Crafting a better brew

by Holly McHugh



ew beverage categories can match the versatility of coffee and tea. A variety of brew methods, flavors, sweeteners, ingredient combinations and whitener sources are available, which gives consumers plenty of options for choosing their perfect cup.

Adding to the appeal of coffee and tea is they are rich in naturally occurring compounds that can benefit the body and mind. Coffee and certain teas have a significant amount of caffeine and are high in antioxidants. Many teas deliver other potential health benefits as well, such as anti-inflammation, digestion support and enhanced relaxation.

The ability to appeal to consumers' personal preferences, combined with functional benefits, have made coffee and tea highly desirable categories. According to Research and Markets, the global coffee market is anticipated to reach US\$134,25 billion in 2024 with a compound annual growth rate (CAGR) of 5.3%. In the U.S., growth is expected to be even greater. Mintel reports the coffee market is worth \$15.1 billion and is expected to grow 22.7% through 2024, with ready-to-drink (RTD) options being the fastestgrowing sub-segment.

Tea is also experiencing substantial growth. Grand View Research found the global tea market was worth \$12.63 billion in 2018 and is expected to expand at a CAGR of 5.5% from 2019 to 2025.

Promising market growth in the coffee and tea categories has led to an explosion of product launches within the last decade, so quality, taste and product differentiation are essential for new entrants to survive. Brands are innovating in these categories by playing with attributes such as preparation method, texture and function to entice consumers.

Evolving preparation preferences

Traditional brewed coffee is in the spotlight thanks to more people working from home as a result of COVID-19. According to Mintel, the at-home coffee market is set to grow by 4.9% in 2020 compared to a total of 3.9% growth experienced between 2015 and 2019.

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In addition to traditional brews and single-serve cups, consumers have access to more novel ways to enjoy coffee at home. Coffee concentrates provide a one-stop-shop for creating coffee-based beverages. By using a small amount of coffee concentrate, consumers can create a cup of hot or cold coffee, lattes, cappuccinos, Americanos, frappés and more.

Cold brew has gained the most traction over the last five years and isn't expected to lose momentum any time soon. According to Grand View Research, the cold brew market was worth \$33.97 billion in 2018 and is expected to have a CAGR of 25.1% from 2019 to 2025. Brands are differentiating their cold brew coffees by incorporating dairy or dairy alternative milks and functional ingredients like nootropics and adaptogens. Cold brew tea products are also entering the market, but at a much smaller scale compared to coffee.

Flash brew and snap chill are other brew methods gaining traction. These brew methods share a similar concept of quickly cooling hot coffee for a bright, crisp and full-flavored product. They differ, though, because snap chill coffee is cooled within 60 seconds of brewing using proprietary technology, while flash brew is made by brewing hot coffee in an oxygen-free environment with around 60% of the water that would ordinarily be used in the brewing process. Once brewed, the hot coffee is poured directly onto an amount of ice equivalent to the remaining 40% of the brewing water.

Texture adds complexity

Amplifying sensory experiences by adding textural complexity is a trend that's grown significantly over the last few years. At the onset of the pandemic, Dalgona coffee was all the rage on social media. It's made by whisking equal parts of instant coffee, sugar and water together until the mixture thickens and holds its shape. The whipped coffee topping is then placed on top of a glass filled with ice and milk (or a dairy alternative). The result is a silky, frothy cold coffee. Once the Dalgona coffee trend caught on, people started experimenting with other ingredients, too, like cocoa powder and matcha.

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A more established trend is serving nitrogen-infused cold brew coffee and tea. Consumers are intrigued by the velvety, luxurious texture nitrogen infusions provide. Nitrogen also elevates the flavor profile of a beverage, emulates sweetness and has a creamy finish without adding calories. Although it's harder to mimic the same experience in an RTD, several brands have launched products that successfully deliver the creamy texture and cascade consumers expect from a nitrogen-infused product by using proprietary widget cans or nitrogenating the can during packaging.

Texture trends have been especially important in the tea space. Bubble tea has been an emerging trend in the U.S. for many years, but growing interest in adding textural complexity to beverages could help the chewable treat move into the mainstream. In addition to bubble tea cafés popping up throughout the U.S., Dunkin' launched a bubble tea beverage during the summer months. There are also a handful of RTD bubble tea beverages available in Europe and Asia.



Cheese tea is another trend that started in Asia and made its way to the U.S. The sweet and savory beverage is a combination of brewed or bubble tea topped a with fluffy, sweet and salty topping made of soft cream cheese, condensed or evaporated milk and whipping cream. Although the combination of cheese and tea might sound odd, it's earned a lot of recognition on Instagram and in the media. As of September 2020, #cheesetea was posted nearly 130,000 times. Additionally, Google searches for "cheese tea" increased 20% from September 2017 to September 2020.

Additional function

Although coffee and tea already have several inherent health benefits, there's been an uptick in brands incorporating other functional ingredients into products for an even bigger boost. Brands are helping consumers improve brain function by incorporating nootropic ingredients which are suggested to promote focus, motivation and productivity. Examples of nootropics include omega-3 fatty acids, L-theanine (which green tea is inherently rich in) and lion's mane mushroom.

Coffee and tea that support jitter-free energy, mental clarity and relaxation are also trending. CBD and adaptogens like ashwagandha, ginseng and reishi mushroom are common ingredients in these types of products.

Healthy fats are another increasingly popular ingredient in coffee-thanks to diets like bulletproof, paleo and keto-because they are suggested to improve energy and satiety as well as help with weight loss. Medium-chain triglyceride (MCT) oil and grass-fed butter are the most common fat sources incorporated in coffee, but products using avocado oil have also launched within the last year.

Challenges to prepare for when developing an enhanced coffee product include off-notes from functional ingredients and solubility issues. Many ingredients have taste challenges like astringency, bitterness and sulfur notes that can be addressed using a combination of flavor, sweeteners and flavors with modulating properties (FMPs). Ingredients in the base of the formula may exacerbate off-notes as well, so it can be beneficial to look at the formula holistically when addressing taste challenges.

Oil-based ingredients like MCT or CBD are insoluble in water and need to be transformed into another format, such as an emulsion or powder, to be used in aqueous products. Many brands utilize a nano-emulsion as a delivery system for CBD. Nano-emulsions are similar to typical oil-in-water emulsions commonly used to deliver flavors and other oil-based functionals in beverages, except the particle size is 10 to 100 times smaller.

Planning for processing is also very important for brands that want to incorporate functional ingredients into their coffee or tea products. Coffee and tea products typically undergo thermal processing; the risk of functional ingredient degradation becomes greater if the temperature is higher and the time exposed to heat is longer. As such, beverages processed under ultra-high temperature (UHT) or retort will suffer the most functional ingredient loss. To combat losses during processing, formulators typically add an appropriate amount of overage to their products. Other steps can be taken to protect functional ingredients, such as using encapsulated forms or, depending on the mechanism of degradation, the addition of antioxidants.

Incorporating plant-based milks

Plant-based has exploded across categories, but it's especially relevant to coffee and tea. Brands are appealing to consumers who are seeking out better-for-you beverages, have dairy allergies or follow a specialized diet. Almond is the most popular dairy alternative on the market-but oat milk has exploded over the last few years, becoming the most popular choice for new RTD coffee and tea launches. Brands are also launching products with niche dairy alternatives like cashew, hemp and macadamia milks.

Brands that incorporate dairy alternative milks into their coffee or tea product may experience mouthfeel and stability challenges. Consumers have come to expect dairy alternatives to have the same texture as dairy milk, which isn't an inherent attribute. Fat is added back using ingredients like coconut cream or sunflower oil to improve viscosity and mouthfeel.

Additionally, ingredients like nut pastes and oat flour also contain particles that can separate out of the beverage, negatively impacting appearance and creating an undesirable "sediment" layer at the bottom of the package. Emulsifying ingredients like acacia gum and sunflower lecithin are added as a thickener to improve suspension and prevent fat separation. Carbonates, phosphates and citrates are also used as buffers to protect proteins in the dairy alternative milk to maintain the pH when it's combined with acidic coffee or tea and prevent the beverage from separating. Coffee and tea lattes are also most stable at higher pH ranges and, therefore, require low-acid processing conditions. These elevated processing temperatures can damage proteins, which poses product stability risks. To address these challenges, formulators usually need to add higher levels of flavors and spend considerable time conducting trials with many variables of different stabilizer types, levels and combinations.

Less (sugar) is more

Consumers embrace the sweet, indulgent flavors of products like iced tea, frappes and flavored lattes, but growing awareness about the potential negative effects of sugar has resulted in demand for low- or no-sugar products that don't compromise on taste. Sugar content for products like iced tea and flavored lattes can range drastically, from a few grams to more than 30 g. Brands that want to introduce lower-sugar products and maintain a clean label have several tools available, including high-intensity sweeteners, polyols and FMPs.

On their own or in conjunction with other sweeteners, stevia and monk fruit are great natural options for brands that want to reduce the amount of sugar and calories in their product. These sweeteners can have bitter and metallic notes that linger, which is a turn-off to most consumers, but flavor maskers are often used to clean up these off-notes.

Planning for the future

Demand for functional beverages and better-for-you products has generated significant interest in coffee and tea products. Taste, texture and functional attributes will continue to be important differentiators for new product launches. A subsegment of hybrid products is also emerging, made with herbs and/or cacao as a coffee alternative. Consumer focus on health and wellness isn't expected to diminish, especially because of the COVID-19 pandemic, so innovation in coffee and tea segments won't slow down any time soon. *



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