

2023 STATE OF THE INDUSTRY REPORT

# Plant-based:

Meat, seafood, eggs,  
and dairy



The background is a dark teal color with a pattern of overlapping geometric shapes. Some shapes are solid teal, while others are filled with a lighter teal dot pattern. The shapes include squares, circles, and triangles, creating a complex, layered visual effect.

# Executive summary

## Executive summary

The plant-based meat, seafood, egg, and dairy sectors experienced both headwinds and tailwinds in 2023. While some regions, especially those with emerging plant-based markets, saw growth in product distribution, U.S. sales of plant-based foods declined as inflation continued and many consumers signaled that products weren't yet meeting their expectations on taste, texture, and affordability.

Governments such as Canada, Denmark, and Germany increasingly committed significant public funding to plant-based research, while private investment into the sector fell—albeit at a slower rate than global venture funding across all sectors. Plant-based meat products, on average, continued to be sold at significant price premiums compared to conventional meat, and sensory gaps to conventional meat remained. All the while, consumers—especially in the United States and Europe—contended with high interest rates and elevated inflation, limiting consumers' willingness to spend on higher-priced protein products.

Amid these conditions, the industry continued to mature. New scientific and technical groundwork was laid. Companies conducted analyses that proved out sustainability benefits of plant-based products. Governments and investors financed researchers and companies. And manufacturers introduced new products, developed strategic partnerships, and built new production facilities. However, although pockets of progress across categories and geographies are clear, plant-based meat is facing significant challenges. The sector needs more progress on price parity, taste parity, manufacturing capacity, and consumer understanding, especially in nutrition, if it is to deliver on its promise of serving as a commonplace center-of-plate protein for mainstream consumers.

*Plant-based meat, seafood, eggs, and dairy*, part of our 2023 State of the Industry Report series, takes a field-wide, global view of the progress made over the past year.

## Commercial landscape

### New products and categories

Hundreds of new plant-based meat, seafood, egg, and dairy products hit retail shelves in the U.S. market in 2023, including plant-based steak, sushi, boiled eggs, Wagyu-style beef, ribs, and more.

### Retail and foodservice trends

- Large companies continued to engage in the sector, including the release of plant-based versions of popular branded products like **Tyson** plant-based nuggets, **Nestlé** plant-based mince meat and plant-based **Häagen-Dazs** products, and **Kraft Heinz** plant-based cheese slices and a plant-based version of Kraft Mac & Cheese product.
- Plant-based meat continued to launch on menus at major chains globally including **Burger King** in Scandinavia, **Subway** in Europe, **Taco Bell** in the United Kingdom, and **Starbucks** in Malaysia.
- **Impossible Foods** launched a lower-fat version of their signature plant-based beef, Impossible Beef Lite, with 75 percent less saturated fat.

### New partnerships

Companies continued to collaborate to develop new products, scale production, and leverage mainstream distribution channels. Notable strategic partnerships in 2023 included **Modern Plant-Based Foods** and **Carbone Restaurant Group** developing plant-based pizzas; **JUST Egg** and **Cheryl's Cookies** developing plant-based cookies; and **MorningStar Farms** and **Pringles** developing a new line of plant-based chicken fingers.

## Manufacturing capacity

Continuing to expand manufacturing capacity and further develop supply chain infrastructure will be critical to the success of plant-based proteins. New facilities opened in 2023, including **SunOpta's** 285,000-square-foot facility in Texas, which will manufacture plant-based milk and creamer. Many more facilities broke ground, such as one for German plant-based food company **Planteneers** in Illinois, or were announced, such as agricultural company **Bunge** committing \$550 million to build a new facility in Indiana.

## Sales

Total U.S. retail plant-based food dollar sales were \$8.1 billion in 2023, a slight decline from \$8.2 billion in 2022. Plant-based meat and seafood sales declined, which indicates that opportunities exist to better meet consumer needs on key product characteristics like taste and price.

- Eighty-one percent of households that purchased plant-based foods in 2023 purchased more than once throughout the year.
- Plant-based milk held nearly 15 percent market share of total milk dollar sales in 2023.
- Across the majority of plant-based categories, repeat purchase rates held relatively steady year over year.

## Investments

According to GFI's analysis of data from the Net Zero Insights platform, plant-based meat, seafood, egg, and dairy companies raised \$907.7 million in 2023 (representing 11 percent of all-time investment), bringing total private investments in the sector to

\$8.5 billion. The number of unique investors in plant-based companies grew by 10 percent to more than 1,293 unique investors.

## Science and technology

New sources of plant-based ingredients, new ways to cultivate these plants, and novel processes to optimize taste, texture, and nutrition were key technological themes driving research for plant-based foods in 2023. Advances were made in ingredient development, from new animal-free fats and emulsifiers to novel aquatic, leguminous, and upcycled protein sources. Improved scalability of traditional texturization methods like extrusion was achieved, and promising newer bottom-up methods like fiber spinning and a patent-pending "process-controlled microstructure design" expanded available technologies for scalable plant-protein texturization. In 2023, Beyond Meat released their second ISO-reviewed Life Cycle Assessment (LCA) which showed the Beyond Burger 3.0 patty generates 90 percent fewer greenhouse gas emissions, uses 97 percent less water and land, and requires 37 percent less non-renewable energy than an average conventional beef patty.

## Government and regulation

Milestones in 2023 government support of plant-based alternative proteins spanned the globe. In the Americas, Canada continued its investment leadership with CAD 150 million (\$110 million) in public funding that will support plant-based protein market growth, while in Europe, the United Kingdom and Germany both announced large commitments to alternative protein R&D and commercialization. Government support of alternative protein startups and product development was announced in Brazil, Japan, Singapore, South Korea, and more.

**Table 1: Invested capital in plant-based meat, seafood, eggs, and dairy**

Category	2023	2006–2023	Highlights
<b>Total invested capital</b>	\$908MM	\$8.5B	2023 invested capital represented 11% of all-time investment.
<b>Invested capital deal count</b>	125	1,211	2023’s largest investment was the \$300 million convertible note raised by Oatly.
<b>Unique investors</b>	187	1,293	The number of all-time unique investors grew by 10% in 2023.
<b>Liquidity event capital</b>	\$389MM	\$25.7B	Above Food, a plant-based ingredient and end products company, announced plans to merge with Bite Acquisition Corp., a publicly traded special purpose acquisition company (or SPAC). Above Food was valued at \$319 million in the announced deal.

Source: GFI analysis of data obtained from Net Zero Insights platform

**Figure 1: Timeline of key plant-based updates in 2023**

