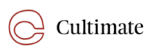




Formo



UMAMI UNITED



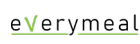
PANVEGA

FIVE YEARS, 100 STARTUPS, AND THE FUTURE OF FOOD

proveg INCUBATOR



Jooules



VOX GEORGIA





Source: Libre Foods

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FIVE YEARS, 100 STARTUPS, AND THE FUTURE OF FOOD

The ProVeg Incubator is the world's first and leading accelerator for startups that are working on food products, ingredients, and technologies that remove animals from the global food system. Since we began our journey, back in November 2018, we've worked with more than 100 companies and helped them to navigate the constantly changing food-tech and startup worlds. It's time to reflect on the past five years, the industry as it stands, and what needs to happen in the next phase and beyond.

When we first began supporting startups, the alt-protein landscape was very different. This newly emerging sector was dominated by companies bringing the plant-based experience to consumers. However, there have been giant technological leaps and countless world firsts over the past five years, in spite of many challenges. We have supported a growing number of companies working with fermentation technology, cellular agriculture, and wholly new approaches, while noting a marked transition towards a more B2B-focused industry. We're excited about what will come next.

This report contains insights from our team at the ProVeg Incubator and many of the startups we've helped to accelerate, plus input from some of our mentors, supporters, and industry allies. We hope that you find the content useful and inspiring, and we'd love to know what you think. If you have any thoughts that you'd like to share with us, or any questions about this report, please get in touch with us at info@provegincubator.com.



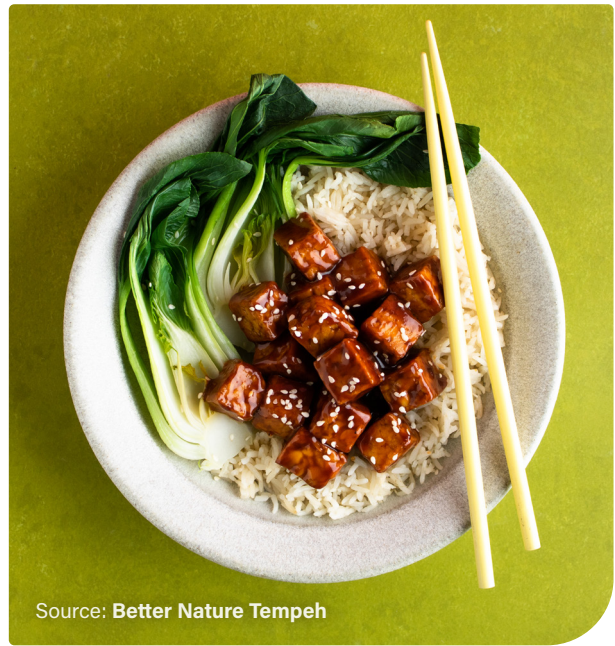
Since we first started out, the food-tech and startup worlds have fundamentally changed. It's time to reflect on the past five years, the industry as it stands, and what needs to happen in the next phase and beyond."

Albrecht Wolfmeyer,
Director, ProVeg Incubator



THE STATE OF THE MARKET

Back in 2021, the Boston Consulting Group predicted a 'protein transformation' in which the alternative-protein market would grow from \$39 billion [to \\$290 billion by 2035](#). And, indeed, in most Western countries, alternative proteins have catapulted from niche segment to mainstream product category over the past few years. Plant-based milk is now a household staple, meat alternatives are available in most major fast-food outlets, cultivated meat has been approved in a number of countries, and fermentation technology is being used to develop an exciting array of new products and ingredients.



However, in the wake of the global pandemic, and given current geopolitical unrest, coupled with energy and cost-of-living crises, many economies around the world are facing challenges, with investors taking a more conservative approach. Many startups are consequently struggling to raise funds and are finding it harder to secure contracts with potential clients and partners.

Like most industries, the alt-protein sector has been affected by the challenging macro-economic environment. In a cruel double-blow, it is also navigating a correction phase in the sentiments of consumers and investors, as is common for nearly all high-growth consumer segments. Divya Murthy, Co-head and Investment Lead at the ProVeg Incubator, adds: "The industry is simmering down, not burning out. Like any emerging sector, this is a healthy recalibration, separating the true potential from the hype. This consolidation will help the sector build back stronger on the other side."



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Divya Murthy,
Co-head and Investment Lead, ProVeg Incubator

Negative press does not equal industry failure

We've all seen the headlines about the slowdown in the alt-protein sector. However, what is usually missed in the rush to generate clicks and views is that the market for alternative protein does not depend solely on the stock price of its key players or continued growth in US grocery sales, as has been the focus of many widely-read articles in prominent news outlets. For example, sales of plant-based meats to restaurants and other food-service institutions in the US [increased by 8% in 2022](#) (the latest figures available at the time of writing), as eating out became the norm again in a post-Covid world, countering the claims of the 'bubble' having burst.

Though the US saw a small decline in retail sales last year (from \$8.2 billion in 2022 to \$8.1 billion in 2023), the global picture is more positive. In its latest [State of the Industry Report](#), the Good Food Institute notes that total global retail sales of plant-based meat, seafood, milk, yoghurt, ice cream, and cheese saw a slight increase, from [\\$28 billion in 2022 to \\$29 billion in 2023](#), which is 34% higher than the figure for 2019 (\$21.6 billion). This data comes from [Euromonitor](#) and does not include plant-based eggs.

"We need to take into account the fact that the situation varies from market to market and also between categories, and is continually undergoing shifts and changes. We are beyond the first wave of product innovation and consumer adoption. The next wave will lead the way, and further accelerate the transformation and growth of the industry," notes Albrecht Wolfmeyer.



We need to take into account the fact that the situation varies from market to market and also between categories."

Albrecht Wolfmeyer,
Director, ProVeg Incubator

+34%

Total global retail sales of plant-based meat, seafood, milk, yoghurt, ice cream, and cheese hit \$29 billion in 2023, which represents a 34% increase on 2019 sales (\$21.6 billion).*

Source: Formo



*Source: [The Good Food Institute](#)

Building towards a stronger future

The changes currently taking place in the industry should lead to a more resilient sector. As Antje Räuscher, Co-head and Partnerships Lead at the ProVeg Incubator, explains: “This correction phase will strengthen the industry’s long-term outlook and resilience, ensuring that truly sustainable, value-adding, and strongly differentiated companies will continue to grow the industry.”

The startups that go through the ProVeg Incubator are tackling some of alt protein’s biggest challenges, from taste and nutrition to pricing and scaling. The products and technologies being developed include a diverse range of novel food technologies, spanning plant-based, cultivated, precision fermentation, fungi, algae, molecular farming, and plant cell culture. “Our startups are developing some mind-blowing products, ingredients and technologies. They are the future, and we’re excited to see the impact they have in this constantly evolving space,” adds Vicki Sagar, Marketing and Communications Manager at the ProVeg Incubator.



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Our startups are developing some mind-blowing products, ingredients and technologies. They are the future, and we’re excited to see the impact they have in this constantly evolving space.”

Vicki Sagar,
*Senior Marketing and Communications Manager,
ProVeg Incubator*

TRENDS

There are several trends – and counter-trends – shaping the industry, as new technologies and changing consumer demand revolutionise the way that we approach food production.

1 Food tech = climate tech

According to [PwC's State of Climate Tech 2023 report](#), in the last decade, just 10% of climate-tech dollars went to the food, agriculture, and land-use sectors. Too little investment is going into food tech, and even less into alt protein – despite the fact that such investments not only generate the biggest impact in the fight against climate change, but also provide the [biggest bang for investors' buck of any climate-mitigation technology](#).

However, at the same time, there is a growing realisation across the world that food production and climate are inextricably linked – not least because the livestock sector accounts for [up to 20% of global emissions](#). Globally, food producers are struggling to keep up with the demand of a growing global population, and, as the climate crisis intensifies, affecting the availability of natural resources, the situation will become more challenging still. Given that current production methods are unsustainable, some governments (including [Singapore](#), [Japan](#), and [China](#)) acknowledge that food tech will need to play a key role in fighting and mitigating the climate crisis, and have been developing national plans that include alternative protein as a central strategy.



Source: Bosque Foods



Reshaping a centuries-old food system is hard work. In order to truly scale and create a delicious, affordable, nutritious, and sustainable dairy solution for a new generation, the industry will need to draw broad public investment."

Kobi Altman,
Chief Financial Officer, Remilk

2 Plant-based 2.0

The industry is working to address the pain points identified with some of the plant-based products currently available, with many businesses now developing products with cleaner labels, improved texture, and better taste, and which have price parity with animal protein. Some are creating hybrid products, whether mixing meat with alternative protein – useful for helping to reduce overall meat consumption – or integrating cultivated or fermentation technology into alt-protein products to meet consumer needs around functionality.

Sustainability in production and processing is a key trend, and we expect to see more companies working with sidestream valorisation and upcycling in the future, not least because this provides a monetary value to the manufacturer, while creating novel ingredients or inputs for the alt-protein and other sectors.

Fungi-based ingredients and fermentation technology will also help to drive the sector forward. Our team is equally excited about the future of algae-based ingredients because of their fast growth, high photosynthetic efficiency, low water consumption, and the fact that they do not require land for growth and have a favourable protein profile.

The logo for Be Better My Friend, featuring the text "BE BETTER MY FRIEND." in a bold, sans-serif font, with a stylized yellow and orange graphic element resembling a leaf or a drop.

Be Better My Friend (Netherlands)

Be Better My Friend produces plant-based butter and cream for use by professional pastry chefs, with functionality equivalent to conventional dairy-based counterparts.

The logo for Haofood, featuring the text "haofood" in a lowercase, bold, sans-serif font, with a yellow and orange graphic element resembling a leaf or a drop.

Haofood (China)

Haofood makes clean-label plant-based meatless dumplings and a chicken alternative, using various plant proteins.

The logo for Omni, featuring the text "omni" in a lowercase, bold, sans-serif font, with a red and white graphic element resembling a leaf or a drop.

Omni (United Kingdom)

Omni produces nutritious plant-based pet food, developed by vets.



As the category develops, consumer preferences are shifting. We're entering a plant-forward era in the meat-free category that is centered on naturalness and nutrition. As an industry, it is our responsibility to continue to adapt and meet customers where they are."

Christopher Kong,
Co-Founder & CEO, Better Nature Tempeh

3 Scaling with B2B

“High marketing spend and customer acquisition costs, coupled with narrow margins in a very competitive category, is causing investors to be more restrained in B2C investments,” says Divya Murthy, commenting on the ongoing shift towards B2B models. Significantly, many companies are working on being a part of the solution – rather than building the whole solution themselves – by working on specific technologies, scaling solutions, and functional ingredients.

This may mean developing enabling technologies such as fermenters, growth media, or customised fat solutions, which allow companies to focus on a specific gap in the value chain, without having to pour millions into developing every aspect of the end product. Or, it could take the form of developing functional ingredients that can help to solve industry challenges. While substitutes for methylcellulose, eggs, and palm or coconut oil can all lead to end products with better functionality and cleaner labels, we can also tap into more diverse plant-based sources in order to provide higher quality protein ingredients that are more sustainable.



Cultimate Foods (Germany)

Cultimate Foods uses proprietary cellular-agriculture technology to create CultiFat, a unique intramuscular fat that contains specific fatty acids, for use in alt-protein products.



Cultivated Biosciences (Switzerland)

Cultivated Biosciences uses biomass fermentation to create a creamy fat ingredient derived from GMO-free yeast, which is designed to improve the mouthfeel of dairy alternatives.



Umami United (Japan)

Umami United is developing a plant-based egg-white alternative for the B2B sector.



High marketing spend and customer acquisition costs, coupled with narrow margins in a very competitive category, are causing investors to be more restrained in B2C investments.”

Divya Murthy,
Co-head and Investment Lead, ProVeg Incubator

4 Novel tech

Innovative technology approaches such as plant-cell cultivation and molecular farming are “key to tackling the problem of recreating dairy proteins and other ingredients on a mass scale,” suggests Wolfmeyer. Fermentation technologies, especially biomass fermentation, which uses the high-protein content and rapid growth of microorganisms to efficiently make protein-rich food at scale, are also important here, since developing and scaling functional ingredients will be key to the success of the industry.

ASPYRE
FOODS

Aspyre Foods (USA)

Aspyre Foods (a ProVeg portfolio company) creates animal-free dairy using molecular-farming technology.

eERGO

Ergo Bioscience (Argentina)

Ergo Bioscience develops complex animal proteins using plant-cell precision fermentation.

Source: Ergo Bioscience



5 APAC as an alt-protein hub

The Asia-Pacific region is home to over half of the world's population and, as such, faces the greatest threat to food security. Its population and economies are set to grow further, while improved standards of living mean that APAC consumers' spending power is also growing. In turn, the demand for alternative protein is growing across many parts of the region, as consumers wake up to concerns around health and the environment.

According to [the GFI's latest report on the region](#), APAC has caught up with the US in terms of the number of cultivated-meat companies in operation. Until now, the US (and Silicon Valley, in particular) has been home to the lion's share of startups in the field. But things have shifted, and by the end of 2023, so many new startups had launched across the APAC region that it now ties with the US at 45 companies each. Within Asia, Singapore is home to the largest number of startups (11), followed by South Korea (9).

Not coincidentally, several governments across the Asia-Pacific region have publicly thrown their support behind alternative proteins as a key solution to national food security and climate change. Singapore is leading the way in terms of regulatory approval for pioneering food technologies, with several other countries looking to follow suit.

There is still a huge funding gap, however, presenting a major opportunity for investors. According to the recent [Asia Food Challenge Report](#), published in November 2023 and backed by major actors in Asia's agrifood system, agri-food systems present the "lowest-hanging climate fruit", and investment in existing solutions could reduce emissions by 12% by 2030.

45

The Asia-Pacific region has caught up with the US and now has 45 cultivated-meat companies in operation.*



vitality
foods

Vitality Foods
(Singapore)

Vitality Foods creates nutritious plant-based stock powders for the elderly.



Fattastic
Technologies

Fattastic Technologies
(Singapore)

Fattastic Technologies engineers plant-based fats in order to improve the sensory and functional attributes of plant-based meat and dairy analogues.

*Source: [The Good Food Institute](#)



Source: Propel Foods

OUTLOOK

Now: continued pressure and recalibration

We expect that 2024-25 will be a challenging period. Harsh economic conditions and a difficult investment landscape will lead to further consolidation in the sector. Hédi Farhat, Investment Manager at the ProVeg Incubator, predicts that many startups in the growth stage will reach the end of their runway from money raised in 2022 and, if unable to raise further funding, risk closure. Tony Callaghan, CEO at Soma-Tech Limited, adds, “The alternative-protein market has now had its dot-com burst; the next wave will be mainstream and massive.”

Investors have a similar view, as Lena Brügger, Senior Investment Associate at Astanor Ventures, explains. “A substantial amount of capital was invested in the first generation of companies, which had to pioneer the way. Today, more and more companies can achieve results with radically increased cost efficiency. Therefore, we must not abandon our efforts; instead, we need to continue investing in scaling up, as our climate and society depend on these innovations.”

We see plenty of cause for optimism. A new wave of plant-based products is hitting the market, with cleaner labels, better taste and nutritional values, and improved texture. At the same time, cultivated-meat products are gradually being approved and are now available in certain markets, including the US and Singapore. Novel products made using fermentation and mycoprotein are also now available for purchase, while the plant-based sector continues to evolve. This steady flow of success stories is likely to generate a new narrative for the alt-protein category, and should contribute to improved investment conditions for startups, as well as a more favourable market environment, overall.



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Lena Brügger,
Senior Investment Associate, Astanor Ventures



A wave of plant-based 2.0 products and a steady flow of new product success stories will generate a new narrative for the alt-protein category, leading to improved investment conditions for startups.”

Hédi Farhat,
Investment Manager, ProVeg Incubator

Next: New pathways and collaboration

We expect to see significant progress in alt-protein product development over the next three-to-five years. By then, most alt-protein products will likely match conventional products in terms of taste, texture, and price, thus renewing and strengthening interest and support from retailers, distributors, and food-services, as consumer needs become almost fully met by these alternatives. Additionally, the cultivated and precision fermentation sectors will mature significantly, particularly in the US and Singapore, and potentially also in Europe, as regulatory pathways improve.

80%

Over the next five years, we predict that most alt-protein products will match conventional products in terms of taste, texture, and price.

Major corporations are already showing substantial interest in alternative proteins – for example, Germany’s second-largest retailer, the Rewe Group, recently announced a new division dedicated to food technology – and some are ahead of the curve in terms of investment and acquisition. “We expect to see the effects of consolidation, along with signs of recovery in the sector, between 2025-26, with more corporate investors driving innovation in the sector,” says Hédi Farhat.





Later: investment upswing, widespread alt-protein technology, and new market opportunities

Over the next eight-to-ten years, we expect that alt-protein products will become the default option for most people, as alt-protein functionality improves and more and more consumers make the connection between animal-based products and the climate crisis. By then, there will also be considerably more options available for alternatives to conventional animal-based products. “We’ll see more cultivated foods in restaurants in Singapore and the US. In Europe, where regulatory approval is slower, the first wave of restaurants will have cultivated meat and seafood on their menus,” says AntjeRäuscher, who also suggests that products made via biomass and precision fermentation will likely become more widely available in retail and foodservice.

In the next decade, as technology accelerates and funding recovers, we expect to see mainstream adoption, with investment likely to increase significantly. “In ten years’ time, we expect alternative protein funding to surpass \$10 billion a year, more than doubling the 2021 figure”, says AlbrechtWolfmeyer. “At the same time, much more capital will be needed to drive the transformation of our food systems. Strategic investors, corporations, and especially public funds and programmes – which a couple of countries have already started – will play a pivotal role here.”



Alternative protein innovation and funding is far from dead. Global consumer interest has been growing constantly since the industry emerged in the late 2010’s, and we will see investor interest returning once overall economic conditions recover.”

Peter Dorfner,
Founding Principal, Green Generation Fund

New market opportunities present further cause for excitement. Africa and Latin America, for example, present a significant growth opportunity, as they are still in the early-stage in terms of their adoption of alternative protein. Divya Murthy adds: "It is increasingly important to support innovation in regions that are not only going to be at the forefront of the climate crisis but will also need to ensure food security for their growing populations."



In ten years' time, we expect alt-protein funding to surpass \$10 billion annually."

Albrecht Wolfmeyer,
Director, ProVeg Incubator



The first wave of restaurants in the EU will have cultivated meat and seafood on their menus within the next 10 years."

Antje Räuscher,
Co-head and Partnerships Lead, ProVeg Incubator



INDUSTRY VIEWS

We surveyed the startups, investors, mentors, and partners in our network. Here’s what they had to say about the current state of the industry, the challenges involved, and what’s needed to ensure future success.

Regulatory processes

A key topic among all respondents was the regulatory process for cellular agriculture and novel foods. Resoundingly, the sentiment is that current processes are difficult, slow, and impede progress, particularly in Europe. “Regulatory developments need to keep pace with the technological innovation being driven by the sector,” suggests Raffael Wohlgensinger, Founder and CEO at Formo.



Many cite the Singapore model as progressive, and everyone we spoke to mentioned the need to reduce the barriers to entry for novel food products. Clément Tischer, Head of FoodTech at the Rewe Group, would like to see a “risk-based approach to regulation, where the level of scrutiny and oversight is proportionate to the potential risks associated with the product, which will also help to avoid overregulation of low-risk products.”

For all of our respondents, clear and uniform industry guidelines are paramount to the success of the industry. Lena Brüggem, Senior Investment Associate at Astanor Ventures, thinks that this will require “empowering communications between regulatory bodies, scientists, and industry players in order to foster a continuously improving framework.”



Regulatory developments need to keep pace with the technological innovation being driven by the sector.”

Raffael Wohlgensinger,
Founder and CEO at Formo



Regulatory frameworks should be designed to adapt to rapidly evolving technologies and scientific understanding. Flexibility allows for continuous assessment and improvement.”

Clément Tischer,
Head of FoodTech at the Rewe Group

An even playing field

Charles Reed, Co-founder and CEO of MycoSure, would like to see an “even playing field” for the alternative-protein industry, which would take the form of incentives, funding, technical support, regulations, and tax breaks.

Other respondents would like to see “systemic and substantial” investment in infrastructure, as they work to build the food systems of the future. For example, Priyanka Srinivas, Founder of The Live Green Co., would like to see education for startups in the space, alongside innovation support in the form of grants, and believes that governments should “provide tax rebates for price parity that any new technology needs during the early adoption period”.

Consumers feel the same way. In November 2023, ProVeg International [published the findings of a study](#) that surveyed 7,500 consumers in 10 European countries, conducted in partnership with Innova Market Insights, the University of Copenhagen, and Ghent University. The study found that more than six in 10 Europeans support removing taxes on food that’s healthier and more sustainable, and 45% want to see a level playing field in terms of subsidies.



Targeted reduction in animal products

While boosting alt-protein production is key to building a sustainable food system, reducing the use of animal-based products is just as important. Joost Lindeman, Co-founder of Be Better My Friend, feels strongly that what he calls a “Japanese-style continuous improvement model” is key to accelerating a shift towards alternative proteins. “Policymakers should force the food industry to decrease the amount of animal products it produces by a targeted percentage. Make it law, provide a long-term vision, and offer alternative routes.”

THE STARTUPS

Meet the problem solvers, the pioneers, and the mission-driven entrepreneurs who are working tirelessly to address the food-system challenges of our time.

The 105 startups in our alumni community span a growing number of exciting sub-sectors that include plant-based (71), biomass fermentation, algae- and fungi-based (18), cellular agriculture and precision fermentation (14), plant-cell culture (1), and molecular farming (1).

Starting a business is risky at the best of times, not least in brave new fields such as these. Of the 105 startups we've supported, 22 are no longer in operation, having closed for operational reasons, insufficient funding, or being acquired, as was the case for Cashewbert.

In the following pages, you can explore our cohort ecosystem and learn more about who they are, where they're based, and what they do. Enjoy!

OUR STARTUP ECOSYSTEM

PLANT-BASED

BIOMASS FERMENTATION, ALGAE & FUNGI-BASED

CELLULAR AGRICULTURE (CULTIVATED & PRECISION FERMENTATION)

THE 100 STARTUPS

- Biomass fermentation, algae & fungi-based
- Cellular agriculture (cultivated & precision fermentation)
- Plant-based
- Molecular farming and plant-cell culture

COHORT 1: WINTER 2018



VLY FOODS

Germany

Plant-based

Model: End-consumer products

What they do: Milk, yoghurt, and shakes made with pea protein



NUCAO

Germany

Plant-based

Model: End-consumer products

What they do: Plant-based chocolate bars and snacks



THE MIGHTY KITCHEN

Cyprus

Plant-based

Model: End-consumer products

What they do: Plant-based meat, Mediterranean style



CHEESE THE QUEEN

Bulgaria

Plant-based

Model: End-consumer products

What they do: Plant-based cheese, using fermented cashews



SEROTONINA

Poland

Plant-based

Model: End-consumer products

What they did: Plant-based cheese and dairy

Business closed



VON GEORGIA

Germany

Plant-based

Model: End-consumer products

What they did: Plant-based cakes and desserts

Business closed



CASHEWBERT

Germany

Plant-based

Model: End-consumer products

What they did: Plant-based cheese, using cashews

Business acquired



CLEAR MEAT

India

Cellular agriculture

Model: Ingredients

What they do: Cultivated chicken Keema, steak, and non-FBS growth media



INFINITE ROOTS®

(FORMERLY MUSHLABS)

Germany

Fermentation

Model: Ingredients

What they do: Using fermentation and fungi to create protein ingredients



YEAP!

Israel

Fermentation

Model: Ingredients

What they do: Yeast-based protein

COHORT 2: SUMMER 2019



MONDARELLA

Germany

Plant-based

Model: End-consumer products

What they do: Plant-based cheese



BLUE FARM

Germany

Plant-based

Model: End-consumer products

What they do: Oat-drink powder



TERRA VEGANE

Germany

Plant-based

Model: End-consumer products

What they do: Plant-based meal-prep products



PLANTAGUSTO

Finland

Plant-based

Model: End-consumer products

What they do: Whole-cut plant-based meat



GREENWISE

Russia

Plant-based

Model: End-consumer products

What they do: Plant-based meat and fish



YOUPEAS!

France

Plant-based

Model: End-consumer products

What they did: Plant-based cookies and snacks, using peas

Business closed



PLANTCRAFT

New Zealand

Plant-based

Model: End-consumer products

What they did: Plant-based deli meats

Business closed



BETTER NATURE TEMPEH

United Kingdom

Plant-based

Model: End-consumer products

What they do: Tempeh



PANVEGA

Switzerland

Fermentation

Model: Ingredients

What they do: Vegan-organic products, using fermentation and microorganisms



FORMO

Germany

Cellular agriculture

Model: Ingredients

What they do: Animal-free cheese and eggs, using precision fermentation



CELLULAR AGRICULTURE

United Kingdom

Cellular agriculture

Model: Enablers

What they do: Bioreactor system for automated cultivated-meat production

COHORT 3: WINTER 2019



PINK ALBATROSS

Spain

Plant-based

Model: End-consumer products

What they do: Plant-based, clean-label ice-cream



NOMOMOO

Romania

Plant-based

Model: End-consumer products

What they do: Plant-based gourmet cheese



ABERYNE

Spain

Plant-based

Model: End-consumer products

What they do: Plant-based foie gras



ALVEGO

Germany

Plant-based

Model: End-consumer products

What they did: Plant-based meat and dairy

Business closed



EVERYMEAL

Switzerland

Plant-based

Model: End-consumer products

What they did: Plant-based ready meals

Business closed



PLÄIN

Germany

Plant-based

Model: End-consumer products

What they did: Plant-based milk

Business closed



BRANNATURA

Denmark

Plant-based

Model: Ingredients

What they did: Umami flavour enhancer, based on plant protein

Business closed



IFOOD

Germany

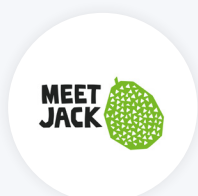
Plant-based

Model: End-consumer products

What they did: Plant-based ready-meals

Business closed

COHORT 4: SUMMER 2020



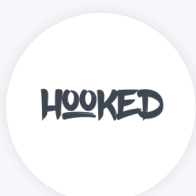
MEET JACK

The Netherlands

Plant-based

Model: End-consumer products

What they do: Jackfruit meat



HOOKED

Sweden

Plant-based

Model: End-consumer products

What they do: Plant-based seafood



MISTER VEG

India

Plant-based

Model: End-consumer products

What they do: Plant-based meat and fish



I LOVE YOU VEGGIE MUCH

Germany

Plant-based

Model: End-consumer products

What they did: Baby food

Business closed



WHOLYFOOD

France

Plant-based

Model: End-consumer products

What they did: Dips, sauces, ready-meals

Business closed



ZVEETZ

Germany

Plant-based

Model: End-consumer products

What they did: Desserts

Business closed



DEVON GARDEN

United Kingdom

Plant-based

Model: End-consumer products

What they did: Milk alternative using yellow split peas

Business closed



REMILK

Israel

Cellular agriculture

Model: Ingredients

What they do: Dairy protein using precision fermentation



HEUROS

Australia

Cellular agriculture

Model: Enablers

What they did: Cultivated meat technology and growth factors

Business closed



THE LIVE GREEN CO

United States

Cellular agriculture

Model: Enablers / Ingredients

What they do: Proprietary platform to develop active functional ingredients for food companies

COHORT 5: WINTER 2020



FELLOW CREATURES

United Kingdom

Plant-based

Model: End-consumer products

What they do: Plant-based chocolate bars and spreads



HAOFOOD

Hong Kong

Plant-based

Model: End-consumer products

What they do: Meatless dumplings and chicken alternative



POW! FOODS

Chile

Plant-based

Model: End-consumer products

What they did: Plant-based meat, including chorizo and nuggets

Business closed



NAKA FOODS

India

Plant-based

Model: End-consumer products

What they did: Plant-based meat and energy bars

Business closed



THE FAST GOOD COMPANY

Netherlands

Plant-based

Model: End-consumer products

What they did: Plant-based ready meals

Business closed



UPDATE FOODS

France

Plant-based

Model: End-consumer products

What they did: Dairy alternatives, using faba and algae proteins

Business closed

COHORT 6: SUMMER 2021



KERN TEC

Austria

Plant-based

Model: End-consumer products / Ingredients

What they do: Products and ingredients using stones from discarded fruit



OMNI

United Kingdom

Plant-based

Model: End-consumer products

What they do: Plant-based pet food made by vets



EGGFIELD

Switzerland

Plant-based

Model: Ingredients

What they do: Egg alternative for chefs and manufacturers



ROOT KITCHEN

United Kingdom

Plant-based

Model: End-consumer products

What they do: Frozen plant-based ready meals



OZERS

France

Plant-based

Model: End-consumer products

What they do: Protein powders and snacks



PROMEAT

India

Plant-based

Model: End-consumer products

What they do: Plant-based chicken and other meat products



ASANTÉ

United States

Plant-based

Model: End-consumer products

What they did: Plant-based meat
Business closed



BOSQUE FOODS

United States

Fermentation

Model: End-consumer products / Ingredients

What they do: Mycelium-based fillets and cutlets



BIFIDICE

Chile

Fermentation

Model: Ingredients

What they do: Microbiotic ingredient for food applications, clinically proven to reduce allergies and improve immunity

COHORT 7: WINTER 2021



UMAMI UNITED

Japan

Plant-based

Model: Ingredients

What they do: Egg-replacement ingredients for food manufacturers



BRAIN FOODS

Bulgaria

Plant-based

Model: End-consumer products

What they do: Snacks



ALTEIN INGREDIENTS

Singapore

Plant-based

Model: Ingredients

What they do: Functional protein ingredients



BETTER BET

(FORMERLY ALT FOODS)
India

Plant-based

Model: End-consumer products

What they do: Plant-based drinks made from sprouted millet



CULTIVATED BIOSCIENCES

Switzerland

Fermentation

Model: Ingredients

What they do: Fat ingredient to improve the mouthfeel of dairy alternatives using fermentation



GENESEEA

Israel

Fermentation

Model: Ingredients

What they do: Macroalgae-derived ingredients for the food industry



MATI FOODS

(FORMERLY MEET FUTURE)
Estonia

Fermentation

Model: End-consumer products

What they do: Whole cuts made using mycoprotein



PROPROTEIN

Estonia

Cellular agriculture

Model: Ingredients

What they did: Technology to produce dairy proteins through yeast fermentation

Business closed

COHORT 8: SUMMER 2022



FABUMIN

Israel

Plant-based

Model: Ingredients

What they do: Plant-based alternative to albumin (the protein in egg whites)



BIOFECT INNOVATIONS

Canada

Cellular agriculture

Model: Ingredients

What they do: Microbial platform for tailor-made protein ingredients



CULTIMATE

Germany

Cellular agriculture

Model: Ingredients

What they do: Cultivated fat



OCEANTASTES

United States

Cellular agriculture

Model: Ingredients

What they did: Cultivated seafood

Business closed



QUAZY FOODS

Germany

Fermentation

Model: End-consumer products

What they do: Functional ingredients made from microalgae



FOTORTEC

United States

Fermentation

Model: Ingredients / Enablers

What they do: Protein ingredients from fungi

COHORT 9: WINTER 2022



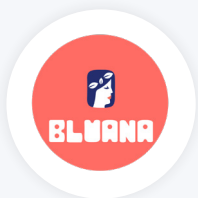
PLANT REVOLT

Hungary

Plant-based

Model: End-consumer products

What they do: Plant-based meat



BLUANA

Romania

Plant-based

Model: End-consumer products

What they do: Plant-based tuna and salmon sashimi



SEASPIRE

India

Plant-based

Model: End-consumer products

What they do: Plant-based seafood



GREEN GO

Ukraine

Plant-based

Model: End-consumer products

What they do: Plant-based meats



LEAF FOODS

Mexico

Plant-based

Model: End-consumer products

What they do: Plant-based dairy products



SER VEGANO

Mexico

Plant-based

Model: End-consumer products

What they do: Plant-based meats, Mexican style



CASA VEGAN

Nigeria

Plant-based

Model: End-consumer products

What they do: Plant-based meat, Nigerian style



D*mn GOOD

(FORMERLY RAW BAKE STATION)

United Kingdom

Plant-based

Model: End-consumer products

What they do: Snacks and desserts



VEGAN SUNDAY SUPPER

United States

Plant-based

Model: End-consumer products

What they do: Plant-based frozen ready meals, Italian style



VITALITY FOODS

Singapore

Plant-based

Model: Ingredients

What they do: Plant-based stock powders



QUELP

Chile

Plant-based

Model: End-consumer products / Enablers

What they do: Plant-based meat products using algae



JOOULES

New Zealand

Fermentation

Model: Ingredients

What they do: Using fermentation to produce protein ingredients from CO₂ and renewable energy



BIOGNR

Lithuania

Fermentation

Model: Ingredients

What they do: Mycoprotein for food manufacturers

COHORT 10: SUMMER 2023



BE BETTER MY FRIEND

The Netherlands

Plant-based

Model: Ingredients

What they do: Butter alternative for the pastry industry



PROPEL FOODS

Mexico

Plant-based

Model: End-consumer products

What they do: Plant-based meat products made using AI



PLANT ORIGIN

Thailand

Plant-based

Model: End-consumer products / Ingredients

What they do: Egg alternative made from rice bran



FOODSQUARED

United Kingdom

Plant-based

Model: End-consumer products

What they do: Plant-based shellfish



STARPLANTS

China

Plant-based

Model: End-consumer products

What they do: Chickpea milk



BYGG FOODS

United States

Plant-based

Model: End-consumer products

What they do: Barley-based protein powder



FATTASTIC TECHNOLOGIES

Singapore

Plant-based

Model: Ingredients

What they do: Customisable alternative fats for use in plant-based products



STICTA BIOLOGICALS

Chile

Cellular agriculture

Model: Enablers

What they do: Yeast-derived recombinant proteins and key nutrients for the cell-based meat industry



SOMATECH

Ireland

Fermentation

Model: Enablers

What they do: Solid-state fermentation platform



MYCOSURE

South Africa

Fermentation

Model: Ingredients

What they do: Mycelium-based protein ingredients



ALGROW BIOSCIENCES

Singapore

Fermentation

Model: Ingredients

What they do: Microalgae-based protein ingredient



ERGO BIOSCIENCE

Argentina

Plant-cell culture

Model: Ingredients

What they do: Animal proteins made using plant-cell precision fermentation

COHORT 11: WINTER 2023



EXSEED

Bulgaria

Plant-based

Model: Ingredients

What they do: Sunflower protein using novel technology for extraction



GIMME SABOR

(FORMERLY GUIMARANA)
Spain

Plant-based

Model: End-consumer products / Ingredients

What they do: Clean-label flavours, seasonings and bouillons



POSEIDONA

Spain

Plant-based

Model: Ingredients

What they do: Protein ingredients made from algal waste and invasive biomass



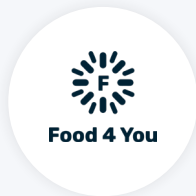
ALLIUM BIO

Singapore

Fermentation

Model: Ingredients

What they do: Co-culturing mycelium and microalgae for functional ingredients



FOOD4YOU

Argentina

Fermentation

Model: Ingredients

What they do: Fermentation-derived ingredients



LIVESTOCK LABS

United States

Cellular agriculture

Model: Enablers

What they do: Customised cell lines for use by cultivated meat producers



CELLVA

Brazil

Cellular agriculture

Model: Ingredients

What they do: Cultivated ingredients including pork fat



MARINAS BIO

Singapore

Cellular agriculture

Model: Ingredients

What they do: Cultivated seafood delicacies, including caviar and roe

PORTFOLIO STARTUPS



ALFRED'S FOOD TECH

Israel

Plant-based

Model: Enablers

What they do: Novel technology platform for whole-cut texturisation



HAPPY OCEAN FOODS

Germany

Plant-based

Model: End-consumer products

What they do: Plant-based shrimp, tuna, salmon, and calamari



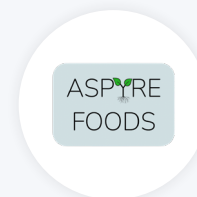
LIBRE FOODS

Spain

Fermentation

Model: End-consumer products / Ingredients

What they do: Fungi-based whole cuts, including bacon and chicken



ASPYRE FOODS

South Africa

Molecular farming

Model: Ingredients

What they do: Using molecular farming to produce ingredients for use in alternative dairy products

ABOUT THE PROVEG INCUBATOR

The ProVeg Incubator is the world's first and leading accelerator programme for food-tech startups working in the alternative-protein space. We work with pioneering founders from around the world to transform our food systems and build a fairer, healthier, and more resilient future for all.

We support startups that are working on new products, ingredients or technologies that can help to accelerate this transition at scale. Our unique impact focus and reinvestment model supports ProVeg's global mission of replacing 50% of animal-based products with plant-based and cultivated foods by 2040.

In 2023, we launched Kickstarting for Good, the world's first incubator and accelerator programme aimed specifically at nonprofit organisations and impact initiatives working on transforming the food system.

Find out more and apply at provegincubator.com.



20-week accelerator programme



Expert mentoring



Up to \$300k funding



Industry networks



Alumni community



Facilities

THANK YOU

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Albrecht Wolfmeyer,
International Director



Antje Räuscher,
Co-head and Partnerships Lead



Divya Murthy,
Co-head and Investments Lead



Hédi Farhat,
Investment Manager



Vicki Sagar,
Senior Marketing and Communications Manager



Gabrielle Meyer,
Marketing and Communications Officer



Yasmine Schrey,
Office and Events Manager



Alexandra Kyvik Ruiz,
Programme Manager



Prakrit Sachdeva,
Programme Manager, Kickstarting for Good



Leo Nunes Ricucci,
Investment Associate



GLOSSARY

Alternative protein

Alternative proteins, also referred to as alt protein, are animal-free ingredients that aim to replace animal proteins such as those found in meat, dairy, seafood, and eggs. They're designed to emulate their animal-derived counterparts in terms of taste, texture, and culinary experience, as well as price and availability.

Plant-based

The term 'plant-based' is used to describe foods and food products in which all the key ingredients come from plants. Such ingredients can include vegetable and fruit ingredients as well as grains, seeds, legumes, and more. They are free of all animal-based products.

ProVeg Incubator alumni companies:
Kern Tec, Omni, Mondarella, Hooked



Cellular agriculture

Cellular agriculture is the process by which animal-based products are produced directly from cell cultures rather than from animals. Cellular agriculture comprises two different approaches: cell cultivation (cultivated) and microbial precision fermentation.

ProVeg Incubator alumni companies:
Cellular Agriculture, Cultivate Foods, Cellva Ingredients



Enabling technology

Enabling technologies include the development and provision of the equipment, infrastructure, and processes needed to improve and scale production. Examples include bioreactors, scaffolding, and microcarriers, all of which improve and optimise production processes and reduce costs.

ProVeg Incubator alumni companies:
Cellular Agriculture, Sticta Biologicals



Cultivated meat

Cultivated meat, also known as cultured meat, refers to meat that is grown directly from cells. Cells are used to build muscle tissue and fat in a biological process similar to that which happens inside an animal's body. The cells can be arranged in the same or similar structure as animal tissues, thus replicating the sensory and nutritional profiles of conventional meat. End products include meat, seafood and organ meats.

ProVeg Incubator alumni companies:
Clear Meat, Cellular Agriculture



Precision fermentation

Precision fermentation uses microorganisms to produce proteins, fats, enzymes, vitamins, flavour molecules, and pigments that can be used as functional ingredients in food production. The process can be used to produce dairy alternatives, including milk and cheese.

ProVeg Incubator alumni companies:
Formo, Remilk, Biofect Innovations, Sticta Biologicals



Biomass fermentation

Biomass makes efficient use of micro-organisms which are grown and harvested at scale in order to produce protein-rich food, both in the form of ingredients for food production, and as end products such as mycelium-based meat alternatives.

ProVeg Incubator alumni companies:
*Infinite Roots (formerly Mushlabs),
Bosque Foods*



Fungi, mycoprotein, and mycelium

Fungi form a very diverse 'kingdom of life' that is separate from plants, animals, and bacteria. The mushrooms that we eat are a kind of fungi, as are the yeasts we use for baking and brewing, and the moulds that degrade organic matter. 'Mushroom' refers only to the fruiting body of fungi while 'mycelium' is the name of the root-like structure beneath the soil. Mycoprotein, which is mycelium created from microscopic fungi, is used to produce nutritious and healthy, meat-like food alternatives.

ProVeg Incubator alumni companies:
*Infinite Roots (formerly Mushlabs),
Better Nature Tempeh, Bosque Foods*



Molecular farming

Molecular farming combines plant agriculture and techniques similar to those used in precision fermentation in order to enable the production of animal proteins, such as dairy or egg proteins, in plants. This process allows for the production of alternative proteins inside a plant, using photosynthesis and established farming techniques.

ProVeg Incubator portfolio company:
Aspyre Foods



Plant-cell culture

Plant-cell culture involves the cultivation of plant-cells to create plant tissues and plant-made molecules for use in food production and other industries. Individual plant-cells and tissues are propagated using bioreactors and feedstock to replicate the ideal growing conditions for the targeted compounds, instead of conventional inputs such as sun, soil, water, and fertiliser.

ProVeg Incubator alumni company:
Ergo Biosciences



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