2024 STATE OF THE INDUSTRY:

Plant-based

meat, seafood, eggs, dairy, and ingredients



Acknowledgments

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About GFI's State of Alternative Proteins series

GFI's State of Alternative Proteins series serves as our annual alternative protein sector deep-dive. The series compiles business developments, key technologies, policy updates, and scientific breakthroughs from around the world that are advancing the entire field. To read other reports, visit the <u>series homepage</u>.

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Executive summary

In 2024, global retail sales of plant-based meat, seafood, milk, yogurt, ice cream, and cheese rose five percent to reach \$28.6 billion, according to Euromonitor. In the United States, the plant-based food retail market totaled \$8.1 billion, more than double what it was just seven years ago, but representing a slight decline from \$8.5 billion in 2022, according to SPINS data. While the impact of high inflation played out in the market and consumers expressed widespread frustration around grocery costs, positive signs for the plant-based sector emerged in 2024, including innovative new product launches, a growing demand for plant-based eggs, and improved velocities (how fast items are turning over at shelf) across several plant-based categories.

Behind the scenes, the plant-based meat sector progressed in other ways—expanded production capacity, new science and innovation hubs, and important path-to-market wins. At the same time, the sector continued to face challenges, including technical and cost hurdles, decreased investments, and varying sales performance across global markets. Consumer research makes clear a major driver: some products do not currently meet consumers' expectations for taste and price, and more work is required for companies to connect with consumers on the particular benefits of plant-based products, like health and sustainability.

As a sector still in its relatively early days and just scratching the surface of its potential, each year brings milestones across science, industry, and policy. These are among the notable advancements of 2024.

Commercial landscape

- New and expanded manufacturing capacity:
 At least 26 plant-based facilities opened,
 expanded, or were announced in 2024,
 including the retrofit of conventional protein
 facilities. Danone converted a conventional
 yogurt facility to plant-based yogurt
 production, while Lactalis Canada reopened a
 former dairy plant as a plant-based milk
 facility. Cocuus and Revo Foods opened 3D
 food printing facilities in Spain and Vienna.
 Irish shellfish producer Errigal Bay and New
 Zealand oat milk producer Otis each opened
 oat milk facilities in their respective countries.
- New product launches: In the meat and seafood categories, Kraft Heinz introduced plant-based hot dogs and sausages as part of their joint venture with NotCo, Unilever's The Vegetarian Butcher brand introduced new plant-based chicken and fish products in select European regions, and Nestlé debuted new ground plant-based meat products in Latin America and Africa. Dairy launches included Danone's plant-based infant formula and yogurt products, Lactalis Canada's new plant-based milk brand, and Bunge and Arla Foods' plant-based butter products.
- New strategic partnerships: At least 13
 partnerships were formed in the plant-based
 sector in 2024, with activity centering around
 plant-based meat product development,
 production technology, and plant-based dairy.
 For example, plant-based meat producer
 Steakholder Foods formed at least three
 partnerships centered around producing
 products using Steakholder's 3D printing
 technology, including agreements focusing on
 plant-based beef, fish, and regional cuisines.

Investments

- Significant deals: The three largest plant-based deals in 2024 were Heura's \$43 million,
 Oatside's \$35 million, and Plantible's \$30 million Series B rounds.
- The long-view context: The investment environment of the past two years has been fundamentally different from the low-interest-rate period before 2022, when the 30 largest rounds in privately held plant-based protein companies were raised.
- **Total raised:** Privately held companies primarily involved in plant-based meat, seafood, eggs, or dairy have raised \$8.4 billion since 2006, while publicly traded companies have secured \$2.5 billion.

Science and technology

- Faba bean protein is an emerging ingredient of interest: Faba beans have a favorable neutral taste, light color, high protein content (20%-25%), accessible genomics for straightforward breeding, and, like peas, are nitrogen-fixing pulses that benefit soil health. In 2024, Roquette, Bunge, and Wide Open Agriculture leveraged these benefits in their new faba bean protein isolates.
- Research ecosystem expansion: New research centers and collaborations were announced across the globe, with a notable investment of \$90 million by the Bezos Earth Fund. The funds were pledged to three Bezos Centers for Sustainable Protein at North Carolina State University, Imperial College London, and the National University of Singapore, which will bring stakeholders together across disciplines to develop and commercialize alternative proteins.
- Assessing the sensory landscape: In 2024, the
 world's largest publicly available sensory
 analysis of plant-based meats was published by
 Food System Innovations <u>NECTAR initiative</u>,
 establishing new benchmarks for innovation
 and transparency in the sector. Most
 plant-based products still have room to win over

consumers, but top performers in every category show what's possible with more R&D—while the average plant-based nugget has already achieved taste parity with its animal-based counterpart. The study identified specific R&D areas in flavor, texture, and appearance for each of the five categories surveyed, with meatiness needed in all five.

Government and regulation

- Chile: In January 2024, the Chilean Court of Appeals of Valdivia dismissed a <u>lawsuit</u> filed by the Association of Milk Producers of the Los Ríos Region, which sought to prevent Chilean plant-based dairy company NotCo from using the term "milk" on their plant-based beverages, which are labeled as "NotMilk." The court of appeals found that NotCo's plant-based milk label clearly states the product is not milk and is unlikely to confuse consumers who want to purchase cow's milk, setting a valuable precedent for other plant-based products in Chile.
- **Europe:** In November 2024, the European Food Safety Authority Panel on Genetically Modified Organisms found Impossible Foods' soy leghemoglobin to be safe for consumption. The ingredient is made from modified yeast using precision fermentation and is what lends the signature "bleeding" quality to their alternative protein products. The soy leghemoglobin is now pending final approval by the European Commission and the EU member states.
- United States: In January 2025, the U.S. Food and Drug Administration (FDA) released draft guidance on the Labeling of Plant-Based Alternatives to Animal-Derived Foods. The guidance would apply to plant-based meat, seafood, eggs, and dairy (other than milk, which was addressed separately by FDA in 2023). The draft guidance states that plant-based food labels can include the names of animal-derived foods, so long as the labels are not misleading.

Unless otherwise cited, all of the investment information presented in this "Executive Summary" is from GFI's analysis of data from the Net Zero Insights platform. Please note that aggregated data has not been reviewed by Net Zero analysts.

