

Focusing on Food Processing Industries

Ensuring Food Security and Enhancing Value Addition to Food Produce in India

India is among the largest producers of milk, fruits and vegetables, marine products, meat and poultry in the world. The rich agricultural and livestock resource base has resulted in a total production of more than 500 million MT of horticultural and non-horticultural produce in the country. In 2013-14, India touched record production of food grain (cereals and pulses) and horticultural (fruits, vegetables, spices, flowers and aromatics) products. However, despite the increasing production of the different food products (*agro, animal and milk*), the per capita availability and per capita consumption of food grain (cereals and pulses), fruits and vegetables, egg and fish has shown a **decline** in the last decade according to data from consumption expenditure surveys conducted by the NSSO. Moreover, India is ranked **55th among 76 emerging economies on the 2014 Global Hunger Index (GHI)**, significantly worse than neighboring China (5th), Sri Lanka (39th) and Nepal (44th).

An important factor behind the declining consumption and a low rank on the GHI is the fact that the cumulative wastage of food products in India **stands at INR 44,000 crore**, as per a report of the Central Institute of Post-Harvest Engineering and Technology (CIPHET). This report also highlighted that the fruits and vegetables segment recorded the highest share of wasted produce, at an estimated 18% of the total production. In monetary terms, this amounted to INR 13,309 crore. The high amount of food wastage can be attributed to poor post-harvest management owing to the **lack of high quality cold storage facilities, logistics and processing units** for food manufacturers and food sellers, among other reasons. Therefore, it is extremely important to establish a comprehensive and integrated network of physical and logistical infrastructure to improve the post-harvest handling and processing of the food produce in the country.

In this context this brief discusses the challenges and opportunities in the food processing sector and the initiatives and policy measures undertaken by the government through the Ministry of Food Processing Industries (MOFPI), such as launching the **Mega Food Parks scheme** and announcing the setting up of 138 integrated **cold chain projects** in order to reduce food wastage as well as increase the value addition to the produce.

Food Processing Industry in India – the opportunities and the challenges



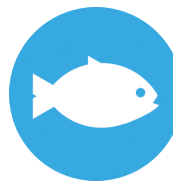
India is the world's second largest producer of fruits and vegetables, with an estimated annual produce of 254 MT (Fruits: 84 MT, Vegetables: 170 MT) in 2013-14; according to the MOFPI, **only 2% of vegetable produce and 4% of fruit produce is processed.**



According to the Economic Survey 2013-14, India accounts for 17% of the world's milk production and recorded production of 138 MT. Also, India has the largest livestock population in the world; in the dairy sector, **37% of the total produce is processed**



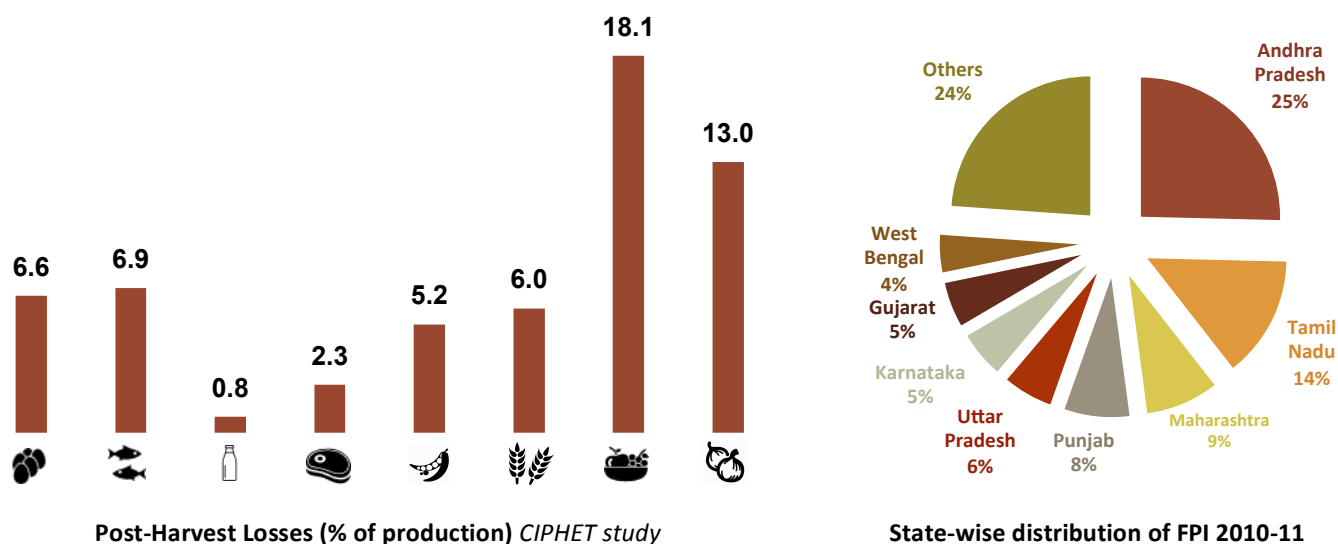
Meat production and poultry meat production is estimated at 6.24 MT and 2.68 MT respectively in 2013-14; According to the Vision Document 2015 of the MOFPI, **about 21% of the total meat production and 6% of the poultry meat production is processed**



India ranks second in world fish production, contributing about 5.4 per cent of global fish production and total fish production during 2013-14 was registered at 9.58 MT; the **processed segment comprises of over 15%** of the domestic marine and fish industry

The Food Processing Industry (FPI) in India is ranked 5th in the world in terms of exports, production and consumption and has grown annually at 8.4% for 5 years up to 2012-13. The FPI accounted for **9.8% of India's manufacturing GDP, 12.2% of agriculture GDP in 2012-13 and had a 12.1% share in the total export during the FY 2013-14¹**. Moreover, the FPI is one of the major employment intensive segments constituting **13.04%** of employment generated in all Registered Factory sector in 2012-13 according to the Annual Survey of Industries. It also accounted for 5.34% of the total FDI equity inflows into the country between April 2011 and May 2014².

However, the food processing levels in India are extremely low and MOFPI estimates the overall level of processing at less than 10%; a case in point being the processing level of 2.2% for fruits and vegetables as compared to 23% in China, 65% in USA and 78% in Philippines. This compounds the problem of post-harvest losses, which range between 0.8%-18% for different food products. Also, *almost 76% of the food processing units are concentrated in 8 states*, as can be seen from the graph below. The proposed National Food Processing Policy aims to increase the level of food processing from 10% in 2010 to 25% in 2025.



The food processing industry has three segments, primary, secondary and tertiary. Since the use of modern technology in the food value chain such as core processing, warehousing, logistics, and production is limited, most of the processing in India is limited to primary processing. *For instance, only one percent of fish and marine products are canned in India.*

Type of Food	Primary Processing	Secondary Processing	Tertiary Processing
Fruits and Vegetables	Cleaning, Cutting, sorting	Pulps, pastes and slices	Jams, juices, pickles
Grains and Cereals	Sorting and grading	Flour, malt and milling	Biscuits, noodles, cakes
Dairy Products	Grading and refrigeration	Cottage cheese, cream, dried milk	Yoghurts, spreadable fats
Meat and Poultry	Sorting and refrigeration	Cut, fried, frozen, dried	Ready-to-eat
Marine and Fish Products	Chilling and freezing	Cut, fried, frozen, dried	Ready-to-eat
Edible Oil	Sorting and grading	Refined oils	Fortified oils

Source: Feeding a Billion: Role of the Food Processing Industry, a FICCI Report

Therefore, the development of a well-distributed and efficient food processing industry, with an integrated supply chain mechanism, has potential to address the issue of food wastage in the country as well as enable better returns for farmers.

¹ MOFPI Statistics: Contribution of Food Processing Sector to GDP, Exports from FPI Sector

² Reply to Rajya Sabha unstarred question no. 2178

Summary of key Government Initiatives & Policy Measures

The Government of India has taken various initiatives as well as introduced policies to address the issue of post-harvest losses of horticulture and non-horticulture produce and provide an impetus to the growth of the food-processing sector. It has taken up creation of integrated cold chains and mega food park projects, which would not only provide a boost to the growth of food processing infrastructure in the concerned states but also provide better price to farmers, reduce wastage of perishables, add value to the agricultural produce and create huge employment opportunities in the rural areas. It is in line with this objective that it has accorded priority sector status to the FPI under the 'Make in India' initiative and the New Manufacturing Policy. This section takes a look at some of the key ongoing schemes and policy decisions.



Mega Food Park Scheme

Mega Food Parks (MFPs) provide modern infrastructure facilities along the value chain from farm to the market with strong backward and forward linkages. The MFP scheme adopts a cluster-based approach based on a hub and spoke model. It envisages a well-defined agricultural/horticultural-processing zone containing state-of-the-art processing facilities with support infrastructure and a well-established supply chain. Under this scheme, *approvals have been granted to a total of 42 MFPs over 22 states and 4 MFPs are currently operational*. The MFPs are expected to help achieve the "Vision 2015" of the Ministry of Food Processing Industries to *increase the processing of perishables* in the country from below 10% to 20%, *value addition* from 20% to 35% and the *share in Global food trade from 1.5% to 3%* by the year 2015. The Ministry of Finance has included Food Parks including Mega Food Parks under the "Infrastructure category", with a view to promote public and private investment in them.

The total estimated investment in the approved MFPs would be around INR 14,794 crore, which includes a Government grant of around INR 2000 crore. A cluster of **30-35 food-processing units** is expected to come up in each MFP with an estimated investment of about INR 250 crore, which would create employment opportunities for approx. **30,000 people**.

Pattern of Assistance

- *One time capital grant of 50% of the project cost (excluding land cost), subject to a maximum of INR 50 crore in general areas and 75% of the project cost (excluding land cost) subject to a ceiling of INR 50 crore in difficult and hilly areas i.e. NE Region including Sikkim, J&K, Himachal Pradesh, Uttarakhand and ITDP notified areas of the States.*
- *A Program Management Agency (PMA) is appointed to provide management, capacity building, coordination and monitoring support. For meeting the cost of PMA and other promotional activities by the Ministry, a separate amount to the extent of 5% of the overall grants is earmarked.*
- *The GOI has also created a fund of INR 2000 under NABARD for extending affordable credit to the designated MFP projects as well as for setting up of food processing units in the designated food parks.*

Implementation Mechanism

- ✓ *The MFPs are implemented by a Special Purpose Vehicle (SPV), which is registered under the Companies Act.*
- ✓ *State Government / State Government entities / Cooperatives applying for setting up a project under the scheme are not required to form a separate SPV.*
- ✓ *The Implementation period of a Mega Food Park project is 30 months.*



Scheme for Cold Chain, Value Addition and Preservation Infrastructure

A study conducted by National Spot Exchange Limited (NSEL) in 2010, had indicated cold storage requirement of 61.13 million MT. According to the MOFPI, there are a total of 6,891 cold stores with a cumulative capacity of 31.82 million MT,

as of 31.03.2014. Thus, *there exists a deficit of almost 29 million MT of cold storage capacity*. Moreover, there exists the issue of uneven distribution of capacity as a majority of investment into setting up cold storages in India has been in states like Uttar Pradesh, Punjab, Gujarat, Maharashtra and West Bengal. These five states account for as much as *64% (4,384) of the cold storage units set up in the country as well as 76% (24.27 million MT) of the total cold storage capacity*. Secondly, the cold storages that have been traditionally set up can cater to single commodities only. In fact, more than *75% of the capacity is utilized only for potato and only about 23% are under multi commodity category*.

In order to address the gap in cold storage requirement and uneven distribution, the Government of India has announced the setting up of **138 integrated cold chain projects, spread across 23 states**. Currently, 52 projects have been completed, while 56 are under implementation. The Government recently announced **30 additional projects**. Upon completion of all the projects, there will be an addition of *4.76 lakh tonnes of storage capacity, 118 lakh litres per day milk processing capacity, 128.5 MT/hour of Individual Quick Freezing (QF) and 810 reefer vehicles*. It is expected that the development of integrated cold chain projects would also facilitate linkage of cold storage with the farm and the market through ensuring controlled temperature (Reefer vans) transportation. Under this scheme, the central government provides grant-in-aid at 50% of the total cost of Plants & Machinery and Technical Civil Works in general areas and 75% for North-East Region and difficult areas, subject to a maximum of Rs.10 crore.

Setting up a mini Cold Storage – the Swaniti Experience

Baruipur block within South 24 Parganas is very well known for its fruits and vegetable cultivation. Despite being a horticulture belt, the lack of cold storage facilities has prevented the farmers in the region from earning the best returns from their produce. The existing facility in the area is not suitable to store fresh fruits and vegetables. As a result, *wastage of fruits and vegetables is very high*. The current warehousing schemes of the government are not suited for individual farmers or a group of farmers and hence it was desirable to develop alternate models of setting up cold storage facilities in the area.

Based on the problem assessment and consultation with the Honorable MP, it was decided to prepare a project proposal for construction of mini cold rooms within the block. *The project cost of setting up one cold-room (capacity of 15-25 MT) ranges between Rs 6-10 lakhs, depending on the supplier of the unit*. The operation and maintenance will be handed over to the Panchayats, who will be allowed to charge a minimum amount from farmers for storing their products which will be used to cover the operating expenses like power and maintenance for the cold rooms. The initiative is expected to especially benefit small and marginal farmers, since user charges of Rs 23 per kilogram per year are expected to be affordable for all categories of farmers.



100% FDI and Priority Sector Lending Status for the Food Processing Industry

100 per cent Foreign Direct Investment (FDI) is permissible in food processing sector through automatic route except for items reserved for Micro, Small and Medium Enterprises (MSMEs). The Reserve Bank of India recently announced that classified loan to food & agro-based processing units and cold chain would be considered under Agriculture activities, which has also been accorded the Priority Sector Lending (PSL) status. This decision will ensure greater flow of credit to entrepreneurs for setting up of food processing units and attract investment in the sector.

Conclusion

Food processing offers several advantages. **Firstly**, it reduces wastage of food and contributes to food security. **Secondly**, it provides better returns to farmers by seeking to create a supply chain that links farms and farmers to industries and markets. **Thirdly**, it is a labour-intensive industry which can potentially employ several jobless young men and women in India. **Fourthly**, it could boost agricultural exports from India, which currently account for a very small share in the global trade in food products. The need of the hour is to create effective, inclusive and sustainable food processing infrastructure, which can potentially realize these social and economic objectives.