, *plus*—most importantly—great taste.”

And the more complex a beverage formulation, the more complex the potential interactions among ingredients. “For instance,” Greenhill explained, “formulating with high levels of protein can affect viscosity, color, mouthfeel and flavor, causing off-notes and minimizing how desirable flavors like vanilla or strawberry come through. Added vitamins and minerals can degrade during shelf life or with exposure to heat, light and water. Botanical ingredients also present solubility, stability, shelf-life and sensory concerns.”

Then there’s the impact of processing, with some heat treatments and pH adjustments predisposing functional ingredients—and the beverages that contain them—to issues ranging from sedimentation and separation to gelation, grittiness, and excessive thickness or thinness.

But “the biggest challenge,” Fligel maintained, amounts to flavor. “Some ingredients tend to have more challenging flavor profiles that’re harder to incorporate into beverage systems.”

All in good taste

To the extent that beverage formulators have overcome the challenges, they have ingredient advances to thank.

“Ingredient innovation has been critical to developing functional beverages and expanding them into new categories,” declared Mindi McKibbin, principal scientist, beverage innovation, IFF. “It’s incredible how flavor, delivery formats, and ingredient stability and function have improved over the years.”

Take the flavor hurdle. “Whereas healthy beverages in the past might’ve gotten away with not tasting so great, consumers are pushing for great-tasting beverages now,” McKibbin explained. Meeting their higher standards has made flavor modulation and masking key. “A great example,” McKibbin offered, “would be formulating with flavor-modulating molecules to enhance sweetness or mouthfeel in low- or no-sugar formulations to give the consumer a full-sugar perception.”

Philip Caputo, marketing and consumer insights manager, Virginia Dare, said functional ingredients can contribute astringency, bitterness, acidity, chalkiness, lingering aftertastes and metallic notes—for starters. “These offending ingredients include vitamins, minerals, plant- and animal-based proteins, dairy and alternative-dairy analogues, fatty acids, amino acids and even high-intensity sweeteners like stevia,” he said.

So, what do flavor specialists do? They customize. “All our taste-improvement systems are application-specific,” Caputo averred. “One formulation does not fit all, and solutions likely include a combination of masking, flavor-profile enhancement and sweetness-enhancement components.”

Sugar solutions

Once upon a time, beverage formulators would’ve absolved many of those sensory sins with a surfeit of sugar. “But with consumers’ intensifying scrutiny of sugar contents,” said Andrew Ohmes, global director, high-intensity sweeteners, Cargill, “that approach has fallen out of favor. Fortunately, a growing array of alternative sweeteners offer formulators a way to create fortified beverages that keep sugar in check while still delivering great taste.”

In fact, the same stevia sweeteners that in earlier iterations might’ve hurt beverage profiles more than helped them are now being extracted and produced for better sweetness and more appealing flavor. “Next-generation stevia sweeteners like our ViaTech stevia-leaf extract and EverSweet stevia sweetener represent significant improvements in sweetness and flavor quality over traditional stevia-leaf extracts,” Ohmes claimed. The addition of erythritol can further round out beverage profiles while masking the off-notes that accompany functional components, he added.

And Sarah Diedrich, marketing director, sweetening solutions and fibers, ADM, considers her company’s proprietary stevia-extraction and purification technology a leap forward, as well. By optimizing the proportion of steviol glycosides known to produce the best flavor, the technology can deliver 15% more sweetness than other steviol glycosides, while minimizing undesirable attributes like bitterness and astringency, she said. “This creates a superior taste profile while mitigating the need for maskers.”

And because sugar contributes more than sweetness to beverages, “We take a holistic approach to formulating reduced-sugar applications,” Diedrich continued. “Using a combination of high-potency sweeteners and enabling ingredients, we limit added sugars while replacing sweetness, rebalancing flavor and rebuilding functionality that can be lost in fortified beverages with high sugar reductions.”

Peak protein

Alternative sweeteners aren’t the only ingredients that threaten a functional beverage’s sensory appeal; alternative proteins can cause trouble, as well.

“Consumers are looking for plant-based protein in applications across the functional beverage spectrum,” noted Jeff Casper, director of research and applications, Merit Functional Foods. “But it’s no secret that plant-based proteins have traditionally brought taste challenges to formulation.”

As with stevia’s evolution, the development of better-tasting plant proteins has proceeded apace—and the secret is all in the extraction. As Casper explained, the extraction process Merit uses to make its pea-protein ingredients removes impurities and “significantly reduces the intensity of any pea flavor,” he said. “That yields a soluble, high-purity—90%—and clean-flavored protein that delivers a creamy, smooth texture in beverages, even at high levels.”

Moreover, he continued, “In most applications, our proteins don’t require any masking ingredients. We’ve taken considerable steps to ensuring a neutral taste so that they can work with any established flavor profile, from a true vanilla to salted caramel and beyond. It’s our belief that your protein source shouldn’t dictate or limit your beverage’s flavor.”

Beyond flavor, proteins can upset textural stability and present solubility issues. “Especially in plant-protein shakes,” McKibbin explained, “protein solubility and graininess can be challenging.” Fortunately, instantized versions with better dispersibility have dispensed with much of the graininess, she said, while advanced production processes now increase protein solubility and improve mouthfeel.

Fligel noted Glanbia offers both plant and dairy proteins designed for heat stability and reliable function across pH environments—suiting them to acidic and neutral beverages alike. OptiSol 1007 targets neutral-pH all-whey beverages, while OptiSol 1005 “was designed for smoothies and gel applications,” she said. The company’s new UltraHi protein technology even lets formulators “push all protein limits in acidic milky beverages,” she said.

And beverage formulators can tap into ingredients that work around protein. As McKibben noted, “Stabilization can make a huge impact in terms of protein suspension and improved mouthfeel.” IFF included ingredients like gellan, locust bean, xanthan and guar gums in its Vegedan Bev systems to contribute clean label stabilization and mouthfeel optimization, she said.

When protein content and nutritional quality matter as much as in-application operability, Cargill’s Stauffer offers Puris pea protein as a source of “nice texture, emulsification and water-binding properties, as well as high solubility”—all at a minimum protein content of 80% and protein digestibility-corrected amino acid score (PDCAAS) of 0.78, which may not be complete, but is “well above most plant proteins,” she said.

True colors

While proteins are affecting beverage stability below the surface, the interplay of functional ingredients with beverage color is plainer for all to see.

That matters because, as Emina Goodman, senior director, colors, ADM, noted, “Bold and bright colors capture shoppers’ attention as they decide on their next functional drink.” Alas, when vitamins, minerals, emulsifiers, proteins, fats, flavors and acidulants—just to name a few confounding factors—cozy up to colorants, *and* when exposure to light, heat or oxygen make their mark, as well, those bold and bright hues can turn dull and dim.

"Nutrient-rich beverages present a handful of challenges," Goodman admitted, as both ingredient interactions and production "can lead to color degradation and greatly affect a color's shade over time." The effects are even starker with the natural colors that consumers expect in contemporary functional beverages.

So, acid-, light- and heat-stable natural colors like those in ADM's Colors From Nature range are musts in functional beverages, Goodman maintained. "Additionally, our clear emulsion technology allows for transparency in beverages like sparkling waters and more and makes it easier to add colors while preventing separation. Plus, our micronized technology provides bright and consistent shades in powdered beverages."

Sending signals

Stability concerns aside, one asset natural colors bring to functional beverages is their inherent health halo. Many are even some of the botanicals, antioxidants and adaptogens that make functional formulations functional in the first place.

Granted, their use levels as colorants are usually too low to contribute notable nutrition, Goodman conceded, "but it may be possible to imply health benefits by using specific colors."

The antioxidant carotenoid beta-carotene, for instance, provides yellow, orange and red hues, she said. "Turmeric—associated with such health benefits as reducing inflammation—is another popular example, adding a bright yellow color to milks, teas, smoothies and other functional beverages." Simply coloring a drink a vibrant yellow or orange "can signal feelings of energy," she continued, and reds and purples from elderberry and red cabbage also telegraph a connection to vitamins and antioxidants.

A similar signaling can happen with flavors. "Coupling drinks that consumers already associate with functionality, like waters and teas, with citrus flavor combinations such as black lime or preserved lemon will grab attention for the intriguing global profiles and associations with vitamin C and immune support," Greenhill wagered. "Moreover, fermented and sour flavors can signal digestive health benefits."

That rings true with Caputo, who suggested using sour flavors like fruity kombucha, apple cider vinegar and acerola to signify healthy fermentation and antioxidants. "Certain ingredients invoke flavors associated with health and well-being," he said, "and by integrating these flavors into applications, beverage brands can underscore their focus on targeted nutrition categories such as immunity, brain health, aging or digestion."

Beyond the power of sour, he cited flavors from dark berries and fruits like açaì, aronia, bilberry and goji; nutty and fatty profiles from nut oils, avocado and chia; mint profiles for digestion and allergies; and earthy flavors from cocoa and mushrooms for creating healthy connotations.

What's more, he added, "Many botanical extracts fall into the functional flavors category, from florals to herbals to teas that contribute both nutrition and taste." Other ingredients that cross the function-to-flavor divide include cayenne, chamomile, cinnamon, eucalyptus, elderflower, hibiscus and rosemary, he said, noting that "these botanicals are emerging across all nutritional drinks."

And they'll likely continue to do so. "Especially in light of COVID-19, consumer health trends will drive natural-flavor inspiration for the foreseeable future," Caputo concluded. "Consumers associate natural flavors with health and wellness, and health and wellness are now at the top of everyone's minds."

As long as they remain there, functional beverages will be right beside them. And beverage developers—once they solve the challenges of functional formulation—will come up with solutions to support all consumers' needs. ✦

Kimberly J. Decker is a Bay Area food writer that has worked in product development for the frozen sector and written about food, nutrition and the culinary arts. Reach her at kim@decker.net

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The future of functional beverages: Botanicals, -biotics, barely-there sweeteners

by Ilana Orlofsky

Consumer interest in beverages that deliver health benefits is growing steadily, with some estimates reporting growth at a compound annual growth rate (CAGR) of more than 8% through 2023.

A large driver of increased demand for functional beverages certainly points to coronavirus, as does steady activity surrounding keto-friendly products, though advancements in ingredient technology and broadened distribution channels also support the proliferation of products characterized by added function.

Our line of sight into the future of the beverage industry is informed by direct access to decision-makers for hundreds of beverage brands and experts in product development, taste modulation and flavorists that have designed more than 10,000 flavors. As the functional beverage landscape continues to evolve, we wanted to capture where we are today, as well as examine the categories, ingredients and flavors we predict will experience significant growth in the next two to five years.

Beverages that are booming

Carbonated soft drinks (CSDs)

Though CSDs have not been heavily associated with rapid innovation—and up until a few years prior to the pandemic, had been contracting for more than a decade—this is a category we predict is going to get a bit of a facelift in the coming years. Lately, CSDs have been undergoing a renaissance of sorts as brands have succeeded in delivering delightfully bright-packaged, low- or no-sugar, and functionally infused sparkling sodas for the modern age.

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More brands will follow in the footsteps of Poppi, Olipop, Culture Pop, Turveda, New Wave Soda and United Sodas of America, and lean on a light percentage of juice, as well as non-nutritive sweeteners and gut health ingredients (primarily through prebiotic fiber or probiotic ingredients) to capture consumer attention. We predict future iterations of better-for-you CSDs will also address brain health, immunity, stress and other need states that resonate with consumers.

Sparkling water

According to IRI, sparkling bottled water sales in the U.S. surpassed $3.4 billion in the 52 weeks ending March 22, 2020, though undoubtedly this accessible refreshment continued to soar in popularity throughout the pandemic. Brands that led the charge include Sparkling Ice (though some contend it's more similar to CSDs than sparkling water), LaCroix, Bubly (with 87.4% growth from the previous year) and Perrier.

We anticipate steady growth in this category—alongside innovation in at-home flavoring solutions—as many consumers will continue to work remotely, at least part time, even post-pandemic. Sparkling water has proven to fill a void for consumers searching for a more fun way to drink water, though a 2020 study from the Yale Center for Customer Insights reported sparkling water fills other gaps. It is perceived to be a luxury item, is used to dilute high-calorie and high-sugar beverages, and as a pacer during alcohol-centric occasions (some consumers alternate between alcohol and sparkling water).

Hard seltzer

Different schools of thought exist regarding the application of "better for you" as a blanket term across all hard seltzer varieties—though as a whole, the subsegment of the beer category has gained the reputation as a lower-sugar and less-caloric alternative to traditional beer. According to IWSR analysts, RTDs in the alcohol sector are predicted to surpass wine consumption (by volume) by the end of 2021.

The second wave of innovation in the hard seltzer space leveraged some familiar and sought-after product attributes, including antioxidant infusions (Vizzy, with vitamin C, and Oasis Premium Hard Seltzer with electrolytes and antioxidants), and organic ingredients and claims (Michelob Ultra, Flying Embers, Maha).

The third wave incorporates a traditional spirit into a sparkling water base, which some may attest isn't healthier than traditional cocktails, primarily because of the addition of a stronger spirit. Since the overall alcohol by volume (ABV), carbohydrate and

calorie content are nearly identical to traditional hard seltzer products, however, we expect consumers to perceive them to be similar—and that product launches in this subsegment will pick up significantly in the next six to twelve months.

Molson Coors is blazing the trail with its spring release of Proof Point "spirited seltzers" in four varieties: whiskey, rum, vodka and tequila. Each features a different "squeeze" or "splash" of fruit flavor.

One major player innovating certainly does not make a trend, but startup Gerry's spirit seltzer line strengthens our confidence in this as the next generation of hard seltzers. Gerry's offers rum, vodka or gin seltzer in true-to-fruit, cocktail-inspired, botanical and spa-centric flavors.

Svedka took a slightly different approach with its vodka soda line in black cherry lime, mango pineapple and strawberry lemonade. The products come in at around 180 calories, 6.5 g of carbs, just over 5 g of sugar and 8% ABV, so they may not be in direct competition with spirit seltzers, but help reinforce a space is growing in the market for hard sparkling water/seltzer RTDs.

Ingredient innovation

Nootropics

Nootropics are a burgeoning arena for innovation in the beverage space. Nootropics refers to substances that improve cognitive function and promote mental health, but they can also enhance physical performance and provide energy over extended periods of time. The nootropic category includes ingredients such as botanicals, adaptogens, vitamins/minerals and the most ubiquitous, caffeine.

One product of note for its incorporation of nootropics is Alpha Brain Instant out of Onnit Labs, which contains a proprietary blend of ingredients including L-theanine (which is naturally found in green tea and some mushrooms), L-tyrosine and *Bacopa monnieri* extract. According to the company, potential areas of influence may include focus, brain power, mental clarity and performance—without any caffeine or other harmful stimulants.

Lately, CSDs have been undergoing a renaissance of sorts as brands have succeeded in delivering delightfully bright-packaged, low- or no-sugar, and functionally infused sparkling sodas for the modern age.

Arepa, a wellness brand based in New Zealand, launched a "nootropic brain drink" earlier in 2021 that combines extracts from blackcurrant and pine bark with L-theanine, and is positioned toward mental clarity.

Aside from caffeine—which remains the king of nootropics for the time being—we continue to watch medicinal mushrooms/fungi; some are considered nootropics, while others may have nootropic effects. Examples include lion's mane (*Hericium erinaceus*), reishi (*Ganoderma lingzhi*), cordyceps (*Cordyceps sinensis*), turkey tail (*Trametes versicolor*) and chaga (*Inonotus obliquus*).

Ashwagandha also has adaptogenic properties and was relegated to primarily specialty and fringe products for the past several years, but Coca-Cola introduced an ashwagandha-infused smartwater+ product earlier this year, giving the plant permission to proliferate.

Aquamin

For several years, Laird Superfood was the only brand on our radar that leveraged a plant-based seaweed derivative called Aquamin to deliver trace minerals and calcium. More recently, however, Voss released three functional waters in its Voss+ line, which include the addition of collagen, vitamin D and a SKU with Aquamin. Though consumer awareness isn't at a point to seek out this ingredient, well-executed products using it will pave the way for more market penetration.

-Biotics

Probiotics were all the rage five years ago and are holding their ground as research on their potential benefits continues to surface.

Prebiotics have been gaining momentum, as consumers continue to take health into their own hands and recognize the vital nature of fiber, a macronutrient that has historically been stripped from fast food, frozen food, juices and many other kitchen staples. We predict prebiotic fiber will be introduced across categories, in the form of inulin, soluble corn fiber, pea fiber and tapioca fiber. Products that prioritize immunity and gut health may include both pre- and probiotics, creating a synbiotic beverage.

A lesser-known "-biotic" is starting to bubble, however, and that is postbiotics, a newer player focused on the large intestine. Postbiotics are found in fermented foods, like probiotics, but are essentially a kind of probiotic waste. While not well understood by consumers (or many industry professionals at this point), a proprietary postbiotic ingredient from Cargill, EpiCor, is touted to have multiple potential benefits, including support for immunity and digestion.

Savor the flavor

Sexier citrus and true-to-fruit

The variety of flavors we see in the beverage sector is also a sign that industry continues to evolve. Health and wellness manifests in flavor profiles, as some brands try to convey that their product has a lower sugar content, natural sweeteners, or a portion size or nutritional profile that gives consumers permission to partake.

Some products want to be perceived as better-for-you or natural and use flavor as a mechanism to communicate their intended position, even though many flavors aren't relegated to a specific category or product type.

In the "sexier citrus" category, blood orange has become relatively mainstream, though we would still classify it as more dynamic and sexier than a traditional orange flavor. Flavors we are tracking (and you should be, too) in this grouping include yuzu (which has seen 49% growth as a Google search term in the past 18 months), key lime (49% growth), calamansi (49% growth) and kumquat (22% growth). Other true-to-fruit flavors on our radar because of increased sample requests and/or product launches include guava, persimmon and fig.

Botanical

Botanical flavors have surged in popularity because they give the perception that plants or herbs are present in a product—though that's not always the case. They often deliver a pleasant accent to a more dominant flavor, thereby avoiding the alienation of consumers with overt obscurity. With the popularity of botanical flavors, it's no surprise that many companies have already launched or plan to launch drinks in this flavor category.

Evian's Sparkling Mind mineral water incorporates ginger, basil and mint into its magnesium- and zinc-fortified line. Ruby Hibiscus Water is a 2021 launch leaning heavily on hibiscus for both color and flavor. Better-for-you soda startup Culture Pop showcases rosemary as the tertiary flavor (following watermelon and lime) in one of its SKUs.

We expect the list to grow, especially for products that tout ginger and turmeric, as these flavors continue to prevail across categories, predominantly in juice, coffee, tea and cocktail mixers. While our botanical flavor library, driven by customer requests, includes the two frontrunners, it also contains flavors such as lemongrass, hibiscus, orange blossom, various types of mint, elderflower, chamomile, clove, basil, cardamom, rosemary and lavender.

Health and wellness as a macro trend was only accelerated and amplified by the pandemic, which is still not fully in the rearview mirror. Across North America, Europe and Asia-Pacific, consumers are looking to improve their health through lifestyle changes, and some of those changes may be achievable through identifying beverages that support their goals, quench their thirst, deliver the taste and texture they expect—and in some instances, make them feel like they're a part of a movement or community.

As we continue to design custom and trend-forward flavors, ingredients that support resonant nutritional profiles and commercially viable products that push the industry forward, we will keep our industry partners in mind and share what we know so that you can innovate, meet consumers where they're at and give them experiences they didn't know they were craving. ✦

Since joining Imbibe more than five years ago, senior marketing manager Ilana Orlofsky has led the charge for numerous marketing initiatives that have helped clarify and amplify the company's voice and presence in the marketplace. She embodies the organization's value of building bespoke products as she delivers custom presentations laden with market and consumer insights to inform innovation pipelines for beverage brands of all sizes, and at conferences. With a bachelor's degree from Washington University in St. Louis, Orlofsky has continued her education through various marketing-specific certificate programs at DePaul, Harvard Business School and Cornell University.


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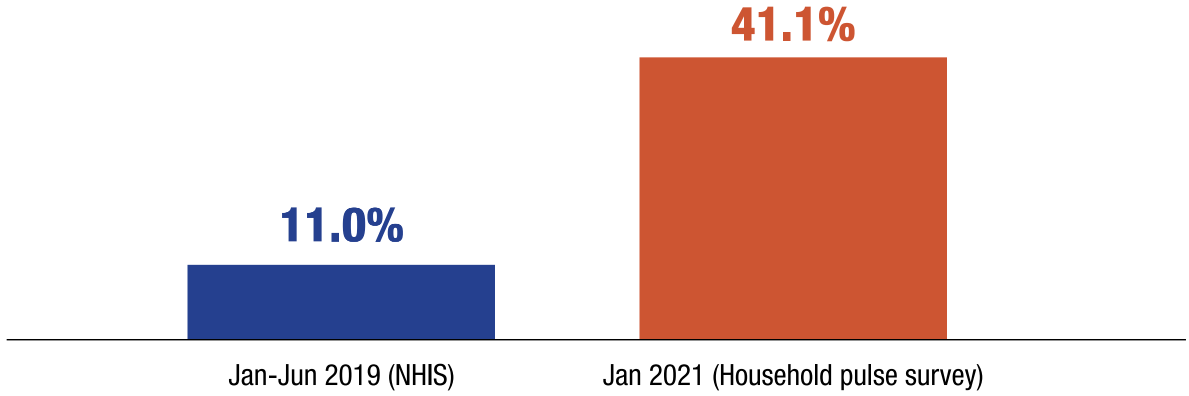
The power of a 'stiff' drink

by Maggie McNamara

Looking back, 2020 will surely go down in history as one of the most challenging and trying years to date. The pandemic left a significant mark on the lives of people worldwide, and its aftereffects will continue to do so for some time.

COVID-19 disrupted work, education, health care, the economy and relationships, with some groups more negatively impacted than others. Data from Kaiser Family Foundation (KFF) indicated about 4 in 10 adults in the U.S. have reported symptoms of anxiety or depressive disorder from the pandemic, a share that has been largely consistent, up from 1 in 10 adults who reported these symptoms from January to June 2019, based on data from the 2019 National Health Interview Survey (NHIS).

Average share of adults reporting symptoms of anxiety disorder and/or depressive disorder, January-June 2019 vs. January 2021



Percentages are based on responses to the GAD-2 and PHQ-2 scales.
Pulse findings (shown here for Jan. 6-18, 2021) have been stable overall since data collection began in April 2020.

Source: NHIS Early Release Program and U.S. Census Bureau Household Pulse Survey.

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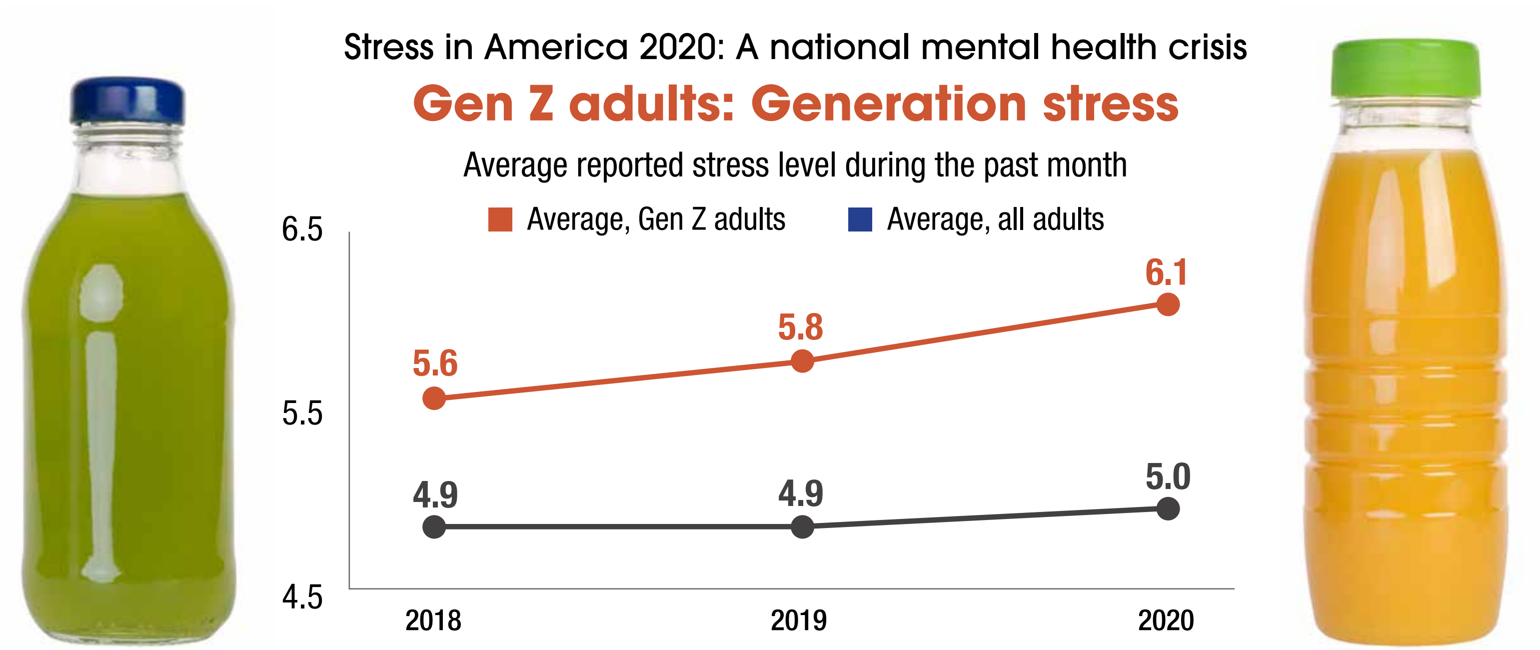
A recent KFF Health Tracking Poll from July 2020 also found that many adults reported specific negative impacts on their mental health and well-being—such as difficulty sleeping (36%) or eating (32%), increases in alcohol consumption or substance use (12%), and worsening chronic conditions (12%)—due to worry and stress over the coronavirus. As the pandemic wears on, ongoing and necessary public health measures expose many people to experiencing situations linked to poor mental health outcomes, such as isolation and job loss, the Centers for Disease Control noted.

Even more concerning are the potential long-term consequences of persistent stress and trauma created by the pandemic for some of America's youngest individuals, known as Generation Z. According to survey findings from "Stress in America 2020" by the American Psychological Association (APA), Gen Z teens (ages 13-17) and adults (ages 18-23) are facing unprecedented uncertainty, experiencing elevated levels of stress and reporting symptoms of depression.

Gen Z adults are facing additional challenges, as they are entering adulthood during a time when the future has never been more uncertain. This may be driving key differences in reported stress, as Gen Z adults report the highest stress level, on average, at 6.1 out of 10.4. This is significantly higher than all other generations: 5.6 for Millennials (ages 24-41), 5.2 for Gen X (ages 42-55), 4.0 for Boomers (56-74) and 3.3 for older adults (75+).



Source: American Psychological Association

COVID-19 may have negatively rocked the world, but it also shifted the way people think about improving their health and staying well—and with that, a greater focus on what they put into their bodies has become important.

Drinking that's good for you

Mintel's Global Food and Drink Trends 2021 report predicted, "In 2021 and beyond, food and drink companies will create mental and emotional well-being solutions, deliver on new value needs, and use brands to celebrate people's identities. Consumers will be looking for more functional food and drink that claim to help people focus, relax and relieve (or ideally prevent) emotional health concerns." In fact, at press time, a search on Instagram for #HealthDrink yielded approximately 1.2 million posts and nearly 33,000 posts tagged #HealthyBeverage.

As the world slowly crawls out from the dark Covid cloud, stress and anxiety are following many individuals close behind. Fortunately, science is providing some ways to face these problems head on.

A 2017 study of 128 healthy adult participants who self-reported low mood—but were not diagnosed with depression—investigated the efficacy of a standardized saffron (*Crocus sativus L.*) extract (as affron, from Pharmactive Biotech Products) for improving mood, stress, anxiety and sleep quality.[1] In the randomized, double-blind, placebo-controlled trial, participants either received affron at 28 mg/d or 22 mg/d for four weeks, or a placebo. Results indicated a significant decrease in negative mood and symptoms related to stress and anxiety at a 28 mg/d dose, with a significant difference between 28 mg/d and placebo on the Profile of Mood States (POMS) Total Mood Disturbance scale, but no treatment effect at the 22 mg/d dose. The results suggested the higher amount of affron contributed to antidepressant and anxiolytic effects in adults with mild-to-moderate depression.

Later that year, another study was conducted to examine affron's potential mood-related effects in teenagers.[2] A randomized, double-blind, placebo-controlled study of 68 youth ages 12-16 administered affron or placebo for eight weeks. The affron group indicated improved anxiety and depressive symptoms with mild-to-moderate symptoms, from the perspective of the adolescent.

Saffron ingredients are increasingly popular with formulators and can be found in gummies and powders but are especially popular in teas. A search for #SaffronTea on Instagram returned over 36,000 posts. However, not all saffron extracts are equal, so it is imperative to purchase clean, sustainably sourced, top-quality pure saffron to ensure effectiveness.

Nootropic botanicals added to the mix

In recent years, science has shown turmeric (*Curcuma longa*) contains bioactive compounds called curcuminoids—such as curcumin—which have various medicinal properties.[3]

In 2020, a study was conducted on a combination of iron and bioavailable curcumin (as HydroCurc, from Pharmako Biotechnologies).[4] In the six-week, double-blind, placebo-controlled, randomized study of 155 healthy adults (ages 18-40), co-administration of HydroCurc with 18 mg elemental iron for 42 days was shown to increase serum BDNF levels.

BDNF is a critical neuroprotein that plays a structural role in the brain and nervous system to help support normal brain function. Acting almost as "fertilizer" for the brain, BDNF helps keep billions of neurons (aka brain cells) flourishing and strong. When BDNF is released, it flips the switch on a series of genes that grow brand-new brain cells and pathways. BDNF also strengthens existing neurons, as well as maintaining mental alertness and improving memory.

As the world slowly crawls out from the dark Covid cloud, stress and anxiety are following many individuals close behind. Fortunately, science is providing some ways to face these problems head on.

Curcumin itself has many potential benefits but is limited due to its hydrophobic nature. HydroCurc overcomes the functional challenges of curcumin by using LipiSperse, a patented dispersion technology. This bioavailable curcumin is available in ready-to-mix (RTM) powders, effervescent tablets, functional beverages and drinks. #TurmericTea has been tagged over 43,000 times on Instagram.

Botanical reduction in stress and anxiety

A 2018 clinical trial at University of Sunshine Coast, Queensland, Australia, investigated the efficacy of a succulent in reducing anxiety and stress in healthy adults.[5] An eight-week, double-blind, randomized, placebo-controlled clinical trial was conducted using *Caralluma fimbriata* extract on 97 participants (49 in the active group and 48 in the placebo group). The study showed statistically significant results in the active group when compared to the placebo for reducing stress and anxiety with an increase in positive emotion. The ingredient can be used in beverages, smoothies, shots and teas.

The world needs calm more than ever. With the rise of functional, good-for-you ingredients that can be used in foods and beverages (and that also come with scientifically backed benefits), formulation is an easier pill—or rather, a proper drink—to swallow. ✦

Maggie McNamara is the marketing director for Gencor. She is a veteran brand and marketing strategist who has worked with multimillion-dollar companies to grow their brand value and increase market share. After spending over a decade working with companies like BMW, P&G, Bavaria Brau, Jacuzzi and Silicon Graphics, McNamara ran a successful marketing agency and a growing a clothing line. She holds a bachelor's degree in communications and multimedia, an honors degree in marketing communication and a master's in organizational communications from the University of Johannesburg, South Africa.

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Unlocking product innovation potential on both sides of the Atlantic

by Nikita McGee

The food and beverage industry is fast-paced and ever-changing as manufacturers are consistently introducing new products into the U.S. market, as well as internationally. In order to remain competitive, new product innovation is key for food and beverage manufacturers and the push to launch the next "new" trendy product has accelerated over the years.

Research and development (R&D) teams are exploring the use of new ingredients, and/or new uses for conventional ingredients to gain a competitive edge. Although the idea of new product innovation sounds promising, companies should consider—early in the process—the multitude of regulations and compliance issues that must be navigated prior to introducing the new product in the U.S. and global markets.

As regulatory requirements are not always clear and concise, obtaining competent regulatory guidance throughout the process should minimize regulatory/compliance issues. The food and beverage industry is regulated differently worldwide.

Comparing the US and EU

In looking at just the U.S. and EU, although many regulatory differences exist, these two regions share the common interest of protecting the public health and maintaining a safe food supply by enforcing adequate food regulations. Conventional beverages must comply with regulations pertaining to the manufacturing processes, product labeling, ingredient type, ingredient composition, product claims, safety, stability, marketing, etc., per the jurisdiction in which they are marketed.

Manufacturing

Manufacturing requirements for the food and beverage industry in the U.S. and EU are comparable. Implementing and following current good manufacturing practices (cGMPs) and hazard analysis critical control point (HACCP) principles are internationally recognized as essential to food safety management.

These procedures should be written and followed by properly trained personnel, as the manufacturing facility must be clean to prevent contamination. And typically, the cGMP and preventive controls requirements are comparable for the U.S. and EU.

Labeling

Labeling regulations vary more than manufacturing regulations when comparing the U.S. and EU. For example, food and beverage products marketed in the U.S. must bear nutrition labeling in the English language. An additional language is permitted, provided English is prominent on the label and all mandatory labeling is presented in both languages. In the EU, the label must be in the national language of the member state where the product is sold. While multiple languages are permitted to appear on the label, the label size and minimum font size requirements may result in multiple product labels for the EU market. Both the U.S. and EU provide well-defined regulations regarding mandatory requirements and other labeling guidance to ensure compliance.

Ingredients

One of the most important parts of formulating a new beverage is to confirm the regulatory compliance of ingredients. Determining which ingredients are eligible for use in conventional beverage products in the U.S. and EU is a science within itself. In the U.S., determining the compliance of ingredients subject to Title 21 of the Code of Federal Regulations (21 CFR) is relatively straightforward.

If not listed in 21 CFR, some ingredients are permitted for use per a conclusion of GRAS (generally recognized as safe)—which may or may not have been notified to FDA. Use and use levels are specific to that outlined in the GRAS. FDA maintains an inventory of GRAS notifications; however, absence from this inventory does not mean the ingredient is not permitted for use. Many companies opt for “independent” or “self” GRAS determinations. The criteria for GRAS are that the safety data supporting the GRAS finding must be publicly available, and qualified experts must be in consensus regarding the safety conclusion. The level of safety required is not less than that required for a food additive. The difference is the premarket approval requirement; food and color additives require FDA review and approval, while GRAS ingredients do not.

One of the most important parts of formulating a new beverage is to confirm the regulatory compliance of ingredients.

The EU does not have a comparable regulatory pathway to GRAS. The EU relies on a preapproval process for food additives, as well as novel food (food not consumed to a significant degree in the EU prior to May 15, 1997), which includes novel ingredients and traditional foods from a third country. The EU maintains a database of approved food additives and a novel food catalogue. The Novel Food and Traditional Food authorization processes review safety, and approvals apply to use in all 27 EU member states. However, the member states can enforce their own specific regulations, such as imposing minimum and maximum amounts for vitamins and minerals, so it is important to review compliance of the formulation on a member state basis as well.

Claims

Food and beverage companies explore various avenues to use functional claims, "natural" claims and nutrient content claims for their products. Nutrient content claims are very straightforward and easy to navigate in both jurisdictions; however, assessing the compliance of other types of claims is more nuanced. The EU only allows for authorized health claims to be used on food and food supplement products. The U.S. also has authorized health claims, which require FDA premarket authorization. Another avenue for claims that may be made for functional beverages are structure/function claims, which are not subject to premarket approval by FDA. Structure/function claims must be truthful, not misleading and adequately substantiated.

Understanding food and beverage regulations and having an experienced regulatory team navigating the nuances are crucial to success. These measures are more important than ever, as food and beverage companies continue to innovate products using new ingredients or products using conventional ingredients in a new way. ✦

Nikita McGee is a senior project manager of regulatory affairs for GRAS Associates, a NutraSource Pharmaceutical and Nutraceutical Services company with 17 years of regulatory affairs experience spanning the food (human and pet), pharmaceutical (human and vet), medical device and biologics industries. Authoring over 250 regulatory submissions as well as a book chapter, McGee offers a wealth of extensive regulatory knowledge. She is experienced in many aspects of regulatory affairs from project innovation through life cycle management, such as regulatory agency negotiations, regulatory intelligence, risk management, food safety compliance, inspections/auditing and facility registrations.

Today's beverage brands find the sweet spot between flavorful and functional

by Melissa Kvidahl Reilly

Overall, the retail beverage market saw a positive upswing during the COVID-19 pandemic as consumers relied more on home meal prep and consumption, and turned to familiar ready-to-drink (RTD) beverage brands that offered a replacement for foodservice, a recent report from Mintel noted.

As 2021 hits its stride, consumers are maintaining the focus on health and immunity they cultivated during the pandemic, and are seeking out beverages that provide some of these attributes—but not at a cost to flavor and enjoyment.

Mintel reported berry, citrus and tropical profiles still top consumers' most wanted flavors, and beverages embracing new functional ingredients will find favor in the market more quickly if they adhere to these in-demand flavor profiles. The result? An ever-blurring beverage market defined by a new focus on functionality, introduced with natural flavor profiles and familiar formats.

Food & Beverage Insider spoke with three brand leaders—from Rowdy Mermaid, Teakoe and Uncle Matt's Organic—on how they're navigating this new hybrid market.

Food & Beverage Insider: What functional ingredients are most in demand in today's beverage market?

Susan McLean, vice president of marketing and innovation, Uncle Matt's Organic: Ingredients that support immunity are still a major trend in the better-for-you beverage market, and immunity concerns for consumers aren't waning. Due to COVID-19, consumers spent the majority of the last 14 months trying to stay healthy, and the demand for multifunctional beverages has increased exponentially. We doubled down on immunity with the launch of Ultimate Immune, an award-winning orange juice boosted with black elderberry and packed with vitamin C, vitamin D and zinc. Another one of our functional beverages, Ultimate Defense, is a blend of superhero nutrients like living probiotics and organic whole root turmeric. Combined with organic orange juice, pineapple and ginger, it's a delicious and invigorating drink that delivers 300% of your daily dose of vitamin C.

Jamba Dunn, founder and CEO, Rowdy Mermaid: Given our passion for leveraging ancient remedies of the past to craft delicious beverages that address contemporary consumer health needs, we spend much of our time scouring the globe for unique, functional ingredients. Recently, we've become particularly interested in understanding the powerful medicinal properties of mushrooms, and determining how to extract those properties without the mushroom taste. This exploration led us to create Adaptonic, our new line of sparkling immunity tonics. Adaptonic uses beta-glucans from reishi mushrooms, which have deep immunomodulating benefits [Int J Med Mushrooms. 2018;20(8):705-716]. We're currently exploring other sources of beta-glucans as well, since the source and structure of beta-glucans greatly impact their power and function.

We also believe there's untapped potential in other adaptogens, like ashwagandha. These ingredients have been used in Ayurvedic practices for thousands of years, and there is a burgeoning interest and demand for incorporating these products into mainstream functional beverages. Consumers are becoming more interested in health management versus quick fixes, and adaptogens hold unique power to address these interests while also satisfying a desire for exploring new taste and flavor experiences.

Food & Beverage Insider: How do consumer demands of beverages differ from those of CPG food products?

Pete Jokisch, founder and president, Teakoe: Historically, it's better to consume your calories through food as opposed to the "empty" calories in beverages. Many drinks have been heavy in sugar, providing no benefit to your daily diet, but the rise of sparkling water swung the pendulum toward zero everything. We believe this is an overcorrection that will settle somewhere between the two (10-30 calories) because if consumers want their beverages to serve multiple functions, the cost of that may come in the form of some caloric value if they want the benefits to actually be substantiated. So, we believe

a differentiation for beverage is bringing more to the table (let's call it healing hydration) in regard to balanced nutrition. Although it will never replace the value food provides, it can now certainly contribute more, thus providing a balanced approach to the items people consume on a daily basis.

Dunn: We see a much higher rate of demand for innovation within beverages than other categories. With CPG food companies, there is stronger brand loyalty and households will often stay with a tried-and-true brand. In beverages, however, there is frequent brand switching and product exploration. This is due in part to the plethora of beverage choices, and in part to a lower price point that equates to more product trial compared to food categories. At the same time, consumers consistently demand and expect that new beverages deliver increased function, improved nutrition panels (like lower sugar) and stellar taste. Those demands, combined with the crowded category, lead brands to constantly innovate with new flavors, function and form, particularly in the refrigerated functional category.

Food & Beverage Insider: Where is there still room for opportunity in the clean label beverage market?

Jokisch: The continued push for transparency and clarity, by consumers and brands, surrounding "natural flavors" will remain an opportunity for differentiation. The guidelines pertaining to what a natural flavor encompasses are extremely broad, and cover anything from artificial preservatives to bitter blockers. There are, however, flavoring agents within the natural flavor realm that do actually come from real ingredient extractions. We believe there will be continued measures taken to tighten regulations regarding ingredient panel transparency—and that will be a huge win for people seeking better-for-you products.

McLean: The organic and clean label beverage industry has continued to grow over the last 20 years and we see no signs of it slowing. The pandemic challenged people to reflect on their own health and seek out products that complemented their health-conscious lifestyle. We recognize there's a tremendous opportunity to continue to innovate within this space, so we have a slew of exciting innovations that we're developing for launch over the next few months and into 2022. This includes a line of Ultimate Shots to support immunity and overall wellness, along with other better-for-you, organic functional blends to support a healthy lifestyle. ✦

Melissa Kvidahl Reilly is a freelance writer and editor with 10 years of experience covering news and trends in the natural, organic and supplement markets. She lives and works in New Jersey.

There's a drink for that

by Alex Smolokoff

A trip into today's beverage aisle can almost feel like a journey into a world all its own. Turn the corner, and suddenly one is surrounded by every kind of beverage imaginable. Still or sparkling, hot or cold, fruity and refreshing or earthy and protein-packed—today's drinks can do just about anything consumers ask of them.

And good thing—because consumers are certainly asking. FMCG Gurus data collected both pre-pandemic, in 2019, as well as during and after the worst of the pandemic, all point toward consumers desiring cleaner, more natural food and beverages. Proprietary FMCG Gurus research conducted in 2021, for instance, found 76% of consumers plan to eat and drink more healthily over the next 12 months, with 60% of those consumers specifically saying they plan to reduce their sugar intake. Other FMCG Gurus data indicated 74% of consumers said it is important that food and drink products are 100% natural, with 53% specifically indicating a desire for soft drinks to be 100% natural.

Demand is producing innovation across the beverage sector, and nearly every type of beverage consumer is benefitting. For consumers looking to kick-start their day with some caffeine in a sparkling water, there's a drink for that. If they want a protein shake that'll fuel a workout, satiate and prep for top performance, there's a drink for that, too.

74% of consumers said it is important that food and drink products are 100% natural, with 53% specifically indicating a desire for soft drinks to be 100% natural, according to FMCG Gurus data.

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Simply put, consumers are asking more of their beverages, and formulators are happy to oblige.

Many of today's consumers are turning to food and beverage over traditional supplements—in a survey conducted by MarketPlace in 2020, 63% of supplement consumers preferred to get most of their nutrition through food. As the focus on personal health remains at the forefront post-COVID, consumers can find everything from vitamins A and C to zinc and other minerals, to pre-, pro- and postbiotics for optimal digestive health. And for consumers simply worn down by the daily slog, innovators are churning out drinks to help relax, aid sleep and provide mental clarity—all with or without some added booze for a kick.

Simply put, consumers are asking more of their beverages, and formulators are happy to oblige. Here are just a few of the latest beverage products that caught our eye for their innovation, integrity and, above all else, taste:

Harmless Harvest Organic Coconut Smoothie

A sip of this organic smoothie is exactly like drinking a coconut—if coconuts were creamy, smooth and served in a bottle. For this new beverage, Harmless Harvest adds hand-scooped coconut meat to its organic coconut water, creating a thick and richly enveloping single-ingredient smoothie packed with naturally occurring medium-chain triglycerides (MCTs) and no added sugar. Like its other mission-minded products, this beverage represents the brand's goal of zero waste and its philosophy of always considering its impact "from seed to shelf." Bonus: In 2020, Harmless Harvest partnered to launch the Regenerative Coconuts Agriculture Project (ReCAP) to develop and implement a regenerative agriculture model for coconuts in Thailand.

Rishi Tea Sparkling Botanicals

Sparkling beverages can be a challenge for product developers looking for a flavor that can dance across the tongue and hint at sweetness without overwhelming the palate. Rishi has managed to hit that right balance with intriguing, botanical-forward flavors like Dandelion Ginger and Turmeric Saffron. Each 12-oz. can contains zero added sugar and a host of unique ingredients; for example, the Dandelion Ginger variety also boasts organic lemon, fermented green tea, tangerine, rosemary and chili peppers.

Rowdy Mermaid Adaptonic

These sparkling immune-forward tonics from Boulder-based Rowdy Mermaid are crafted with refreshing botanicals, fruits, herbs and adaptogenic reishi mushrooms. With flavors ranging from Ashwagandha Blackberry, Chamomile Lime, Matcha Yuzu and Strawberry Holy Basil, these beverages pack all the adaptogenic perks without any of the mushroom taste. Ranging from 15-25 calories and less than 8 g of sugar per 12-oz. can, these sparkling tonics made with certified organic ingredients can be enjoyed guilt-free.

Enroot Sparkling Cold Brew Teas

Enroot is a low-calorie, all-natural drinking experience. The small-batch, slowly cold-brewed wellness teas are sustainably sourced and combine organic teas, botanicals, fruits and spices to deliver a smooth and refreshing taste in a range of caffeine levels. Choose from varieties such as Strawberry Lavender Rosemary Tulsi, Peach Hibiscus Jasmine Green Tea, Raspberry Mint White Peony Tea and others, all only 25 calories per bottle, with no added sugar, sweeteners or flavors. This female-led and B Corp-certified company proudly supports the James Beard Foundation's Women's Leadership Programs, which work to advance diversity and parity in the food community.

G.O.A.T. Fuel Energy Drink

Founded by NFL Hall of Famer (and certified G.O.A.T. himself) Jerry Rice and his daughter Jaqui, the newly launched drink's hero ingredient is Cordyceps mushrooms. Available in appealing flavors like Blueberry Lemonade and Peach Pineapple and just 10 calories per can, each variety features zero sugar, zero preservatives, ginger root, green tea—which naturally contains the antioxidant polyphenol epigallocatechin gallate (EGCG)—and branched-chain amino acids (BCAAs). The product is also gluten-free and non-GMO. ✦