

# The Future of Flavor

Original Content from:

foodtechnology

Contraction of the



# The Future of Flavor

BY KELLY HENSEL

A look at five flavor trends that will resonate with consumers in the coming years and how technology is helping companies take flavor to a whole new level.

hese days when the subject of food arises—at least among industry professionals, academics, economists, and those in Silicon Valley—it is often to ponder its future. What will food look like in 10, 15, or 20 years? How will we be able to produce enough food to feed a growing population? What technological innovation will be the next big thing?

These are, of course, all important and relevant questions. But it's important to keep them in perspective. At the reThink Food conference organized by the MIT Media Lab and the Culinary Institute of America and held last month in Napa Valley, Calif., a theme emerged that might serve as a tenet for anyone working in the food industry: The future of food is food. That is, at the end of the day, whatever technology we implement or solution we develop, we need to remember that it always comes back to the food. And what is the No. 1 driver of all food purchases? Flavor.

With insight from more than 20 flavor companies, chefs, and market research experts, here are five flavor trends—alcohol infusion, fermentation, East Africa and Southern India, herbs and botanicals, and maple and honey—to watch in 2018 and beyond.

#### 1. Alcohol Infusion

According to Mintel, craft beer continues to experience growth in the United States. In fact, its share in the beer category nearly doubled from 2010 (5.2%) to 2015 (10.2%). With a focus on continual innovation, the craft beer segment has seen a surge in demand for flavored beer. Overall, as many as three in five U.S. alcohol drinkers say they are interested in fruit-flavored beer, with other flavors, such as spicy, tart/sour, and beer blended with juice, tea, and soft drinks, also showing strong potential (Mintel 2016).

This cross-category blurring has also led to an interest in beer- and alcohol-flavored food. The trend has taken hold in two categories where flavor innovation is no stranger—ice cream and confectionery. One of the most popular flavors at Sweet Action Ice Cream, a Denver ice cream shop, is *Stranahan's Whiskey Brickle* ice cream.

"The whiskey is an elemental part of the flavor, and it wouldn't be the same without it, for sure," explains Chia Basinger, co-owner of Sweet Action Ice Cream. »»

The IFTNEXT initiative is a heightened, purpose-drive commitment to bringing provocative ideas and discoveries together to inspire thoughtful, important conversations that challenge conventional approaches with the goal of informing global issues related to the science of food.



# foodtechnology

Want to stay up to date on the latest industry news and trends? *Food Technology* magazine has you covered. Whether it's the top 10 food trends to watch or an insider look at what's going on in academic food science departments, *Food Technology* is THE science of food publication for those who want to be in the know—and it's available free to all IFT members.

Learn more at ift.org/foodtechnology



"The goal on that one was to create a true whiskey ice cream instead of using whiskey as an 'extra touch' ... Stranahan's is perfect for it—it's a highquality whiskey (and one of the first of the new craft whiskeys in the country), and its flavors are a perfect match for the ice cream and the toffee candy."

The beer/alcohol-flavored ice cream trend is also filtering down to larger craft brands, such as Graeters, which has collaborated with Braxton Brewing to release limited-time offerings. The companies have partnered to release two beer flavors, and in September they debuted their first ice cream collaboration—*Stout & Pretzels Ice Cream*—which uses Braxton's *Dead Blow Tropical Stout*.

As Basinger noted, alcohol often pairs well with confectionery, so it's no surprise that beer- and alcohol-flavored candy and chocolate are increasing in popularity. David Horrocks, research Sweet Action Ice Cream prides itself on its innovative and unique flavors such as Stranahan's Whiskey Brickle–a customer favorite. © Julia Vandenoever for the Almond Board of California

chef and member of the global and North American marketing team at International Flavors & Fragrances (IFF), notes that this "blurring of boundaries will continue to be evident in 2018 and beyond." In fact, he has seen Rosé and Moscow Mule—both trendy alcoholic beverages of late—being introduced into confections.

Brooklyn, N.Y.—based Nunu Chocolates' entire business is centered around the pairing of beer and chocolate. Not only do owners Andy Laird and Justine Pringle have 10 craft beers on tap at their Café & Tap Room for visitors to enjoy, but they make an assortment of chocolates that feature the craft beers and liquors, such as absinthe and moonshine, in the ganache of their truffles.

Others are taking the ingredient known for flavoring beer-hops-and infusing it directly into foods and beverages. Hop Pop Soda is a caffeine-free, carbonated soda, flavored and bittered with Galaxy and Citra hops that can be enjoyed on its own or as a cocktail mixer. B-Hoppy Hop Candy comes in varietal-specific flavors, including Saaz, Cascade, and Motueka. Charles Martell & Sons coats its full-fat, cow's milk cheese in a layer of toasted Hallertao Hersbrucker hops, while HopTown Pizza, located just outside of Yakima, Wash., sprinkles its pizzas with Cascade hops sourced from a local farm.

It appears that a prediction by Mindy Segal, pastry chef and owner of HotChocolate in Chicago—that we will begin to see everything and "anything flavored with beer"—may reach the mass market level in the coming year. And food ingredient companies are preparing to meet the demand by developing specialized flavors. In October, Kalsec introduced a range of beer flavors for food applications that feature IPA, lemon shandy, porter, pumpkin, and wheat.

#### **2**. Fermentation

Closely tied in many ways to the alcohol

infusion trend, the use of fermentation is coming front and center not only as a technique for food preparation but also as a unique flavor profile. The popularity of home brewing in addition to the growing interest in global cuisines has introduced a wider audience to the pungent and tangy flavors created from fermentation.

Denver Chef Jensen Cummings is so passionate about fermentation that he created Brewed Food in 2014 as a "Food Lab & Culinary Movement." He utilizes beer's building blocks (yeast, malt, and hops) and brewing processes to "fashion thrilling foodstuffs that blur the line between ales and edibles" (*Draft* 2017). His creations include wild yeast– fermented kimchi, cherry sriracha fermented with brewing yeast, and bacon rimmed in hop ash.

As an added perk, the fermentation process also creates beneficial bacteria—probiotics—that may positively affect the gut microbiome. "As consumers look to products with simple ingredients, those that serve a dual function—that of imparting taste and functionality—will be increasingly important," says Edouard Janssen, senior vice president and general manager for Solvay Aroma Performance.

While American consumers are obviously familiar with fermented products such as yogurt, cheese, beer, and bread, they are also increasingly becoming familiar with products like kombucha that tout the health benefits derived from fermentation. The fact that in 2016, beverage giant PepsiCo acquired KeVita-a fermented probiotic and kombucha start-up that launched in 2009 from a kitchen in Ojai, Calif.—is proof that the kombucha trend has gone mainstream. According to Markets and Markets, the global kombucha market is predicted to grow from \$600 million in 2015 to \$1.8 billion by 2020 (2015).

China, where kombucha was developed, is certainly not the only country to have a history of fermented beverages. Perhaps kvass, an Eastern European fermented drink that has been around for 1,000 years and is traditionally made with rye bread and



veggies, will be the next kombucha. One of only a handful of U.S. kvass manufacturers is start-up Maverick Dog, based in Brooklyn, N.Y. Founded this year, the company produces four varieties of the nonalcoholic tangy beverage: *Original*, *Hops*, *Cranberry*, and *Honey*.

Another product that dates back thousands of years and one that Elizabeth Moskow, culinary director at Sterling-Rice Group, believes will start getting the attention it deserves in the coming years is koji. It's a fermented product made by treating rice or soy beans with *Aspergillus oryzae*, a mold that adds a distinct flavor. This is then used to make soy sauce, Chinese fermented black bean paste, Korean fermented bean paste, rice wine, and Japanese miso and sake. What do all those products have in common? A strong umami essence that is caused by koji breaking down proteins to produce glutamate the amino acid responsible for a rich, savory flavor. **Brooklyn, N.Y.-based start-up Maverick Dog** hopes that its kvass-an Eastern European fermented drink-will be the next kombucha. Photo courtesy of Maverick Dog

"The umami wave isn't new for 2018, but it will deepen and broaden in the coming years as consumers look to educate their palate beyond sweet and savory," says Moskow. "Pickles and brined vegetables—kimchi—were very hot in 2017 as was fermented dairy, but I believe this is just the gateway into exploration of other and deeper fermentation flavor profiles."

Moskow predicts that the American palate may be ready to explore these "richer and more pungent flavors" within categories such as fermented grain, tofu, and meat. One example is injera, an Ethiopian flatbread made from teff flour. Traditionally, it is made by allowing wild yeast to form during days-long fermentation, resulting in a flatbread with a unique, slightly spongy texture and a tangy, sour taste.

Injera is just one example of a fermented food that most Americans are unaware of. According to Roger Lane, Sensient Flavors' marketing manager for savory flavors, one need only look to any global cuisine to see the ubiquity of fermented flavors. "If one looks from a global perspective, there are fermented flavors found in almost every culture, and they're just waiting to be mined for inspiration," says Lane.

#### **3**. East Africa and Southern India

Consumers are demanding new, unique, and authentic flavors that take them to exotic destinations that they may or may not have visited. "Any flavor that transforms a product or menu item into an experience will undoubtedly be popular in 2018 and onward," says Shannon Cushen, director of marketing at Fuchs North America. "This includes flavors that take global or regional inspiration, have unique or sophisticated ingredients, combine unexpected taste profiles, or have some sort of nostalgic quality. ... Consumers are demanding foods that aren't just for eating; they're for experiencing."

Specifically, while Cushen sees Latin, Mediterranean, and Asian

#### Using AI to Optimize Flavor

At the Massachusetts Institute of Technology's (MIT) Media Lab, Caleb Harper is on a mission to create a healthier and more sustainable food system using artificial intelligence (AI), experimentation, and open source data mining. He is

the director of the Media Lab's Open Agriculture Initiative (OpenAg), which is looking at ways to create more inventive future food systems.

In 2015, the Media Lab researchers developed the **OpenAg Personal Food** Computer—a contained growing environment that uses robotic systems to control and monitor climate, energy, and plant growth. Climate variables such as carbon dioxide, air temperature, humidity, dissolved oxygen, potential hydrogen, electrical conductivity, and root-zone temperature are among the many conditions that can be controlled and monitored within the growing chamber to yield various phenotypic expressions

in the plants. The goal? Make growing food for nutrition and flavor a reality.

As Harper explains, each grow cycle "amounts to about 3.5 million data points per plant. ... We call that a recipe. We take that data and do machine learning. There are two sets of data: what did the plant do and what did we do to the plant, and then we use machine learning and Al in between."

At first, the researchers were analyzing the data themselves to slowly improve their "climate recipes." But in 2016, the researchers partnered with Sentient—a company that develops AI platforms for industries such as investment and healthcare. Now, the AI uses the data from each grow to suggest changes to the climate recipe for the next grow cycle. According to a blog post written by Arielle Johnson, scientist and director's fellow with OpenAg, "in an ideal world, Food Computers will learn from the data as they're generating it and the climate recipes will get better through the growth cycle" (2017). The researchers' first experiments with the Food Computers were testing optimization of flavor using basil as a model organism. As of May, the team had run three rounds of basil experiments' data through Sentient's AI and



MIT OpenAg Personal Food Computer. Photo courtesy of MIT Media Lab

could already determine that "the model is finding things we would have never been able to find on our own," writes Johnson in her blog post.

The team finished building the Food Server—a shipping container–sized, controlled environment agriculture technology that can be built to utilize hydroponic or aeroponic technology. It is intended to produce larger quantities of food than a Personal Food Computer and, according to the researchers, will appeal to interdisciplinary researchers and small-scale cafeterias, restaurants, and boutique operators.

Perhaps the best, and most important, part of the team's work is that it is all available, open and for free. "There's never been a time in human history where you can get more people working on a single problem—if you share that infrastructure," says Harper in an interview with *The Splendid Table*. "I don't think anything is more important than how we are going to feed all the people in the world with the least amount of resources and the highest amount of flavor and nutrition" (Lam 2017). cuisines continuing to be popular, she foresees "new ethnic cuisine types and flavors popping up more frequently, like African, Indian, and Eastern European."

This resonates with McCormick's newly announced 2018 Flavor Forecast, which lists "A Bite of East Africa" as one of five trends on the company's radar for the coming year. "East Africa is a treasure trove of flavor," notes the company. "Finally, the signature seasonings, BBQ marinades, and sauces of Tanzania and Ethiopia are being discovered across the globe."

Among these flavors is the Ethiopian berbere spice blend, which contains an array of spices like paprika, allspice, coriander, cardamom, ginger, cinnamon, and red pepper. According to McCormick, "it's hot, sweet, and citrusy flavor is perfect for chicken stew and meats as well as lentils and vegetables."

Currently, berbere can be found as a seasoning on some snack food products, such as Spice Foods' *Ethiopian Berbere Dry Roasted Almonds*. With other flavors inspired by Argentina and the Middle East, Spice Foods claims its mission is to "bring global destinations to your daily grind."

The East African spice blend is also showing up on a larger scale in Kashi's *Teff Thins*, a line of gluten-free crackers inspired by African culinary recipes. Launched in August 2016, they are available in *Tomato Lentil Berbere, Red Sea Salt*, and *Lemon Chickpea Chili*.

Another cuisine that will become more familiar to American diners is that of Southern India. Americans are already familiar with Northern Indian cuisine, which features a strong Persian influence that



According to McCormick, the Ethiopian berbere spice blend is a "hot, sweet, and citrusy flavor [that] is perfect for chicken stew and meats as well as lentils and vegetables." Photo courtesy of McCormick & Co.

uses creams and butter in sauces, as well as meats and nuts. Southern Indian cuisine is less well known and is characterized by hot spices, the sour flavor of tamarind, and a heavy use of rice and lentils in stews and dosas (somewhat similar to the Ethiopian injera).

According to Technomic report data supplied by SupHerb Farms, 31% of consumers—including 45% of Gen Zers and 42% of Millennials—would like to see more Indian influences on restaurant menus. Additionally, the data show that 25% of consumers seek out different regional Indian cuisine experiences but that just 17% know the culinary differences among the various

#### Mining the Chemical Universe for Potential Flavors

Ensuring that Coca-Cola Zero Sugar tastes like the regular, full-sugar version or that a protein bar tastes delicious despite the fact that it is packed with protein, vitamins, and minerals are the kinds of challenges that product formulators regularly face. Scientists are hard at work finding new tools that allow product developers to make consumers' favorite products more healthful without sacrificing flavor. FlavorHealth is one such company; its sole mission is to "create natural flavor solutions that enable healthier foods and beverages without compromising taste." It does this by discovering natural compounds in three key areas—sugar reduction, sodium reduction, and bitter balancing.

Traditionally, this process might involve the time-consuming and painstaking task of taking compounds, adding them to a solution, and tasting them to see if they have the desired effect. FlavorHealth has turned that process on its head with *Chromovert*—a technology platform that the company's parent organization, Chromocell, uses to identify naturally occurring cells that have the ability to produce unmodified taste receptors as they exist on the human tongue, *in vitro*. The process results in cells expressing receptors that are not changed from the native receptors that you would expect to find on your tongue. This means they aren't tagged or chemically modified or truncated.

Based on this technology, the company has developed automated high-throughput screening assays that identify the pounds that have potential to promote or inhibit specific tastes. This allows the scientists to "look at hundreds of thousands of potential flavors and give us really early on a thumbs up or thumbs down about whether or not there would be a modulation of taste from that particular flavor," explains Ryan Loy, assistant principal scientist at Chromocell. From there, the identified flavor compounds are put through a follow-up safety assessment and evaluated by a group of tasters.

As you can imagine, the whole process produces tons of data, and that allows the scientists to "constantly learn and refine the data and the analytical tools that we are using to look at the data," says Loy. So, let's say the scientists discover 10 compounds that have the potential to promote saltiness in the assays. In the taste-testing phase, the tasters find that two make the product taste saltier, six produce an off-taste, and two didn't seem to have any effect. The scientists can examine why the first two had the impact they were looking for and then refine the analytics. This means that the scientists can conduct screens more effectively on new molecules that haven't been looked at yet, but also potentially identify new flavors by looking at existing data as they learn more and see what applications a flavor works in or doesn't work in. A decade's worth of data and refinement has resulted in sophisticated algorithms that allow FlavorHealth to find novel, promising taste modulators.

"It's a great way to look at the universe of potential flavors in a high-throughput way that is very targeted on that one taste perception area. We get the breadth of information that would be really challenging to get from a typical approach," says Loy. With food manufacturers feeling the pressure to reduce sodium and sugar and, at the same time, increase healthful ingredients like protein, technology that assists in the discovery of novel compounds to maintain sweetness and saltiness and decrease bitterness will be vital.



**The Chaat Co. has launched a line of savory yogurt snacks** inspired by the flavors and ingredients of Indian street snacks commonly known as "chaat." Photo courtesy of The Chaat Co.

regions (2017). This will require restaurants and food manufacturers to educate consumers and offer balance by leveraging products (ingredients, sauces) from known brands to increase consumers' willingness to try dishes featuring unusual flavors.

This fall, Fuchs North America debuted a South Asian Collection of seasonings, bases, and flavors aimed at this very trend. One of the four seasoning blends—*Kerala Style Lamb Curry Seasoning*—is inspired by the state in Southern India that rose to fame for its production of spices such as black pepper, cardamom, and cinnamon.

In the consumer packaged goods world, The Chaat Co., based in New York City, received \$1 million in seed funding in August from India-based Jain Farm Fresh Foods to help with the launch of its savory yogurt snacks inspired by the flavors and ingredients of Indian street snacks commonly known as "chaat." *Tangy Sweet Tamarind* & *Date Chutney* is one of five flavors the company offers, and each flavor has crunchy lentil puffs as toppings.

#### Herbs and Botanicals

Some of the most innovative flavor combinations surface first in cocktails due to mixologists' love for experimentation and consumers' acceptance of more complex flavor profiles in their alcoholic beverages. In the past couple of years, the demand for healthier and fresher ingredients has led to a revolution in the craft cocktail segment. Sweet and sour mix is out, and bartenders are creating housemade juices, syrups, bitters, shrubs, and sodas using fresh herbs, botanicals, and spices.

And now that same movement has inspired the production of mixers and mocktails. "An example of how Generation Z is influencing flavor trends is the drive for more sophisticated low- or noalcohol beverages with an emphasis on herbal flavors," notes Marie Wright, vice president and chief global flavorist at WILD Flavors/ADM. "These beverages will be sophisticated—a new era of mocktails. Teas, tonic waters, and ginger beers are regulars in this space and will continue to grow in 2018 and 2019."

Gladys Slovis, flavor applications manager at Comax Flavors, agrees with Wright and sees the "popularity of sophisticated herbal and floral flavors being driven by the mocktail trend." Flavors such as pomegranate elderflower and cucumber ginger will gain ground and become more mainstream. Boundary Waters Brands was founded in 2010 to offer consumers an alternative to standard soda that was more flavorful and featured fresh ingredients. A year later, the company introduced Joia Natural Sodas in five flavors: Blackberry, Pomegranate & Ginger; Pineapple, Coconut & Nutmeg; Grapefruit, Chamomile & Cardamom; Ginger, Apricot & Allspice; and Orange, Jasmine & Nutmeg. The market appears to be receptive, with Panera Bread carrying the brand's Grapefruit, Chamomile & Cardamom flavor in more than 1,600 of its stores throughout the United States since late 2015.

McCormick's "Drink to Your Wellness" 2018 Flavor Forecast trend aligns perfectly with the increase in botanicals, herbs, and spices appearing in beverages. "These wholesome drinks add uplifting ingredients and robust flavors like cucumber, dandelion greens, ginger, turmeric, and cayenne pepper," said the company in its report. The trend is illustrated with two beverages: *Spiced Cucumber & Apple Morning Boost* and *Pineapple Turmeric Mocktail with Dandelion Greens.* 

Mike Kostyo, senior publications manager for Datassential, explains that as consumers' definition of health has evolved, so has what they are looking for in their food and beverages. "Healthy 1.0 was focused on bad things

being taken out of food, like fat and calories," says Kostyo. "Healthy 2.0 was focused on feel-good terms like farm-to-table and organic, but Healthy 3.0 focuses on functional foods and positive nutrition. 'I want my food to give me energy, support wellness, detoxify me, etc."

"The clean label and organic trends aren't going anywhere," says Kip Murphy, marketing manager for Virginia Dare. "Any ingredients that meet these requirements and offer natural benefits make those new offerings even

Herbal and floral flavors are beginning to flood the beverage category with innovations like Joia Natural Soda Grapefruit, Chamomile & Cardamom sparkling beverage. Photo courtesy of Boundary Waters

Brands





Starbucks debuted its new Maple Pecan Latte as a part of its fall limited-edition lineup. Photo courtesy of Starbucks

more enticing." According to Mintel's *Global Food & Drink Trends 2018* report, chamomile, lavender, and lemon balm are the leading herbs and spices used in global food and drink with relaxation properties launched from September 2016 through August 2017 (2017).

While prevalent in beverages, botanicals and herbs are also appearing in food products. "Lavender, basil, hibiscus, and cherry blossom are all popping up in beverages and baked goods," says Murphy.

"Lemongrass is also seen more widely, especially in tea and other beverages, and will find its way into frozen desserts and more delicate baked goods, like cookies and confections," says Kara Nielsen, vice president of trends and marketing for CCD Innovation. This medicinal plant is said to aid in the treatment of a variety of digestive ailments and even the common cold.

#### **(b)**. Maple and Honey

Caramel has pretty much ruled the sweet brown category for years, and while it is not disappearing, it may take a back seat to maple and honey. Both are appealing to consumers because they are natural ingredients that have the ability to add sweetness and depth of flavor to practically any food and beverage category.

This trend is probably the furthest along in terms of adoption, as evidenced by the launch this fall of Starbucks' new *Maple Pecan Latte*. "Seasonal or limitededition flavors will continue to shine," says IFF's Horrocks, "and right now maple is having a moment."

According to Technomic's MenuMonitor, mentions of maple are up about 85% in nonalcoholic beverages between the second quarter of 2016 and the second quarter of 2017 (Market Watch 2017). Positioned to oust pumpkin spice as the top seasonal flavor, maple is showing signs of living well beyond the brief fall limited-time-offering period. This makes sense given that maple syrup is harvested in the spring and is already associated with yearround foods like oatmeal and waffles.

Honey is on a similar trajectory. "Honey has a very well-known profile as a sweetener that people are really familiar with," said Lindsey Oostema, senior marketing specialist at Synergy Flavors. "It has this natural connotation, so I think that consumers are really drawn to it." At a time when artificial sweeteners of any kind can immediately turn consumers off, both maple and honey provide a health halo effect because they're known as natural sweeteners and they have the added benefit of providing a nuanced and varietal flavor to food and beverage products.

"We are tracking increases in sweet flavors such as maple, honey, and cinnamon spice used beyond traditional bakery applications into beverage, snack, and savory products," confirms Luis Fernandez, vice president of strategic development for flavors at Mane.

Technomic is also tracking a similar trajectory, according to its 2017 Flavor Consumer Trend Report. Mentions of maple on burgers is up 31.3% year over year, while honey mentions in fried chicken dishes have increased 12.5% on menus. In addition, more consumers now (46%) than in 2015 (42%) prefer honey glazes and marinades for chicken, according to Technomic's 2017 Center of the Plate: Poultry Consumer Trend Report.

Hot honey, a chili-infused honey condiment, has been poised to become the new sriracha for a few years now, appearing on an increasing number of menus and in grocery stores. A wellknown brand, *Mike's Hot Honey*, got its inspiration back in 2003, when founder Michael Kurtz was first introduced to the concept of chili pepper—infused honey while living in Brazil. Upon his return to the states in 2004, he began experimenting with honey infusion, but it wasn't until 2010 that he officially debuted *Mike's Hot Honey*.

On the foodservice side, Popeyes

Louisiana Kitchen recently introduced a new limited-time offering featuring its *Crunchy Tenders* drizzled with a *Red Hot Honey Sauce*, moving this flavor trend squarely in the direction of mass market attention thanks to the chain's 2,600 locations around the world.

Technomic predicts "continued growth of both maple- and honeyflavored savory dishes, as well as an increase in demand for maple-based icy beverages and desserts" (2017).



Mike's Hot Honey is a chili pepper-infused honey that can be paired with "a wide variety of foods, including pizza, chicken, ribs, biscuits, salads, fruits, cheeses, and even ice cream." ©Janelle Jones

#### **The Millennial Factor**

Many factors influence the development of flavor trends over time, but today one factor dwarfs all others the Millennials (who were born between 1982 and 2000). What is now the largest living generation in the United States, the Millennials have a lot of interest in every aspect of their food, including flavor (U.S. Census Bureau 2015).

"The consumers that are really driving these trends are Millennials, not surprisingly," says Fuchs' Cushen. "They are curious about the world; even if they've never been to Thailand, they want to experience Thai food and know what it's like. Millennials are challenging food companies to come up with more creative and inventive products."

This vocal and passionate consumer group seeks many things when it comes to their food, but three values are exerting the greatest influence on new product development and flavor innovation. These drivers are a desire to experience new bold and authentic flavors, clean labels with simple ingredients, and food that is going to improve one's health and wellness. Each flavor trend—alcohol infusion, fermentation, East Africa and Southern India, herbs and botanicals, and maple and honey-meets at least one, if not all, of these consumer demands, which is why the contributing experts see them as "the ones to watch" in 2018 and beyond.

"Overall, the palette of flavor tonalities consumed by individuals is increasing," says Mane's Fernandez. "Taste curiosity and diversity is on the rise. ... Nevertheless, truly unfamiliar tastes take years, if not decades, to find their way into people's everyday habits."

The more that the food industry can balance what's new with what consumers are already familiar with, the easier, and perhaps faster, it will be for them to adopt new flavors. Additionally, imparting new flavors into more categories of food enables more exposure and an increased level of comfort.

"Traditionally, beverage and confectionery are extremely innovative categories as far as flavor is concerned," says Fernandez. "But flavor diversity is also expanding rapidly in the culinary space of savory snacks, ready-to-eat meals, and sauces."

And that means that as consumers walk down the aisles of the grocery store next year, they will likely find themselves surprised and even delighted—to see how these trending flavors pop up everywhere from the chip aisle to the freezer section.

**Kelly Hensel** is senior digital editor of Food Technology magazine (khensel@ift.org).

IFTNEXT is made possible through the generous support of Ingredion Incorporated, IFT's Platinum Innovation Sponsor.

#### REFERENCES

Bernstein, J. 2017. "Kitchen Confidence." Draft, May/June.

CCD Innovation. 2017. Top 10 Trends to Watch. CCD Innovation, Emeryville, Calif. ccdinnovation.com.

Fuchs North America. 2017. "Fuchs North America Introduces the 'South Asian Collection' of Seasonings, Bases and Flavors." Press release, Oct. 17. Fuchs North America, Baltimore. fuchsna.com.

Graeter's Ice Cream. 2017. "Graeter's Ice Cream and Braxton Brewing Co. Bring Fans First Collaborative Ice Cream Flavor." Press release, Sept. 19. Graeter's, Cincinnati. graeters.com.

Johnson, A. 2017. "Open Agriculture and Artificial Intelligence for Natural Flavor." *Medium*, May 1. https://medium.com/mitmedia-lab/open-agriculture-and-artificial-intelligence-fornatural-flavor-d64463bd439.

Kalsec. 2017. "Kalsec Introduces Line of Beer Type Flavors for Food Applications." Press release, Oct. 25. Kalsec, Kalamazoo, Mich. kalsec.com.

Lam, F. 2017. "Global data collection and the future of indoor urban farming." *The Splendid Table*, Sept. 8. splendidtable.org/ story/global-data-collection-and-the-future-of-indoorurban-farming.

McCormick. 2017. 2018 Flavor Forecast. McCormick & Co. mccormickcorporation.com.

Mintel. 2017. Global Food and Drink Trends 2018. Mintel Group Ltd., Chicago. mintel.com.

SupHerb Farms. 2017. "Trending Now: Indian Fare." White paper, Oct. 2. supherbfarms.com.

Technomic. 2017. Flavor Consumer Trend Report. Technomic Inc., Chicago. technomic.com.



feeding the minds that feed the world

Envision what the very best minds involved in the science of food can achieve when they work together: providing each and every person on the planet with a safe, nutritious, and sustainable food supply. Since 1939, the Institute of Food Technologists (IFT) has been unlocking the potential of the food science community by creating a dynamic global forum where members from more than 100 countries can share, learn, and grow.

We've helped the members of this community connect both in person—through scientific and technical education venues and forums such as the world's largest annual food expo—and virtually, through our publications, website, and other resources. By serving as a leading advocate for food science and a catalyst for change around the world, we've educated the media and policy makers and worked with government at the local, federal, and international levels to shape regulations. As a visionary organization, IFT is feeding the minds that feed the world.

To learn more about IFT, visit ift.org.

# foodtechnology

Established in 1947, *Food Technology* is the monthly publication of the Institute of Food Technologists (IFT). Food professionals rank *Food Technology* as the food industry's "must read" publication. Our readers trust *Food Technology* to provide unbiased viewpoints, industry news and trends, science-based market intelligence, and the breadth and depth of information they need to be successful.

*Food Technology* magazine consistently delivers trusted, job-essential editorial content based on the collective needs of professionals in R&D, product development, food safety, QA/QC, purchasing, regulatory compliance, processing, and packaging.

"Top 10 Food Trends" originally appeared in IFT's *Food Technology* magazine. *Food Technology* is available free to all IFT members as a membership benefit. It is also available to non-IFT members with an annual subscription.

Want a sneak peek at the current issue? Visit ift.org/foodtechnology.