AVALON Consulting

# Unlocking the Potential of the Agriculture and Food Processing Industry in Telangana

ASSOCHAM
Ideate · Innovate · Impact

## Agribiz Connect 2025

21 August 2025

Hyderabad

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# About ASSOCHAM

ASSOCHAM initiated its endeavor of value creation for Indian industry in 1920. It brings in actionable insights to strengthen the Indian ecosystem, leveraging its network of more than 4,50,000 members, of which MSMEs represent a large segment. With a strong presence in states, and key cities globally, ASSOCHAM also has more than 400 associations, federations and regional chambers in its fold.

Aligned with the vision of creating a New India, ASSOCHAM works as a conduit between the industry and the Government. The Chamber is an agile and forward-looking institution, leading various initiatives to enhance the global competitiveness of the Indian industry, while strengthening the domestic ecosystem. With more than 100 national and regional sector councils, ASSOCHAM is an impactful representative of the Indian industry. These Councils are led by well-known industry leaders, academicians, economists, and independent professionals. The Chamber focuses on aligning critical needs and interests of the industry with the growth aspirations of the nation.

ASSOCHAM is working hand in hand with the government, regulators and national and international think tanks to contribute to the policy making process and share vital feedback on implementation of decisions of far-reaching consequences. In line with its focus on being future-ready, the Chamber is building a strong network of knowledge architects. Thus, ASSOCHAM is all set to redefine the dynamics of growth and development in the technology-driven 'Knowledge-Based Economy. The Chamber aims to empower stakeholders in the Indian economy by inculcating knowledge that will be the catalyst of growth in the dynamic global environment

**Vision:**

Be the knowledge architect for the Indian economy, with a focus on strengthening India's domestic ecosystem and enhancing global competitiveness.

**Mission:**

Its mission is to impact the policy and legislative environment so as to foster balanced economic, industrial, and social development.

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# FOREWORD

**India's food processing industry sits at a defining crossroads—linking the productivity of our farms with the dynamism of our factories. More than an economic engine, it is a force for nutrition, rural livelihoods, entrepreneurship, and global competitiveness.** By bridging agriculture and manufacturing, food processing adds value to what we grow while shaping diets, generating jobs, and integrating India into global value chains.

This is also one of the most inclusive industries, engaging both organized and unorganized enterprises and nurturing entire ecosystems—from cold chains and packaging to logistics and retail. Sub-sectors such as dairy, fruits and vegetables, meat, poultry, fisheries, and aquaculture are evolving rapidly, driven by consumer demand, product innovation, and expanding export linkages.

Within this larger national canvas, **Telangana is uniquely positioned to lead.** The State has combined **enabling policies, investor-friendly frameworks, and mission-mode programs with robust infrastructure** such as **food processing zones, special clusters, and Mega Food Parks.** These initiatives not only de-risk investments but also shorten go-to-market timelines and strengthen farm-to-factory integration.

For businesses, Telangana presents **a rich canvas of opportunities—to rethink customer segments, redefine value propositions around health, convenience, and regional flavors, and ride on fast-changing consumer trends.** The state's growing recognition of Geographical Indication (GI) products and its focus on **farm-gate-to-factory models** create fertile ground for differentiated branding and inclusive growth. Looking ahead, **digitization, supply chain efficiency, and advanced technologies will be key enablers in making Telangana a benchmark for sustainable and globally competitive food processing.**

As knowledge partners in this initiative, we are privileged to collaborate with **ASSOCHAM, whose vision and convening power continue to play a pivotal role in shaping dialogue and action for India's food processing sector.** In this whitepaper, our intent is to highlight the opportunities and pathways that can **unlock the full potential of Telangana's agriculture and food processing sector.** We hope it inspires dialogue, collaboration, and innovation across stakeholders, and contributes to shaping a future where farmers, businesses, and consumers thrive together.

**Santosh Sreedhar**
Partner, Avalon Consulting
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# FOREWORD

**Key Drivers for Telangana:**

- **Strategic Infrastructure and Policies:** Telangana boasts two Mega Food Parks, 33 processing clusters (One District One Product focus), 11 integrated cold chain facilities, and 25 warehouses, supporting logistical efficiency, reduced wastage, and seamless farm-to-factory integration. The Telangana Food Processing Policy (T-FAPP), TS-iPASS single-window clearance, and continuous administrative reforms have established an industry-friendly ecosystem, recognized nationwide for ease of doing business.

- **Diverse Agri-Base with Specialty Niches:** The state is a major producer of rice, spices (notably turmeric and chillies), mangoes, citrus fruits, and emerging categories such as dragon fruit. Targeted "place of origin" branding (Geographical Indication tags for Tandur Redgram, Warangal Chapata Chilli, and soon, Armoor Turmeric) positions Telangana to capture premium markets and drive rural prosperity.

- **Clustered Production and Investment Focus:** Telangana is actively developing Special Food Processing Zones across 10,000 acres, synergizing primary production with integrated dairy, meat, and horticultural processing units. By attracting ₹25,000 crore in capital investments and nurturing MSMEs, FPOs, and SHGs, the state fosters inclusive employment and innovation.

- **Technology-Driven Competitive Edge:** Adoption of advanced technologies—AI for quality assurance, IoT for smart storage, blockchain for traceability—ensures Telangana's processors meet global standards, minimize losses, optimize costs, and ensure product authenticity.

- **Consumer-Centric Opportunity:** Rapid urbanization, growing disposable incomes, and shifting consumer preferences are fueling demand for healthy, value-added, and convenient foods. Telangana's processors can capture high-growth segments: ready-to-eat meals, premium protein-enriched foods, and ethnic products for both domestic and export markets.

**Vision for the Future:**

ASSOCHAM recognizes Telangana's unique confluence of resources, policy intent, and entrepreneurial spirit. With proactive investment, continued focus on cluster development, branding initiatives, and leveraging new technologies, Telangana can emerge as a national benchmark for sustainable, inclusive, and competitive food processing. The collaborative partnership between industry, government, and knowledge bodies will be critical in unlocking value, transforming rural livelihoods, and establishing Telangana as a global hub for quality processed foods.

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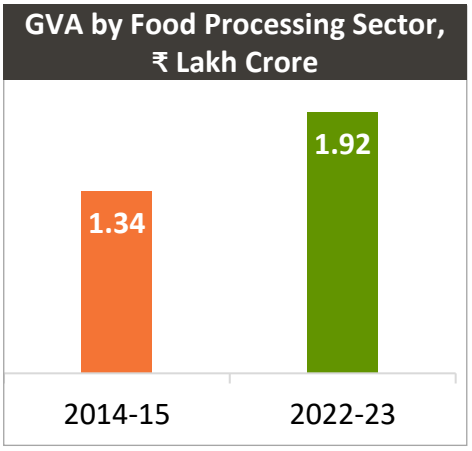
# Role of Food Processing Industry in India

The food processing industry is very crucial and dynamic pillar of Indian economy, serving a link between agriculture and manufacturing sector. It contributes significantly to the Gross Domestic Product (GDP), generates employment, attracts investment, and plays a pivotal role in enhancing farmer incomes. The sector, by enabling higher level of processing, not only reduces post-harvest losses and minimizes wastage but also fosters value addition, promotes crop diversification, and ensures better returns for farmers. Additionally, it drives FOREX earnings through exports and addresses key challenges like food security, food inflation, and the availability of wholesome, nutritious food for the masses.

## *Contribution of food processing sector to Indian GDP*

Between 2014–15 and 2022–23, the Gross Value Added (GVA) by the Food Processing Industries (FPI) sector grew from ₹1.34 lakh crore to ₹1.92 lakh crore at constant 2011–12 prices, reflecting an absolute increase of 43%. During same period it recorded an average annual growth rate of about 4.6%, higher than the 4.4% growth seen in agriculture and allied activities at 2011-12 prices. This strong performance has been driven by a higher agriculture production alongside rising demand for processed food and supportive government incentives. In 2022-23, the sector contributed ₹1.92 lakh crore GVA to the economy, constituted as much as 7.66% of the Manufacturing sector's GVA, 8.45% of the agriculture sector's GVA, and 1.30% of India's total GVA, demonstrating its prominence in driving GDP and India's vision of US$ 5 trillion economy by 2025.




Source: MOFPI

**Overall and Sectoral GVA at Constant Prices 2011-12 (in ₹ Lakh Crore)**

| Economic Activity / Indicator | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GVA - All Sector | 85.46 | 90.64 | 97.12 | 104.92 | 113.28 | 120.34 | 127.34 | 132.36 | 126.87 | 138.77 | 148.05 |
| GVA - Manufacturing | 14.87 | 15.61 | 16.84 | 19.04 | 20.55 | 22.09 | 23.29 | 22.6 | 23.29 | 25.61 | 25.05 |
| GVA - Agriculture, Forestry & Fishing | 15.24 | 16.09 | 16.06 | 16.16 | 17.26 | 18.4 | 18.79 | 19.94 | 20.74 | 21.7 | 22.72 |
| GVA - FPI | 1.3 | 1.3 | 1.34 | 1.61 | 1.79 | 1.93 | 2.36 | 1.96 | 1.96 | 1.9 | 1.92 |

Source: MOFPI

## *Employment in food processing sector*

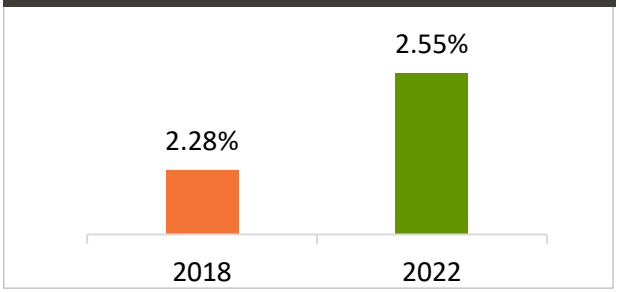
The food processing sector plays a vital role in employment generation in India, offering significant opportunities across both organized and unorganized segments. As per the Annual Survey of Industries (ASI) 2022–23, the registered food processing sector employed 22.7 lakh people, while the unregistered segment, according to the NSSO 73rd Round (2015–16), provided livelihoods to 51.1 lakh workers, constituting 14.18% of total employment in the unregistered manufacturing sector. This employment base highlights the sector's importance in creating jobs, supporting rural and urban livelihoods, and strengthening the link between agriculture and industry.

**Table : Employment Contribution by Food Processing Sector**

| Sector | Food Processing Industry Employment (lakh) | Overall Industry Employment (lakh) | (%) Share of FP sector |
|---|---|---|---|
| Registered (2021–22) | 22.7 | 184.5 | 12.30% |
| Un-incorporated (2015–16) | 51.1 | 360.4 | 14.18% |

Source: MOFPI

## % Share of India's Food Export in World




Source: MOFPI

### *Forex earnings – rising exports:*

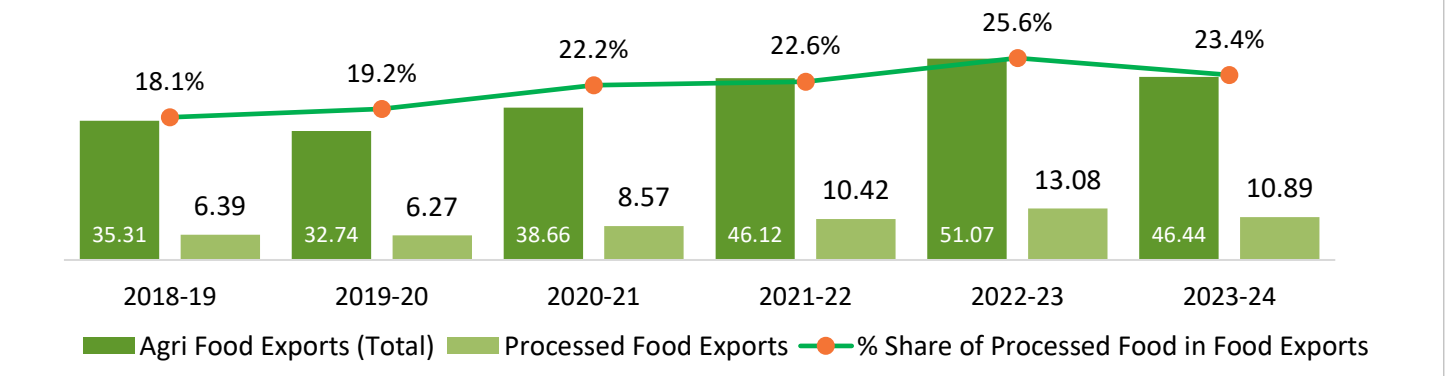
India achieved a significant growth in food export with its share in world food exports rising from ***2.28% to 2.55% from 2018 to 2022.***

India's agri-food exports have shown both resilience over the six-year period from 2018–19 to 2023–24, with processed food playing an increasingly important role. Total agri-food exports rose from USD 35.30 billion in 2018–19 to a peak of USD 51.06 billion in 2022–23, before moderating to USD 46.44 billion in 2023–24. Within this, processed food exports, covering categories such as processed meat, marine products, prepared fruits and vegetables, sugar, and value-added cereals had grown from USD 6.39 billion in 2018–19 to USD 10.88 billion in 2023–24. The share of processed food in agri-food exports increased from 18.1% in 2018–19 to above 23.4% in 2023–24, peaking at 25.6% in 2022–23.

India's agri-food imports rose from USD 19.38 billion in 2018–19 to USD 31.67 billion in 2023–24, with processed food imports increasing from USD 2.73 billion to USD 5.35 billion during the same period. Although their share in total agri-food imports fluctuated, dropping from 14.1% in 2018–19 to 9.9% in 2022–23 before rebounding to 16.88% in 2023–24. The recent surge was driven mainly by high-value items like edible oils and fats (USD 15.05 billion), sugar and confectionery (USD 2.15 billion), cocoa products, beverages, and dairy.

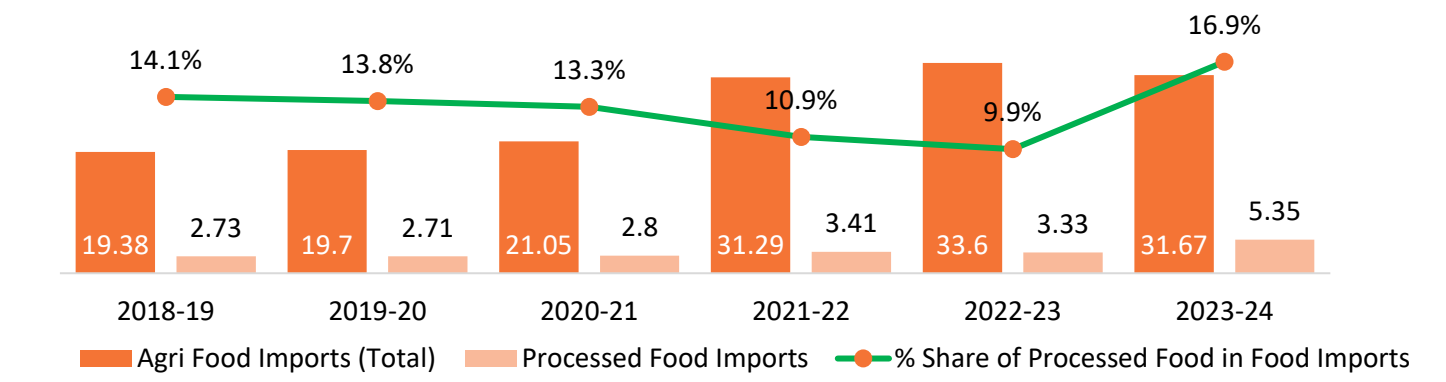
The relatively faster growth in exports compared to imports demonstrates India's competitiveness in the global market. Strengthening domestic value chains and diversifying export products will be key to further enhancing India's position in global trade.

## Agri Food Export, US$ Billion




Source: MOFPI

## Agri Food Import, US$ Billion

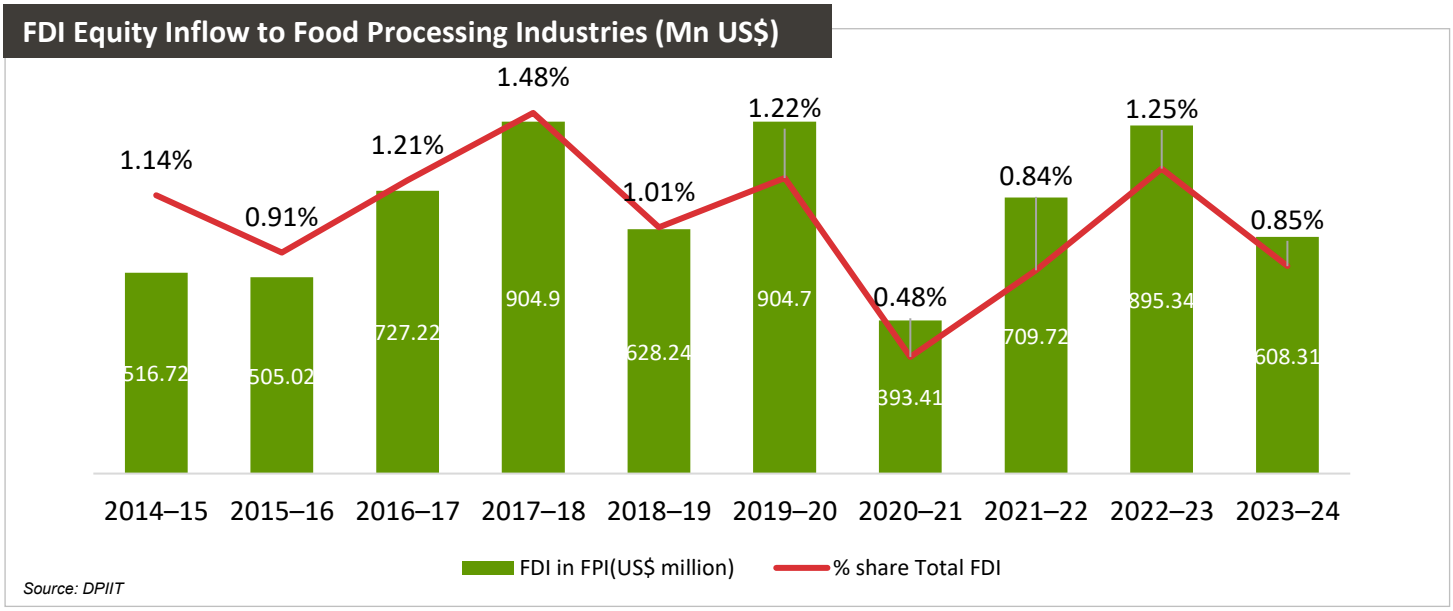



Source: MOFPI

## *FDI Inflow in food processing sector*

Between 2014–15 and 2023–24, FDI inflows into India's food processing industry totaled USD 6.80 billion, showing a fluctuating yet resilient trend. Annual inflows ranged from a low of USD 393.41 million in 2020–21, impacted by the pandemic, to a peak of USD 904.9 million in 2017–18, with other strong years in 2016–17, 2019–20, and 2022–23. The sector's share in total FDI generally stayed between 0.48% and 1.48%, reflecting steady investor interest. India allows 100% FDI under the automatic route for food processing industries and 100% FDI through the government approval route for trading—including e-commerce—of domestically manufactured or produced food products, offering significant scope to boost investment, particularly in value-added and export-oriented segments.

**FDI Equity Inflow to Food Processing Industries (Mn US$)**




*Source: DPIIT*

## *Food security and post-harvest losses*

The percentage of food lost globally after harvesting on farm, transport, storage, wholesale and processing levels, is estimated at 13.2 percent in 2021. (FAO). India's is having a large-scale agricultural production, in spite that food inflation and food security remain key concerns for policymakers, as they directly impact the fundamental need for citizens to have sufficient, nutritious, and affordable food. To address these challenges, NABARD Consultancy Services Pvt. Ltd. (NABCONS) conducted a nationwide study on post-harvest losses across 54 agricultural commodities in 292 districts spanning 15 Agro-Climatic Zones. Submitted in August 2022, the study assessed losses occurring at various stages of the value chain viz. harvesting, collection, grading/sorting, windowing/cleaning, drying, packaging, transportation, and storage, depending on the nature of each commodity.

The NABCONS 2022 study reveals high post-harvest losses, especially in fruits (6.02–15.05%), vegetables (4.87–11.61%), and marine fisheries (8.76%), alongside notable losses in cereals, pulses, and other commodities. These wastages reduce marketable surplus, depress incomes across value chain player, and strain food security. Strengthening food processing infrastructure can significantly cut losses. Processing also extends shelf life and converts perishable produce into value-added products. Targeting high-loss segments can boost better returns, stabilize prices, and enhance year-round food availability.

**Post Harvest Losses Major Agricultural Produce, MOFPI**

| Crops / Commodities | Loss (%) |
|---|---|
| Cereals | 3.89 – 5.92 |
| Pulses | 5.65 – 6.74 |
| Oil Seeds | 2.87 – 7.51 |
| Fruits | 6.02 – 15.05 |
| Vegetables | 4.87 – 11.61 |
| Plantation Crops & Spices | 1.29 – 7.33 |
| Milk | 0.87 |
| Fisheries (Inland) | 4.86 |
| Fisheries (Marine) | 8.76 |
| Meat | 2.34 |
| Poultry | 5.63 |
| Egg | 6.03 |

*Source: MOFPI*

# Overview of key food processing sub-sectors

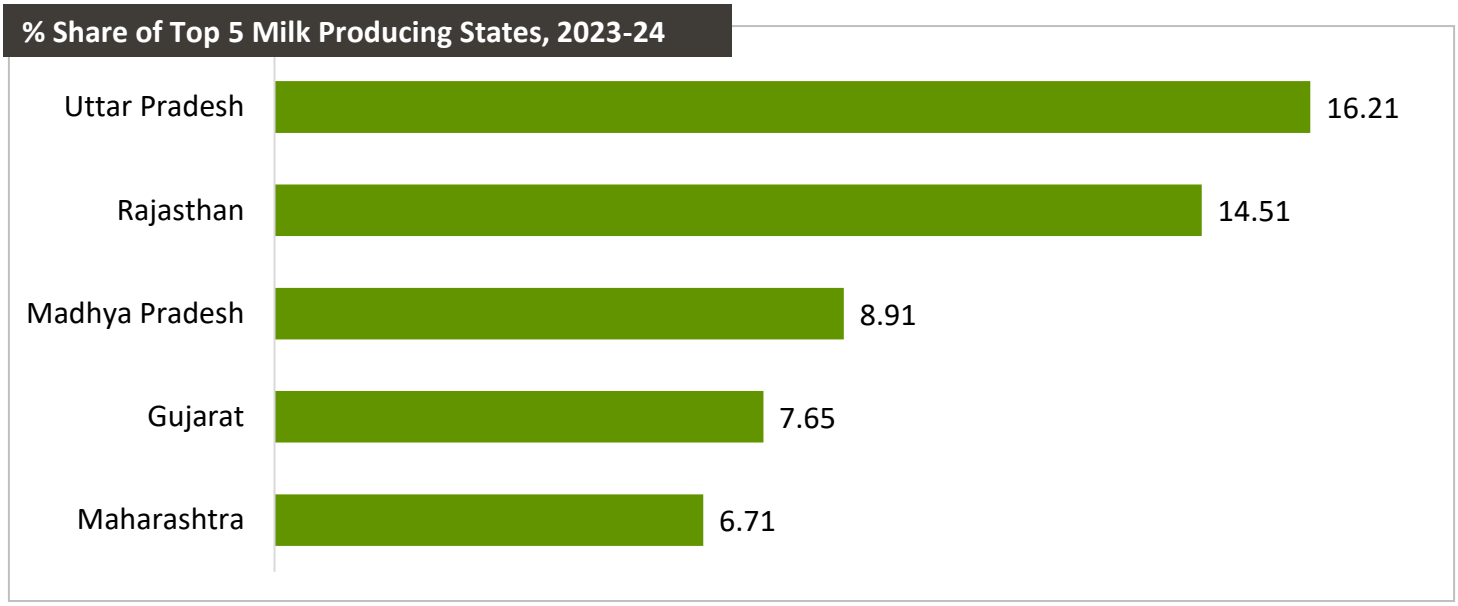
## Dairy sector

World trade in dairy products (butter, cheese, skim milk powder and whole milk powder) in 2024 reached 86 million tons and is projected to expand over to reach 14.2 MMT in 2031 (FAO).

Clarified Butter, Cheese, Flavored milk are the key processed dairy products widely consumed in Indian market along with milk derivatives like whey proteins, infant food and value-added products like Ice creams, desserts, yoghurts, fresh cream, condensed milk

India is the world's largest milk producer, contributing 24% of global milk with an output of 239.3 million metric tons in 2023–24 and a per capita availability of 471 grams per day. Given its high socio-economic importance, the dairy sector is a high priority sector for the Government for making the country truly 'Aatmanirbhar' in this segment.

**% Share of Top 5 Milk Producing States, 2023-24**

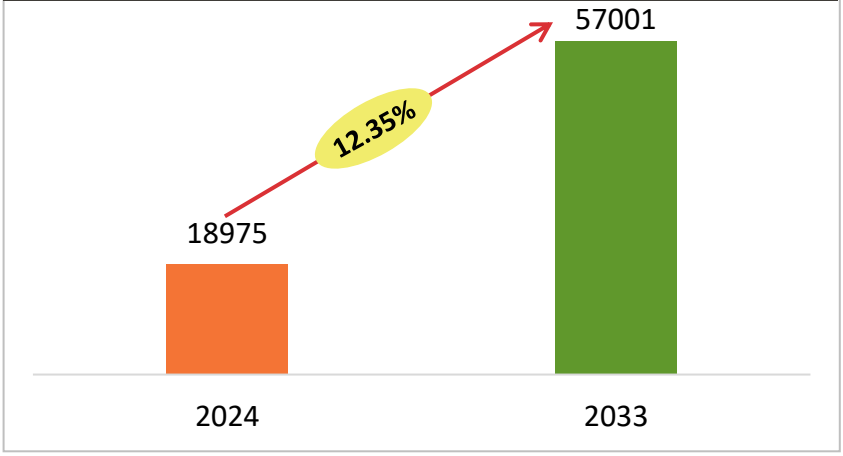



*Source: World Food India*

The Indian dairy market ranks third in the Asia-Pacific region and is self-sufficient in production. Valued at INR 18,975 billion in 2024, the market is projected by IMARC Group to reach INR 57,001.81 billion by 2033, growing at a CAGR of 12.35% during 2025–2033.

Among processed dairy products, liquid milk (both pasteurized and homogenized) remains the largest consumption category.

**Expected Market Size, INR Billion**




*Source: World Food India*

## *Fruits and vegetables sector*

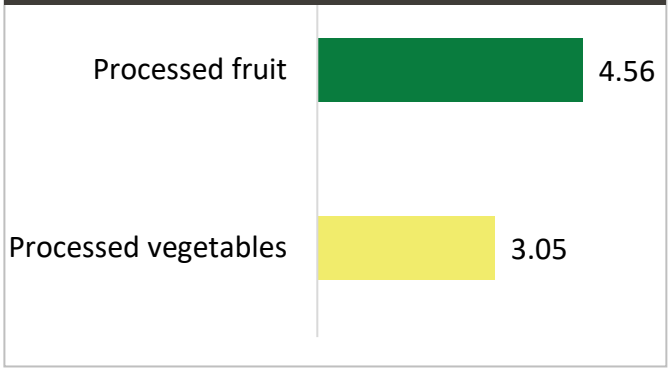
According to the Food and Agriculture Organization (FAO, 2023), global fruit production grew by 63% between 2000 and 2022, reaching 933 million tons, while vegetable production rose by 71% over the same period to 1.17 billion tons. This increased production also reflects in increases post harvest losses along the supply chain.

The fruit and vegetable processing sector is a leading segment of the global food industry, and is evolving with consumer preferences, technological innovations, and shifting market trends.

Global revenue in vegetables market amounts to US$ 1.16tn in 2025 and is expected to grow annually by 6.59% (CAGR 2025-2030) wherein Processed & Frozen Vegetables market amounts to US$ 284.55bn in 2025 and is expected to grow annually by 6.34% (CAGR 2025-2030).

Similarly, global Revenue in the Fruits & Nuts market amounts to US$ 923.94bn in 2025 and is expected to grow annually by 6.24% (CAGR 2025-2030) wherein Processed & Frozen Fruits market amounts to US$75.34bn in 2025 and is expected to grow annually by 6.50% (CAGR 2025-2030)

**Global Trade, US$ Billion**

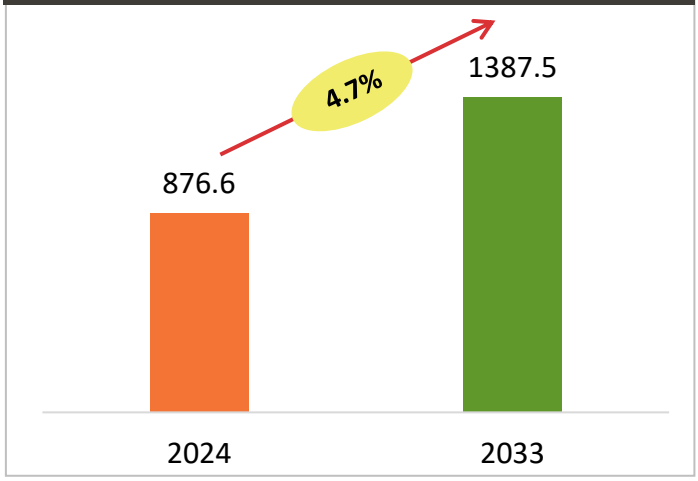



*Source: World Food India*

India is having a diverse agro-climatic zones and cultivates an extensive range of tropical, sub-tropical, and temperate fruits and vegetables. As per the final estimates of production of horticultural crops for 2023–24, India's total horticulture production is estimated at 354.74 million tons making India the second largest producer after China.

The India fruit & vegetables processing market size reached USD 876.6 Million in 2024 and is expects to reach USD 1,387.5 Million by 2033, exhibiting a growth rate (CAGR) of 4.7% during 2025- 2033. (IMARC)

**Market size, US$ Millions**



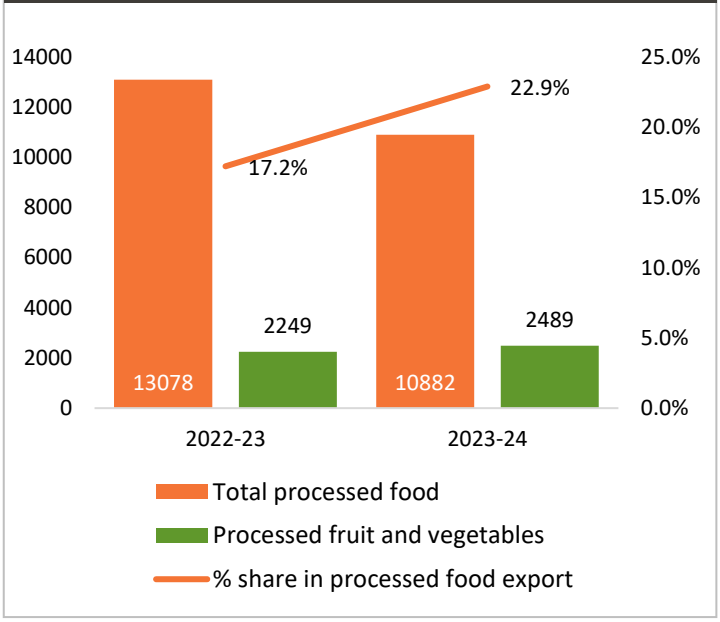

*Source: World Food India*

Processed fruits and vegetables are widely consumed and exported globally. Some of the processed forms are

- Processed frozen fruits and vegetables
- Juices
- Jams & marmalades
- Ready-to-eat meals
- Fresh-cut vegetables
- Purees and Ketchups

India exported USD 2489 million worth of processed fruit and vegetable in 2023-24, significantly higher than the previous year. The share of processed fruit and vegetables in total processed food exported has increased to 22.9% as compared to 17.2% in the 2022-23.

**Processed Fruit and Vegetable Export, US$ Millions**



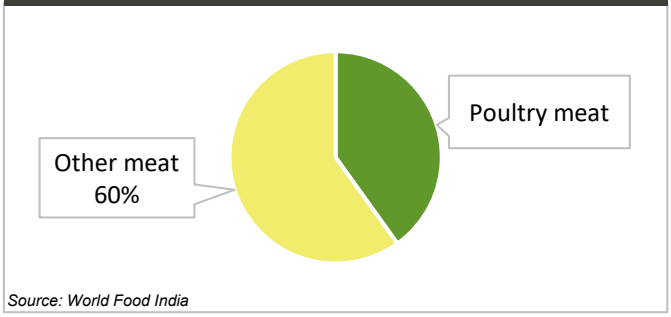

*Source: APEDA*

## *Meat and Poultry Sector*

Global meat production is set to increase moderately by 1.4% in 2024, reaching approximately 374 million tons. **Poultry meat** continues to dominate the market, making up nearly 40% of all meat produced globally. This trend is expected to continue, with poultry projected to account for 41% of all meat protein consumed by 2032. Pig, bovine, and ovine meats follow poultry in terms of production share. Looking ahead to 2032, consumption of poultry and mutton/chevon is projected to grow by 15%, while pork is expected to increase by 11% and beef by 10%.

China is the largest producer in the world, followed by the United States, Brazil, Russia and India in 2024. India ranks 5th in the world in terms of total meat production.

**Share of Meat Production**



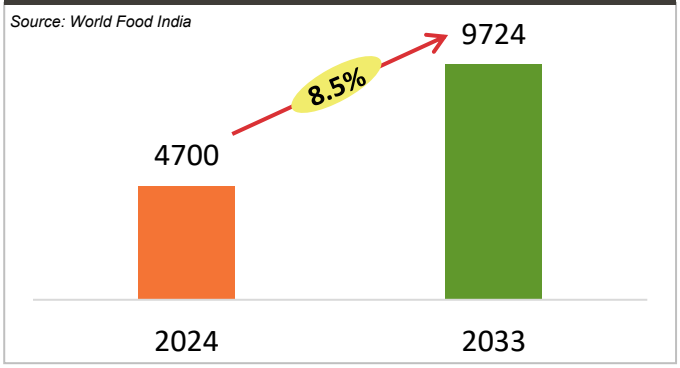

Source: World Food India

Poultry products are appealing to consumers because of their lower prices, consistent quality versatility, and lower fat content and higher protein content. It is anticipated that the global consumption of poultry meat will rise to 152 MMT by 2030.Global pork consumption is projected to increase to 129 MMT over the next ten years and to account for 33% of the total increase in meat consumption. Global per capita beef consumption, which has declined since 2007, is projected to fall by a further 5% by 2030. Global sheep meat consumption is projected to increase to 18 million metric tones (MMT) by 20307 . Currently, sheep meat accounts for about 25% of all red meat consumption globally8 . Increased demand projections both in domestic and global markets, impact meat and poultry sector positively.

In India the expanding middle class is contributing to the demand for meat product has resulted in increased production. In 2023-24 the total meat production in the country is 10.25 million tons, with poultry leading, increased by 4.95% as compared to previous year 2022-23.

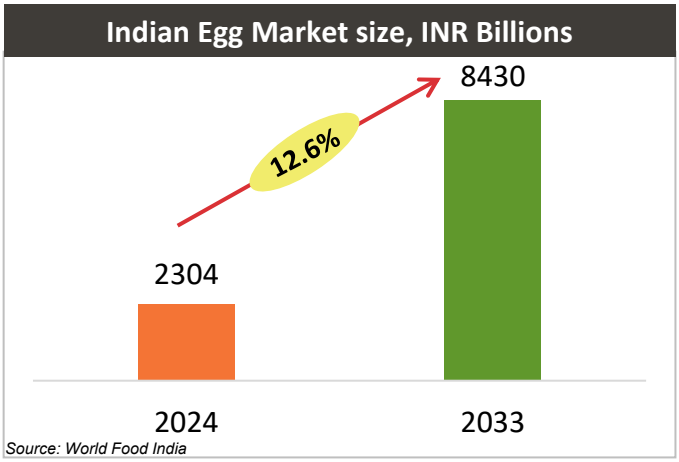
The India meat market size was valued at USD 55.3 Billion in 2024. Looking forward, IMARC Group estimates the market to reach INR 9724 Billion by 2033, exhibiting a CAGR of 8.50% from 2025-2033.

**India Meat Market size, INR Billions**




The Indian egg poultry market size reached INR 2,304 Billion in 2024. Looking forward, IMARC Group expects the market to reach INR 8,430 Billion by 2033, exhibiting a growth rate (CAGR) of 12.60% during 2025-2033. India ranks 2nd in egg production globally after China. India produced 142.77 billion numbers of eggs in 2023-24, increased by 3.17% compared to the previous year. The total egg production from commercial poultry is 114.92 billion eggs, and from backyard poultry is 2.7 billion eggs, contributing 80.49% and 19.50% of the total egg production, respectively.

**Indian Egg Market size, INR Billions**



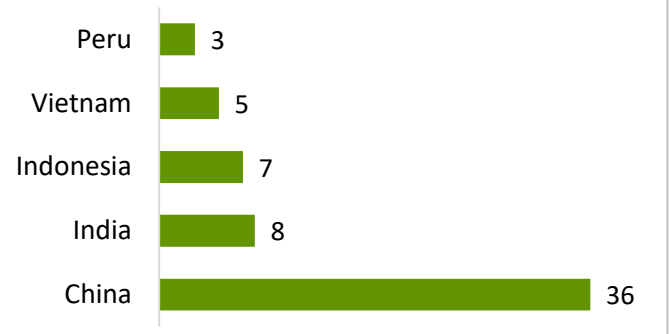

Some processed meat and poultry products that is being consumed in India and globally

- Processed meat: Cold cuts, treated and cured items
- Sausages and similar products made from meat, meat offal
- Ready to cook and frozen products including nuggets, strips, nuggets
- Frozen and packed meat and poultry products with specialized cuts
- Fortified and organic certified eggs

## *Fisheries and aquaculture*

Global fisheries and aquaculture production reached a historic high of 223.2 million metric tons (MMT) in the fiscal year 2022. 58.6 % is contributed by the world aquaculture, valued at USD 313 billion while rest 41.4% is contributed by the world capture fisheries. China remained the major producer, followed by India, Indonesia, Viet Nam and Peru.

**Top 5 producer, % share in total production**



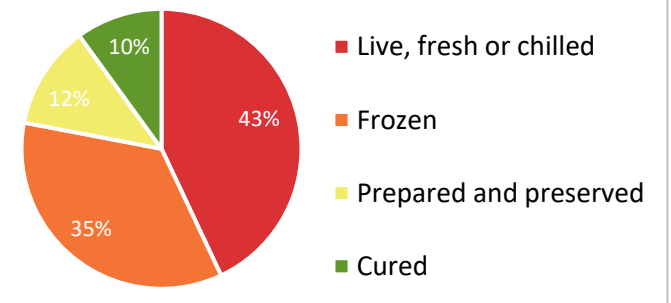

*Source: World Food India*

Seafood been rich in proteins, vitamins, and minerals, is a staple in diets worldwide since ages, valued for its health benefits and easy cooking. Processed seafood is gaining popularity due to convenience, ready-to-cook options that save time for busy consumers.

This consumption rise is also fueled by growing demand for protein-rich, health-focused, and hassle-free meal choices.

In 2022, of the 165 million tons consumption was in the live, fresh or chilled form accounted for about 43 percent. This remains the most preferred and high-priced form of aquatic food products

**Consumption of Aquatic Food**

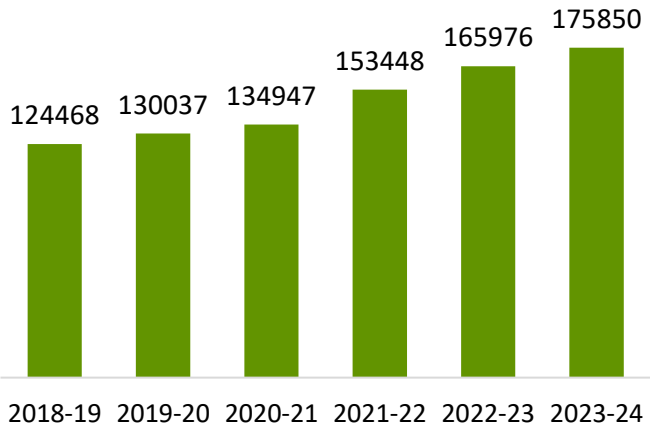



*Source: World Food India*

India, with its vast coastline, rich inland water resources, and diverse aquatic ecosystems, is the second-largest fish producer in the world, contributing 8% to global output.

The total fish production during FY 2023-24 is estimated at 18.40 MMT with a contribution of 13.91 MMT from Inland sector and 4.49 MMT from Marine sector. The fisheries sector plays an important role in the national economy with the share of Fisheries sector in the total Gross Value Added (GVA), at constant prices, in 2023-24 is estimated at ₹. 1,75,850 Crores that constitutes about 1.09 percent of the total national GVA and 7.42 percent of agricultural GVA. The sector has shown an impressive growth rate of 5.9% (Constant Price: 2011-12) during the year 2022- 23 to 2023-24. However, the annual average growth rate in the Fisheries sector

**Gross Value Addition by Fisheries Sector, Crore**




*Source: MOSPI*

During FY 2023-24, India's export of marine products stood at 1.78 MMT and valued at ₹. 60,523.89 Crores (USD: 7.38 billion) with an annual growth rate of about 2.67% (in Quantity).

**Export of Major marine commodities**

| Products | 2021–2022 (USD Mn) | 2022–2023 (USD Mn) | 2023–2024 (USD Mn) |
|---|---|---|---|
| Frozen Shrimp | 5,828.59 | 5,481.63 | 4,881.27 |
| Frozen Fish | 471.45 | 687.05 | 671.17 |
| Frozen Cuttlefish | 280.08 | 295.49 | 274.62 |
| Frozen Squid | 383.37 | 454.61 | 373.4 |
| Dried Item | 143.46 | 384.05 | 496.21 |
| Live Items | 47.98 | 55.47 | 48.61 |
| Chilled Items | 63.92 | 77.17 | 83.85 |
| Others | 540.73 | 658.84 | 552.74 |
| **Total** | **7,759.58** | **8,094.31** | **7,381.87** |

*Source: MPEDA*

# Global food processing industry at glance

The Food Processing Market size is to reach **USD 3908.18 billion by 2032, from USD 3232.77 billion in 2024 and growing at a compound annual growth rate (CAGR) of 2.4%** from 2024 to 2032.

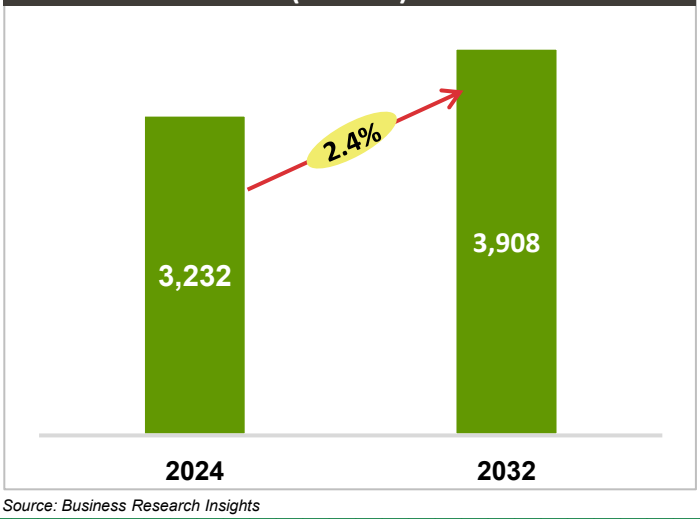
The food processing market has a strong growth driven by increase in consumer demand for convenience, healthy food options and innovative packaging solutions. Technological advancements such as automation, AI, and IoT are driving productivity . As well as food safety and quality, the increasing preference for organic, plant-based clean label products is reshaping industry trends. The manufacturer focuses on creating healthier and more sustainable offerings. Additionally, market is also seeing increased investment in research and development, targeting new storage techniques and extended shelf life.

**Driving Factors**

**Technological Advancements in the Market**

Technological progress has driven the growth of the food processing market. This revolutionizes production efficiency and food quality. Innovations like automation Artificial intelligence (AI) and the Internet of Things (IoT) are helping food processors to streamline operations, reduce waste, and enhance safety standards. AI and machine learning are being used more often to improve predictive maintenance. Automation in events and supply chain management including robots and packaging systems This increases productivity and lowering labor costs. Advances in food preservation methods such as high-pressure processing and microwave technology Helps extend shelf life without reducing nutritional value or taste.

**Global Food Processing Market Forecast (USD Bn)**




*Source: Business Research Insights*

These technologies address increasing consumer demand for convenience and quality, sustaining food processors' profitability.

**Rising Consumer Demand for Healthier Foods**

Health concerns among consumers are increasing the demand for the organic, natural, and healthier food options. Food processors are now concentrating on producing low-sugar, low-fat, and nutrient-rich products because of this trend. This trend is fueling demand for health and food choices, Increased awareness of food-related health problems such as obesity, diabetes and allergies. As a result, consumers are shifting towards nutritious options. To meet this demand, food processors are advancing with healthier ingredients, offering products such as plant-based alternatives and nutritional snacks. As preferences shift toward nutrient-rich products, Food processors therefore adapt to remain relevant in the market.

**Restraining Factor**

**Increasing Cost of Raw Material**

Raising cost of raw materials is one of the major challenges facing by the food processing industry. Primary commodities such as grains, vegetables, and animal products are highly volatile in prices. Several factors influence these fluctuations including climate change, supply chain disruptions, and geopolitical events. These may lead to shortage in crop production and rising in Raw material prices.

# Indian food processing industry at glance

India is the Fourth largest economy in the world and expected to be the fastest-growing economy among major G20 countries, with GDP growth estimated to be around 6.5% in FY25. The food processing sector has become a key contributor to India's economy over the past few years. It has significantly contributed to Gross Domestic Product (GDP), employment, and investment.

India's food processing industry is emerging as a key pillar of economic growth, representing one of the fastest-expanding sectors in the manufacturing landscape. With a market valuation of **US$348 billion in 2024**, it is projected to reach **US$745 billion by 2033**, growing at a healthy **8.8% CAGR**. Rapid urbanization, growing consumer preference for processed foods, supportive government initiatives, ongoing technological advancements in food processing, and an evolving retail landscape that favors convenient Ready-to-eat (RTE) products are among the key factors driving the market growth.

According to the Viksit Bharat@2047 report, India's food processing sector will grow significantly, reaching US$ 1,500 billion by FY40 and US$ 1,900 billion by FY45.

Globally, India holds the 6th spot in food processing, supported by its status as the world's largest producer of milk, spices, and pulses, and the 2nd largest producer of fruits and vegetables. The sector contributes **9% to agriculture's Gross Value Added (GVA)** and accounts for **~23% of the country's exports**, while creating jobs for over 7 million people across the supply chain.

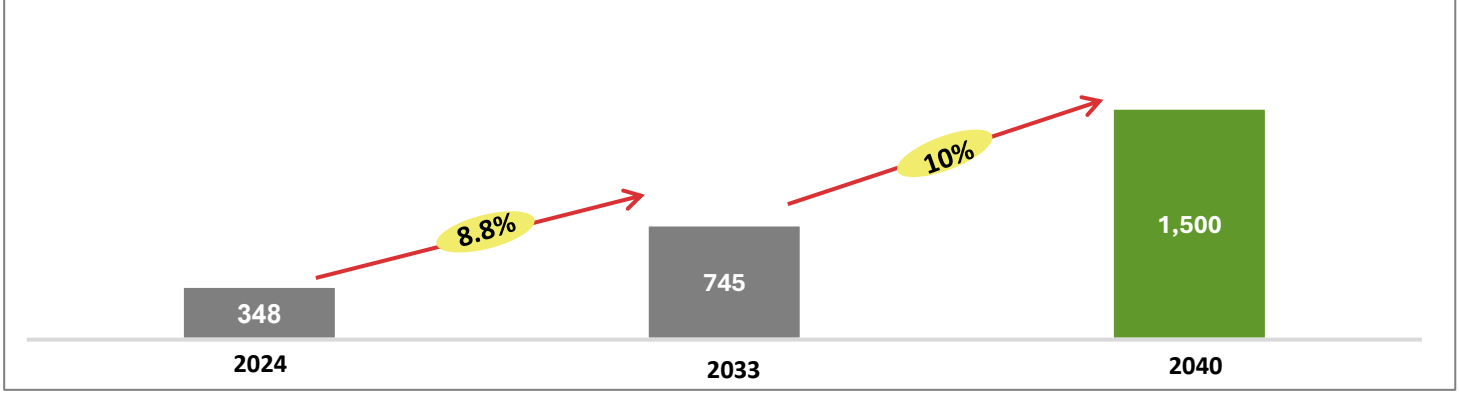
## Advantages in India

- Fastest growing economy in the world.
- Largest producer of several agri commodities.
- 1.4 billion consumers with increasing demand for branded food.
- Proactive government policies with attractive fiscal incentives.
- 3rd largest economy in terms of purchasing power parity.
- Rich demographic dividend with high focus on skill development, availability of skilled personnel.
- Opportunity for investors across the food processing supply chain.
- Overall processing level of perishable products in India is ~10%, compared to USA (80%), Malaysia (80%), France (70%), Thailand (30%), India's processing levels remain far lower than those of many developed countries.

**Food processing sub sectors in India**

- Dairy
- Fisheries
- Fruits and Vegetables
- Packaged Foods
- Meat and Poultry
- Beverages

**India Food Processing market Forecast 2024-2045 (USD Bn)**




Source: IMARC

## *Food Processing Sector in India: Key Highlights*

**2nd**

Total food production globally, next to China.

In terms of production of milk, bananas, mangoes and ginger

**1st**

**1st**

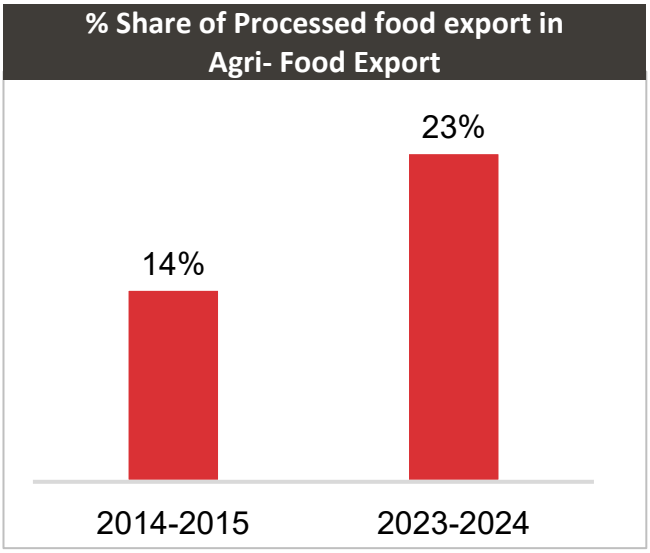
In Food processing terms of employment & number of factories in operation

Food Produced is wasted between farm gate and consumer's plate

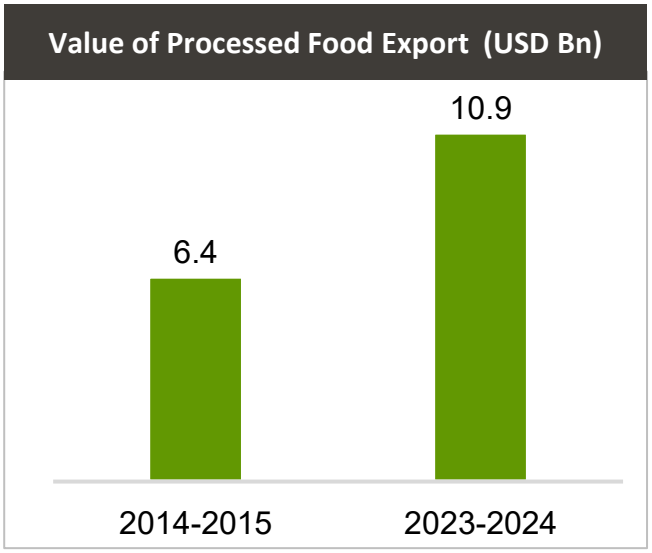
**30%**

**37468+**

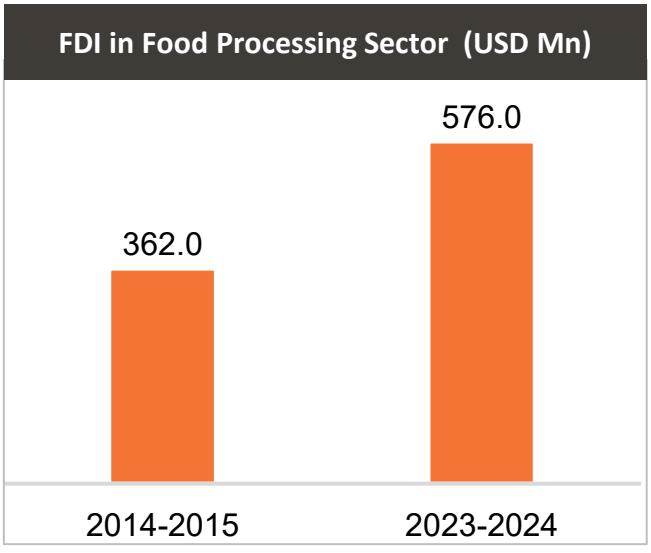
Registered Food Processing Units in India




Source: PIB




Source: PIB



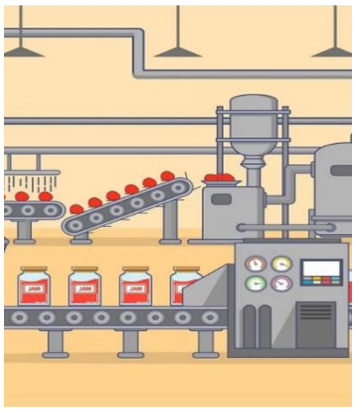

Source: PIB

## *Government Initiatives boosting Food Processing Sector*

The Indian government has introduced significant measures to bolster international engagement in the food processing sector. It allows 100% Foreign Direct Investment (FDI) in this industry, emphasizing its openness to global involvement. Additionally, it also granted approval for 100% FDI in trading food products via e-commerce platforms, subject to government approval, enabling foreign investment in the distribution of food products manufactured or produced in India.

The food processing sector has emerged as a crucial component of the Indian economy, contributing significantly to GDP, employment, and exports.





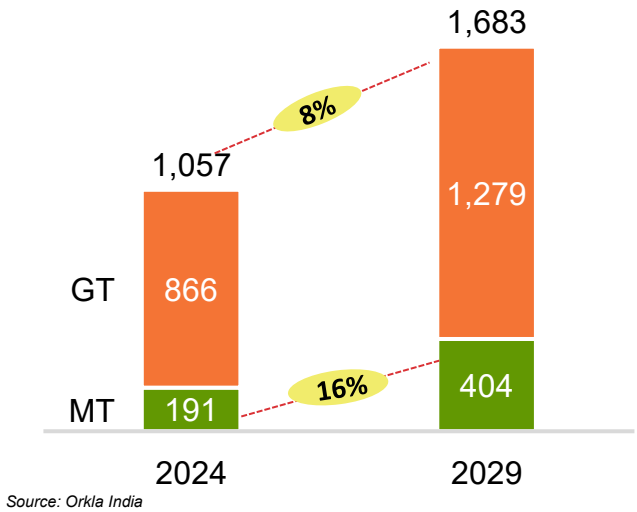

| PMKSY | PMFME | PLISFPI | PMMSY |
|---|---|---|---|
| **Pradhan Mantri Kisan SAMPADA Yojana (PMKSY)** | **PM Formalisation of Micro Food Processing Enterprises (PMFME)** | **Production Linked Incentive Scheme for Food Processing Industry (PLISFPI)** | **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** |
| Focused on developing **agri-processing infrastructure, integrated cold chains, Mega Food Parks and agro-processing clusters**. Initially approved for ₹5,520 crore; extended with **₹6,520 crore**. | Launched in June 2020, the scheme aims to encourage **'Vocal for Local'** in the sector in a total outlay of **₹ 10,000** extended up to FY 2025-26. This is the first ever Govt scheme for Micro Food Processing enterprises and is targeted to benefit **2 lakh enterprises through credit linked subsidy and adopting the approach of One District One Product**. | The Central Sector Scheme, Production Linked Incentive Scheme for Food Processing Industry (PLISFPI) was approved by Union Cabinet in March 2021, with an **outlay of ₹10,900 Crore**. The Scheme is being implemented over a six-year period from 2021-22 to 2026-27. | Launched in September 2020 under the Ministry of Fisheries, Animal Husbandry & Dairying. It involves a total investment of **₹20,050 crore. Expands fisheries processing, aquaculture infrastructure, cold chains, marketing, exports.** |
| As of February 28, 2025, MoFPI has sanctioned **1,608 projects including 41 Mega food Parks, 394 Cold Chain projects, 75 Agro-processing Clusters projects, 536 Food Processing Units, 61 Creation of Backward & Forward Linkages and 44 Operation Greens projects**. | Over **1.44 lakh projects sanctioned** as of June 2025 under this scheme, In 2024–25, Bihar top implementation with 10,296 loan approvals and 6,589 disbursed units (63%). | According scheme beneficiaries report, an investment of **₹8,910 crore has been made across 213 locations** .As of 31 October 2024, the scheme has reportedly **generated employment of over 2.89 lakh.** | **Fish production increased from ~141.64 lakh tonnes in FY 2019-20 to ~161.87 lakh tonnes in FY 2022.** Exports reached to 13.64 lakh tonnes. Over 31.47 lakh fishermen across 22 states and 7 UTs covered under insurance. |

# Indian retail landscape and its impact on food processing industry

India's retail sector is experiencing a major transformation, due to higher disposable incomes, shifting consumer tastes, fast-paced digital adoption, and evolving urban lifestyles. This change is creating new opportunities for the food processing industry.

India's retail market was valued at **USD 1,057 billion in Fy 2024**, growing at an 8.9% CAGR over the past five years. Modern trade (MT) expanded at a strong 21.0% CAGR (Fy 2019 -24),while e-commerce and quick-commerce expanded at 24.9% CAGR during the same period reflecting shifting consumer purchasing habits. **By Fy 2029, the retail market is forecast to grow at a 9.7% CAGR to USD 1,683 billion.** Modern trade is expected to grow at a 16.1% CAGR, reaching USD 405 billion, increasing its share to 24.0% from the current 18.1%, Whereas e-commerce and quick-commerce is expected to grow at CAGR 15% and 4.5% respectively. This evolution is driving higher penetration of convenience led consumption products.

**India Retail market Forecast 2024-2029 (USD Bn)**

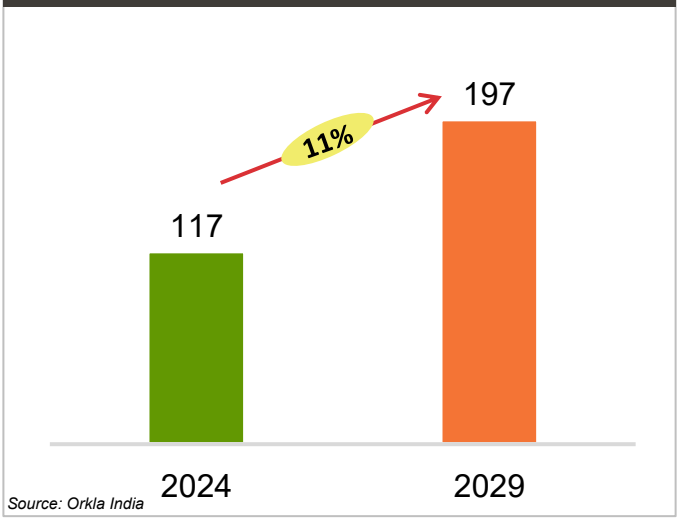



Source: Orkla India

**Packaged Foods**

The Indian packaged food market was estimated at USD 117 billion in Fy 2024, expected to reach USD 197 billion in FY2032, with a CAGR of 11%. The high growth is fueled by rising disposable incomes, urbanization, lifestyle changes, nucleariza tion, and a growing workforce, particularly among women. Impact for processors: Steady production cycles, reduced seasonal volatility, and higher scope for product innovation.

**Packaged food Forecast 2024-2029 (USD Bn)**

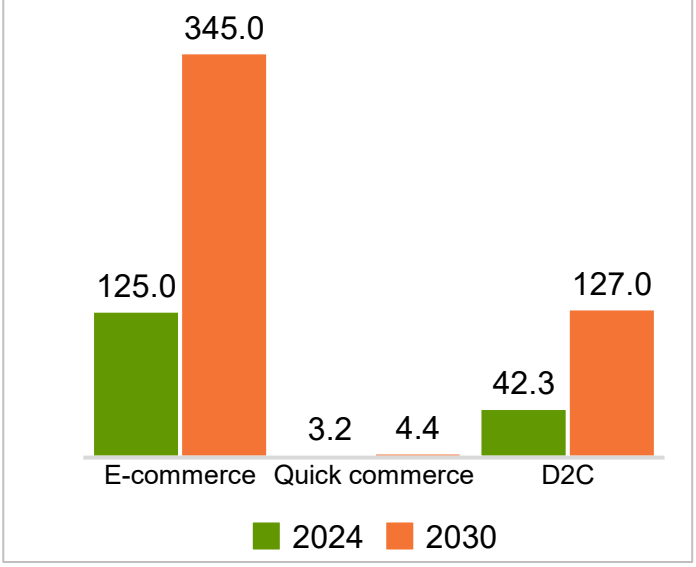



Source: Orkla India

**Digital Channels Reshaping Consumption**

India is growing rapidly in digital commerce industry is set to significantly boost the food processing industry. The e-commerce market is expected to grow from US$125 bn in FY 2024 to US$345 bn by FY 2030 with a CAGR 15% , creating broader distribution channels for packaged and processed foods. Quick commerce is expected to grow from USD 3.49 bn in 2025 to USD 4.35 bn by 2030 with 4.5% CAGR, will further push demand for fresh and ready-to-eat segments which are heavily reliant on efficient food processing. The Direct-to-Consumer (D2C) market growing from USD 42.59 bn in FY 2024 to USD 185.21 bin by FY 2032 with 20.17% CAGR, with over 600 active food brands, will push processors to innovate in packaging, preservation, and product variety.

**Forecast 2024-2029 (USD Bn)**

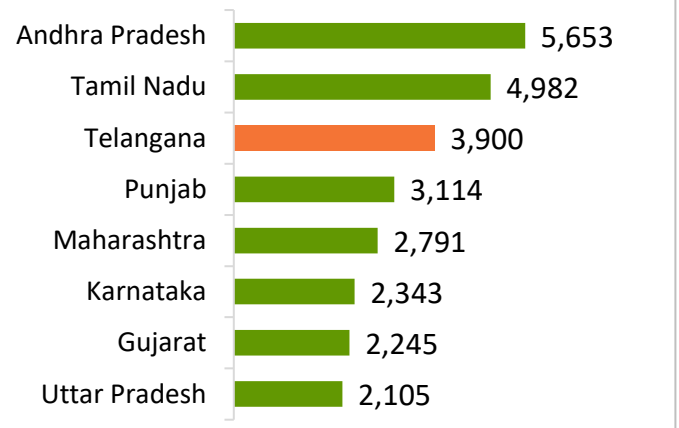



Source: IBEF, Mordor Intelligence

# State-wise rankings of food processing in India

As per latest **Annual Survey Industries 2021-22**, the total number of factories in the registered food processing sector in the country was **41,913**. Telangana stands at **3rd position** with **3900** factories(10%) in terms of number of Food & Processing Industries. In the unregistered segment, as per this National Sample Survey (NSS 73rd round 2015-16), a total of **24.59 lakh** food processing enterprises are reported. Telangana holds 12th position with 80,392 factories (3%) in terms of unregistered factories..

**No. of Registered FPI Units**

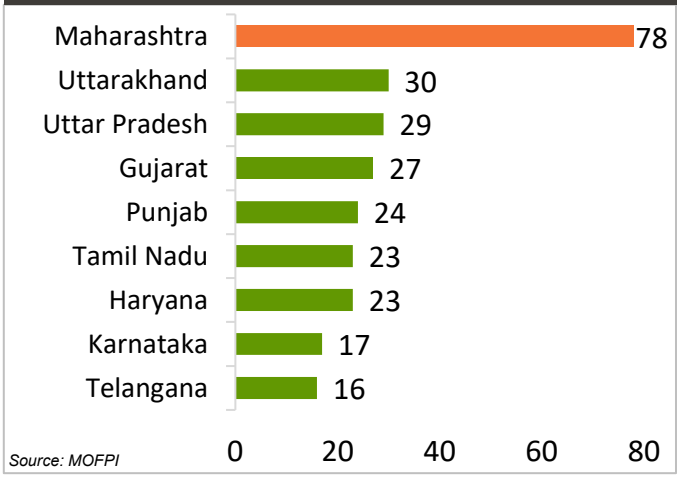



Source: MOFPI

## Cold Chain Projects

Out of 399 Approved Cold Chain Projects assisted by Ministry of FPI, Maharashtra holds the highest 78 Cold Chain projects followed by Uttarakhand & Uttar Pradesh. Majority of these Cold Chain Projects are Fruits & Vegetable focused followed by Dairy, Fisheries & Poultry. Telangana has a total of 16 projects, out of which 9 belong to Dairy, 4 belong to F&V and 3 are of Poultry, Meat

**No. of Cold Chain Projects**




Source: MOFPI

## Mega Food Parks

### 03 States with 3 Food Parks

- Andhra Pradesh
- Maharashtra
- Punjab

### 02 States with 2 Food Parks

- Telangana
- Bihar
- Gujarat
- Haryana
- Karnataka
- Madhya Pradesh
- Odisha
- Rajasthan
- Uttarakhand

### 01 States with 1 Food Park

- Arunachal Pradesh
- Assam
- Chhattisgarh
- Himanchal Pradesh
- J&K
- Manipur
- Meghalaya
- Mizoram
- Nagaland
- Nagaland
- Tamil Nadu
- Tripura
- West Bengal

**Mega Food Parks** Scheme was launched under PM Kisan Sampada Yojana implemented since 2008 which aims to create a modern food processing infrastructure based on a hub & spoke manner. The broader idea behind the scheme is maximize value addition, minimize wastages and improving farmers' income by bringing together farmers, processors and retailers.

Out of 41 projects planned, **24 projects** are operational. Telangana has 2 Mega Food Parks in Nizamabad & Khammam out of which Smart Agro Food Park Pvt. Ltd., Nizamabad is operational.

# Telangana food processing industry at glance

**25%**

**Contribution** to agri & allied output by value

**Mega Food Parks** worth 492 Crs.

**4th**

**11**

Integrated **Cold Chain Projects**

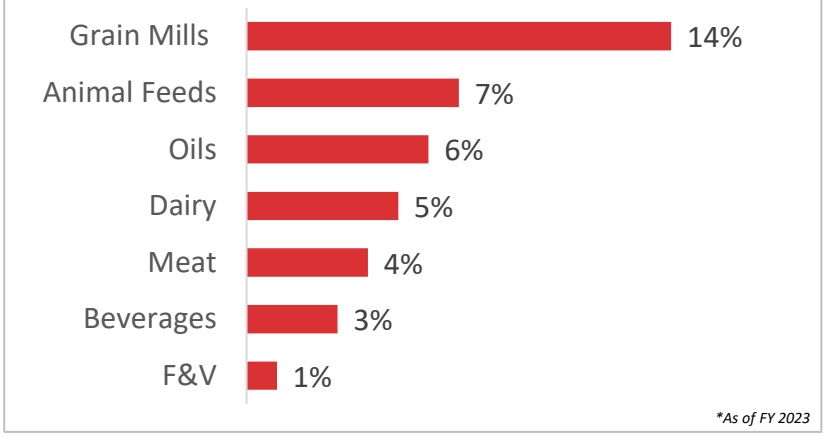
Largest producer of **Turmeric, Sweet Orange, Red Chillies**

**2nd**

**3900+**

Registered FPI Units

## % of sector wise FPI Units




Source: MOFPI

Telangana has strong focus on growing Infrastructure aimed at enhancing

production capabilities & supply chain efficiency. It has 2 Mega Parks, 33 Production Clusters focused on One District One product, 25 Warehouses & 11 Cold Chain facilities strategically positioned. It also has 193 APMCs, 57 E-Nam Mandis, 31 Rythubazars connecting producers with Markets.

## Top Agriculture Produce in Telangana

| Category | Item | Production (MMT) | National Share |
|---|---|---|---|
| **Food Grains** | Rice | 12.400 | 9.60% |
| | Pulses | 0.576 | 2.11% |
| | Coarse Cereals | 2.349 | 4.60% |
| | Total Foodgrains | 15.300 | 4.90% |
| **Non food Grain** | Oil Seed | 0.681 | 1.79% |
| | Sugarcane | 2.860 | 0.65% |
| **Horticulture** | Fruits | 2.400 | 2% |
| | Vegetables | 1.100 | 1% |
| | Spices | 0.800 | 7% |
| | Honey | 0.001 | 1% |
| | Horticulture | 4.400 | 1% |

Source: MOSPI

Telangana stands 4th in Rice production, 9th in Pulses & Coarse Cereals, The state stands out in spice production, ranking 5th, contributing significantly to its agricultural landscape. It ranks top 5 in Dried Chillies, Turmeric, Ajwain, Curry Leaf. In fruits, Telangana ranks 15th with

2.384 million metric tones. It ranks 5th in Mango, Citrus & 2nd in Dragon Fruit. In vegetables, it ranks 20th with 1.072 million metric tones.

It ranks 3rd in Egg production, 5th in Meat, 6th in Poultry & 9th in Inland Fish Production.

# *Telangana's policy & infrastructure support*

### Ease of Doing Business
Continuously among Best Performing State under Ease of Doing Business

### Special Economic Zone
Home to 2nd highest number of operational Special Economic Zones SEZs (30) in India

### High Export Potential
Ranked 2nd in Export Preparedness Index 2022 under the Landlocked category, NITI Aayog 2022-23; Among selective states to be a part Agriculture Export Policy 2018

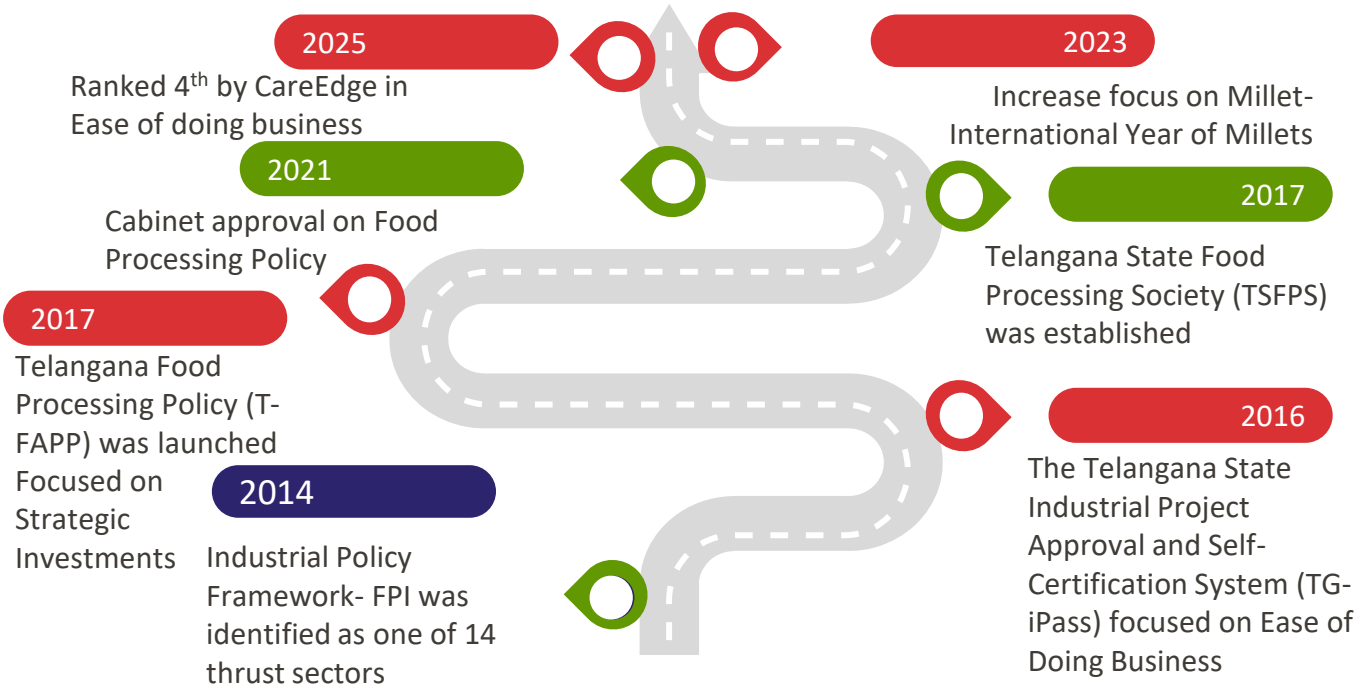
### Strong Policies
Support through strong State Policies like TS-iPass, TS-Idea along with Central Government Policies

Under Ministry of Food Processing Industries, Government of India, various schemes to develop infrastructure, expand processing capacity, and provide other supportive measures are kept under an umbrella scheme Pradhan Mantri Kisan Sampada Yojana (PMKSY). It focuses on to establish modern infrastructure with efficient supply chain management for better return to farmers & employment opportunities. It includes Mega Food Parks, Integrated Cold Chain and Value Addition Infrastructure, Creation/Expansion of Food Processing & Preservation Capacities, Creation of Backward and Forward Linkages, Food Safety and Quality Assurance Infrastructure.

Pradhan Mantri Formalization of Micro Food processing Enterprises scheme (PMFME) focuses on to provide financial, technical, and business support to establish or upgrade micro food processing enterprises. It includes Support for setting up / upgradation of Micro Food Processing Enterprises- Credit linked capital subsidy is provided to Individual entrepreneurs/ Proprietorship Firms/ Partnership Firms/ FPOs / NGOs / Cooperatives/ SHGs / Pvt. Ltd. Companies; Support for setting up of common infrastructure Facilities to FPOs/FPCs/ SHGs.

Production Linked Incentive Scheme for Food Processing Industry (PLISFPI) aims to provide support to food manufacturing entities that meet the specified minimum sales criteria and are willing to make the required minimum investment for expanding their processing capacity.

In lines with the Central Government Policies, Telangana has endeavored to provide a hassle-free business environment to enable investors. The Telangana State Government has implemented numerous reforms to create a conducive and investor-friendly business environment for those interested in establishing their businesses within the State.



### *Telangana Single Window Clearance System- 'TS-iPASS'*

The Telangana State Industrial Project Approval and Self-Certification System Act of 2014 was introduced to expedite the processing of requests for various clearances required to establish industries at a single location. The portal provides a Single Window Clearance System with all relevant departments, which sets approval timelines between 1 to 30 days. This legislation allows entrepreneurs to self-certify their compliance, promoting an environment conducive to investment in the State of Telangana. To further facilitate business activities, a comprehensive online portal has been established as a centralized hub for investors. This user-friendly platform enables digital access to all State-related business approvals, catering to the specific requirements of each enterprise.

### *Telangana State food processing policy*

The policy was approved in 2021 by Telangana Government with the objective to encourage creation of processing capacities and infrastructure in alignment with the increased and diversified production from agriculture and livestock. The policy further aims to build state capacity to process the expected rise in production across agriculture, horticulture, animal husbandry, dairy, and fisheries. It will empower producers, collectives, FPOs, and SHGs with infrastructure, financial incentives, and facilitation to integrate further into the value chain by establishing food-processing enterprises. It plans to create 10,000 acres of special food processing zones across the state to support the additional 53 lakh acres area brought under irrigation till 2024-25 and Attract a total of 25,000 Crores of capital investment to establish food processing enterprises.

### *Major Players in Food Processing Sectors*

Due to attractive policies & huge potential, several companies have set their facilities in Telangana. ITC Ltd., Bikanerwala, Sandhya Aqua, Parle Agro, Varun Beverages, Vidya Herbs, Tata Consumers, etc. are some of the beneficiaries of PLI Scheme.
Creamline Dairy, Dodla Dairy, Prasad Seeds, AGP Oil Limited are some other firms which have benefitted from govt. policies.

**Infra support**

- The state policy focus n establishing **Special Food Processing Zones (SFPZs)** spanning 200–1000 acres each, amounting to 10,000 acres.
- Develop **specialized zones** for integrated meat, fish, dairy, and poultry production.
- Allocate **30% of SFPZ land** to warehousing, logistics, marketing, and export infrastructure.
- Provide **plug-and-play sheds** and necessary infrastructure within SFPZs for local entrepreneurs, FPOs, SHGs, SCs, STs, and minorities.

**Financial support**

- The state offers **financial incentives** to enterprises set up within SFPZs, with **additional benefits** for SCs, STs, and minority groups.
- Extend **special financial benefits** to SHGs and Farmer Producer Organizations (FPOs) to enable establishment, expansion, or modernization of food processing units.
- **Tailor-made incentives are also established** for large processing and retail projects—particularly those that commit to large-scale procurement from small and medium processors via micro-franchise models.
- Special benefits like **Power Rebate, Interest Subvention, Land Cost Rebate** are provided

**Administrative Reforms**

- **TG-iPASS Single-Window Clearance** scheme focuses on ensuring faster and transparent clearances for units, with statutory timelines and accountability
- **TS-Industrial Policy Framework**: A pro-business ecosystem with investor-friendly regulatory environment via self-certification systems
- **Support via T-IDEA Incentives**: Broader industrial incentives that also cover food processing, including stamp duty, conversion costs, power cost reimbursement, seed capital, skill support, and quality measures
- **Smart Agro Mega Food Park Governance**: Uses structured hub-and-spoke model with integrated value-chain management

# 7 Success Mantras in Food Processing

1. Rethink Customer Segments
2. Redefine Value Proposition
3. Ride on Consumer Trends
4. Supply Chain Efficiency & Cost Competitiveness
5. Think “Place of Origin” Branding
6. Build Farm-Gate to Factory Models
7. Digitize Quality & Traceability

## *Success Mantra 1: Rethink Customer Segments*

Consumers preference for healthier variety of packaged food products with **good quality ingredients and increased shelf life** is a key growth driver today. Additionally, the **expansion of the working population** and **increased disposable income** has led to increase in demand of Packaged food products.

Moreover, the change in the distribution channel, with coming up of the online grocery segment, has made a substantial contribution to the market. Additional sustainable packaging of food products is also acting as a key growth driver for the market.

A **ready-to-eat (RTE) segment** has strongly approached India's processed food market. Driven by constant product innovation, consumer convenience, consumer demands and preferences are changing towards the ready-to-eat segment. The rising popularity of convenience food, ready-to-eat food, and ready-to-cook categories has given an opportunity to various organizations to enter into this category.

The **Organized Food Retail Market is expected to grow at a CAGR of 25%.** Among these are Brick & Mortar Hypermarkets / Supermarket, Brick & Mortar Grocery Stores, Online Grocery Stores The Online Grocery Market is about to grow by **more than 25%** in next 5 years. With Players like Zepto, Blinkit, Swiggy Instamart, Nature's Basket, Big basket, JioMart- The trend of distribution is changing for Processed food.

Food Service sector is also changing with quick adoption & increasing penetration of **Online Delivery Platforms**, growing International Brands, Convenience food preference. These provides immense opportunities for Dairy Supply, Pre-processed food sector, Trading for Exotic Vegetables & Raw Material and partnering for Backward Linkage and processing.

India is yet to fully utilize its full potential in exporting food products; still major proportion of our exports are in Raw Material/ Semi-processed products. **India exports only 2 %** share in global export of food products which provides us a great opportunity by focusing on Packaged food, Dairy, Meat & Marine alongside government supporting policies.

**With the changing consumer preferences, distribution channels, Government Policies, following Customer Segments can be focused upon:**

- **Consumers Seeking Nutrition & Convenience**

  Processed food players have the opportunity to meet the nutrition, convenience and various other needs of consumers through production and marketing of packaged food products. This model is attractive because it allows the processor to capture value across the value chain. However, it is challenging as developing a brand, and distribution network needs high investments. Hence this option is difficult for SMEs.

- **Packaged Food / FMCG Brands**

  Food processing industry have the opportunity to overcome the challenges of direct consumer marketing by becoming suppliers to established and growing packaged food / FMCG players. Top companies such as ITC, HUL, Nestle etc. have models for tying up with processors which can explored.

- **Organized Retail Market**

  Retail giants like DMart, More, Heritage Fresh, SPAR, Ratnadeep and rising Ecommerce Retail with players like Zepto, Blinkit are the drivers of processed food market as they are serving to the changing consumer needs. Processors have the opportunity to tie-up with organised retailers for producing white-label products.

- **Food Service & Hospitality Sector**

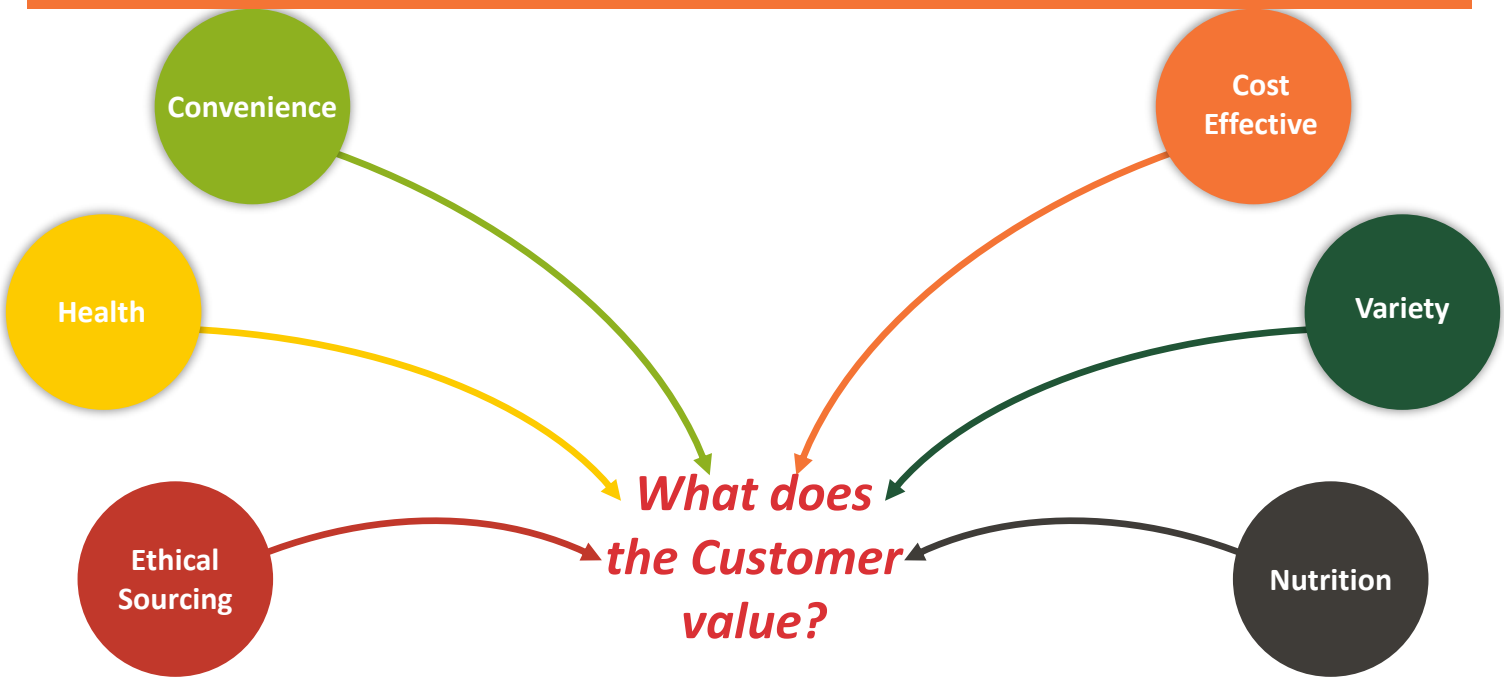
  With growth in urban hospitality, institutions need reliable, hygienic ingredients. Partnership with Restaurants Chains, Cafes, QSR is a great opportunity for Food Processing Firms.

  **Products**: Bulk frozen vegetables, spice blends, curry pastes. Local restaurants often source fresh produce from local markets but could benefit from organized supply chains.

- **Export-Oriented Traders & Commodity Buyers**

  Due to Telangana's strong presence in various commodities especially spices, Focus on high-value processed goods—oleoresins, specialty oils, poultry & aquaculture products—for both domestic scale-up and international markets. Quality Management, Better Research & Development and understanding the right market can fetch great results.

# Success Mantra 2: Redefine Value Proposition




With the changing times, consumer preferences have significantly changed especially due to factors like rapid Urbanization, increasing purchasing power, more focus on health after COVID, Sustainably focused due to rapid climate change, more healthier option due to rising adulteration practises, Increase in information flow due to Internet Penetration.

Over the past decade, India's per-capita income has nearly doubled. Urban elites now devote their huge budgets to processed foods, take-out, and dining out, while even rural households, historically reliant on staple grains, are increasingly opting for ready-to-eat meals, beverages, and packaged products. Health has emerged as a key purchase driver. **Protein-rich, low-sugar, and organic offerings** are gaining meaningful traction. Ancient Indian ingredients such as millets and makhana are being rediscovered—for their preventive health benefits. Rural consumers are also exploring beyond traditional foods, driven by rising affluence and growing health awareness. A lean towards **clean & Nutritious food** can be seen with gut-friendly probiotics, protein-packed snacks, or clean-label beverages gaining momentum as they promise energy, immunity, and well-being.

Products catering to busy lifestyles—single-serve, ready-to-cook or fully prepared meals—are growing. Companies are investing in technology systems, AI for demand forecasting, IoT for traceability, and digital channels to manage the value chain at various levels to continuously study, innovate & satisfy meet customer needs.

Established Companies have adapted & been agile to these changing Customer Needs and delivered value.

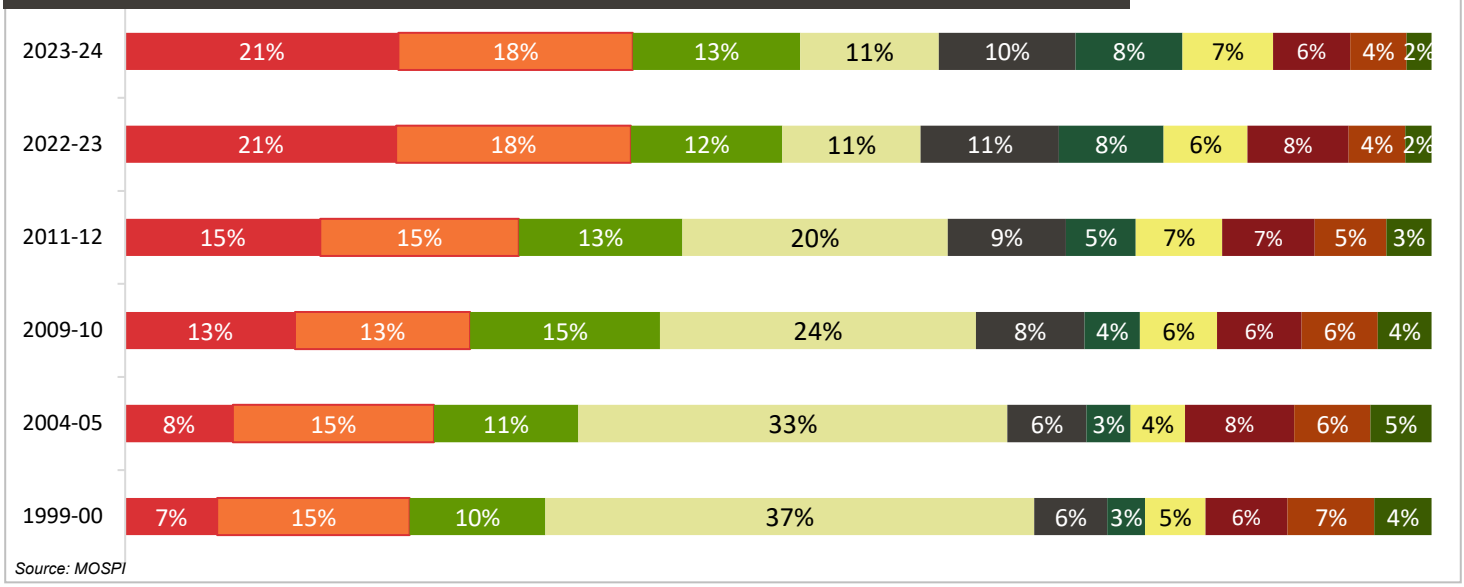
- ITC Ltd.- Acquired **Yoga Bar** (protein, low-sugar snacks) and **24 Mantra Organic** to deepen health/clean-label portfolio. Extending their portfolio into Medicinal & Aromatic Plants Extracts in Agribusiness Portfolio.
- Nestle India- Strong R&D in Millet products healthier, ethnic in existing SKUs
- Britannia- Building NutriChoice as a high-fiber/diabetic-friendly & expanding into Cheese & Milk- based protein products**.**
- PepsiCo India- Beverages toward **zero/low sugar**; push Quaker as quick**, whole-grain, protein-forward** options**.**
- Amul- Create protein rich daily staples; widen protein-rich paneer/curd range and additional Protein related SKUs.

Startups have also played an important role to identify the changing needs of customers and innovating to deliver value.

**Epigamia (Drums Food)-** Targeting urban protein demand with Greek yogurt; **DryM Foods** offer freeze-dried, preservative-free Indian meals with up to one-year shelf life; **iD Fresh-** Own the fresh, no-chemical**,** Ready to Cook in batters/parottas; **Licious-** Built **traceable**, temperature-controlled meat supply chain; **Beyond Meat** is shifting toward simplicity—shedding "meat" from its name, and focusing on cleaner nutrition- Plant-Based Meat. **Lahori Zeera-** Offering natural, ethnic, affordable beverage alternatives to mainstream colas.

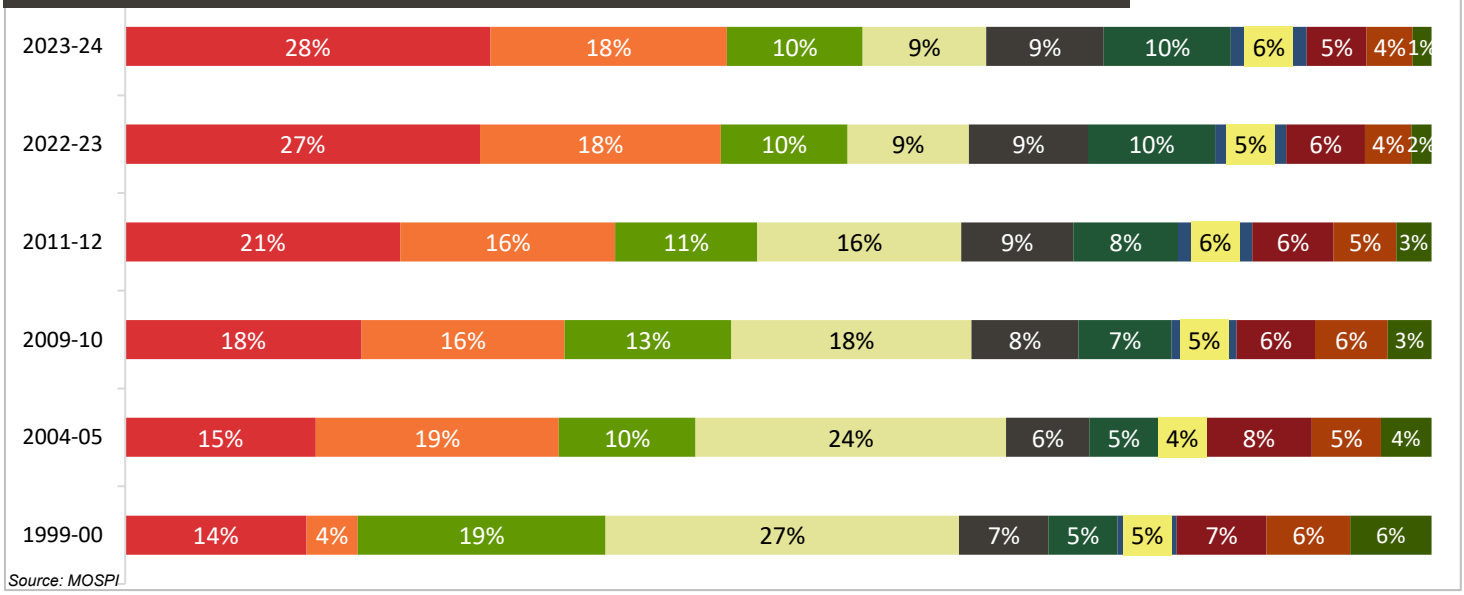
# Success Mantra 3: Ride on Consumer Trends

## Composition of Monthly Per Capita Food Consumption on Food Items – Rural




Source: MOSPI

## Composition of Monthly Per Capita Food Consumption on Food Items – Urban




Source: MOSPI

Beverages, processed food | Milk & milk products | Vegetables | Cereals & substitutes
Egg, fish & meat | Fruits(fresh & dry) | Spices | Edible oil
Gram, pulses & pulse products | Sugar & salt

Over the period the expenditure habits of Indian on food items have changed. The most significant changes has been observed in the spending on beverages and processed food which almost got doubled in last two decades suggesting the rapid rise of convenience and value-added consumptions.

***A few consumer trends***

- **Regional flavors and blended multi cuisines:** The preference for regional flavor's and multi cuisine food influences the processed food industry, with top processed food players going for locally inspired snack and beverage and creating products having blend of different cuisine.
- **Premiumization:** Premium products constitute 27% of the overall FMCG market, yet they have contributed a disproportionate 42% to the sector's total growth in India
- **Protein enriched food:** The India per capita protein consumption was 72 gm, 21% less than the global average. Consumers across all age group are now getting more aware of protein-based diets.
- **Gut health food:** Indian consumers are prioritizing digestive health as a core component of overall wellness, leading to a surge in demand for fermented foods such as yoghurt (curd), buttermilk (chaas), kanji that support gut health.

## *Success Mantra 4: Supply Chain Efficiency & Cost Competitiveness*

Large food processing companies are increasingly leveraging advanced technologies to build agile, cost-efficient, and resilient supply chains. Tools such as **AI, IoT, and predictive analytics** are enabling real-time visibility across operations, accurate demand forecasting, and proactive risk management. This shift towards data-driven, smarter operational models is reducing inefficiencies, lowering costs, and enhancing responsiveness to changing consumer needs.

The transition towards Industry 5.0 principles where human expertise is augmented by automation and intelligent systems, is redefining competitiveness in the sector. By combining adaptive workflows, empowered decision-making, and sustainable practices, food processors can minimize waste, optimize logistics, and achieve greater cost efficiency.

For example, in a model ice cream plant, Industry 5.0 enables seamless integration of automated production lines, AI-powered quality control, and human-led innovation, resulting in higher productivity, lower operational costs, and sustainable growth.

In today's fast-evolving food ecosystem, this technology-enabled transformation is no longer optional—it is central to achieving supply chain efficiency, cost competitiveness, and long-term resilience

# Success Mantra 5: Think "Place of Origin" Branding

*Place of origin branding is when producers or marketers use the **product's association with a geographical location** in its marketing or positioning.*

*Few Examples of "Place of Origin" Branding*

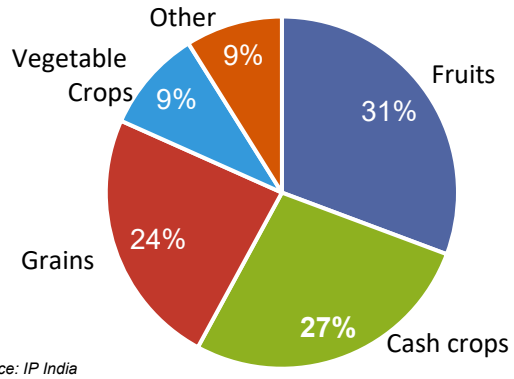

Place-of-origin (geographical indication) branding offers multiple strategic benefits to producers and communities. By anchoring product identity to a specific region, brands can command **better realizations**, meaning producers often fetch higher prices and improved profit margins by delivering **authenticity and differentiation**. This regional anchoring also leads to **less demand fluctuation**: established reputations stabilize demand and shield producers from price volatility. Additionally, the broader recognition afforded by the place-related identity promotes **demand growth** through wider reach, opening up new markets and helping products transcend local confines. These dynamics, in turn, stimulate **local employment**, bolster regional economies, and encourage **sustainable wealth creation**—financial gains that can ripple from local to national levels. Consumers experience **better satisfaction**, due to the assurance of quality, uniqueness, and cultural authenticity that place-of-origin branding inherently guarantees.

In India, Importance of " Place of Origin" branding was identified with introduction of **Geographical Indications (GI) of Goods (Registration and Protection) Act, 1999**, which laid down the procedure and criteria for granting GI status. The Act came into force in 2003 and empowered the **Geographical Indications Registry**—a division under the Ministry of Commerce and Industry. **Darjeeling Tea** was the first to be granted status of GI in the year **2004–05.**

GI Tag provides **legal protection** to GI-tagged products. It also prevents unauthorized use of GI-tagged products by others and ensures consumers receive **quality products** with desired traits and guarantees authenticity. GI Tagging promotes the economic prosperity of producers by increasing demand for GI-tagged goods in both national and international market and also helps in getting higher **premium prices**, access to markets, and preservation of cultural identity.

Out of **658** registered GI items, India has **216 Agricultural GI-tagged crops**, out of which Cash crops, Grain and Fruits are the major categories.

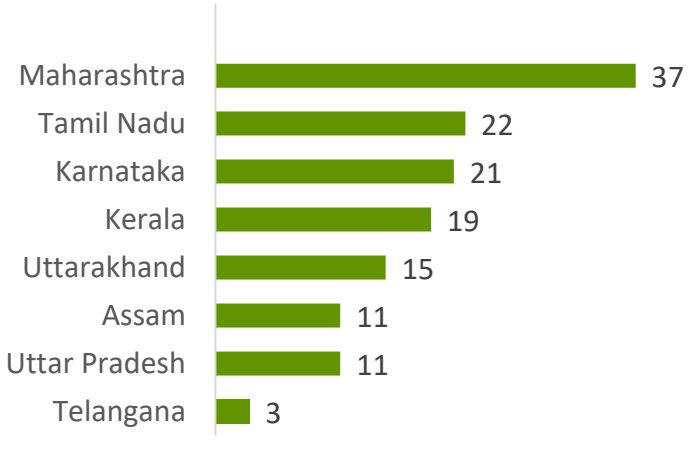
**Subsector wise distribution of Agri GI**




*Source: IP India*

Fruits have the largest contribution in Agriculture GI Tags followed by Cash Crops & Grains. Other include Flowers, Jaggery. Rice(29) has the highest number of Geographical Indication tagged varieties followed by Mango(15) and Chill(14)

**Top States in Agri GI**




*Source: IP India*

Maharashtra Holds highest GI tag in Agriculture sector, followed by Tamil Nadu & Karnataka. Telangana holds just 3 GI Tags in Tandur Redgram & Warangal Chapata Chilli, Banaganapalle Mangoes

# Success Mantra 5: Think "Place of Origin" Branding

***One District One Product Mapping for Agriculture Products for Telangana***

| | | |
|---|---|---|
| **Peddapalli, Jangaon** | Rice |  |
| **Kumuram Bheem, Mahabubnagar** | Millets |  |
| **Jagtial, Nagarkurnool, Mahabubnagar & Mancherial** | Mango |  |
| **Jayashankar, Mulugu, Warangal, Mahabubabad, Bhadradri Kothagudem, Khammam** | Chillies |  |
| **Suryapet, Yadari Bhuvanagiri, Sangareddy** | Milk-based Dairy products |  |
| **Nalgonda** | Sweetlime Orange; Cotton |  |
| **Mahabubnagar** | Mango (Banaganapalle) |  |
| **Jogulamba Gadwal, Wanaparthy, Mahabubnagar** | Groundnut |  |
| **Mahabubnagar** | Custard Apple |  |
| **Rangareddy, Vikarabad, Siddipet** | Vegetable processing |  |
| **Siddipet** | Tomato |  |
| **Kamareddy, Adilabad, Nirmal** | Soyabean |  |
| **Rajanna Sircilla** | Fisheries |  |
| **Nizamabad** | Turmeric |  |
| **Adilabad, Nirmal** | Cotton |  |

*Source: TGFPS*

Telangana's strategic focus on agricultural space, strong policies, and modern infrastructure creates an attractive ecosystem for enhancing its food processing sector through the Geographical Indications (GI). E.g. **Tandur Redgram** — a high-protein, region-specific pigeon pea variety with unique soil and climatic attributes — recently received GI status, enabling farmers and millers to brand their products and access higher market premiums. At the policy level, as studied earlier, the state's Food Processing sector is promoted by State Preservation Policy (T-FAPP) facilitating Special Food Processing Zones (SFPZs).

Coupled with this, the state can leverage the One district One Product Program to identify potential items for GI Tagging which will enhance the agriculture & food processing space in Telangana. **Armoor turmeric and Balanagar custard apple** are underway to get a GI Tag supported NABARD. Other agriculture items like Groundnut, Chillies Cotton can be looked upon for "Place of Origin" Branding which can enhance the enable premium positioning, which agro-processors can capitalize on through branded, traceable food products.

# Success Mantra 6: Build Farm-Gate to Factory Models

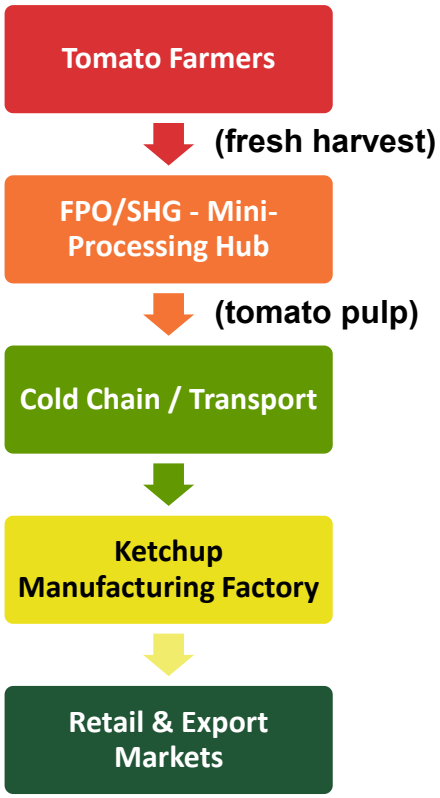
## Farm-Gate to Factory Model for Food Processing

The Farm-Gate to Factory model is to connect farmers directly with the food processing industry. By establishing mini-processing hubs close to farms managed by Farmer Producer Organizations (FPOs) and Self-Help Groups (SHGs). Here farmers can turn raw produce into semi-processed or value-added goods before sending them to larger factories.

This decentralized model creates a network of localized processing hubs close to the farms, which helps in maintaining a steady and predictable supply of raw materials for the food processing industry throughout the year, even in off-seasons. By processing soon after harvest, it minimizes spoilage and post-harvest losses that typically occur during storage and long-distance transport. Farmers gain the ability to sell value-added or semi-processed products rather than raw commodities, thereby commanding better prices and improving their net incomes.

Additionally, the shorter and more resilient supply chain reduces dependence on intermediaries, improves traceability, and enhances overall efficiency, making it more reliable for processors and more beneficial for rural economies.

***Example:***
Tomato Value Chain in the Farm-Gate to Factory Model




| Stakeholders, Roles & Benefits | | |
|---|---|---|
| **Stakeholder** | **Role** | **Benefits** |
| **Farmers** | Supply fresh produce to FPO/SHG hubs | Higher income, reduced wastage, better market prices |
| **FPOs/SHGs** | Operate mini-processing hubs, manage quality, aggregate produce | Additional revenue, local employment, skill development |
| **Food Processing Companies / Large Factories** | Source semi-processed inputs from hubs | Reliable supply, lower logistics costs, quality control |
| **Logistics Partners** | Transport semi-processed goods to factories | Stable contracts, reduced spoilage losses |
| **Government / NGOs** | Provide infrastructure, subsidies, and training | Rural development, agricultural value-chain strengthening |
| **Consumers** | Buy processed goods | Better quality, safer food, stable prices |

## *Success Mantra 7: Digitize Quality & Traceability*

Digital technologies are revolutionizing the food processing sector, creating a more transparent, efficient, and sustainable ecosystem. By digitizing critical processes—from procurement and production to distribution and retail—businesses can ensure consistent quality control, faster response to risks, and real-time visibility across the supply chain. These technologies not only build greater consumer trust through traceability and authenticity, but also strengthen resilience against disruptions, reduce losses, and promote long-term sustainability. In effect, digital adoption acts as a bridge that connects farmers, processors, retailers, and consumers in a seamless and trustworthy food system.

Key advantages of digital adoption include:

1. Reduced Post-Harvest Losses

Real-time monitoring and automated checks help preserve produce quality, extend shelf life

2. Compliance & Food Safety

Standardized digital records ensure adherence to safety norms and regulatory requirements, reducing risks of contamination and unsafe food.

3. Authenticity & Risk Reduction

Digital traceability systems authenticate products, making it harder for unsafe or fraudulent goods to enter the market.

4. Building Trust through Transparency

End-to-end visibility in supply chains reassures consumers and retailers, enabling informed decisions and strengthening brand credibility.

### *Example: Blockchain-enabled Food Traceability*

Transparency in the supply chain can be enhanced with the help of blockchain technology by creating a secure ledger. This shared ledger enables all participants to access and verify transactions in real-time, ensuring data accuracy and tamper-proof records. By tracking products from their point of origin to the destination, blockchain offers complete visibility into every stage of the journey. Enhanced transparency can also help in detecting fraudulent activities and ensure adherence to regulatory standards. For instance, implementation of blockchain technology in food processing reduces the time needed to trace contaminated products. The blockchain technology enhances tracking by providing a transparent and verifiable record of the journey of the product, fostering reliability among consumers, investors, and other relevant stakeholders.

For example, customers can scan QR codes on items to see their entire journey from farm to fork, helping businesses build stronger trust and credibility.

**Benefits:**

- Enhanced food safety and reduced risk of foodborne illnesses
- Successful traceability: The program successfully traces food product ingredients to their sources.
- Empowering consumers to make informed choices based on product information readily available on the platform.
- Improved market access for small and medium-scale food producers through online selling opportunities.
- Streamlining e-commerce transactions for food products, creating a more efficient market

# Our Values - The Avalon EDGE

**E** ENTREPRENUERSHIP
Enterprising ownership to transform ideas into pragmatic and profitable solutions

**D** DEDICATION TO EXCELLENCE
Commitment to premier quality and highest standards in everything we do

**G** GREAT VALUE CREATION
Focus on delivering maximum client impact through innovation and collaboration

**E** ETHICAL APPROACH
Respect, fairness, and transparency in all our interactions

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