

# India Farm 2 Fork 2015 - Making India Globally Competitive

November 2015



# Message

हरसिमरत कौर बादल  
Harsimrat Kaur Badal



खाद्य प्रसंस्करण उद्योग मंत्री  
भारत सरकार  
MINISTER OF FOOD PROCESSING INDUSTRIES  
GOVERNMENT OF INDIA

## MESSAGE

India ranks number one in the world in the production of Milk, Mangoes, Bananas, Guavas, Papayas, and Ginger. Further, India is second in the production of Rice, Wheat, Fruits and Vegetables. Abundant supply of raw materials, increase in demand for food products and incentives offered by the Government propound the abundant opportunities for the food processing sector in the country. This has positively impacted the lives of the farmers and stakeholders associated with the food value chain directly and indirectly.

The sector has emerged as an important segment of the Indian economy in terms of its contribution to GDP, employment and investment. It constitutes as much as 9.0 and 10.0 per cent of GDP in Manufacturing and Agriculture sector respectively. It accounts for 12 percent of India's exports and 7 percent of total industrial investment in fixed capital in registered sector.

To further expedite the growth of the sector, Ministry of Food Processing Industry is promoting the Government initiatives like "Make in India" and "Skill India" in the Food Processing sector through its schemes of Mega Food Parks and Cold Chains. In order to promote Indian food brands on a global platform and also to provide quality and safe food products to the consumers, emphasis is being given to R & D and quality improvement through lab testing facilities. Innovative and novel technologies are also being developed to bring down the cost to make Indian Food Processing Industry competitive & viable.

I am pleased to know that PHD Chamber of Commerce and Industry is organizing the 3<sup>rd</sup> International Conference and Exhibition "India Farm 2 Fork 2015" on 19-20 November, 2015 at PHD House, New Delhi. I congratulate PHD Chamber for taking this initiative.

I wish a pronounced success to the event.

(HARSIMRAT KAUR BADAL)

Place: New Delhi

Dated: 2<sup>nd</sup> November, 2015

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Secretary

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October 7, 2015.

### MESSAGE

I am delighted to know that PHD Chamber of Commerce is organizing India Farm 2 Fork 2015 – 2 Days International Conference & Exhibition on 19 - 20 November, 2015 at PHD House, New Delhi.

Processed food not only helps in increasing the shelf life of the food but it also reduces food wastages and leads to efficient supply chain management. The need of the hour is to address these issues more seriously. I am sure that this conference will not only ensure discussions enumerating various factors affecting the sector but it would also ensure that various stakeholders contribute significantly in making recommendations which could be acted upon without much difficulty.

The efforts of the PHD Chamber is praiseworthy and it is expected that similar effort would be sustained in the larger interest of the food processing sector.

I wish the Conference all the best and look forward to a very bright future.



( Ranglal Jamuda )





**Alok. B. Shriram**

President  
PHD Chamber

PHD Chamber of Commerce & Industry, a leading Industry Chamber of India, ever since its inception in 1905, has been an active participant in the India's growth story through its advocacy role for the policy makers and regulators of the Country. Regular interactions, seminars, conference and conclaves allow healthy and constructive discussions between the government, industry and international agencies bringing out the vitals for growth. As a true representative of the Industry with a large membership base of 48000 direct and indirect members, PHD Chamber has forged ahead leveraging its legacy with the Industry knowledge across sectors (58 Industry verticals being covered through Expert Committees), a deep understanding of the economy at large and the populace at the micro level.

At a global level we have been working with the embassies and high Commissions in India to bring in the International Best Practices and business opportunities. As a staunch believer in the strength of Indian Industry and MSME segment, we have mobilised tie-ups with a network of 60 world-wide chambers of commerce for allowing a one-to-one interaction between the Industry and Govt. peers across the borders.

Agriculture and Food Processing sectors are amongst the most important sectors of the Indian economy which engage more than 60 percent population and growth in these sectors can only ensure the food and nutritional security in the country.

It is a matter of great contentment that Chamber is organising conference and exposition on such vital subjects. Agriculture and food processing are the areas where such interventions are indispensable for the growth of the sector.

I am sure that this annual platform will create enduring value for the stakeholders.

I wish the programme a grand success!



**Dr. Mahesh Gupta**

Sr. Vice President  
PHD Chamber

PHD Chamber contributes significantly to socio-economic development and capacity building in several fields. Agriculture & Agri-business, Industrial Development, Health, Education & Skill development, Housing, Infrastructure and Digital India are the seven key thrust areas of the Chamber.

Agribusiness and food processing have been the core sectors for the PHD Chamber, due to the importance they hold in the Indian economy. To address the concerns of the sector, PHD Chamber has a very vibrant Agribusiness Committee which caters to the needs and interest of the industry, researchers and other stakeholders.

With an average production of 260 million tons of food grains and 227 million tons of fruits and vegetables annually, India is the top producer of many such agricultural and horticulture products like bananas, mangos, guavas, rice, and wheat. It occupies a very important place in the world's total production basket. India is also the highest milk producer with 138 million tonnes of production during 2013 - 14. In addition to the domestic market, there is ample scope for the agriculture and horticulture crops to be processed and exported. The vast production base offers India tremendous opportunities for domestic market as well as export.

Owing to its importance and the vibrant opportunities existing in the sector, PHD Chamber has successfully taken up this sector as a priority and plans to create platforms to deliberate on important concerns and opportunities.

Against this backdrop, the 3rd International Conference and Exhibition-**India Farm 2 Fork**, 2015 on 19 – 20 November at PHD House, New Delhi being organised by PHD Chamber is very apt and of prime importance.

My best wishes for this programme.



**Mr. N.M. Kejriwal**

Chairman  
Agribusiness Committee,  
PHD Chamber

PHD Chamber has an Agribusiness Committee to focus on important and topical issues which helps in catalysing the sustainable and inclusive sectoral growth. It also takes up issues of the concerned members with the highest level in the Central and State governments.

Expert Committee on Agribusiness has strived to create valuable policy interventions in the forum. In addition, strategic platforms have also been created to important recommendations for various sub-sectors of the subject and have been forwarded to the policy makers.

Various programmes at the state level such as Farm tech, Food Tech and Agriculture Leadership Summit and Livestock Expo have been organised successfully by PHD Chamber which were appreciated by the respective State governments.

At the international level, the 3rd International Conference and Exhibition **India Farm 2 Fork**, 2015 would cater to the needs of the sector as a whole and benefit the stakeholders while bringing exchange of ideas and services.

I am hopeful that this programme shall be a great success.



**Ms. Priyanka Mittal**

Co-Chairperson  
Agribusiness Committee,  
PHD Chamber

The Indian food processing industry accounts for 32 percent of the country's total food market, 14 percent of manufacturing GDP, 13 percent of India's exports and 6 percent of total industrial investment. This depicts the importance of the sector in the Indian economy.

It is a matter of immense pleasure that with the support of all the partners, PHD Chamber is organising 3rd International Conference and Exhibition **India Farm 2 Fork** 2015 on 19 – 20 November, at PHD House, New Delhi.

**Farm 2 Fork** is an annual initiative taken by PHD Chamber to have strategic exchanges and value creation for various sub-sectors of the Indian food processing sector.

This year, the key sessions have been purposely kept in sync with the Government's vision on Skill development, Innovative technologies, 'Make in India' and branding of the Indian food creations across the world.

Agribusiness Committee will continue its efforts to focus on policy related initiatives through development of such platforms and engage all the stakeholders of the entire food value chain.

I am confident that the concept shall be well accepted by the stakeholders!

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# Foreword



**Kunal Sood**

Partner,  
Grant Thornton India LLP

Indian food processing industry that is pegged over US\$ 121 billion 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

There are a multitude of stakeholders involved in different value chains activities (including the intra-national value chain). These stakeholders share a common vision yet need to collectively work towards evolving a competitive chain -- farming to the fork.

The emphasis of the report, **Farm 2 Fork: Making India Globally Competitive** is on the diagnostics and policy intervention that would add value to different produce and commodities with minimal post-harvest, processing and distribution losses. Also, there is need to ensure that value accruals and earnings to stakeholders involved in different activities of sub-sector value chains sector reflect the value added by such stakeholders. Unfortunately, such is not the case today with producers and farmers enjoying smaller value accruals vis-à-vis marketers and input-output traders. This scenario not only hinders the growth of certain section of stakeholders but also creates a socio-economic divide. This is but one of the several constraints and challenges confronting the Indian food processing sector which merits immediate intervention.

The report summarises the opportunity for evolving a sustainable globally competitive sector by fostering, strengthening and aptly channelling the capabilities and capacities of the existing natural agglomeration of production and processing stakeholders.

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

Global competition today is not between countries but between such agglomerations of producing and processing stakeholders. Systemic development of such agglomerations could help ensure more equity in value accruals to stakeholders involved in different value chain activities. This approach will also ensure more demand based production even while adopting global best practices in “farm to fork” activities.

This report seeks to identify how the Government of India can support such organic and natural agglomerations of units with a judicious mix of policy and field-level interventions. Such intervention 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.



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# Executive summary

The Global food Industry is pegged at US\$ 3.2 Trillion. While India is the leading producer of milk, pulses, sugarcane and tea in the world and the second largest producer of wheat, rice, fruits and vegetables, it is still a small share in the global market. About 60 percent of the country's population is dependent on agriculture for their livelihood. However, the extent of processing is relatively low particularly in fruits, vegetables, poultry, meat and fishery. Compared to other Asian markets, food processing levels in India are a mere 6 percent in overall terms as against 40 percent in China. Hence, value accruals to farm and enterprise stakeholders within the country are also relatively poor.

The key growth drivers in the Indian context include strong domestic demand, rising global demand, supply side advantages and policy support. Though, the sector is largely concentrated by MSMEs in enterprise agglomerations in different states, investments in productive assets and in technology by the private sector as well as the Government is relatively low. This is also due to the fact that much of the sector is characterised by MSME units in the unorganised sector. With low investments, there has been low value addition to the produce and largely fruits, vegetables, cereals, milk and fish etc. are being traded as table varieties or as fresh commodities. This has resulted in losses to the tune of up to 18 percent of post-harvest output in different sub-sectors.

The Government has offered highly favourable fiscal incentives for entities into green field investment in the sector. However, thrust on "smart cities" and investment and growth corridors notwithstanding, various factors have to be favourably oriented to enable the sector to realize its latent potential. These include factors such as skill enhancements of the involved labour, post-harvest and processing infrastructure, credit and fiscal levies imposed on firms.

- The challenges in the dairy sub-sector include increase in prices of fodder in the last two years meriting a price stabilisation fund. There are limited common facilities for primary processing and value addition and cold chain infrastructure in several specialised enterprise agglomerations such as Salem in Tamil Nadu
- The challenges in the fruit and vegetable sub-sector includes a circumstance wherein less than 2 percent of total vegetables being processed, and over 30 percent post-harvest losses of fruits in some locations. There is limited quality pulping and aseptic packaging as well as blast freezing facilities in a large number of MSME enterprise agglomerations such as Krishnagiri in Tamil Nadu, and Ratnagiri and Sindhudurg in Maharashtra

- The challenges in fisheries sub-sector may be viewed in terms of limited information on fish breeding and rearing processes. Limited compliant facilities in terms of peeling sheds, and in cold store infrastructure in several specialised enterprise agglomerations ranging from Vishakhapatnam, Ramanathapuram and Kanyakumari to Kolkata
- There is a dearth of primary processing and preparing facilities in several MSME agglomerations like Madurai in Tamil Nadu across the ready-to-eat/ ready-to-cook segment
- In addition to this, there are a number of industry level constraints:
  - Skill related gaps in terms of training facilities
  - Infrastructure related gaps in terms of logistics and distribution infrastructure, testing and R&D infrastructure, inadequate twinning in terms of in-situ common facilities, and greenfield parks/ infrastructure existing agglomerations of MSMEs Innovation
  - Credit gaps due to the informal nature of many units and seasonality of outputs. A dedicated NABARD like institutions, and revised norms vis-à-vis minimum working capital requirements may be considered

Based on these challenges, there is a need to strengthen existing agglomerations of units which primarily face bottlenecks in the food processing sector. At the agglomeration level, the challenges range from access to common technical and physical infrastructure, access to credit, inadequate branding efforts and skill gaps in the manpower deployed etc. Globally, similar challenges are being faced by natural agglomerations. However, with government support and industry participation, these agglomerations have performed well directly benefitting farmers and processors involved.

These existing natural agglomerations in India are mapped in this report along with possible interventions. The required interventions in each agglomeration may be different and unique. But the intervention is likely to benefit all stakeholders along the intra-National value chain.

In this setting, the Government of India needs to support the industry with certain policy changes and incentives. There is also a need to undertake a study to develop a baseline on the extent and nature of the hundreds of agglomerations of the largely unorganised MSMEs across the food processing sector in the country. A collective effort by all the stakeholders will strengthen the capacities and capabilities of the agglomerations.





# Introduction

Unique food consumption patterns across different geographies including that of India has led to the growth of food processing industry across the world. Currently world's food processing industry is pegged at US\$ 3.2 trillion. Growth of this sector, has been the highest in developed economies like UK, USA, and Japan etc. USA is the largest consumer of processed food, sharing 31 percent<sup>1</sup> of global food sales.

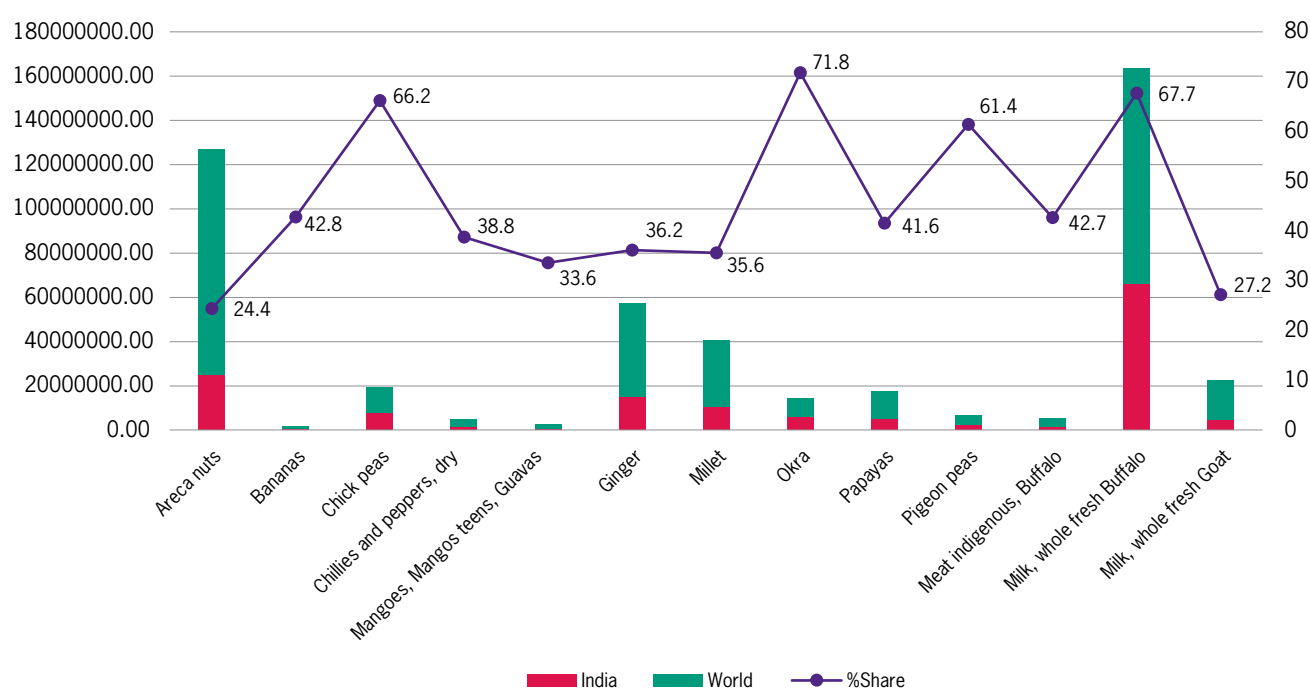
In comparison to developed economies, emerging markets such as China and India present a sea of opportunities on account of the domestic demand. India's population of over 1.2 billion presents a huge growth opportunity for this market. Key growth segments identified include, meat, juices and milk products. There has also been a shift in consumption trends across markets in the past decade. While the demand in developed markets such as the US is expected to decline, demand in developing economies are set to increase, as a result of enhanced usage of processed food products. Established markets are now procuring farm fresh produce for consumption

### The Indian Scenario

The Indian food processing industry is pegged close to US\$ 121 billion to US\$ 130 billion. 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.

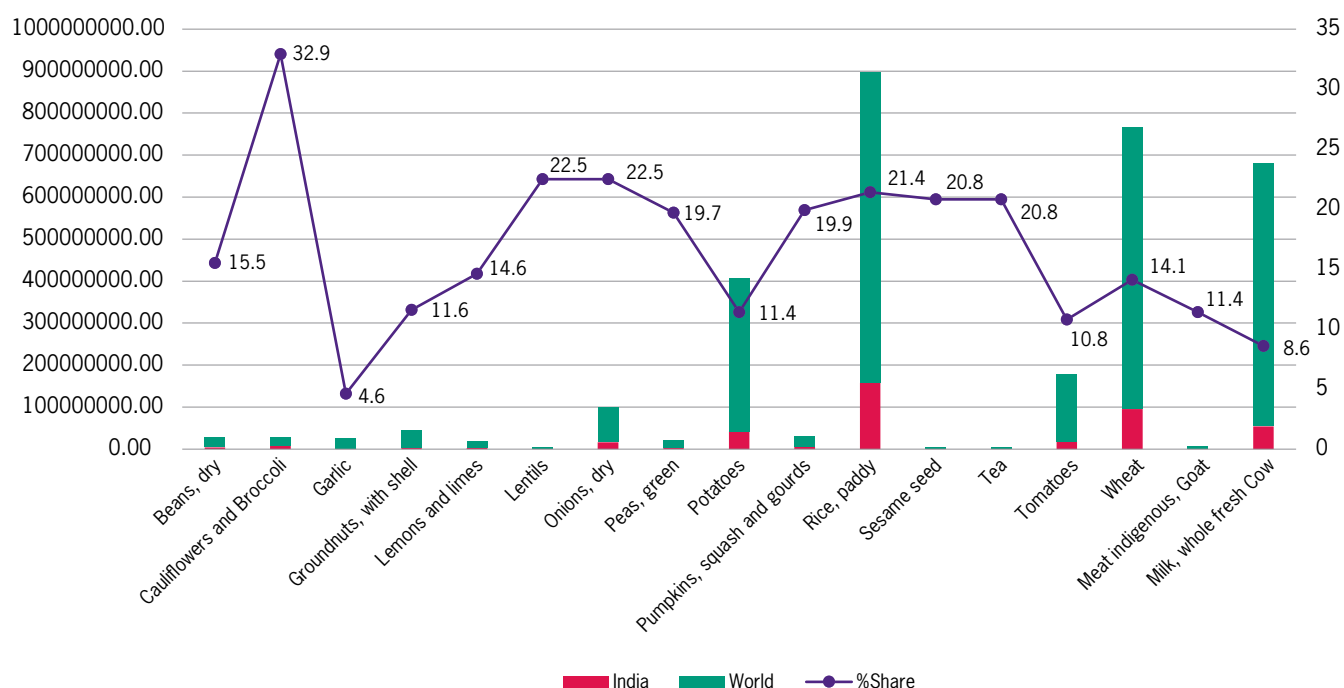
#### Key agricultural and related commodities where India is ranked 1 (Value in MT)



Source: MOFPI Annual Report 2014-15

1. Agriculture and Food Processing Sector Profile –Government of Karnataka

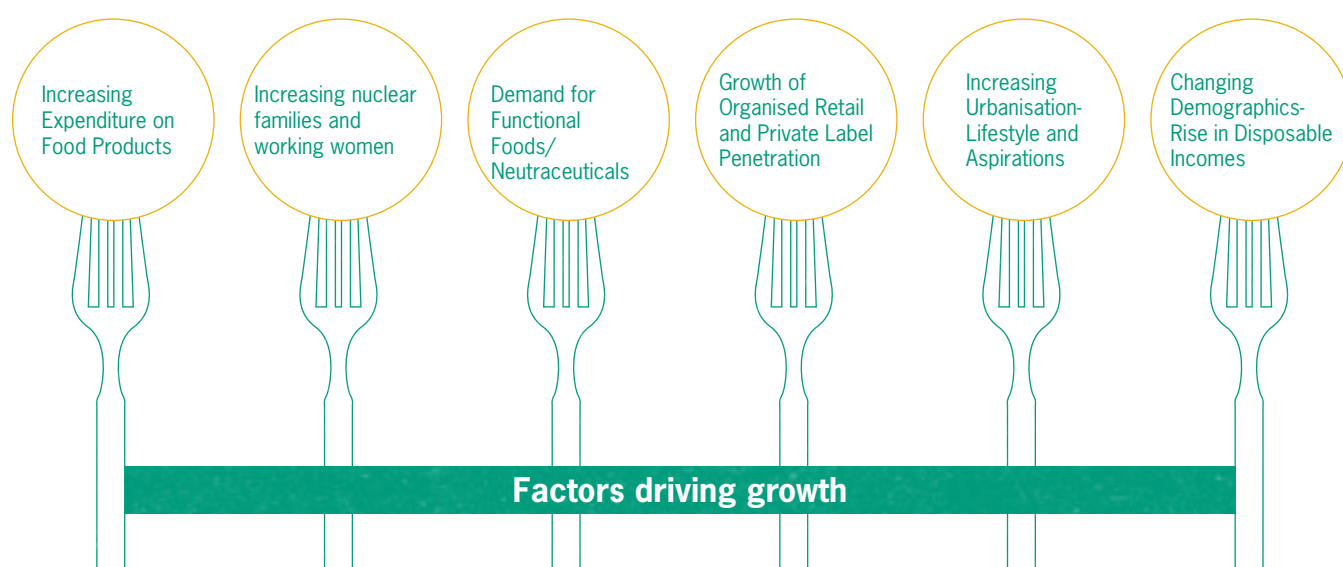
### Key agricultural and related commodities where India is ranked 2 (Value in MT)



Source: MOFPI Annual Report 2014-15

### Growth Potential

Raw material availability, changing lifestyle, increase in purchasing power, fiscal incentives etc. are the key reasons for growth.



## Value Chain



Milk & Milk Products



Fruits & Vegetables



Grains & Cereals



Meat & Poultry

10-15%

## Medium Growth segments

Milk, Ghee, Cheese

Frozen Dehydrated

Pulses, Instant Mixes, Cattle Feeds

Above 15%

## High Growth Segments

Processed milk, Flavoured milk, Curd & yogurt, Ice cream, Skimmed milk, Dairy whitener

Pulps, Concentrates, Pickle, Potato wafers/flakes, Fruit Beverages, Spices

Breakfast Cereal, Biscuits, Pasta, Instant Noodles, Ready to Eat & Ready to Cook Meals, Noodles & Vermicelli

RTE Non-Veg Meal

5-10%

## Low Growth segment

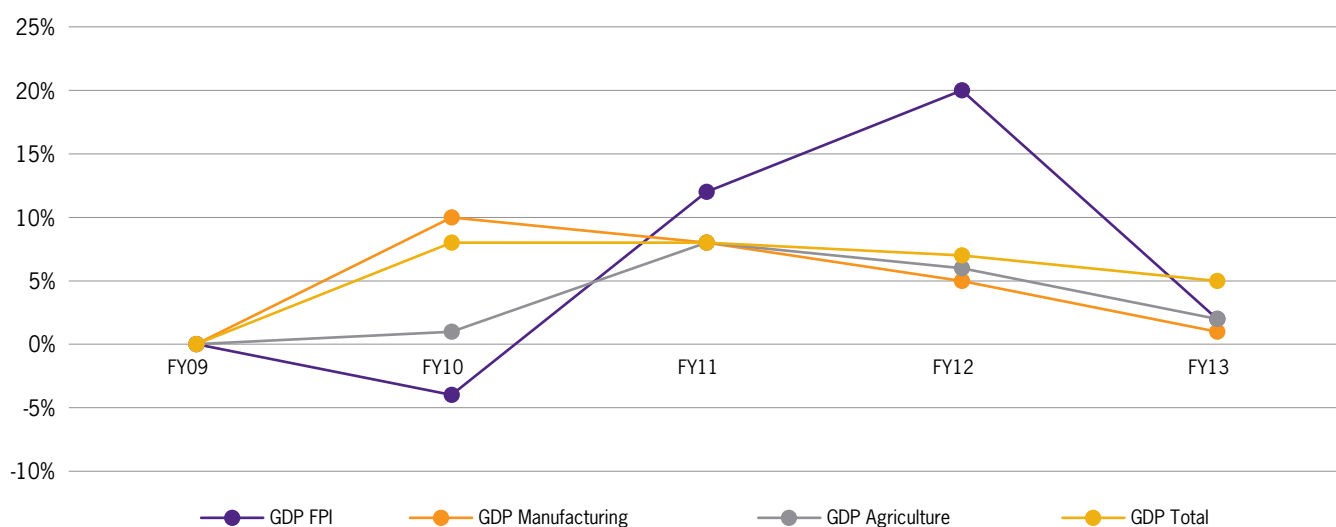
Bread



## Impact on GDP

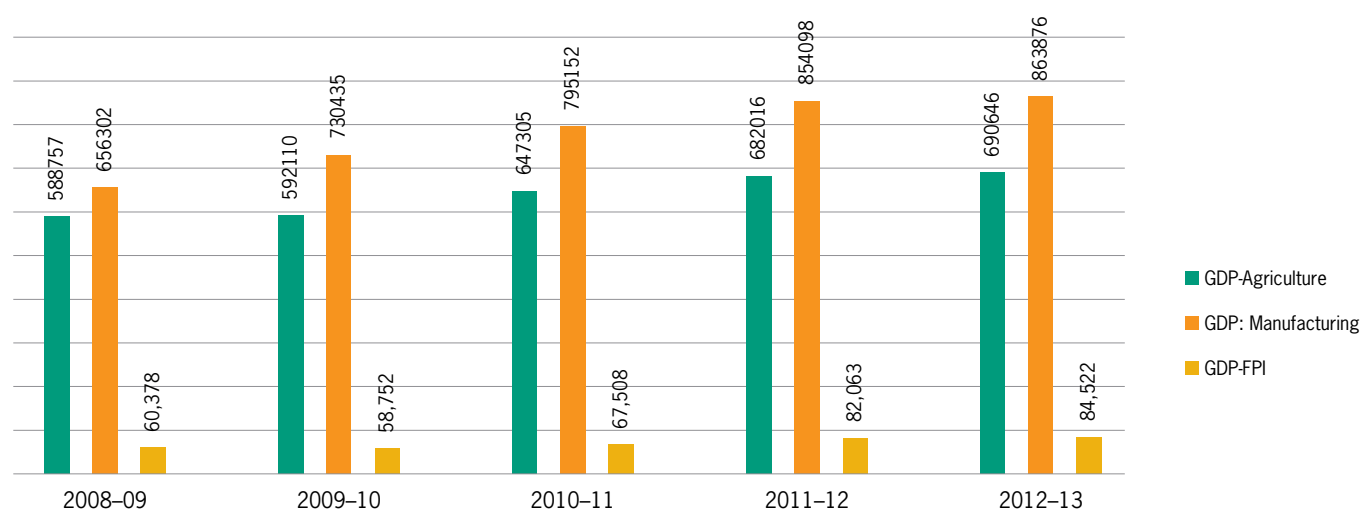
The share of contribution of the food processing industry to the Gross Domestic Product through manufacturing in the financial year 2013-14 is 9.8 percent<sup>2</sup>. The sector is expected to reach US\$ 258 billion by the end of financial year 2015. During FY 2009-13 the sector has expanded at a CAGR of 4.4 percent.

### Growth in GDP by sectors (%)



Source: MoFPI (Ministry of Food Processing Industries) – Data bank, National Accounts Statistics (NAS), CSO and GT analysis

### Growth in GDP among different sectors



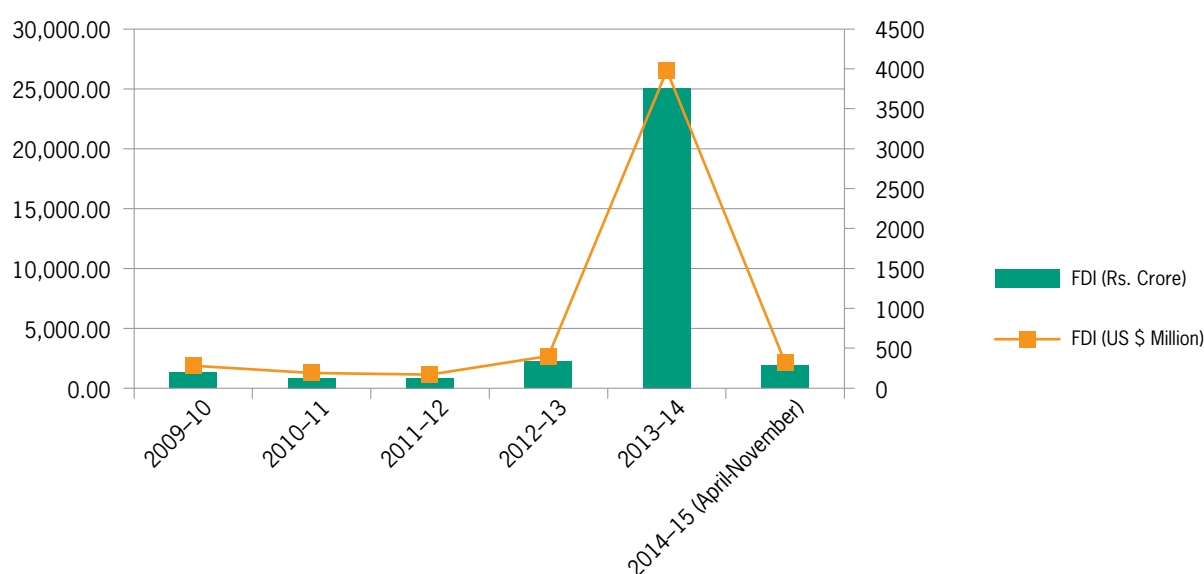
Source: MOFPI Annual Report 2014-15 and GT Analysis

2. MOFPI and IBEF, 2015 report

## Foreign Direct Investment

According to the data provided by the Department of Industrial Policies and Promotion (DIPP), the food processing sector in India has received around US\$ 6,429.15<sup>3</sup> million worth of foreign investment during the period April 2000 - June 2015.

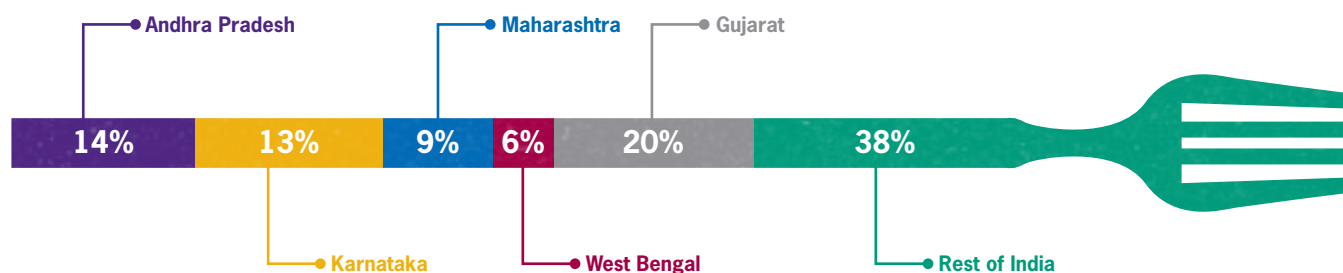
### Foreign Direct Investment (FDI) in Food Processing Sector



Source: MOFPI Annual Report 2014-15

Of the total investments worth over US\$ 12.584 billion attracted by food processing sector as of December 2014, Gujarat attracted the highest share (US\$ 2.5154 billion) at 20 percent. Further, the private sector accounted for over a whopping 97 percent of the total investment attracted in Gujarat.

### State wise Share in Food Processing Investments



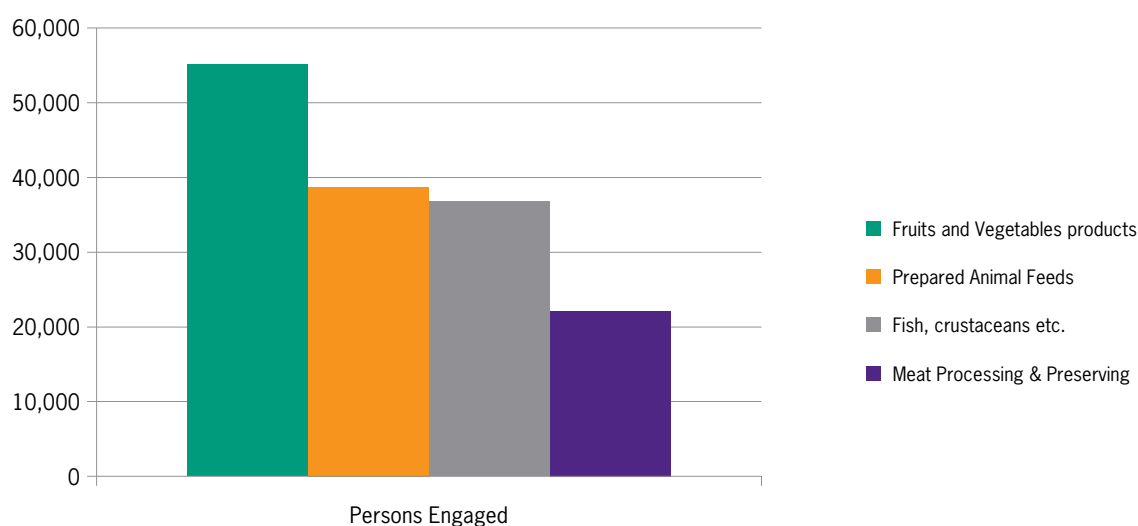
Source: GT analysis and Economic Survey reports of state government

3. DIPP

## Employment generation

The food processing sector in the country is largely governed by the unorganised segment. While 42 percent of the output comes from the unorganised segment, the remaining 25 percent comes from the organised segment. The industry that has large employment generation potential, currently accounts for direct employment of more than 1.6 million workers in factories along with over 1.4 million workers in the MSME segment. In addition, the industry potentially impacts over 0.182 million people across its supply chain.

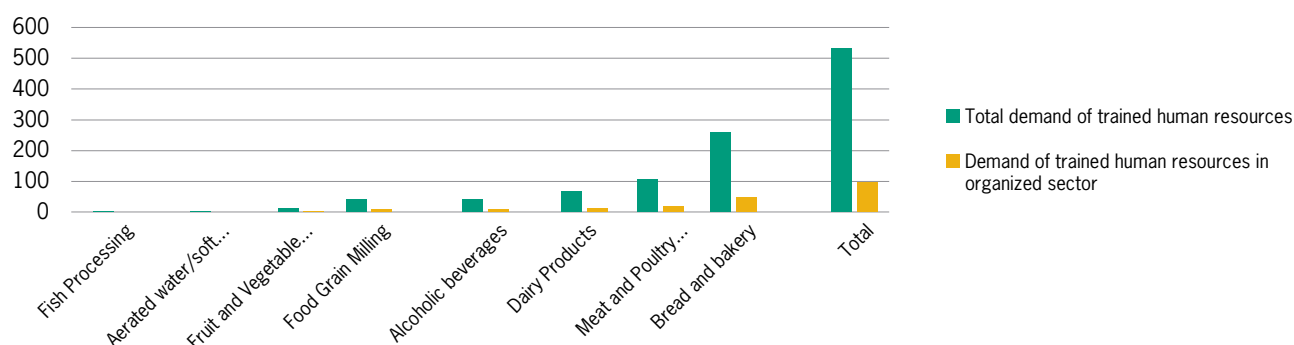
### Employment in Food Processing Units



Source: MOFPI Annual Report 2014-15 and GT Analysis

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

### Annual Demand of Human Resource in 000s

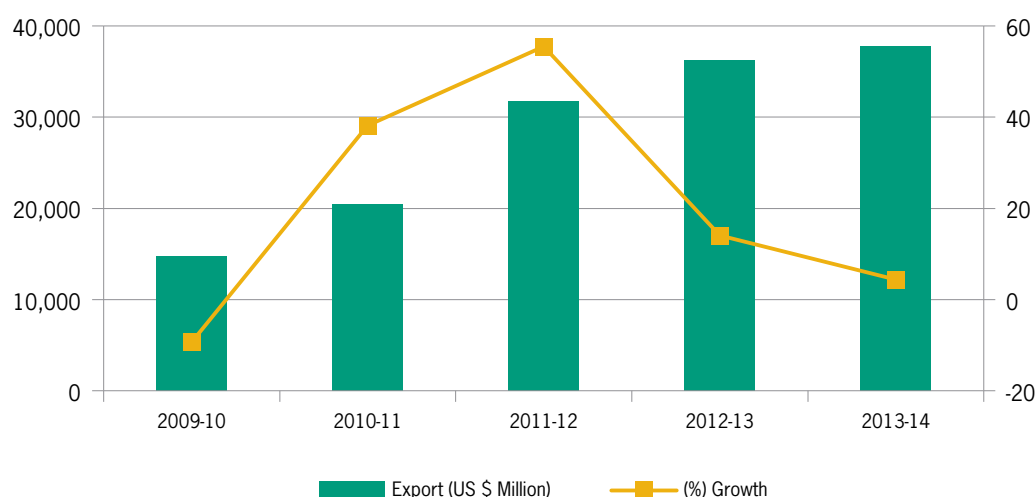


Source: National Skill Development Council (2010) Human resource and skill requirements in the food processing sector: study on mapping of human resource skill gaps in India till 2022. New Delhi, India and GT Analysis

## Exports Scenario in Food Processing Sector

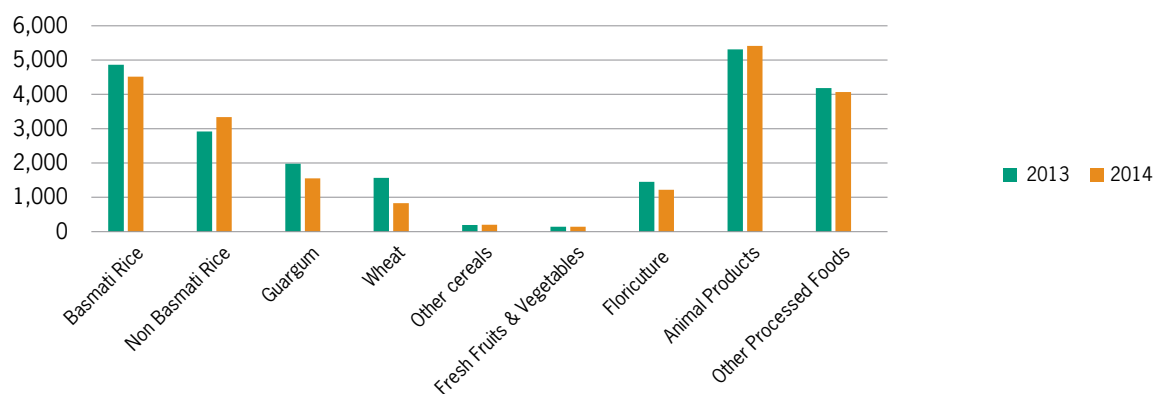
With globalisation and increasing trade across the borders approximately about 460 million tons of food valued at US\$ 3 billion is traded annually. India has thus, a great potential for global trade in agricultural and processed food products. The share of food processing exports in total exports was 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<sup>4</sup>.

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



Source: MoFPI Annual Report 2014-15

### Export of Key Processed Products (US \$ millions, FY 2014)

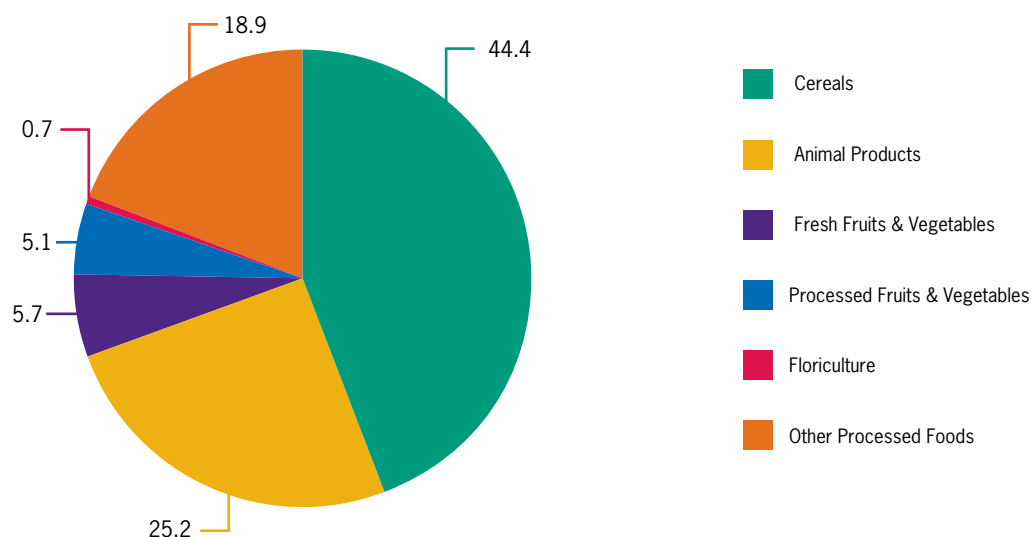


Source: APEDA, Agri Exchange

4. Agricultural Produce Export Development Authority (APEDA), and IBEF, 2015



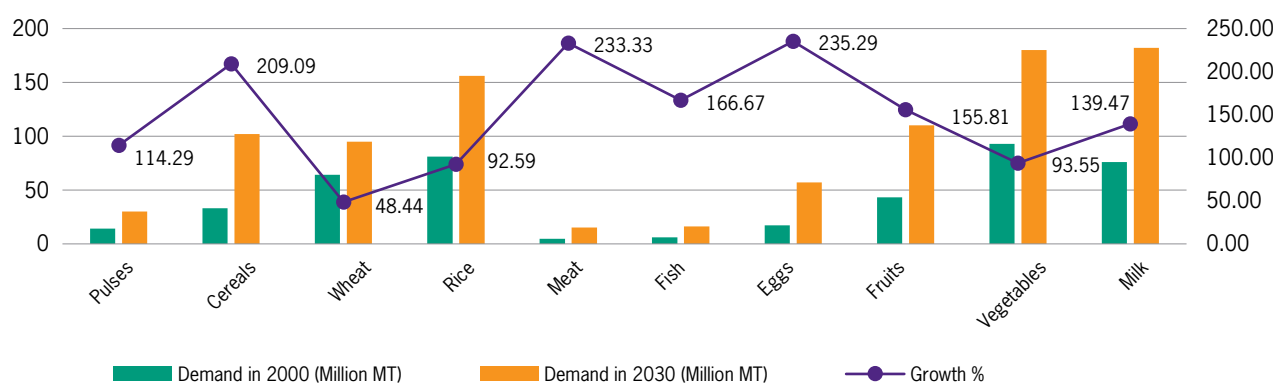
### Share in APEDA Exports (FY2015)



### Vision 2030

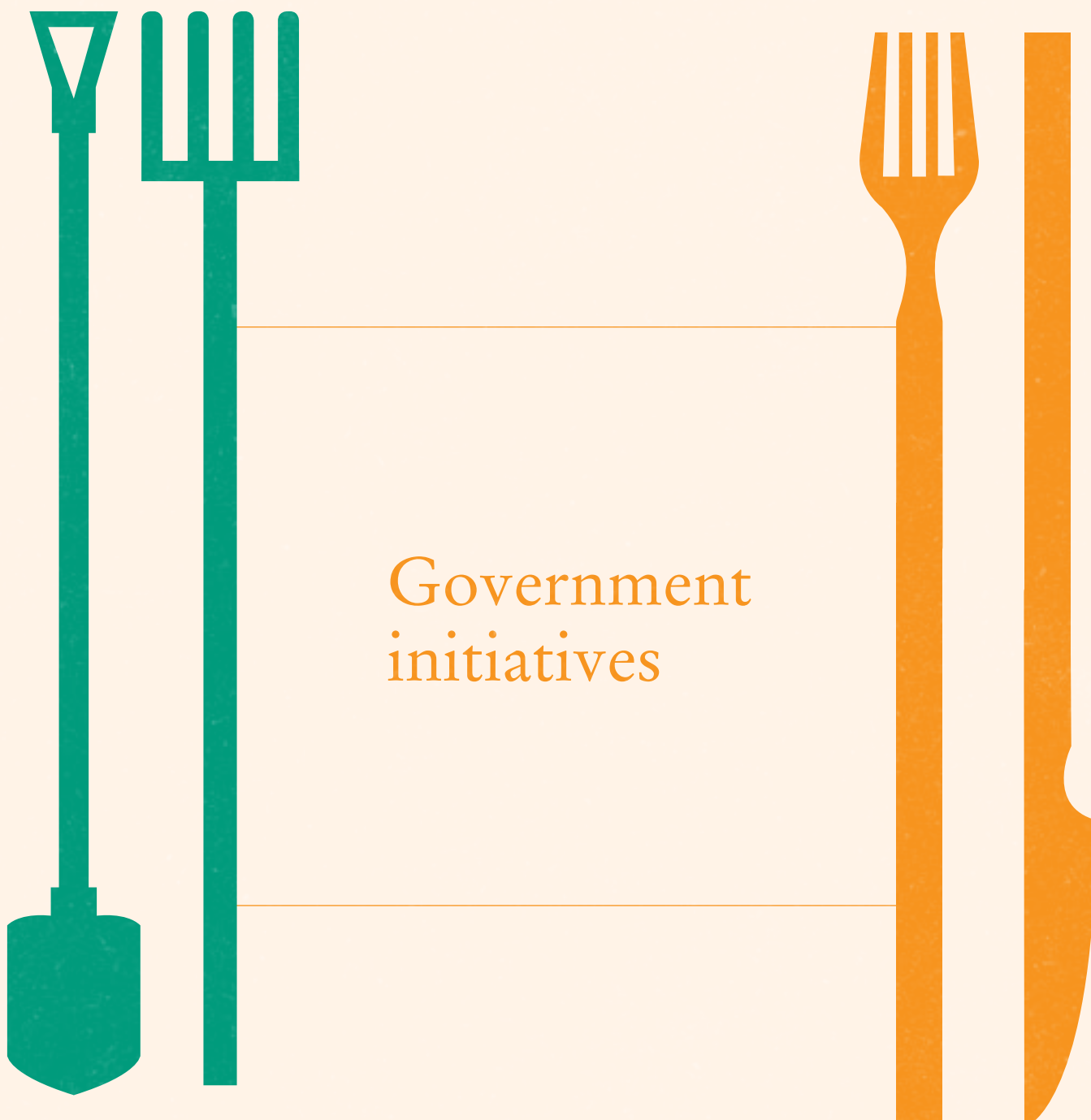
The analysis below indicates the growth potential of the food processing sector and growth rate of different focused segments in the food processing industry.

### Growth in Food Products till 2030



Source: ICAR Vision 2030 Indian Council of Agricultural Research, January 2011 and GT Analysis

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.



## Government initiatives

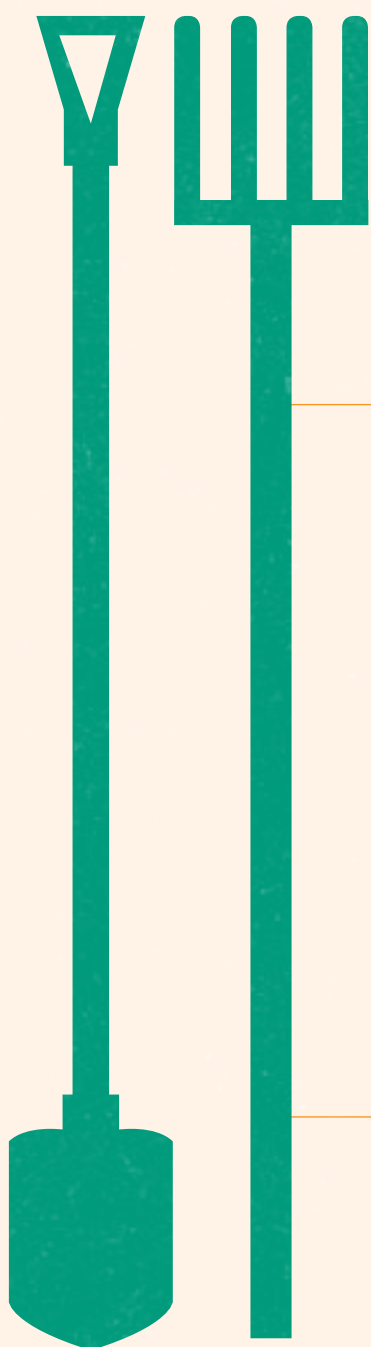
The Government of India has focussed on various policy initiatives in the sector which provides initiatives for capital grant, duty free export and tax incentives. Some of the major schemes which are being run by MoFPI are Mega Food Parks Scheme, Integrated Cold Chain and Modernisation of Abattoirs scheme.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

Tax Incentives	Policy Support
<ul style="list-style-type: none"> <li>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</li> <li>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</li> <li>There is a provision for duty-free import replenishment of inputs, subject to basic input-output norms for approximately 600 export categories</li> <li>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</li> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>100 percent FDI under automatic route (except for alcohol, beer, and sectors reserved for small scale industries). Repatriation of capital and profits permitted</li> <li>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</li> <li>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)</li> <li>A corpus of US\$ 0.303 billion during 2014-15 and onwards for providing direct term loans to establish infrastructure in the Mega Food Parks</li> <li>Food Safety and Standards Act 2006- Convergence of different food safety laws under one act that is FSSAI</li> </ul>

Initiatives	Gap	Support
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.



## Challenges, interventions and the role of stakeholders





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



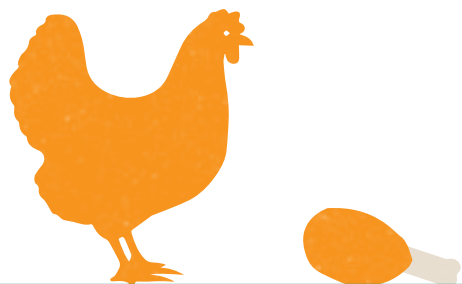
Dairy



Fruits & Vegetables



Food Grains



Meat & Poultry

## CHALLENGES

- Low milk productivity from cattle
- High fodder prices
- Establishment of constant quality of milk during procurement
- Lack of cold chain infrastructure

- Highly perishable produce
- Processing units are primarily SME and MSME in nature
- Low value addition
- Varying procurement price for the produce

- Limited storage capacity
- Efficient procurement and movement for PDS
- Medium value addition
- Traditional cultivation technologies

- Highly perishable processed produce
- Licenses and clearances from different departments
- Religious sentiments
- Inadequate access to common facilities
- Limited understanding of international laws for exports

## INTERVENTIONS

- New high yielding varieties
- Development of cold chain infrastructure
- Training farmers for maintaining the constant quality of produce
- Development of model farm

- Assistance for setting up of processing and storage infrastructure
- Linkages of farmers through collection centres/KVKs
- Encouragement to entrepreneurs for high value addition

- Encouragement of high value addition
- Training to FPOs
- Increase in capacity of silos and warehouse

- 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

## STAKEHOLDERS

### MoFPI

- Farmer producer organisation
- Animal Husbandry departments
- Research and Training Institutions

- Ministry of Agriculture
- Industries
- MoFPI
- Research institutions and training centres
- Agricultural universities

- Ministry of Agriculture
- MoFPI
- Food Corporation of India
- State governments
- Training of institutions and agricultural universities
- Industries

- MoFPI
- Department of Animal Husbandry
- State Governments
- Municipal corporations
- Research and development institutions and universities
- Industries



New emerging  
opportunities





Government of India and the private sector are innovating various concepts and initiatives which support the food processing sector.


“Make in India”: A campaign which supports investment in India. Some of the initiatives which would enhance the promotion of this campaign are:



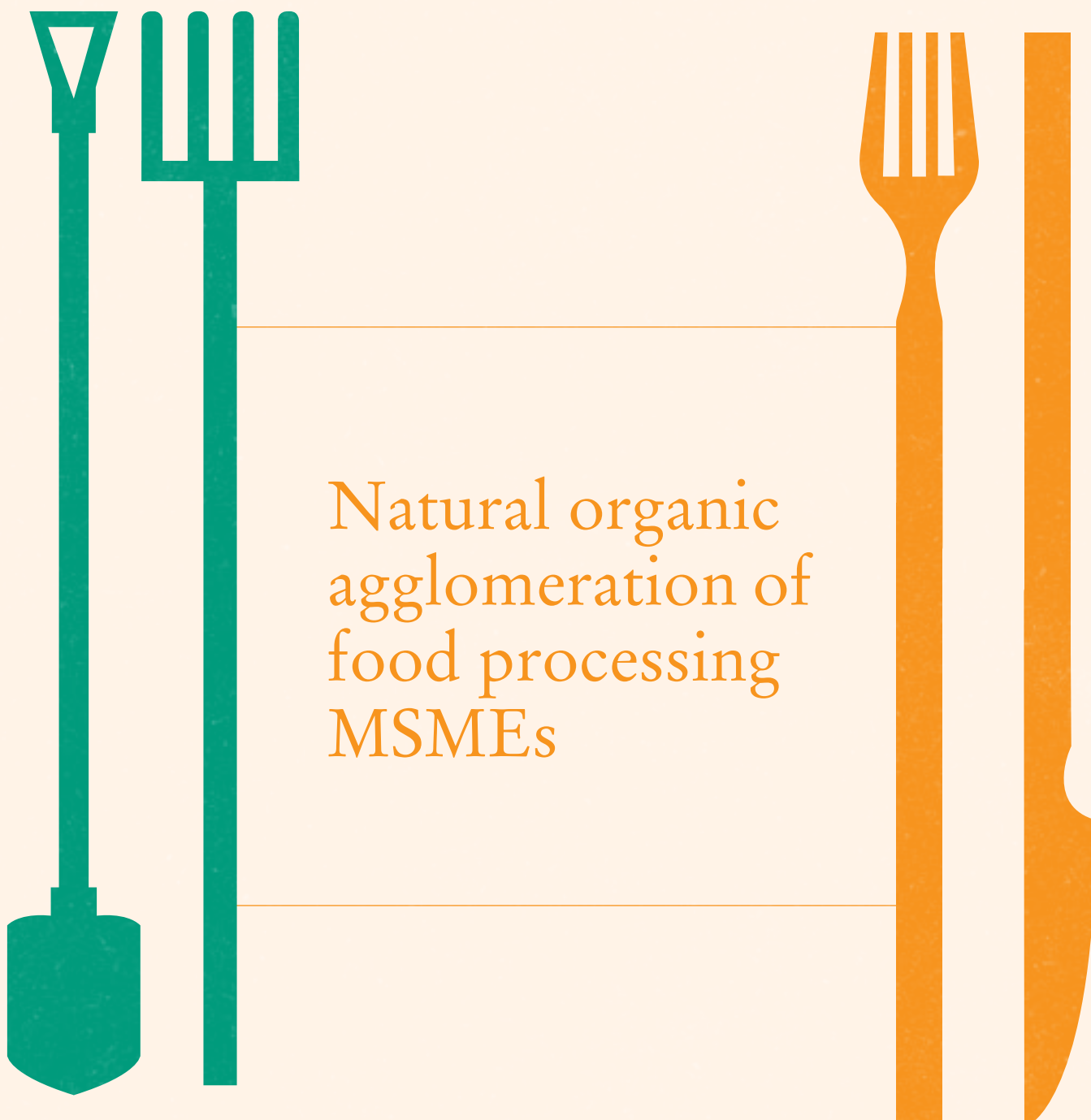
Some of new initiatives of GoI which support innovation and skill development in the food processing sector are as follows:

-  **Encouraging innovation**

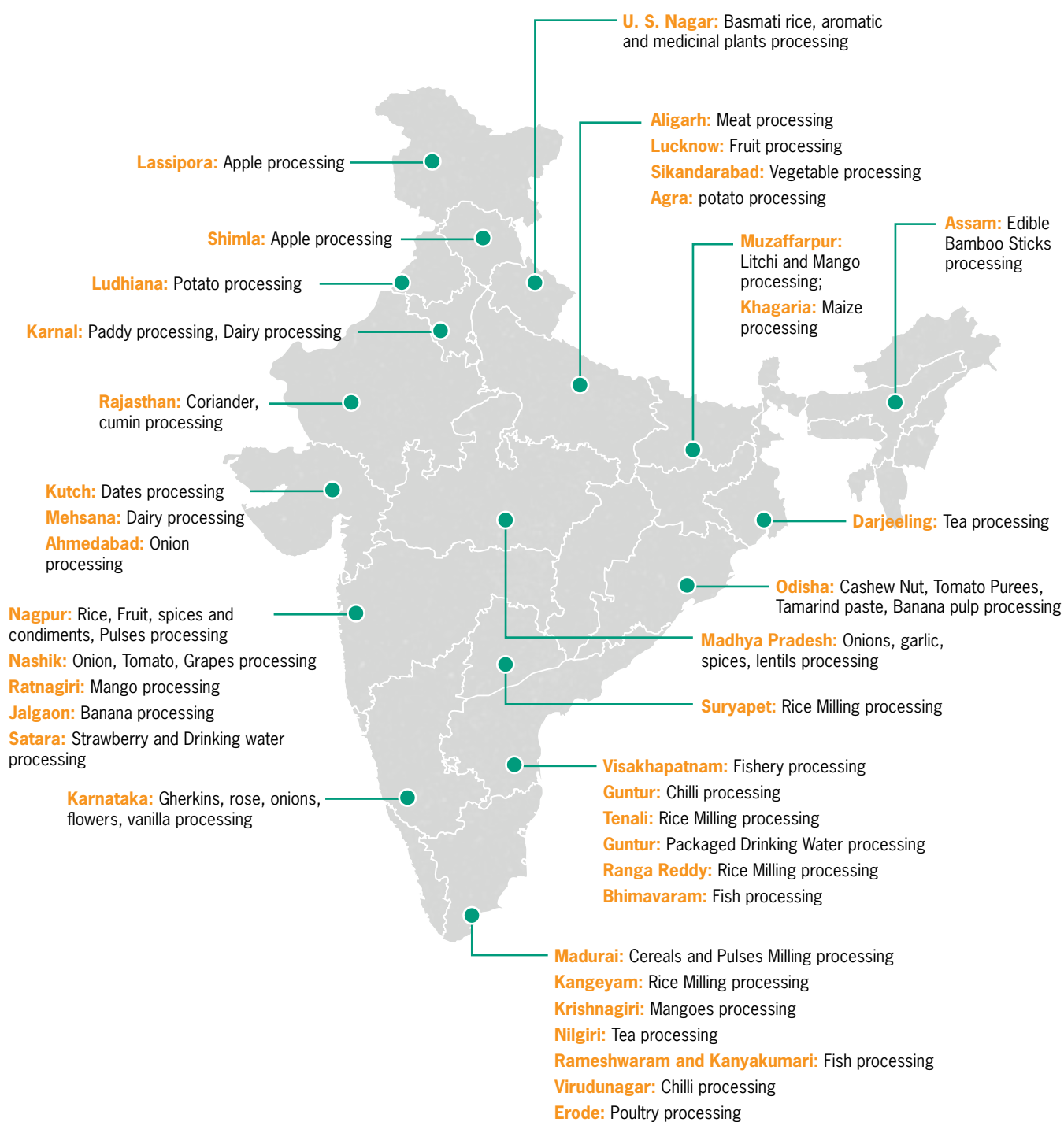
To promote innovation and entrepreneurship culture at grassroots level, Ministry of MSME under its scheme for Promotion of Innovation, Entrepreneurship and Agro Industry have been allotted a budget of 31.86 million (Source; Deptt of MSME, GoI)
-  **Encouraging skills development**

Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship outcome-based skill training scheme of the new Ministry of Skill Development & Entrepreneurship (MSDE). The objective is to enable and mobilise a large number of Indian youth to take up outcome based skill training and become employable. Under the scheme, monetary reward would be provided to trainees who are successfully trained, assessed and certified in skill courses run by affiliated training providers. The scheme will be implemented through the National Skill Development Corporation (NSDC)
-  **Encouraging access to credit**

The Reserve Bank of India (RBI) has revamped priority sector lending (PSL) norms. Banks can meet their entire agriculture lending target - 18 percent of their net loans disbursed in the previous year - by funding to indirect agriculture, which includes loans to companies engaged in the agriculture sector. Direct agriculture refers to individual farmers or groups directly engaged in agriculture and allied activities. Now, food and agro processing units will be treated as part of agriculture



Natural organic  
agglomeration of  
food processing  
MSMEs



# Successful models of organic agglomeration of food processing units

The following case illustrations underlines the need of support to the organic agglomerations, in particular their competitiveness at the global levels. These cases highlight some of the similar challenges at other agglomerations around the world and the interventions made.

Focus area	Lessons from international market	Possible intervention
<b>Case study 1:</b>		
<b>Root crop production in Salem, Tamil Nadu</b>	<b>Root crop production in Mozambique</b>	
Root of Tapioca plant is used to produce alcohol. The area witnesses the highest yield of Tapioca in the world (25-30 t/ ha) against the world's average yield of 10 t/ ha. Crop is produced over an area of about 82000 hectares providing employment for thousands of workers over fields across 800 units in Tamil Nadu as a whole.	Cassava roots in the region are used for producing alcohol.	<ul style="list-style-type: none"> <li>Cassava roots in the region are used for producing alcohol</li> <li>Linking with global marketers/ industries is important for introduction of new technology. This will drive the future of the businesses in the Salem region</li> </ul>
<b>Challenge:</b> <ul style="list-style-type: none"> <li>Salem is constrained in terms of brewer market oriented BDS and establish related common facilities to cater to liquor manufacturing companies</li> <li>Branding has been identified as one of the key challenge for the agglomeration</li> </ul>	<b>Challenge:</b> <ul style="list-style-type: none"> <li>Cassava roots are highly perishable</li> <li>Mobile technology were used to move the highly perishable Cassava starch post-harvest within 24 hours</li> </ul>	
<b>Case study 2:</b>		
<b>Fishery Production &amp; Processing in Kochi, Kerala</b>	<b>Salmon Production &amp; Processing in Chile</b>	
Kochi has benefitted from favourable government policies and schemes for exports of fishery products. Exports were worth US\$ 455 million every year. Focus of the agglomeration has been on exports	Los Lagos region is the largest Salmon farming and processing sub-sectoral specialised enterprise agglomeration in Chile, accounting for most of the national production	<ul style="list-style-type: none"> <li>Common infrastructure was put in place to mitigate the challenges</li> <li>The successful model can be replicated for developing specialised enterprise agglomerations in locations such as Vishakhapatnam and Kolkata etc.</li> </ul>
<b>Challenge:</b> <ul style="list-style-type: none"> <li>Suffered from lack of infrastructure by way of: inadequate peeling or pre-processing sheds of international standards</li> <li>Inadequate quality control laboratory, capacity of ice plants, power generation plants etc. These are required to ensure continuous and reliable supply of power, adequate water supply system meeting international standards</li> </ul>	<b>Challenge:</b> <ul style="list-style-type: none"> <li>Absence of technical business development services</li> <li>Very few incentives were offered by the government to foster start-ups</li> </ul>	
<b>Case study 3:</b>		
<b>Fresh Fruit specialised enterprise agglomeration in Sindhudurg - Maharashtra</b>	<b>Fresh Fruit specialised enterprise agglomeration in Petrolina- Juazeiro, Brazil</b>	
Sindhugarh produces over 250,000 MT of premium alphonso and other mangoes. Kokum and other fruits are also produced in this region.	Brazil is one of the leading producer and exporter of mangoes and grapes.  It employs over 29,000 workers in producing 90 percent of Brazil's mango exports and 30 percent of its grape exports. Benefitting 700 growers producing in 22,000 hectares.	<ul style="list-style-type: none"> <li>Opportunity for developing existing specialised enterprise agglomerations in locations such as Sindhudurg, Ratnagiri, Krishnagiri etc. with common facilities and physical infrastructure and branding initiatives</li> </ul>
<b>Challenge:</b> <ul style="list-style-type: none"> <li>25 percent of produce is lost due to inadequate post-harvest and processing infrastructure</li> <li>No access to IQF or blast freeze or cold storage facilities for most farmers and primary processors</li> </ul>	<b>Challenge:</b> <ul style="list-style-type: none"> <li>Infrastructure has been identified as the key challenge for the agglomeration</li> <li>Unavailability of post-harvesting capacity as well as pack houses</li> </ul>	<ul style="list-style-type: none"> <li>Some of the strategies used include: use of field quality crop book; organisations of producers/ growers who negotiate prices with processors and provides technical support</li> </ul>

Focus area	Lessons from international market	Possible intervention
<b>Case study 4:</b>		
<b>Winery Specialised Enterprise Agglomeration- Nashik, Maharashtra</b>	<b>Winery Specialised Enterprise Agglomeration- California, US</b>	
Nashik in Maharashtra is a national grape processing hub. It has favourable factor conditions by virtue of agro-climatic circumstance.	California's 17 districts cover more than 100,00 square miles and count more than 500,00 acres of wine grapes concentrated in pockets of the Napa county and San Joaquin Valley.	<ul style="list-style-type: none"> <li>• Opportunity for developing specialised enterprise agglomerations such as Nashik through registration under the Geographical Indications Act as well as generic brand equity promotion</li> </ul>
<b>Challenge:</b> <ul style="list-style-type: none"> <li>• Limited R&amp;D and innovation efforts and industry-institution linkages</li> </ul>	<b>Challenge:</b> <ul style="list-style-type: none"> <li>• Limited/Inadequate promotional efforts used to market the wineries</li> <li>• Limited means to promote agro tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Innovation has been identified as the key challenge. Some of the innovative works undertaken by Sula shall be studied. Also, Wine Festivals similar to "Wine Down Under" in Australia can be encouraged</li> </ul>
<b>Case study 5:</b>		
<b>Apple Specialised Enterprise Agglomeration- Lassipura, J&amp;K</b>	<b>Apple Specialised Enterprise Agglomeration- Italy</b>	
Lassipura in J&K is one of the leading producers of Apple in India. Demand for apple is set to increase to around US\$ 16.2 million MT by 2050. (Estimated provided by CITH, ICAR).	Italy has 16 cooperatives of apple growers, 4000 shareholder growers, and 1300 employees (32 percent market share) with US\$ 0.42 million MT of apples. It has a network of 1000 clients in 40 countries with turnover of + US\$ 212.4 million.	<ul style="list-style-type: none"> <li>• Infrastructure has been identified as the key challenge, due to unavailability of similar successful models in the region. Hence, a key learning from FIL (Fungicides India Limited) industries is building an integrated chain from growing apples to storage and processing</li> </ul>
<b>Challenge:</b> <ul style="list-style-type: none"> <li>• Inadequate CA storage capacity of about 3-5 percent of the total apple production</li> <li>• Absence of farmer networks and branding initiatives</li> <li>• Longer window of storage timelines leading to blockage of working capital</li> </ul>	<b>Challenge:</b> <ul style="list-style-type: none"> <li>• Lack of centralised source for sale of apples</li> <li>• 17 cooperatives in competition with each other</li> <li>• Inadequate promotional efforts under a common brand name</li> </ul>	
<b>Case study 6:</b>		
<b>Ham Specialised Enterprise Agglomeration- Namakkal, Tamil Nadu</b>	<b>Ham Specialised Enterprise Agglomeration- Italy</b>	
Namakkal alone accounts for 30 percent of broiler production in India; It has more than US\$ 0.364 million birds available and generating employment to more than 10,000 people The state has a daily turnover of US\$ 2.5-3.03 million from poultry industry	Ham-manufacturing industrial district of San Daniele and Parma share 65 percent of national production in Italy. It has a turnover of US\$ 300 million (approx. US\$ 303.4 million).	<ul style="list-style-type: none"> <li>• Namakkal is a special case which showcases the development of the region through intervention of processors and support from the Government. Similar concentrated agglomerations of units shall be supported to reach to the next level</li> </ul>
<b>Challenge:</b> <ul style="list-style-type: none"> <li>• Biosecurity to maintain the health status of the growing number of birds in the country</li> <li>• Inadequate Infrastructure of the poultry farms</li> </ul>	<b>Challenge:</b> <ul style="list-style-type: none"> <li>• Ham seasoning is a relatively long process and requires sunk investment</li> <li>• Supply of raw inputs</li> </ul>	<ul style="list-style-type: none"> <li>• Setting up an Integrated Chain for poultry including a feed mill, contract farming for maize, through a tie up with Ross Breeders – UK for supply of grandparents chick</li> </ul>

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# Key observations from the study

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The policy and field-level interventions in regional organic agglomeration producing and processing, provide better social and economic outcomes to the entire value chain as against those offered to individual firms and stakeholders. The case of Melinda Apples, Winery Agglomerations in California, Salmon farming and primary processing in Chile; and sea-food in Kochi, cashew in Kollam, spices in Kochi and tea in Darjeeling validates the point.

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Food processing in India is being developed through a mix of green field and brown field project interventions. It has been observed that most interventions oriented towards green field options such as establishment of mega food parks and cold chains, are yet to generate substantial positive outcome as envisaged earlier. In this context, there is a need to align scarce resources towards building capacities and capabilities of large regionally specialised natural agglomerations of producers and processors. The global setting makes it apparent that strengthening natural brownfield agglomerations of stakeholders through a mix of interventions generates better and far more quicker positive results for farmers-producers, processors-entrepreneurs and consumers.

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The concentration of MSMEs in enterprise agglomerations specialised in different sub-sector activities in Indian states is large. Many of these agglomerations contribute significantly to India's GDP. Apparently, over 48 million people are directly or indirectly employed in these agglomerations. Some of these agglomerations have developed and are firmly entrenched in global value chains. While these have a brand value, many others are yet to realise their intrinsic potential.

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# Key recommendations

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## Recommended Policy Initiatives for Industry

- There is a need for policy initiatives supporting existing MSME agglomerations typically specialised in specific sub-sectors of the food processing sector
- Enterprise stakeholders in these agglomerations may develop their sub-sectoral specialisation through a dedicated scheme for twinning Business Development Services (BDS) as to strengthen their financial, marketing, product and packaging quality and conformance base, as well as evolving necessary technical and physical infrastructure

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## BDS related interventions include:

- Leveraging existing schemes and financial institutions and instruments for appropriate credit linkages. Twinning with BDS providers on various fronts ranging from technology to market development, product and packaging quality to compliance. Such BDS may be public or private in nature
- Establishing specialised enterprise agglomeration coordination committees and national value chain coordination committees to evolve a joint vision and action plan. The coordination committee can involve all stakeholders and validate detailed value chain studies capturing constraints and opportunities from “farm to fork”
- Strengthen industry associations in existing specialised enterprise agglomerations so as to help them evolve into sustainable governance platforms

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## Technical and physical infrastructure related interventions include:

- Grant in-aid assistance for establishing institutions with common facilities for the development of joint technology upgrading projects or for establishment of value chain gap filling technical infrastructure facilities
- Establishing or upgrading physical infrastructure in PPP mode in the existing specialised enterprise agglomerations

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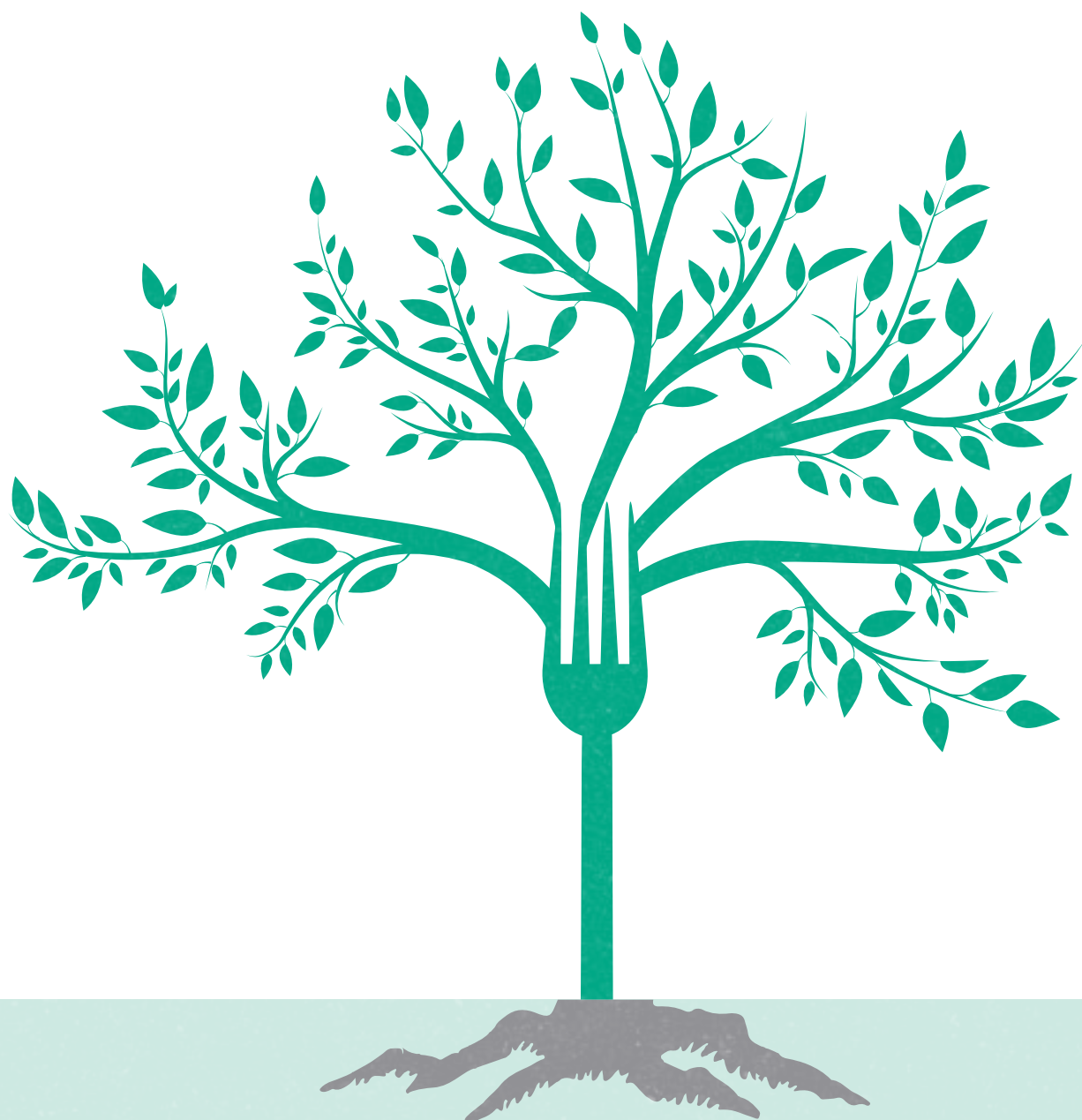
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