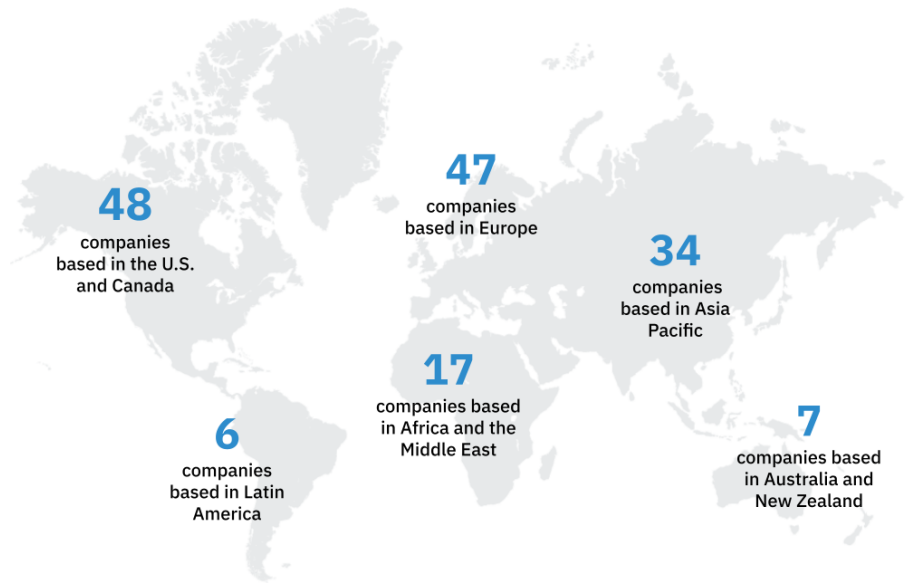


Cultivated meat industry landscape, 2023

In a historic first, two companies—UPSIDE Foods and GOOD Meat—received U.S. regulatory approval in June 2023 for their cultivated chicken products. Take a look at the current state of the cultivated meat industry and what’s next.

Commercial landscape

- 159** dedicated cultivated meat companies
- 80+** additional companies with involvement in cultivated meat
- 32** cultivated meat companies span 32 countries and every major world region
- 19** new cultivated meat companies in 2022



Investments

	2022	2021	All-time, 2016-2022
Invested capital	\$896 million	\$1.4 billion	\$2.8 billion
Investment highlights	2022’s largest investment was \$400 million (Upside Foods)	2021’s largest investment was \$347 million (Future Meat Technologies)	The cultivated meat sector has experienced several liquidity events, including: <ul style="list-style-type: none"> ○ JBS’ acquisition of BioTech Foods. ○ MeaTech’s acquisition of Peace of Meat. ○ UPSIDE Food’s acquisition of Cultured Decadence.

For monthly alternative protein commercial landscape and investment updates, sign up for GFI’s [Alternative Protein Opportunity newsletter](#).

Science and technology

The cultivated meat research and industry community has made key technical advancements in the last year:

- **Technoeconomic assessment:** A team of researchers at UC Davis published a new [techno-economic assessment pre-print study](#) that assumed the largest bioreactor size examined yet in a cultivated meat TEA. The study illustrated the importance of the materials used in bioreactor manufacturing and economies of scale for reducing the cost of cultivated meat.
- **Life cycle assessment:** A team of researchers at the University of Bath and University of Helsinki conducted a [life cycle assessment of cultivated meat grown in hollow fiber bioreactors](#). The study further illustrated the importance of efficient cell metabolism and producing cultivated meat using renewable energy to realize full sustainability benefits.
- **Serum-free media development:** Scientists at Mosa Meat published peer-reviewed papers detailing the team’s advancements in serum-free [proliferation](#) and [differentiation](#) media production. Media is currently one of the most significant cost drivers of cultivated meat.
- **Antibiotic use:** GFI lead scientist Dr. Claire Bomkamp published a [peer-reviewed paper on antibiotic use](#) in cultivated meat - cultivated meat (along with other alternative proteins) offers a way to decrease reliance on antibiotics in food production, ensuring that antibiotics still work against common diseases.

For a full primer of the science of cultivated meat, please visit GFI’s [scientific deep dive on cultivated meat](#). To get the latest cultivated meat science advancements in real-time, follow along with GFI’s regular [State of Science updates](#).

Government and regulation

In a historic milestone, two cultivated meat companies—UPSIDE Foods and GOOD Meat—have successfully completed FDA and USDA evaluations and are now cleared to begin selling their cultivated chicken products. See GFI’s [fact sheet](#) on the regulatory pathway for cultivated meat for more details.

Governments are acting on the sustainability and food security benefits of alternative proteins.

A number of governments around the world have funded public R&D into cultivated meat or granted funds to cultivated meat startups, including Australia, Brazil, China, the European Union, Israel, India, Japan, New Zealand, Qatar, Singapore, South Korea, Spain, the United Kingdom, and the United States.

To learn more about public funding for alternative proteins, please review GFI’s [State of Global Policy Report](#).

About GFI: The Good Food Institute is a nonprofit think tank working to make the global food system better for the planet, people, and animals. Alongside scientists, businesses, and policymakers, GFI’s teams focus on making plant-based and cultivated meat delicious, affordable, and accessible. Powered by philanthropy, GFI is an international network of organizations advancing alternative proteins as an essential solution needed to meet the world’s climate, global health, food security, and biodiversity goals. To learn more, please visit www.gfi.org.