

Smart Protein Market Size & Export Potential in India by 2030

India's smart protein sector has truly taken off over the last two years - with new products going to market every few months, more than **50 startups** now active in the space, and an ecosystem of **80+ companies** supporting the growth of these startups. But there's a lot that remains to be seen and the market size of the smart protein sector in India hasn't been comprehensively mapped before. Investors and other stakeholders that GFI India engages with frequently ask us what the true potential of the sector is.

To answer questions like these, over the last several months, **GFI India has been working with Deloitte India on a Smart Protein Economic Analysis**, to gauge what smart protein could mean for India's economic future in terms of market size, export potential, job creation, and more.

METHODOLOGY

Our domestic market size models for plant-based meat, eggs, and dairy and meat from fermentation across scenarios were built after considering various factors such as penetration of the various products/categories across different Socio-Economic Classifications (SECs), adoption rates, replacement potential, and prices of both conventional and plant-based products by 2030. Other key assumptions which underpin the path to taste and price parity for various categories across the three scenarios are different levels of supply chain localization and investments in R&D and local talent development. Projections have been calculated across 3 scenarios - low-growth, medium-growth, and high-growth.*

For export potential, we considered various factors such as penetration and variety of existing categories in overseas markets, unique propositions offered by Indian smart protein products in overseas markets, and export volume and growth trends of similar or adjacent food products and categories from India such as conventional meat, dairy, and ready-to-eat/ready-to-cook foods.

****Scenarios explained:** The penetration, adoption, and replacement potential calculations were arrived at using a combination of GFI India's primary research on the target market and Deloitte's proprietary market sizing modeling. To understand the path to taste and price parity for various alternative protein categories, we conducted a series of interviews with experts across the industry.*

KEY FINDINGS

Here are our top line ranges (both low growth and high growth scenarios) for the domestic market size and export potential of plant-based meat, eggs, dairy, and fermentation-derived meat, along with the export potential of cultivated meat:

The total economic opportunity (domestic market size + exports) for smart protein in 2030 ranges from **INR 12,075 crore (USD 1.5 billion) to INR 33,194 crore (USD 4.2 billion)**

PLANT-BASED MEAT

- The domestic market size for plant-based meat in 2030 ranges from **INR 1,803 crore (USD 228 million) to INR 5,884 crore (USD 745 million)**
- The export potential for plant-based meat in 2030 ranges from **INR 2,194 crore (USD 278 million) to INR 6,824 crore (USD 864 million)**

PLANT-BASED EGGS

- The domestic market size for plant-based eggs in 2030 ranges from **INR 527 crore (USD 67 million) to INR 1,416 crore (USD 179 million)**
- The export potential for plant-based eggs in 2030 ranges from **INR 266 crore (USD 34 million) to INR 631 crore (USD 80 million)**

PLANT-BASED DAIRY

- The domestic market size for plant-based dairy in 2030 ranges from **INR 4,827 crore (USD 611 million) to INR 10,625 crore (USD 1.3 billion)**
- The export potential for plant-based dairy in 2030 ranges from **INR 459 crore (USD 58 million) to INR 1,889 crore (USD 239 million)**

FERMENTATION DERIVED MEAT

- The domestic market size for meat produced via biomass/precision fermentation in 2030 ranges from **INR 318 crore (USD 40 million) to INR 1,038 crore (USD 131 million)**
- The export potential for meat produced via biomass/precision fermentation in 2030 ranges from **INR 351 crore (USD 44 million) to INR 819 crore (USD 103 million)**

CULTIVATED MEAT

- The export potential for cultivated meat in 2030 ranges from **INR 1,312 crore (USD 164 million) to INR 4,152 crore (USD 520 million)**

CUMULATIVE MARKET OPPORTUNITY

- The consolidated domestic market size for smart protein in 2030 ranges from **INR 7,475 crore (USD 946 million) to INR 18,963 crore (USD 2.4 billion)**
- The consolidated export potential for smart protein in 2030 ranges from **INR 4,582 crore (USD 480 million) to INR 14,321 crore (USD 1.4 billion)**

DOMESTIC MARKET SIZE BY 2030 (IN INR CR)

SCENARIO	PLANT-BASED MEAT	PLANT-BASED DAIRY	PLANT-BASED EGGS	FERMENTATION DERIVED MEAT	OVERALL
CURRENT MARKET SIZE (2022)	100	250	1	-	351
LOW GROWTH	1,803	4,827	527	318	7,475
MEDIUM GROWTH	3,525	7,643	989	622	12,779
HIGH GROWTH	5,884	10,625	1,416	1,038	18,963

EXPORT POTENTIAL BY 2030 (IN INR CR)

SCENARIO	PLANT-BASED MEAT	PLANT-BASED DAIRY	PLANT-BASED EGGS	FERMENTATION DERIVED MEAT	CULTIVATED MEAT*	OVERALL
LOW GROWTH	2,194	459	266	351	1,312	4,582
MEDIUM GROWTH	4,722	1,208	432	604	2,415	9,381
HIGH GROWTH	6,824	1,889	631	819	4,158	14,321

*Includes exports of growth factors and recombinant proteins