EDUPHORE- IAS
WEEKLY CURRENT AFFAIRS

TOPIC OF THE WEEK: FOOD PROCESSING INDUSTRY OF INDIA

Food Processing Industry of India

Food processing industry provides the vital linkage between industry and agriculture. The Indian food industry presents a very large opportunity to every stakeholder. This is primarily driven by a robust consumer demand, the changing nature of the Indian consumer, who is more informed and willing to try new products; and the strong production base of the country.

- The several gaps in the current production and delivery systems actually present a huge opportunity for the growth of companies willing to bet long term in this sector.
- However, the growth of food processing companies has been sub-optimal because of high cost, low level of productivity, high wastage and lack of competitiveness of Indian food products in the global market.
- To fully leverage the growth potential of the sector, current challenges that are being faced by the industry need to be properly addressed and steps n hampering the sectoral growth.

Potential of the sector

- India currently processes less than 10% of its agri output.
- Most of the processing that is done in India can be classified as primary processing – done through rice, sugar, edible oil and flour mills etc.
- Primary processing offers lower value-addition compared to secondary processing that includes processing of high value items viz fruits and vegetables, dairy, bakery, chocolates etc.
- Thus, given the high production levels along with low processing current processing rates, the sector presents huge opportunities.
- The need of the hour is to move up the value chain in processed food products by establishing efficient backward linkages to contribute to nation' food security as well as contribute towards improving the income level of the farmers by reducing food wastages and enhance food as well as processed food exports.
- The sector provides huge employment generation potential.
- Large sourcing hub for agriculture produce.
- India has the advantage of a large and growing market. Changing consumption patterns due to urbanization, changes in the gender composition of work force, and growing consumption rates have contributed to the increase in the size of processed food market.
- More than two thirds of our 1.3 billion population are young with growing incomes also create a large market for food products. All these factors lead to growing consumption of food.

Food Processing sector has been growing at an Average Annual Growth Rate (AAGR) of around 8.41 per cent between FY14 and FY18 and constitutes as much as 8.83 per cent and 10.66 per cent of GVA in Manufacturing and Agriculture sector respectively.

- Cereals - second largest producer of food grains globally.
- Fruits & vegetables - second largest producer of Fruits and Vegetables.
- Milk - largest producer of milk.
- Meat - largest livestock population in the world.
- Poultry - around 95.2 bn eggs annually
- Marine - second largest fish producer in the world.

EXPORTS

- Indian agricultural/horticultural and processed foods are exported to more than 100 countries/regions; chief among them are the Middle East, Southeast Asia, SAARC countries, the EU and the US.
- India's total agriculture export basket accounts for little over 2% of world agriculture trade and Agricultural exports.
- Majority of Indian exports are low value, raw or semi-processed and marketed in bulk which are then processed in other countries, indicating the scope to move up the value chain.
- Further, India is unable to export its vast horticultural produce due to lack of uniformity in quality, standardization and its inability to curtail losses across the value chain.

- There is a massive requirement for pack houses at the farm gate, cold storage facilities across the value chain, multi-modal logistics, infrastructure at port gateways with phyto- sanitary facilitation etc.

Opportunities &Sub-segments

- Processing of cereals to high value products like snacks, ready to cook/ready to eat products, bakery products etc.
- Share of healthy variants of cereals- based products such as multi-grain flour, brown bread, brown rice, multigrain bread, whole wheat bread etc. is witnessing significant growth.
- Super cereals or millets are witnessing a huge demand domestically and in global markets due to the health benefits that they offer.
- Opportunity for millet-based value- added products.
- India is witnessing wastage in the range of 4.65% – 5.99%in cereals majorly due to lack of storage infrastructure and primitive grain handling mechanism. To reduce this wastage level and fulfil the increasing demand for grains and its processed forms, India needs adequate infrastructure, processing facility and research & development in this area.

Fruits and vegetables	• **India is the second largest producer of Fruits and Vegetables in the world.** • **India's share in the global market is still nearly 1% only.**	**Opportunity:** • **Harnessing export potential of processed fruits and vegetables in the form of frozen (IQF), canned, pulp, paste, sauces, snacks, dices, dehydration, pickles, juices, jams, jelly, etc.** • **Investing in initiatives that help reduce wastage levels.** • **Adequate infrastructure (cold chain, processing infrastructure), R&D.**
Dairy	• India is the largest producer of milk globally. • Changing lifestyle patterns, increasing disposable incomes and increasing health consciousness are the key growth drivers for milk and high value milk products in India.	Challenges: • Segregated structure of the sector. • Marginality of the majority of farmers. • Limited impact of technological innovations. • Given the fragmentation and small volume of milk handled by individual farmers, milk procurement becomes challenging. • Breeding related issues and unavailability of high yield pure breeds. • Lack of expert knowledge about feeding and healthcare of the cattle.
Fisheries	• India is the second largest fish producer in the world, after China. • Of the country's total production nearly 65% is from inland sector. • Processing levels of marine food in India are	• Processing of fish into canned and frozen forms is carried out mostly for exports. • Besides, there is an increased demand for processed and ready to eat marine products in

	currently at 23%.	the domestic and overseas market. • Traditional independent fish retailers still dominate the distribution channel of fish and seafood in India. • Retail sales volume via modern grocery retail channels like supermarkets, have grown rapidly from a smaller base in recent years.
Meat & Poultry	• India has the world's largest population of livestock. • India is the largest producer of buffalo meat and second largest producer of goat meat. • It is the third-largest egg producer in the world after China and the USA. • Current processing levels in poultry are 6%, while for meat it stands at 21%.	• Poultry is a highly vertically integrated industry in India and matches the efficiency levels of many western countries. • Farm automation, abattoirs, logistics, processing and point of sale cold storage infrastructure are an opportunity in India, given the changing preference of Indian consumers for clean, safe and hygienic meat and meat products.

KEY EMERGING TRENDS

Convenience

- With a **sizable and increasing urban population** (>30 per cent as per 2011 census, and, 62.5% of the population are between ages of 15 – 59 years (2011 Census)), there is a major shift in consumption pattern towards convenience food in India.
- Convenience food items- ready meals, rice, pasta & noodles and savory snacks have been registering impressive sales growth. Fast growth in breakfast cereals, ice-cream and soups segments.
- Young population is placing **higher importance on physical and emotional wellbeing**, and thus swiftly moving towards healthier alternatives.

EMERGING PROCESSING SUB SEGMENTS

- Packaged food segment
- Breakfast cereals
- Bakery products
- Processed fruits and vegetables
- Processed Meat and Seafood
- Pasta and Noodles
- Edible oils
- Ready meals
- Sauces, Dressings and Condiments
- Soup
- Dairy
- Chocolate confectionary
- Beverages

Mindful Eating

- Consumers are conscious about making **responsible food choices.**They want to know what ingredients and nutritional properties of food.
- **Food safety, traceability and sustainability** are shaping consumer buying behavior.
- Detailed, honest and accurate labeling is emerging as a key product differentiation strategy.
- **Sustainable sourcing** has become a pre- requisite all along the food value chain.

Packaging & Branding

- The food packaging industry is India's fifth largest sector.
- Food packaging industry has seen the maximum number of innovations in terms of packaging and branding.

- With the advent of E-commerce, and online retail, there is trend toward protective packaging.
- Packaging in India at present is highly fragmented most of the firms are micro, small and medium enterprises (MSMEs).
- As the industry grows and matures, there is expected to be a trend towards consolidation as supply- side companies merge and acquire smaller companies to increase scale, reduce competition and improve bargaining power with customers.

Technology and Automation

- Automation is the future for the sector to address the required levels of quality control, production speed, labor shortages and overall profitability.
- Further automation will not replace people but will improve the skills workers need to keep up with the pace of change.

Personalized nutrition

- Consumers in India have become more health-conscious and are keeping a watch on what they are consuming.
- Personalized nutrition is gaining grounds and understanding the trends companies are increasingly investing in the segment.
- Companies are adopting Artificial intelligence, DNA testing etc for providing consumers with alternatives.
- Dietary supplements manufacturers are shifting focus on specialty ingredients that are developed keeping in mind specific health needs of the consumers, such as lutein for eye care, omega3 for heart health.

e-Commerce

- India's digital e-commerce market is accelerating at a rapid pace and is expected to reach US $200 billion by 2026.
- With emergence of e-commerce, the food retail segment is further evolving.
- Online grocery while is at a nascent stage at present owing to the fragmented and unorganized nature of the Indian market.
- However online grocery is expected to grow due to fast- paced urbanization, changing customer lifestyle and tech-savvy demographic changes.
- Technology enabled innovations like digital payments, hyper-local logistics, analytics driven customer engagement and digital advertisements will support further growth in the sector.

Need for Second Green Revolution in Agriculture

The first Green Revolution has run its course. Cereal yields are rising very slowly, water tables are plunging, and agricultural growth is also low. India needs a second Green Revolution which takes rice and wheat cultivators beyond the grain production stage to agro-food processing and gives value addition and would also solve the issue of constraints in raw material procurement. This high end initiative requires commitment from all the stakeholders in the food value chain.

POLICY ECOSYSTEM

- The Government of India has accorded **'high priority' status to the food processing industry**.
- The **Ministry of Food Processing Industries (MOFPI) has been set up** as a nodal agency for formulation and implementation of the policies and plans for the food processing industries.
- Various measures have been taken in line with the **'Make in India' initiative** of the Government.

a) Attracting investments

- **100% FDI is permitted under the automatic route in Food processing industries.**
- 100% FDI is permitted in Manufacture of food products and for trading (including through e-commerce) for food products manufactured and/ or processed in India.

b) **Agricultural Produce and Livestock Marketing (Promotion and Facilitation) [APLM] Act 2017**.

Pradhan Mantri Kisan SAMPADA Yojan

- In 2016, MoFPI introduced an umbrella Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters or SAMPADA, which was proposed to be implemented with an allocation of ₹6,000 crores for the period of 2016-20.
- In 2017, SAMPADA was renamed as the Pradhan Mantri Kisan Sampada Yojana (PMKSY).
- It is a Central Sector Scheme.

c) The electronic National Agriculture Market (e-NAM) portal was launched in 2016 with the vision of a single agriculture market.

d) Infrastructure support
   - With a view to augment private investment to food processing sector, an umbrella scheme **Pradhan Mantri Kisan SAMPADA Yojana**for the period 2016-20.
   - The existing schemes under MoFPI have been subsumed under PM-SAMPADA and the focus is on creation of modern infrastructure with efficient supply chain management from farm gate to retail outlet.

e) The Ministry of Food Processing Industries is implementing **Mega Food Park Scheme**.

f) **Agricultural Export Policy, 2018** has been formulated with a focused plan to boost India's agricultural exports to USD 60 billion by 2022.

g) Financing: The food processing sector enjoys priority Sector Lending. Further, to boost easy access of finance infrastructure status is provided for projects like Mega Food Parks and Cold Chain. A special fund of Rs.2000 crore has been set up in National Bank for Agriculture and Rural Development (NABARD) to provide credit at affordable rates to boost food processing sector. Under this fund, loan is extended to individual entrepreneurs, cooperatives, farmers producer organizations, corporates, joint ventures, SPVs and entities promoted by the Government for setting up, modernization, expansion of food processing units and development of infrastructure in designated food parks.

h) Regulatory Support: **Food Standards and Regulations in India are evolving to ensure safety and quality of food for consumer's and facilitate fair and open trade.** There has been an evident shift from 'checking adulteration' to 'ensuring safety'.

i) Harmonization with international standards has taken momentum in India to meet with Global standards. Over the years, Indian participation in the Codex processes have increased considerably.

APLM allows for clauses such as allowing single licenses for traders and de-listing perishables from the ambit of the APMCs, both of which will be significant enablers for better sourcing for food processing. However, the uptake of the Act among states needs to be fast-tracked.

Mega Food Park Schemes aims to create modern infrastructure facilities for food processing along the value chain from farm to market with strong forward and backward linkages through a cluster based approach.

CHALLENGES

- Inadequate Infrastructure Facilities.
- Availability of trained manpower
- Processing plants with cost effective technologies
- Cost effective food machinery & packaging technologies
- Constraints in raw material production
- Access to Credit
- Market Intelligence
- Inconsistency in central and state policies
- Lack of Applied research
- Adequate value addition
- Lack of specific plan to attract private sector investment across the value chain
- Food safety Laws

	Challenge	Way forward
Infrastructure	• **Long and fragmented supply chain.** • **Inadequate cold storage and warehousing facilities.** • **Road, rail and port infrastructure. Last mile connectivity, dependence on road over rail, customized transportation** • **Lack of modern logistics: logistics parks, integrated cold chain solutions.** • **Technology adoption**	• **Dedicated freight corridors in rail supplemented by concretized dual carriageways for the State & National highways, will directly reduce the cost of goods supplied.** • **Contract farming.** • **Customer & industry centric single entity of all multi-modal transportation.** • **Incentives for setting up warehousing/cold**

	(barcoding, RFIDs).	storage infrastructure and customized transportation network development
Manpower	• Skill shortages due to mismatch between the demand for specific skills and available supply. • Shortage of skilled, semi-skilled and unskilled workers impacting the competitiveness of Indian food industry.	• Immediate adoption of ITI's by the food processing industry. • The candidates after training could be directly employed by the industry. • Industry partnership with food technology/processing institutes. • Government needs to address the regulatory/policy issues to facilitate this engagement at a broader scale rather than on piece meal basis.
Food safety law	• Indian food regulations comprise various food policies that have been enacted at different points of time. • Food sector is governed by a number of different statutes rather than a single comprehensive enactment. • Incoherence and inconsistency in regulatory scenario. • Multiplicity of ministries and administering authorities at both the central and state level resulted in a complex regulatory system.	• Enforcement of the Food Safety and Standards Act in spirit including increasing radically the number of trained inspectors and state of the art lab facilities. • World class rules which would foster innovation and serve the interest of the consumers at large. • Science should get the preeminence.
Raw material	• Availability of right quality of produce at the right time and required quantity to food industry are the major constraints. • Inferior quality planting materials/seeds, lack of HYV of industrial importance crops, improper practices of cultivation, inadequate availability of inputs, and lack of modern farm machinery.	• Contract farming can emerge as a significant opportunity for companies whereby they can create direct farm linkages to source appropriate quality, quantity and varieties of inputs.