# Fruit Flavors: <br> The Rise of Exoticism, Tradition and Fusion 

# Flavors innovators are mixing and matching combinations like never before and taking fruit flavors into non-traditional applications. 

by Robin Wyers

While orange and apple flavors for soft drinks, strawberry for ice cream and banana for dairy milk mixes may still be the preferred flavors for the mass market, many consumers are looking for something more exciting and flavor suppliers are addressing this through innovation. "They want outstanding, and they want unique. Those who buy premium products and younger target groups in particular are keen to experience new taste sensations," notes Oliver Hoffmann at Doehler.

Flavors innovators are therefore mixing and matching flavor combinations like never before and taking fruit flavors into non-traditional applications. There has been a resurgence in tropical flavors, with the recent launch of Red Bull Yellow Edition with tropical fruits, following a successful limited edition launch in July and August of 2014. The introduction comes as the number of soft drinks products with a tropical flavor continues to rise steadily.


》There has been a resurgence in tropical flavors, with the recent launch of Red Bull Yellow Edition with tropical fruits (right).

Innova Market Insights tracked 468 products with this flavor in 2014, compared with 202 in 2008. But despite this rise in exotic ideas, there is also a growing interest in local and authentic flavors; while there are opportunities to combine the two.
"Citrus flavors are an all-time favorite over all regions and categories. Nevertheless they can be twisted by using more exotic citrus tastes, such as Kaffir lime or Dalandan," says Helene Möller, Product Management Ingredients, WILD Flavors \& Specialty Ingredients. "Both fruits still meet the demand for a well-known perception of taste but come along with a new aromatic flavor," she says.

In addition, pomegranate is one of the trendiest and upcoming flavors in EMEA for all kinds of applications, she notes. It is popular due to its unique, varying taste and triggered by the healthy image of the fruit itself. "Flavor profiles found in beverages are varying between fantasy flavors such as candy, syrup and grenadine to more earthy, authentic and vegetable versions. This range of pomegranate flavors offers the possibility for customers to find the optimum flavor profile for the specific application," she explains.

## Exotic Discovery

Hoffmann at Doehler notes that authentic African flavors are a completely new and unestablished exotic discovery. Last year, the company formed a joint venture with Afriplex, a producer and supplier of wellness product solutions from source to shelf. Their common goal is to deliver integrated ingredient solutions that are tailored to the needs of Southern African markets in terms of taste preferences, tech-

nological and regulatory requirements. The move has also given Doehler access to a wide portfolio of African ingredients to take them into traditional markets.
"African fruits such as marula, baobab, monkey orange, soursop, tamarind, mucua and the North African date offer huge innovation potential, especially for dairy products, drinks and the confectionery sector," says Hoffmann. "These fruits have a long tradition of use in African products, but they have not yet entered the global mainstream." Hoffmann notes market and consumer insight data which shows that authentic African flavors have immense growth potential, as they offer new and exciting taste experiences within the very popular exotic flavors segment. The flowery and fruity marula flavor, for instance, fits very well with traditional fruit flavors such as cherry, but can also be combined with other exotic flavors. A marula-flavored carbonated soft drink will be a refreshing and unusual taste experience. Monkey orange also has exotic, fruity notes. The woody, aromatic notes of tamarind are suitable not only for sweet applications, but can also be used to round off the taste of savory products. Soursop, meanwhile, has a very complex flavor profile with tropical and citrusy top notes, as well as creamy notes reminiscent of coconut or banana. Beyond offering a comprehensive range of authentic African flavors, Doehler also has a range of Brazilian flavors, all of which can be used as single flavors or combined with others.

## Global Cuisines

Brazilian flavors were on the menu at the 2014 World Cup, but will remain there through the 2016 Olympics, which are
slated to take place in Rio de Janeiro. "We expect the spotlight to remain firmly on Brazilian cuisine over the coming twelve months, particularly in anticipation of the 2016 Olympics," says Hugh Evans, marketing manager at Synergy. "Our research has revealed that the Brazilian trend is a prelude to a greater interest in South America as a whole. Indigenous Brazilian flavors, such as passion fruit, have become a key element in dishes at prestigious restaurants across the UK, featuring in several courses from appetizers to desserts. Linked to this, passion fruit flavors are making their way onto supermarket shelves too, with new product launches including passion fruit flavored tea, soft drinks, dressings and desserts."

Evans also notes that with growing consumer interest in global cuisine, there is an increasing demand for more esoteric and unusual flavors. The proliferation of Japanese cuisine, for example, is driving the incorporation of the Japanese flavor - yuzu - a citrus fruit with an intense and bold profile. "From alcoholic drinks and cocktails, to juices, energy drinks, sauces and desserts, yuzu brings the acidity of other citrus fruits like grapefruit and tangerines, combined with a fragrant aroma and refreshing flavor that's less tart than its citrus counterparts," he says.

## Local Appeal

But we should not lose sight of flavors that are drawn from a more local origin, which is in line with the trend towards traceability and sustainability. Möller at Wild notes that fruits such as rhubarb, blackcurrant and pear have for many generations been known as local fruits in Central Europe, and often consumed as fresh fruit. "Currently, as flavors they are becoming more important, because consumers put more and more emphasis on a regional focus and traditionally perceived flavors - also in processed foods. They are expected to taste fruity and ripe
as fresh from the garden," she explains.

Another reason for this quest for authenticity is the role for keeping naturalness on the agenda when formulating with fruit flavors. Möller notes that consumers are increasingly demanding a natural flavoring, because the acceptance of synthetic ingredients in food is falling steadily.
"The most natural way - and especially appropriate for premium products - would be
to use FTNF flavors (from the named fruit). They fully meet the consumer demand for authentic food but put rather high requirements on certain conditions concerning harvesting, sourcing and manufacturing processes," she says.
"Finally, a reliable beverage concept naturally includes the appropriate color. The product must be consistent. Besides the use of a natural flavor, the color should also be derived from natural sources," she adds.

## Flavor Pairings

Fruit flavors are typically incorporated into sweet applications, but there is a whole new area to address in flavor fusions or "mash ups," where new and exciting flavors are fused with traditional cuisines. As a result, Evans says that manufacturers are looking for ways to meet these requirements by successfully blurring the boundaries and creating exciting new flavor combinations. Sweet and savory flavors, for example, are


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increasingly being fused together to cater to the more adventurous consumer's needs.
"Bold pairings such as pear \& blue cheese, mango \& chili and strawberry \& black pepper, can help manufacturers to diversify their offering and make their product stand out on the supermarket shelf. Coconut infused popcorn and apple flavored crisps are further
examples of how food manufacturers continue to push the boundaries and experiment in new application areas," notes Evans.

One example of how WILD has taken up the fusion trend is by blending energy drinks with other segments from the food and beverage market. This has resulted in energy products with tart notes, such as apple.
"Sour Energy will not only win over people who love tangy tastes: it will also draw in consumers who are looking for alternatives to classic energy drinks but still want an invigorating boost," says Möller.

## Flavor Diversification

The cross category trend is not only a question of fruit flavors. A fun example recently

## > Meeting Consumer Demand for Quality Fruit Products

The demand for healthier, more authentic-looking foods is thriving in today's society. The food and beverage industry has responded to the rising consumer awareness in recent years, by bringing to the fold a whole new range of food and health products containing fruit and vegetables.

With a larger range of products to choose from, consumers are more selective than ever about what they want from the healthy options on offer. They have strong expectations with regards to color, firmness and mouthfeel. In fruit yogurt, for instance, a strawberry should always look and taste like a strawberry and not have a mushy texture. In piccalilli, one must be able to tell a raisin from a currant. Fruit processors need to meet these demands and are constantly looking for ways to further optimize the use of their raw materials.

Most industrially processed fruit and vegetables get damaged by mechanical and thermal treatment. Freezing and pasteurization have negative effects on the fruit texture, leading to a fluffy appearance and an excessively soft mouthfeel. Fruit processors try to overcome these production challenges and create products that contain fruit and vegetables in a way that meets consumer expectations of what fruit in a product should look and taste like. At the same time, effort is put into reducing waste and optimizing product yields.

Fruit preparations which are added to dairy products or pastry filling should ideally contain special characteristics such as fruit integrity, firmness and stability. This can be partially obtained by applying processing techniques like individual


Cooked IQF vegetables

quick freezing (IQF) or by adding calcium salt. However, greater improvements can be realized through the application of enzymes.

DSM offers Rapidase enzymes for the fruit processing industry. These include pectin methyl esterase enzymes, which create a strong network from the fruit's natural pectin. The fruit firming effect is achieved by reinforcing the structure of the plant cell and thus helping to overcome the negative effects of mechanical and thermal treatment during food production.

These enzymes can be added to a variety of fruits and vegetables, such as strawberry, carrot and tomato in a fresh, frozen or thawed state. Firmness, texture, viscosity and mouthfeel are improved in fruit and vegetable preparations, jams, sauces, cubes or slices.

Besides the aforementioned improvements in texture, the Rapidase enzymes can also improve the taste of the fruit and vegetable preparation. For instance, in the case of tomatoes, processed tomatoes are usually treated with calcium chloride for firmness and as a result have a metallic aftertaste. The pectin methyl esterase enzymes enable a three-fold reduction in calcium salt usage, allowing for a product that tastes better and which is healthier for consumers.

Enzymes enable superior taste and texture providing healthy and authentic-looking products, which ultimately helps fruit processors to optimize the use of their raw materials and meet today's consumer demands. $\bar{\nabla}$

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highlighted by Innova Market Insights relates to alcohol flavors that are appearing in highly diverse new application areas that go far beyond the obvious. New tracked products with traditional alcohol flavors can be as diverse as Pina Colada in soup, vodka in marmalade and wine in salt. For example, Supp Kultur Pina Colada Style Curry Soup (Germany) is made with coconut milk, pineapple and rum, in a 390 ml easy-to-open aluminum can. Artisan Kitchen Lemon and Vanilla Vodka Marmalade (UK) fuses fresh leafy lemons, sugar and fresh vanilla seeds, which is all finished with a splash of vanilla vodka.
"In the whole food and beverages industry, the boundaries between the individual market segments are increasingly disappearing. More and more products with a typical flavor from one category are appearing in a completely different food category," says Hoffmann at Doehler. He notes that examples of these cross-category transfers include currywurst-flavored crisps, apple strudel ice cream and strawberry cheesecake chocolate.

For Hoffmann, as an existing "sweet" category, soft and energy drinks are particularly suitable for flavors that are reminiscent of sweets and cakes. In response to this trend, Doehler has developed "candy and cake" flavors for beverages. "As a pure flavor incorporated into a recipe or as a compound, they allow innovative beverages that appeal to a younger, innovative target group who are keen to try new things - whether it is a soft drink in apple ring fruit gum flavor, a candy-floss-flavored lemonade or even a beverage with a hint of cheesecake," he concludes.

Whether through using fruit flavors in traditionally sweet applications, such as confectionery or soft drinks, or taking them into entirely new flavor fusion spaces, innovators will be keen to identify the next winning fruit flavor to tempt the trendy consumers' eye and palate. $\sqrt{ }$

