



## Protein powder products: Differentiating in a crowded market

*Plant protein powders are surging in both supplements and food/beverages, with ample opportunities for plants beyond the popular pea and rice, including a ripe opportunity for hemp.*

Steve Myers | Aug 07, 2019

Protein is booming, and powders have played a huge role in delivering efficacious amounts of protein to sports nutrition consumers looking to build and maintain muscle mass. Tubs of ready-to-mix (RTM) protein powders have long been a visual mainstay of many sports nutrition stores, aisles and sections, and powdered ingredients are also used to fill sports supplement capsules and provide muscle to bars and beverages. However, the protein powder market is crowded, and the

consumer shift to wanting higher protein intake via foods and beverages instead of supplements only adds to the challenges of making a protein powder-based product stand out and be successful.

For companies playing in the RTM protein powder space, differentiation requires innovative flavors and ingredient combinations, as well as enhanced bioavailability and responsible sourcing. The protein ready-to-drink (RTD) market is seeing increasing numbers of clear or water beverages with high protein content, in addition to new hot protein RTD products. The food segment has exploded with high-protein offerings as companies have found ways to infuse protein into an array of everyday foods and snacks. In every corner of the protein powder market, new technologies are supporting innovation.

The size and future of the protein supplement market varies depending on which market expert you ask, but Allied Market Research and Marqual IT Solutions Pvt. Ltd (KBV Research) both predicted around 7.5% compound annual growth rate (CAGR) over the next five or six years and a resultant market of US\$8.7 billion. Zion Market Research calculated the CAGR at 5.7% and a size of \$3.6 billion heading into 2024. Either way, the segment is expected to enjoy solid growth worldwide.

On the animal side, whey protein is set to grow 7.6% to \$12.5 billion by 2024, according to Statista. On the plant side, the global pea protein market was about \$101.7 million (all uses) in 2018 and should grow at a 17.4% CAGR through 2025, reported Grand View Research. Persistence Market Research reported organic pea protein should grow at an even more robust 7.2% CAGR through 2027.

For sports nutrition powder products, proprietary *Nutrition Business Journal (NBJ)* data shows a consistent annual growth around 7% from 2014 to 2018, with a resulting \$5.4 billion in annual sales. For RTD protein drinks, *NBJ* reported the market grew 16%—more than double the CAGR of protein powder products—from 2013 to 2018. However, the market size for RTD protein drinks, \$928 million in annual sales, is far smaller than for protein powders.

Despite these growth and size figures, companies operating in or eyeing this space still face challenges to success and profit.

Longtime sports nutrition formulator Bruce Kneller, currently a partner with HiQ Financial Holdings Inc., said the protein powder market is saturated and margins have thinned, even for major players with great buying and selling leverage.

“Look at Amazon: How many brands are cutting each other’s throats to make lower and lower margins?” he asked, noting the new generation of young brand owners look at sales as quantitative, not qualitative, and are happy to make smaller margins on protein powders.

“If you are not one of the sources for protein and/or a contract manufacturer with a house brand to push (or maybe one of the two 'withering' retail giants in the space?), forget it,” he quipped, saying protein powder is a price-driven commodity market now. “You can't make any money.”

Kneller said the new wave of high-protein products is driven by functional foods, not RTM or even RTD. “The better bars with nuts and such are selling well,” he reported, adding protein-rich yogurt and ice cream are also good performers.

Among product types, high-protein functional foods may be trendy, but there are some consumer-driven trends that cut across all protein product types.

## **Sugar Reduction**

As many as 86% of consumers are limiting sugar in their diets, according to Mintel.

“Sugar reduction is still a top priority for many consumers and therefore, many brands,” said Holly McHugh, Imbibe Inc., during her trends presentation in the sports nutrition workshop at SupplySide East trade show in April 2019. “As changes to the nutrition facts panel loom, brands are highlighting ‘no added sugars,’ in products, which will make it a top claim next year.”

She explained the main challenge for brands is that consumers still want a sweet flavor but less sugar, and many are avoiding artificial sweeteners and flavors. Stevia has become the leading alternative.

“Stevia will dominate the natural, non-nutritive sweetener category since it is approved for use in food and beverage in North American, European and Asian countries and is considered more ‘clean label’ than artificial sweeteners,” McHugh said, although monk fruit and other alternatives are increasingly used.

In 2017, stevia was used in 28% of new products that use high-intensity sweeteners, eclipsing aspartame (25%), according to Mintel.

Nielsen data, as publicized by Cargill, showed stevia sales rose about 12%, while sucralose and saccharin sales both fell 6% and aspartame sales slid 8%.

As with artificial sweeteners, one of the criticisms of stevia has been taste. However, McHugh noted advances in stevia technology and flavors with modulating properties that mask off-notes have helped the taste of stevia-sweetened products.

However, the sports nutrition protein product segment has been slow to adopt stevia and other alternatives in all areas. For instance, **INSIDER**’s review of the top-selling RTM protein powder products on BodyBuilding.com and Amazon.com revealed only one product on each list was sweetened with stevia, with the rest were sweetened mostly with the artificial sweetener acesulfame potassium (Ace K); a few relied on or included sucralose.

These top-selling lists were primarily whey- or dairy-based proteins. A similar review of the top-selling plant protein powders on both websites found almost all were sweetened with some form of stevia or other natural sweeteners.

For protein beverages, the sweeteners were mixed. Many of the top-selling such beverages on Amazon used stevia, monkfruit, agave, honey and cane sugar; only a few used Ace K or sucralose. Legacy sports nutrition brands tended to use artificial

sweeteners, especially if they had a top-selling protein powder featuring the same sweeteners. Newer sports nutrition brands and those with crossover appeal more frequently used natural alternatives.

The core bodybuilding segment may be fine with artificial sweeteners, but the broader sports nutrition and protein markets seem to be trending to more natural alternatives, leaving legacy brands with potentially less crossover appeal.

A similar dichotomy is found in protein bars, as well-established sports nutrition bars tend to feature artificial sweeteners such sucralose, according to **INSIDER**'s review of BodyBuilding.com's best-selling protein bars. There are exceptions, as category leaders Quest Nutrition has bars sweetened with stevia.

Over at Amazon, the top protein bars include Quest (with stevia) as well as mainstream-sports crossover brands such as Luna, Rx Bar and gomacro, many of which feature natural-derived sweeteners, including stevia, sugar alcohols, cane sugar, coconut sugar and dates.

While protein powders, bars and drinks may purposefully keep carbohydrates (i.e., sugar) calories low, especially amidst the current keto diet explosion, high-protein foods and snacks may face more challenges doing so.

Among the high-protein food and snacks hitting the market in droves, baked goods often include cane sugar for its baking-friendly structural properties. Still, there are some stevia products available in a 'baking sugar' form.

## **Clean Label**

One way that high-protein baked products—cookies, pancakes, muffins and brownies are popular—can differentiate is by using organic cane sugar and brown rice syrup. Because organic certification rejects artificial ingredients and harmful agricultural chemicals, many consumers see organic ingredients as clean label.

McHugh said clean label is no longer a trend, but an expectation. Innova Market Insights reported an uptick of about 30% between 2013 and 2017 in the use of clean label claims touting no preservatives, artificial colors, flavors or sweeteners, non-GMO, and natural. This is only one aspect of clean label, which generally means shorter ingredient lists with recognizable names.

Innova market Insights reported 91% of U.S. consumers believe foods with recognizable ingredients are healthier.

Depending on the formulation, sports nutrition products like protein powders and foods can struggle to keep ingredient lists short, but “cleaning up” the types of ingredients used can go a long way to tapping into these trends. Using natural sweeteners is one method, as is avoiding the use of proprietary blends.

McHugh said more brands are referring to their products as “clean protein,” “clean performance” and “clean energy.”

“Sucralose and colors like Red #40 are common in sports nutrition products, but several brands I spoke with have transitioned or are transitioning to natural sweeteners, colors and flavors,” she noted.

In the realm of protein ingredients, the nomenclature is what it is—protein, whether plant or animal, tends to be either isolates or concentrates. However, even whey companies have sought to differentiate by using “organic,” “grass fed” or “native” versions, which resonate with some core and crossover sports nutrition consumers.

Kneller said while there is money to be made catering to consumers, including vegans, who may want or need organic, kosher or similar certifications, but this market also is becoming crowded.

## **Plant Proteins**

One area where vegans and vegetarians are not alone is in the growing demand for plant protein products. Many athletes and consumers see plant proteins as cleaner and healthier.

The global plant protein market should grow at a 7% CAGR and reach \$7.5 billion by 2024, according to Mordor Intelligence, which noted North America accounts for just under 40% of this market. The market research firm noted the U.S. National Institute of Allergy and Infectious Diseases has reported 90% of food allergies are caused by eggs, milk, fish, red meat, soy and nuts.

“The demand for plant proteins is growing at a fast rate, owing to change in lifestyle, lack of balanced dietary intake and improved R&D, in order to develop new kinds of plant-protein-enriched products,” Mordor noted, in its recent report on the plant protein market.

This leaves a door open for plants such as pea and rice, which have driven the plant protein sports nutrition market in recent years.

Among the top-selling plant proteins at Amazon and BodyBuilding.com, pea and rice proteins are the most common sources. Other plant sources surfacing in sports nutrition protein products include quinoa, chia, garbanzo, lentils, cranberry seed, artichoke, pumpkin seed, sunflower seed, alfalfa, hemp and sacha inchi, a nut heralded by the Incas.

Another growing plant protein source is a tree nut. Almond milk and butter have become popular in food and beverage products, but almond protein powder is ripe prime for use in sports nutrition products.

Stephanie Doan, senior R&D food scientist, Blue Diamond Almonds, said almond protein powder delivers approximately 41 to 48% protein, making one 30 gram serving a good source of protein. “Almond Protein has been shown to be compatible with other complementary proteins, including both plant-based sources and dairy sources, to create products with complete amino acid profiles for optimal product

development,” she noted. “Within blends, almond protein can also aid in neutralizing unpleasant flavors (such as ‘earthy’ notes in pea protein), creating a well-rounded product with good flavor and a simpler label.”

Almond protein powder has a better taste profile than other protein powders, according to Shaheen Majeed, President Worldwide, Sabinsa, maker of Promond almond powder.

"It has a complete range of amino acids, including branched-chain amino acids (BCAAs)," he said, noting Promond has a minimum of 50% protein, is easily digestible, and fit for vegans. "It has a low carbohydrate content and is lactose-free. This off-white to cream, free-flowing powder is easy to formulate and process into a variety of finished products."

New Hope’s NEXT Trend Database, which tracks products and claims at Natural Products Expo trade shows, has found innovation activity is much higher in the plant protein than in the animal protein segment.

There were 680 plant protein ingredients/claims relating to protein volume at Expo West 2018, compared to only 499 for animal proteins. The share growth for plant protein ingredients/claims was 38%, compared to 5% for animal proteins, based on data from EXPO West 2016 through 2018.

On the animal side, NEXT found substantial negative share growth for whey, casein and milk protein in diet and nutrition products (-32, -61 and -62%, respectively). These proteins fared much better in food and beverage products. While whey had a modest 26% share growth, casein and milk protein posted huge growth shares of 198 and 182%. Clearly, the innovation for these proteins shifted from supplements to food/beverage.

Egg protein was the only outlier, with positive share growth in both supplements and food/drinks (88 and 87%, respectively).

Plant proteins also had gains in both diet/nutrition and food/beverage segments at Expo. Pea protein was way out front with a whopping 131% share growth in diet/nutrition products and an astronomical 486% share growth in food and beverage. Rice protein logged a thin 7% share growth for supplements but an impressive 101% growth in food and beverage.

Hemp posted disappointing growth, with -44% in supplements and -25% share growth in foods/drinks. With the recent passage of the 2018 Farm Bill in the United States, hemp with lower than 0.3% THC (tetrahydrocannabinol, the psychoactive ingredient in cannabis) will now be legal. Its regulatory status in supplements and foods awaits FDA or Congressional pathway to legality, but the hemp and CBD products have been flooding the market in the meantime. Thus, there is a real opportunity in hemp protein powder for sports nutrition and broader applications.

As expected, soy protein share growth at Expo West 2018 fell 40% in supplements but managed a modest 19% share growth in foods and beverages, according to NEXT analysis.

## **Alluring Flavors**

For a long time, protein powder products were mostly flavored with variations of chocolate and vanilla—the texture and natural flavor of proteins, especially dairy-based ones, call for creamy flavors. However, brands have broken out from this black and white pen to offer a broader range of dessert flavors such as birthday cake, salted caramel, brownie, red velvet, crème brulee, mocha cappuccino, malt, banana creme and other rich dessert flavors. Ghost Nutrition, a flavor innovator across all its sports supplements, uses cereal milk variations as flavors for both its whey and plant protein products.

## **Technology Drives New Applications**

As the market for all kinds of protein powder products becomes crowded, one area of innovation and differentiation is in the underlying technologies used to make

better, innovative and more beneficial products.

As the sports market has turned away from soy protein, it is also wary of soy lecithin, which is considered not "clean" by many consumers.

Glanbia's patent-pending BevEdge technology offers a clean label method of delivering exceptional dispersibility and superior flavor without lecithin, according to the company. Introduced with its BevEdge Pea Protein in 2017, this technology is now also available as BevEdge Whey Protein 290, featuring a whey protein isolate.

"With no lecithin in the ingredient, there is also no use of soy, so no soy allergen and no soy on the label," Glanbia noted.

Boosting the bioavailability of protein powders is a benefit offered by Nutrition 21's Velositol, a combination of amylopectin and chromium. A 2017 study publication reported adding Velositol to a 6 g dose of whey protein taken by men and women increased the fractional rate of muscle protein synthesis (MSP, the process of building new muscle) beyond what was seen with whey protein alone (*J Int Soc Sports Nutr.* 2017;14:6).

A product of an Australian-New Zealand partnership, Extrusion Porosification Technology (EPT) from Clextal promises protein powder manufacturers improved product characteristics and higher solubility for rehydration.

"The EPT process enables enhanced rehydration properties such as dispersibility and solubility with difficult-to-dry products, such as dairy proteins (Whey Protein Concentrates and Milk Protein Concentrates)," explained Alain Brisset, EPT business development manager, Clextal, adding it can also protect sensitive molecules like flavors. "We can achieve optimal flavor retention for powdered beverages (coffee, for example) compared to conventional spray drying."

Juna Deygat, EPT worldwide sales manager, Clextal, said the technology can reduce energy consumption and generate a higher throughput. "This is due to the

processing of highly concentrated media,” she explained, noting the concentration does not require as much energy as a spray tower (more than two times less).”

Targeting the plant protein trend, Futureceuticals developed its Beverage-Ready Grains to help protein beverage formulators tackle issues with taste, texture and mouthfeel. The process behind Beverage Ready Grains—including oat, quinoa and ancient grain varieties— shatters the tough cell wall and creates a free-flowing hydrocolloid-like material, according to the company.

As these and other technologies help deliver more potent and flavorful protein powder-based products within economic and market constraints, consumers and athletes will benefit from a wider array of product options than even the dizzying array of high-protein food and beverages. Adding energy and recovery ingredients is yet another way protein powder products, which easily blend with other powders like creatine and botanicals, are upping the ante in a crowded marketplace.

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