



THE POLITICS OF PROTEIN

FAKE MEAT IN THE SPOTLIGHT

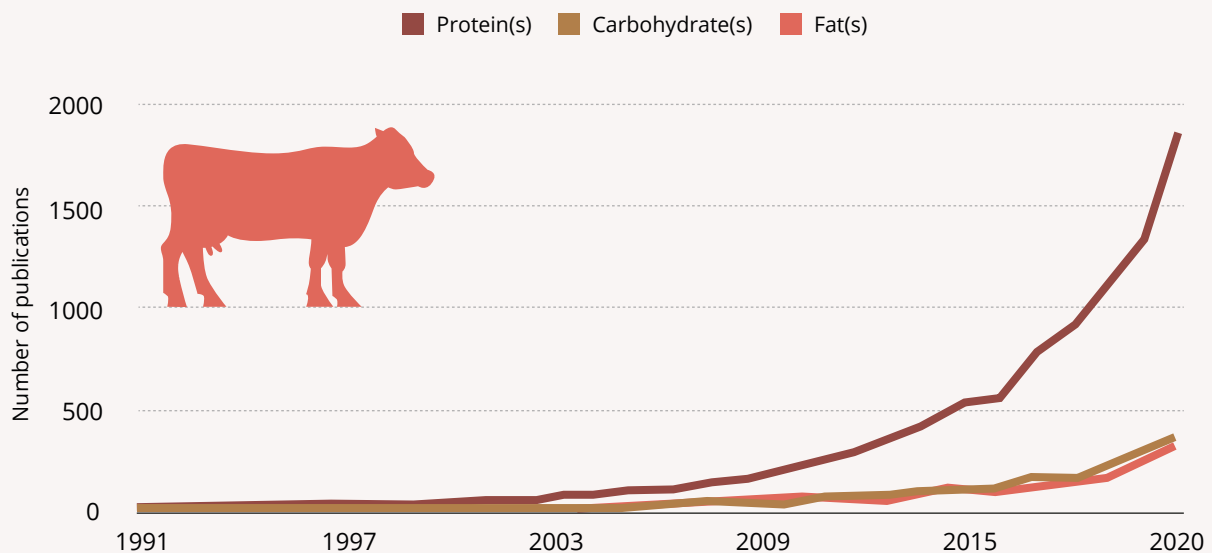
INFOSHEET APRIL 2022

FAKE MEAT WILL NOT SAVE THE PLANET

A new report by IPES-Food, *The Politics of Protein*, reveals that fake meat is a ‘silver bullet’ technology that may not be as sustainable as its advocates claim. There is a rush to so-called ‘alternative proteins’ - which include ‘lab’ or ‘cultured’ meat and fish products, plant-based (or ‘fake’) substitutes, as well as dairy and egg alternatives. A ‘protein obsession’ in marketing and media helps to bolster these technologies.

Alternative proteins are promising reduced damage to the climate. However the evidence for these claims is limited and speculative. Indeed they may cause more harm than good, and risk entrenching domination of food systems by giant agri-business firms, increasing dependency on fossil fuel energy, promoting standardised (Westernised) diets of processed foods, driving loss of livelihoods for livestock farmers in the global South, and reinforcing industrial supply chains that harm people and the planet. These often highly processed products are being marketed to consumers worldwide regardless of their relevance or context.

WEB OF SCIENCE SEARCHES FOR RESEARCH ON ‘PROTEIN AND SUSTAINABILITY’

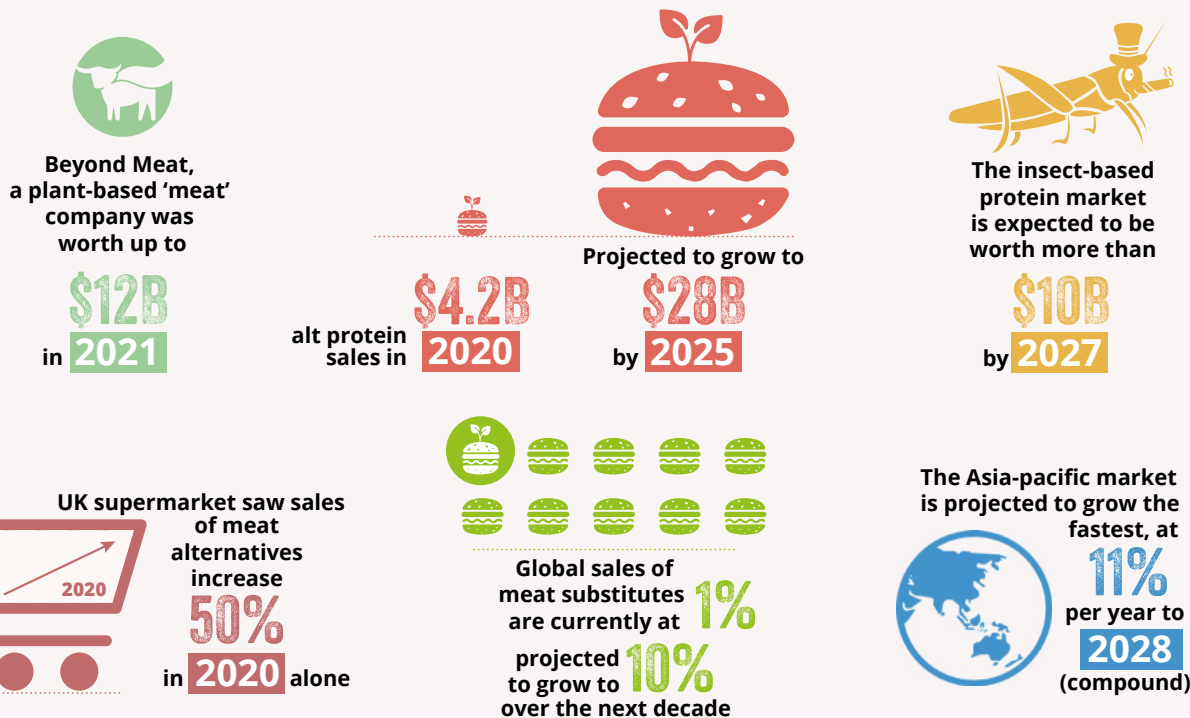


THE ALT PROTEIN GOLDRUSH

Alternative proteins have attracted eye-catching backers including Bill Gates, Sergey Brin and Richard Branson. As well as support from US, Chinese and European governments. The market for meat substitutes is experiencing rapid growth.

- A market worth \$4.2 billion sales in 2020 is predicted to grow 6-fold to reach \$28 billion by 2025.
- The insect-based protein market is expected to be worth more than \$10 billion by 2027.
- Beyond Meat, a plant-based 'meat' company, became publicly traded in 2019, and by 2021 was worth up to \$12 billion - three times the size of the entire alt protein market at the time, and greater than many more established food processors with higher annual sales (though share prices have since fallen).
- Alternative meat sales currently represent 1% of the world market for meat, but this could grow to 10% by 2030.
- UK supermarket Tesco, registered a rise in demand for meat-free substitutes by almost 50% in 2020 – the most popular lines being burger, sausage and mince substitutes.
- While currently Europe holds the biggest market share, at 38.5% of global revenues in meat substitutes, the Asia-pacific market is projected to grow the fastest, at 11.18% per year to 2028.
- Significantly, the Chinese government's five-year agricultural plan this year emphasised cultivated meat for the first time, likely pointing to increased government funding.

ALTERNATIVE PROTEINS ARE BIG BUSINESS



BIG MEAT COMPANIES ARE MOVING INTO PLANT-BASED SUBSTITUTES



Invested in lab grown meat company



Joint venture with pea protein firm



Contracting to source insects for animal feed



Introducing its own plant-based meat substitute



The largest meat company in the world

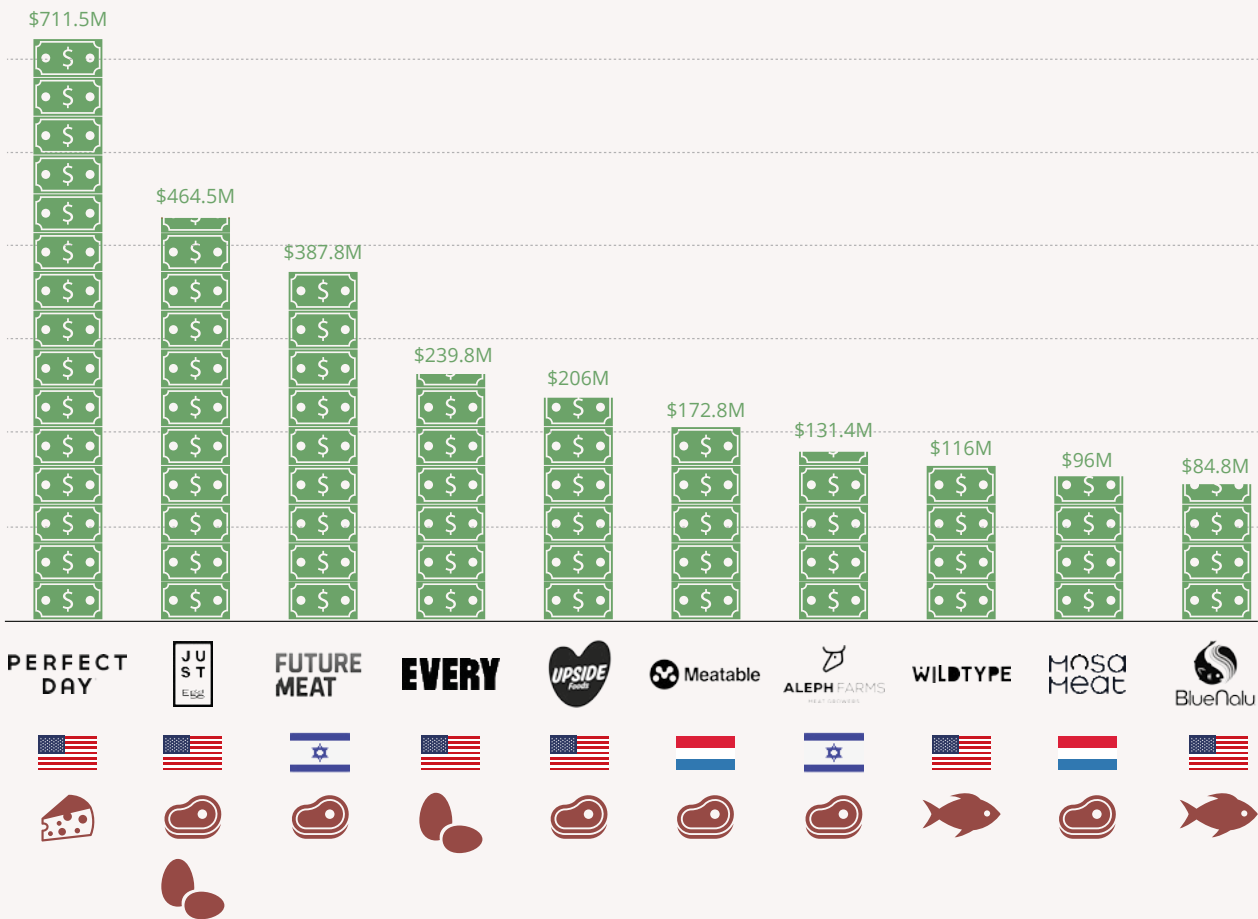


Purchased **Bio.Tech. Foods.** (A Spanish lab grown meat firm)

Investing **\$100M** in developing lab grown meat



THE 10 LARGEST LAB-GROWN MEAT (AND FISH/DAIRY/EGG) FIRMS IN FUNDING RAISED FROM FUNDING ROUNDS



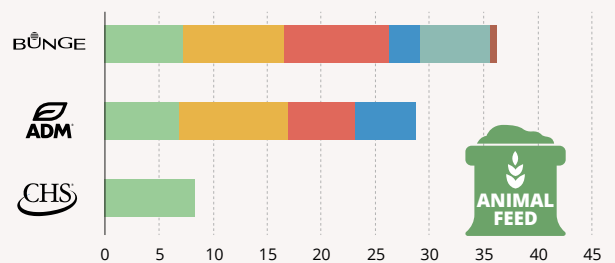
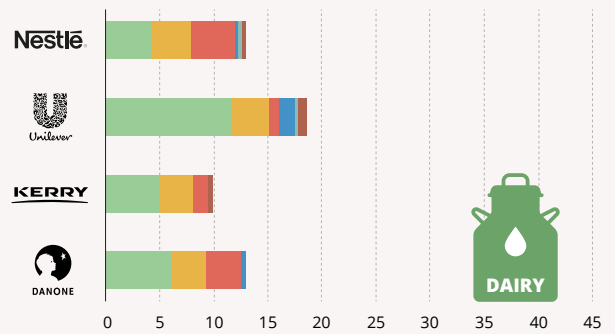
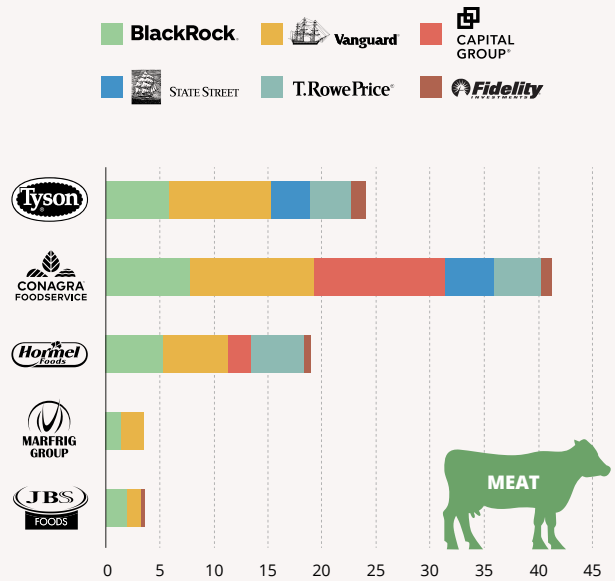
THE CONSOLIDATION OF BIG MEAT AND BIG PROTEIN

Despite start-ups initiating the alternative protein boom, the alternative protein industry has seen significant investments and acquisitions from the world's largest meat processing companies, in order to tap growth opportunities and maintain future market share.

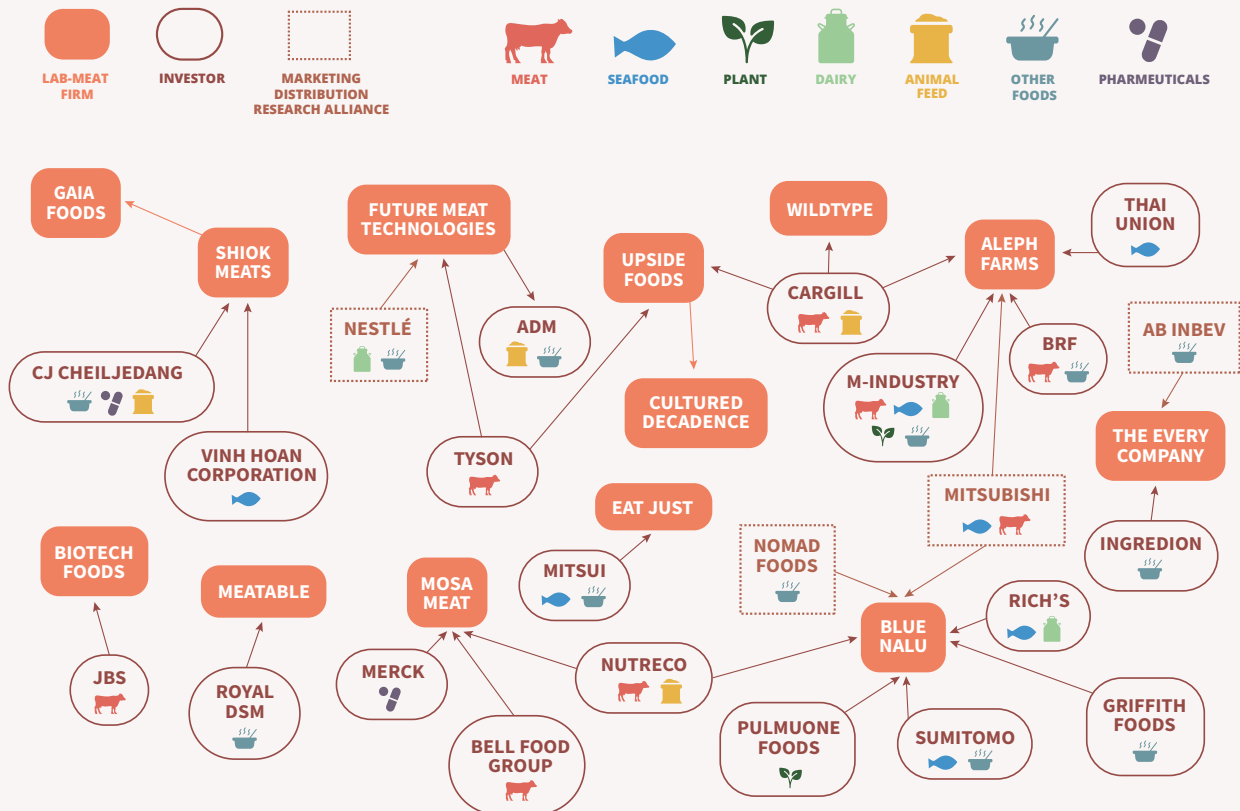
- This 'protein convergence' involves the majority of dominant meat processors in the world – including JBS, Tyson, WH Group, and Cargill. Most of them already have the full sweep of poultry, pork, and beef divisions.
- The meat giants are now acquiring or developing plant-based meat and dairy substitutes and investing in start-ups that are attempting to commercialise lab-grown meat and fish.
- Vanguard and BlackRock – two of the world's biggest asset management firms – have investments in almost all of these meat and protein giants.
- Major investment funds and indexes are helping to rapidly capitalize new plant-based protein and lab-grown meat firms. These trends are contributing to the increasing financialization of food systems.

The alternative protein market is thus now characterised by giant companies who combine both industrial meat production and its alternatives - creating 'protein' monopolies. Well-meaning consumers of alternative proteins may not realise they're buying into the same giant meat companies that are operating the biggest of factory farms, contributing to deforestation and forced labour, and slaughtering millions of animals everyday.

LEADING INSTITUTIONAL INVESTORS IN PROTEIN



LARGEST LAB GROWN MEAT FIRMS AND KEY INVESTORS



SUSTAINABILITY CLAIMS ARE SPECULATIVE AND RISK GREENWASHING

According to manufacturers, 'alternative proteins' offer wide-ranging benefits for health and the climate. However, the evidence to date is limited and speculative - particularly for lab-grown meat. Many claims are based on unsubstantiated science and studies which the manufacturers have funded.

Many plant-based substitutes fall into the category of ultra-processed foods, whose consumption a number of dietary guidelines recommend limiting. Many rely on energy-intensive hyper-processing to produce key additives as well as sourcing (plant) ingredients from industrial monoculture systems. When plant-based substitutes depend on soy, palm oil and wheat, they may just be exacerbating the chemical-intensive crop monocultures that are already causing severe environmental and health impacts.

Meanwhile, for lab-grown meat, one recent study concluded that its high energy requirements mean any longer-term potential to cut greenhouse gas emissions is contingent on the decarbonisation of fossil fuelled energy systems.

The sustainability benefits of alternative proteins also depend on which animal production systems they are compared against. Research consistently ignores the significant variation in impacts between different types of livestock and different production models. Assumptions about land currently occupied by livestock being turned to plant-based food production or 'rewilded' are far from guaranteed.

There is also a risk that alternative proteins could entail a significant overhaul of the workforce involved in farming - displacing and disrupting the livelihoods of millions across the global South whose livelihoods depend on agriculture. Alternative protein manufacturers have their sights on rollout across the global South.

Lastly, the market domination by big corporations cannot be ignored. The potential of alternative proteins to have a positive impact on sustainability, livelihoods, and resilience is likely to be severely constrained by the business models and modus operandi of a highly concentrated industrial agri-food sector.

The bold categorical green claims can seem appealing in a polarised protein debate. But there are too many uncertainties and data gaps, and too much variation between highly-diverse plant and animal production systems, to back up these claims. These technologies risk recreating the same problems of our industrial food system.

WHAT'S NEEDED

IPES-Food is calling for a shift in focus away from the protein hype and simplistic techno-fix solutions, towards sustainable food systems and localised food reforms. Meanwhile, to tackle the 'protein' monopolies, IPES calls for an end to public funding of such 'silver bullet' technologies, and promotion of organisational diversity through antitrust and competition law.

CONCLUSIONS

There's lots of hype
about meat and protein

It's narrowly
focused on CO₂

It ignores
how food is produced

It ignores
differences between
world regions

It fails to see the
whole food system

It's focused on
simplistic silver
bullet solutions



RECOMMENDATIONS

1

Focus on achieving a
transformation to
'sustainable food systems' -
not a 'protein transition'

2

Prioritize reforms that deliver
on all aspects of sustainability
starting at regional level

3

Reclaim public resources
from 'big protein',
realign innovation pathways
with the public good,
and reset the debate



Full report available at:

www.ipes-food.org/pages/politicsofprotein