



A ROAD MAP TO FOOD PROCESSING INDUSTRY --THE THRIVING PINNACLE OF EMINENCE

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Abstract

Food which has a very wide association is any plant or animal material, which is consumed for nutrition and sustenance. The collection, preparation and distribution of food constitute the very foundation of civilization, culture and home. Humanity has always recognized that preservation of food to ensure availability according to need is central to its concerns. Food processing is a multi-faceted endeavour and its further complexity lies in terms of the enabling environment, the status of the production of the basic plant and animal material, the industry and then consumer or the market. Food processing industry is of enormous significance for India's development due to the vital linkages and synergies that promotes the two pillars of our economy, industry and agriculture. Fast growth in the food processing sector and progressive improvement in the value addition chain are also of vital significant for achieving favourable terms of trade for Indian agriculture both in the domestic and international markets. Even more thought provoking is the crucial contribution that an efficient food processing industry could make in the nation's food security. It is in this context that the study attempts to put forth a road map to the food processing industry that have gained approval all over the world due to its constant transformation and functional growth of higher relevance. Food processed is food saved.

Keywords: *Food Processing, Preservation, International Markets, Industry.*

INTRODUCTION

Food processing is the transformation of raw ingredients, by physical or chemical means into food, or of food into other forms. Food processing combines raw food ingredients to produce marketable food products that can be easily prepared and served by the consumer. With the growth of the economy after independence, the farming sector has a changing shift from consumption of cereals to a more varied and nutritious diet of fruit and vegetables, milk, fish, meat and poultry products is also being seen in the food basket of Indian consumer. These changes have brought in their arisen of an emerging industry of Food Processing. India is a global outsourcing hub, with large retailers sourcing from India owing to abundant raw materials, supply and cost advantages. The food processing sector though in the nascent stage constitutes 14% of manufacturing GDP. It employs 130 lakh persons and has the propensity to promote 2.4 times the indirect employment of its direct employment creation. Employment over value added is larger as compared to the manufacturing sector as a whole. Over the last decade or so food processing has grown at a rate of 7.1% per annum. The higher rate of growth as compared to the agriculture growth rate is an indicator of its low base, the increased availability of surpluses, changing life styles, tastes and higher disposable income with consumers. With the advent of the WTO regime and the possibility of lowering of subsidies in the developed countries, our competitive advantages in food production and processing industry shall come to the forefront. However, due to a variety of factors though world trade has moved more and more towards processed commodities, India's export has performed unevenly with regard to such value added products.

OBJECTIVES OF THE STUDY

Now a day, consumption in India is driven towards packaged and ready-to-eat foods. Food processing has the largest employment generation potential which is a key to economic progress and substantial development. In this context the study focussed to have an overview of food processing industry and various benefits offered to members in food chain through food processing. Further constraints in achieving the potential benefits of food processing are also evaluated.

DATA BASE AND METHODOLOGY

The present study focused on Indian food processing industry that plays a pivotal role in the economic development of the country. There is a growing awareness and concern for wellness and health, for high protein,

low-fat, wholegrain, organic food. Data are mainly collected both from primary and secondary sources. Primary data were collected on personal interaction with HR executives who are dealing with food processing industrial activities. The secondary data has been collected from different sources like scholarly articles, annual reports of the food processing industry, newsletters, and various web sites. The methodology will be of descriptive in nature.

FOOD PROCESSING INDUSTRY —AN OVERVIEW

Liberalization and the growth of organized retail have made the Indian market more attractive for global players. With a large agricultural sector, abundant livestock and cost competitiveness, India is fast emerging as a sourcing hub of processed food. Food processing sector is indispensable for overall development of an economy as it provides a vital linkage and synergy between the agriculture and industry. The food processing industry is one of the largest industries in India –it is ranked fifth in production, consumption, export and expected growth. The food industry is on a high as Indians continue to have a fest. The Ministry of Food Processing, Government of India indicates the following segments within the food processing industry:

- Grain processing
- Dairy, fruits and vegetable processing
- Fisheries
- Meat and poultry processing
- Consumer foods including packaged foods, beverages and drinking water.

Food Processing is recognized as a priority sector in the new manufacturing policy of 2011. National Food Processing Policy aims to increase the level of food processing from 10% in 2010 to 25% in 2025. The basic objective of the National Mission on Food Processing is decentralization of the implementation of food processing related schemes for ensuring substantial participation of state and union territory governments. Food processing can provide benefits to all the members in the supply chain starting right from farmer to the final consumer including government. Benefits to the various members in the food chain through food processing are vitiated below:

- Higher farmer incomes and the presence of a larger as well stable market for farmer produce.
- Reduction in wastage of farm produce.
- Providing new business opportunities to the entrepreneurs
- Provision of nutritious, safe food and wider consumer choice.
- Enhancing employment opportunities by way of direct and indirect employment
- Generating foreign exchange for the nation by way of increased exports and reduced imports.

The Government of India has given utmost priority to developing the food processing sector. The Government has taken a number of initiatives. The entire sector has been deregulated and no licence is required except in the case of alcoholic beverages. Automatic approval for foreign investment up to 51 per cent is allowed. Cent percent export-oriented units are permitted to import raw materials and capital goods free of duty. Zero duty import is also permitted, for capital goods. Export earnings are exempted from corporate tax. A number of State Governments have also announced liberal fiscal benefits for the food processing industries.

The Indian food processing industry is one of the largest in the world in terms of production, consumption, export and growth prospects. Earlier, food processing was largely confined to the food preservation, packaging and transportation, which mainly involved salting, curdling, drying, pickling, etc. However, over the years, with emerging new markets and technologies, the sector has widened its scope. It has started producing many new items like ready-to-eat food, beverages, processed and frozen fruit and vegetable products, marine and meat products, etc. It also include establishment of post-harvest infrastructure for processing of various food items like cold storage facilities, food parks, packaging centres, value added centres, irradiation facilities and modernised abattoir.

The liberalisation of the Indian economy and world trade as well as rising consumer prosperity has thrown up new opportunities for diversification in the food processing sector and opened up new avenues for growth. Table 1 highlights the segmentation of different sectors of food processing industry. Demand for processed and

convenience food is increasing constantly because of urbanisation, changing life-style and food habits of the people. Accordingly, the Indian consumers are being offered newer high quality food products made by using the latest state-of-the-art technology.

Table 1: Segmentation of different sectors in food processing industry

Sectors	Products
	Description
Grains and cereals	Flour, bakeries, starch glucose, cornflakes, malted foods, vermicelli, beer, grain based alcohol.
Diary	Ice cream, skimmed milk powder, whole milk powder, condensed milk, ghee and butter, cheese.
Fisheries	Frozen and canned products in mainly in fresh form.
Consumer foods	Biscuits, alcoholic and non-alcoholic beverages, snack food, namkeen, ready to eat food.
Fruits and vegetables	Slices, frozen and dehydrated products, potato chips, juices, pulps, concentrates.
Meat and poultry	Frozen and packed in fresh form, egg powder.

Source: Ministry of food processing Annual Report 2004.

With the size of food production India has, the opportunities are many. While the above listed benefits are possible the results achieved so far are no way near the potential. There are many constraints in achieving the potential benefits. Sub-optimal growth of Food Processing can be attributed to the vicious circle of high unit cost, low demand, low capacity utilization and hence high unit cost. The constraints are both on the demand side as well as supply side.

DEMAND CONSTRAINTS SCENARIO

- Price reliability: In the developed countries processed food and fresh food prices are usually within a reasonable range. Usually processed foods are even cheaper than fresh food. In India, affordability is the key issue. Price differential between fresh and processed food in India is very high relative to the convenience, hygiene and health values of the processed food. Low income Indians are very price sensitive since food accounts for over 50% of the family budget. High prices are due to various factors which include high taxation.
- Customer Awareness: Food habits are quite difficult to change in the short term. A visible change in food habits usually points out much deeper changes at work in the society's lifestyles, attitudes and aspirations. Over the past few years, a number of exciting trends have been pushed into India's food habits. The mindset of the Indian consumer where home-cooked and fresh food is preferred and housewives insist on making everything from snacks to multi-course meals in-house, needs to be changed to seeking convenience and variety using the vast menu of 'ready to cook and eat' foods. The need is to convert the niche segments presently in tier I cities to mass markets.
- Export markets: The issues in exports are cost competitiveness, quality conforming to international standards, continuous product innovation, brand and market building on global scale, ability to deal in volumes and consistency in supply. These require global scale of operations and deep pockets which Indian companies presently lack. Moreover, exports are inextricably linked to the local production system, and cannot be sustained without systematic and qualitative expansion of the domestic industry and market. Further, domestic support and export subsidies provided in developed countries have also retarded Indian exports.

SUPPLY CONSTRAINTS SCENARIO

I. Related to Production

- a. **Inclusion of varieties:** Fostering relationships between processors and farmers strengthens and increases varietal relevance and productivity. Agriculture often suffers from varietal constraints. The solution lies in research and development of varieties suitable for processing by agricultural universities. Further, research is needed in development of technologies or processes where the existing varieties can be processed.
- b. **Quality product:** High quality product can be produced and strengthens only at farm level. Indian agriculture system have the basis of high cost and low quality of farm produce because of low technology, risk aversion, inferior agri-inputs, uncertain market, inappropriate variety, and inefficient farm management. Further the world market is demanding for high quality traceable products which need information linkages right farm level.
- c. **Machinery Outlet:** It is generally accepted phenomenon that the traditional extension machinery has not been able to deliver on varied demands and requirements of farmers. There has been a failure in connecting the lab with the land and product with the plate. To overcome some states have fostered public-private relationships. Others have partnered with company led initiatives and the encouragement of contract farming; however the results are of positive.

II. Related to Post harvest and Supply Chain

- a. **Post-harvest outlook:** The losses in post-harvest handling are of both qualitative and quantitative in nature. Post-harvest losses are primarily due to lack of infrastructure. In order to boost up the sector, apart from development of infrastructure, post-harvest handling, cleaning, grading, packaging and storage protocols need to be developed and promoted in a big way by the government.
- b. **Supply chain cycle:** Indian food supply chain process is very long and fragmented chain, that there is mismatch between demand and supply, unacceptable wastage, avoidable cost addition, limited choice to the consumers, poor hygiene, and opportunistic profiteering. At certain times the number of intermediaries can be as high as 6 to 7 which is a thought provoking constraint.
- c. **Chain of marketing and distribution:** Marketing and distribution is largely unorganised and fragmented. Nearly 5 million outlets are engaged in the retailing of food. Retail outlets have the advantage of proximity to consumers but are associated with low product quality, lack of variety and low hygiene and cannot provide shopping experience. Fragmented retail structure also leads to inefficient storage, transportation and distribution, wastages and value loss. Organized retailing thereby reduces the number of intermediaries and transaction costs thus making products and services cheaper for consumer and also to test market their products effectively.

III Related to Infrastructure

- a. **Post-harvest Infrastructure:** Acute necessity is most felt for Post-harvest infrastructure for perishable products. Deficiencies exist for grading and packing besides pre-cooling at farm site which could feed a cold chain. Fish processing industry more specifically for exports requires a major step up in infrastructure availability.
- b. **Processing related Infrastructure:** Food Processing which is characterized by a high degree of fragmentation and low capacity utilization is concerned with the largest issue with the processing sector is the lack of scale in most units, which in turn is linked to absence of backward and forward linkages. Most processing units are of single-product facilities. Knowledge of alternate usage of processing facilities and the market potential for the products will facilitate processors to utilize their assets more effectively.

NATIONAL MISSION ON FOOD PROCESSING

The NMFP outlay for 2012-17 have focussed the below schemes to be implemented by State Governments as a key of progress.

- Setting up/ modernisation/ expansion of abattoirs
- Scheme for cold chain, value addition and preservation infrastructure for non-horticulture products
- Scheme for technology up gradation/ establishment/ modernisation of food processing industries.
- Scheme for promotional activities
- Modernisation of meat shops
- Old Food Parks.

CHALLENGES AND OPPORTUNITIES

Indian food processing industry has undergone significant growth and changes over the past few decades due to changing trends in markets, consumer segments and regulations. The trends of growing population, rapid urbanization and changing demographics are expected to continue in future and boost up food processing industry. India is having strong comparative advantages over the other nations due to vast pool of natural resources and growing technical knowledge. The food processing sector is clearly an attractive sector for investment and offers significant growth potential to investors.

The most vital challenge today that Indian food processing industry is facing is the lack of suitable infrastructure. Improvement in general infrastructure is a must for the industry to progress. Some of the crucial initiatives needed to boost up the sector are:

- Development of cooperative dairy farms
- Provision of insurance package to avoid distress
- Encouraging private veterinary clinic
- Enhancing livestock extension services
- Promotion of rural backyard poultry in a cooperative marketing setup
- Promotion of appropriate crossbreeds while conserving indigenous breeds of livestock

FOOD PROCESSING INDUSTRY EMINENCE IN INDIAN SCENARIO

India is having extensive administrative structure and independent judiciary highlights a stable and thriving democracy. Due to its diverse agro-climatic conditions, it is having a wide range of raw material base suitable for food processing industries. At present only a small percentage of value added products prevails and is one of the biggest emerging markets. Demand for processed food constantly rises due to rapid urbanization, increased literacy and rising per capita income leading to tremendous new opportunities for exploiting the large latent market. India's comparatively cheaper workforce can be effectively utilized to setup large low cost production basis for domestic and export markets. Very good investment opportunities exist in many areas of food processing industries viz, convenience food and drinks, fish and poultry processing, fruit and vegetable processing, milk products and the like. Liberalised overall policy regime, with specific incentives for high priority food processing sector provides a very conducive environment for investments and exports in the sector.

CONCLUSION

The term 'food processing' is a process of value addition to the agricultural or horticultural produce by various methods like grading, sorting and packaging. It is a technique of manufacturing and preserving food substances in an effective manner with a view to enhance their shelf life; improve quality as well as make them functionally more flexible. It covers spectrum of products from sub-sectors comprising plantation, agriculture, animal husbandry, horticulture and fisheries. These efforts have boost up competitive edge to the food processing industry on a global platform. More people are consuming value-added and processed food products. The industry possess high export opportunities and its growth seeks to bring immense benefits to the economy by raising agricultural yields, enhancing productivity, creating employment and raising life-standards of a large number of people across the country. Thus, the outcome is innumerable business opportunities in the diverse



areas of food processing. Still, the food processing sector remains largely untapped because of high packing costs, cultural preference of the people for fresh food, seasonality's of raw materials, lack of adequate infrastructural facilities and quality control mechanism. By providing greater incentives as well as creating conducive environment for more investments and exports, potentialities of food processing industries can be fully attainable.

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