

The Essential Guide to Choosing a Protein Ingredient Partner



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With unprecedented consumer interest in protein and protein-enhanced foods and beverages, product developers are working hard to create consumer products that will satisfy this burgeoning craving. Faced with an expanding array of choices in protein ingredients, it can be an enormous challenge for even the most experienced product developer to choose the right ingredient from the right source for their chosen format.

The following guide helps to outline choices and considerations in choosing a protein ingredients supplier and partner. Its objective is to help food and beverage makers understand the fundamentals of protein ingredients and know what to look for when seeking reliable, professional protein experts and sources.

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Introduction

With health and wellness foremost on consumers' minds, many are actively seeking protein-packed foods and beverages. But they're not turning to steaks and tofu. Many are turning to protein-fortified options, including dairy and dairy alternatives, snacks, meal replacements, and recovery beverages, among many other options. With the variety of protein sources currently available, as well as a marked acceleration in protein ingredient technology, it can be a challenge for formulators and marketers to know which protein ingredient is best for their product.

Multiple studies attest that protein claims for foods and beverages are attracting consumers in increasing numbers. For example, such claims "continue to grow in appeal across the globe," according to a recent report by FMCG Gurus.¹ The report, based on a study of global protein market trends, revealed that, "unlike other health fads...the desire for high protein products is something that has been incorporated into everyday consumer attitudes and behaviors."

According to the report, the appeal of protein is based on it being an ingredient that consumers "know and trust" and is a part of "everyday food and drink." Moreover, it is attractive as an ingredient that

consumers know they won't have to "pay a premium" for. Simply put, consumers like—and trust—protein; they understand that it is healthy, readily available, reasonable, and familiar.

We hope this guide can serve as a reliable resource for product developers and marketers in their product innovation journey. There are many options in choosing a protein ingredient supplier and many attributes to consider. From cost to quality, collaboration to supply chain, finding the right partner can make all the difference in your ongoing product development cycle.

The considerations laid out in this guide can help any brand or manufacturer, no matter their size, make a more informed decision about the best partner for their individual needs.

We hope you find it useful and consider Glanbia Nutritionals in your protein-fortified product development journey!

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The Global Protein Market: What Consumers Want in 2022

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Demand for protein is on the rise worldwide.

As consumers' wellness needs evolve, protein is playing a bigger role in their purchasing decisions. From convenient protein-fortified snacks to realistic plant-based meats to protein bioactives that support an expanding outlook on nutrition and wellness, protein and protein-based bioactive ingredients are checking all the boxes for today's consumers.

The global protein ingredient market continues to be led by soy and dairy in terms of volume, followed by pea, wheat, potato, and rice. While advantages in cost, availability, nutrition, and functionality will keep soy and dairy in high demand, other proteins have strong appeal in specific applications, such as wheat protein in baking and pea protein as a non-genetically modified material, allergy-free alternative to soy.

Global Supply of Protein Fortification Ingredients

Protein Source	Est. Metric Tonnes
Soy	2,000,000
Dairy	890,000
Pea	140,000
Wheat	70,000
Potato	65,000
Rice	11,000
Other	10,000

Source: Internal knowledge & American Dairy Products Institute

Consumers' strong and growing interest in protein is creating new opportunities that touch on the functional benefits of different proteins, protein diversity in the diet, and new protein sources.

Here's a look at a few of the themes we see driving the market:

Demand for Plant Proteins Growing

Plant-based proteins continue to gain traction, particularly in North America and Europe. While plant-based proteins are increasingly being incorporated into sports nutrition products, growth in flexitarian eating is also creating demand for plant-based proteins in meat and dairy alternatives. Soy protein remains the go-to plant protein for nutrition products due to its high protein quality and for plant-based meats due to the functional properties it offers.

However, issues of GM crop contamination (especially in Europe) and concerns around allergens and phytoestrogens are driving a shift toward non-soy plant proteins, particularly in premium products. Pea protein is the up-and-coming plant protein of choice for manufacturers that wish to sidestep the issues surrounding soy. Though the pea protein market is still small, at just a fraction of the soy protein market, it's rapidly expanding to meet demand.

Dairy Protein Leads in Premium Products

Dairy proteins, which include whey and milk proteins, will continue to lead in premium applications, such as sports nutrition, clinical nutrition, and infant formula. Dairy proteins are expected to gain share in niches that emphasize protein quality. Examples include products for children and sports performance products like protein-fortified ready-to-drink beverages and nutrient-dense bars.

The sports nutrition category, in particular, is characterized by nutrition-savvy consumers that are likely to understand not just the concept of protein quality, but also the performance implications associated with different types of proteins. For example, fast-absorbing whey proteins are popular for post-workout muscle building and maintenance, while slow-absorbing milk proteins are known for providing sustained release and satiety. In the U.S., dairy remains the preferred protein choice by active consumers for protein-fortified beverages and powders.¹



Alternative Proteins for Product Differentiation

In North America, the growing demand for protein has launched an interest in alternative proteins, which is as much about culinary adventure as it is about nutrition. Using proteins derived from alternative legumes, seeds, nuts, grains, fungi, or algae is a way to add excitement, as well as the dietary benefits of protein diversity, to any product. Alternative legume proteins include chickpea, fava bean, and lupin proteins, while seed-based options include sacha inchi, hemp, flax, chia, pumpkin, and sunflower seed proteins. The use of canola and alfalfa proteins is also picking up.

Blending of animal and plant proteins, or animal and fungal proteins, is another approach to addressing consumers' interest in protein diversity. These types of protein blends allow a consumer to have the complete protein benefits associated with many animal proteins along with the superfood benefits of certain plants and mushrooms. In retail products, the so-called "blended burger" (which blends beef with mushrooms) and dairy/almond milk blends are examples of this trend.

Another emerging trend is blending complementary plant-based proteins so they have the right balance of amino acids to be complete proteins—those containing all nine essential amino acids—or to improve their protein digestibility corrected amino acid score (PDCAAS). But more on those later.

Choosing the Right Protein Solution

While consumers' protein needs may be very diverse, there is fortunately a wide variety of protein ingredients on the market to meet these needs—including dairy-based protein concentrates, isolates, hydrolysates, and those rich in bioactive components—available from animal and plant sources.

The simplest approach to choosing the right protein ingredient for any product is to first determine which benefits are needed to achieve the best product for the target consumer. All proteins are not created equal. Differences in nutrient quality, functionality, flavor, cost, health benefits, and consumer perception will influence protein selection. What works best in a nutrition bar may not be ideal for protein water or plant-based meat, for example.

In developing a new protein product or reformulating a product to improve its protein content, it can be helpful to lean on the ingredient supplier to learn about all the options available and the often nuanced differences among them. Seeking a partner with specific protein expertise is key to creating products that will be successful in the market. One of the first places a formulator can start is with protein source. Keep reading to learn more about the benefits and challenges of the most popular protein ingredients.

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Comparing Protein Sources

Comparing Protein Sources

Ingredient choices, especially when it comes to protein, can help or hurt brand owners in achieving their ideal formulation.

While plant proteins have been trending up rapidly, consumers focused on the purity, quality, and bioavailability of protein are driving a renewed surge of interest in dairy proteins.

Consumers are reaching for grab-and-go options, especially for breakfast, lunch, and those times in between. So what's the best protein source today's better-for-you product maker should consider—plant or dairy? The answer is both. There are advantages to both types of protein, and with today's ingredient technology more sophisticated than ever, options can suit almost any formulation.

All Proteins Are Not Created Equal

When it comes to “plant versus dairy” proteins, what do consumers prefer? As it happens, that depends on the product. According to a consumer study by Ipsos Retail Performance, almost 10 million Americans claim to follow plant-based diets, a nine-fold increase since 2004. Yet, when those consumers were asked about preferred protein sources for beverages, just over half (57%) cited a preference for dairy. This was more than four times the second-most preferred source (and most common plant protein source), soy (14%). Only 5% said they favored pea protein. And, more than a fifth—22%—declared no preference in protein source for their functional beverages.¹

On the other side, the plant-based protein revolution is now in full swing and only expected to keep growing strong, at least through 2025.² A 2018 Nielsen survey³ found that almost four in 10 Americans admitted to conscious efforts to add more plant-based options into their diets. In 2020—pre-pandemic—consumer sales research group SPINS saw that number jump by about 50% to six in 10 consumers.⁴

Another consideration is protein quality. Dairy proteins provide a high-quality complete protein, or one that achieves a PDCAAS score of 1.00. Most plant proteins, including pea protein, need other proteins to supplement their amino acid content to make them a complete protein. [See sidebar for more info on PDCAAS.]

Consumer perception and protein quality are two major considerations, but taste and texture are the determining factors in consumer approval and, in many cases, lead product formulation discussions. Let's take the example of protein fortified nutrition bars. A key consideration when it comes to protein choice in a high protein bar

PDCAAS: The Protein Digestibility Corrected Amino Acid Score

The Protein Digestibility Corrected Amino Acid Score (PDCAAS) was devised as a way to measure the actual protein quality of foods and ingredients via how much of the protein components of a food are digested and absorbed by the body. It takes the amount of essential amino acids in a digested amount of protein with at least 100% yielding a score of 1.00.

Here are PDCAAS score of common sources of protein ingredients:

Typical PDCAAS Scores of Popular Protein Sources⁵

Protein Source	PDCAAS Score
Bovine milk	1.00
Whey protein	1.00
Casein	1.00
Soy protein	1.00
Pea protein	0.91
Chickpea protein	0.71
Rice protein	0.64
Peanut protein	0.55
Wheat protein	0.54

is texture. Plant and dairy proteins vary significantly. Even milk and whey proteins have variation between them. Milk proteins tend to have shorter texture, while whey proteins provide a chewier or dense texture. Plant proteins, like pea protein, are often gritty.

Then there is flavor. Plant proteins have an additional challenge when it comes to flavor. “The flavor masking aspect in plant-based formulations is so much more relevant,” says Brooke Rosenthal, Product Strategy Manager, Flavors. “In plant-based formulations, application scientists and flavorists work together to optimize the full system.”

If dairy-based proteins provide a clean slate, plant-based formulations are a better canvas for bold flavors. “Plant-proteins impart their own inherent flavors, which can often be a challenge,” stresses R&D Research Manager Steve Adolphson. “Most of the time, brands have specific flavors in mind, but sometimes protein can help guide flavor.” For example, pea proteins are not well suited to delicate flavors like vanilla and almond, but they are better to more assertive notes like cinnamon or chai. “Most of the time, we can make bars that match the customer’s request,” Adolphson acknowledges, “but we also give them options that may be better suited and let them make the decision.”

“Most of the time, brands have specific flavors in mind, but sometimes protein can help guide the flavor.”

—Steve Adolphson, R&D Research Manager

Let’s dive into some of the most popular plant and dairy protein ingredients on the market today and the advantages they offer to consumers and food and beverage makers alike.



Dairy Proteins

For processors, dairy proteins deliver high functionality when it comes to flavor and texture attributes. High dairy protein concentrations (greater than 15 g of protein) require a level of understanding in ingredient technology and formulations. However, dairy proteins tend to be easier to work with than plant proteins from a formulation perspective. Because of these positive attributes, and the overall high acceptance by consumers who do not avoid dairy as a principle, dairy proteins have experienced strong growth even as plant proteins have trended upward.

Dairy proteins, especially whey and casein, are leading protein sources for sports nutrition, clinical nutrition, and infant formula product categories. The two biggest advantages of dairy proteins over many plant proteins are that they are a complete protein source and have high bioavailability. In fact, isolation and purification technology today is so advanced that whey protein isolates have demonstrated superior bioavailability.

From a product functionality standpoint, dairy proteins have benefited from

Snack Attack

Recent lifestyle changes have altered snacking habits among consumers. Adults of all ages are snacking more—many on multiple occasions per day—but they also are seeking healthier snacks. Protein fortified bars and ready-to-drink beverages and shakes are perennial favorites among on-the-go snacking consumers, with protein waters an emerging category.

High protein snacks, such as crisps, are growing rapidly in popularity. Crispy protein snacks present certain challenges, though. This type of application calls for stable proteins and protein fractions that do not lose functionality when subjected to high levels of heat, shear, or low pH (acidic) conditions or media.

Whether dairy- or plant-derived, a variety of protein options are available to suit the requirements of product makers striving to meet the needs of today’s snack-craving consumers.

To learn more about healthy snacking, download our snacking trends guide [here](#).

advances in technology that have greatly expanded the applications they can be used in. Of particular advantage is the ability to incorporate dairy proteins in high acid beverages. Protein-enhanced waters are the best example of use of these protein solutions.

Added whey and casein are especially prominent in “dairy-plus” products, such as protein-enhanced milks, yogurts, and ice creams; sports and RTD beverages; bars and confections; as well as food and beverages for infants and children. But they also are a favored way to boost the protein content of baked goods. This is because dairy-derived protein isolates have excellent softening properties that are desirable in many bakery and bar applications. They also have been shown to help lengthen shelf life in these types of products.

Minimally processed, native, instantized micellar casein is a heat-stable, low-viscosity protein solution. It boasts excellent solubility and clarity. A benefit of this form of milk protein is that it has a high concentration of leucine and other amino acids. Moreover, micellar casein is only gradually absorbed, allowing it to provide benefits in satiety, muscle recovery, and muscle maintenance.

Plant Proteins

The booming trend of consumers cutting down on animal protein or going totally vegetarian/vegan is based on two lifestyle concerns: personal health and the environment. One powerful factor contributing to the jump in plant-based foods is that of meat, poultry, and seafood analogs. Unprecedented advances in ingredient technology have led to plant-based meat alternatives that closely mimic beef, chicken, and fish and that are highly accurate for texture, chew, flavor, and color. These innovations have made it easy for conscious consumers to eat less of, or give up entirely, the animal counterparts they crave.

Dairy and meat alternative product manufacturers are turning to protein sources ranging from soy, pea, and chickpea, as well as to grains and seed sources, such as wheat, chia, hemp, and quinoa. Also coming up fast on the market are proteins from mushrooms, algae, nuts, and tubers (e.g., potatoes).

Of the plant-derived proteins, while soy remains the primary source, it is rapidly giving ground to pea and chickpea. Consumer concerns ranging from genetic modification to allergens to bioactive compounds with negative consumer connotations, such as

phytoestrogens in soy, are driving the move to such alternatives. Other qualities, too, have pushed interest in non-soy proteins. These include flavor profiles, as some soy proteins can give “beany” flavor notes or even bitter back notes to certain formulations.

Pea and chickpea proteins also boast a full complement of the nine essential amino acids that cannot be formed in vivo, and they thus provide a more complete nutrition profile to meet consumer expectations when it comes to added protein. These are sometimes referred to as “complete proteins.” Technology has also reduced texture challenges of pea proteins while raising the protein concentrations of pea protein powders to 90%.

Where to Start?

While this seeming dichotomy might appear as a challenge to developers crafting the next generation of protein-rich products to appeal to savvy consumers, the reality is that product makers have a decided advantage in choices of protein source and concentration. Many of the sources used today have proven to be both familiar to and favored by consumers. In close collaboration with a protein ingredient supplier and their R&D teams, you can match the right protein source with your application for the optimal taste, texture, quality, and product label to help ensure your product’s success.

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Preparing Your Brand for the Future of Protein

Protein is undoubtedly an in-demand nutrient, with its consumption closely linked to disposable income.

North America and Europe lead in per capita protein consumption, with animal and plant proteins popular among consumers. The lowest per capita protein consumption can be found in least developed countries in sub-Saharan Africa and Asia, where plant-based proteins make up the vast majority of protein in the diet. Rising incomes in China, as with many other rapidly emerging global economies, continue to drive an increase in protein consumption, in line with a shift toward the Western diet. All in all, the future of protein fortification is not just for sports nutrition or active consumers anymore.

Understanding the Mainstreaming of Protein

A growing number of mainstream consumers understand that protein supports satiety, weight management, and muscle building and maintenance. With many developed countries concerned with a growing overweight or obese population, as well as a growing global senior population that seeks nutrition to mitigate the effects of aging (such as age-related muscle loss), it's clear that protein meets mainstream needs.

Functional protein powder and beverages are forging a path for flavorful, on-the-go shelf-stable snacks and foods. This is true of both concentrated

proteins—80%—and protein isolates of up to 95% concentration. Depending on the application, higher protein concentrations can make it easy for developers to create high-protein, nutrient dense products.

Today, protein solutions are readily incorporated into nutrition bars, chips, shakes, meat analogs, and baked goods. Although some isolates can impart unwanted flavor profiles, many can go unnoticed in products especially if those solutions have been optimized for taste and texture.

Mainstream consumers now look for protein throughout the grocery store aisles—in products ranging from frozen meals to breakfast cereals to ice cream—and are checking labels for protein claims and grams of protein. Protein fortification of mainstream savory snacks, in particular, is on the rise. Consumers are increasingly choosing protein chips, crackers, and extruded snacks as better-for-you versions of their favorite salty treats.

Protein for Performance

While there may be a mainstream effect in the market, protein fortification continues to appeal to a core set of consumers: athletes and active lifestyle chasers. Seeking higher-protein products to meet recovery and performance needs, they are often highly informed and knowledgeable about protein quality and how the different types of proteins can impact performance. Many tend to prefer dairy proteins for muscle building and maintaining muscle, as well as for post-activity muscle cell recovery. However, plant-based performance has gained popularity recently with elite athletes and celebrities promoting a plant-based lifestyle.

Protein that has been enzymatically broken down, also known as hydrolyzed protein, is the optimal format for many sports performance products. It boasts faster absorption and rapid metabolism. However, both fast-absorbing protein fractions and slow-absorbing milk proteins that have sustained release and higher satiety serve distinct needs of active consumers. In fact, in the U.S., dairy proteins are the preferred choice for beverages overall by active consumers.¹

When it comes to creating high-protein products for the sports nutrition category, whey, casein, egg, soy, and pea protein sources have been the primary choices. Of these, research has demonstrated that the dairy proteins whey and casein are particularly helpful at building muscle mass. Whey has a particularly high content of leucine, the primary amino acid the body uses for synthesizing muscle tissues.

An added advantage to hydrolyzed whey protein is that it also can be applied to weight management applications. Multiple research studies have shown

that, when taken between workouts, it can help boost performance during subsequent activity sessions. Casein, on the other hand, triggers little insulin response, which is thought to help reduce body fat.

No matter which set of consumers your brand is looking to target, partnering with a protein supplier equipped with a portfolio of protein solutions, a deep understanding of protein processing technology, and a network of application scientists to support your brand globally is critical to your product launch timeline. Choosing a partner with these traits and capabilities, as well as a tradition of collaboration, will not only make your scale-up more efficient, it can also optimize your brand's core capabilities while leaning on a strong ingredient partner for theirs.

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Mind Your Peas

The two most popular categories of protein ingredients, plant-based and dairy, are on track to remain strong components of products focusing on sports performance and active lifestyle nutrition, and products targeting overall holistic health and well-being.

Already experiencing strong growth based on the boom in plant-based analogs of meat and dairy, pea protein became one of the trending protein sources based on its high protein quality and its superior flavor and textural functional properties.





Beyond the Macronutrient: Protein Derived Bioactive Ingredients

Beyond the Macronutrient: Protein Derived Bioactive Ingredients

Processing and application support are not the only indicators of an industry leading protein supplier.

A portfolio of protein-based bioactive ingredients is another indication of the depth in the supplier's protein knowledge. Below is a discussion of only a few protein-derived bioactive ingredients and the benefits they can bring to your product line.

Originally driven by sports performance consumers, the demand for protein-based bioactives is growing among other consumer groups as well. This is due to the range of benefits they can provide related to muscle synthesis, endurance, and immune health support, among others.

Weight management and “smart nutrition” are among some of the fastest-growing uses for protein-based bioactives that have important mainstream applications—for example, milk protein isolate modified to reduce the rate of digestion and increase satiety. With obesity and elderly population rates rising globally, the use of nutritionally optimized ingredients like bioactives in nutrient-dense, muscle support, and satiety products are key opportunity areas.

In addition, protein-based bioactives like [lactoferrin](#) that can support immune health are particularly valuable as consumers seek to stay healthy. Demand for bioactives is also surging in the personal care market, where collagen-boosting bioactives are used in anti-aging facial products. Science-based skincare ingredients like these are especially popular among higher-income Asian countries.

Let's start with the basics, sometimes called the “building blocks” of protein, amino acids also have their own unique functions.

Amino Acids

Amino acid and amino acid blends have become standard ingredients in many performance products, especially in performance-positioned energy and sports drinks. One of the better examples of these is the group known as branched-chain amino acids (BCAA). Among the essential amino acids—the nine aminos that the body does not make—are the branched-chain aminos leucine, isoleucine, and valine.

BCAAs are necessary for multiple functions in the body. They're needed to build protein, they are important for organizing neural signaling pathways, and they are key components in the breakdown and use of the body and brain's primary fuel, glucose. BCAAs also are important to immune function (especially in the proliferation of lymphocytes) and cognition (needed for brain protein and neurotransmitter creation as well as energy production in the brain).



BCAAs, other amino acid blends, and some standalone amino acids have a long history of use by athletes and physically active consumers. However, they have been shifting into the mainstream by younger consumers' desire to stay active and energized. One of the most popular of these is creatine. While the body does synthesize creatine from the amino acids glycine and arginine (with help from methionine), its key function in regenerating the source of power for all our cells—adenosine triphosphate (ATP)—put it on the map for those consumers who are burning the candle at both ends. BCAAs and creatine are available as ingredient solutions that can be incorporated into such beverages as pre-workout supplements, energy drinks, and recovery shakes.

However, protein-based bioactive ingredient popularity is growing outside of performance and active lifestyles. Advancing technology and clinical substantiation is extending the health halo of these ingredients into the early life and wellness categories.

The Protein Health Connection

As a macronutrient, protein could easily be considered the most vital of nutrients, with protein-based and protein-derived compounds participating in almost every cellular and bodily function. Virtually nothing happens in the body without being catalyzed by the protein structures known as enzymes. A trove of proteins and protein components—such as amino acids, peptides, and nucleotides—all contribute either directly or indirectly to helping maintain physical and mental health and well-being. As ingredients in food and beverage formulations, protein and protein ingredients can contribute greatly to the making of superior better-for-you foods and beverages.

Immune Health

When it comes to overall health and wellness, immunity has been foremost in the mind of most people lately. Not only are dietary proteins and their derivatives needed to support the vast and complicated immune system, they must be of superior quality, readily soluble, highly bioavailable, and easily incorporated into foods and beverages.

One specific protein structure integral to a healthy immune system is immunoglobulins. These are the main components in the “search and destroy” approach of the immune system. They are in a category of protein structures called glycoproteins and consist of an amino acid structure attached to a medium-chain carbohydrate (oligosaccharide) called a glycan.

One of the more interesting protein compounds of this class is [lactoferrin](#). A key member of the immune system, it is multifunctional when it comes to maintaining health. In addition to its function as an iron transporter, lactoferrin acts as an antimicrobial agent. But it



Our wide range of dairy-based, plant-based, functional proteins and bioactive ingredients offers excellent nutritional value and superior functional properties.

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doesn't stop there: Lactoferrin is so critical to infant development that it is in its highest known natural concentration in the first milk a mother makes for her newborn. Because of these benefits, it is an important ingredient in formula and beverages for infants and toddlers.

Cognition, Mood and Sleep

How we feel, our reaction to stress, and even sleep are regulated by proteins called hormones. Although the body makes the hormones that control these (and thousands of other) functions, consumers seeking a better "food-mood" connection recognize the advantages of being able to overcome the effects of stress and poor sleep, while wanting to remain sharp at work. They're knowledgeable about key hormones that rely on amino acids present in abundance in specific sources.

For example, the neurotransmitter serotonin is well known as the "feel good" hormone. Serotonin is derived from an amino acid called tryptophan. It not only positively affects mood, it also plays roles in everything from appetite control to learning and memory. Tryptophan also is a precursor of melatonin, known as the "sleep hormone." Animal protein sources such as dairy are rich in tryptophan.

Milk is considered one of the richest food sources of tryptophan, with whey protein in particular a primary source of the hormone and one of its principal components, lactalbumin. More importantly, tryptophan has the lowest reserves of the free amino acids in the body. For developers of better-for-you products addressing food and mood, pure whey protein or an optimized source of tryptophan supported by a bioavailable peptide carrier are potential options.

If you're looking for a best-in-class protein supplier, ensure that your choice is armed with science-supported bioactive ingredients that will support the consumer trends of today and tomorrow. A partner that offers a toolbox of innovative protein solutions and bioactive ingredients will bolster your brand's future in nutrition and wellness.

A Few Final Considerations

Protein Processing

All living things contain protein, but how a manufacturer gets that protein can make a difference. Pulling that protein out of plants commonly involves chemical extraction, such as those using solvents, in order to get high yields, especially above 80%. Those types of extractions often result in off flavors and also fail to meet clean-label status. But advances in extraction technologies have led to the development of non-solvent methods that work particularly well on non-soy proteins, especially from peas. This not only allows for clean-label designations but also allows organically grown plant protein sources to maintain their organic status post-production.

High-heat and high-shear processing of proteins also bring problems that can negatively affect protein quality. Avoiding these negatives demands a functional, stable protein that can stand up to the extremes inherent in such common processing techniques.

Sustainability

A study published earlier this year for Forbes by Forrester Research, Inc.¹ found that environmental stability is more important than ever for consumers, especially post-2020. Findings revealed that 68% of such “highly empowered consumers” are planning to “step up their efforts to identify brands that reduce environmental impact,” and nearly half are purchasing organic products on a regular basis. Succinctly, the report noted that “highly empowered consumers seek and champion brands that commit to sustainability.”

With sustainability and other ecological concerns prominent in the minds of today’s consumers, whey

and casein proteins derived from milk acquired from grass-fed cows raised organically register powerfully with consumers. So, too, do plant proteins from organic farms relying on sustainable and regenerative agriculture.

Collaboration

For your next development or reformulation project, choose a protein partner that explores every available option and their nuanced differences. To create successful protein products, developers should seek out an ingredient supplier with protein processing technology expertise, application know-how, and a network prepared to collaborate with you across the globe, wherever you need it most.

At Glanbia Nutritionals, we are experts in nutrition for healthier lifestyles at all ages and performance levels. As a collaboration partner, we lean on our global network of R&D teams and locations, decades of innovation, and our shared passion for creating nutritious products that are healthful and taste great. From standardized protein concentrates and isolates to customized protein solutions and scientifically supported bioactive ingredients, we are here to help you choose the right ingredients for your products today and your plans for tomorrow.

We’re built to help solve your next nutrition challenge. [Send us your next development](#) to see how our expertise can add to your products and business.

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