

# Food Business News®

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## Food Business News®

### Keurig Dr Pepper: Building a beverage



## POWERHOUSE

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#### WINTER FANCY FOOD SHOW 2018

### Four concepts shaping the future of food

Several concepts presented at the Winter Fancy Food Show, held Jan. 21-23 in San Francisco, challenge today's notions about food — how it's made, how it's purchased and how it's eaten. Phil Kafarakis, president of the Specialty Food Association,

hosted a panel discussion on Jan. 23 featuring four entrepreneurs who have created new platforms in retail, food service, product development and distribution.

"We've been hearing from these very clever people — different channels, different products, but it seems it's the same kind of passion," Mr. Kafarakis said to open the session. "There's always someone trying to fill their own personal need, which is why we are calling you the 'food innovation nation.' Because someone had a problem and took it upon himself to solve it for himself and for other people like them."

Pradeep Elankumaran wanted an easier way to buy fresh milk for his two-year-old daughter without having to set foot in a

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## Eliminating the pea flavor in pea protein

Masking flavors may allow for the use of pea protein in shakes, bars and cookies



**P**ea protein has its advantages when compared to other plant protein sources. It may be lower in cost and non-G.M.O. Pea protein, however, also may have specific taste issues that are easy to describe.

"They taste like peas," said Paulette Lanzoff, technical director for Synergy Flavors, which has a U.S. office in Wauconda, Ill. "If you try to make a vanilla shake or a strawberry-flavored shake with something that tastes like peas, it's a little bit of a challenge. They've done a lot of things to clean up the pea protein (flavor). We're getting a much cleaner profile with it, but there's still a lot of vegetative notes that come through. We've really got to modify flavors to get them just right for the end application."

Modifying or masking the pea protein flavor may allow for its use in shakes, bars and baked foods. Sweeteners, flavors and other plant protein sources may assist in such masking.

A 2017 study from GlobalData Plc revealed the growing awareness of pea protein, which increased to 47% in 2017 from 38% in 2015, said Tom Vierhile, innovations insight director for GlobalData. While 18% of respondents in 2017 said they did not know what pea protein is, the percentage was 30% in 2015.

People may describe pea protein's flavor in unflattering terms. Common descriptors are grassy, beany, earthy, bitter and chalky, said Ryan Loy, Ph.D., assistant principal scientist at Chromocell

Corp., North Brunswick, N.J. Chromocell owns FlavorHealth, which offers ways to mask flavors. A ProteinBrite system from FlavorHealth mitigates off-tastes from plant proteins, Dr. Loy said.

"This solution offers companies in the wellness and nutrition field the ability to add essential micronutrients or plant proteins to their products without compromising on great tastes across their product lines," Dr. Loy said.

The quantity of pea protein in a sports/nutritional drink or a protein bar may be the primary challenge, said David Bom, Ph.D., technology development manager – beverage flavors, North America for Sensient Flavors, Milwaukee.

"Dosages can range from 10 grams to 30 grams per serving," he said. "That is a large amount of bitter stimuli for any taste-masking system to overcome."

Low-calorie or zero-calorie sweeteners may be used to mask flavors in pea protein applications, but that strategy may bring bitter, metallic off-notes.

"This is where we can leverage our taste modulations technology, which excels at masking the off-notes associated with these products, making them much more palatable," Dr. Bom said.

Applications where the protein is bound, even during mastication, tend to be more palatable than applications where the protein is more available to the taste buds, including beverages, shakes or yogurt, he said.

How pea protein fares in shakes may

depend on the flavor of the shake.

"We can do a really good job of pea protein in vanilla and chocolate and the sweet brown flavors, but some of the fruity flavors are a little bit more of a challenge, strawberry in particular," Ms. Lanzoff said.

In baked foods, pea protein pairs well with a sweet, brown flavor that may be used in cookies, muffins or cakes, she said.

Besides its flavor, pea protein comes with an aroma that consumers may not like. Vanilla might solve the issue.

"You'd want a very aromatic french vanilla profile — spice notes rather than a plain standard vanilla flavor that you'd use in whey protein," Ms. Lanzoff said.

Other plant protein sources may be used in masking pea protein's flavor to give the finished product a more balanced flavor profile, Ms. Lanzoff said. Almonds, macadamia nuts and pumpkin are options.

Pea proteins may have issues with astringency and bitterness, but Cargill's pea protein is different, said Paige Ties, technical service manager, research and development, for Minneapolis-based Cargill.

"It's sourced from non-G.M.O. yellow pea seed varieties specially selected to minimize the off-flavors normally attributed to pulses," she said. "In addition, it's processed without chemicals to bring out the best flavor possible." **FBN**

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