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Alt-proteins on the up

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The alternative proteins market – encompassing cultivated meat, plant-based and fermented proteins – was projected to be worth over \$20 billion in 2025. Many of these products, excluding cell-based meat and dairy, are made with no animal involvement, broadening the vegan food sector and offering innovative ways for conscious consumers to meet their nutrition needs. Here, we examine some of the animal-free alt-proteins poised for growth this year.



Sunflower

Last year saw the rise of sunflower seed protein, with several manufacturers turning to this plant-based source. While sunflower seeds have been consumed for centuries, sunflower protein isolate is considered a novel food in some regions, including the EU regulatory approval.

Food ingredient and processing specialists Tetra Pak and Burcon both launched sunflower protein solutions in 2025. Meanwhile, German food brand Sunflower Family made its debut in the UK with a new line of clean label meat alternatives made entirely from sunflower protein.

"The plant-based food and beverage market is expected to triple by 2033," said Ida Svensson, director of portfolio and capabilities for food solutions at Tetra Pak. "With 74% of consumers now actively looking for products with health claims, producers are seeking protein ingredients that offer strong nutrition and can be easily integrated into existing recipes and production lines."

"Sunflower protein meets this demand, with a high protein content – up to 50% – alongside a naturally rich nutritional profile. It can be adopted with only minimal investment and only minor adjustments to existing equipment."

Svensson highlighted sunflower protein's ease of use as one of its key benefits. "While many

plant-based ingredients are limited by challenges around flavour, colour and texture, sunflower protein offers a naturally fine texture, neutral colour and taste, with a subtle nutty note," she said.

This versatility allows its use in a wide range of applications, including RTD protein shakes, iced coffees, yogurt alternatives and more. "It can also be incorporated into dairy to create hybrid formulations with added protein and fibre, without disrupting flavour or texture," she noted.

"Additionally, in many formulations, sunflower protein can enhance mouthfeel without overpowering other flavours, helping brands deliver products that are nutritious, tasty and enjoyable to eat."



Mycoprotein

Fungi-based proteins have surged in popularity over the last decade. Mycelium's filamentous structure lets producers mimic the fibrous texture of traditional meat, driving its rise in the alternative meat market.

UK brand Quorn pioneered mycoprotein in this space, launching its first product made from the *Fusarium venenatum* strain in the late 1980s. Now, applications using different strains are expanding into new arenas.

Dutch start-up The Protein Brewery is targeting the active nutrition segment with its fungi-based ingredient. Thanks to mycoprotein's versatility, low environmental footprint and nutrient-rich composition, the company believes it could power a new generation of complete nutrition products for an ageing population.

Thijs Bosch, CEO of The Protein Brewery, said: "Today, scientists have described around 150,000 species of fungi, but conservative estimates suggest that 1.5 million species exist. 90% of species are yet to be uncovered and potentially utilised for food ingredients, supplements and pharmaceuticals."

He explained that, compared to soya or pea protein, the company's Fermotein ingredient – produced by cultivating the mycelium of *Rhizomucor pusillus* as a food-grade biomass – delivers a more complete nutritional profile, with 50% protein (PDCAAS score of 1) and 30% fibre by composition. The fungi strain can also feed on a variety of agricultural byproducts, allowing the company to incorporate waste streams, such as carrot tops, into the manufacturing process as part of a circular approach.

"Notably, certain bioactive nutrients contributing to immune function and bone health are only found in fungi and not plants," Bosch added.

While applications span dairy alternatives, bakery, snacks and confectionery, the near-term focus is on active nutrition products, such as ready-to-mix powders and supplements. "The segments we aim to serve are longevity, gut health, weight management and performance," said Bosch. "GLP-1 agonists have taken the market by storm and will only become more widespread with government support, such as the pending US pilot to make Medicare and Medicaid dollars available for weight loss."

The fungal strain used in mycoprotein solutions determines whether novel food approvals



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are required. For example, *Fusarium venenatum* already benefits from approval in many countries due to its established commercial history. Other strains, such as The Protein Brewery's *Rhizomucor pusillus*, must undergo regulatory approval in different regions before commercial use.

The Protein Brewery has recently celebrated several regulatory milestones. The company is currently on track for final authorisation and EU market entry following a positive opinion from the European Food Safety Authority. It obtained self-GRAS (Generally Recognized as Safe) status in the US in 2021, and expects a further 'no questions letter' from the Food and Drug Administration in 2026. The ingredient already gained approval in Singapore in 2024. ►



Grains

Grain-based proteins are gaining momentum, with rice protein already well-established in meat alternatives, beverages and sports nutrition products.

Several of Beyond Meat's core products use rice protein in blends with pea and other ingredients to enhance their amino acid profile, while sports nutrition brands like Pulsin and Bulk offer rice-based protein powders as plant-based alternatives to whey.

Wheat protein remains a staple in the category as well. Seitan, made from wheat gluten and originating in China, has been enjoyed for centuries and is widely used as a meat substitute in diverse dishes.

An emerging option for boosting protein in the savoury snacks and bakery category is barley protein – a particularly sustainable choice for European consumers, where barley is one of the region's most abundant crops. Declan Rooney, business development director at Irish barley protein producer ClonBio Foods, said: "Barley protein and grain-based proteins are poised for significant growth over the next decade".

"We expect to see increased innovation in functional applications beyond simple fortification, such as texture enhancement, clean label binding and hybrid formulations that pair barley with pulse proteins for optimised amino acid profiles."

Rooney noted that barley's mild, cereal-like taste and naturally light brown colour make it ideally suited for protein fortification in foods like breads, crackers, cereals and bars, without the beany or earthy off-notes commonly associated with alternatives like pea and soya.

The company's ingredient, PurusPro, contains over 60% protein and more than 15% dietary fibre, with an amino acid digestibility score of around 92%. Beyond boosting protein, it offers a range of functional benefits, helping to maintain a uniform crumb texture, imparting rich cereal notes to baked goods and naturally enhancing colour.

Rooney pointed out that, due to its brown colour, barley protein is less suitable for lighter baked goods, dairy alternatives or beverages where a whiter appearance is desired. Its low solubility also makes it unsuitable for clear drinks or high-moisture beverage applications.

"Its strength is in doughs, batters and extruded systems where a structured, insoluble protein-fibre matrix is an advantage," he added.



Sweet proteins

Though primarily a sugar reduction tool rather than a protein source, given their use in very small quantities, sweet proteins have emerged as an exciting segment of the fermented proteins market.

Sweet proteins such as brazzein and monellin, naturally found in certain tropical fruits, are increasingly being used as an alternative to sugar, delivering intense sweetness without the associated calorie load or blood sugar impact. Advances in precision fermentation now allow these proteins to be produced at scale, enabling a more sustainable supply that does not rely on sourcing rare fruits.

Companies like Oobli and Sweegen are at the forefront of sweet protein development, working with F&B producers to support their sugar reduction goals.

Daria Nalewajek, innovation director of EMEA for Sweegen's global sweetener platform, said: "As consumers look for natural, zero-calorie sweetness without off-notes, and become more open to biotech and precision-fermented ingredients, sweet proteins fit perfectly at the intersection of health, taste and modern food innovation".

Sweegen's Ultratia Brazzein is a high-potency solution that can act as both a sweetener and a flavour modulator, able to soften bitterness, acidity and plant-based off-notes, all at extremely low use levels.

"Cost-in-use parity or near-parity with alternative sweeteners is [Sweegen's] future goal," Nalewajek said. "We are working towards larger-scale, consistent manufacturing to supply global F&B market demand." ●