



## RAISING THE BAR ON PROTEIN:

# A guide to using plant proteins in snack bars

Portable, convenient and packed with protein, snack bars continue their reign as consumer favorites. But crafting a bar that stands out in this crowded marketplace is no easy task. Last year alone, nearly 600 new bars made their debut on U.S. store shelves, half of which boasted some kind of protein claim.<sup>1</sup>

“Not so long ago, developers formulating a high-protein bar would have given little thought to their protein choice – dairy proteins ruled the day,” says Courtney LeDrew, Cargill’s Senior Marketing Manager and resident snack-trend expert. “Now, however, with the proliferation of protein sources and formats, it’s not such a cut-and-dried decision.”

Product development goals – from desired protein inclusion levels to label considerations – all factor into a brand’s ingredient decisions. “Protein is still the big driver for bar sales,” LeDrew explains, “the difference is how brands are using their protein choices to differentiate their products.”

## Plant power

While dairy proteins still dominate, LeDrew has seen a rise in bars aimed at the growing plant-based space.



**Six in 10 consumers report paying attention to the source of protein they consume, with factors like taste, texture, nutrition and quality all weighing on their minds.<sup>2</sup>**

*Source: HealthFocus International*

“Plant-based products are getting lots of buzz, which helps explain why across the grocery store, product launches making plant-based claims are up nearly 40% in the last five years,” LeDrew says. “It’s all about perception... and consumers perceive plant protein as a health positive.”

Allergens are another consideration as formulators winnow their protein options. Rather than use dairy or soy protein, brands might opt for pea, bean or lentil protein to avoid major allergens and appeal to label-conscious consumers.

“Options like pea protein fit many of today’s broader product development trends. It’s non-GMO, vegan, gluten-free, soy-free and more,” LeDrew notes. “That checks a lot of boxes for marketers.”

However, label appeal can only go so far. In the world of snack bars, products must deliver on taste and texture – something that hasn’t always been a given, especially as protein levels rise.

“We know snack bar shoppers are looking at the amount of protein,” LeDrew says, “but at the end of the day, you have to balance grams of protein with things like taste, texture and value. If the final product doesn’t live up to consumers’ expectations in those areas too, it won’t get a second look.”

## Powders plus

Fortunately, advances in processing technology have sparked significant innovation around protein formats, yielding new tools that deliver greater texture flexibility and improved flavor profiles. Traditional protein powders still find their way into some formulations, but Cargill Principal Food Scientist Chad Rieschl is especially keen on the possibilities afforded by newer hydrolyzed proteins and inclusion crisps.

“When working with proteins in snack bar applications, texture is always the big thing to watch,” he explains. “Proteins are notorious for stealing moisture from other ingredients, and bars don’t have much free moisture to begin with.”

As a result, at higher inclusion levels, it's easy to end up with a bar that has a short, hard texture. Hydrolyzed proteins, like those produced by Cargill's partner PURIS,<sup>®</sup> help bars stay softer, giving product developers far greater flexibility around texture as compared to most standard plant protein powders.

He's also a big fan of using protein crisps as inclusions in snack bars, an approach that adds visual appeal and an enjoyable crunchy texture – while serving as another protein source.

**The PURIS portfolio includes several pea-protein crisps, including an option packed with 60% protein.**

Still, if brands are aiming for double-digit grams of protein, formulators may need to expand their protein playbook further.

“Fortunately, protein can come from lots of different sources, including nut butters, nuts and seeds, along with crisps and hydrolyzed powders,” Rieschl notes. “A single bar might need to tap all these sources to reach its protein goals.”

## Flavor forward

That same strategy of leveraging multiple protein sources can also help address another common challenge in high protein bars: flavor.

“Most plant proteins exhibit some level of negative sensory attributes, such as astringency or beany, grassy or earthy flavor notes,” Rieschl explains, though he notes that the extent of those off-notes can vary based on the botanical source and the ingredient provider. PURIS pea protein, for example, is known for its more neutral flavor profile, but there are plenty of pea proteins with more pronounced vegetative notes.

Flavor improvement has been a focus for most ingredient suppliers, and as a result, plant protein flavor profiles have

gotten progressively better in recent years. However, the more grams of protein in the product, the more flavor challenges that may arise.

“You’ll see bars touting 20 grams of protein in a 60-gram bar,” Rieschl says. “That means a third of the formula is protein – so the less flavor baggage, the better.”

Starting with the best-tasting proteins is a key first step, but there are often flavor advantages when formulators use multiple botanical sources and formats to reach their grams-of-protein goals. Flavor maskers, which can help mute off-notes, are another tool, as is selecting a complementary characterizing profile.

“Not every characterizing flavor works with every plant protein,” Rieschl notes. “Brown flavors, like chocolate, tend to pair well with pea protein, but a lighter, fruity profile might present more challenges.”

## Plant positives

Regardless of the protein source, high-protein bars may present some formulation hurdles. Taste and texture are the most common, but advances like hydrolyzed pea protein and pea protein crisps are helping brands achieve higher and higher inclusion levels. Still, Cargill's LeDrew reminds brands to keep consumers front-and-center throughout the development process.

“They may want a high-protein snack bar because they perceive it to be a healthier snacking choice or view it as an easy meal replacement – but they’re still looking for indulgent flavors and satisfying textures,” she says. “It doesn’t have to be one or other. Plant proteins can deliver on both nutrition and indulgence – and Cargill’s technical teams can help you get there.”

Ready to develop the next breakthrough protein bar?  
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PURIS<sup>®</sup> Pea Protein is a trademark of PURIS Foods, a Cargill strategic partner.

SOURCES:

<sup>1</sup> Innova Market Insights. “Cereal/Snack Bar Launches in U.S., June 2022 – May 2023.”

<sup>2</sup> HealthFocus International, 2022.

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