

## Food Processing Industry in India: Challenges and Opportunities

Hattalli A. D., Koli S. C., Jagadale S. G. and Nirmal O. A.

Assistant Professor, Sharadchandraji Pawar College of Food Technology Kharwate- Dahivali, Chiplun,  
Ratnagiri (M. S.)

### SUMMARY

Food processing industry is one of the largest industries in India, ranking fifth in terms of production, growth, consumption, and export. Dairy sector, fruit and vegetables, grain processing, meat and poultry processing, fisheries, consumer foods including packaged foods, beverages and packaged drinking water are important segments of food processing industry in India. Supply side bottlenecks, infrastructure bottlenecks, deficiencies in the regulatory environment, lack of holistic approach are important challenges in Indian food processing industry. In India vast opportunities in food processing sector because of adequate raw material, biggest emerging markets, rapid urbanization, change food habit of Indian people, lack of transportation facility 40 per cent food production is wasted.

### INTRODUCTION

India holds the second largest arable land in the world. With 20 Agri-Climatic regions, all 15 major climates in the world exist in India. The country also possesses 46 of the 60 soil types in the world. India is the largest producer of pulses, milk, tea, cashew and mangoes, buffalo meat; and the second largest producer of tea, wheat, sugarcane and rice. Demand growth for processed food has been rising with growing disposable income, urbanization, a young population and rise in the number of nuclear families. Food processing industry is one of the largest industries in India, ranking fifth in terms of production, growth, consumption, and export. The total value of Indian food processing industry is expected to touch US\$ 194 billion by 2015 from a value of US\$ 121 billion in 2012, according to Mr. Swapan Dutta, Deputy Director General, Indian Council of Agricultural Research (ICAR).

### Segment-wise analysis of Food Processing Industry

#### Dairy Sector

India stands first in the world in terms of milk production. The output is expected to be about 108 million tonnes (estimate for 2007), growing at a compounded annual growth rate of 4 per cent. Consumption of milk has registered a growth of nearly 8.4 per cent (in urban areas) and is currently valued at US\$ 16 billion. The dairy sector ranks first in terms of processed foods with 37 per cent of the produce being processed. The organised sector processes an estimated 15 per cent of the total milk output in India. There are 676 dairy plants registered with Government of India, which come under the organised sector. Milk and milk products contribute to a significant 17 per cent of the country's total expenditure on food. Traditional dairy products account for about 50 per cent of the total milk produced. The market for dairy products is expected to grow at 15-20 per cent over the next three years.

- Ghee is the most widely marketed and branded product with a nation-wide penetration of 24.1 per cent. It is estimated to be growing at a rate of 8 per cent per annum
- The dairy whitener market comprises of sweetened milk powders, condensed milk and creamers. Its market size is estimated at US\$ 450 million for 2005-06
- The cheese market is estimated at US\$ 2.49 million for 2005-06 (54000 tonnes in volume terms), growing at a rate of nearly 10 per cent per annum. The organised cheese market is dominated by processed cheese which accounts for 74 per cent market share
- The ice-cream market in India is estimated at US\$ 226 million in 2005-06, with the organised market at US\$ 158.2 billion This is currently growing at 20 per cent

#### Fruits and Vegetables

India produces the widest range of fruits and vegetables in the world. It is the second largest vegetable and third largest fruit producer accounting for 8.4 per cent of the world's food and vegetable production. The share of organised sector in fruit processing is estimated to be nearly 48 per cent. Fruit production in India registered a growth of 3.9 per cent during the period 2000-05 whereas the fruit processing sector grew several

times faster at 20 per cent over the same period. The total area under fruit cultivation is estimated at 4.18 million hectares. The total area under vegetable cultivation is estimated at 7.59 million hectares. However less than 2 per cent of the total vegetables produced in the country are commercially processed, as compared to nearly 70 per cent in Brazil and 65 per cent in USA. India's installed capacity for fruits and vegetable processing nearly doubled during the 1990s, from 1.1 million tonnes in 1993 to 2.33 million tonnes in 2004. About 20 per cent of processed fruits and vegetables are exported. Major products exported include fruit pulps, pickles, chutneys, canned foods, concentrated pulps and juices and vegetables. Fruit exports have registered a growth of 16 per cent in volume and 25 per cent in value terms in 2005-06. Mango and mango-based products alone constitute 50 per cent of the exports.

### **Grain Processing**

India produced nearly 209.32 million tonnes of grains in 2005-06. India's production covers all major grains – rice, wheat, maize, barley and millets like jowar, bajra and ragi. It ranks third in the production of grains in the world. With a share of 40 per cent, grain processing is the biggest component of food sector. Primary processing constitutes 96 per cent with the remaining accounted for by the secondary and tertiary sectors. Total rice milling capacity in the country is 186 million tonnes. There are about 516 large flour mills in the country, as well as about 10,000 pulse mills.

### **Meat and Poultry Processing**

India has the largest number of livestock population in the world accounting for 50 per cent of buffaloes and 16 per cent of the goat population. Meat production grew at a CAGR of 34 per cent during the period 1999-2004 and stood at US\$ 12.44 million in 2005-06. Meat exports stood at US\$ 0.104 million in 2005-06. Most of the animals in India are not bred for meat. Animals generally used for production of meat are cattle, buffaloes, sheep, pigs and poultry. Only 11 per cent of the buffalo population, 6 per cent of the cattle, 33 per cent of the sheep and 38 per cent of the goat population is culled for meat. Consumption per head of both fresh and processed meat is very low at 1.5 kg compared with world average of 35.5 kg. Indian poultry meat market was approximately US\$ 2.03 billion in 2005. Indian broiler industry has seen a rapid growth in the last few years - CAGR of more than 10 per cent a year since 1998.

### **Fisheries**

India is the third largest fish producer in the world and second in in-land fish production. The Fisheries sector in India has been classified into marine, inland and aquaculture. The fisheries sector contributes 1.1 per cent to the country's GDP. This segment also provides employment to 11 million people engaged fully, partially or in subsidiary activities pertaining to the sector. India's fish production stood at a level of 6.4 million tons in 2004-05. Of this, about 60 per cent (3.9 million tons) came from marine resources. Currently fish processing is mostly targeted for export markets. There are over 369 freezing units with a daily processing capacity of 10,266 tonnes and 499 frozen storage units with a capacity of 134,767 tonnes. Processed fish product exports include conventional block frozen products, individual quick-frozen products and minced fish products like fish sausage, cakes, cutlets, pastes etc. Export of marine fish products touched of US\$ 1.48 billion during 2004-05. Exports showed an increase of 11.97 per cent in volume and 11.1 per cent in value realisation. Frozen shrimp is the largest item in terms of value contributing to 63.5 per cent of the total exports, and frozen fish is the largest in terms of volume contributing to 34.62 per cent.

### **Consumer Foods Including Packaged foods, Beverages and Packaged Drinking Water**

#### **Packaged Foods**

Packaged foods segment in India registered a growth of 8 per cent in 2005-06. Noodles/Vermicelli is the fastest growing category in this segment with a CAGR at 15 per cent. The market for branded noodles is estimated at 230 million servings per year. The Soups market is still small and nascent in India and is approximately US\$ 14 million in value. The market for culinary products is estimated at US\$ 475,000 and estimated to grow at 18 to 20 per cent per annum. Products like Tomato Ketchup and Jams currently have low

penetration levels, but are growing rapidly. Ketchups, for example, have a penetration of just 3 per cent in India; however, this category is estimated to be growing at 20 per cent per annum.

### **Beverages**

The beverages market primarily consists of non-alcoholic beverages which can be broadly classified into carbonated drinks, non-carbonated drinks and hot beverages. This segment is estimated at US\$ 155 million out of which fruit juices and fruit-based drinks account for US\$ 60 million. The market size of organised carbonated drinks is estimated at US\$ 119 million. In the past decade the carbonated drinks market registered a healthy growth rate of 20 per cent, driven by the positive changes in India's consumer profile. Hot beverages include health drinks such as white beverages ('Horlicks' etc) and brown beverages such as tea/coffee as well as branded drinks (Eg: 'Boost'). The total size of this market is estimated at US\$ 333 million by value and 85,000 tonnes by volume. White beverages account for 65 per cent of the market and brown beverages constitute the remaining 35 per cent. India is the largest producer of tea in the world accounting for 28 per cent of the total global production, at 857 million kgs. Tea production in India has been growing at 1.2 per cent per annum and India is the fourth largest exporter of tea in the world with estimated exports of US\$ 5 million in 2002-03. India is also the fifth largest producer of coffee accounting for 4 per cent of the total production in the world. Nearly 75 per cent of India's production is exported and coffee exports stood at US\$ 5.2 million in 2005-06.

### **Challenges of Food Processing industry in India**

Food Processing industry is recognised as the 'sunrise industry', providing vital linkages between the two major sectors, manufacturing and agriculture. The Food Processing industry in India is undergoing a significant transformation. With a turnover of \$110 billion, it accounts for 35 per cent of the Indian food market. Though low levels of processing and market share in the global arena suggest an untapped opportunity to capitalise on India's enormous raw material base and propel exports, they also indicate critical challenges to be trounced to sustain continual growth of the industry.

#### **Supply side bottlenecks:**

Small and dispersed marketable surplus due to fragmented holdings, low farm productivity, high seasonality, perishability and intermediation result in lack of distribution on supply and quality, and in turn, impede processing and exports.

#### **Infrastructure bottlenecks:**

More than 30 per cent of the produce from farm gate is lost due to inadequate cold chain infrastructure (covering only 1 per cent of total F&Vs production) and inadequate logistics. About 80 per cent of the 217 lakh tonnes cold storage capacity is engaged by potatoes while other F&Vs account for only 0.2 per cent. Likewise, instead of using specialised transportation for perishables like reefer vans, their logistics predominantly rely on traditional modes, commonly used for grains. Yet, development of cold chains and logistics infrastructure remains an unviable investment option, on account of, lack of critical scale and high operating costs (twice than in the West). The food processing industry has a high concentration of unorganised segments, representing almost 75 per cent across all product categories. Thus, explaining the inefficiencies in the existing production system, ascribed to the debility of small regional players to invest in technology up gradation and diversify into alternate product categories.

#### **Deficiencies in the regulatory environment:**

Lack of integration & clarity: Numerous laws, under the jurisdiction of different ministries and departments, govern food safety and packaging. The multiplicity of legislation leads to contradictions in specifications, conflicting approach, lack of co-ordination and administrative delays. For instance, manufacturers of packaged food products such as jams and squashes are obligated to comply with quality standards and label declarations prescribed under multiple legislation such as The Standards of Weights &

Measures (Packaged Commodities) Rules, Prevention of Food Adulteration (PFA) and Fruit Products Order (FPO). Correspondingly, FPO allows usage of Class II sweeteners in Fruit Products, whereas PFA does not.

### **Lack of holistic approach:**

Despite conferring numerous incentives for establishing new processing units, proportionate results have not been achieved. This can be credited to the absence of vital peripheral infrastructural linkages and legislation for contract and corporate farming, inadequate implementation of the APMC Act and cumbersome procedures to avail grants. Also, unlike for small scale industries, fewer schemes have been designed to promote scale by incentivising large scale investors.

### **Strengths and Opportunities of India**

The future of the Indian farmer depends on the success of the food industry as India's prosperity is predominantly linked to the growth of incomes in the agrarian sector of the economy. Increasing liberalization of the economy has tried to lift the protection that the food and agriculture sector once enjoyed in the country. This has exposed the sector both to the opportunities and challenges of the global food economy.

- It is the seventh largest country, with extensive administrative structure independent judiciary, a sound financial and infrastructural network and above all a stable and thriving democracy.
- Due to its diverse agro-climatic conditions, it has a wide-ranging and large raw material base suitable of food processing industries. Presently a very small percentage of these are processed into value added products.
- It is one of the biggest emerging markets, with over 1 billion population and a 250 million strong middle class.
- Rapid urbanization, increased literacy and rising per capita income, have all caused rapid growth and changes in demand patterns, leading to tremendous new opportunities for exploiting the large latent market. An average Indian spends about 50 per cent of household expenditure on food items.
- Demand for processed or convenience food is constantly on the rise.
- India's comparatively cheaper workforce can be effectively utilized to setup large low-cost production bases for domestic and export markets.
- Liberalized overall policy regime, with specific incentives for high priority food processing sector, provides a very conducive environment for investments and exports in the sector.
- Very good investment opportunities exist in many areas of food processing industries, the important ones being fruit and vegetable processing, meat, fish and poultry processing, packaged, convenience food and drinks, milk products etc.

### **CONCLUSION**

The sector of food processing industry in India has grown rapidly and that has gained immense importance in modern time. 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. Therefore, 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 need to be taken to remove the bottlenecks hampering the pectoral growth. The Indian food processing industry has remarkable capability to grow, considering the still promising levels of processing currently. Though India's agricultural production base is practically strong, wastage of agricultural produce is large.

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