

Food Processing and Management's Contribution in India's Vision @2047

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ABSTRACT:

India ranks 2nd in the global world in regard to the production of fruits and vegetables. It employs 12.9% of the total organised manufacturing employment. With a CAGR(Compound Annual Growth Rate) of 20% from the sector of food processing and management. This sector has a fifth rank in terms of food processing in the global world. This sector emerged as a sunrise sector with various key applications in terms of rise of horticulture, floriculture, Aquaculture with food processing and management in order to give these sectors a major uptake.

KEYWORDS: India, CAGR, Floriculture, Aquaculture, Horticulture, Food processing and management, Fruits and vegetables.

INTRODUCTION

Food processing is a mechanism under which raw material from Agriculture sector is processed in the form of pickles, chutneys, Jams from fruits and vegetables. It will provide a push to increase Agricultural product's value as well as Doubling the Farmer's income (DFI Report 2017). Food management is a process under which food grains and food resources are managed through E-NAM, FPOs, Hub and Spoke Models, APMCs. In order to secure and maintain food security in the country to provide an ideal price for Farmer's crop. As a result, it will give a huge blow to India's vision of Viksit Bharat @2047.

Food processing and management sector of India has emerged as one of the strong mammoth in the engine of growth of India's economy. It has 12.91% of total organised manufacturing employment. Agricultural food exports include processed foods, totalled USD 49.43 billion result in accounting for approx. 11.2% of total exports. Due to this sector, India's food exports increased from 14.9% in FY18 to 20.4% in FY25. Meanwhile, there are prevalent challenges emerging under this sector such as Climate change, erratic weather events, water scarcity, water guzzling crops like rice and sugarcane, price volatilities due to war conditions and other dynamic problems.

OBJECTIVE:

1. Transform India into a Global Food Hubs(GFHs) by increasing processing levels from 10% to 30%.
2. Boosting India's food exports through food processing to 50%.
3. Reducing post harvest losses and enhancing rural incomes through DFI(Doubling Farmer's income 2017).

4. Innovation and Nutrition through RTE “Ready To Eat” food products and Climate smart technology to improve nutritional security.
5. 100% FDI in order to collaborate with world global markets.

METHODOLOGY:

The study is based on literature and looks into the present topic. We also relied on Secondary data from economic survey (2024-25) and (2025-26), journals and legitimate websites of Various organizations like MOFPI (Ministry of food processing and industry) and Ministry of Agriculture and family welfare.

HYPOTHESIS:

- H1- Is food processing and management sector is beneficial in fulfilling India’s goal of Viksit Bharat @ 2047.
- H1- Is food processing and management sector, has a impact of Climate change and other challenges on it.
- H1-Is food processing and management emerged as a dominant sector of India’s economy.

LITERATURE REVIEW:

The food processing sector is a critical pillar for India’s Viksit Bharat @ 2047, aiming to quadruple its Gross Value Added (GVA) share to ~7.2% by 2047. It drives economic growth by reducing wastage, enhancing farmers’ income, boosting exports, and transforming agriculture from subsistence to profit-oriented. Achieving this requires massive investment in rural, cold chain, and logistics infrastructure to connect farm gates to markets.

Key Contributions to Viksit Bharat @ 2047: Economic Growth & Employment: The industry, already the 5th largest globally (\$336.4 billion), employs over 1.9 million people and contribute 12.9% to manufacturing GDP. It is essential for elevating the rural economy.

Export Potential: Agri and processed food exports, which were \$53 billion in 2022-23, are projected to reach \$700 billion by FY2047, driven by PLI schemes and improved quality standards.

Infrastructure & Value Addition: Shifting from low-level processing (2.1% for fruits/vegetables) to higher value-addition requires Pradhan Mantri Kisan Sampada Yojana (PMKSY) Mega Food Parks, and integrated cold chains.

Sustainability & Resilience: Modern food management reduces food waste, ensures food security, and promotes sustainable agricultural practices, aligning with the long-term goals of a developed nation.

Future Strategies & Challenges:

1. **Infrastructure Gaps:** Significant investments are needed in sorting, grading, packing, and testing labs.
2. **Supply Chain Integration:** Strengthening the link between farmers and processors is critical to prevent rural distress.
3. **Technological Adoption:** Utilizing AI and machine learning for better supply chain management and predictive analytics.

Viksit Bharat envisions transforming the agricultural landscape into a robust, technology-driven, and sustainable sector by 2047, with food processing as its engine.

KEY DRIVERS OF FOOD PROCESSING AND MANAGEMENT IN INDIA:

Driver's name	Main components	Contribution in India's CAGR(%) /rank in the world / export orientation
Horticulture	Grapes Production	5% growth rate between FY 17 to FY 23
Floriculture	Flower Production	100% (export orientation)
Agriculture	Food crops	3.5
Dairy and other products	Milk and milk products	1 st in the production of milk
Fishery	Fish, shrimp, crabs etc.	13.67%
Livestock	Eggs, meat, mutton, chicken etc.	12.99 %
Spices	Turmeric and pepper	70 %of world's global production

OTHER DRIVERS

1. Andhra Pradesh is the leading performer with a CAGR of 8.8% in Agriculture and Allied sectors.
2. Andhra Pradesh is the major producer of shrimp from India in the world.
3. In the production of rice , India surpassed China and become the largest producer of it.
4. India accounts 11.6% , cereal's producer of the world.

KEY CHALLENGES:-

1. UPSTREAM
2. DOWNSTREAM

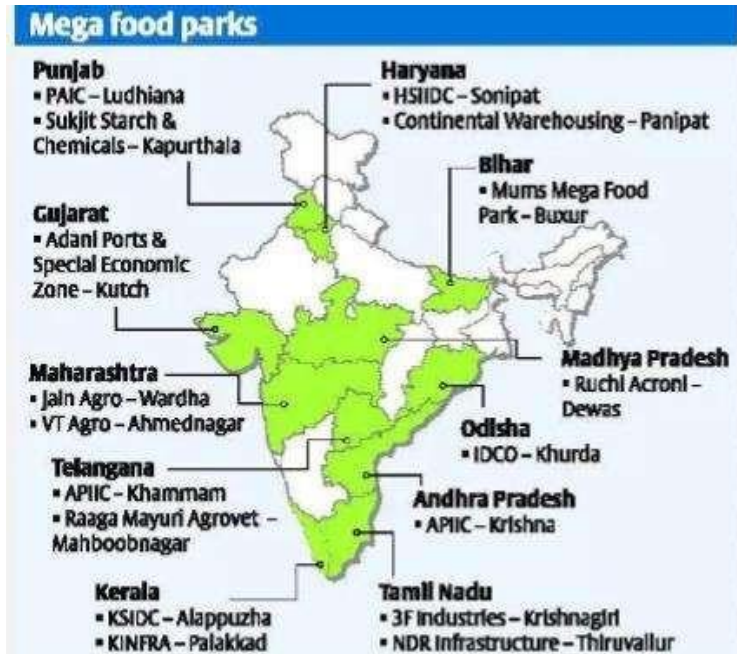
1. Upstream challenges:-

- Raw material supply and quality due to seasonal variability and QCOs(Quality Control Orders).
- Agricultural practices affected due to fragmented landholdings and inefficient farming techniques.
- Lack of infrastructure and logistics due to less storage and transportation facilities.
- Input supply affected due to lack of quality seeds and fertilizers as well as water supply.
- Financial constraints difficult to get easy access to reasonable credit.

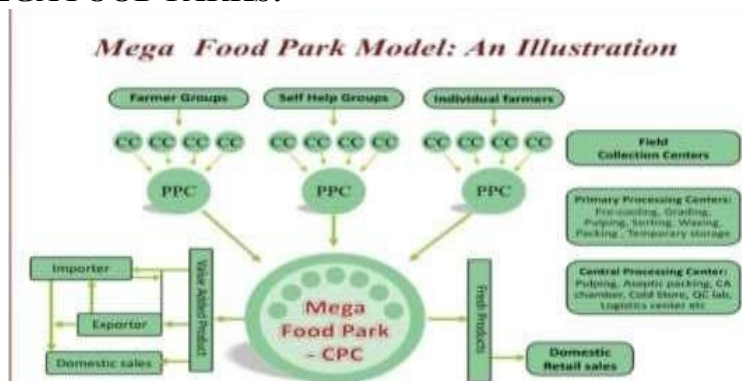
2. Downstream challenges:-

- Market Access fragility due to difficult to get distribution channels result in limited access as well as weak market linkages.
- Infrastructure inaccessible due to lack of advanced technology and low investment in Research and Development(R and D).
- Regulatory and policy issues – very difficult to access complex regulations and high taxation.
- Consumer Demands and Preferences - fluctuating market demands and diverse expectations.
- Financial constraints – high capital requirements and high operational costs.
- Supply Chain management – lack of co-ordination as a result working in silos.

MAJOR FOOD PARKS IN ALL OVER INDIA:



STRUCTURE OF MEGA FOOD PARKS:



INITIATIVES FOR FOOD PROCESSING AND MANAGEMENT BY GOVERNMENT OF INDIA:-

- The Government of India (GOI) drives food processing and management through initiatives like PM Kisan Sampada Yojana (PMKSY) (budget ~₹4,600 crore) for infrastructure, Production Linked Incentive (PLI) Scheme (outlay ₹10,900 crore) for branding and manufacturing, and PMFME scheme for upgrading micro-enterprises. These efforts focus on reducing wastage via cold chains, boosting exports, and enhancing food quality.
- Pradhan Mantri Kisan Sampada Yojana (PMKSY): A comprehensive package aimed at developing modern infrastructure from farm gate to retail, including Mega Food Parks, Integrated Cold Chains, and Value Addition Infrastructure.

- Production Linked Incentive Scheme (PLISFPI): Supports Indian food brands in global markets, offering incentives for manufacturing Ready to Cook/Eat (RTC/RTE) products, marine products, and mozzarella cheese.
- PM Formalisation of Micro Food Processing Enterprises (PMFME): Provides financial, technical, and business support to micro-enterprises, with a focus on Farmer Producer Organizations (FPOs) and Self Help Groups (SHGs).

Infrastructure Development:

- **Cold Chain Infrastructure:** Incentives for establishing cold storage and transportation to reduce postharvest losses.
- **Food Testing Labs:** Financial support to set up 100 new NABL-accredited labs to ensure safety and quality.
- **Food Irradiation Units:** Development of units to enhance shelf life of agricultural products.
- **Skill Development:** Collaborating with institutions like NIFTEM and the Food Industry Capacity and Skill Initiative (FICSI) to bridge the skill gap in the food processing sector.

CONCLUSION:

Due to weather vagaries, it not only impact food processing and management but also give a huge chances of emerging consequences on price mechanism. In India due to erratic weather events especially in times of monsoon. Farmers sell their crops at ₹5 or 10 and the intermediaries between the farmer and the consumers took advantage of this situation. It led to disruptions in supply chains and give rise to cost push inflation. It will further give rise to price deficiency to farmers for their crop due to the menace of intermediaries. In this regard, GOI created cold storage facilities as well as silos containers for grain storage. This food grains are used in food processing in order to generate more valuable food products like pappads from rice, pickles and chutneys from vegetables and fruits respectively. Through this various women SHGs are emerging which are contributing to India's GDP and following the path of India's vision @ 2047.

REFERENCES:

1. <https://agriwelfare.gov.in> (Department of Agriculture and Farmers welfare).
2. <https://mofpi.gov.in> (Ministry of food processing and industries).
3. <https://www.pib.gov.in> (Press Information Bureau).
4. THE FOOD PROCESSING INDUSTRY IN INDIA: CHALLENGES AND OPPORTUNITIES, ' Mr. Santosh Bharat Bharute-Bhavsar¹, 'Dr. Ashutosh. V. More²'.
5. FOOD PROCESSING INDUSTRY IN INDIA : S&T CAPABILITY, SKILLS AND EMPLOYMENT OPPORTUNITIES , 'Mohammad Rais ', 'Shatroopa Acharya *' and 'Neeraj Sharma**'.
6. Dhanya, V., Avdshesh, K. S., & Rishabh, K. (2020). "Food Processing Industry in India: Challenges and Potential." RBI Bulletin.
7. Makda, S. (2019). "The food processing industry in India: Challenges and Prospects." GAP Interdisciplinarity, 2(3), 97–107.
8. Dudhagara (2025). "A Study on Indian Food Processing Industry: Growth Trends and Food Safety Standards." European Journal of Nutrition & Food Safety, 17(7): 15-26 European Journal of Nutrition & Food Safety.