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ASIA

Why Push for Cruelty-Free Meats?Â

03 June 2025 | News

A little over ten years ago, the idea of growing real meat without raising or slaughtering animals sounded like science fiction. Fast forward to today, and cultivated meat is no longer just a bold concept; itâ??s a fast-moving, headline-grabbing innovation thatâ??s reshaping how we think about the future of food.Â



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The worldâ??s appetite for protein is growing fast, and by 2050, global demand is expected to double. Rising incomes, changing diets, and rapid urbanisation, especially in emerging markets like India, where the numbers are staggering. Take poultry, for example: demand in India alone is projected to skyrocket 850 per cent by 2040, jumping from just over 1 million to nearly 10 million tonnes annually. Thatâ??s the steepest growth curve anywhere in the world. However, hereâ??s the catch: our traditional livestock systems arenâ??t built to scale sustainably. Livestock farming is a major contributor to greenhouse gas emissions, land and water degradation, and public health threats, from zoonotic diseases to the global rise in antimicrobial resistance, fuelled by the overuse of antibiotics in animal agriculture. Enter cultivated meat: one of the most promising players in the broader smart protein landscape, alongside plant-based and fermentation-derived alternatives. Cultivated meat offers a potential solution, a way to produce real, delicious meat with far less environmental impact, and without the volatility of traditional supply chains. What was once a moonshot is now an emerging sector with a real shot at transforming how we feed a growing planet.

Smart protein holds immense promise in delivering environmental, social, and economic benefits while contributing to nine of the United Nationsâ?? 17 Sustainable Development Goals (SDGs). By eliminating the need for animal rearing and slaughter, these proteins greatly reduce public health risks and have a far lower environmental footprint. For instance, cultivating meat directly from animal cells can cut land use by 64 to 90 per cent compared to traditional livestock farming, offering a powerful tool to combat climate change and conserve natural resources. What once felt like science fiction is now fast becoming an international reality, and this is just the beginning.

Turning Consumer Curiosity Into Market Momentum

A consumer survey conducted in India by Biokraft in 2025 identified tier 1 cities (67 per cent of respondents), followed by tier 2 cities (25 per cent), as potential clients for cultivated meat. This reflects a strong initial interest in cultivated meat among urban consumers, where awareness, purchasing power and demand for sustainable food options are higher. Given that Tier-1 cities present immediate marketing opportunities, Tier 2 cities exhibit potential for expansion. Securing FSSAI and FDA approvals is mandatory for establishing the credibility and safety of cultivated meat products. At the same time, scaling production is necessary for minimising costs and achieving price parity with that of traditional chicken. Offering trial pricing can accelerate initial adoption, thereby allowing consumers to experience the product at a relatively lower price. Investing in R&D to improve the mouthfeel of cultivated meat is equally crucial. For instance, a recent study by the Purdue Centre for Food Demand Analysis & Sustainability reveals that U.S. consumers remain sceptical about the flavour of cultivated meat. When it comes to taste, they rated cultivated beef and chicken just 2.7 out of 5, nearly half as enjoyable as conventional beef (4.2) and chicken (4.4). Still, the gap narrows when it comes to health perceptions.Â

Even if lab-grown meat tasted the same, had equal nutrition, and cost no more than conventional meat, most people still wouldnâ??t bite. A YouGov survey found that just 13 per cent of respondents said they would prefer it under those ideal conditions. The takeaway? For many consumers, the biggest hurdle isnâ??t the product, itâ??s the perception.

Partnerships That Shape a Sustainable Protein Future

Legacy food giants are becoming powerful allies in the rise of cultivated meat, helping startups unlock funding, scale production, and navigate complex markets. Global leaders like JBS, Tyson, Cargill, NestlÃ©, Thai Union, and Danone are backing the sector through strategic investments, partnerships, and innovation. A standout example: in 2024, Israeli startup Aleph Farms filed Thailandâ??s first cultivated meat approval, after nearly a year of close collaboration with Thai Union. These cross-industry partnerships are fast-tracking cultivated meat from lab to table, signalling a major shift in the future of protein.

Biokraft Foods, a pioneering biotech startup, has made history by hosting Indiaâ??s first formal tasting event for cultivated chicken meat. Commenting on the same, Kamalnayan Tibrewal, Founder and CEO of Biokraft Foods, shared*â?? We are working closely with the Indian regulatory body, FSSAI, and are optimistic about commercialising our product by next year. Weâ??re excited to lead this space and create a future where technology and tradition meet for a better planet.â?* Biokraft Foods is a leading cultivated meat startup focused on producing sustainable, high-quality meat using advanced 3D bioprinting technology.

Nilesh Lele, President of CASMB and Strategic Advisor at Biokraft Foods, expressed his optimism, â??Biokraft Foods is at the forefront of cultivated meat innovation, and this event underscores their potential to revolutionise the industry. Iâ??m confident that Biokraft will not only lead in this space but also put India on the global map for sustainable food technology.â?

Biokraft Foods has made a breakthrough in Indiaâ??s seafood sector by launching structured rainbow trout products through cell cultivation technology, a first of its kind in the country. This milestone was achieved in partnership with the Indian Council of Agricultural Research â?? Central Institute of Coldwater Fisheries Research (ICAR-CICFR), marking a major step forward in Biokraftâ??s clean protein platform.Â

Rainbow trout are prized for their taste and health benefits, but farming them comes at a high environmental cost. These species are crucial to both nature and the economy, yet finding a way to enjoy trout without depleting wild stocks has been a tough nut to crack.Â *â??At Biokraft Foods, we believe the future of food lies at the intersection of innovation and sustainability,â?• said Kamalnayan Tibrewal, Founder and CEO of Biokraft Foods. He added, â??Our partnership with ICAR-CICFR marks a significant milestone launching Indiaâ??s first cultivated trout product, a breakthrough that preserves our precious aquatic biodiversity and brings cleaner, cruelty-free fish to the plate.â?*

Trout is a delicacy in India, but its high price and limited availability make it more of a luxury than a regular dish, thanks to geographic and climate challenges. As production scales up, costs will drop, making it more accessible without sacrificing quality. Best of all, cultivated trout is free from antibiotics and harmful contaminants like microplastics, offering a cleaner, greener, and more sustainable seafood choice that doesnâ??t compromise on taste or nutrition.

Dr Amit Pande, Principal Scientist, remarked, â??At ICAR-CICFR, our mandate has been to promote sustainable cold water fisheries through advanced research and innovation. This initiative not only aligns with our vision of conserving aquatic biodiversity but also opens up new avenues for cell-based aquaculture research in India.â?

A New Era of Meat for a Changing Planet

Turning cultivated meat into a $25 billion global industry by 2030 opens doors far beyond the current food sector. By the end of the decade, cultivated meat could account for up to 0.5 per cent of the global meat supply, translating to billions of pounds

of production with ripple effects across agriculture, technology, health, and sustainability. For cultivated meat to truly deliver on its promise of sustainability, the world needs greater investment in open-access research, especially around the species and cell types used, as well as next-generation production technologies. A shift toward renewable energy is also critical, as it magnifies the environmental benefits of cultivated meat. Industry data suggests that, when powered by clean energy, cultivated meat could slash greenhouse gas emissions by up to 92 per cent compared to conventional meat. It also uses dramatically less land and water, up to 90 per cent and 66 per cent less, respectively, while significantly reducing environmental impacts like air pollution, soil acidification, and marine eutrophication.Â

With so much less land required for production, new opportunities emerge for carbon capture, renewable energy generation, and restoring ecosystems, positioning cultivated meat as a key piece of the climate and food security puzzle. In just a few years, cultivated meat has slashed its production costs by a staggering 99 per cent, a drop that mirrors some of the fastest tech breakthroughs in history. If costs continue to fall at a pace similar to human genome sequencing, which declined by 45 per cent annually from 2001 to 2021, cultivated meat could match the price of conventional meat by 2030. That would mark a turning point, where sustainable, slaughter-free meat becomes not just possible, but practical for the masses.Â

India is poised to become a leader in smart protein innovation by building dedicated hubs within existing bio-incubators and Atal Incubation Centres. Backed by agencies like BIRAC, DST, and CSIR, these hubs would give startups and researchers access to cutting-edge lab, pilot, and manufacturing infrastructure. With a strong network of biotech parks and research institutions already in place, India has the talent and tools to turn cultivated meat from lab breakthrough to market reality.

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