

# GET zany

Here's why you should experiment with combinations of fruits and nuts to build product appeal.

By Donna Berry

Bakers, like other prepared foods manufacturers, try their best to meet consumers' growing demand for healthier products. One of the easiest approaches — as well as cleanest and simplest — to improving the image of carbohydrate-laden baked goods is to add some fruits and nuts.

These are real, often identifiable, food ingredients that contribute an array of nutrients, including vitamins, minerals, fiber, essential fatty acids and, in some cases, even protein — the food world's booming buzz word. They also deliver on color, flavor and texture. So get zany! Experiment with fun combinations. Try pistachios in banana bread or macadamias with coconut in a muffin. Imagine blood orange cheesecake with a praline cashew crust.

“Bakers are wise to take a broad view of flavors and product concepts that are becoming popular and figure out how they can complement mainstream baked goods,” said Rob Corliss, founder of All Things Epicurean and research chef for the Almond Board of California. “Such insights can help determine what fits your brand, growth initiatives and target audience.”

For example, food trucks continue to grow in popularity, with some of the most sought-after concepts being Asian and barbecue platforms. Bakers can team up with these businesses and offer options such as the popular Taiwanese pineapple bun, so named for its appearance, not its flavor. This fluffy, doughy bun has a crispy, vanilla cookie exterior and is filled with everything from fruits to nuts to red bean paste. Most are often topped with slivered almonds for added decoration and flavor.

Another popular treat is the coconut cream bun, which has a light, creamy center and a dusting of coconut flakes on top. It's the perfect marriage of bread and cake.

When it comes to baked goods for barbecue trucks, think smoky and spicy. Bakers can use brownies as a base and then add smoked nuts and spicy fruit pieces. The traditional cornbread side can take on a new twist when corn flour is combined with nut flour. The addition of diced fruit, maybe infused with some





Fruits and nuts give an extra touch of eye and taste appeal to variety donuts.

Parker Products

heat, adds another dimension of flavor as well as an enticing invitation to try.

### **Packing it into snacks**

Bakers cannot afford to ignore the snack foods segment and how fruits and nuts add value to these on-the-go mini meals. This is particularly true for bars, biscuits and crackers, which are both portable and durable. Fruits and nuts also present opportunities to “snackify” familiar baked goods, such as bagels, muffins and scones.

According to a September 2014 study on flavor trends in bars, conducted by Sterling-Rice Group, almonds were the most desired ingredient in the “ideal” nutrition/snack bar. Oats, granola, peanut butter, coconut and dark chocolate also ranked high among desired ingredients. The top fruit flavors selected for consumers’ ideal bar were strawberry and coconut (tied at 13%), followed by raisin (9%), cranberry (8%) and blueberry (7%).

“In the baking industry, formulators can develop new products, such as protein bars, designed to fit a nutrition goal,” said Tom Leahy, spokesperson for Sunsweet Ingredients. “They can also reformulate traditional products to be healthier, such as bagels with more fiber.

“In Korea, we provide prune products to a company that markets a bar made primarily from walnuts and prunes, with a touch of honey and cranberry for a little added sweetness and acidity,” he said.

### **Fruity innovations**

Real fruit ingredients come in many different formats, ranging from those with no piece identity, such as concentrates, juices, pastes and purees, to products that more closely resemble the original whole fruit. This includes dices and slices. Fruit ingredients can be purchased fresh, but for efficiency, quality and safety, bakers typically used aseptic, canned, dried or frozen forms.

“Real fruit has traditionally presented a significant technical challenge in the bakery category,” said Wayne Lutomski, vice-president of international, Welch’s Global Ingredients Group. “The key is to mitigate moisture transfer. It’s not the absolute moisture content of an ingredient. Rather, the crucial parameter is water activity, which is a measure of the ability of water to migrate

## **Bakers cannot afford to ignore the snack foods segment and how fruits and nuts add value to these on-the-go mini meals.**

from the fruit ingredient into the surrounding food matrix. It’s really important to ensure the water activity of any fruit ingredients you use has been tailored specifically for the application.”

Kami Smith, director of culinary showcasing, Pecan Deluxe Candy Co., said, “Working with fruits in all types of baking needs can bring either very ‘fruitful’ results or a watery, bleeding mess that ruins the look and flavor profile of the baked item. That’s why in many applications, dried fruit is your friend.”

In cake and muffin batter, dried fruits will hydrate with the ingredient water or added moisture while remaining in suspension during baking. They will plump to a desirable post-bake texture. Rarely do dried fruits bleed into the batter, according to Ms. Smith. With cookie doughs and bars, dried fruits provide superior texture and maintain consistency throughout shelf life.

“Vacuum-dried fruits have a more concentrated flavor and deliver full fruit flavor to baked goods,” said Brigham Sikora, R&D director, Kerry Americas Region. “Maintaining the correct water content requires consideration. Real fruit can add water, and dried fruit can reduce it, so it’s important to find the right balance.”

Indeed, dried fruits reduce water activity, which holds down potential microbial issues in the final product, according to Megan Culp, sales manager, Parker Products. “Dehydrated berries incorporated into our grain-based inclusion with a final application of muffins have been highly popular,” she said. “Dehydrated cranberry is used in a granola cluster that’s a topper for many bakery applications.”



## INTRODUCING THE MOST DESIRED INGREDIENT IN BARS

**ALMONDS**

When consumers were asked in a recent study to create their “ideal” bar, they chose almonds as their top ingredient. It’s no surprise really—almonds contain 6 grams of protein and 4 grams of fiber per serving, and deliver a satisfying crunch that would make any bar a favorite among today’s consumers. Learn more at [Almonds.com/bars](http://Almonds.com/bars).

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## Trending: Flavored, candied nuts

The versatility of nut ingredients can help reinvent classic baked goods with modern flavors as well as enable development of new concepts, often a melding of an ethnic favorite with a local concept. Think cappuccino-glazed diced almonds on a breakfast muffin or rosemary-dusted macadamia nuts rolled into biscotti dough and positioned as a soup accompaniment.

“We are known for our artisanal candy production,” said Kami Smith, director of culinary showcasing, Pecan Deluxe Candy Co. “With our tasty nut meats cooked and coated with sugar, we can add flavors on top of the pralined candy shell. This includes spice blends, such as Moroccan, curry and chili.

“We can combine nut meats with dehydrated fruit powders to bring a new combination of flavors in a one-bite experience that can be used as a topping on doughnuts and pastries,” she added.

Coatings function as moisture barriers and keep nuts crunchy. Praline coating is quite popular, but chocolate, lipids and sugar syrups do the job, too.

“Maple-glazed walnuts can top everything from doughnuts to brownies,” said Megan Culp, sales manager, Parker Products. “Agave-coated nuts are also trending. Both maple and agave syrups are viewed as better-for-you alternatives to straight sugars.

“Our praline pecans make a great cheesecake crust inclusion as well as a topping,” she continued. “We use the same proprietary praline process to coat pumpkin seeds for fall-themed baked goods as well.”

FutureCeuticals specializes in organic freeze-, spray- and drum-dried fruits. The company manufactures these materials in whole or piece formats or as powders.

“We are able to provide added value and supply-chain security for our partners by developing and manufacturing nutritional custom blends,” said Andrew Wheeler, director of marketing, FutureCeuticals. “We’ve had great success in delivering blends that are able to boast claims such as ‘contains two servings of fruits’ or ‘contains one serving of fruit and one serving of vegetables.’”

## Juiced-up concentrates

Welch’s supplies real fruit ingredients made from Concord and Niagara grape varieties. The ingredients are made using a process called ultra-rapid concentration, which was developed by the company’s partner, Taura Natural Ingredients.

“Because our real fruit ingredients are made with the juice or purée of Concord and Niagara grapes, they deliver a large quantity and diversity of polyphenols,” Mr. Lutomski said. “Both varieties are grown in North America, and both are true American superfruits.”

The Concord grape is a distinctive dark purple grape variety with a sweet bold flavor. Its cousin, the Niagara grape, is a white grape with a golden hue that delivers a sophisticated flavor profile that is crisp, sweet, light and refreshing.

“When fresh is expected, your best choice is individually quick frozen (IQF) fruit,” Ms. Smith said. “To minimize bursting, bleeding and watering the batter too much, it is best to prepare the batter to specification and then add the necessary IQF fruits in the last mixing stage. This decreases staining the batter and helps secure a full, fresh piece of fruit.”

Dawn Merrill, technical services manager, Kerr Concentrates, Inc., said, “With wet fruit ingredients such as juice concentrate or puree, let the water work for you.” The moisture in a chunky puree can replace some of the added liquid. But unlike some other added liquids, the puree contributes texture and authentic fruit flavor.

Kerr Concentrates offers fruit juices, juice concentrates, purees, puree concentrates, essences and custom blends for a variety of baked goods. “Concentrates provide a clean-label solution by replacing sugar or adding natural color in many applications,” Ms. Merrill said. “If a developer was formulating a cranberry bagel, they could use cranberry juice concentrate to achieve desirable color and flavor in the finished product. Puree concentrates have a viscous consistency, which makes them ideal for fruit fillings and jams in cereal bars and pastries.”

## Replacing sugars, fats

As bakers explore the use of more whole grains, as well as the inclusion of ancient grains and alternative flours,

certain fruit ingredients can assist with flavor and texture. They can help recreate a familiar food with a more healthful nutrient profile.

For example, research shows that prune ingredients complement these grains, making them more palatable to the discriminating consumer, according to Mr. Leahy. “The rich, complex, caramelized flavor and firm texture of prunes is very compatible with many whole grains,” he said. “Their rich flavor complements ‘bright’ dried fruits, such as cranberries and blueberries.”

Depending on the application, fruit ingredients can also serve as a partial or full substitute for ingredients that some consumers are trying to reduce in their diet, namely, fat, salt and sugar.

“Prune puree can be used for fat reduction in cookies and pastries and as a sweetener in bars,” Mr. Leahy said. “Interestingly, in many products using puree for fat reduction, added sugars and sodium are also reduced.”

Kristen Doran, technical services and innovation manager, iTi Tropicals, agreed that some fruits have the ability to mimic fat in baked goods. This can lower the fat content while also boosting nu-

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Citrus powerfully complements chocolate, and the selection of clementine puree provides an interesting tropical note.

iTi Tropicals



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## FRUITS & NUTS

tritional value by contributing fiber and vitamins. She said there's growing interest in exploring the use of tropical fruits in baked goods, thus melding the exotic with the familiar.

"For cookies, you can replace half of the fat with a fruit puree, such as guava or mango," Ms. Doran said. "For quick breads and cakes, if the recipe calls for one cup of butter, then use a half-cup of fruit puree and a half-cup of flour."

### Superfruit passions

Coconut can be used in many forms, such as milk, cream, water, concentrate, powder and flour. "We supply coconut cream that can be used in place of traditional dairy milk in baked goods such as cake or quick bread," Ms. Doran said. "Coconut cream provides a great mouthfeel and fat content to help maintain product stability while also allowing a dairy-free formulation.

"Passion fruit and figs are fruits to watch, and they pair really well together," she added. "Figs can provide the body needed in the form of paste and act as a humectant while passion fruit provides a sweet and tart tropical flavor."

Many tropical fruits are also recognized as superfruits because they possess health-and-wellness properties. For example, acerola, also known as the Barbados cherry, is an exceptionally concentrated source of the antioxidant vitamin C. Regular consumption is associated with reduced signs of aging, enhanced immune response, improved mood and more.

"Acerola is a natural source of vitamin C," Ms. Doran said. "As consumers demand cleaner-label products, a natural source of vitamin C provides excellent fortification for baked goods and a unique way to add fruit to products."

Jeff Manning, chief marketing officer, Cherry

### Going nutty in more ways than one

Most nuts come in an array of shapes and sizes, making it easy to add them to all types of baked goods, with multiple forms often used in the same finished item. That's because each form has a unique function, delivering different degrees of flavor and nutrition. They can be added into the batter or dough, or as a topping for finishing purposes. Crusts also benefit from nut ingredients.

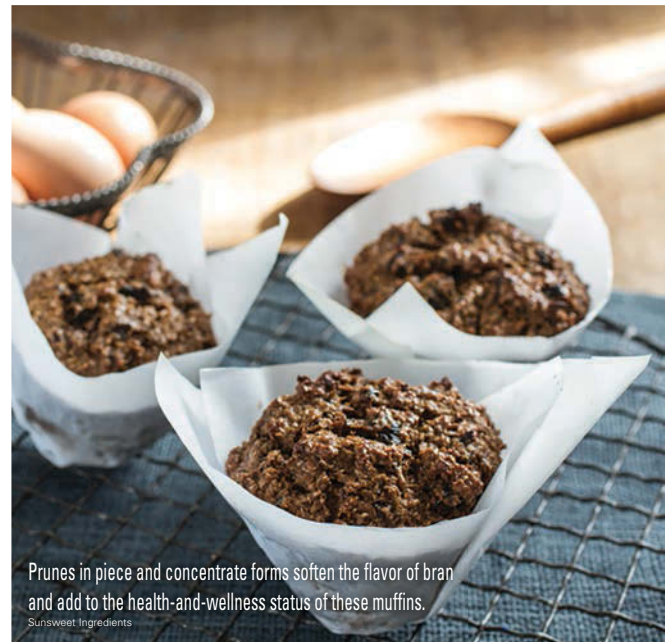
"The beauty of so many forms is the versatility that translates to numerous applications for manufacturers," said Rob Corliss, research chef for the Almond Board of California and founder of All Things Epicurean.

Nut forms, from largest to smallest piece, are whole, sliced, slivers, chopped/diced and flour/meal. There are also viscous formats, including nut milks and butters/pastes.

"Flours and meals provide soft texture and elegant flavor notes to baked goods. They are great for gluten-free and paleo baking," Mr. Corliss explained. "The identifiable pieces contribute visual appeal and texture cues. They can also be used as toppings or inclusions. Nut butters and pastes can be used as a filling or binding agent."

Nut milks, on the other hand, can replace other fluids typically used in a formulation, bringing unique flavor profiles to the product. Depending on the nut milk, use can also influence the color and texture of the baked good.

Nuts can be paired with distinctive and new flavor combinations that today's consumers' crave. Mr. Corliss cited data from Innova Market Insight. "Global new product introduction data show that there has been an increase of products made with almonds and coconut flavors, in particular, in products such as snack bars, cookies and other confections," he said, adding, "There has also been a rise in almond and green tea flavor combinations, an inspiration from the growing Asian culinary landscape."



Prunes in piece and concentrate forms soften the flavor of bran and add to the health-and-wellness status of these muffins.

SunSweet Ingredients



Toasted coconut combines with chocolatey inclusions in this muffin concept.

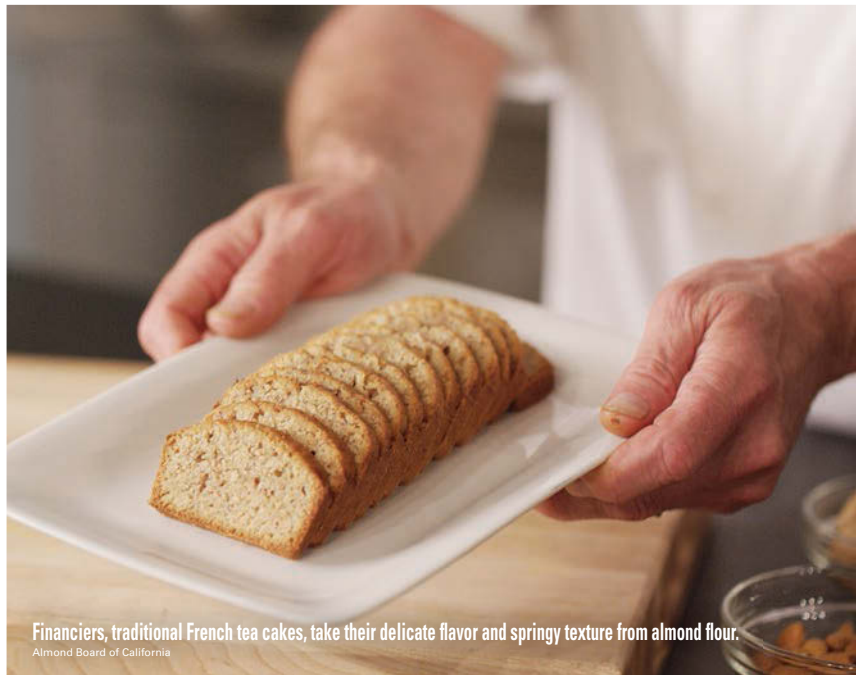
Kerry Americas Region

Marketing Institute, observed, “Montmorency tart cherries are a natural way to help bind dry ingredients, increase moisture, add volume and create texture, which can all be challenging when formulating or producing snack foods. They also have low water activity and can be used in low-moisture snacks.

“Due to their unique sweet-tart taste, Montmorency tart cherries blend perfectly with other ingredients, helping to add unique flavor, texture and color,” Mr. Manning said. “Potential blend partners include almonds, yogurt and chocolate, especially dark chocolate.”

Mr. Sikora concluded, “Using fruits and nuts in baked goods is a perfect opportunity to capitalize on consumer demand for products that deliver both taste and nutrition. We’re continuing to see innovation, and speed to market is important. But you need to get it right because consumers have never demanded more.” ●

Find resources for nuts by visiting [www.esourcebaking.com](http://www.esourcebaking.com). Browse by category under Ingredients, and click on Characterizing for listings.



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