



# Agriculture and Food Industry – India

January 2011

# Agriculture and Food Industry in India

---

- Executive Summary
- Market Overview
- Key Drivers
- Value Chain
- Selected Sectors
- Appendix



# Executive Summary

## Market

- The size of the Indian agriculture and food industry is expected to double, and reach INR XX trillion (USD YY bn) by 20--
- Technological innovations, government initiatives, agro-climatic conditions and increase in food consumption will drive the sector growth
- Contract farming has played an important role in increasing private participation

## Major Sectors

- Agriculture offers enormous opportunities along its value chain, this has led to emergence of organized players in many segments
  - Seeds : Increasing use of hybrid and biotech crops provide huge growth potential in the sector
  - Fertilizers : Government interference in production and price dampens the potential in this sector making it a low margin segment
  - Agricultural Equipments : Due to cyclical nature of business, industry players are finding new markets like construction and infrastructure industry for tractors. They are also venturing in new products which were earlier dominated by unorganized markets
  - Warehousing and Cold Chains: Growth in organized retail and food processing, increasing government initiatives, large scale investments has made the segment very attractive
  - Food Processing: Increasing retailing and higher consumer spend is expected to increase the penetration of processing food in the Indians markets. India's favorable agro-climatic conditions also gives an immense export opportunity to the players
  - Organic food: Increasing health consciousness of the people, organized retailing and exports is expected to drive the sector. Though these products are more expensive, rising income of people and higher prices in export markets are expected drive the bottom line of the players in the industry
- Many ancillary services like packaging, training, R&D and quality control have now come into play

## Conclusion

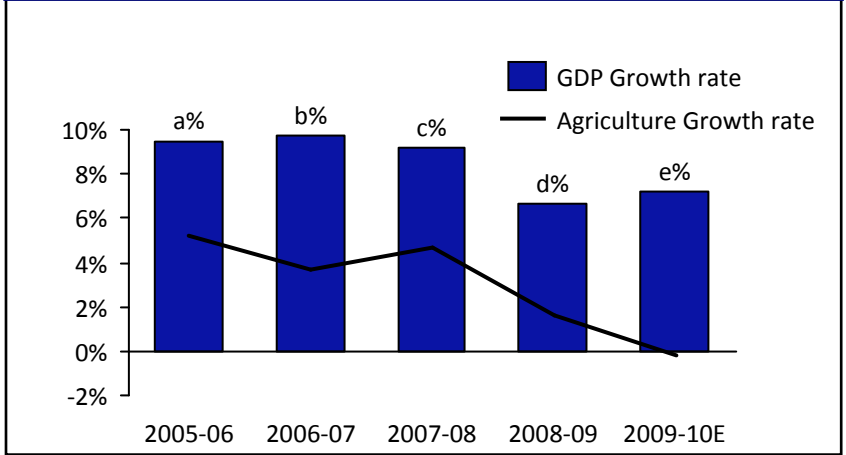
- Increase in private equity investments shows continued interest in this industry
- Our research indicates that agri-biotech, food processing, organic food, warehousing and cold storage are high growth sectors, though there are a few challenges that need to be addressed



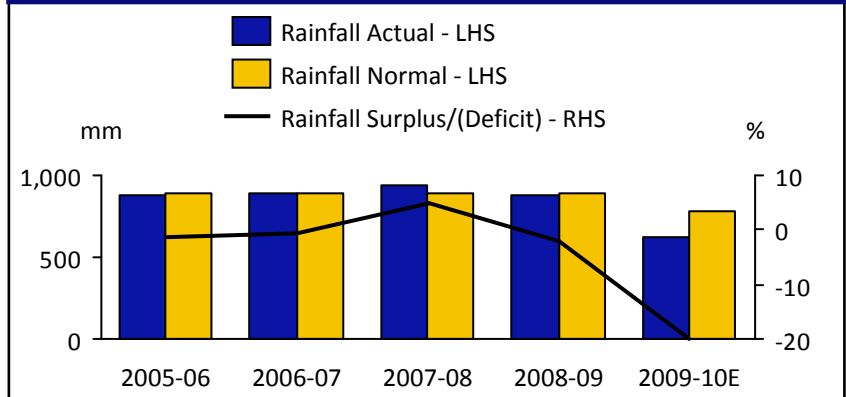
# Agriculture has witnessed a slowdown in the last few years, government initiatives and food demand to drive the sector

## Agriculture Industry Overview

**1** Agriculture growth rate has slowed down as compared to GDP growth rate in India...

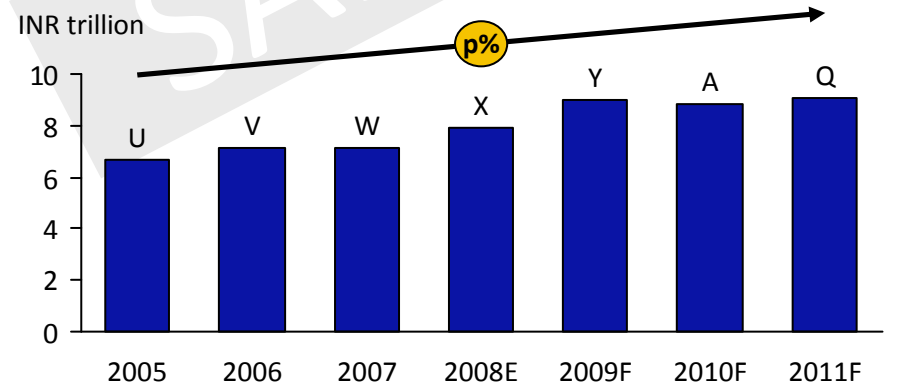


**2** ... primarily due to rainfall deficit, as agriculture industry is heavily dependent on rains...



**3** ... but it is expected to grow in the future due to government initiatives, growing food demand, and tech. innovation

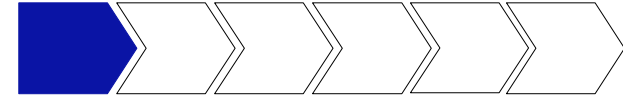
- The agriculture sector is expected to witness strong growth in the future
  - Eleventh Five Year Plan targets a growth of o% for the sector
  - Food security and a large dependence of the Indian workforce (nearly p%) on the sector has made it imperative for the government to watch the sector more closely
  - Food consumption is expected to witness a CAGR of p% for the period 20-- - 20--



- Technological innovation has led to increase in crop yields
  - Productivity increased from P1 kg/ha to more than P2 kg/ha in the period between 19-- - - to 20-- - -
  - Food grain yields tripled and the production increased from F1 mn tonnes in 19-- - - to F2 mn tonnes in 20-- - -

Source





- Executive Summary
- Market Overview
- Industry Trends
- Drivers & Challenges
- Competition
- Corporate Actions and Investments

# Executive Summary

## Market

- Indian seed industry is valued at INR U bn and is the V<sup>th</sup> largest in the world
- a% of the sources of seeds are farmer bred and the remaining b% are hybrid seeds
- However, the industry is in a transition stage and farmers are increasingly adopting hybrid seeds and biotech crops

## Drivers and challenges

### *Drivers:*

- *Government policy initiatives*
- *Higher yields and increasing profits*
- *Private sector participation*

### *Challenges:*

- *Inconsistent approval system*
- *Lack of awareness and knowledge*
- *Price control on agri-biotech products*
- *Controversies on the use of BT products*

## Competition

- Private companies are dominant in high value - low volume seeds industry that has left the low value - high volume space for the public companies
- Large companies with integrated facilities face competition from smaller companies having regional presence
- There are a variety of brands for each quality of BT products. This leads to price wars amongst the existing players

## Conclusion

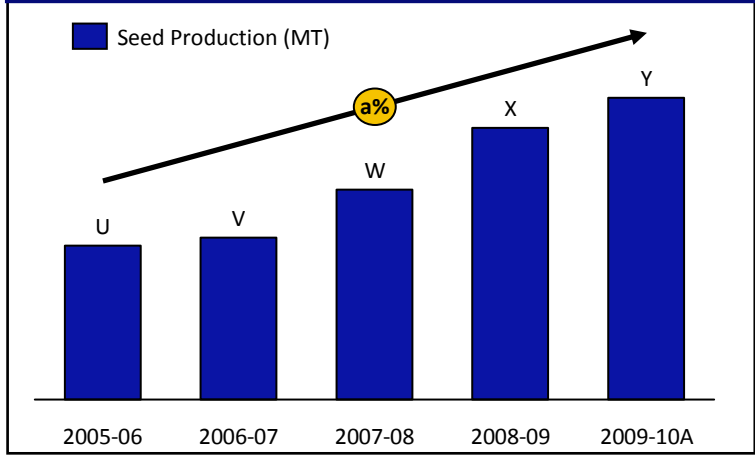
- Hybrid seeds, seed certification and emergence of agri-biotech will drive the growth of the seeds sector
- However, few challenges like inconsistent approval system and low acceptance by farmers needs to be dealt with for rapid growth in the sector
- Many private equity investors have invested in the seeds sector in the period 20 -- - --



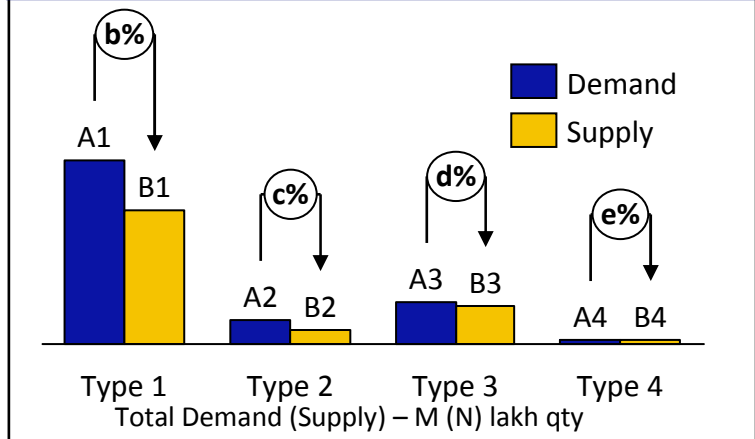
# Increasing seed production and growing demand for hybrid/certified seeds is expected to drive the industry

## Seeds Sector Overview

**1** Though the production has been increasing consistently...



**2** ... it has not been able to pace with the growth in demand






**3** however, the increasing demand for hybrid seeds and growth of agri-biotech will boost the sector





- Indian seed industry is the W<sup>th</sup> largest market in the world, valued at INR XX bn (USD YY bn), f% of world market
- In India, g% of seed sales are farmer bred seeds, while remaining h% sales are hybrids
  - The hybrid seeds market accounts for i% of the global market
  - It is growing at 10% annually, against the j% in the global market
- Total production of seeds witnessed a CAGR of k%
- As per the national seed plan the total demand-supply gap for all crops was L mn qtl
- Planning commission has provided directions to the government in the Mth Five Year Plan to boost the sector
  - Development of Agri-biotech industry
  - Opening the sector for private player and FDI
  - Focus on R&D

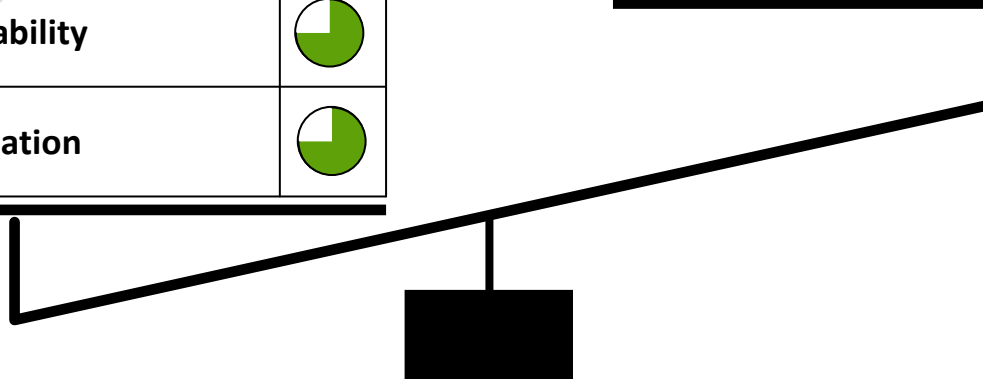
Source:

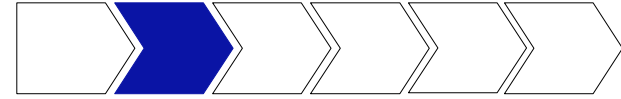


# Drivers & Challenges – Summary

<b>Drivers</b>	
Government policy initiatives	
High yields and profitability	
Private sector participation	

<b>Challenges</b>	
Inconsistent approval system	
Lack of awareness and knowledge	
Price Controls	
Controversies on BT products	





- Executive Summary
- Market Overview
- Regulatory environment
- Drivers & Challenges
- Competition

# Executive Summary

# SAMPLE

## Market Overview

- The fertilizers sector is a highly regulated sector; however, the rise in demand-supply mismatch and an increase in imports has highlighted the need for policy reforms
- The fertilizers market is segmented into – Segment 1, Segment 2, Segment 3 and Segment 4
- State 1, State 2, State 3, State 4, State 5, State 6, State 7, State 8 are the largest consumers

## Regulatory Environment

- Subsidy on fertilizers is passed on to the farmers in the form of subsidized Maximum Retail Price (MRPs)
- However, the government plans to reduce the fertilizers subsidy as it constitutes d% of the overall subsidy

## Drivers & Challenges

### *Drivers:*

- *Shift to nutrient based subsidy*
- *Increasing use of other fertilizers*
- *MRP and price decontrol*
- *Low penetration per hectare*
- *Other drivers*

### *Challenges:*

- *Inadequate supply of natural gas*
- *Ineffective government policies*
- *Dependence on potash imports*

## Competition

- Player 1, Player 2 and Player 3 are some key players in the fertilizers market
- Industry is dominated by private players with more than c% of the market share held by the private sector

## Conclusion

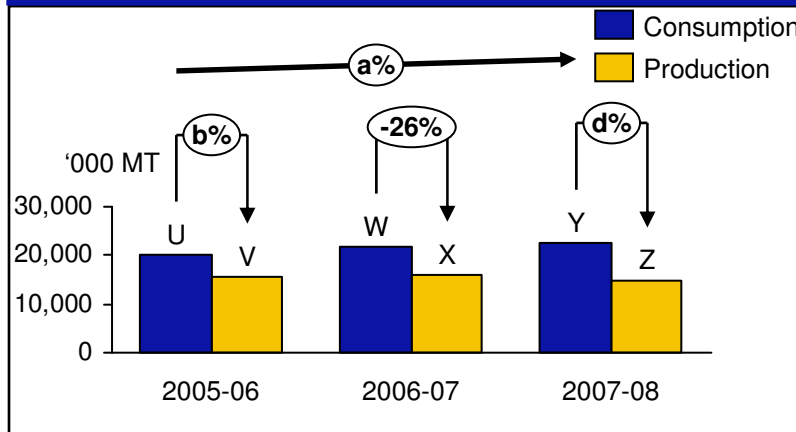
- Government interference in production and price dampens investment potential in this sector as it makes it a low margin segment



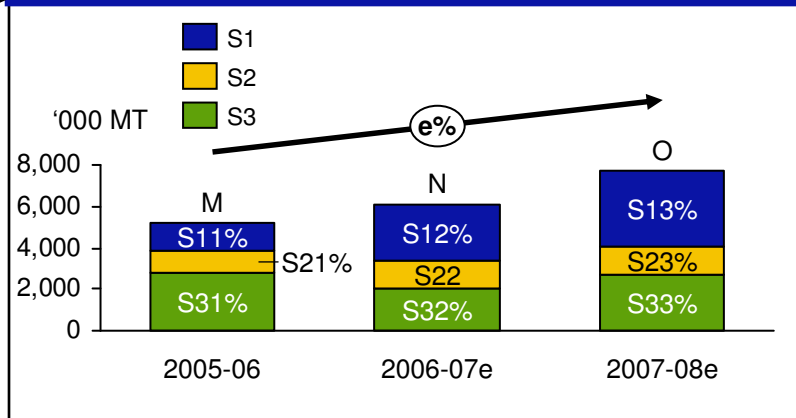
# A highly regulated sector; improved regulations and demand-supply mismatch has led to major investments

## Market Overview

**1** Demand increased at a CAGR of a% but supply saw a marginal de-growth leading to demand-supply mismatch...



**2** ...this has led to increase in imports which witnessed a CAGR of e% from 2006-08



**3** However, changing regulatory environment is expected to augur growth

- To reduce dependence on imports of raw materials and fertilizers:
  - Many companies are seeking partnerships abroad for urea, phosphoric acid and other critical inputs which has facilitated them assured source of supply of raw materials
- International market, for fertilizers like Product 1, is very sensitive to demand-supply scenario
  - To reduce the dependence on imports, government (since 20-) has allowed economically efficient units to produce beyond their reassessed capacity
- Increasing focus on self sufficiency and changing regulatory environment has facilitated higher investments from public and private sectors
- State 1, State 2, State 3, State 4, State 5, State 6, State 7, State 8 are the largest consumers of fertilizers

### Market segmentation

Nitrogenous

Phosphatic

Potassium

Complex



- Executive Summary
- Industry Value Chain
- Market Overview
- Overview of Tractors Industry
- Markets
- Drivers & Challenges
- Competition
- Corporate Actions and Investments

# Executive Summary

## Market

- Indian agricultural equipment sector was valued at INR X bn and expected to witness a CAGR of ~a% in the period 20-- - --
- Tractors and tillers have been the main drivers of the industry, which constitute b% of the market share
- The total sales of tractors and tillers witnessed a CAGR of c% in the period 20-- - --; in terms of volumes India is one of the largest tractors market in the world

## Drivers and challenges

### *Drivers:*

- *Availability of credit*
- *Low penetration of tractors*
- *Low farm availability*
- *Opportunity in the new markets and products*

### *Challenges:*

- *Cost constraints*
- *Fragmentation of land*
- *Erratic monsoons*

## Competition

- The agricultural equipment market is dominated by a few major players competing for a larger market share
- Most large players have Product 1 as a part of their portfolio. The cyclical nature of the industry had led the players to find new markets like construction industry (for their Product 1 business) and also widen their market portfolio

## Conclusion

- Technological innovation and the acceptance of new technology by farmers is expected to drive the sector. Many companies like Company 1, Company 2 and Company 3 are entering new markets which were earlier dominated by the unorganized sector. This will positively affect their bottom lines. However, the penetration in these new markets is expected to be slow



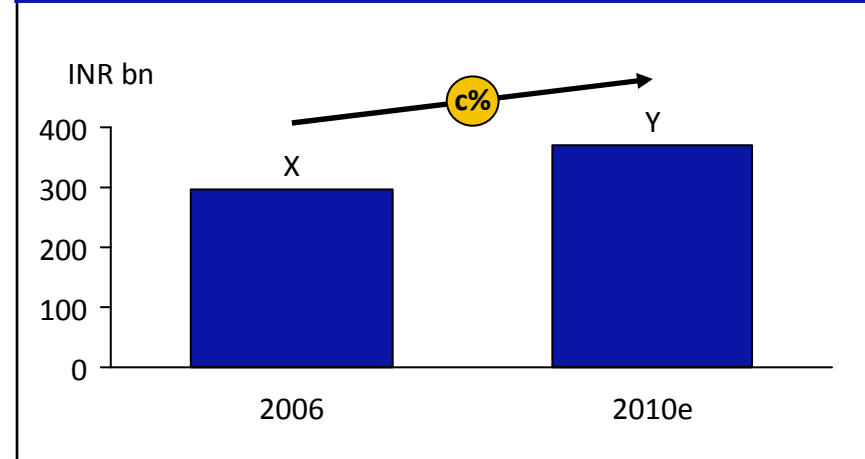
# Indian agricultural equipment industry is expected to grow steadily driven by tractors and tillers

## Overview of the Indian Agricultural Equipment Industry

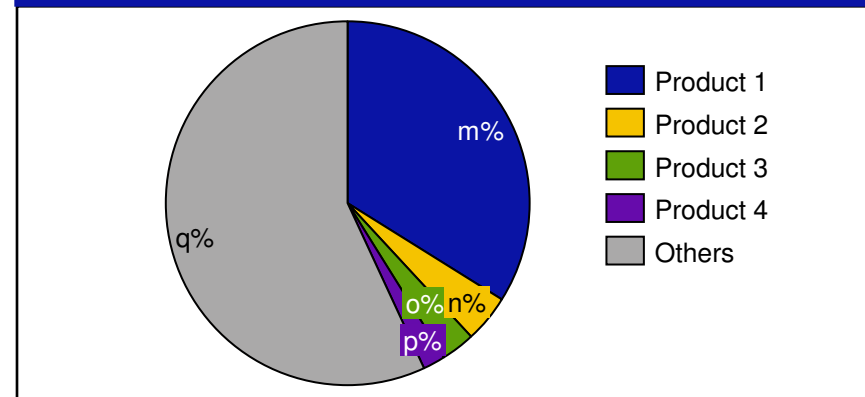
### Market Overview

- Indian agricultural equipment (AE) market accounted for a% of the global AE market in 20--
- Tractor and tiller are the two major equipments manufactured by the organized sector in India
  - Other major agricultural equipments and machineries manufactured in India include harvesters, plant protection equipment, drip irrigation and micro-sprinkler
- India's major exports of farm equipments are to Region 1, Region 2, Region 3 and Region 4
- New markets, new product portfolio and rising credit availability from the government is expected to drive the industry
- Cost constraints and fragmentation of land are the major barriers to growth
- The industry is dominated by the unorganized sector with a market share of over m%

### 1 Indian AE market witnessed a CAGR of c% for the period 20--



### 2 ...driven by tractors and tillers which constitute ~d% of the total market



Source:



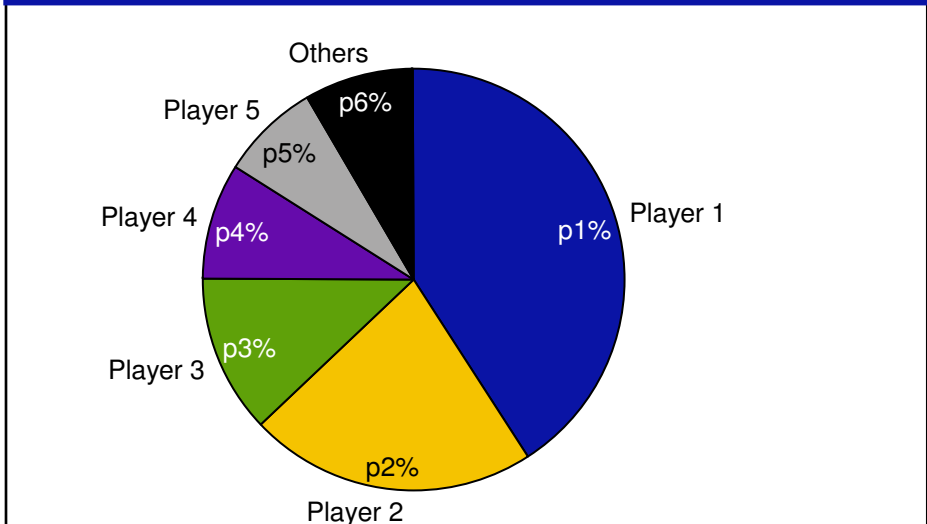
# Cyclical nature of the tractor business has led to companies finding new markets or widening their equipment portfolio

## Competition

### Competitive Landscape

- The AE market is dominated by a few major players competing for larger market shares; and a few players have also grown inorganically
- Most large players have tractors as a part of their product portfolio
  - Player 1 is the largest player with the largest sales and distribution network and is the market leader with ~a% of market share
  - Player 2 has an edge over competitors in product development and technological expertise
  - Southern India is dominated by Player 3

### Market Share – Tractors (20--)



### Companies are entering new markets to cope up with cyclicity

- Due to cyclical nature of tractors business, most companies in the segment are widening their portfolios
  - Player 4 – It has established several businesses including power generator and engines, crop harvester and cutters, agriculture services and seeds
  - Player 5 - It increased its agricultural equipment portfolio by adding m new products in 20-- and plans to add another n new products

### Financial performance of a few major companies

Company	Revenues (INR mn)	Net Income (INR mn)	NIM (%)
Player 1	R1	NI1	r%
Player 2	R2	NI2	t%
Player 3	R3	NI3	u%

Source:





- Executive Summary
- Market Overview
  - Warehousing
  - Cold Chains
- Drivers & Challenges
- Trends
- Competition
- PE Investments



# Executive Summary

## Market Overview

- Agricultural warehousing industry forms a small part of the overall warehousing industry and is growing gradually
- Market size of agricultural warehousing was valued at INR X-Y bn in 20-- - -- and it is expected to grow at a-b% CAGR till 20-- - - --
- Cold Storage market in India is estimated to grow at w% CAGR with private players dominating the market

## Drivers & Challenges

### *Drivers:*

- *Growth in Organized Retail*
- *Shift towards horticultural crops*
- *Growth in Processed Food Sector*
- *Government Initiatives*
- *Investments*

### *Challenges:*

- *Lack of Logistical Support*
- *Uneven Distribution of Cold chains*
- *Cost Structure*
- *Power Supply*
- *Inadequate Infrastructure & Resources*

## Trends

- Backward Integration, PPP Model, refrigerated warehouses at airports, and rail based reefers are key trends for this segment

## Competition

- PSUs like Company 1, Company 2 and Company 3 account for d% of the organized agricultural warehousing segment
- Current cold chain capacity in the organized sector is around R tonnes and it is likely to witness capacity addition & investments in next l years

## Conclusion

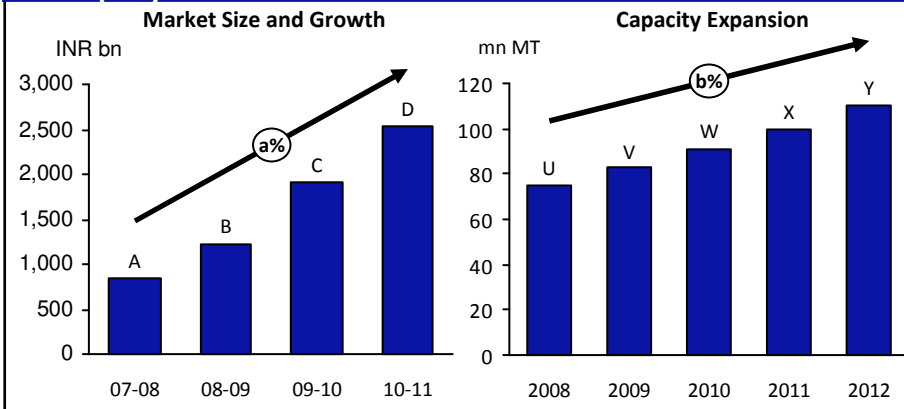
- Growth in organized retail and food processing, increasing government initiatives has made the segment very attractive
- PE investments levels, by 20--, towards the development of warehousing space is estimated to be INR w bn



# Agricultural warehousing industry forms a small part of the overall warehousing industry and is growing gradually

## Agricultural Warehousing Industry Overview

### 1 Overall warehousing industry is expected to grow rapidly ...



### 2 ... however, the agricultural warehouse accounts for just m% of the total warehousing industry, and has shown slow growth

- Market size of agricultural warehousing was valued at INR Z-Q bn est. in 20-- --
- It grew at g%-h% p.a. CAGR between 20-- -- and 20-- -- and is expected to grow at w%-e% p.a. CAGR between 20-- -- and 20-- --
- Competitive landscape in the agricultural warehousing industry is dominated by state-owned firms
- The factors responsible for slow growth are low rates and prime focus on industrial warehousing

### Overview - Warehousing

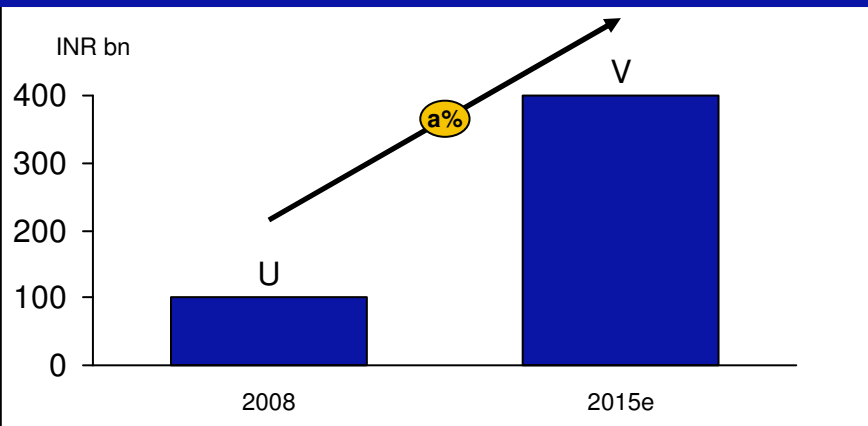
- Warehouse management in India largely follows the B agent model
  - Warehouses are in the form of depots or stocking points managed by agents for companies on a contractual basis
  - Companies use these depots to facilitate partly the transfer of goods between stock points
  - Value-added services provided include packaging, product mixing/bundling, order processing, inventory mgmt
- Classification depending on ownership and usage
  - Private - owned, operated by private entities or individuals
  - Public - licensed by the govt. to private entities, individuals or cooperative societies
  - Bonded - licensed to accept import goods for storage until payment of customs duty
- Warehousing business has high operating leverage with s% of costs being fixed in nature
  - Profitability is vulnerable to changes in utilization levels
  - Most players operate at competitive prices
- Rates charged are half in case of agricultural warehousing as compared with industrial warehousing, given its priority sector status and large players being govt.-owned



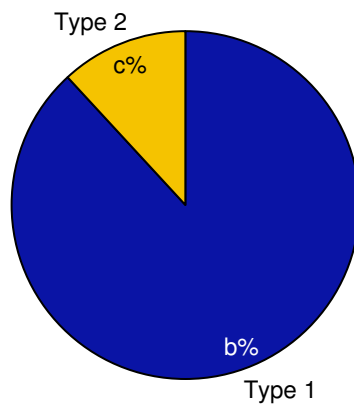
# Cold Storage market in India is estimated to grow strongly with private players dominating the market

## Cold Chain Industry Overview

1 The cold chain industry is expected to reach INR V bn by 20--...



2 with surface storage contributing 88% to the overall cold chain market

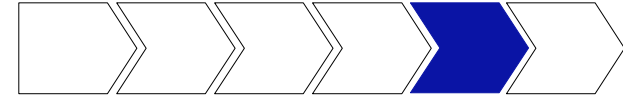


## Overview – Cold Chains

- A cold chain is a temperature-controlled supply chain, it consists of storage and distribution activities which maintains a product at a given temperature range
- Cold chains market in India is at a nascent stage
  - Cold storage facilities in India is available for only d% of agricultural produce
- Private players dominate the market though state owned players are also present
- Leading private players in cold chains are:
  - Company 1
  - Company 2
  - Company 3
  - Company 4
- It can be divided into 2 broad segments:
  - **Surface Storage:** Consists of refrigerated warehouses for storage of essential products
  - **Refrigerated Transport:** Refrigerator trucks, cars, van, rail, containers, ships for transporting perishable products

Source:





- Executive Summary
- Market Overview
- Product Segments
- Drivers and Challenges
- Competition
- Corporate Actions and Investments

# Executive Summary

## Market Overview

- The food processing industry is valued at INR A trillion (USD B bn) and is expected to witness a CAGR of c% (20-- - 20--)
- States like Sate 1, State2, State 3, State 4 and State 5 are highly attractive for food processing industry

## Product Segments

- Dairy products and fruits & vegetables are the most attractive segments for investments
- Packaged foods, beverages and staples are characterized by high volumes and low margins

## Drivers & Challenges

### *Drivers:*

- *Increasing consumer spend on processed foods*
- *India's competitive edge*
- *Growing food retailing in India*
- *Government support*
- *Growth in food processing exports*
- *Growth in terminal markets*
- *Low level of penetration in domestic market*

### *Challenges:*

- *Lack of integrated supply chain and scale of operations*
- *Limited use of technology in food processing*
- *High taxes on branded agricultural products*

## Competition

- Indian food processing sector is highly competitive with many foreign players in the market
- More players are planning to tap the mass market in segments like Segment 1, Segment 2, Segment 3, and Segment 4

## Conclusion

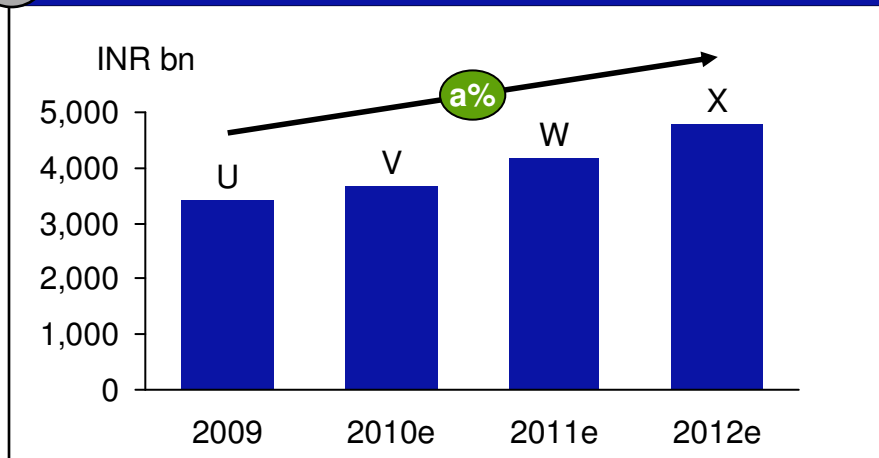
- Increasing retailing and higher consumer spend is expected to increase the penetration of processing food in India
- Low penetration in the sector offers immense opportunities for growth hence large PE investments is seen from 20-- to 20--



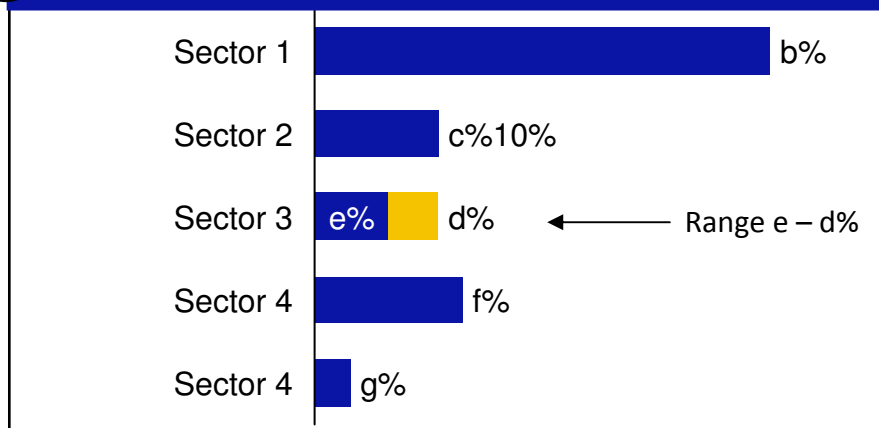
# Food processing industry in India has huge untapped potential and offers scope for large investments

## Food Processing Sector Overview

1 Food processing sector is expected to grow at a CAGR of a% from 20-- to 20-- ...



2 ... with Sector 1 having the highest penetration in the market

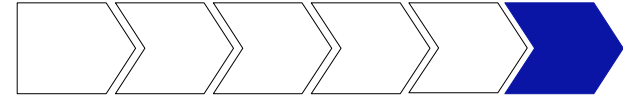


## Market Overview

- The industry is valued at INR M trillion (USD W bn) and is expected to witness a CAGR of b% in the period 20-- - 20--
- India is one of the top producers of milk, pulses, sugarcane and tea in the world
- Government has taken major initiatives towards ensuring multi-fold growth in this sector that has an investment opportunity of about INR G trillion (USD H bn) by 20--
- Mega Food Parks are coming up in India to integrate the supply chain and promote food processing
- Foreign direct investments was ~INR R bn (USD T mn) in 20--- --
- States like State 1, State 2 and State 3 are highly attractive for food processing industry

Source:





- Executive Summary
- Market Overview
- Trends
- Drivers & Challenges
- Competition
- PE Investments

# Executive Summary

## Market

- The global organic food market in 20-- is valued at INR A trillion and is expected at b%
- In India, organic food products consists of c% of the total organic product market
- Certification of the organic food is one of the major steps taken by the government and an important driver for the export growth, as international markets is for only certified products

## Drivers and challenges

### **Drivers:**

- **Increasing health consciousness of the people**
- **Huge export market**
- **Increasing organized retail**
- **Government initiatives**

### **Challenges:**

- **High prices**
- **Certification barrier**
- **Lack of integrated supply chain**

## Competition

- The organic food, is at a nascent stage. However, emergence of many players in a short period has led to increased competition
- Considerable competition is seen among the producers, wholesalers and promoters of organic food

## Conclusion

- Increasing health consciousness, organized retail and rising income levels are the factors expected to drive the sector.
- There is huge export potential due to established markets like Region 1, Region 2, Region 3, Region 4 and Region 5. However, challenges like certification barrier needs to be dealt with for further boosting the exports market

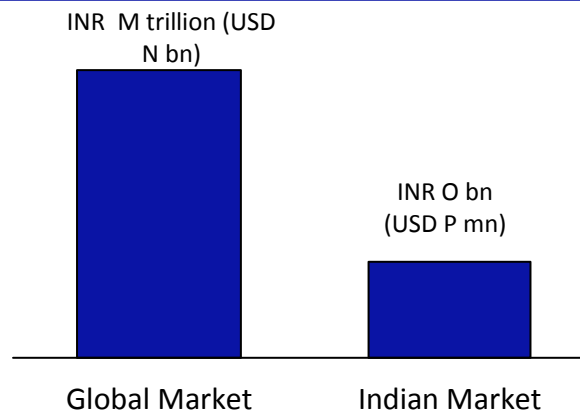


# Indian organic food market was valued at INR U bn in 20-- and has vast potential in domestic as well as export markets

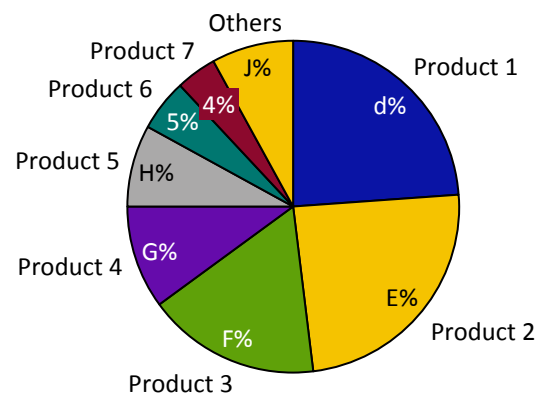
## Market Overview

- The global organic food market in 20-- is valued at INR X trillion (USD W bn) and is expected to grow at a% to reach INR Y trillion (USD V bn) by 20--
- The five major markets are Country 1, Country 2, Country 3, Country 4, and Country 5
  - Country 1 is the largest market and consists of ~b% of total global market
- In India, organic food products consists of c% of the total organic product market
- The major drivers are increasing health consciousness among people and government support
- Rice and Tea are the largest produce and constitute ~d% of total production
- Due to low penetration in the domestic market, majority of organic products are exported from India
  - Exports were valued at INR E bn in 20-- - -
  - Most of the products are exported to Country 3

## Organic Foods, Market size, 20-- - -



## Total production of organic food in India, X M.T



# Organic Food: Company Profiles (3/3)

# SAMPLE

Company	Business Description
<b>Company 1</b>	<ul style="list-style-type: none"> <li>• Company 1 started as a program of the Research Foundation for science, Technology and Ecology (RFSTE) in 19--</li> <li>• It has a network of seed keepers and organic producers spread across a states in India</li> <li>• It has its own seed bank and organic farm spread over an area of b acres in State 2</li> <li>• Trained about B farmers in India in organic cultivation</li> <li>• Produces around M organic products like varieties of legumes, rice, cereals, flour, dry fruits, jams, pickles and tea</li> </ul>
<b>Company 2</b>	<ul style="list-style-type: none"> <li>• World's largest producer and exporter of organic basmati rice established in 19--</li> <li>• Carries out organic production in states like State 1, State 2 and State3</li> <li>• Exports its organic rice to countries like Country 1, Country 2, Country 3 and Country 4</li> <li>• It produces organic rice varieties like traditional basmati rice, pusa basmati rice, fair trade basmati rice and sells them under the brand name 'G'</li> </ul>
<b>Company 3</b>	<ul style="list-style-type: none"> <li>• It has more than T acres under organic cultivation in various states of India since 20--</li> <li>• It sells its organic products under the brand name 'H' from their own retail outlets and chain of supermarkets across India</li> <li>• Product portfolio includes fruits, vegetables, spices, pulses, honey, tea and coffee</li> <li>• Exclusive 'H' retail outlets are present in states like City 1, City 2, City 3 and City</li> </ul>
<b>Company 4</b>	<ul style="list-style-type: none"> <li>• K carried out organic farming in the state of X in India</li> <li>• Organic product portfolio includes cereals, pulses, tea, oilseeds and herb</li> </ul>

Source:



# Thank you for the attention

---

The Agriculture and Food Industry - India report is a part of Agriculture Industry Series. For more detailed information or customized research requirements please contact:

## Gagan Uppal

Phone: +91 22 4098 7530

E-Mail: [gagan.uppal@netscribes.com](mailto:gagan.uppal@netscribes.com)

## Gaurav Kumar

Phone: +91 33 4064 6214

E-Mail: [gaurav.kumar@netscribes.com](mailto:gaurav.kumar@netscribes.com)

*Research on India is a product of Netscribes (India) Pvt. Ltd. Research on India is dedicated to disseminating information and providing quick insights on “hot” industries in India and other emerging markets. Track our new releases and major updates in these industries on*

  
**researchonindia.com**

### About Netscribes

*Netscribes is a knowledge-consulting and solutions firm with clientele across the globe. The company’s expertise spans areas of investment & business research, business & corporate intelligence, content-management services, and knowledge-software services. At its core lies a true value proposition that draws upon a vast knowledge base. Netscribes is a one-stop shop designed to fulfil clients’ profitability and growth objectives.*

***Disclaimer:** This report is published for general information only. Although high standards have been used the preparation, Research on India, Netscribes (India) Pvt. Ltd. or “Netscribes” is not responsible for any loss or damage arising from use of this document. This document is the sole property of Netscribes (India) Pvt. Ltd. and prior permission is required for guidelines on reproduction.*

