MESSAGE

I am happy to know that ASSOCHAM is organising 10th International Food Processing Summit & Awards – Food Retail – Investment – Infrastructure, 2017 on 22-23 February, 2017. I appreciate ASSOCHAM for taking this initiative and deliberating on ways to boost food processing sector in India especially investment in it.

Food processing industry is of enormous significance for India’s development because of the vital linkages and synergies that it promotes between the two pillars of our economy, industry and agriculture. A growing food processing sector and progressive improvement in the value chain are also of great importance for creating favourable trade environment for Indian agriculture both in domestic and international markets. Even more important is the crucial contribution than an efficient food processing industry can make in the nation’s food security.

Government of India has given utmost priority in developing the food processing sector and a number of initiatives have been taken to promote this sector and encourage investment in food processing. This sunrise sector can significantly reduce wastage, generate employment, offer remunerative prices to farmers and help in reducing food inflation.

The present summit proposes to deliberate on issues pertaining to investment, technology and safety in food processing sector in India, which are thrust areas of this Government.

I am sure that the deliberations and suggestions made in this summit will help in promoting investments and encourage usage of latest technology in food processing sector in India.

I wish ASSOCHAM all the success for this summit.

(HARSIMRAT KAUR BADAL)

Place: New Delhi

Dated: 08-02-2017
MESSAGE

I am pleased to know that ASSOCHAM is organising 16th International Food Processing Summit & Awards – Food Retail – Investment – Infrastructure, 2017 on 22-23 February, 2017 in New Delhi.

The Summit with the aim to promote investments in Food processing Sector, Showcasing and promoting latest technology, opportunities, discuss food safety issues and also to promote business potentials in this sector. It will also provide a platform for national and international stakeholders, representatives from union and state governments, investors, policy makers, industry leaders, trade bodies & associations food technologists, food safety experts to share their knowledge in this area. The unique recipe of the summit is to organize B2B and B2G meetings on request, to facilitate dialogue for business/investment in food processing sector.

The present summit has proposed to deliberate on issues pertaining to investment, technology and safety in food processing sector in India, which are thrust areas of this Government.

The Indian food industry is currently valued at US$39.71 billion and is expected to grow at a CAGR of 11 per cent to US$65.4 billion by 2018. Recognising the potential for growth in food processing sector, the Government of India has taken a number of initiatives to promote this sector, including allowing 100 per cent Foreign Direct Investment (FDI) in food processing sector on automatic route and 100 per cent FDI under Government approval route for trading, including through e-commerce, in respect of food products manufactured and / or produced in India for attracting maximum investment in the food processing sector. As a result there is splurge for investment in food processing sector. In today’s era, the application of modern technologies in food and agro food industry is absolutely essential to meet the challenges of globalization and growth in food processing sector cannot be achieved without the use of science & technology. This sunrise sector can significantly reduce wastage, generate employment, offer remunerative prices to farmers and help in reducing food inflation.

I am sure that the deliberations and suggestions made in this summit will help in promoting investments and encourage usage of latest technology in food processing sector in India.

I wish this summit a great success.

(Sadhvi Niranjan Jyoti)
It gives me immense pleasure to note that ASSOCHAM is organising its “10th International Food Processing Summit and Awards – Food Retail, Investment, Infrastructure, 2017” on 22 February 2017, at New Delhi.

The food processing industry in India is a sunrise sector that has gained prominence in recent years. Availability of raw materials, changing lifestyles and relaxation in policies have given a considerable push to the industry’s growth. This sector is among the few that serves as a vital link between the agriculture and industrial segments of the economy. Strengthening this link is of critical importance to improve the value of agricultural produce; ensure remunerative prices to farmers and at the same time create favourable demand for Indian agricultural products in the world market. A thrust to the food processing sector implies significant development of the agriculture sector and ensures value addition to it.

I am hopeful that the deliberations and suggestions made in this conference will benefit all stakeholders, wherein minds of industry experts, policy makers and academicians from India and around the world will brainstorm to make India the food bowl of the world and push for ‘MAKE IN INDIA’ initiative of the Government of India.

ASSOCHAM extends its earnest gratitude to the Ministry of Food Processing Industries, Government of India for their support in making this programme a grand success.

I extend my heartfelt thanks to Grant Thornton in India for bringing out a very informative study. This extensively researched publication will highlight the challenges in developing food processing sector and way forward to create a unified agriculture market.

This Conference would not be the same without due support from our corporate partners. Lastly, I also appreciate the efforts put in by Dr Om S Tyagi, Senior Director, ASSOCHAM along with Mr Chetan Vij and Mr Nitesh Sinha for organising this Conference.

I not only wish the Conference a great success but also assume that ASSOCHAM shall continue to organise such programmes for larger public benefit with great degree of excellence.
Indian food processing industry that is pegged over US$ 121 bn presents an opportunity for growth. However, there is a need for policy intervention and field level changes. Such a perspective alone will help India develop global competitiveness in many related sub-sectors and ensure that different sub-sectoral value chains are firmly entrenched in global value chains.

While there is an opportunity for growth, there is a need to focus on product conformity with global standards and quality, logistics traceability and safety, quality of packaging and delivery.

The present report is emphasising on deeper diagnostics and interventions to reduce post-harvest, processing and distribution losses of farm products in the country.

Further, the industry is witnessing significant reforms by the Government of India and several State governments with 100 per cent FDI under government approval route for trading, including through e-commerce, in respect of food products manufactured or produced in India; enhanced investment in the food processing sector; proactive steps simplifying ‘ease of doing business’, delisting of horticulture crops and insurance schemes to support the vulnerable farmers and farm products. These will make the sector more competitive and market oriented.

The paper summarizes global and national scenario, also reflects on the evolving promising ecosystem, which should be benefiting all key stakeholders and facilitating farmers in doubling their income. The later remains the central aim of the Government of India.

Such a strategy has already been implemented in certain parts of the country and has given desired results. This has benefited the agglomerations and the stakeholders.

This report seeks to identify how the Government can support such organic and natural agglomerations of units with a judicious mix of policy and field-level interventions. Such interventions may range from public-private partnership based implementation of common facilities and technical infrastructure, evolving a strong governance structures and industry associations, facilitation of credit, and development of technology to bring quality and conformance amongst others.
Introduction

Food processing industry is of enormous significance for India’s development because of the vital linkages and synergies it promotes between the two pillars of our economy, industry and agriculture. Fast growth in the food processing sector and simultaneous improvement in the development of value chain are also of great importance to achieve favourable terms of trade for Indian agriculture both in the domestic and the international markets. The sector however, has to go a long way. Even important is the crucial contribution that an efficient food processing industry could make in the nation’s food security for instance the post-harvest losses of selected fruits and vegetables are about 25 to 30 percent in our country. Even marginal reductions in these losses are bound to give us better returns and thereby improve the income level of the farmers.

During the last one decade, India moved from a position of scarcity to surplus in food. Given the trade in production of food commodities, the food processing industry in India is on an assured track of growth and profitability. It is expected to attract phenomenal investment in capital, human, technological and financial areas. The total food production of India is estimated to double in the next 10 years. Hence, there is an opportunity for large investments in food and food processing technologies, skill development and equipment. The major interventions in this context are, for example, canning, dairy and food processing, specialty processing, packaging, frozen food/refrigeration and thermo processing. Fruits and vegetables, fisheries, milk and milk products, meat and poultry, packaged/convenience foods, alcoholic beverages and soft drinks and grains. Health food and health food supplements are other rapidly rising segments of this industry.

With a number of fiscal relief and incentives, to encourage commercialisation and value addition, Government of India has accorded ‘high priority’ status to the food processing industry. Food processing is recognised as the priority sector in the National Manufacturing Policy (2011). 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. With an overall objective of positioning India as the ‘Food Basket’ to the world, several initiatives have been undertaken with the objective of promoting investments, innovation and bringing best practices. This vision is in line with the ‘Make in India’ initiative of the Government.

India, as a large producer and consumer of food is likely to have an overwhelming impact on world demand and supply of food products in the future, according to the estimates provided by the Food and Agriculture Organisation (FAO) in 2012. With its vast production base, India has the potential to become one of the largest food suppliers to the world and at the same time serve its own vast population (MOFPI 2014).

Registering a growth of around 20 percent per annum, the total value of the Indian food processing industry is expected to touch US$ 194 bn in 2015 from the earlier value of US$ 121 bn in 2012.

Food and grocery constitute a substantial part of India’s consumption basket accounting for around 31 percent share in the total. In contrast, consumers in other countries spend a much lower proportion of their income on food and grocery—9 percent in the United States (US), 17 percent in Brazil and 25 percent in China. Food and grocery is the largest segment in India’s retail sector, with a share of more than 60 percent in India’s total retail market in 2014.
While there are tremendous opportunities on the demand side, India also has a strong supply base for the food and grocery industry. India is the world’s second largest producer of food after China. The arable land area of 159.7 mn hectares (394.6 mn acres) is the second largest in the world (after the US). India has a strong raw material base for the food processing industry. India is one of the largest producers of certain fruits, vegetables, pulses, cereals and dairy products such as mangoes, papaya, potatoes, onions, ginger, check peas, rice, wheat, groundnuts, milk and eggs among others. Over time, there has been a continuous increase in the production of food processing industry. The total value addition of the food processing sector as a share of GDP manufacturing was 9.8 percent in 2012-13.

Yet in India the sector suffers from several bottlenecks leading to an estimated wastage of 25-30 percent of agriculture produce according to the study by Chari and Raghavan in 2012. India lacks agricultural raw materials of processable quality (Mukherjee et al., 2013). Only 7 percent of the total Indian perishable produce is processed, which is extremely low compared to countries such as the US (65 percent), Philippines (78 percent) and China (23 percent).

Realising the need for improving capacity of the food processing industry, the government has taken several initiatives to fillip the growth of the sector. In 2005, the MOFPI released a vision document, =Vision 2015’ that set out targets for the sector. It set targets for enhancing the level of processing of perishable, value addition by the sector and increase India’s share in global food trade by 2015. To achieve these targets, the Government earmarked certain investments that were to be disbursed through specific schemes. One of the schemes enacted by the MOFPI is the Scheme of Mega Food Park, which is based on the ‘cluster’ approach for developing food processing industries.¹

¹ Source: ICRIER report on impact of MFPS
The Indian packaged processed foods industry is estimated at US$ 10.87 bn – US$ 13.05 bn, including biscuits, chocolates, ice-cream, confectionery, snacks, cheese and butter.

The industry is growing at a healthy 14-15 percent over the past two-three years.

The industry received foreign direct investment (FDI) totalling US$ 143.80 mn in 2008-09 against US$ 5.70 mn in 2006-07.²

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2. Source: Report on Indian Packaged Food Industry
   Published by: Big Strategic Management Consultant
The Indian food processing industry is pegged close to US$ 121 bn to US$ 130 bn. With the second largest arable land in the world, India is the largest producer of milk, pulses, sugarcane and tea in the world and the second largest producer of wheat, rice, fruits and vegetables. Indian agriculture being the primary supporter caters to around 60 percent of the population for their livelihood and contributes to 17 percent of GDP. Despite the massive production, the degree of processing is low and ranges between 2 to 35 percent for different produce.

India is one of the top rankers in the production of bananas, guavas, ginger, papaya etc., although processing levels in the country remain limited. This indicates an extensive opportunity in the food processing sector.

Key agricultural and related commodities where India is ranked 1 (Value in MT)

Key agricultural and related commodities where India is ranked 2 (Value in MT)

By FY 2020
Indian food and retail market is projected to touch US$ 482 bn

By FY 2013-14
India’s export of processed food and related products increased to US$ 37.9 bn

By FY 2022
Food processing sector has the potential of attracting US$ 33 bn of investment in coming years and generate employment of 9 mn persons days
Chapter 2: Advantage India

India’s food processing industry:
2015: US$ 258 bn
2020: US$ 482 bn

**Strong demand growth**
- Demand for food processed food rising with growing disposable income, urbanisation, young population and nuclear families
- Household consumption set to double by 2020
- Changing lifestyle and increasing expenditure on health and nutritional foods

**Increasing investment**
- Govt. expects US$ 21.9 bn of investment in food processing infrastructure by 2015
- Investment including FDI would rise with strengthening demand and supply fundamentals
- Launch of infrastructure development schemes to increase investment in food processing infrastructure

**Food processing hub**
- Indian benefits from large agriculture sector, abundant livestock and cost competitiveness
- Investment opportunities arise in agriculture, food infrastructure and contract farming
- Diverse agro-climatic conditions encourage cultivation of different crops

**Policy support**
- Sops to private sector participation; 100% FDI under automatic route. Investment in April 2000- March 2016 stood at US$ 6.82 bn
- Promoting rationalisation to tariff and duties relating to food processing sector.
- Setting up of National Mission on Food Processing
- Foreign Trade Policy 2015-2020

Source: IBEF Website
• The food industry, which is currently valued at US$ 39.71 bn is expected to grow at a CAGR of 11 percent to US$ 65.4 bn by 2018.

• In FY 2015, food processing industry constituted 14 percent to India’s GDCP through manufacturing.
Value chain in food processing sector and key players

**Key Activities**
- **Inputs**: Seed, Fertilizers and Farm Equipment's
- **Production**: Farmers, cooperatives and private companies
- **Procurement and storage**: Warehouse, cold Storage and silos
- **Processing**: Grading, sorting, milking and packing
- **Retailing**: Retail shops, malls, cash and carry

**Major Players**
- **Inputs**: National Seed Corporation Limited, Cargill and Advantage India Ltd
- **Production**: Farmers, Amul, ITC, Pepsi, Hindustan Unilever Ltd
- **Procurement and storage**: Food Corporation of India, NCMSL, Arshiya International
- **Processing**: ITC Ltd, Cargill, Adani enterprises, Olam International
- **Retailing**: General Merchant Stores, Bharati Walmart, Future Retail, Aditya Birla Retail Ltd.

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Source: Ministry of Food Processing Industries (MOFPI), TechSci Research
Note: (1) – Till December 2015, As per latest data available

**Figure**: Contribution of food processing industry to India's GDP through manufacturing (FY18(1))

90% Other

14% Food processing
Chapter 3: Employment and skill development

Large presence of the unorganised sector

- The unorganised sector accounts for 42 percent of India’s food processing industry
- The sizeable presence of small-scale industries points to the sector’s role in employment generation
- Though the market falls under the unorganised sector in the country, the organised sector has a larger share in the secondary processing segment than the primary one
- Rice mills account for the largest share of processing units in the organised sector
- In FY15, the organised sector is estimated to account for 30 percent of India’s food processing industry

Food processing is a key contributor to employment generation in India

- Policymakers have identified food processing as a key sector in encouraging labour movement from agriculture to manufacturing
- By 2024, food processing sector is expected to employ 9 mn people in India
- This project is expected to generate 8,000 direct and 80,000 indirect jobs in the state

Source: IBEF Website
The below mentioned graph indicates the incremental human resource requirement of trained people through short-term/modular training initiatives in the food processing industry.

**Employment in Food Processing Units**

The graph shows the employment in different food processing units, categorized as follows:
- Fruits and Vegetables products
- Prepared Animal Feeds
- Fish, crustaceans etc.
- Meat Processing & Preserving

Source: MOFPI Annual Report 2014-15 and GT Analysis

**Annual Demand of Human Resource in 000s**

The chart illustrates the annual demand of trained human resources in the food processing sector, categorized into different sectors:
- Fish Processing
- Aerated water/soft...
- Fruit and Vegetable...
- Food Grains Milling
- Alcoholic Beverages
- Aerated Water/Soft...
- Biscuit and Bakery
- Total

Source: National Skill Development Council (2010) Human resource and skill requirements in the food processing sector: study on mapping of human resource skill gaps in India till 2022. New Delhi, India and GT Analysis
Chapter 4: Notable trends in the Indian food processing sector

Notable trends in the Indian food processing sector

| Changing consumer tastes | • Wide array of products, coupled with increasing global connectivity, has led to a change in the tastes and preference of domestic consumers  
| • This trend has been bolstered by rising incomes, increasing urbanisation, a young population, and the emergence of nuclear families. Consumer preference is moving towards healthier snacks |
| Entry of international companies | • Liberalisation and growth of organised retail have made the Indian market more attractive for global players  
| • With a large agriculture sector, abundant livestock, and cost competitiveness, India is fast emerging as a sourcing hub of processed food. Danone, Nestle, Kraft Foods, Mondelez International, Heinz are the international players in food processing market in India |
| Rising demand on Indian product in international market | • Strategic geographic location and continuous increase in raw material production help India to supply cheaper products to other countries  
| • India's exports of processed food and related items rose at a CAGR of 21.5 percent during FY11–16(1), accounting for US$19,337.4 mn in FY16(1)  
| • Companies like Haldiram's and Bikamervala have a presence in over 70 countries,  
| • Whereby they provide Indian snacks |
| Higher consumption of horticulture crop | • There is a surge in demand for fruits & vegetables as a result of a shift in consumption.  
| • Accordingly, Indian farmers are also shifting production towards horticulture crops to cash in on the growing demand. |
| Emphasis on healthier ingredient | • Food processing companies are serving health and wellness as a new ingredient in processed food, given that health conscious consumers prefer food products with lower carbohydrate content and with low cholesterol edible oils, e.g. zero-percent trans fat snacks and biscuits, slim milk, whole wheat products, etc. ITC is planning to launch multi-grain Bingo to increase its share in healthy snacks market |
| Packaging as purchase influencer and communicator | • Food packaging has enabled today's consumers to look for various options, and compare the value offerings thereof, before making a purchase.  
| • Packaging has also helped enhance 'carry ability' of products and increase their shelf life. |
| A shift from usefulness in processing to usefulness to consumer | • Product innovation is always needed as consumers not only prefer safe ingredients and additives but also useful ones  
| • This creates opportunities mainly in product innovation, specialised products, and product extensions for the various existing food processors as well as new entrants  
| • Consumers have become aggressive in demanding better, safer, and convenient food products and are willing to pay a higher price for health and convenience. |

Source: IBEF Website
### Frozen and processed goodness
- Frozen processed foods offer both convenience and nutrition.
- The increase in spending capacities and the concurrent time-paucity has led to the continuous development of such frozen processed food products as frozen vegetables (e.g., peas, potato, corn, etc.) and such non-vegetarian products as chicken, fish, and meat products. Food processing market accounts for 32 percent of the total food market in India.

### Sensible snacking
- Domestic consumers are now tuned in to the greater variety of foods available, thanks to both wider variety in offerings as well as their own international exposure. ITC and PepsiCo are shifting their focus on healthier snacks as the market for healthy snacks is growing with double speed.

### Product innovation as the key to expansion
- It is now the norm for food processing companies to offer value-addition; those who hitherto offered solely milk have now added other dairy products to their repertoire.
- This helps the processors to not only reduce wastage, but also expand uses and realise higher returns. In 2015, Bonhokia has announced to launch 'Boho' coffee machines, the company is the first one to manufacture coffee and tea capsule in India.
- In FY16, Ministry of Food Processing Industries has granted fund of US$ 18.81 mn for the ongoing Mega Food Park projects. As on September 2016, a Mega Food Park has been setup by the government in Ludhiana.

### Strengthening procurement via direct farmer-firm linkages
- Contract farming has been operational in India for a long time now; however, the experience of the private sector players involved therein has been a mixed bag of successes and failures.
- Largely, it has helped both the processing companies, via increasing sales and therefore augmenting their incomes, as well as providing access to better technology and fetching better prices by securing an assured market for Indian farmers. Examples include Nestlé, PepsiCo, Venky's, Milkfed, and Mahagrapes, among others.

Source: IBEF Website
Chapter 5: Export scenario in food processing sector

Export scenario in food processing sector
With globalisation and increasing trade across the borders approximately about 460 mn tons of food valued at US$ 3 bn is traded annually. India has thus, a great potential for global trade in agricultural and processed food products. The share of food processing exports in total exports was around 12 percent in the last few years. During FY 2011-15, India’s exports of processed food related products have been growing at a CAGR of 23.3 percent.

Export of processed Food & Related Commodities (US$ Million)

Source: MoFPI Annual Report 2014-15

Export of key processed products (US$ millions, FY 2014)

Source: APEDA, Agri Exchange
As observed from the graph above, the highest growth is expected in the case of egg and meat sector while lowest is being observed in the case of wheat. The key reason for the same seems to be the increasing per capita income and a shift towards high protein products from the earlier carbohydrates and fats.
Agri export zones in India

**Jammu & Kashmir:** Apples, Walnuts

**Himachal Pradesh:** Apples

**Punjab:** Basmati Rice, Vegetables, Potatoes

**Rajasthan:** Coriander, Cumin

**Gujarat:** Mangos, Vegetables, Sesame seeds, Onions

**Maharashtra:** Grape, Grape wine, Mangos, Flowers, Kesar mango, Onion, Banana, Orange, Pomegranate

**Karnataka:** Gherkins, Rose onion, Flowers, Vanilla

**Madhya Pradesh:** Onion, Garlic, Seed Spices, Lentils, Wheat, Orange, Grams, Potatoes

**Kerala:** Horticulture products, Medicinal Plants

**Uttarakhand:** Basmati rice, Aromatic and medicinal plants, Flowers, Lychee

**Uttam Pradesh:** Basmati rice, Mangos, Potatoes, Vegetables

**Sikkim:** Flowers (Orchids), Cherry Pepper, Ginger

**Assam:** Ginger

**Jharkhand:** Vegetables

**West Bengal:** Pineapple, Lychee, Darjeeling Tea, Vegetable, Mangos, Potatoes

**Orissa:** Ginger and Turmeric

**Andhra Pradesh:** Vegetables, Mango Pulp, Grapes, Gherkins, Ghilli, Mangos

**Tamil Nadu:** Flowers, Mangos, Cashew nuts, Cut flowers

Source: IBEF Website
Chapter 6: Government initiatives and policy support

The Government of India has focussed on various policy initiatives in the sector which provides initiatives for capital grant, duty free export and tax incentives. Some of the major schemes which are being run by MoFPI are Mega Food Parks Scheme, Integrated Cold Chain and Modernisation of Abattoirs scheme. It may be noted that fund allocation to MoFPI in 10 plan was US$ 37.5 mn that has been revised to US$ 1088.5 mn in the 12th plan.

The initiatives of the MoFPI have augmented the development of food processing infrastructure in the country. Growth has been identified in this sector, with reduction in losses for farm produce, higher value addition, increasing exports, employment generation and increase in farmers’ income.

Various tax incentives and government policy initiatives for the sector are presented below:

<table>
<thead>
<tr>
<th>Tax incentives</th>
<th>Policy support</th>
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<tbody>
<tr>
<td>• Entities in infrastructure development for food processing unit are given a tax deduction of 100 percent for the first 5 years &amp; 30 percent for the next 5 years for the calculation of taxable income</td>
<td>• Encouragement to private sector – 100 percent export-oriented units are allowed to sell up to 50 percent of their produce in the domestic market. Export earnings are exempted from corporate taxes</td>
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<tr>
<td>• Customs duty on all imported capital goods, raw materials and other inputs is exempted, in addition to excise duty and sales tax on domestic inputs, for all export oriented units</td>
<td>• 100 percent FDI under automatic route (except for alcohol, beer, and sectors reserved for small scale industries). Repatriation of capital and profits permitted</td>
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<tr>
<td>• There is a provision for duty-free import replenishment of inputs, subject to basic input-output norms for approximately 600 export categories</td>
<td>• Focus on infrastructure - Assigned priority sector for bank credit. 60 Agri Export Zones (AEZ) have been set up across the country. 42 mega food-parks have been approved along with 128 cold chain</td>
</tr>
<tr>
<td>• Import duty scrapped on capital goods and raw materials for 100 percent export-oriented units. 100 percent tax exemption for 5 years followed by 25 percent in subsequent years</td>
<td>• Incentives for development of storage facilities - Investment-linked tax incentive of 100 percent deduction of capital expenditure for setting up and operating cold chain facilities (for specified products), and for setting up and operating warehousing facilities (for storage of agricultural produce)</td>
</tr>
<tr>
<td>• Tax exemption for the next 5 years for new agro-processing industries. Full excise duty exemption for goods that are used in installation of cold storage facilities</td>
<td>• A corpus of US$ 0.303 bn during 2014-15 and onwards for providing direct term loans to establish infrastructure in the Mega Food Parks</td>
</tr>
<tr>
<td>• Incentives for development of storage facilities - Investment-linked tax incentive of 100 percent deduction of capital expenditure for setting up and operating cold chain facilities (for specified products), and for setting up and operating warehousing facilities (for storage of agricultural produce)</td>
<td>• Food Safety and Standards Act 2006 Convergence of different food safety laws under one act that is FSSA</td>
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In the recent RBI guidelines, food processing infrastructure has been considered under the priority RBI sector lending. Cheap credit will support the food processing industries to compete globally and augment the growth rate in food processing sector. The MoFPI has incorporated policy initiatives to set up food processing infrastructure through Mega Food Parks and cold chains. These initiatives are expected to bring in significant investments in the food processing sector.

The policy support through food parks does not encourage the growth of natural organic agglomerations of food processing units. It only supports Greenfield projects. Further, the model is developer based and doesn’t encourage users to come in the food park. This infrastructure doesn’t commensurate with demand-supply requirement.

Policy initiatives which supports user based model and assist in expansion of natural organic agglomeration of food processing units shall be encouraged.
The key challenges identified overall for the food processing sector are as follows:

**Infrastructure**
- Lack of cold chain infrastructure
- Lack of government certified labs
- Lack of mechanised handling and loading

**Innovation**
- Technology transfer from research lab to the industry
- Demand based innovations
- Encouragement to the Innovation through GoI Schemes

**Skill**
- Inadequate skill sets at different levels in food processing industry (especially at operator and procurement levels)
- Lack of training infrastructure
- Lack of specialised training programmes

**Branding**
- Lack of awareness as well as links with apt BDS providers
- Platform to brand the produce globally like “Darjeeling Tea”
- Inefficient and unreliable marketing networks

**Access to credit**
- A capital intensive sector and requires cheap credit
- Access of dedicated Venture Capital Fund
- Access of working capital at low Interest Rate
## Sector wise key challenges

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<tr>
<th>Sector</th>
<th>Challenges</th>
<th>Interventions</th>
<th>Stakeholders</th>
</tr>
</thead>
</table>
| Dairy  | • Low milk productivity from cattle  
• High fodder prices  
• Establishment of constant quality of milk during procurement  
• Lack of cold chain infrastructure | • New high yielding varieties  
• Development of cold chain infrastructure  
• Training farmers for maintaining the constant quality of produce  
• Development of model farm | MoFPI  
• Farmer producer organisation  
• Animal Husbandry departments  
• Research and Training Institutions |
| Fruits & vegetables | • Highly perishable produce  
• Processing units are primarily SME and MSME in nature  
• Low value addition  
• Varying procurement price for the produce | • Assistance for setting up of processing and storage infrastructure  
• Linkages of farmers through collection centres/KVKs  
• Encouragement to entrepreneurs for high value addition | Ministry of Agriculture  
• Industries  
• MoFPI  
• Research institutions and training centres  
• Agricultural universities |
| Food grains | • Limited storage capacity  
• Efficient procurement and movement for PDS  
• Medium value addition  
• Traditional cultivation technologies | • Encouragement of high value addition  
• Training to FPOs  
• Increase in capacity of silos and warehouse | Ministry of Agriculture  
MoFPI  
Food Corporation of India  
State governments  
Training of institutions and agricultural universities  
Industries |
| Meat & poultry | • Highly perishable processed produce  
• Licenses and clearances from different departments  
• Religious sentiments  
• Inadequate access to common facilities  
• Limited understanding of international laws for exports | • PPP based abattoirs to encourage processing and value addition  
• Assistance from GOI for setting up of common facilities like labs  
• Setting up of cold chain infrastructure  
• Training programmes to handle the cattle, birds and understanding of international food laws | MoFPI  
Department of Animal Husbandry  
State Governments  
Municipal corporations  
Research and development institutions and universities  
Industries |
Chapter 7: Growth drivers

Strong fundamentals and policy support aiding growth

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<th>Strong domestic demand</th>
<th>Rising export opportunities</th>
<th>Supply-side Advantages</th>
<th>Policy support</th>
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<tbody>
<tr>
<td>• Rising disposable income</td>
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<td>• Growing middle class, urbanisation, a young population</td>
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<td>• Changing lifestyle and food habits</td>
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<tr>
<td>• India’s Greater Integration with the global economy</td>
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<tr>
<td>• Increasing export with advantage of proximity to key export destination</td>
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<tr>
<td>• Expected spike in global demand as emerging markets grow at fast pace</td>
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<tr>
<td>• Favourable climate for agriculture; wide variety of crops</td>
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<td>• Large livestock base aids dairy and meat processing sector</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Inland water bodies, long coastline help marine products</td>
<td></td>
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<tr>
<td>• Vision 2015 plan targets trebling of food processing sector</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Mega food parks, Agri Export Zones to attract FDI and aid infrastructure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Approval of National Mission on Food Processing</td>
<td></td>
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</tr>
</tbody>
</table>

Foreign investment

• Between April 2000 and September 2016, FDI in food processing industry agriculture machinery and in India stood at US$ 7.316 bn and US$ 0.440 bn, respectively
• Demand growth, supply advantages, and policy support have been instrumental in attracting FDI
• The government’s main focus is on supply-chain related infrastructure, such as cold storage, abattoirs and food parks

Source: IBEF Website
Opportunities

**Untapped market with strong growth potential**
- Fragmented market leads to lower processing levels and value addition
- The government plans to raise value addition to 35 percent by 2015 from 20 percent in 2005
- PPP modules ideal for the private sector
- Strong demand growth; household consumption set to double by 2020

**Potential global outsourcing hub**
- Global supermarket majors looking at India as a major outsourcing hub
- India enjoys favourable supply side fundamentals (abundant raw materials supply, cost advantages)
- The government has helped by investing in AEZs, mega food parks, easier credit
- The Establishment of food parks - a unique opportunity for entrepreneurs, including foreign investors in the Indian food processing sector.
- With an investment of US$ 11.6 bn, process of setting up 42 mega food parks in PPP is underway, as of 2015

**Supply chain infrastructure and contract farming**
- Both firms and the government are eager to boost efficiency and access to market
- Investment potential of US$ 22 bn in food processing infrastructure; 100% FDI in this area
- Firms increasingly taking recourse to contract farming in order to secure supply
- Supply chain infrastructure - this niche has investment potential in food processing infrastructure, the government’s main focus is on supply chain related infrastructure like cold storage, abattoirs and food parks

Source: IBEF Website
Farmer’s Produce Promotion Society (FAPRO)

**Background**  
FPO has total of 354 members who are located in Hoshiarpur. FAPRO was formed in year 2001 with the objective to provide facility to process the farm produce for small & marginal farmers who can market themselves.

**FPO Infrastructure**  
An acre of land leased from Panchayat and has established a traditional turmeric processing unit and honey processing unit.

**Problem identified**  
1: Upgradation of existing infrastructure of FAPRO  
2: Market linkages to provide an alternative market to farmers for better income  
3: Capacity building of members i.e. farmers in area of business management, material handling, compliances requirement

**Areas of intervention (project commenced in month of October 2016)**  
1: Establishment of CFC  
2: Input material like seed, fertiliser, pesticide facilitation (manufacturer to FPC)  
3: Market linkages  
4: Compliance competition

**Activities**  
1: Establishment of CFC: In the short duration of four months GT has prepared and submitted a complete detailed project report to State Government, Banks for appraisal for establishment of CFC for turmeric processing and grading and sorting of pulses.  
2: Market Linkages: 1: For product Honey, financial transaction was held between FAPRO and M/s Kay Kay enterprises, 2: Members of FAPRO participated in Vendor summit held in month of December 2016  
3: Walmart official visited FAPRO in month of February 2017  
4: Walmart is looking forward to make FAPRO as their vendor.
Krishijeeewan Agro FPO, Narayangaon

<table>
<thead>
<tr>
<th>Background</th>
<th>Vegetable Belt, near to markets like Pune and Mumbai</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPO Activity</td>
<td>Custom Hiring Centre (Farm Implement Bank)</td>
</tr>
<tr>
<td>Farm Implement Bank</td>
<td>Supported by World Bank assisted MACP</td>
</tr>
<tr>
<td>Total Grants</td>
<td>7.5 Lakh</td>
</tr>
<tr>
<td>FPO Contribution</td>
<td>6.0 Lakh</td>
</tr>
<tr>
<td>Components</td>
<td>Implements, Tractor, Mulching paper laying machine, Rotator, Potato Planter, Plough etc.</td>
</tr>
</tbody>
</table>

**Problems faced by the Farmers**

- Labour availability at the time of harvesting
- High Labour Costs
- Availability of land per farmer is less
- High attack of insects and pests
- Lack of availability of machineries

<table>
<thead>
<tr>
<th>S. No</th>
<th>Equipment</th>
<th>Operational Activity</th>
<th>Unit</th>
<th>PC rate per unit (in Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trailer (with dumping trolley)</td>
<td>Transporting agro-inputs and harvested produce</td>
<td>Trip</td>
<td>300</td>
</tr>
<tr>
<td>2</td>
<td>14&quot; plough with double teeth</td>
<td>Deep ploughing</td>
<td>Acre</td>
<td>600</td>
</tr>
<tr>
<td>3</td>
<td>Rotovator</td>
<td>Land preparation</td>
<td>Acre</td>
<td>800</td>
</tr>
<tr>
<td>4</td>
<td>Leveller</td>
<td>Land levelling</td>
<td>Acre</td>
<td>400</td>
</tr>
<tr>
<td>5</td>
<td>Cultivator</td>
<td>Bed preparation and inter-culture operations</td>
<td>Acre</td>
<td>400</td>
</tr>
<tr>
<td>6</td>
<td>Ridger</td>
<td>Bed preparation</td>
<td>Acre</td>
<td>400</td>
</tr>
<tr>
<td>7</td>
<td>Potato planter</td>
<td>Sowing potato seeds</td>
<td>Acre</td>
<td>1200</td>
</tr>
<tr>
<td>8</td>
<td>Mulching paper laying machine</td>
<td>Laying mulching paper</td>
<td>Acre</td>
<td>1500</td>
</tr>
</tbody>
</table>

- This unit has supported more than 500 farmers and covered area more than 1000 acres.
- FPO has earned profit of Rs 1,61,520 in 7 months from this activity.
- Patronage bonus to its shareholders.
- Scheme implemented- PPP-IAD- Tomato value chain- inputs facilitation, marketing of Tomato by aggregation
- Turnover of FPO from this activity is around 1 Cr.
PG Farmsys Agro Producer Company Limited

<table>
<thead>
<tr>
<th>Background</th>
<th>Rain fed area, Seasonal crops – Onion, Pulses, Jowar</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPO Infrastructure</td>
<td>Primary processing unit(2TPH) and Onion storage structures.</td>
</tr>
<tr>
<td>Farm Implement Bank</td>
<td>Supported by World Bank assisted MACP</td>
</tr>
<tr>
<td>Total Grants</td>
<td>7.5 Lakh</td>
</tr>
<tr>
<td>FPO Contribution</td>
<td>10 Lakh</td>
</tr>
</tbody>
</table>
| FPO Activity | • Direct Marketing of 500MT of clean and graded Jowar to Mumbai based traders.  
• Participated in Onion supply scheme of SFAC in 2014-15 and sold onion directly to Mother Dairy, New Delhi.  
• Turnover in Onion sales: 7.5 Cr.  
• In 2015-16 supplied onion to McDonalds (25 MT).  
• Quantity though small but has given insights to farmers on exact requirements of market (size, variety etc.)  
• Established linkages with Go4fresh for pulses and onion sales. |

Problems faced by the Farmers

- Distant Markets
- Glut situation in the market (Onion)
- No other income source other than Agri Produce
- No Market for Jowar
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