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Ingredients for a Changing Consumer Landscape

In recent years, consumers have become more informed about food, ingredients, and issues affecting the food industry. As a result, they have taken to the Internet, the airwaves, and the offices of their elected officials to demand changes to how foods are formulated and processed. At the same time, nutrition researchers are gaining new insights into foods and ingredients, causing them to rethink what they thought they knew and to reevaluate nutrition policies. In response to this, the U.S. Food and Drug Administration revoked the GRAS status of partially hydrogenated oils. The organization in May announced changes to the Nutrition Facts label, one of which lists the amount of added sugar in a product on a separate line. It is also currently reviewing comments on the use of the term “natural” on food labels. Kraft, Mars, General Mills, Nestlé USA, and

Campbell Soup are some of the large food companies that committed to reformulating products without synthetic ingredients. They join restaurant chains Taco Bell, Panera Bread, and Noodles & Co., which have made similar pledges. Many brands have also decided to label products as to whether they contain ingredients made from genetically modified sources. The state of Vermont has a labeling rule set to take effect in July, and since Congress failed to agree on a national measure, some food companies are taking the issue into their own hands and have announced that they will begin labeling products sold across the country, not just in Vermont. And if all of this is not enough, consumers want products that focus on the latest flavor trends, offer a range of textures and mouthfeels, and are safe to eat and drink.

That’s a lot for product developers to

keep track of, but rest assured, IFT16 offers plenty of opportunities for learning about the latest ingredient developments to help food companies deliver products that solve formulation challenges, are on trend, and meet consumer demands for clean and clear labels, naturally derived ingredients, and more. At IFT’s food expo, learn more about sweetener solutions, lowering sodium in foods, and how various protein ingredients differ from one another. Other food expo ingredients and trends of interest include texturizing solutions, whole grains, naturally derived ingredients, clean label, and improving product safety and quality. Many ingredient manufacturers are also offering ingredients that are naturally derived, gluten-free, allergen-free, or free from genetically modified organisms (non-GM).

To illustrate the functionalities of these ingredients, exhibitors will sample product concepts like *Chicago “Meatless” Hot Dogs*, *Japanese Miso Ice Cream*, *Ready to Drink Peanut Butter Milk*, and *Sriracha Pineapple Dipping Sauce*. Doughnuts, carbonated fruit drinks, snack bars, various dips, and more will highlight featured ingredients, too. Some exhibitors will host live cooking demonstrations during “Cooking Up Science” sessions on the show floor. Attendees will also have the opportunity to speak one-on-one with ingredient experts to get in-depth information about which ingredients will meet their formulation needs.

Understanding the latest trends affecting the food and beverage industry is important to product developers. Two international market research firms—Innova Market Insights and Mintel—will have representatives on hand at their booths to share perspectives on what consumers want and how this shapes product development efforts.



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This *Ingredients* column highlights some of the ingredients manufacturers plan to highlight at IFT's food expo; for a comprehensive list, visit ift.org/IFT16 or download the IFT16 mobile event app. There you can learn about ingredient exhibitors offering product concepts and read the digital show daily, *IFT16 News*, to stay up-to-date on all the IFT16 activities. Walk the food expo show floor to meet with ingredient experts as they explain the functional properties of different ingredients, advise on ways to improve products, and inspire your product development efforts.

SPECIAL THEMES

During past IFT food expos, several ingredient exhibitors have taken the opportunity to develop a booth theme, celebrate an anniversary, or focus on a particular issue. At this year's event, ingredient manufacturers will highlight multiple functionalities of a single ingredient, show you ways to grow your business, and capitalize on trends to produce products that capture market share. You will even have a chance to learn more about the food ingredient developments of Dutch food companies and celebrate the 100th anniversary of the commercial availability of the highbush blueberry.

A CENTURY AGO, New Jersey farmer Elizabeth White and U.S. Dept. of Agriculture scientist Frederick Coville propagated cuttings from native highbush blueberry bushes and selected only the best-tasting blueberries. Their efforts resulted in the production of cultivated blueberries with deep, rich flavor. The first commercial crop went to market in 1916. Come celebrate the centennial of the U.S. highbush blueberry (and National Blueberry Month in July) by indulging in blueberry pastries and treats.

Blueberries provide food



Photo courtesy of U.S. Highbush Blueberry Council

manufacturers with ease of formulation, year-round availability, and a range of formats (fresh, frozen, dehydrated, canned, and liquid). Consumer interest in healthy eating and naturally occurring antioxidants makes blueberries the choice for exciting product innovation; fruity, true flavor; and certain global appeal. *U.S. Highbush Blueberry Council, blueberrytech.org, Booth 2046*

TO "HELP FEED your food business," Archer Daniels Midland Co. will showcase an expanded innovation pipeline of ingredients, ingredient systems, and tools. ADM's recent acquisitions of Harvest Innovations, Eatem Foods, Specialty Commodities, and WILD Flavors complement its existing portfolio, broadening it to include areas ranging from specialty ingredients and sweeteners to oils and milled flours.

Convenient Wellness and Free-From are two themes ADM will present at its booth. There attendees can sample an extensive lineup of product concepts formulated with plant-based proteins; edible beans and pulses; nuts, nut butters, and nut flours; seeds; dried fruit; gluten-free pasta; ancient grains; liquid and dry fibers; natural preservatives; lecithin from canola, sunflower, and soy; xanthan gum; molding starch; crystalline fructose,

dextrose, and sorbitol; dry honey and molasses; stevia; sucralose; maltitol; clean label extracts and distillates; natural flavors and seasonings; sweetness and sodium enhancers; natural colors; and nonhydrogenated oils.

Earlier this year, ADM reached an agreement to purchase a controlling stake in Harvest Innovations, a producer of minimally processed, expeller-pressed soy proteins, oils, and gluten-free ingredients. The ingredient range includes non-GM soy chips, expeller-pressed soy flour, textured vegetable protein, organic soy crisps, and gluten-free flour and pasta. *ADM, adm.com, Booth 2002, and Harvest Innovations, harvest-innovations.com, Booth 1201*

AS FOOD AND beverage manufacturers face an array of challenges, Cargill is helping its customers grow their North American businesses. One way that Cargill does this is by assisting with product line and brand innovation challenges that are often magnified by consumer and regulatory demands to improve nutritional profiles through sugar reduction, healthier oils, and reduced sodium. The company is also helping to address consumers' desire to better understand where their food comes from and how it is made. Cargill promotes the fact that its solutions focused on improving nutritional values

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and managing costs, as well as protecting customer brands through responsibly supplied ingredients, address these challenges. *Cargill, cargillfoods.com, Booth 2474*

WHAT HAPPENS WHEN egg is removed from baking formulations? The American Egg Board has the answer to this question and much more as it will share the results of research conducted by an independent firm that compared the use of real egg ingredients against a representative sample of replacers. The results measure the

technologies. As far as ingredients are concerned, attendees can learn about using plant proteins in dairy products from experts at NIZO and how the *Scelta Taste Accelerator* from Scelta Mushrooms can reduce sodium and increase the umami taste in many foods. Akzo Nobel will promote its *Akucell* cellulose gums, which have very high water absorption capacity, and *OneGrain* low-sodium mineral salt to help reduce sodium in many different applications. Samhound Food will highlight the importance of consuming more vegetables with its line of burgers and pasta

product developers options to formulate foods and beverages that appeal to many consumers seeking clean label products. Naturex will feature ingredients in three categories in different product concepts. First up, express your creativity by creating your own customized ice cream at the Naturex Imagination Ice Cream Parlor where you can experiment with naturally derived colors and toppings, including spirulina blue and shiny, glittery inclusions. After this, learn about minimally processed fruits and vegetables as Naturex highlights its *Unpasteurized Premium Juice* line of cold-pressed, nonthermally and nonenzymatically processed juice. Finally, *Xtrablend OA* antioxidant promises to preserve color in meat preparations. This ingredient is a blend of acerola standardized in ascorbic acid and onion standardized in polyphenols. *Naturex, naturex.com, Booth 2651*



Photo courtesy of Ingredient

performance of the various ingredients in a variety of finished baked goods, with separate studies devoted to each individual application scenario. One of the researchers will be available at the booth to discuss the study.

Egg ingredients supply more than 20 functional properties ranging from aeration to whippability in a variety of applications. Egg ingredients contribute to a product's taste, appearance, texture, and shelf life, and they react synergistically with other common ingredients within the processing environment to produce desired results. *American Egg Board, aeb.org, Booth 2801*

BOTH START-UPS AND established Dutch businesses will showcase their offerings at the Holland Food Valley Tasting House. These include ingredients, products, and

products formulated with vegetables. *Holland Food Valley, hollandfoodvalley.com, Booths 2012, 2015, 2018*

COME SEE HOW ICL Food Specialties will add a modern twist to its "Create Your Masterpiece" theme with product concepts that highlight ingredients for protein-containing applications. The *Chicago "Meatless" Hot Dog* features *ROVITARIS Protein System* that provides meat texture without meat proteins. Try the egg-free *Indulgent Cheesecake* made with *BEKABAKE EF2* for creamy texture and clean flavor. Finally, the *Sparkling Clear Strawberry Limeade* formulated with *BEKAPLUS BP 900* has 20 g of protein/16 oz serving. *ICL Food Specialties, iclfood.com, Booth 1254*

NATURALLY DERIVED INGREDIENTS give

INGREDION TURNS FRESH ideas and science-based problem solving into market-leading solutions by helping food and beverage manufacturers capitalize on emerging trends by addressing the consumer needs behind the trends, reformulating products for clean and simple labels, providing on-target health and nutrition solutions, or creating an improved sensory experience. At its booth, try a number of chef-inspired product concepts featuring health-focused ingredients, including non-GM sweeteners and starches, pulse proteins and flours, reb A stevia sweeteners, potato starches, texturizers, and more. Its fibers and prebiotics help support digestive health; other ingredients can reduce sugar levels and provide weight and energy management solutions, and pulses can boost protein levels of foods. Ingredient will also hold live cooking demos at its booth, featuring a juice and bowl bar, and DIAL-In sweetness and texture technologies. *Ingredient, ingredient.us, Booth 1231*

FIND WAYS TO make your products "Look Better, Taste Better, and Last Longer... Naturally" when you visit the Kalsec Creation Station. There you can engage in an interactive experience with Kalsec's food formulation experts as they assist in providing innovative ingredient solutions

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for your food development opportunities. You will learn more about how the company's naturally derived spice and herb flavor extracts, colors, and antioxidants can contribute sensory impact to your products and provide the clean labels consumers want.

Speaking of cleaner labels, Kalsec will introduce its new line of *Simply Aquaresin* water-dispersible oleoresins. These ingredients meet most retail supermarket and restaurant acceptable ingredient lists, according to the company.

From its spice and herb flavor extract line, Kalsec will feature *IsoFresh* alliums that maintain a fresh flavor profile even through challenging processing conditions. Kalsec's *Heat Management* portfolio that includes *ClearCap* soluble capsaicin, *HeatSync* heat management systems, *Fusionary Heat* ingredients, expeller-pressed specialty peppers, and global flavor combinations will also be highlighted. The company also offers naturally derived colors and color systems and *Herbalox* rosemary extracts. *Kalsec, kalsec.com, Booth 1551*

"UPSCALE, DOWN HOME" is the theme for Sensient Technologies, and its three divisions, Sensient Flavors, Sensient Colors Group, and Sensient Natural Ingredients, will treat attendees to a culinary exploration of different product concepts inspired by street foods, ethnicities, and regions from around the world.

Sensient Beverage Flavors will be showcasing its innovative reduced-sugar sweetening solution technology. Sensient Sweet Flavors will feature bakery and confectionery product concepts inspired by Trends to Taste, Sensient's predictive consumer insights program. "Sweet Endings" (dessert-style yogurts) and "South-of-the-Border" confections will be shared along with a complementary frozen dairy dessert. Sensient Savory Flavors will team up with Sensient Natural Ingredients to focus on "Global Grilling" for savory fare. Try grilled jerked chicken tacos with an island slaw garnished with grilled pineapple salsa in a hatch green chili dressing or spicy overripe melon hot sauce, and grilled peri-peri chicken skewers over a black-eyed pea, lentil, and rice salad in a peri-peri pepper dressing. In addition, a line of six new snack seasonings will debut, and Sensient Natural Ingredients will introduce its *New Mexico Hatch Chili* line as well as its organic chili pepper and campfire-inspired

chili powder collection.

Sensient Colors Group continues to ramp up development of naturally derived colors to meet the growing requests by food companies making the switch from synthetic colors to natural ones. More shades and hues of naturally derived colors are available and technologies have made them much more stable and vibrant than previous generations. The company's Advanced Emulsion Technology combines natural colors to create new color shades and helps prevent color bleeding and staining of packaging material. For applications that still require synthetic colors, the company also produces a range of certified dyes and lakes. *Sensient Technologies, sensient.com, Booth 1631*

SAN FRANCISCO-BASED CHEF Caroline Fey will host live product demos at the TerraVia booth demonstrating how to make delicious and healthier foods using the company's algae food ingredients.

Several ingredients will be highlighted. The newest one, *AlgaWise Algae Butter*, has a composition and functionality that is similar to high-value structuring fats such as shea stearin and has a high proportion of stearic-oleic-stearic triglycerides. This can offer a better performing alternative for bakery, spreads, and confectionery.

AlgaVia Lipid Rich Powder is said to replace dairy fats, eggs, and oil in foods while maintaining the same taste and texture as full-fat versions. A vegan source of protein, *AlgaVia Whole Algae Protein* is free of known allergens and contains all essential amino acids, reports TerraVia. Two algae oils offer functional benefits to food products. The first, *AlgaWise Ultra Omega-9 Algae Oil*, is positioned by the company as a healthier alternative to saturated fat oils due to its high levels of monounsaturated fats and low levels of saturated fat. The other ingredient, *AlgaWise High Stability Algae Oil*, offers oxidative stability with zero *trans* fat per serving. *TerraVia, terravia.com, Booth 1005*

GRAINS AND FLOURS

More than ever, food manufacturers have a diverse range of grain ingredients from which to choose. From wheat, corn, and oat to ancient grains, sorghum, and sprouted grain flour, these ingredients offer functionalities like taste and texture to food products. Whole

grains and ancient grains appeal to consumers seeking healthier food options while giving manufacturers the opportunity to call out the ingredients to set their products apart from others. Some consumers still demand gluten-free foods, so there are plenty of gluten-free grain and flour ingredients available to manufacturers. Suppliers are also bringing more organic and non-GM versions online.

AFTER EXPANDING ITS corn and oat fiber operations, Grain Millers now offers a wider range of these ingredients. With a new oat fiber plant adjacent to milling operations in St. Ansgar, Iowa, the company has expanded its line of oat fibers to include ones that have higher absorption and improved texture, structure, and flow aid capabilities for products within the cereal, beverage, spice, snack, bread, tortilla, and meat industries. All of the ingredients are available in non-GM, organic, conventional, and gluten-free forms. Its corn operation in Marion, Ind., has also expanded the corn ingredient line to include Non-GM and certified organic corn ingredient options that are custom milled into meals, grits, flours, and bran. *Grain Millers, grainmillers.com, Booth 3627*

AS PART OF the Healthy Food Ingredients family of specialty ingredient companies, SK Food International and Hesco/Dakota Organic Products produce a range of grain ingredients for the food and pet food industries. SK Food International provides non-GM, organic, gluten-free, and identity-preserved ingredients such as grains, seeds, pulses, soybeans, and expeller oils. In addition, SK Food offers *AncientGrisps*, which are milled and extruded from a custom blend of ancient grains including amaranth, quinoa, sorghum, and millet. Hesco/Dakota Organic Products offers ancient grains like quinoa, sorghum, amaranth, spelt, buckwheat, Kamut, millet, and teff as well as grains like barley, wheat, rye, durum, flax, triticale, and oat. The company promotes that it is able to trace the grains that it processes back to the field where they are grown. *SK Food International, healthyfoodingredients.com, and Hesco/Dakota Organic Products, hesco-inc.com, Booth 1056*

FULL OF ANTIOXIDANTS and polyphenols, including high amounts of anthocyanins, *Suntava Purple Corn* is available in processed forms such as raw flour, meal, or grits;

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precooked flake, flour, or grits; pregelatinized flour; snack grits; and sprouted.

Suntava Purple Corn is part of the specialty ingredient stable of brands within the Healthy Food Ingredients family. It is certified organic and Non-GMO Project Verified, and NSF recently certified the corn gluten-free. *Suntava*, suntava.com, Booth 1212

EACH DAY OF the food expo, Richardson Milling will offer attendees a new indulgent and healthy breakfast alternative that features its whole grain oats. Its whole grain rolled oat flakes will be paired with granola clusters to provide a boost of flavor and nutrition. A convenient, ready-to-go breakfast bowl will highlight low sugar, high fiber, ancient grains, real fruit, real vegetables, and naturally derived and organic ingredients. Richardson Milling's whole grain oats begin with the farmer and continue through to the delivery of oat ingredients in flake, flour, bran, coated grain, and cluster forms that inspire product development efforts. *Richardson Milling*, richardson.ca, Booth 3216

THROUGH ITS NETWORK of growers and compliance to food safety certification programs through its purity protocol, Avena Foods produces and markets a line of certified gluten-free oat ingredients. These include rolled oats, quick flakes, steel cuts, groats, and flour.

Last year, Avena Foods and Marshall Gluten-Free Milling formed a strategic partnership to meet the demand for organic gluten-free oats. Marshall Gluten-Free Milling specializes in the organic marketplace with a focus on oats and supporting rotations of non-gluten organic grains to maintain sustainable purity, according to the company. Through the strategic partnership, the companies offer oat ingredients that are both certified organic and certified gluten-free. *Avena Foods*, avenafoods.com, Booth 4576

SPROUTED ANCIENT GRAINS and seeds are now part of the *BeneGrain* line of sprouted ingredients. They join sprouted amaranth, millet, quinoa, chia, brown flax, sprouted wheat, and brown rice from Bay State Milling. *BeneGrain* sprouted ancient



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grains and seeds are available in both whole and milled forms, conventional, and organic certified. They are germinated to activate enzymes that result in the increased availability and digestibility of key nutrients, according to the company.

Recently, the company expanded its gluten-free operations at its facility in Bolingbrook, Ill. This expansion enhances the facility's existing ancient grain flour business within one dedicated production area to produce ingredients under the *Baker Elements* and *Gluten Free Essentials* brand names. *Bay State Milling*, baystatemilling.com, Booth 753

SPROUTED GRAINS MANUFACTURER

Everspring Farms recently installed a validated, organic intervention step into its germination process, the first of its kind to be used in the sprouted grain industry, according to the company. Teaming up with Agri-Neo, the Neo-Pure Food Safety System will allow Everspring to reduce pathogens and unwanted microbes in sprouted grains. Specifically, the company reports that it will be able to achieve a 5+ log reduction (99.999%+) in pathogens such as *Salmonella*. It plans to use the system for its allergen-free sprouted grains, seeds, and blends produced at its Seaforth, Ontario, plant. *Everspring Farms*, everspringfarms.ca, Booth 761

FIND ALL TYPES of rice, such as instant, rice flour, and functional rice flour, for use

in a variety of food applications. Organic options are also available. In addition to these core ingredients, Riviana Foods can source specialty rice from around the world, including risotto rice, basmati rice, and Thai jasmine rice. *Riviana Foods*, riviana.com, Booth 1409

ORGANIC PRE-GELATINIZED RICE Flour and *Low Micro' Organic Rice Flour* are the newest additions to the ingredient offerings from Western Foods. The water present in the *Organic Pre-Gelatinized Rice Flour* is linked to the starch matrix, making it less prone to fermentative and microbial reactions, reports the company. The ingredient can be used in gluten-free foods and conventional products like baby foods, sauces, prepared foods, and confections.

The company uses proprietary technology to produce *Low Micro' Organic Rice Flour*. The process involves a heat treatment to significantly reduce the microorganism count in the raw material. *Western Foods*, westernfoodsco.com, Booth 4504

SORGHUM PROVIDES A number of functional and nutritional benefits to food applications. Sorghum is primarily used for livestock feed and ethanol production, but food manufacturers are discovering sorghum's potential as a food ingredient. The United States is the world's largest producer of grain sorghum, which is one of

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the top five cereal crops in the world. *United Sorghum Checkoff Program, sorghumcheckoff.com, Booth 3659*

AS A MAJOR producer of grain ingredients, Ardent Mills is pleased to announce the opening of its Innovation Center at its headquarters in Denver. The facility will host food scientists, chefs, product developers, analytical chemists, and technical bakers along with their customers as they develop products for stores and restaurants. The research and collaboration will take place in a flour research room, R&D applications lab, analytical lab, bake lab, sample preparation room, and culinary center.

Ardent Mills' comprehensive portfolio of grain ingredients includes traditional, specialty, and whole grain flours and ingredients. Whole grains, multigrain blends, ancient grains, various types of flour (including sprouted flour), and bread mixes are some of the ingredients available. *Ardent Mills, ardentmills.com, Booth 1241*

SWEETENERS

With more and more consumers looking to avoid added sugar and in light of new Dietary Guideline targets of just 10% of daily calories, choosing the right sweetener has never been more important. From

more traditional high-intensity options like sucralose and aspartame to natural offerings derived from the stevia plant, sugar alternatives can maintain sweetness levels in products as well as provide cost savings. In addition, nutritive sweeteners made from natural sources, like molasses, tapioca, and rice, can offer a taste similar to sugar while providing for natural label opportunities.

COUPLET SUGARS, A family-run company based in Belgium, manufactures pearl sugar in a variety of sizes. Made from beet sugar, the ingredient is gluten-free and is ideal for waffle applications. In addition, the company offers a large range of naturally derived, high-quality, and gluten-free sugar specialties, such as freeze-thaw stable sugars, moisture stable sugars, baking stable sugars, colored and flavored sugars, icing sugars, and ultrafine powdered fondants. Couplet will be sampling several of these ingredients at its booth. *Couplet Sugars, coupletsugars.com, Booth 4642*

JOIN SWEET GREEN Fields as it features *Intesse*, a proprietary, non-GM blend of steviol glycosides with an upfront sweetness profile close to that of sugar and a significantly reduced bitterness and lingering profile compared with other stevia sweeteners. At the booth, attendees can

sample a zero-calorie carbonated cola with no added sugar, a sugar-reduced lemon lime drink, and a light cookie and view information about stevia. *Sweet Green Fields, sweetgreenfields.com, Booth 3051*

FOUNDED IN 1953 as the first sugar manufacturer in Korea, CJ CheilJedang will highlight its low-calorie sweeteners, including allulose and tagatose. Allulose offers a sugar-like taste and texture with almost zero calories. The company offers a broad allulose portfolio, including a high-purity syrup that provides a richer taste. Made from non-GM corn, allulose provides clean label opportunities. Tagatose, meanwhile, can be included in a range of applications with a third of the calories of sugar. *CJ CheilJedang/CJ America, cjbio.net, Booth 3677*

BRIESS WILL LAUNCH *InnoSweet Sprouted Wheat Powder*, a first-of-its-kind sweet whole grain ingredient that offers the nutrition of sprouted whole wheat and can reduce added sugars. The whole grain ingredient is produced using a natural conversion process that optimizes the grain, creating sweetness while retaining all the components and nutrition of the sprouted whole grain. It can be used to partially or fully replace sugar while increasing fiber (15%) and protein (12%) and adding whole grain, fiber, and protein statements to the label. It functions similarly to malt extract, delivering sweetness, flavor, and browning, and it is suited for use in baked goods, cereals, bars, yogurt, snacks, and smoothies. Attendees can sample reduced-sugar bars, extruded breakfast cereal, and a breakfast cookie made with *InnoSweet Sprouted Wheat Powder* at Briess's booth. The company is also celebrating its 140th anniversary. *Briess, briess.com, Booth 2160*

A RANGE OF sweeteners, including molasses, light and dark brown syrup, tapioca syrup, invert sugars, rice syrups, and dry sweeteners is supplied by Domino Specialty Ingredients. It can also provide high-intensity sweeteners in the form of sugar and stevia blends, as well as stevia with different levels of rebaudioside A. In addition, Domino's range of evaporated



Photo courtesy of Briess

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cane juices, which are available in organic varieties, are certified carbon-free.

Domino Specialty Ingredients, dominospecialtyingredients.com, Booth 1818

PRINOVA PRIDES ITSELF on its ability to make better-for-you products even better, particularly in the realm of sugar reduction and clean label. Through a partnership with PureCircle, Prinova can show the latest in marketing trends associated with natural sugar reduction and the best ways to market reformulated stevia products. At its booth, the company will show four of the latest methods marketers are using to communicate these healthy changes and offer attendees a taste through corresponding demos formulated with PureCircle's newest stevia sweeteners and flavors. *Prinova, prinovausa.com, Booth 2816*

PURECIRCLE USA IS dedicated to producing high-quality natural-origin, zero-calorie sweeteners made from the stevia plant, including stevia varieties that contain more than 20 times the amount of rare steviol glycosides versus other leaf varieties available on the market. Its product range includes the *SG95 Family* that is ideal for complex flavor systems that require moderate sugar reductions, as well as the *Reb A Family*, the company's original stevia ingredient. The *Reb A Family* can deliver upfront sweetness needed in moderate to deep reductions, and because it is typically used at higher levels, PureCircle can bring in other ingredients to offset bitterness and licorice notes.

In addition, the *Alpha Family*, which has a clean taste profile and can suppress bitter notes, works well for moderate sugar reduction in delicate flavor systems, and the *Delta Family's* steep sweetness curve can help formulators achieve a sugar reduction of 8 brix or more. At the food expo, PureCircle will be showcasing some of its newest stevia ingredients for the first time and showing how those plant-based ingredients can provide the best tasting, zero-calorie solutions for the food and beverage industry. *PureCircle USA, purecircle.com, Booth 521*

DUE TO INCREASED consumer interest in clean and healthy eating, Steviva Ingredients recently announced a partnership with Brazilian farmers to produce the newest additions to the company's portfolio of clean label sugar reduction products. *BraziliaSweet RA95* and *BraziliaSweet 95-60* stevia extracts are harvested from ethically sourced, identity-preserved stevia plants that are cultivated in a single location in Brazil. *BraziliaSweet RA95* has a more pronounced sweet effect, while *BraziliaSweet 95-60* is slightly less sweet and offers a more well-rounded flavor profile.

In addition to highlighting these new ingredients, Steviva Ingredients will also feature *Nectevia Fortified Agave Nectar with Stevia in Marrakesh Spice*, which provides an approachable cardamom flavor profile, as well as an *Allulose Stevia Blend*, a low-energy monosaccharide sugar derived from enzymatically treated fructose sugar that is about twice as sweet as sucrose. At the booth, Steviva Ingredients will sample handcrafted, 10-calorie lemongrass and tangerine sodas sweetened with *Erysweet+ stevia erythritol blend* and *Nectevia*. *Steviva Ingredients, stevivaingredients.com, Booth 4733*

SUZANNE'S SPECIALTIES HAS been supplying organic and all-natural sweeteners to the health and commercial food industries for more than 30 years. The company's full line of alternative sweeteners includes brown rice syrup, tapioca syrup, non-GM honey, molasses, agave syrup, and cane sugar, and Suzanne's can also create custom blends and systems. *Suzanne's Specialties, suzannes-specialties.com, Booth 1777*

AS A PRODUCER of specialty food starches, maltodextrins, and rare sugars, Matsutani will showcase the company's rare sugar, *Astraea* allulose, a plant-based, zero-calorie sweetener that may help regulate blood sugar levels and lower lipid accumulation in the body. *Astraea*, a monosaccharide, contains 0.2 K/Cal per gram and gives true sugar flavor with no aftertaste. Recommended applications include beverages, confections, dairy, bakery, and sweet goods. *Astraea* can be

used as a 100% tabletop granular sugar replacement and as a replacement for hard candy and chewing gum at 50%.

R&D experts from Matsutani will be on hand at the company's booth to discuss the sugar's formulation and transformation into a food ingredient. *Matsutani Chemical Industry Co., astraea-allulose.com, Booth 4605*

ENZYMES

Enzymes are found naturally in foods and biological systems. Enzymes in apples are responsible for the browning of cut apple slices while lactase in the digestive system is responsible for hydrolyzing lactose into glucose and galactose. In many areas of food production, enzymes play specific roles in increasing yield, reducing cost, and improving the finished product. Enzymes are derived from different sources and can be used singularly or in combination with other enzymes.

EXPLORE THE CAPABILITIES of enzymes and learn about the vast array of applications in which these ingredients function, from protein hydrolysis to flavor generation in modified cheese. One that is highlighted is *Depol 40L*, a carbohydrase that allows for maximum maceration of botanical tissue and the release of active flavors from their bound inactive forms. It can increase the yield of vanilla extracted for vanilla extract by two- to four-fold. This is important to flavor companies during times when the supply of vanilla beans is low.

Biocatalysts offers both off-the-shelf enzymes and its Customized Enzyme Discovery, Development, and Manufacturing Service, the latter of which involves developing an enzyme tailored to a customer's needs from concept through to commercial-scale manufacture in less than 12 months. *Biocatalysts, biocatalysts.com, Booth 3635*

FIND ENZYMES AND enzyme preparations for baking, brewing, distilled spirits production, dairy processing, flavor modification, meat tenderizing, winemaking, and juice and fruit processing. Many of the enzymes are non-GM. Powder and liquid enzyme preparations and custom

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formulations are available. The broader categories of enzymes that the company produces are carbohydrases, proteases, lipases, esterases, cellulases, xylanases, and pectinases. *Enzyme Development Corp., enzymedevelopment.com, Booth 4563*

A NON-GM AMYLASE can help to extend the shelf life of bread and tortillas. *SEBake Fresh L* can help baked goods retain their crumb springiness and softness for longer periods of time. *SEBake EG6* hydrolyzes phospholipids to produce lyso-phospholipids that have emulsifying properties and mimic the functions of egg yolk. This may allow manufacturers to reduce the amount of egg yolk in formulas. Other enzymes for the production of flavored yeast extracts (*SEBYeast P1*), dough strengthening (*SEBake PF*), and more will be featured. *Enzyme Innovation, enzymeinnovation.com, Booth 4062*

FLAVOR

One attribute that can differentiate your product from others is flavor. Global flavors are popular around the world, but so are nostalgic and traditional flavors, bold flavors, flavor combinations, and even flavors in unexpected applications (i.e., habanero pepper— or stout-flavored ice cream). Taking cues from these trends, innovative flavor chemists are creating brand-new flavor ingredients that creative product developers can then include in formulations for the next taste-tempting food or beverage product.

VIRGINIA DARE WORKS with its customers to formulate products through the use of its extracts, flavors, and flavor enhancement systems. The company's expertise in sourcing and product development adds substantial value to its clients' brands. Combining formulation expertise with deep knowledge in sourcing and producing natural flavors and extracts, the company uses both science and sourcing to generate business advantages for its clients. The company helps clients create new products that meet consumers' sophisticated palates and transparency expectations. This includes products that are natural, clean label, non-GM,

sustainable, and ethically sourced. Most importantly, though, the company helps clients produce products with the taste that consumers prefer.

Virginia Dare will offer new product concepts formulated with flavor-enhancement systems, vanilla ingredients, and coffee and tea extracts. Visit the booth to also learn about the outstanding university food science students who have won the Virginia Dare Award, which the company has presented for more than 50 years. *Virginia Dare, virginiadare.com, Booth 1226*

ENHANCE AND IMPROVE the taste of a wide range of foods and beverages with flavors, natural extracts, and taste modulators from Kerry. Flavors and natural extracts can help add distinction to products and meet consumer demands while taste modulators allow product developers to produce foods with added protein and fiber or less salt or sugar that have the taste that consumers prefer. *Kerry, kerry.com, Booth 302*

INNOVATION STARTS AT David Michael's booth, where you can experience what's new in the world of flavor trends.

Representatives from the company will serve up some delicious treats and twists on classic favorites. Visitors to the booth can also register for a chance to win a free trip to the 2016 David Michael Innovation Roadshow in Philadelphia. Each year, the Innovation Roadshow highlights the company's best ideas in technical creativity, new flavor development, and cost-saving technology. *David Michael & Co., dmflavors.com, Booth 2626*

EDLONG DAIRY TECHNOLOGIES will debut its new *Edlong Simply Dairy* line of ingredients at the food expo. The line of ingredients combines the company's biochemical processing knowledge with natural dairy sources to create novel dairy source blends. Customers will enjoy the Edlong dairy profile capabilities and gain the ability to label real dairy on product labels. The food scientists at Edlong are experts at developing on-trend product concepts to show how dairy flavors can solve product development challenges and formulate products that deliver enhanced taste.

In business for more than 100 years, Edlong is the only certified woman-owned flavor house, providing custom flavor development in a range of profiles, including cheese, butter, milk, cream, cultured dairy, and sweet dairy. The company's flavor ingredients are ideal for masking off notes in nutrient-dense products, enhancing reduced-sugar applications, and adding mouthfeel to a wide range of applications such as beverages, snacks, seasoning blends, bakery, and more. *Edlong Dairy Technologies, edlong.com, Booth 1026*



Photo courtesy of David Michael & Co.

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TASTE AN ARRAY of flavors from Gold Coast Ingredients in savory ice cream product concepts. *Chicken & Waffles Ice Cream* is a fried chicken-flavored ice cream topped with maple sauce, butter pecan whipped cream, and rosemary waffle pieces. *Thai Coconut Curry Ice Cream* is flavored with coconut and curry and served with sweet Thai chili sauce, lemon-grass whipped cream, and chopped peanuts. The third ice cream, *Japanese Miso Ice Cream*, is a miso- and green onion-flavored ice cream finished with soy-orange sauce, ginger whipped cream, and candied furikake, a Japanese seasoning. *Gold Coast Ingredients, goldcoastinc.com, Booth 2417*

IT'S ALL ABOUT flavor at American Fruits & Flavors, which has more than 50 years of extensive experience and capabilities in offering a number of ingredients that add flavor to foods and beverages. These include liquid and powdered flavors, fruit blends, fruit sweeteners, fruit concentrates, and spray-dried juices. The company also provides innovative customized product development. *American Fruits & Flavors, americanfruits-flavors.com, Booth 3648*

A NEW LINE of naturally derived flavors from popular Southeast and East Asian ingredients such as sriracha, kimchi, Chinese five spice, gaprao, green curry, yuzu, shichimi chili, and wasabi will be available from Ogawa & Co. These flavors add an authentic Asian taste to foods and will be sampled in dip product concepts at the company's booth. The company will also introduce a naturally derived sodium reduction solution that adds strong salty taste, cuts the metallic aftertaste of potassium chloride, and adds body by enhancing umami. Other ingredient introductions include natural flavor for improving stevia taste, natural flavor for stimulating and boosting carbonated sensation, and vegan meat flavors that do not contain meat, dairy, or egg ingredients. *Ogawa & Co., ogawa.net/English, Booth 3684*

DENATURED SPIRITS ADD distinctive flavors to products and help food formulators play into the growing interest in distilled

spirits. The line features dark rum, light rum, bourbon, whiskey, white tequila, vodka, brandy, and moonshine white whiskey. A denatured porter ale is also part of the line. Both food manufacturers and culinary professionals use these ingredients in a range of food products that include marinades, dressing, sauces, soups, and demi-glaces. Try them in food bases, desserts, and prepackaged meals. *Mizkan Americas, mizkan.com, Booth 1548*

TO CELEBRATE ITS 10th anniversary, Blue Marble Biomaterials announces the launch of its 100% natural aromatic ester line for the food and beverage industry. By replicating naturally occurring processes, Blue Marble manufactures drop-in replacement natural flavor and fragrance chemicals utilizing proprietary non-GM fermentation and extraction technologies. The ester line that the company is debuting at the food expo is manufactured at its biorefinery in Missoula, Mont., and meets all requirements for U.S. and EU natural labeling. Blue Marble offers third-party isotopic testing validation as well as detailed process flow diagrams to ensure the efficacy of all of its ingredients offered to the industry. Stop by the booth to see and smell samples of the ester line and learn how Blue Marble can increase your supply chain transparency and confidence in your products. *Blue Marble Biomaterials, bluemarblebio.com, Booth 1274*

A RANGE OF flavors arranged by product category helps product developers create exciting, flavorful foods and beverages. The diversity of the flavor offerings ranges from caramel, marshmallow, bubble gum, and passion fruit to bacon, smoke, gravy, and pepperoni. Also available are customized masking agents that can help eliminate off-tastes of other ingredients in the formulation. *Carmi Flavor & Fragrance, carmiflavors.com, Booth 2639*

TASTE KOREAN-STYLE SEAFOOD Broth featuring *Natural Marinextracts* (crab, cod, and shrimp) plus *Tomato, Vegetable, and Organic Fire Roasted Natural Flavors* from Activ International, which creates savory flavor and culinary-inspired ingredient solutions. Other product concepts

available for sampling are *Veal Osso Bucco with Veal, Natural Vegetable Stock, and Pan Roasted Tomato Flavors* and crispy snacks made with *High Impact Grill Flavors*. *Activ International, activ-international.com, Booth 2477*

CHOCOLATE AND VANILLA

Vanilla and chocolate are two of the most popular flavors in many food and beverage applications. In ice cream, for example, vanilla and chocolate are named as favorite flavors by consumers in many markets around the world. Vanilla lends flavor and aroma notes that are slightly spicy, slightly floral. Chocolate ranges from milky and creamy to rich, roasted, and a bit bitter. These ingredients are versatile, too, and can be used in both savory and sweet applications with delicious results.

ORGANIC CHOCOLATE AND cocoa ingredients available for sampling include certified organic *Agostoni* brand chocolate including single-origin and Fair Trade chocolate as well as chocolate made without soy emulsifier. The product line includes a range of dark, milk, and white chocolate couvertures, chips, and chunks in a variety of sizes, and natural and Dutch cocoa powder. Stop by the booth of Global Organics to experience the fruity, smoky, and intense cocoa flavors of *Agostoni* chocolate. *Global Organics, global-organics.com, Booth 1680*

FOR MORE THAN 150 years, Barry Callebaut has been involved in chocolate production from sourcing of the cocoa bean to the shelf. The company manufactures a number of cocoa and chocolate ingredients like cocoa, cocoa powder, chocolate pieces, and coatings. The company offers chocolate ingredients geared to food manufacturers, foodservice operators, and artisan chocolatiers. It also conducts research to develop chocolate that is more heat-resistant for customers in warmer climates and to map the genetic code of cacao. *Barry Callebaut, barry-callebaut.com, Booth 4636*

ADD THE FLAVOR of vanilla or chocolate to products with ingredients from Prova. Chocolate ingredients include *Procaao*

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chocolate extracts and flavors. For vanilla, choose from natural extracts, natural and artificial flavors, and organic vanilla extracts in both liquid and powder form. Since 1946, the company has been involved in the vanilla extraction industry. In addition to vanilla extracts, Prova produces vanilla flavors. *Provarom* is a line of compound vanilla flavors (natural, WONF, artificial, and natural and artificial) and *Provanil* is an alternative to vanillin in high-fat systems and products exposed to high baking temperatures. *Prova, provaus.com, Booth 2255*

AS A LEADING cocoa processor and chocolate ingredient supplier, Blommer Chocolate has five strategically located manufacturing facilities in North America and China. The company offers cocoa powders, various coatings, milk and dark chocolate ingredients, and chocolate drops and chunks. The company goes beyond these offerings by producing nutraceutical and high-protein coatings, organic chocolate sourced from the bean, its *Signature Line* of chocolate coatings for premium boxed chocolate products, and chocolate powders designed to give maximum chocolate flavor and the capability to deliver protein, fiber, and other additives. *Blommer Chocolate, blommer.com, Booth 2038*

PROTEIN

Consumer demand for protein remains strong, and some consumers are turning to new product forms, such as bone broths, to take in the protein they desire in flavorful, convenient foods. Plant-based protein ingredients like soy, pea, and more are increasingly used to boost the protein content in beverages and baked goods. Animal-based ingredients, such as broths, stocks, and collagen, provide formulators with a range of options for adding protein content, savory flavors, and functional benefits to products, while whey protein ingredients offer improved texture.

WHEY PROTEINS EXHIBIT water-binding and textural properties that help improve the finished food and beverage products. Several ingredients are available from whey ingredient manufacturer Grande Custom Ingredients Group. *Grande WPCrisp* is a patented line of textured whey protein crisps while *Grande Primo Y100* dried low-fat yogurt offers authentic yogurt flavor and creamy textural benefits. *Grande Ultra Whey Protein Isolates* are made from a patented process to ensure the ingredient has flavor and clarity across a wide pH range. *Grande Custom Ingredients Group, grandecig.com, Booth 2609*

SPECIALTY WHEAT PROTEIN ingredients enrich products with protein without affecting taste (wheat proteins from MGP Ingredients are said to have a neutral flavor profile). Three wheat protein isolate ingredients in the *Arise* brand line range in protein content from a minimum 85% to more than 90%. In addition to providing protein enhancement and other functional benefits, the ingredient can partially replace egg white in baked goods and pastas. The company also offers *Optein* lightly hydrolyzed wheat protein and *TruTex* textured protein. *MGP Ingredients, mgpingredients.com, Booth 602*

A NEW CHICKEN bone broth from Hormel Foods Corp. delivers clean label protein. In addition, the company offers a range of protein ingredients, including all-natural soup stocks, savory fats, premium meat ingredients, and dairy powders. *Hormel Foods Corp., hormelingredients.com, Booth 3467*

BATORY FOODS HAS expanded its offerings into the protein segment. The



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Photo courtesy of Batory Foods



company can provide a full line of plant- and animal-based proteins in different forms, from commodity-based proteins available in bulk quantities (with protein values less than 80%) to more specialty, functional concentrates and isolates designed for specific applications. Options include ancient grains, soy, wheat, pea, egg, collagens, fiber-rich pulse flours, and dairy-based proteins. Batory strives to provide customers with the most current information about protein to guide purchase decisions, and the company's fully stocked warehouses placed in strategic locations across the country allow for efficient deliveries. *Batory Foods*, batoryfoods.com, Booth 1806

FORMERLY KNOWN AS Proliant Meat Ingredients, BHI, and Proliant Health, Essentia Protein Solutions focuses on protein, offering functional proteins, stocks, broths, flavors, fats, health and nutrition ingredients, and coming soon, fish ingredients. Its functional ingredients can provide texture improvement, purge reduction, cleaner labels, and the ability to reduce sodium levels. Some of these ingredients include *ScanPro*, animal collagen-based protein solutions; *APro*, animal blood-based proteins, and *ExcelPro*, a line of protein solutions based on compounds of internal protein sources. Essentia's *ProBase* and *ProFlavor* ingredients, meanwhile, offer improved taste and umami in soup, gravy, or seasoning blends. *Essentia*

Protein Solutions, essentiaproteins.com, Booth 1215

NIZO FOOD RESEARCH has been working extensively on understanding how combining plant and dairy proteins can alleviate changes in the texture and perception of foods using plant sources to replace animal proteins. At its booth, NIZO protein expert Laurice Pouvreau will share the latest NIZO insights into protein blends, including using protein blends for nutritional value and achieving cost reduction in new product development. He will also discuss the effects of protein blends on texture and offer insight into methods for preventing texture alteration and creating new textures. *NIZO Food Research*, nizo.com, Booth 2018

FONTERRA (USA) HAS added *SureProtein WPC550* whey protein concentrate to its *NZMP* range of functional whey ingredients. These ingredients are specifically made for use in high protein sports beverages and medical foods. The company uses a proprietary process to produce *SureProtein WPC550* that makes it heat stable and able to maintain low viscosity in products fortified to be high or higher in protein. *Fonterra (USA)*, fonterra.com, Booth 4777

TEXTURE AND STABILITY

Gums, emulsifiers, and starches play an

important role in many applications, from rounding out a beverage's mouthfeel to thickening a sauce to stabilizing a yogurt. With a consumer focus on natural products, more and more manufacturers are looking to incorporate ingredients that won't impact labels negatively, and many ingredient companies are creating clean label options for a range of applications.

A PRODUCER OF specialty hydrocolloid products and solutions, CP Kelco offers a variety of stabilizers and texturizers to suit the needs of food and beverage manufacturers, including pectin, gellan gum, xanthan gum, carrageenan, and cellulose gum. Through its application development and R&D support, the company also helps customers convert innovative ideas and concepts into real-world products. *CP Kelco*, cpkelco.com, Booth 3239

WACKER PROVIDES INNOVATIVE vegetarian ingredients for the food industry, including *CAVAMAX W6*, a soluble dietary fiber with emulsifying and structure-building properties. A carbohydrate enzymatically derived from starch, this ingredient can be used as an egg replacement in cakes as well as in gluten-free bread. In addition, Wacker offers a vegetarian fermentation-grade cysteine for use as a dough softener. *Wacker*, wacker.com, Booth 2222

AT ITS BOOTH, Avebe will demonstrate how its *Etenia*, *Solanic*, and *Eliane* brands can solve manufacturers' formulation challenges. These ingredients align with current trends such as free-from, high protein, vegan, GM-free, and clean and clear labeling.

Etenia, a sustainable ingredient for fresh cheese or strained yogurt, can improve yield by up to 400% while preventing acid whey from being produced. In addition, *Etenia*—an E-number-free enzymatically treated potato starch—achieves the texture of a typical fresh cheese or strained yogurt without the need for whey separation. It can also be used in bakery, emulsified low-fat spreads, and confectionery and can be labeled as starch in Europe and maltodextrin in the rest of the world. *Avebe*, avebe.com, Booth 3379 »»

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Photo courtesy of AgriTech Worldwide

INNER MONGOLIA RAINBOW Biotech Co. focuses on researching and producing innovative applications for microbial polysaccharides and other biological gums. The company's ingredients include gellan gum and xanthan gum. Gellan gum and xanthan gum can be used in soy products, dairy products, suspending pulp juices, and candy. *Inner Mongolia Rainbow Biotech Co., rbbio.com, Booth 3949*

AGRITECH WORLDWIDE RECENTLY merged with ZTrim Holdings, and the new company uses existing patents and processes to transform biomass into proprietary products and processes. Offerings include hydrocolloids, fat replacers, fiber, and other novel ingredients to help customers enhance their products and the consumer experience. AgriTech's clean label, natural, and non-GM ingredients help reduce fat and calories, add fiber, provide shelf stability, prevent moisture migration, and add binding capacity, all without changing the taste and texture of the finished product. *ArgiTech Worldwide, ztrim.com, Booth 1704*

BENEO WILL SHOWCASE its recently launched *Remypure*, the company's first high-performance rice starch that qualifies for natural and clean label status worldwide. "With 65% of consumers in the United States considering natural

products as better and 47% actively looking for natural products when making food purchase decisions, clean label and natural claims are becoming ever more important in the creation of food products," says Marc-Etienne Denis, commercial managing director at BENE0.

Remypure has high stability during processing and performs well even under harsh processing conditions, such as low pH, high temperature, or high shear, and the ingredient increases shelf-life stability and texture of products such as retorted sauces, baby food, dairy desserts, and fruit preparations. *BENE0, beneo.com, Booth 231*

PROZAS MANUFACTURES EMULSIFIERS under the *ERVESA* brand for use in confectionery, bakery, and beverages. Prozas recently introduced a new form of its diacetyl tartaric acid esters of monoglycerides and diglycerides (DATEM). Non-GM *ERVESA DATEM 3800* contains 90% DATEM and 10% carriers and can increase volume and create better inner texture in bakery applications, as well as increase the oven-spring property of the loaves. *Prozas, prozas.com, Booth 127*

TIC GUMS PROVIDES advanced clean label texture and stabilization options for food and beverage manufacturers looking to meet specific labeling requirements.

Ticaloid PRO 181 AG, a new technology for those seeking to target texture and stability in dairy alternative beverages, satisfies clean label requirements, improves processing efficiencies, and emulsifies and stabilizes oils found in nondairy milk alternatives such as almond and cashew milk. *Ticagel Natural GC-581 B*, meanwhile, is a naturally derived, non-GM gelatin replacer that helps formulators creating gelatin-free gummy applications build back vital textural attributes like cohesiveness and toothstick that are lost when gelatin is removed. These clean label hydrocolloids, which meet multiple requirements, such as all-natural, organic-compliant, and non-GM, will be available to sample at the booth, along with technical papers, exclusive formulations, and product demonstrations.

In addition, TIC Gums' technology manager of beverages, Dan Grazaitis, will be presenting during a technical session titled "The Clean Label Market and How to Overcome Formulation Challenges Using Functional Clean Label Ingredients," which will be held Sunday, July 17, from 2 p.m. to 3:30 p.m. *TIC Gums, ticgums.com, Booth 3426*

BASED IN FLORIDA, Exandal exports tara gum from its processing plant in Peru. Tara gum is a galactomannan that is structurally similar to guar and locust bean gums; it can replace carrageenan and xanthan gum up to 50% and exhibits synergistic effects with other gums such as agar agar, CMC, and modified starch. Exandal's sister company, Colorex, meanwhile, is a leading exporter of Peruvian quinoa grains, flours, and flakes. Both companies' processing plants are certified BRC, HACCP, Fair Choice, gluten-free, halal, kosher, and organic. *Exandal Corp./Colorex Corp., exandal.com, Booth 463*

GRAIN PROCESSING CORP. recently collaborated with Iowa State University to provide food science students with a hands-on product development learning experience. The GPC Ingredient Application Challenge asked student teams to conceptualize and execute a product demo featuring GPC's *MALTRIN* maltodextrins and specialty starches. The winning concept, a *Coconut Curry Chicken*

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Rice Cup that features *PURE-GEL* modified starch in the filling for stabilized viscosity, will be showcased at the booth. Another entry, *Chickpea Fries*, will be sampled to demonstrate the coating properties of *INSTANT PURE-COTE* film-forming starch and be served with a *Sriracha Pineapple Dipping Sauce*. Attendees can wash down the appetizers with a mocktail that uses *MALTRIN QD* (quick dispersing) maltodextrin, an agglomerated maltodextrin that quickly disperses to add body and build mouthfeel in the beverage. *Grain Processing Corp.*, grainprocessing.com, Booth 2812

A NUMBER OF sustainable emulsifiers for multiple applications such as bakery and margarine can enable manufacturers to remove *trans* fats. Palsgaard's *Emulpals 115*, an instantly reacting emulsifier for cake batter systems, shows excellent aeration after just two minutes of whipping. The emulsifier is also highly tolerant to variations of ingredients and make-up methods. *Emulpals 116*, meanwhile, is a cake emulsifier that works at much lower dosages than traditional emulsifiers and with a short whipping time of just four minutes. The emulsifier reacts instantly when liquid is added to the mix and no activation steps are needed. The company will also have experts on hand to discuss innovations in sustainability, *trans* fat reductions, and the company's new R&D facilities opening this fall. *Palsgaard*, palsgaard.com, Booth 434

DOW FOOD SOLUTIONS, a business unit of The Dow Chemical Co., recently expanded its capability to produce its *WELLENCES Fat Reduction (FR)*, a plant-based ingredient that can decrease the amount of fat and oil uptake in fried foods. In a batter or coating system, the ingredient can decrease fat (and associated calories) by 35% or more, and the process has minimal impact on the sensory profile of foods, ensuring that flavor and crispiness are maintained. *Dow Food Solutions*, dowfoodsolutions.com, Booth 412

QUALITY AND SAFETY

Food safety and quality are top of mind for food manufacturers. Ensuring that food is

produced and handled in ways to prevent contamination and mold and microbial growth is important for public health. Food manufacturers also want to formulate products with ingredients that help maintain qualities like flavor and color, prevent premature staling, and improve shelf life.

"HELLO, CREATIVITY" IS Equichem's theme as it shows product developers how to create the flour, bakery products, and beverages that they imagine. Visit the company experts at the booth to learn about *VIVA* dough conditioner and specialty flour ingredient blends, *Nutri-Mix* vitamin premixes, and *EXTENDAYS* tortilla and bakery product preservation systems. The company's ingredients are custom formulated and manufactured to fit into a wide variety of product formulations. *Equichem International*, equichem.com, Booth 3008

A CLEAN LABEL ingredient for raw meat and poultry can protect against the three systemic failures leading to *E. coli* and *Salmonella* outbreaks. *DefenStat*, part of the Newly Weds Foods' IsoStat Products Group, is said to inhibit pathogen proliferation, substantially reduce potential for cross-contamination, and enhance *E. coli* and *Salmonella* susceptibility to heat. According to the company, *DefenStat* sets the standard in food safety as the first and only clean label antimicrobial that defends against the effects of *E. coli* and *Salmonella* proliferation and survival. The ingredient contains no synthetic or artificial ingredients. *Newly Weds Foods*, newlywedfoods.com, Booth 3616

LEARN HOW TO keep food and beverage products fresher and safer over an extended shelf life with ingredients from Kemin. Extracts and antioxidants help preserve the color and flavor of food products. The label-friendly *FORTIUM*, *NaturFORT*, and *GT-FORT* lines of proprietary plant extracts and synergistic blends provide protection to many types of food matrices with no negative sensory impact, according to Kemin. *EN-HANCE* is an antioxidant that protects foods that contain fats and oils, such as meat products, baking mixes, nuts, potato chips, sausages, cookies, oils, and cereals.

Kemin also manufactures antimicrobials made from organic acids to provide food safety functions. *SHIELD* is a line of liquid mold inhibitors for bakery and tortilla products, while *BactoCEASE* protects against foodborne pathogens and spoilage bacteria to provide food safety functions and extends the shelf life of ready-to-eat meats, fresh meat, fish, and poultry products. *Kemin Food Technologies*, kemin.com, thekemindifference.com, Booth 3220

EXPLORE A RANGE of ingredients—some derived from plants and others based on enzymes or fermentation processes—that offer various safety and quality functions that help produce long-lasting products for consumer to enjoy.

Biotecta Pro provides antibacterial action against typical spoilage organisms and emerging pathogens common to the food industry. *BioTecta 200* inhibits the growth of yeast and mold and optimizes the taste profile of bakery goods by reducing their water activity. *Bafos SSR* is positioned as an alternative to MSG, autolyzed yeast, and phosphate salt-containing ingredients, while *Bafos Veg* helps retain red color in cured meats and improve shelf life. Eliminate chemical ascorbic acid or sodium erythorbate in meat and food products with *Bafos OX*. *Protecta 400* functions as an antibacterial agent and can also keep yeast and mold growth in check. *Protecta Fresh* helps protect against the growth of *Listeria monocytogenes* and other gram positive/negative bacteria found in a wide range of food products. *Bavaria Corp. International*, bavariacorp.com, Booth 4226

A PATENT-PENDING BLEND of powdered vinegar and citrus flour is said to increase cook yield and improve sliceability, shelf life, and food safety for ready-to-eat meat and poultry products. *Verdad Avanta Y100* is said to also control purge, enhance texture, and control *Listeria*. Using the ingredients offers manufacturers the benefits of consumer-friendly labeling and cost reduction, according to the company. *Corbion*, corbion.com, Booths 1218, 1221

THROUGH ITS SHELF-LIFE science innovation and its Ingredients Works custom solutions for food formulating, *Hawkins*

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provides functional blends, flavors, and antimicrobials that address shelf-life challenges. It offers solutions for yield and moisture management, color stability and flavor protection, pathogen and microbial control, and texture modification.

Two lines of antimicrobial systems—*UltraLac* and *Ultra-Pure*—that the company produces are based on the science of acetates, diacetates, lactates, and vinegar. The *e(Lm)inate* line of antimicrobials effectively controls *Listeria* in meat and poultry products. Stop by the booth to learn about *e(Lm)inate DVi* dried vinegar, liquid antimicrobials, clean label options, functional liquid food ingredients, and the company's *Listeria* growth prediction model using *e(Lm)inate LAD*. *Hawkins, hawkinsinc.com, Booth 2057*

COLOR

Color additives add color to or enhance the color of food and beverage products, and are available in naturally derived and synthetic forms. Of these, naturally derived colorings have seen significant growth in the variety of shades available and interest on the part of food manufacturers. Consumers are pushing manufacturers to replace many ingredients with so-called clean label versions, and colorings are no exception. In recent months, many food manufacturers both large and small have reformulated products to remove synthetic colorings and replace them with naturally derived ones.



Photo courtesy of ColorMaker

USED IN ALL types of foods and beverages, liquid and powdered caramel colors from Sethness Products Co. are available in a wide range of strengths and hues to achieve food colors from light yellows to deep browns. In response to the demand for cleaner labels and the growing popularity of minimally processed colors, Sethness has introduced its darkest Class I powdered caramel color, *SB245*. It is significantly darker than traditional Class I powders and offers a Class I brown-toned option for food and beverage manufacturers. *SB245* is made from ingredients that are non-GM, low in sulfite, gluten-free, and kosher. No 4-methylimidazole (4-Mel) is created during its production, according to the company.

To address 4-Mel concerns, all of the company's Class I and Class II caramel colors are formulated to contain no 4-Mel. Sethness also offers a line of Class III and Class IV low 4-Mel caramel colors. *Sethness Products Company, sethness.com, Booth 3763*

COLORMAKER DEVELOPS AND manufactures naturally derived custom color blends that are compatible with the products, processes, and packaging requirements of its customers. The company regularly receives requests for natural colors that "match" the synthetic colors FD&C Red 40, Yellow 5, Yellow 6, and Blue 1 in various applications, so it developed natural color blends that mimic synthetic colors in royal icings and buttercream icings. These coloring ingredients are packaged in 4 oz disposable pouches with one-way valves, which is ideal for professional cake decorators who need extra color for vibrant icings but do not want to carry an inventory of perishable natural colors. The one-way valve allows the coloring to be dispensed as needed without allowing air to enter the pouch and oxidize the color. This packaging is an extension of ColorMaker's *Color Garden Pure Natural Food Color* retail product line. The company offers natural red, yellow, orange, and blue colors that are sourced from fruits and vegetables. These colorings are also kosher certified and can be halal certified. In addition to the colorings themselves, the company will also exhibit cakes and cookies decorated

with them. *ColorMaker, colormaker.com, Booth 4338*

GRAPE JUICE CONCENTRATES and colors from natural sources like the *Rubired* grape meet the needs of manufacturers looking to satisfy consumers who want products made with label-friendly ingredients. The ingredients provide various shades in red and purple hues to a range of foods and beverages. *San Joaquin Valley Concentrates, sjvconc.com, Booth 814*

NEW INNOVATIONS THAT DDW will feature include *Purple Corn Juice Concentrate*, *Specialty Dark Class I Caramel Color*, and *EmulsiTech Clear Paprika* and *Beta-Carotene Natural Color Emulsions*.

DDW's award-winning *Purple Corn Juice Concentrate* is a non-GM vibrant red color option with a neutral taste that can be labeled as "vegetable juice for color." The ingredient is produced using a gentle process without the use of solvents and through a safe, sustainable, and transparent supply chain that DDW controls from seed to final sale. The company reports that the coloring can replace Red #40 more cost effectively. The second color ingredient from DDW is *Specialty Dark Class I Caramel Color*. *Specialty Dark Powders*, available as Class I caramel color or burnt sugar powders, can achieve a one-to-one replacement for Class III and single-strength Class IV caramel colorings with excellent stability in most applications.

The final two ingredients that DDW will highlight are *EmulsiTech Clear Paprika* and *Beta-Carotene Natural Color Emulsions*. Using these ingredients helps to create a clear yellow, orange, or orange-red beverage with minimal flavor impact and excellent heat, acid, and light stability. *DDW, ddwcolor.com, Booth 1809*

CHR. HANSEN WELCOMES you to the wonderful world of natural colors. Whether you manufacture dairy-based products, confectionery, beverages, or other prepared foods, the food scientists at Chr. Hansen help create a color solution to match your shade need, targeted shelf life, cost parameters, and label requirements.

The company will showcase several of

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its recently developed color ingredients. *Ultra Stable Red* is derived from red vegetal sources and can match Red #40 with enhanced stability. *CapColor 3rd Generation* is the latest in Chr. Hansen's enhanced encapsulated color solutions line. *I-Colors* are naturally derived powder colors for vibrant seasonings, powdered beverages, and snacks. And the last ingredient line is a range of extracted juices and concentrates called *FruitMax* that are used in clean label formulations. Chr. Hansen, chr-hansen.com, Booth 3444

THE RECENT OPENING of a second manufacturing plant will allow Distribuidora Y Convertidora Industrial to produce aluminum lakes color additives. The company also produces soluble dyes, dispersed lakes, and naturally derived colorings. *Distribuidora Y Convertidora Industrial*, dicoisa.com.mx, Booth 3277

A DRY TOMATO pulp ingredient adds red color to sauces, condiments, soups, ready meals, and processed meats. It will not turn brown like some other colorants, and it also contributes to the finished product's texture and fiber content, according to Lycored. The company also manufactures *Tomat-O-Red* and *Lyc-O-Beta* naturally derived colorings that give vibrant shades of red, orange, and yellow to foods and beverages. Join Chef Tony Lagana of Culinary Systems at the booth as he creates product concepts made with several of Lycored's ingredients. *Lycored*, lycored.com, Booth 4457

SAUCES AND SEASONINGS

From single-origin spices and custom blends to fresh-tasting herbs and infused oils, sauces and seasonings can add the bold flavor consumers crave to set a product apart in a crowded marketplace. In addition, they can extend shelf life while remaining label-friendly—and in some cases, provide cost savings as well.

MCILHENNY CO. SUPPLIES food manufacturers with bold **TABASCO**-brand *Original Red Sauce* flavor in a range of forms, including liquid, intermediate moisture, and dry. Three different intermediate moisture formulations can meet the needs of a

variety of food processing environments, while spray-dry flavoring, an easy-to-use, free-flowing light orange to red powder, is ideal for seasoning blends, beverages, and baked goods. Liquid ingredients are also available in a range of other flavors, such as *Green Jalapeño*, *Chipotle*, *Habanero*, *Buffalo Style*, and *Garlic*. *McIlhenny Co./Tabasco Brand*, tabascoingredients.com, Booth 1002

MIZKAN AMERICA FOOD Ingredients Division recently introduced four new varieties to its vinegar line. Organic red wine vinegar is a blend of the fermented juices of organic Sangiovese and Lambrusco grapes and other organic grapes, while the organic white wine vinegar uses organic Trebbiano and Chardonnay grapes and other organic grapes; both are all-natural 60 grain (6%) vinegars. Organic balsamic vinegar blends the fermented, heated, and caramelized juices of organic Trebbiano, Lambrusco, and other organic grapes; it is matured in oak or chestnut casks for a minimum of two months. Balsamic vinegar without caramel coloring, meanwhile, shares the characteristics of traditional balsamic vinegar without the addition of caramel coloring. *Mizkan America*, mizkan.com, Booth 1548

BASED IN BAKERSFIELD, Calif., The Garlic Co. is a fully integrated garlic supplier—controlling its local crop from seed to formula-ready ingredients. “We offer our customers a consistent, high-quality supply of garlic because of our vertical integration. This gives us a lot more control over our supply,” says John Duffus, vice-president of sales. According to Duffus, garlic meets the demands of today's consumers for simple, clean label ingredients. The company's shelf-stable garlic, puree, and juice provide strong garlic flavor to applications such as pasta sauces, salad dressings, and garlic bread in an easy-to-use format with a two-year ambient shelf life. *The Garlic Co.*, thegarliccompany.com, Booth 3836

A FAMILY-OWNED BUSINESS with more than 60 years of experience at its core, Asenzya offers custom seasoning

solutions and functional ingredients for products in all parts of the market. Asenzya can create custom blends, protein seasonings, and snack seasonings, as well as provide ingredients for applications such as dairy, dips, bakery, sauces, dressings, and soups. Functional ingredients include *BindEASE*, a natural phosphate replacer, and *SaltEASE*, a sodium-reduction alternative. *SuperCaps* encapsulated spices and its line of extenders can offset high commodity costs. *Asenzya*, asenzya.com, Booth 1670

A FIRST-TIME EXHIBITOR at the food expo, Darégal Gourmet provides clean label infused oils and liquid herbs to the global food industry. Its aromatic oil results from a special infusion process of culinary herbs into oil; the 100% natural ingredient delivers the full aromatic profile of the fresh plant, enhancing the taste of salads, meat marinades, and other products. The full range includes basil, smoked red chili, cilantro, garlic, lemongrass, spearmint, rosemary, and curry. Darégal's liquid herb solutions, meanwhile, are created from IQF herbs and natural ingredients selected for their taste quality. The pumpable, ready-to-use products add freshness to preparations and are

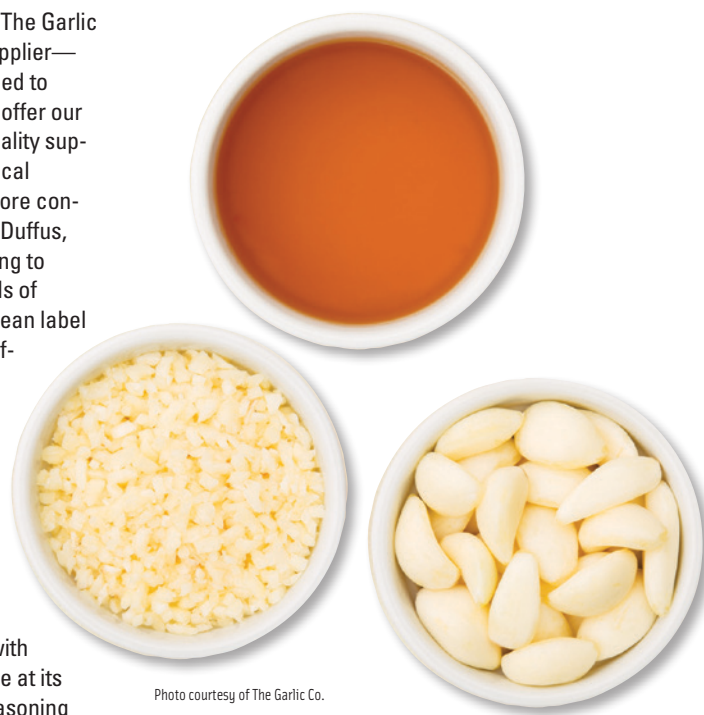


Photo courtesy of The Garlic Co.

Ingredients for a Changing Consumer Landscape continued...

available in a range of flavors, including herb and pepper blends. In addition, Darégal can work with R&D departments to create custom recipes. *Darégal Gourmet, daregalgourmet.com, Booth 338*

FRENCH'S FLAVOR INGREDIENTS recently introduced a line of four dry flavors to help formulators deliver intense flavor without adding moisture. Available in *FRENCH's Classic Yellow Mustard*, *FRANK's RedHot Cayenne Pepper Sauce*, *FRENCH's Dijon Mustard*, and *FRANK's RedHot Buffalo Wing Sauce*, the kosher/pareve-certified ingredients are easily reconstituted with water and provide multiple applications with one product.

During the food expo, French's will showcase its bold flavors through a variety of small bites that rotate daily, such as a *Pretzel Bread Bratwurst Bite with a Yellow Pickle Relish Aioli* made with *FRENCH's Classic Yellow Mustard*. Other options include *Buffalo Blue Cheese Seasoned French's Potato Sticks*, *FRENCH'S Jalapeño & Potato Bar Mix* featuring *Crispy Jalapeños*, and a *Buffalo Chicken Dip With Chips* made with *FRANK's RedHot Buffalo Wing Sauce*. *French's Flavor Ingredients, frenchsflavoringredients.com, Booth 2436*

ONE OF THE world's leading soy sauce manufacturers—Kikkoman—will demonstrate how its range of products can support formulators' Asian-inspired applications. Samples will include *Gluten-Free Edamame Crackers* using *Kikkoman Gluten-Free Less Sodium Tamari Soy Sauce*, a *Sweet & Savory Nut Butter* that incorporates *Kikkoman Preservative-Free Sriracha Hot Chili Sauce* and *Thai Style Chili Sauce*, *Korean BBQ Potato Chips* with *Kikkoman Non-GMO Soy Sauce*, and *Edamame Hummus* featuring *Kikkoman PK-56 Clear Soy Sauce*. *Kikkoman Sales USA, kikkomanusa.com/foodmanufacturers, Booth 1826*

DAIRY

Dairy can answer a range of formulation requirements. In its neutral-tasting concentrate form, it adds protein to bars and workout drinks, and in liquid form, it provides creaminess to beverages and



Photo courtesy of U.S. Dairy Export Council

desserts. As butter, it offers richness and enhances crispiness and browning, and in cheese form, it boosts savoriness and flavor. It seems there's nothing dairy cannot do.

TO MEET CONSUMERS' growing desire for clean label, higher-protein foods, the U.S. Dairy Export Council will highlight three product concepts—a dip, soup, and empanada/samosa hybrid—that incorporate various dairy proteins, cheeses, yogurt, and permeate to show how dairy can answer a variety of consumer trends. These include demonstrating how dairy proteins can offer certain benefits that make them a higher-quality protein than other options and discussing how dairy ingredients can combine with ethnic flavors from around the globe to yield unique flavors and textures for wide cultural appeal. *U.S. Dairy Export Council, thinkusadairy.org, Booth 1931*

FOR MORE THAN a century, Grassland Dairy Products has supplied retail, food-service, and industrial customers with a full line of butter products, including bulk butter, butter totes, and butter pails. Grassland continues to develop new, high-value ingredients, capabilities, and processes, and the company's diverse portfolio of dairy ingredients includes milk protein concentrates, milk protein isolate, milk permeate, nonfat dry milk, and butter-milk powder. *Grassland Dairy Products, grassland.com, Booth 3901*

EVERY DAY, IDAHO Milk Products' facility takes in 3 million lb of fresh, raw milk, which the company fractionates into its macronutrient components—protein, carbohydrate, fat, and water—through a series of steps utilizing standard dairy technologies in new and innovative ways. According to the company, Idaho Milk Products is the only global supplier that can transition its ultrafresh milk products to final packaging within 24 hours. *Idaho Milk Products, idahomilkproducts.com, Booth 3812*

WORKING WITH ITS customers, Land O'Lakes Ingredients develops a wide variety of cheese powders and dairy seasonings to provide a competitive advantage in the marketplace. The company recently launched its *Snackscape* blog, which is designed to help manufacturers create snack products that answer the demands of today's consumers. In addition, its Focus on Flavor program helps formulators identify innovative and on-trend dairy-based flavors, and its integrated R&D team and pilot plant capabilities can ease new product development. *Land O'Lakes Ingredients, landolakes-ingredients.com, Booth 2239*

FRUITS AND VEGETABLES

Consumers are looking for healthy foods that taste great, and adding fruits and vegetables to meals, snacks, and beverages

Ingredients for a Changing Consumer Landscape continued...

alike indicates to consumers that these products are good for them. Ingredient suppliers can provide these ingredients in a staggering array of forms, from juices and purees to individually quick frozen and freeze-dried. In addition to being a source of beneficial nutrients, fruit and vegetable ingredients provide appealing color, flavor, and texture.

LAST SEPTEMBER, WOERNER

AgriBusiness formed a sustainable agriculture operation called Bon Secour Valley Ingredients to produce dehydrated vegetable and fruit ingredients. This summer, the division is opening a 40,000 sq ft dehydration and ingredients plant in Foley, Ala., to produce powders, granules, particulates, and extracts from various crops such as chicory, carrots, butternut squash, kale, pumpkin, sweet potatoes, sweet corn, breadfruit, and banana. The plant will have dehydration, roasting, and extrusion capabilities to produce the ingredients from whole fruits and vegetables for use in snack applications, smoothie beverages, pet treats, bakery products, and more.

Bon Secour Valley Ingredients, which is a first-time exhibitor at the food expo, will share some of its fruit and vegetable ingredients with attendees. Stop by the booth to pick up samples of chicory, carrot, and sweet potato powders. And don't forget to ask the company representatives about the work that Woerner AgriBusiness is doing with the U.S. and Cuban governments to get approval to import Cuban-grown tropical fruits to give its customers even more choices of dehydrated and powdered ingredients. *Bon Secour Valley Ingredients*, bsvingredients.com, Booth 141

KERR CONCENTRATES PROVIDES conventional and organic fruit and vegetable juices, purees, concentrates, custom blends, essences, and distillates. Formulated products such as original custom blends, functional value-added ingredients, and type replacers can be tailored to fit any application. In addition, Kerr's processing facility in Oxnard, Calif., allows the company to quickly process handpicked strawberries directly from nearby fields, ensuring freshness and quality. Strawberries are available in

single-strength, pasteurized puree, whole, sliced, and diced and are available with or without sugar. *Kerr Concentrates*, kerrconcentrates.com, Booth 4267

JUICE PRODUCTS NEW ZEALAND (JPNZ) offers juice concentrates, juices, and purees from locally grown New Zealand produce that retain high color content and excellent flavor. It supplies a variety of different colored carrot ingredients, such as orange, yellow, and purple, as well as purees of apple, apricot, beetroot, blackcurrant, boysenberry, nectarine, and plum. JPNZ will offer a variety of product samples at its booth. *Juice Products New Zealand*, jp-nz.com, Booth 2088

ORGANIC RED BEET juice concentrate and organic banana, kale, and mango purees are just a few of the fruit and vegetable ingredients offered by Global Organics to add color, flavor, and nutrients and help meet healthy product formulation goals. Global Organics' fruit and vegetable specialty ingredients include juice concentrates, purees, and IQF fruits and vegetables, as well as an array of organic coconut products such as coconut water, coconut milk, and desiccated and toasted coconut flakes. All ingredients are non-GM, certified organic, and third-party audited to ensure quality and authenticity. *Global Organics*, global-organics.com, Booth 1680

SINCE 1956, MILNE Fruit Products has focused on creating fruit juices, concentrates, and purees from Concord grapes. Since then, the company has expanded its ingredient line to include more than 35 different fruit and vegetable varieties and more than 50 ingredient products. These include the *MicroDried* line of 100% all-natural, high-quality dried fruit and vegetables. In addition, Milne has introduced a wide range of highly sought after vegetable varieties, such as cucumber, kale, pumpkin, spinach, and sweet potatoes, as well as exotic fruits such as aronia, mango, pomegranate, and watermelon. Milne can also create new custom blended products, reformulate clean label blends, and reduce the cost of blended products through an on-site product development team that formulates new food



and beverage products. *Milne Fruit Products*, milnefruit.com, Booth 608

A VERTICALLY INTEGRATED, independent raisin grower, harvester, and processor located in the central valley of Fresno, Calif., Sun Valley Raisins offers most varieties of California raisins with various size, moisture, and coating specifications. The company relies on 10 independent, state-of-the-art, laser and X-ray sorting systems to service customers with enhanced quality needs. *Sun Valley Raisins*, sunvalleyraisins.com, Booth 4074

TOPCHANCE FOODS PRODUCES dehydrated vegetables, including garlic, onions, red and green bell peppers, and carrots. Its new production line has just been put in use, with more advanced equipment in place for producing quality vegetable ingredients. The company is BRC and kosher certified and its professional team is available to answer any questions its customers may have. *Topchance Foods*, topchancefoods.com, Booth 456 »»

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TREE TOP IS an innovative leader in the development of premium fruit ingredients. With an array of ingredients that includes juices, sauces, purees, dried, frozen, and fresh-cut, Tree Top can answer the demand for great-tasting healthy options. The company can also offer superior technical support capabilities; its experienced scientists are readily

available to work with customers on the development of new products and unique applications. At its booth, Tree Top R&D will showcase a crisp, interesting juice that pairs Northwest hops and apples into a refreshing carbonated beverage. *Tree Top, treetop.com, Booth 4509*

GRACELAND FRUIT PRODUCEs dried cranberries, blueberries, cherries, and apples, as well as a *Soft-N-Frozen* line of scoopable frozen fruit that retains a soft bite. The *Classic* variety contains 50%–80% processed fruit in a natural stabilized syrup mix, while the *Premium* contains 85%–89% infused processed fruit, and the *Premium Plus* contains 95% or more infused processed fruit. *Graceland Fruit, gracelandfruit.com, Booth 3420*

VAN DRUNEN FARMS offers fruits and vegetables processed in a variety of ways to meet formulators' needs. A wide variety of fruits can be freeze-, drum-, or air-dried, and in addition, low-moisture fruits can be created by replacing the water in the raw material with sugar or other sweeteners. Vegetables can be freeze-, drum-, or air-dried or individually quick frozen (IQF), and tomatoes can also be sun-dried. *Van Drunen Farms, vandrunenfarms.com, Booth 3414*

ACCORDING TO RESEARCH from the Wild Blueberry Assoc. of North America, adding wild blueberries to products makes consumers up to 69% more likely to buy them, and 73% of consumers say they would purchase a large quantity of a product that contained wild blueberries. In the nationwide study that surveyed more than 1,000 U.S. consumers, 72% of consumers also said that they believed wild foods are healthier and taste better. The organization can help product developers source wholesale wild blueberries, which are available in bulk year-round in formats that include frozen-fresh, IQF, freeze-dried, dehydrated, sugar-infused, canned, concentrate, puree, powder, and extract. Fresh wild blueberries are available August through September. *Wild Blueberry Assoc. of North America, wildblueberries.com, Booth 863*

SAVORY AND UMAMI

Looking to boost the meaty, salty, or brothy notes in food products and add savory and umami appeal? Yeast, mushrooms, meat and fish powders, and, of course, salt enhance these flavors in foods and give them full-bodied taste and mouthwatering effects that consumers enjoy. Salt is used to give foods a salty taste, and it comes in a variety of sizes with larger crystals adding both taste and texture when used topically. Some manufacturers have

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reformulated products with less sodium. They use yeast extracts, meat powders, and low-sodium soy sauce to give foods a savory or umami boost with less sodium.

IT'S AMAZING WHAT the right salt can do for your product applications, and you can find out how by visiting the Morton Salt booth, where you will learn about

star-shaped or cubic-shaped salt, salt with jagged edges or smooth edges, and salt that is brilliant white or transparent. At the booth, you can decide which salt is best for you, or speak with Morton's team of experts to determine the best one for your application.

Star FlakeDendritic has unmatched adherence, superior blendability, and quick salty taste sensation delivered, according to the company. The translucent *Rock Pretzel Salt* stands out on hard pretzels, crackers, or breadstick snacks. Learn more about the recently released *PureSun Culinary Crystals*, a food-grade solar salt. See them and many more at the Morton Salt Inspiration Station and taste them in a number of gourmet product concepts. *Morton Salt*, mortonsalt.com, Booth 2226

HARNESSING THE NATURAL power of umami, *Scelta Taste Accelerator* is said to increase flavor and reduce sodium in

processed foods without affecting taste and function. The company has shown that *Scelta Taste Accelerator*, which is a blend of vegetable extracts, can reduce sodium up to 50% without compromising taste and function and without the use of potassium.

In October 2015, *Scelta Taste Accelerator* was named Fi Europe Innovation Award overall winner and “Most Innovative Food Ingredient” at the 2015 Food Ingredients Europe show. *Scelta Mushrooms*, sceltamushrooms.com, Booth 2012

COLLABORATE WITH THE team of experts from Biospringer to evaluate formulations and develop recipes that demonstrate the functional benefits of the company’s yeast ingredients.

Bakers’ yeast extracts are used to reduce sodium and replace MSG. The *Springer 2000* line is naturally rich in nucleotides and provides an umami, or savory, taste. The company also offers certified organic bakers’ yeast extract that is made in the United States.

Bakers’ and brewers’ yeast extracts enhance the flavor of soups, sauces, snack seasonings, baked goods, and more. Biospringer develops custom solutions that target specific needs for formulations, including reducing sugar and masking off-notes. At the booth, sample snack applications showcasing flavor-boosting and sugar-reduction ingredients. *Biospringer*, biospringer-na.com, Booth 2448

FOUR LINES OF yeast ingredients promise to heighten the umami taste savory notes in foods like soups, broths, condiments, snacks, meats, and seasonings. *Bionis* yeast extract is produced from a specially selected strain of *Saccharomyces cerevisiae* to provide more body, mouthfeel, and umami taste. *Bioenhance* ingredients are derived from bacterial fermentation that give foods an intense umami taste and enhance salt perception with no added salt. *Biotaste* is derived from yeast and yeast extract to give meaty, beef, and chicken savory notes to foods. Finally, *Goldcell* is a line of dry and autolyzed yeast produced from *S. cerevisiae* for uses as a nutritional source or for nutritional fermentation. *Biorigin*, biorigin.net, Booth 612

A TASTE ENHANCER, *SANTE*, contains a high concentration of the natural compounds that produce umami and kokumi tastes. By using the ingredient, food manufacturers may be able to reduce the levels of salt, MSG, or yeast in food products. Stop by the booth to try product concepts that demonstrate how *SANTE* can achieve this. *Lycored*, lycored.com, Booth 4457

TO SATISFY YOUR savory needs, choose from a wide range of savory- and umami-enhancing ingredients.

Meat Plus+ meat flavor systems enhance chicken and beef flavors in meat-flavored products, while *Yeast Based Flavors* are specially formulated to bring out selected flavor notes. Yeast extracts and enhancers bring brothy, meaty, salty, umami, or roasted notes to product formulations.

A line of ready-to-use flavor blends called *Chef*

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Select Blends, combine naturally derived ingredients from Cheddar cheese, mushrooms, celeriac, and more with yeast extracts and other seasonings. Use ingredients from this line as building blocks for all types of foods from a range of cuisines. *Savoury Systems International*, savourysystems.com, Booth 1638

GIVE FOOD PRODUCTS a delicious savory taste with *Savorboost* and *Yeastock Yeast Extracts*. These boost umami and kokumi tastes. Other savory taste enhancers include *Ajinomoto MSG*, *Ajitide Nucleotides*, and *San-J Soy Sauce*. *Koji-Aji*, a combination of nucleotide-rich yeast extract, fermented wheat gluten, and maltodextrin, gives foods a kokumi taste sensation with an initial flavor impact and richer, rounder mouthfeel. Company experts will be on hand to explain the specific functions of these ingredients and how they can bring more depth and levels of flavor to your products. *Ajinomoto North America*, ajiusafood.com, Booth 1237

JUNGBUNZLAUER OFFERS A range of natural, biodegradable ingredients for the food industry. Its range encompasses citric acids, gluconates, lactic acids, special salts, sweeteners, and xanthan gum. In addition, its specialty value-added ingredients include functional acids, sodium diacetate, and *sub4salt*, a mineral salt blend that can reduce the sodium content up to 50% while achieving identical functionality. In addition, *sub4salt cure* combines *sub4salt* with sodium nitrite (0.5%/0.9%) for sodium reduction in the meat industry. *Jungbunzlauer*, jungbunzlauer.com, Booth 1008

COFFEE AND TEA

After water, tea and coffee are the most consumed beverages around the world. Tea leaves and coffee beans are processed into stand-alone beverages, and they are also used to make extracts, flavors, and other ingredients for the bakery, processed food and beverage, and culinary industries. You'll find black tea ingredients used in sauces and confections, green tea ingredients in smoothies and sweet baked goods, and coffee ingredients in seasoning blends and beer. Exhibiting companies in this category will show other innovative applications where coffee and tea add layers of flavor.

AS A PREMIER provider of brewed tea and coffee ingredients, Amelia Bay will showcase tea and coffee product concepts that demonstrate its brewing and formulation expertise. Stop by the company's booth to try one (or all four) of the following beverages: organic matcha green tea with pineapple and mango, premium brewed organic sweet black tea, premium brewed organic unsweetened tea, and organic cold-brew coffee with mocha.

When Amelia Bay was founded in 1989, its goal was to develop new manufacturing technology to capture the true essence and taste of brewed tea and coffee. Today, the company is an industry leader for the production of commercial-scale premium



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brewed tea and coffee that reflect the key ingredients and compounds that are found in tea and coffee. Its certified flavor chemists and R&D team have helped to develop some of the most well-known brands available to customers. *Amelia Bay, ameliabay.com, Booth 1660*

THE GLUTEN-FREE CERTIFICATION Organization recently certified the matcha tea ingredients from Aiya America gluten-free. The ingredients covered by the certification include premium-, ceremonial-, and organic ceremonial-grade matcha, and bulk-sized ingredient-grade matcha.

As many consumers adopt a gluten-free lifestyle, they seek gluten-free food options. Matcha is naturally gluten-free, and the certification that Aiya America received for all of its matcha tea ingredients gives them added assurance. "The Gluten-Free Certification Organization holds the products it certifies to the strictest standards, assuring a quality assessment," says Fumi Sugita, general manager at Aiya America. "Though matcha is naturally gluten-free, this new certification means that people

who suffer from celiac disease and have gluten sensitivities can now confidently enjoy all of our matcha teas." *Aiya America, aiya-america.com, Booth 4741*

A CUSTOM COFFEE roaster and supplier of iced tea to the foodservice industry, S&D Coffee & Tea also offers coffee and tea concentrates and extracts for use in sauces, baked goods, cocktails, and more. The company produces tea extracts and concentrates by choosing from more than 50 leaf varieties in its inventory. It sources tea for both the hot tea and iced tea markets. In addition to supplying coffee to the fresh-brewed coffee market and single-cup coffee markets, the company customizes liquid coffee extracts to meet specific sensory profiles that its customers request. Come learn about what the company calls emerging coffee and tea beverages. *S&D Coffee & Tea, sdcoffeetea.com, Booth 2207*

MATCHA AND JAPANESE green teas have distinctive grassy and green flavors. Matcha also has a bright emerald green color that is imparted to baked goods, ice cream, and beverages. The leaves of specially cultivated plants are

Ingredients for a Changing Consumer Landscape continued...

picked and then ground into a fine powder to produce matcha. The traditional way of preparing it is to whisk the powder with water until it is frothy. The high antioxidant and other nutrient content of matcha makes it a popular beverage for health-conscious consumers. Organic and conventional matcha versions are available, as are ceremonial, bulk, and wholesale. *AOI Tea Co., aositea.com, Booth 3945*

FATS AND OILS

Partially hydrogenated oils no longer retain their GRAS status, making it more important than ever for companies to find ways to replace trans fats in their products. Ingredient companies have created innovative solutions to this challenge and have also made strides in other development issues, such as preventing chocolate from melting in hot climates and enhancing the shelf life and quality of frying oils.

AAK PROVIDES A wide range of value-adding vegetable oils and fats suited to many industries, including confectionery, bakery, dairy, and infant nutrition. Among its confectionery fats offerings is the company's latest innovation, *TROPICAO*. This ingredient, which has been developed for hot climate markets, will maintain a non-bloom appearance as well as its sensory properties when exposed to temperatures up to 37°C (98.6°F). For ice cream applications, the *Akomix* line features reduced saturated fats and increased mono- and polyunsaturated fatty acid content. The composition improves the properties of the ice cream, reduces shrinkage, and enhances the end products' melting resistance. AAK's range of nutritional lipids includes *Specidol* omega-3 fatty acids and *VividoL*, a phytosterol-containing ingredient, which can both contribute to a healthy cholesterol level in the blood and help maintain a healthy cardiovascular system. *AAK, aak.com, Booth 1258*

QUALISOY WILL PROVIDE information about soy-based replacements for partially hydrogenated oils (PHOs) and utilizing soy for frying and baking. Benefits of soy include achieving a more stable fat with structure and customizable melt points by using interesterification with domestically produced conventional and high oleic soybean oils and creating high stability shortenings by blending fully hydrogenated soybean oil with conventional soybean oil, high oleic soybean oil, or alternative vegetable oils. High oleic soybean oil, a liquid oil, provides high stability, increased fry life, longer shelf life, and a neutral flavor profile without contributing *trans* fats.

In addition, QUALISOY will present the "Advancing Applications of High Stability Oils for the Food Industry" session on Tuesday, July 19, from 8:30 a.m. to 10 a.m., to inform attendees about the current state of the food industry and initiatives to remove PHOs in food applications. It will

also bring back Food Network star Chef Emily Ellyn on Sunday, July 17, from 2:15 p.m. to 2:45 p.m., for the QUALISOY Cooking Up Science demo, where she will highlight high oleic and interesterified soybean oils in action. *QUALISOY, qualiso.com, Booth 3904*

A FIRST-TIME EXHIBITOR, Choco Finesse will showcase its new *Epogee* brand fat replacement technology at the show. Created by inserting a food-based spacer between the glycerin and fatty acid molecules, *Epogee* is a “split” fat and behaves like fat in food and in the human body. It can safely reduce calories per serving, fat calories per serving, and fat grams per serving without impacting food taste, texture, mouthfeel, or appearance. The GRAS ingredient is effective in a wide range of applications, including confectionery, baking, bars, and spreadable fats such as peanut butter. *Choco Finesse, chocofinesse.com, Booth 751*

CREATED BY A father-and-son team, Chicago-area Columbus Vegetable Oils has remained family owned and operated since its formation in 1936. The company can supply a wide range of cooking oils, shortenings, and animal fat, as well as non-GM or organic oils, such as soybean, canola, coconut, avocado, and palm. The company also provides private labeling and custom blending opportunities. *Columbus Vegetable Oils, columbusfoods.com, Booth 320*

DAILY COOKING DEMONSTRATIONS

and product concepts at DuPont Pioneer’s booth will showcase *Plenish* high oleic soybean oil. *Plenish* contains no *trans* fat and lower levels of saturated fat and offers enhanced stability for food preparation and consumer packaged goods. *Plenish* also provides more than 75% oleic content—the highest of any soybean under commercial development,

according to the company—to significantly enhance the functionality of the oil. *DuPont Pioneer, plenish.com, Booth 3201*

A KEY GLOBAL producer of fats and oils servicing the food industry, IOI Loders Croklaan USA focuses on providing replacements for partially hydrogenated oils in the United States. For frying, palm olein can break down less quickly than vegetable oils with polyunsaturated fatty acids, and Loders Croklaan offers palm ingredients specifically suited to frying doughnuts, popcorn, and potatoes. Within bakery, the company provides shortenings for cookies, cakes, icings, and pie crusts, as well as ingredients for coating, stabilizing icing, fillings, and pizza. In addition, Loders Croklaan’s dairy fat alternatives can replicate the texture and mouthfeel of dairy and are available in semisolid palm oils, palm oil fractions, liquid vegetable oils, shortenings, and hard fats. *IOI Loders Croklaan USA, northamerica.ioiloders.com, Booth 1622*

THE STATE-OF-THE-ART BUNGE Ingredient and Innovation Center and mobile food truck, Bunge M.O.E.—which stands for Mobile Oil Experts—allows Bunge North America to bring innovative solutions to its customers. Bunge produces a wide variety of edible oils used by restaurants, bakeries, foodservice operators, food processors, and retail markets. Its broad portfolio of *trans* fat-free oils has helped its customers reduce the amount of *trans* fat in food products by more than

70% over the last decade. Products include frying oils, all-purpose and frying shortenings, buttery spreads, and liquid butter alternatives. In addition, the company’s emulsified shortenings are formulated to hold oil, shortening, and water together to produce a moister product and can be used in cakes, icings, bread, and yeast-raised doughs. *Bunge North America,*



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Ingredients continued...

bungenorthamerica.com, Booth 1031

RICHARDSON OILSEED OFFERS a full line of nonhydrogenated oils, margarines, and shortenings. Its product portfolio includes functional drop-in solutions with cleaner labels to meet today's trends. The company's new *Richardson Oilseed Baking Base* is a shortening substitute formulated without palm and PHOs and contains only 24% saturated fat. Suitable applications include cookies, tortillas, cakes, fillings, breads, and rolls. Richardson will serve samples of products made with this ingredient at its booth. *Richardson Oilseed, richardson.ca, Booth 3216*

PAR-WAY TRYSON SPECIALIZES in food release oil sprays under the *Vegalene* brand for foodservice and commercial bakery applications. It offers a standard aerosol and liquid sprays, as well as allergen-free, buttery-flavored, non-GM, and coconut oil versions. *Par-Way Tryson, parwaytryson.com, Booth 3564*

NUTS, SEEDS, AND LEGUMES

Consumers are looking for protein, and many would prefer it come from a plant-derived source. Nuts, seeds, and legumes can provide protein, healthy fats, and a variety of minerals and nutrients, all while offering enhanced sustainability. With 2016 having been deemed the Year of the Pulse by the United Nations, it is an exciting time to investigate the potential chickpeas, dry peas, and lentils can offer.

ACCORDING TO PIZZEY

Ingredients, its *PurFlax* line of flaxseed ingredients contains the most alpha-linolenic acid omega-3 of any whole food source, along with protein, fiber,

and lignans. The line can be used to replace oil or shortening in baked goods, guar gum in tortillas or gluten-free applications, and as a partial replacement for carboxymethylcellulose (CMC) in beverages. The *PurFlax* line includes *BevPur*, which can add flaxseed's nutritional benefits to beverages and supplements, partially replace CMC in smoothies, and replace eggs in baked goods. Pizzey will be sampling this ingredient in a mango smoothie. *BlendPur*, meanwhile, can be used as a clean label replacement for hydrocolloids and shortening in baked goods, and *BakePur* is ideal for baked goods. *PurFlax* ingredients are available in both golden and brown varieties, organic and conventional, and are non-GM and gluten-free. *Pizzey Ingredients, pizzeyingredients.com, Booth 461*

GARBANZO BEAN POWDER from The Whole Bean offers food manufacturers a clean label, non-GM, and allergen- and gluten-free alternative to pea and soy ingredients. With a neutral taste, the ingredient fortifies, emulsifies, and increases yield across a broad range of applications while adding plant protein, fiber, and healthy starch. Garbanzo bean powder can replace eggs, soy, and emulsifying gums without a beany taste and absorbs 20% more oil and 25% more water than competitive products. In addition, its high foaming capacity can improve yields. Suitable applications include cookies, snack bars, baked goods, salad dressings, soup thickeners, pasta, hummus, and meat binding. *The Whole Bean, wholebeanfoods.com, Booth 1887*

BEST COOKING PULSES will feature its lentil-shaped, gluten-free *BEST Pulse Crisp* at the food expo. Made from a proprietary pulse ingredient blend,

nutrient-dense *BEST Pulse Crisps* contain 23% protein and 17% dietary fiber and provide iron, calcium, and other micronutrients, including B vitamins. Available in conventional and certified organic formats, they are non-GM, kosher, and vegetarian/vegan. Free from all major allergens, including gluten, tree nuts, soy, lactose, and peanuts, the *BEST Pulse Crisp* is a crunchy, clean label ingredient made without concentrates, isolates, colors, or additives that is suitable for many applications. *Best Cooking Pulses*, bestcookingpulses.com, Booth 1880

ESTABLISHED IN 1910, Blue Diamond Almonds is the world's largest processor and marketer of almonds. The company's recent addition of almond flour provides ways to create nutrient-dense foods without compromising taste and texture; the ingredient offers a smooth mouthfeel and adds a rich, buttery flavor. Almond flour is available in three forms: *Extra Fine Natural*, which is as versatile as blanched flour while maintaining a natural light tan color; *Extra Fine Blanched*, which offers a powder-like consistency suited for delicate cookies, breads, and cakes; and *Fine Blanched*, which works well in everyday baking and cooking and toasts to a rich golden color. Attendees can stop by the booth to learn more about formulating with almonds and almond ingredients trends. *Blue Diamond Almonds*, bdingredients.com, Booth 3242

FARMER-OWNED CHS PAYS special attention to soybeans, investing millions in soybean ingredient development. The company's soybeans are sourced primarily from U.S. farms, and each year, CHS processes more than 120 million bushels of soybeans, refines more than 1.3 billion lb of soybean oil, and produces 3 million tons of soy protein products. Its soy-based ingredient line includes *Honeysoy* flour, which helps retain moisture, whiten crumb color, shorten baking time, extend shelf life, and decrease fat absorption; *Ultra-Soy*, dry textured, vegetable proteins which, when hydrated, have the texture of meat; and *Q Isolates*, a family of 90% protein minimum isolated soy proteins. In addition, CHS supplies sunflower kernels and in-shell sunflower seeds, which are both high in protein. *CHS*, chsinc.com, Booth 402

WITH UNIQUE ALMOND samples, the latest research, and live demonstrations, the Almond Board of California (ABC) will have industry and culinary experts available to address attendees' questions and development challenges. Attendees can schedule an individual or small-group California Almond Solution Session with Chef Rob Corliss of All Things Epicurean, who will be available at the booth to

discuss and address development challenges. ABC will sponsor a Cooking Up Science demonstration on Sunday, July 17, from 3:30 p.m. to 4 p.m. *Almond Board of California*, almonds.com, Booth 1902

GOLDEN PEANUT AND Tree Nuts offers a full line of all-natural, plant-based dry and liquid peanut

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Photo courtesy of Blue Diamond Almonds



ingredients that can be used in a variety of products. From high-protein, low-fat roasted peanut flours to roasted aromatic

peanut oils, the company's specialty products offer non-GM and gluten-free plant-based protein options consumers

are looking for while providing roasted peanut flavor. At its booth, Golden Peanut and Tree Nuts will feature a ready-to-drink peanut butter milk concept flavored with roasted defatted peanut flour. *Golden Peanut and Tree Nuts, goldenpeanut.com, Booth 2804*

AT THE SOY Connection booth presented by the United Soybean Board, attendees can brush up on the latest U.S.-grown soybean oil and soy protein resources and meet one-on-one with soybean industry experts and a U.S. soybean farmer. There they can also sample snacks made with soy-based ingredients, play interactive games, and enter a prize giveaway.

In addition, the United Soybean Board collaborated with sustainability leaders to develop a session titled "Sustainability in the Marketplace," which will take place Monday, July 18, from 12:30 p.m. to 2 p.m., and will feature a panel of

speakers representing the International Food Information Council, McDonald's, and the United Soybean Board. *United Soybean Board, soyconnection.com, Booth 3870*

THE UNITED NATIONS declared 2016 the Year of the Pulse—seeds of dry peas, lentils, and chickpeas—and the USA Dry Pea & Lentil Council, Pulse Canada, and American Pulse Assoc. can help product developers create foods using the healthful, protein-packed ingredients. On its website, the council provides recipe ideas and information about the nutritional benefits pulses provide, including fiber, iron, zinc, potassium, folate, and magnesium. According to Jessie Hunter, director of domestic marketing for the USA Dry Pea & Lentil Council, "Pulse crops and pulse crop ingredients are being incorporated into more and more food products due to their ability to provide water binding and emulsification functions, nutrition characteristics, and clean label features."

The food expo marks the unveiling of the new Pulse Brand logo program, a signature brand being introduced to make it easier for consumers to identify products containing pulses. During the food expo, the booth will provide daily chef demos of unique pulse applications, showcasing six to eight different recipes, and on Tuesday, July 19, from 11 a.m. to 12 p.m., attendees are encouraged to attend the LovePulses Global Product Showcase in the Cooking Up Science amphitheater, where chefs from around the world who developed pulse innovations as a part of the Global Pulse Confederation's call for entries will be showcasing their winning items. *USA Dry Pea & Lentil Council and Pulse Canada, cookingwithpulses.com and pulsecanada.com, Booth 1877*

POTPOURRI

A NEW INGREDIENT from KMC adds the savory profile of cheese to products without using dairy, making foods suitable for vegans or allergy sufferers. Potato starch-based and naturally GM-free *CheeseMaker* solutions allow formulators to make vegan alternatives for grated, shredded, and sliced cheese by matching the functional properties of dairy proteins. In addition, *CheeseMaker* starch solutions do not have a distinct flavor, so there is no need for masking any off-tastes, making it easier to add exactly the right cheese flavor. *KMC, kmc.dk, Booth 2560*

ARE YOU A baker looking for innovative leavening agents that meet the latest health trends? Kudos Blends will showcase simple and effective ways to reduce sodium, increase potassium, and eliminate aluminum in chemically raised products. Offering up to a 50% reduction in sodium, *KUDOS Potassium Bicarbonate* has been developed specifically for the bakery industry to help ensure that product volume, taste, and texture are maintained. *KUDOS SALP Replacer* range consists of aluminum-free raising agents designed to mimic the reaction and end product characteristics of sodium aluminum phosphate. The *KUDOS* range of ingredients provides a balance of essential minerals, delivering important health benefits to bakers and consumers worldwide, according to the company. *Kudos Blends, kudosblends.com, Booth 3612*

LEARN ABOUT THE multifunctionality of *TREHA* trehalose by sampling a glazed doughnut and quenching your thirst with a grapefruit energy beverage. *TREHA*, which is produced via a proprietary enzymatic process from starch, can benefit the

Ingredients for a Changing Consumer Landscape continued...



Photo courtesy of Nagase

freshness, flavor, and texture of food and beverages. The ingredient helps control moisture migration to minimize stickiness of the glaze over storage. In the energy beverage, *TREHA* is used to mask the off-notes of a high intensity sweetener used in the formulation. *Nagase America*, nagaseamerica.com, Booth 3817

BRENTAG NORTH AMERICA is committed to connecting food producers and ingredient manufacturers. As a leader in distributing specialty and commodity ingredients, the company offers its customers tailor-made supply-chain solutions and technical and market expertise. Brenntag focuses on sustainability, aiming to minimize the ecological impact of its business activities, as well as food safety and supply chain responsibility. *Brenntag North America*, brenntag.com, Booth 3827

SAMPLE PRODUCTS CONTAINING *pHase* acidulant, which can lower pH without a

sour taste and be labeled as “sodium acid sulfate,” “bisulfate of soda,” or “sodium bisulfate.” In addition, the ingredient from Jones-Hamilton Co. can improve flavor, reduce sodium and sweetener content, improve food safety, and reduce the time and temperature required in the thermal processes.
Jones-Hamilton Co., jones-hamilton.com, Booth 2388

AN INTERNATIONAL MANUFACTURER with more than 10 global sales offices throughout the world, the KRÜGER Group produces non-GM and responsibly sourced ingredients for the bakery, confectionery, ice cream, and foodservice industries. Created and manufactured in Germany, KRÜGER’s hazelnut, cocoa, and cookie butter ingredients offer a wide range of flavors to suit the needs of its customers. At the food expo, first-time exhibitor KRÜGER will treat attendees to a variety of innovative new spread and filling concepts. *KRÜGER North America, krueger-company.com/en, Booth 4090*

INCLUSION TECHNOLOGIES WILL show a variety of clean label ingredients at its booth. Its clean label inclusions have been formulated to be free from all artificial ingredients and are made solely with naturally derived flavors and colors, and the company’s *Allergen Free Bits-O-Flavor* inclusions have been formulated without any of the eight major allergens. In addition, Inclusion Technologies will introduce *Coated Nadanut*, the newest member of the *Nadanut* family of 100% nut-free nut extenders and replacers coated with an edible film that allows them to be used effectively in higher moisture systems like ice cream and yogurt. Made from nutritious wheat germ, these products look, taste, and crunch like real nuts but without the nut allergens and high costs.
Inclusion Technologies, inclusiontech.com, Booth 2852

ONLINE E-COMMERCE PLATFORM ingredientsonline.com provides factory-direct access to nutritional raw ingredients harvested around the globe. Through the website, manufacturers in the United States can purchase raw materials directly from overseas factories, resulting in cost and time savings, and the company provides data on the origin of ingredients, substantial

*Photo courtesy of
Inclusion Technologies*



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QA/QC documentation, and 24/7 real-time access to ingredient information. The company will provide demos and information at its booth.
ingredientsonline.com, Booth 440

OLAM PROVIDES INGREDIENTS to create clean label and free-from products. With control over its supply

chain, the company can deliver non-GM ingredients and advanced traceability, and Olam places high value on sustainability, trust, and transparency in its chain. At the food expo, Olam will highlight the spices and vegetable ingredients, coffee, cocoa and edible nuts divisions. According to the company, Olam's offerings can provide value to customers through synergistic offerings across multiple food ingredient categories, assistance with product development, innovation services, and procurement simplification.
Olam, olamgroup.com, Booth 1544

AS ONE OF North America's leading distributors of ingredients, raw materials, and packaging products, L.V. Lomas has solutions to help food manufacturers develop novel, exciting food formulations. The company promotes itself as one that stays ahead of the curve in food trends by offering gluten-free, non-GM, organic, and other popular ingredients that can be used in the beverage, bakery, fruit prep, dairy, confectionery, prepared foods, and meat categories.
L.V. Lomas, lvlomas.com/food, Booth 2980

TATE & LYLE CAN provide a wide range of ingredients for the food industry, from food starches and texturants to wellness ingredients that include *PROMITOR Dietary Fiber*, a prebiotic, soluble fiber that is easily integrated into existing formulations without changing taste or texture, and *PromOat Beta Glucan*, a soluble fiber derived from whole grain oats that provides a clean taste, neutral color, and no graininess. Its sweetener portfolio includes *DOLCIA PRIMA Allulose*, a low-calorie sugar that closely matches the profile of sugar but provides 90% fewer calories, and *KRYSTAR Crystalline Fructose*, a nutritive sweetener processed from high fructose corn syrup into free-flowing crystals or a pure white syrup that offers high solubility and low water activity content.
Tate & Lyle, tateandlyle.com, Booth 1248

FROM CAROTENOIDS TO yeast extracts, DSM Food Specialties has ingredient solutions to suit the needs of food and beverage manufacturers across many categories, such as dairy, confectionery, fruit processing, brewing, beverages, baking, meat, and savory. Some ingredients improve the taste or texture of products while others fortify them with beneficial nutrients. The company even has solutions to help manufacturers control cost and improve processing efficiencies.
DSM Food Specialties, dsm.com/food, Booth 2839 FT



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