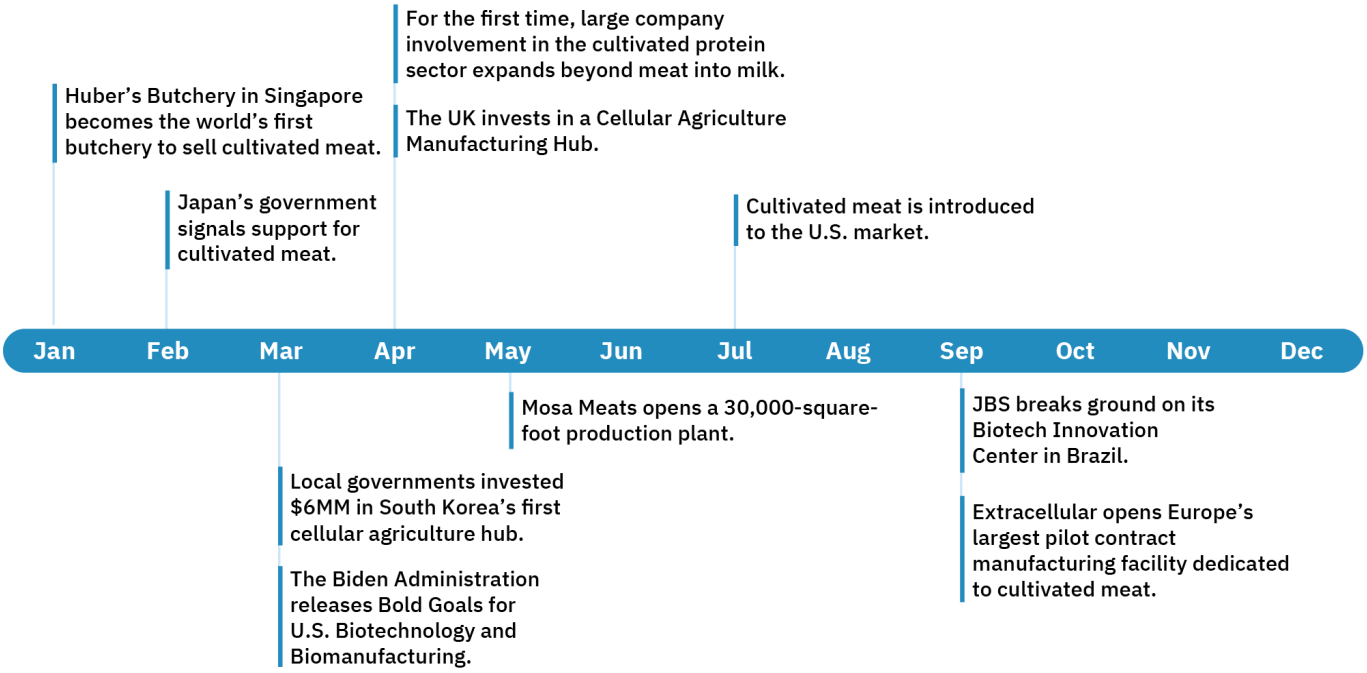
Good Food Institute

FACT SHEET
Last update: April 2024

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.

Timeline of key cultivated meat developments in 2023



Commercial landscape

174
dedicated cultivated meat companies

80+
additional companies with involvement in cultivated meat

30
countries and every major world region have at least one cultivated meat company

8
new cultivated meat companies in 2023

Investments

	2023	2022	All-time (since 2013)
Invested capital	$226 million	$922 million	$3.1 billion
Investment highlights	2023's largest investment was $35 million (Meatable)	2022's largest investment was $400 million (Upside Foods)	83% of cultivated meat investment occurred in the last three years alone.

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

For monthly alternative protein industry updates, sign up for GFI's Alternative Protein Opportunity newsletter.

Science and technology

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

- **Landmark report:** The UN Environment Programme (UNEP) released a landmark report that assessed the potential impacts of alternative proteins on public health and environmental harms compared to animal agriculture (summarized here). The report cites numerous life cycle assessments (LCAs) of cultivated meat, which collectively show how it requires significantly less land, results in less nitrogen-related impact, and could produce fewer greenhouse gas emissions than conventional meat, especially if renewable energy is used.
- **Serum-free media development:** Scientists in Denmark published research using mathematical techniques and algorithms to derive serum-free media that outperforms serum-containing media. Media is currently one of the most significant cost drivers of cultivated meat.
- **Scaffolding:** Researchers from the National University of Singapore determined that pumpkin seed protein supported cell adhesion and proliferation to a similar extent as animal gelatin and could support long-term proliferation of mouse muscle and fat cells, adhesion of chicken and pig muscle cells, and muscle cell differentiation. They also confirmed that pumpkin seed proteins are rich in RGD sequences, which presumably explains their results.
- **Cell line survey**: GFI APAC published a report summarizing a survey they conducted to better understand what cell types cultivated meat companies are using, where the biggest cell line-related pain points are, and how GFI and others can better support this growing industry.

For a more detailed view of the state of the science of cultivated meat, visit GFI's science of cultivated meat page.

Government and regulation

In a historic milestone, two cultivated meat companies–UPSIDE Foods and GOOD Meat–completed FDA and USDA evaluations and are now cleared to sell 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.

Several 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.

For a more in-depth overview of the cultivated meat industry, check out GFI's State of the Industry Report: Cultivated meat and seafood.

The Good Food Institute is a 501(c)(3) nonprofit working internationally to make alternative proteins like plant-based and cultivated meat delicious, affordable, and accessible. GFI advances open-access research, mobilizes resources and talent, and empowers partners across the food system to create a sustainable, secure, and just protein supply. GFI is funded entirely by private philanthropic support.