

Offset hemp's taste issues with spices, fruit flavors, whole grains

Bread, burgers and beverages are all potential applications



HEMP NSEEDS

Now that PepsiCo, Inc., Purchase, NY, has shown confidence in the hemp category, other food and beverage companies could follow. Concerns over legal issues should be few, provided products do not contain cannabidiol (CBD), but taste will demand attention.

The US Food and Drug Administration does not allow CBD in foods, beverages and dietary supplements since it is in Epidiolex, an FDA-approved drug. Yet hemp without CBD may not be a problem since the FDA in December 2018 said it had “no questions” about the Generally Recognized As Safe (GRAS) status for three hemp seed-derived food ingredients.

What about flavor?

PepsiCo in February launched Rockstar Unplugged infused with hemp seed oil, spearmint, lemon balm and about 80 mg of caffeine. It comes in three flavors: blueberry, passion fruit and raspberry cucumber.

Flavors and flavor-masking agents may offset unwanted flavors in hemp.

“Hemp oil has a distinctive flavor,” said Larissa Campbell, manager of research and innovation at Allen Flavors, South Plainfield, NJ. “While the exact profile can vary between suppliers, it can be grassy, dirty or nutty. Overall, most hemp oils can be described as earthy, which can be challenging to work with in products such as soft drinks.

“The earthy flavor profile can

dominate many other flavors. One of the best ways to overcome this profile is utilizing flavors that complement them. Spice flavors, such as turmeric, ginger or rosemary, complement the earthiness of hemp oil. Pairing these trending flavors with a fruit flavor like grapefruit creates a rounded, cleaner flavor profile.”

Flavor issues are less challenging in other beverage categories.

“Within coffee products, utilizing a robust, roasted coffee flavor will mitigate the earthiness of hemp oil,” Ms. Campbell said. “The leading profile of the product would be the roasted bitterness of the coffee. In addition, a touch of sodium can help mellow this out as well.”

Flavor-masking agents may work in conjunction with flavors to create a

desired flavored profile, said Brian R. Wilson, application lab manager for Prova, which has a North American office in Beverly, Mass. Hemp also may impact a product visually.

“In terms of coloration issues, the inherent color of hemp protein ranges from drab olive all the way to off-white and lends well to food and beverage products flavorings within the chocolate and coffee ranges,” he said.

Burgers and bread mixes

Hemp burgers and bread mixes are available commercially.

Hemp Way Foods, Evergreen, Colo., offers burgers, crumbles and Italian

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Definitions within cannabis

Cannabis (*Cannabis sativa* L.):

Hemp and marijuana are two classes.

Hemp:

In 2018 the US Agriculture Improvement Act, also known as the farm bill, defined hemp as cannabis and derivatives of cannabis that are less than 0.3% delta-9-tetrahydrocannabinol (THC) on a dry weight basis.

Hemp hearts:

Hulled hemp seeds.

Hemp seed oil:

It is extracted from the seeds of the hemp plant.

Marijuana:

Cannabis that is more than 0.3% THC.

Cannabidiol (CBD):

It currently is illegal to put into interstate commerce a food, beverage or dietary supplement that has CBD in it because CBD is the active ingredient in Epidiolex, a prescription drug, according to the US Food and Drug Administration.

Delta-9-tetrahydrocannabinol (THC):

A psychoactive compound in marijuana.

Hemp industry battles consumer perception, legal confusion

Carla Boyd, owner of Hemp Way Foods, Evergreen, Colo., appeared on the TV news in 2019 and soon received a phone call from her grandmother.

"She said, 'Honey, I just saw you on TV selling that weed burger. You can sell weed burgers on TV?'" Ms. Boyd said.

Hemp Way Foods offers crumbles, burgers and breakfast sausages that contain hemp but no "weed," slang for marijuana. The phone conversation shows how those in the hemp industry struggle with consumer perception, as well as legal confusion.

The Agriculture Improvement Act of 2018, also known as the farm bill, removed hemp from the Controlled Substances Act, which made hemp farming legal in the United States. Hemp and



Hemp Burgers from Hemp Way Foods contain 10 grams of plant protein and 8 grams of fiber per 4-oz serving.

marijuana are both *Cannabis sativa L.*, but they differ. Hemp must contain less than 0.3% tetrahydrocannabinol (THC), the psychoactive compound in marijuana.

Ms. Boyd likened the cannabis genus to the canine family.

"You've got the wolf, and you've got the Pekinese," she said. "That wolf will eat the Pekinese, but they are still in the same family."

Richard Charpentier owns Hemp N' Seeds, Morgantown, Pa., which sells bread mixes that contain hemp. He receives letters of certification from hemp suppliers saying the hemp contains neither THC nor cannabidiol (CBD).

"We need to educate consumers that, 'Hey, this is not drugs. This is not THC,'" Mr. Charpentier said.

Even after the farm bill, legal confusion exists.

Perkins Coie provided legal advice to PepsiCo, Inc., Purchase, NY, before the company launched Rockstar Unplugged with hemp seed oil. Barak Cohen, chair of the cannabis industry group at Perkins Coie, served as the matter lead. While Mr. Cohen could not give details on the PepsiCo consultation because of attorney-client privilege, he spoke about the cannabis category in general in an interview with *Food Business News*.

The federal government needs to take a consistent regulatory approach on products in the cannabis category, Mr. Cohen said. Currently, the government is not being clear or forthcoming in producing regulations.

"That's generally bad for consumers as well as businesses that want to understand what the guardrails are for providing products to consumers," he said. "It's a very confusing marketplace right now from a regulatory perspective."

State governments, meanwhile, are struggling to understand how to regulate products in the cannabis category.

"All these products are regulated essentially in 51 different ways," Mr. Cohen said. "You've got the federal government, and you've got the 50 states. Even though hemp seed is recognized as safe by the FDA as a food additive, the states all have very, very different positions on how products should be handled, especially because they are associated with the cannabis plant."

The future of cannabis, including hemp, still appears positive. A Whitney Economics report for the fourth quarter of 2021 surveyed responses from operations and stakeholders in 20 states. The report forecast cannabis to generate over \$25 billion in legal medical and adult-use revenues in 2021 and then generate \$45 billion by 2025.

Business is good at Hemp Way Foods. The brand launched in Whole Foods Market in Colorado last year and is found in more than 30 retail outlets in Colorado and California. Ms. Boyd will represent Hemp Way Foods as part of the Colorado Department of Agriculture booth during the National Restaurant Association show May 21-24 in Chicago.

"There's much better education, and people are starting to really, truly understand, but there's definitely more to do," she said. **FBN**

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PepsiCo's Rockstar Unplugged is infused with hemp seed oil, spearmint, lemon balm and about 80 mg of caffeine.

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breakfast sausages that feature hemp in the frozen food aisle.

"To me (hemp) has a little bit of earth flavor but very heavy in the nuttier taste," said Carla Boyd, who founded the company in 2014. "I sprinkle it on everything. I sprinkle it on salads and smoothies. I even make a hemp hummus with it."

A 4-oz serving of hemp burger with organic hemp hearts and hemp protein

contains 10 grams of plant protein and 8 grams of fiber. Garlic, Himalayan sea salt, organic spice and organic black pepper provide flavor. Lentils and organic brown rice assist in achieving a meat-like texture.

Hemp N' Seeds, Morgantown, Pa., offers four bread mix varieties containing hemp: keto with 10 grams of protein and 20 grams of fiber per serving, premium artisan whole wheat with 6 grams of protein and 3 grams of fiber, multigrain

rustic French with 8 grams of protein and 4 grams of fiber, and German farmer rye with 7 grams of protein and 4 grams of fiber.

Hemp contains all nine essential amino acids, said Richard Charpentier, founder of the company, which is targeting the at-home baker.

Hemp N' Seeds uses different whole grains to mask the off-notes of hemp and blends different flavors as well, Mr. Charpentier said. White bread would present more challenges than whole wheat bread.

"Can you make a bread 100% with hemp? No, you can't," Mr. Charpentier said. "So you are going to need other ingredients."

New technologies from manufacturers of hemp protein and hemp food products are improving the color and flavor of hemp.

"They have found ways to make it a little more yellow," Mr. Charpentier said. "The flavor is not as aggressive. Hemp oil by itself is not as pleasant. They are coming up with ways to change the flavor and make it more palatable." **FBN**

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