Agro and Food Processing
Sector Profile
Agro and Food Processing
India Scenario
Overview

LARGEST PRODUCER OF MAJOR AGRICULTURAL AND HORTICULTURE CROPS

- India is the largest producer of pulses, milk, tea, cashew and jute; and the 2nd largest producer of wheat, rice, fruits and vegetables, sugarcane, cotton and oilseeds.
- Total food grains production in India reached an all-time high of 252.68 million tonnes in FY15*

Agriculture accounts for ~14% of gross domestic product (GDP) and about 10 per cent of India’s total exports

- India has 60% cultivable land compared to 11% world average
- India has 157.35 million hectares arable land, which is more than China, USA, Japan

Production of food grains (million tonnes) in Kharif and Rabi Seasons

<table>
<thead>
<tr>
<th></th>
<th>Kharif</th>
<th>Rabi</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY08</td>
<td>121</td>
<td>110</td>
</tr>
<tr>
<td>FY09</td>
<td>118</td>
<td>116</td>
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<td>FY10</td>
<td>104</td>
<td>114</td>
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<td>FY11</td>
<td>121</td>
<td>124</td>
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<td>FY12</td>
<td>131</td>
<td>128</td>
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<td>FY13</td>
<td>132</td>
<td>124</td>
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<tr>
<td>FY14</td>
<td>129</td>
<td>128</td>
</tr>
<tr>
<td>FY15*</td>
<td>126</td>
<td>126</td>
</tr>
</tbody>
</table>

Sources: Ministry of Agriculture, Government of India
Exports of Agriculture Products

India's agro exports during FY 15 touched USD 38.70 billion as against USD 15 billion in FY 11.

India is the world's largest rice exporter and second in terms of wheat exports.

Exports Value of Major Products (USD million) (2014-15)

- Buffalo Meat: 4781 USD million
- Basmati Rice: 4518 USD million
- Non Basmati Rice: 420 USD million
- Guargum: 667 USD million
- Wheat: 760 USD million
- Groundnuts: 542 USD million
- Maize: 3335 USD million
- Cereal Productions: 4781 USD million
- Other Processed Fruits & Vegetables: 1,552 USD million
- Other Processed Products: 829 USD million

Major Exports Destinations (USD million) (2014-15)

- Vietnam: 2505 USD million
- Saudi Arabia: 1824 USD million
- United States: 1,786 USD million
- Iran: 1,299 USD million
- UAE: 1,135 USD million
- Bangladesh: 1,269 USD million
- Malaysia: 787 USD million
- Indonesia: 610 USD million
- Nepal: 497 USD million

Sources: Ministry of Food Processing Industries (MoFPI), Agricultural and Processed Food Products Export Development Authority, IBEF *Data is for April – September 2015
Horticulture Crops Overview

CAGR for production (2003-04 to 2013-14)

- Aromatic and Medicinal Plants: 21.17%
- Loose Flowers: 14.76%
- Fruits: 6.80%
- Vegetables: 6.31%
- Plantation Crops: 2.16%
- Spices: 1.46%

• During 2014-15, India exported fruits and vegetables worth INR 7474.14 crores which comprised of fruits worth INR 2771.32 crores and vegetables worth INR 4702.78 crores.

• Exports of Horticulture has shown an increase of 26.6% between 2011-12 and 2013-14

Sources: Ministry of Food Processing Industries (MoFPI), Agricultural and Processed Food Products Export Development Authority
*from 2004-05 to 2013-14
Horticulture Crops

Horticulture crops registered an all time high production of 277 million tonnes in 2013-14.

HORTICULTURE SECTOR
FRUITS | VEGETABLES | FLOWERS | AROMATIC AND MEDICINAL PLANT | SPICES | PLANTATION CROPS

FRUITS: India is 2\textsuperscript{nd} largest producer of fruits
- Largest producer of fruits like mango, banana, guava, papaya.
- Mangoes, Walnuts, Grapes, Bananas, Pomegranates are largely exported from the country.
- The major export destinations for fruits and vegetables are UAE, Bangladesh, Malaysia, UK, Netherlands, Pakistan, Saudi Arabia, Sri Lanka and Nepal.

VEGETABLES: India is 2\textsuperscript{nd} largest producer of vegetables
- India is a leader in production of peas and okra.
- India occupies 1\textsuperscript{st} position in production of okra, 2\textsuperscript{nd} in brinjal, cabbage, cauliflower and onion and 3\textsuperscript{rd} in potato and tomato in the world.
- Onions, Okra, Bitter Gourd, Green Chilles, Mushrooms and Potatoes are largely exported from the country.

SPICES
- India is the largest producer, consumer and exporter of spices and spice products in the world.
- India produces a wide variety of spices like black pepper, chilies, ginger, turmeric, garlic, coriander, tamarind, cumin, cardamom & a variety of tree and seed spices.

Sources: Indian Horticulture Database 2014, Agricultural and Processed Food Products Export Development Authority
Animal Husbandry and Dairy

- India has the largest population of milch animals in the world
- India’s exports of Animal Products was INR 32,529 crore in 2014-15 which include major products like Buffalo Meat, Sheep/Goat Meat, Poultry Products, Dairy Products, Animal Casing, Processed Meat, Other Meat and Natural Honey
- India has exported 557 Thousand Tonnes of Poultry products worth INR 651 crore during year 2014-15. The poultry products include live poultry, poultry meat and eggs (dried, cooked, frozen and preserved)
- India is largest producer of Buffalo meat (1.4 Million Tonnes)

DAIRY: India is the largest producer of milk with 16% share in total milk production in the world
- India is the largest exporter of dairy products and exported 66 Million Tonnes of dairy products worth INR 1205 crore in 2014-15. The various dairy products are cheese, butter, ice-cream, ghee, milk-powder, curd.
- Major Export Destinations (2014-15): Bangladesh | UAE | Pakistan | Nepal | Bhutan | Philippines

Sources: Agricultural and Processed Food Products Export Development Authority
India is 2nd largest producer of fish in the world, contributing about 5.7% of global production

• The total fish production during 2014-15 is estimated at 10.1 Million Tonnes with a contribution of 6.6 Million Tonnes from inland sector and 3.5 Million Tonnes from marine sector respectively.

• During 2013-14, fish and fish products export was about 984 Thousand Tonnes worth about INR 30,213 crore.

STRENGTHS:

• Employs 14 million people
• Contribution of nearly 1% of GDP and 5% of the total GDP of agriculture & allied sectors.
• Contributes about 20% of national agriculture export
• 8,118 km long coastline with 1,537 fish landing centers across the coastline

Sources: Department of Animal Husbandry, Dairying & Fisheries; Agricultural and Processed Food Products Export Development Authority
Food Processing Industry

Food Processing Market Constituted 14% Of India’s GDP through Manufacturing In FY15

- Indian Food & Retail market is projected to touch USD 482 billion by FY2020
- Food Processing sector has the potential of attracting USD 33 billion of investment in coming years and generate employment of 9 million person days.

There is a tremendous opportunity for growth in the industry, with only about 2% of agricultural production currently being processed. The food processing industry ranked 5th largest sector in terms of production, consumption, export and expected growth in India.

Sources: Minister of Food Processing Industries (MOFPI), Technopak, IBEF
Exports of Processed Food

Value of exports of processed food has steadily increased with a CAGR of 20.53% for five years ending 2013-14.

Major export products from India are Marine products, Basmati Rice, Meat & Meat preparations, Rice other than Basmati, Cashews, Fresh Vegetables, Fresh Fruit

Export of Processed Food (USD Million)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Value (USD Million)</th>
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<tbody>
<tr>
<td>2009-10</td>
<td>14.8</td>
</tr>
<tr>
<td>2010-11</td>
<td>20.4</td>
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<tr>
<td>2011-12</td>
<td>31.8</td>
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<tr>
<td>2012-13</td>
<td>36.2</td>
</tr>
<tr>
<td>2013-14</td>
<td>37.8</td>
</tr>
</tbody>
</table>

Major Exports Destinations for processed food (USD millions) (FY 16 – Till August 2015)

- Saudi Arabia: 622
- UAE: 566
- Vietnam: 195
- USA: 193
- Malaysia: 187
- Iran: 176
- Egypt: 145
- Kuwait: 128
- Bangladesh: 118
- Nepal: 117

Sources: Minister of Food Processing Industries (MOFPI), Agricultural and Processed Food Products Export Development Authority

* All agricultural produce when exported undergo an element of processing. Hence all edible agricultural commodities exported are included in the export data.
Food Processing Sector

**Major Initiatives:**

**Income Tax** – 100% Tax Exemption for first 5 Years of Operation for New units in the business of processing, preservation and packaging of fruits and vegetables

**Service Tax** – Exemption of service tax for storage, handling and transportation of processed food

**Customs Duty** – Benefits to projects of cold storage and handling system for processed food

**FDI & Credit Availability** – 100% FDI allowed under automatic route. Soft loan is extended of up to 95% of project cost.

**Investment Opportunities:**

**Mega Food Parks:**
- Storage facilities
- Food processing equipment’s
- Contemporary plug & play sheds
- Packaging facilities
- Cold storage facilities
- Bulk material handling equipment
- Grading & sorting facility
- Enabling Infrastructure

**Cold Chain logistics:**
- Controlled atmosphere / modified atmosphere storage
- Pre cooling at farm
- Modern pack houses
- Ripening chambers
- Reefer technology
- Refrigerated transport solutions
- Energy efficiency solutions

**Food Processing Machinery:**
- Packaging equipment
- Water and air pollution control equipment
### Major Initiatives in Agriculture Sector

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Details</th>
</tr>
</thead>
</table>
| **Pradhan Mantri Krishi Sinchai Yojana (PMKSY)** |  ■ Expand cultivable area under irrigation (Har Khet ko pani) (Water for every farm)  
  ■ Convergence of investments in irrigation; Greater private investments in irrigation  
  ■ Improve on-farm water use efficiency (Jal Sinchan)  
  ■ Sustainable water conservation practices (Jal Sanchay)  
  ■ Precision-irrigation and water saving technologies (More crop per drop) |
| **Pradhan Mantri Fasal Bima Yojana (PMFBY)** |  ■ To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases  
  ■ To ensure flow of credit to the agriculture sector. |
| **National Agriculture Market (e-NAM)** |  ■ National Agriculture Market (NAM) is a national e-market platform for transparent sale transactions and price discovery to create a unified national market for agricultural commodities through the existing Agricultural Produce Marketing Committee (APMCs),  
  ■ The NAM Portal provides a single window service for all APMC related information and services. This includes commodity arrivals & prices, buy & sell trade offers, provision to respond to trade offers, among other services. |
| **Kisan Suvidha and Pusa Krishi mobile Apps** |  ■ Farmers can get easy solutions to their farming problems from scientists and information about weather and can take measures to save crops accordingly  
  ■ The app will provide farmers with information related to new varieties of crops developed by Indian Council of Agriculture Research (ICAR), resource conserving cultivation practices as well as farm machinery and its implementation will help in increasing returns to farmers. |
## Major Initiatives in Agriculture Sector

### Soil Health Card Scheme
- Agri scientists and experts will analyze the strength and weaknesses (micro-nutrients deficiency) of the soil based on the soil sample test and will suggest measures to deal with it in the cards issued to farmers to help boost productivity and bring about increased prosperity.

### Integrated Scheme for Agricultural Marketing (ISAM)
- To support framing of grade standards and quality certification of agricultural commodities to help farmers get better and remunerative prices for their graded produce.
- To use ICT as a vehicle of extension to sensitize and orient farmers to respond to new challenges in agricultural marketing.

### National Mission for Sustainable Agriculture (NMSA)
- Primary objective is to ensure food security and protect various resources such as land, water, biodiversity and genetic resources along with facing challenges and threats such as climate change.

### Integrated Scheme of Oilseeds, Pulses, Oil Palm & Maize (ISOPOM)
- Primarily targeted at small and marginal farmers who raise oilseeds under rain fed conditions in arid & semi arid areas. In the 11th plan period, implemented across 14 states for oilseeds and pulses, 15 states for maize and 9 states for palm oil.

### National Food Security Mission (NFSM)
- Launched in 2007 to improve country’s overall crop production especially rice, wheat and pulses by introducing technological components.

### Rashtriya Krishi Vikas Yojana (RKVY)
- It was launched to incentivize the States to increase the share of investment in agriculture in their State plans.
Agro and Food Processing
Gujarat Scenario
Gujarat: A leading agricultural producer

- **Cotton**
  - 1/3 production of the country
  - 26.33 lakh ha. & 104.55 lakh bales production

- **Groundnut**
  - 30% production of the country
  - 18.05 lakh ha. Area & 33.76 LAKH MT Prodn with yield of 1870 kg/ha.

- **Castor**
  - Highest productivity in world (1978kg/ha.)
  - 84% production in country
  - 4.91 lakh ha. & 9.71 lakh MT production

- **Highest productivity of Cummin**
- 90% of India’s total Fennel production
- Monopoly in India in Isabgul processing
- GIR KESAR MANGO specialty of the state with GI status
LAND UTILIZATION

- Total Geographical Area : 19.6 million ha.
- Net Area Sown : 9 m ha.
- Total Cropped Area : 13.9 m ha.
- Gross Irrigated area : 4.47 m ha.
- Net Irrigated area : 4.32 m ha.
- Total Operational land holder : 4.88 million
- Average land holding : 2.03 ha.
During the period 2011-12 to 2014-15(Q), the GSDP for agriculture sector including animal husbandry sector had increased from INR 93481 crore to INR 99591 crore at constant (2011-12) prices.

<table>
<thead>
<tr>
<th>Crop</th>
<th>CAGR for production (2009-10 to 2014-15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>12.1%</td>
</tr>
<tr>
<td>Groundnut</td>
<td>11.4%</td>
</tr>
<tr>
<td>Maize</td>
<td>11.4%</td>
</tr>
<tr>
<td>Wheat</td>
<td>5.41%</td>
</tr>
<tr>
<td>Cotton</td>
<td>5.39%</td>
</tr>
</tbody>
</table>

Sources: CRN India; Socio-Economic Review 2015-16
Overview

**MAJOR AGRICULTURAL CROPS:**
Wheat, Cotton, Groundnut, Castor, Rice, Bajra, Maize, Mustard, Green Gram, Sugarcane and Pigeon pea, Cumin

**Performance of Agriculture Sector at Constant (2004-05) Prices (INR crore)**

- 2011-12 (P): 93481
- 2012-13 (P): 77415
- 2013-14 (P): 101764
- 2014-15 (Q): 99591

**Area covered under major crops in Kharif Season (lakh hectares) (2015)**
- Cotton: 27.61
- Groundnut: 7.61
- Castor: 7.84
- Rice: 12.95
- Maize: 3.0
- Pigeon Pea: 1.46
- Bajra: 2.35

Total Area - 85.27 lakh hectares

**Area covered under major crops in Rabi Season (lakh hectares) (2015)**
- Wheat: 2.98
- Rapeseeds and Mustard: 1.28
- Cumin: 0.58
- Gram: 0.56
- Sugarcane: 1.7

Total Area - 12.68 lakh hectares

Sources: Socio-Economic Review 2015-16
*P – Provisional, Q – Quick Estimates
Agriculture Strengths and Production Clusters

**Advantage Gujarat**

- 8 Agro-climatic zones
- Diversity of climate and cropping
- 40+ major crops
- Strong market infrastructure system
- Excellent Road, Rail & Port connectivity
- Enterprising farmer base
- Entrepreneur friendly policy
- Increasing adoption of Hi-tech Agriculture
- 1600 km of long coastal belt
Horticulture

**Major Fruits:** Banana, Mango, Citrus and Sapota (Chiku)

**Major Vegetables:** Onion, Potato, Brinjal, Tomato, Okra and Cucurbit

**Major Spices:** Cumin, Fennel, Garlic, Chilly and Ginger

**Major Flowers:** Rose, Marigold, Lilly

**Gujarat State Horticulture Mission (GSHM),** a registered society has been formed for the implementation of “National Horticultural Mission (NHM)” in the state.

- The aim is to double the horticulture production and income upto the year 2014-15 by adopting end to end approach with simultaneous development of post harvest infrastructure and marketing facilities.

Sources: Socio-Economic Review 2015-16, Agriculture And Co-operation Department, Government of Gujarat
Dairy

- Ranks 4\textsuperscript{th} in terms of Milk Production in the country which is about 8.1\% of entire country
- 8.82 million milch animals in the state as per 19\textsuperscript{th} Livestock Census
- Total milk production in State in 2014-15 is 11.69 Million tonnes.
- Gujarat has 51 dairy plants, 2\textsuperscript{nd} highest in the country

Milk Production (Million Tonnes)

<table>
<thead>
<tr>
<th>Year</th>
<th>Milk Production (Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-06</td>
<td>6.96</td>
</tr>
<tr>
<td>2006-07</td>
<td>7.53</td>
</tr>
<tr>
<td>2007-08</td>
<td>7.91</td>
</tr>
<tr>
<td>2008-09</td>
<td>8.39</td>
</tr>
<tr>
<td>2009-10</td>
<td>8.84</td>
</tr>
<tr>
<td>2010-11</td>
<td>9.32</td>
</tr>
<tr>
<td>2011-12</td>
<td>9.81</td>
</tr>
<tr>
<td>2012-13</td>
<td>10.3</td>
</tr>
<tr>
<td>2013-14</td>
<td>11.1</td>
</tr>
<tr>
<td>2014-15</td>
<td>11.7</td>
</tr>
</tbody>
</table>

- District Co-op. Milk Producer Unions: 18
- Milk Co-operative Societies: 17,846
- Members: 33.37 Lakh
- Installed Capacity: 164.50 LLPD
- Milk Procured: 136.33 LLPD
- Milk Distributed: 89.54 LLPD

Dairy sector in Gujarat is majorly dominated by 17,846 cooperative societies, private players have been expanding their production and leverages the increased domestic demand.

Major Private Players: AMUL, Vimal Dairy, Jain Dairy, Flourish Purefoods

Anand Milk Union Limited (AMUL) established in 1946 in Anand, is Asia’s biggest dairy with revenue of USD 3.4 billion in 2014-15

Sources: Socio-Economic Review 2015-16
Animal Husbandry

12 Intensive Poultry Development Projects (IPDP), 5 District Poultry Extension Centres, 85 Poultry Service Centres and 23 Intensive Cattle Development Projects (ICDP) are functioning in the state.

During the year 2014-15, 7600 Animal Health Camps (Pashu Arogya Mela) were held in which 4.38 Million animals were treated.

### Major Livestock Products

<table>
<thead>
<tr>
<th></th>
<th>2013-14</th>
<th>2014-15</th>
<th>2015-16 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk (In million tonnes)</td>
<td>11.11</td>
<td>11.69</td>
<td>12.26</td>
</tr>
<tr>
<td>Eggs (In million numbers)</td>
<td>1555.07</td>
<td>1656.84</td>
<td>1721.59</td>
</tr>
<tr>
<td>Wool (In million kilos)</td>
<td>2.58</td>
<td>2.58</td>
<td>2.28</td>
</tr>
</tbody>
</table>

GUJARAT HAS QUALITY LIVESTOCK LIKE:-
1. Cattle: Gir and Kankrej
2. Buffaloes: Surti, Mahesani, jafarbadi and Banni
3. Goats: Surti, Zalawadi, Mehsani, Gohilwadi & Kachchhi
4. Sheep: Patanwadi, Marwadi
5. Horses: Kathiawadi and Marwadi
6. Camels: Kachchhi and Marwadi

Animal husbandry plays a vital role in Gujarat’s rural economy, while contributing nearly 5.32% to the state GSDP.

Sources: Socio-Economic Review 2015-16; Gujarat Livelihood Promotion Corporation, Agriculture and Co-operation. dept. Gujarat
Fisheries

- Gujarat stands first in Marine fish production.
- Gujarat’s 1600 km long coastline which is broken by several bays, inlets, estuaries and marshy lands is available for fishing activities extends from Lakhpat in Kachchh district in north to Umargaon in Valsad district in south
- Important commercial varieties of fish namely Pomfret, Jew fish, Bombay duck, Shrimp, Lobster, Squid, Cuttle fish, Silver bar, Hilsa, Shark, Catfish, Mullets, etc. are caught in large quantities.
- Export of Fisheries has increased from USD 175.6 million in 2007-08 to USD 560.8 million in 2014-15, a CAGR of 18%; it contributes 23.35% in the Nation’s overall value added marine products exports.
- Gujarat’s contribution in the National Marine Fish production is 20% in the year 2014-15 and its share in the GDP of the State is around 0.84%.

<table>
<thead>
<tr>
<th>Fish Production ('000 Tonnes)</th>
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</thead>
<tbody>
<tr>
<td>Marine</td>
</tr>
<tr>
<td>689</td>
</tr>
<tr>
<td>86</td>
</tr>
</tbody>
</table>

**Strengths**

- Continental shelf – 1.64 lakh sq. km. (32% of India)
- Exclusive Economic Zone – 2.14 lakh sq. km. (11% of India)
- Number of Fish Landing Centers – 121 (7.8% of India)
- No of Fish Farmers Development Agencies (FFDAs) - 21

Sources: Socio-Economic Review 2015-16; Commissioner of Fisheries, Government of Gujarat
Harbors and Major Fish Landing Centers

MAP 1: STATUS OF EXISTING AND PROPOSED HARBOURS IN GUJARAT

- Jakhau
- Okha
- Porbandar
- Mangrol
- Veraval
- Mandvi
- Bhadreshwar
- Surajbari
- Navlakhi
- Sachana
- Salaya
- Rupen
- Miyani
- Chorwad
- Muldwarka
- Magrolbara
- Madhwd
- Navabandar
- Umarsadi & Magod Dungri
- Bhavnagar
- Chandi
- Rajpara
- Kotda
- Maroli
- Vansi
- Borsilimora
- Vansdli

Status of Harbours
- Existing (5)
- Proposed (5)

MAP 2: MAJOR FISH LANDING CENTERS IN GUJARAT

- Major fish landing centers

Sources: Commissioner of Fisheries, Government of Gujarat
### Initiatives by GoG to enhance Production and Productivity (1/2)

<table>
<thead>
<tr>
<th>Natural Resource Management</th>
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<tbody>
<tr>
<td>• Soil health Management (42.39 Lakh SHCs distributed till 2013-14)</td>
</tr>
<tr>
<td>• Irrigation and Water Conservation practices: <strong>More Crop Per Drop</strong></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Farm Inputs</th>
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<tbody>
<tr>
<td>• Timely Availability of quality inputs; Seed Treatment Campaigns; Thrust on Micro Irrigation; Exclusive Company to Promote MIS; Large Scale Farm Mechanization</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agriculture Research and Extension</th>
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<tbody>
<tr>
<td>• i-Kisan Portal (10.69 lakh registered farmers till 2013-14); Massive Agriculture Extension Campaign (Krishi Mahotsava); Technology Support to Farmers</td>
</tr>
</tbody>
</table>
Initiatives by GoG to enhance Production and Productivity (2/2)

Crop Diversification
- Thrust on Integrated Agriculture Development
- Mission Mode Support even in 10 non-NHM districts

Policy Initiatives
- Reforms in Rural Electrification under Jyotigram Yojana
- Policy Level Government Initiatives for Rural Infrastructure
- Comprehensive Agro Business Policy: Chief Minister Mission on Food Processing

Infrastructure Development
- Public Investment in Agri & Marketing Infrastructure; Establishment of Post harvest Storage and Marketing Infrastructure at APMCs; Improvement in Agri-Technology Initiative; Improvement in Agriculture Power ('Immediate Power Connection Scheme 2013'). Irradiation Plant, Pack House
State Government Initiatives

Soil Health Card
Salient features:
• Well monitored report to farmers based on analysis
• Regular monitoring to get a long-term soil health record
• Guidance to improve the quality of the soil
• Crop-wise recommendations of nutrients and fertilizers required

Achievement
• First state to start Soil Health Card Programme
• 4.2 Million soil samples analyzed till date
• In 2013-14, 1.14 Million soil samples are collected and of them, 1.12 Million soil health cards are distributed to farmers in 2014-15, information of which is available online

Krushi Mahotsav
Salient features:
• 1 Month Long Intensive Extension Program since 2005
• Krushi Mela, Exhibition and Seminars/Talks
• Guidance to farmers about Agriculture related information
• Free kit distribution to small farmer

Achievement
• 8 Lakh farmers attended Krishi Mahotsava 2015
• 3 lakh cheque/sanction letter issued under assistance schemes in Krushi Mahotsav 2015
• 10,291 crop kits distributed

Sources: Socio-Economic Review 2015-16
State Government Initiatives
Irrigation

Sardar Sarovar Project (SSP)
- Will be **second largest in the world** with an aggregate volume of 6.82 million cu. m.
- Expected to provide irrigation benefits in over 74 talukas of 17 districts in the State
- Provide water for domestic and industrial uses in 9490 villages and 173 townships
- The dam covers 1.84 Mha (75% area drought prone) in Gujarat benefitting 1 million farmers
- The dam is expected to provide drinking water to 30 Million Population by 2021

Sujalam Safalam Yojana
Providing water to dry land and dry underground areas with an estimated investment of ~ **USD 10 billion (INR 6500 Crore)**
- Sujalam Safalam canal **links 21 rivers** of the state, spread over a **length of 332 km**
- 4786 villages and 58 Town of 12 district are planned to be covered

Sauni (Saurashtra Narmada Avtaran Irrigation) Yojana
- Aims to divert one MAFt excess over flowing flood water of Narmada allocated to Saurashtra Region
- These water will be distributed to 115 reservoirs of Eleven districts of Saurashtra benefitting 10 lakh acre land

## State Government Initiatives

### Micro Irrigation Scheme (MIS)
- To provide farmers professional Services on MIS coupled with required equipment & essential agro-inputs from the MIS Suppliers to improve Agriculture productivity and farmers prosperity at large

### Support for mechanization in agriculture
- Assistance for plough, tractor, power tiller, rotavator, tarpaulin, cultivator rake, decorticator machine,

### Seed assistance
- Assistance in sugarcane tissue culture, wheat seeds, integrated pest management material, fodder kits

### Assistance for use of fertilizer
- Assistance for use of organic fertilizers, gypsum, liquid organic fertilizer, vermicomposting unit

### Support for irrigation facility
- Assistance for open and underground pipelines, electric motor, submersible pump, oil engine

### Assistance for crop protection
- Assistance for knapsack sprayer, crop protection medicines, power operated sprayer

### Assistance for planting tools
- Assistance for multi crop planter sowing machine, seed drill sowing machine, land leveler, power thresher, reaper, power weeder

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Sources: Agriculture And Co-operation Department, Government of Gujarat
Krishi Mahotsav: Farmer Centric Model

Features
- Organized by Local Committee
- Beneficiary selection by Gram Sabha
- Lab to Land
- Proactive
Soil Health Cards:
Integrated approach to improve agriculture productivity

1. **Sample Collection**
   - Local Person (SSC/HSC Pass)

2. **Sample Analysis**
   - STL Agri Dept.
   - APMCs

3. **Soil Health Card Preparation**
   - Outsourcing for Data entry, Printing
   - Science College
   - Sugar Coop Lab

4. **Soil Health Card Distribution**
   - Extension functionaries & various campaign mode programme
Hi-tech Horticulture

- **Protected Cultivation**
  - Green House: 2295 Units
  - Net House: 3420 Units

- **Tissue culture Laboratory - 20**
  - 15 million Production capacity of Banana, Date palm & Parval (pointed gourd)

- **Mulching**
  - Maximum use in Watermelon, Papaya & Vegetable crops

- **Micro Irrigation**
  - Potato, Banana, Papaya, Pomegranate, Watermelon & other crops
ikhedut Portal: One Stop Solution

- Crop Advisory
- Fertilizer
- Scheme Benefits
- Market Rate
- Weather
- Input Information
- Problem Solution
- Credit Info
- Land records
- Crop Insurance

Farmer

Direct One stop Solution

www.ikhedut.gujarat.gov.in
Food Processing Industry

- More than 30,000 food processing units are operating in Gujarat providing employment to over 1 million people.
- 560 cold storage and fish processing units with capacity of 20,30,873 MT

Mega Food Parks:
- The Gujarat Agro Mega Food Park Pvt. Ltd. (project SPV) in Surat district is under development.
- Adani Food & Agro Processing Park Ltd. (AFAPPL) located in Mundra has been principally sanctioned.

Cold Chain Projects:
- 4th highest share in India's total cold chain storage capacity
- 8 projects have been approved by the Ministry in Gujarat

Major Private Players

Sources: Ministry of Food Processing Industries, Government of India; Agricultural and Processed Food Products Export Development Authority, ASSOCHAM
Value of exports of processed food has steadily increased with an average annual growth rate of 20.53% for five years ending 2013-14.

Export of Processed Food (USD Million)*


24.11% CAGR

Major Exports Destinations (USD millions) (FY 16 – Till August 2015)
- Saudi Arabia: 622
- UAE: 566
- Vietnam: 497
- USA: 428
- Malaysia: 317
- Iran: 314
- Egypt: 249
- Kuwait: 195
- Bangladesh: 193
- Nepal: 187
- Total: 21.5

Sources: Minister of Food Processing Industries (MOFPI), Agricultural and Processed Food Products Export Development Authority
* All agricultural produce when exported undergo an element of processing. Hence all edible agricultural commodities exported are included in the export data.
Comprehensive Agro Business Policy 2016-2021
VISION and OBJECTIVES

Vision: “To ensure food & nutritional security; & economic empowerment to the people through accelerated yet sustainable growth in agriculture”

OBJECTIVES:
- To promote water management practices
- To promote gender equity & enhance sensitization
- To ensure fodder security
- High priority to food & nutritional security
- To discourage migration, both seasonal & permanent, of rural people
- To promote diversification of agriculture
- To bridge the existing yield gap
- To sustain production & productivity
- To accelerate capital investments in agriculture
- To promote farm mechanization
- To encourage individual, joint or contract-farming for specialty crops
- To increase farm income

High priority to food & nutritional security
To ensure fodder security
To promote diversification of agriculture
To bridge the existing yield gap
To sustain production & productivity
To increase farm income
Chief Minister’s Mission on Food processing Scheme

In view of the strategy under Comprehensive Agro Business Policy, Government has introduced ‘Scheme for Financial Assistance with a view to promote Food Processing Units and Food Processing infrastructure Projects’ under the Chief Minister’s Mission on Food Processing.

| 1 | Capital Investment Assistance | 25% of project cost subsidy |
| 2 | Assistance of Back Ended Interest | 7.5% interest assistance |
| 3 | Additional Back Ended Interest | 1% additional interest subsidy |
| 4 | Assistance for Freight Subsidy | Available for MSME Units |

- For Agro and Food Processing Units
- For Cold Chain, Food Irradiation Processing Plants & Pack Houses
- For Creating Primary Processing Centers / Collection centers in Rural Areas
- Reefer Vehicles

- For Agro and Food Processing Units
- For Agro and Food Processing Infrastructural Projects

- For SC/ST, physically challenged or women entrepreneurs,
- For Entrepreneurs below 35 age

- Air freight Subsidy 25% to 40%
- Sea-Freight Subsidy 25% to 40%
### Chief Minister’s Mission on Food processing Scheme

#### Other Incentives

<table>
<thead>
<tr>
<th>Scheme for Skill Development</th>
<th>Financial Assistance of Electricity Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% of training cost sub to max Rs. 10,000 per person and Rs. 0.5 lakhs per Food Processing Units</td>
<td>Rs. 1.00 per unit maximum for 5 years and 100% exemption on electricity duty for first 5 years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exemption from VAT and Sales Tax for Agro &amp; Food Processing units and Infrastructure Projects</th>
<th>Stamp Duty Exemption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reimbursement of VAT for 5 years subject to 70% of eligible fixed capital investments for MSME</td>
<td>100% stamp duty reimbursement to infrastructure projects and 50% stamp duty reimbursement to agro and food processing units</td>
</tr>
</tbody>
</table>

**Quality certification mark**

50% (maximum of Rs.5/- lakh) assistance of expenditure incurred by institute/ entrepreneur will be granted for obtaining certification mark.
Research and Development

- Offers courses in agriculture, agricultural engineering and technology and fisheries, veterinary science & animal husbandry, fisheries
- Offers MBA in Agri Business Management.
- Has faculties of agriculture, horticulture, veterinary science, fisheries, and forestry
- Has 29 research centers offering opportunities across sector including soil science, agriculture research, water management research

Kamdhenu Veterinary University
- Set up in 2009-10 for the development of research, education, and extension in the field of Animal Husbandry, Dairy Development and Fisheries
- Specific research opportunities offered at College of Dairy Science, Amreli and Polytechnic in Animal Husbandry, Himmatnagar

- Offers courses in agriculture engineering, horticulture, dairy science, veterinary science, animal husbandry, agribusiness management
- 7 colleges, 17 research centers, 6 extension education institute in 9 districts

- Offers courses in agriculture, horticulture, veterinary science and animal husbandry, home science and nutrition, dairy science and food technology
- Offers a course in Agri Business Management
- Has 28 research centers in agriculture and allied sciences
Educational Infrastructure

- **INDIAN INSTITUTE OF MANAGEMENT, AHMEDABAD:**
  - P.G Programme in Agri Business Management (2 yrs)
- **Dhirubhai Ambani Institute of Information and Communication Technology**
  - M.S. in IT – Agriculture (www.daiict.ac.in)
- **Sheth M C college of Dairy Science, Gujarat Agriculture University**
  - B.Sc and M.Sc in Dairy Technology
- **Sardar Krushinagar Dantiwada University**
  - B.Tech in food engineering, M.Tech in agriculture process and food engineering
- **Advanced Research and Educational Centre for Horticultural Crops, Navsari**
- **WTO Cell, Junagadh**
- **Centre of Excellence on Biotechnology, Anand**
- **Centre of Excellence on Post Harvest Technology, Navsari**
- **Centre of Excellence on soil and water Management, Junagadh**
- **Centre for Excellence on Castor, Sardar Krushinagar**
Investment Opportunities

AGRICULTURAL/HORTICULTURAL INFRASTRUCTURE PROJECTS
- Cold chain
- Fresh fruits-pack house
- Vegetables pack house
- Mechanized grain handling and storage at port
- Food parks
- Terminal markets
- Agri produce irradiation plants
- Organic farming
- Marine export

EXPORT ORIENTED PROCESSING
- Peanut butter
- De-hulled roasted sesame seed and sesame oilseed
- Roasted, salted and coated peanuts
- Integrated shrimp farming and processing

FOOD PROCESSING
- Tomato, potato flakes/powder
- Specialty grades guar gum powder
- Refined sugar
- Egg powder
- Baker’s yeast
- Fish oil extraction
- Tomato Processing at Important crop pockets
- Castor Oil Derivatives – Perfumery Raw Materials
- Enzymes for food processing industry
Investment Opportunities

ANIMAL HUSBANDRY
- Sectors such as veterinary service, poultry, dairy, financial-credit and insurance

NATURAL RESOURCES- BASED OPPORTUNITIES
- Natural food colors
- Medicinal herbs extraction
- Food processing enzymes
- Neem/tobacco oil based bio-pesticides
- Fish meal- based bio-fertilizer

NEWER TECHNOLOGY-BASED PROJECTS
- Spices cryo grinding
- Freeze dried food processing unit
- Instant vegetables in retort pouches
- Dehydration of Vegetables

INNOVATIVE TECHNOLOGIES
- Organic milk and milk products
- Ice cream balls
- Castor derivatives
- Banana fiber extraction
- Textiles production
A Theme Seminar on “Innovation and Technology in Food Processing for sustaining Food Security”

The event witnessed wide participation of over 500 delegates including representatives from Government of India, leading industrialists, policy makers, academicians, government officials and experts in agro and food processing sector from across the world.

Food and Agriculture Organization of UN, Agricultural and Processed Food Products Export Development Authority and Council of Scientific & Industrial Research - Central Food Technological Research Institute (CSIR-CFTRI) extended their support by partnering the event.

In the Summit, 1554 Investment Intentions have been signed in Agro and Food Processing Sector.
# Key Department / State Government Agencies

<table>
<thead>
<tr>
<th>S. NO</th>
<th>DEPARTMENTS</th>
</tr>
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<td>1</td>
<td>Agriculture and Co-operation Department</td>
</tr>
<tr>
<td>2</td>
<td>Department of Fisheries and Animal Husbandry</td>
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<tr>
<td>3</td>
<td>Director of Agriculture</td>
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<tr>
<td>4</td>
<td>Director of Horticulture</td>
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<tr>
<td>5</td>
<td>Director of Animal Husbandry</td>
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<tr>
<td>6</td>
<td>Commissioner of Fisheries</td>
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<tr>
<td>7</td>
<td>Registrar of Co-operative Societies</td>
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<td>8</td>
<td>Director of Sugar</td>
</tr>
<tr>
<td>9</td>
<td>Gujarat State Seed Corporation Limited</td>
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<tr>
<td>10</td>
<td>Gujarat State Seeds Certification Agency</td>
</tr>
<tr>
<td>11</td>
<td>Gujarat State Land Development Corporation Limited</td>
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<tr>
<td>12</td>
<td>Gujarat Agro Industries Corporation Limited</td>
</tr>
<tr>
<td>13</td>
<td>Gujarat State Warehousing Corporation</td>
</tr>
<tr>
<td>14</td>
<td>Gujarat State Sheep &amp; Wool Development Corporation Limited</td>
</tr>
<tr>
<td>15</td>
<td>Gujarat Fisheries Central Cooperative Association Limited</td>
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<tr>
<td>16</td>
<td>Gauseva &amp; Gaucher Vikas Board</td>
</tr>
<tr>
<td>17</td>
<td>Gujarat State Agriculture Marketing Board</td>
</tr>
<tr>
<td>18</td>
<td>Gujarat livestock development board</td>
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</tbody>
</table>
Thank You

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