



सत्यमेव जयते

GOVERNMENT OF GUJARAT

# Setting up a Bio-Fertilizers and Bio-Pesticides Unit

Biotechnology  
Government of Gujarat

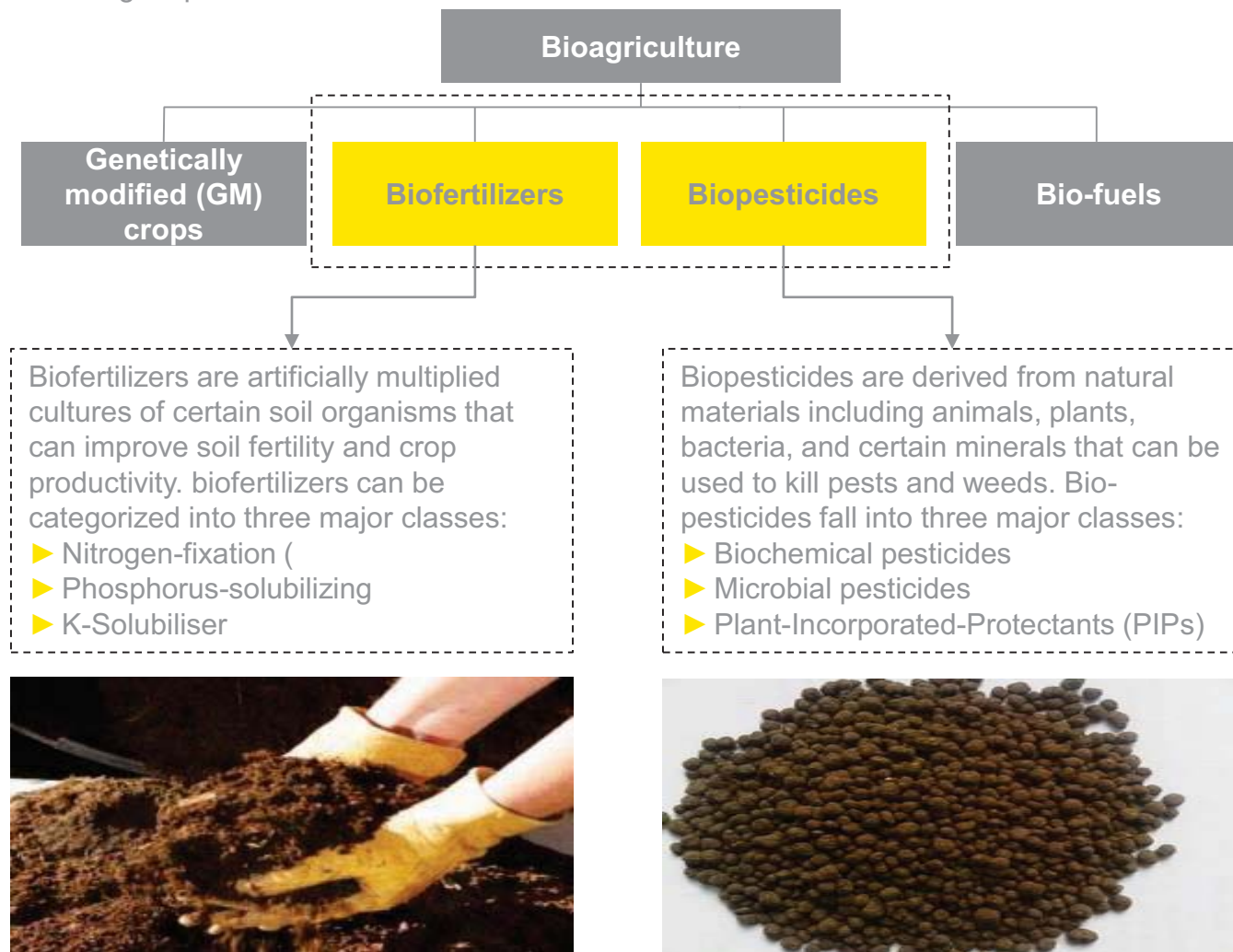


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## Biofertilizers and biopesticides: overview

Biofertilizers and biopesticides form part of the bioagriculture. Bioagriculture is an emerging scientific area which is useful for breeding nutritious, high-yielding and less resource input-demanding crops.



Biofertilizers and biopesticides have various benefits listed below:



Soil fertility and Healthy food



Provide sufficient yields



Help in carbon sequestration



No adverse effects on health of humans



Save water

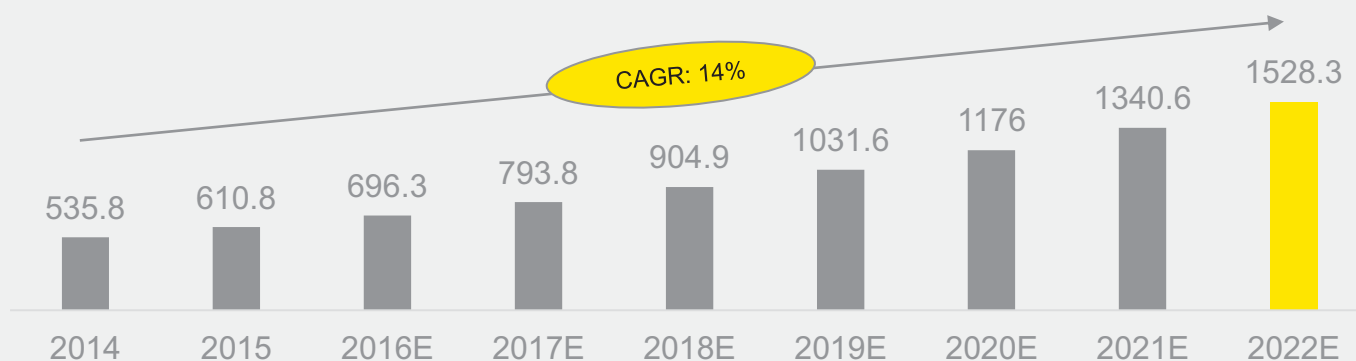


Help in reducing pollution

The project involves establishing a biofertilizer and biopesticide manufacturing unit in Gujarat.

**Global biofertilizer and biopesticide market will be driven by contamination and other environmental hazards owing to excessive application of fertilizers and agrochemicals on crops**

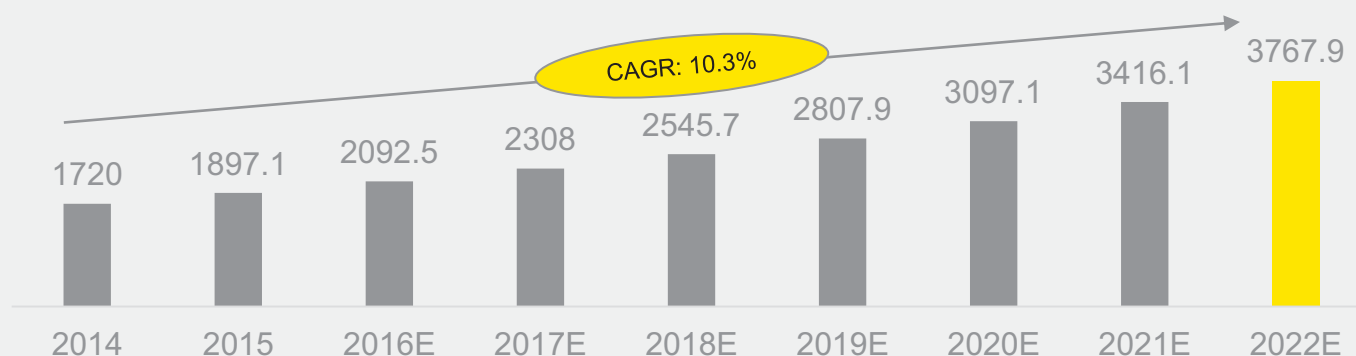
**Global biofertilizer industry - Market size (US\$ m)**



Source: Morning Star, Grand view research, EY analysis

- ▶ Nitrogen fixing was the largest product segment, accounting for over 75% of global revenue share in 2014, followed by Phosphate solubilizers with 15% share in global revenue in 2014.
- ▶ Phosphate solubilizers are also expected to be the fastest growing at a CAGR of 13.9% from 2015 to 2022.
- ▶ Seed treatment was the largest application, accounted for 65% of the end user industry in 2014.
- ▶ North America was the largest regional industry in 2014 followed by Europe and together accounted for over 54% of the global revenue.

**Global biopesticide industry - Market size (US\$ m)**



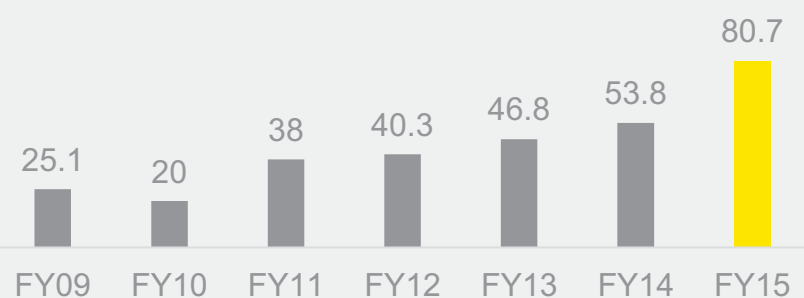
Source: Global Newswire, EY analysis

- ▶ Microbial pesticides held the largest share accounting for 57.7% market share in 2014 and is expected to grow at a CAGR of 9.7% from 2015 to 2023.
- ▶ North America held the largest market share (41.7%) in the bio-pesticides market in 2014. The market growth in this region is attributed to growing demand for organic food as the organic industry is dependent on chemical-free crop protection products to safeguard crops.

Bioagriculture is the third largest sector of the Indian biotech industry. In addition to GM seeds, biofertilizers, biopesticides are also contributing to the growth of the Indian agri-biotech market.

## Indian biofertilizer industry

Indian biofertilizer industry – production (in '000 tons)

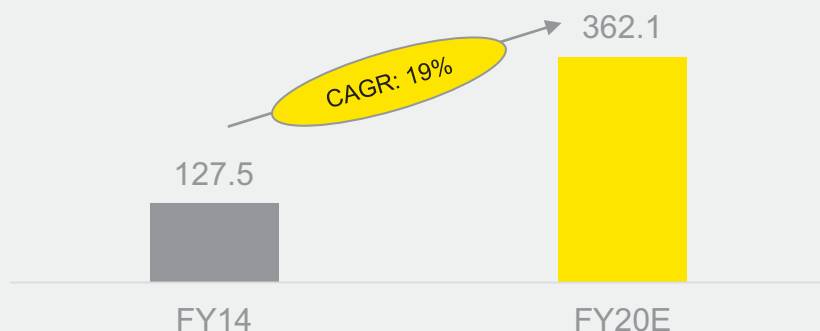


Source: Department of fertilizers, ministry of chemicals & fertilizers, NCOF annual report 2014-15

- ▶ Indian biofertilizer market had grown rapidly in the period FY09 to FY15, the production of biofertilizers in India had more than tripled during FY09-15.
- ▶ The growth is expected to continue in future owing to the strong push by the Government of India (GoI) to promote bioagriculture.

## Indian biopesticide industry

Indian biopesticide industry - Market size (US\$ m)



Source: Morning Star, Grand view research, EY analysis

- ▶ The Indian biopesticide market stands at over US\$127 million (7-8% of the global market) and is expected to triple by FY20.
- ▶ Rising demand for chemical free crop protection products, which have minimum or no negative impact on environment and possess better safety features, are key drivers for the bio-pesticides market.

**Widening demand – supply gap of food crops, increasing demand of organic food and the government focus on conserving the environment is expected to drive the growth of biofertilizers and bio-pesticides industry in India**

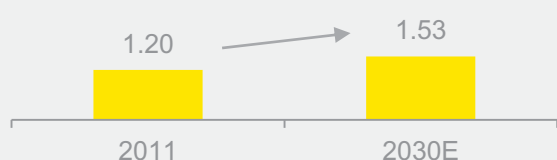
## Demand-side



### Growing population

India's population is projected to increase by ~17%, from 1.31 billion in 2015 to reach 1.53 billion by 2030 and surpass China's population. There will be an increase usage crop growth and protection nutrients to feed such a large population.

Population of India (in billion)



### Impetus by GoI to improve the soil health and conserve environment

Under the National Food Security Bill, GoI will ensure a monthly quota of 7 kg per person for a family below the poverty line. To meet this target in a ecologically sustainable way and without degrading the environment, GoI is giving a strong push to the organic farming by providing subsidies for new biofertilizer/ biopesticide units.



### Increasing affordability

Per capita net national income has increased by 10.1% to INR88,538 per annum in FY15, over FY14. This has led to a shift in consumption pattern, which is expected to lead to increase in sale of high-nutrition and high-priced organic food products.

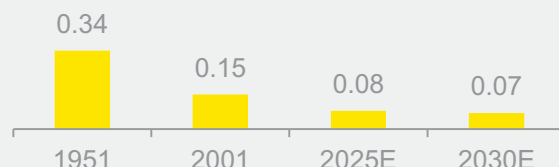
## Supply-side



### Arable land is declining

Increasing land for commercial and urban usage has led to the decline of arable land from 0.34 ha in 1950 to 0.15 ha in 2000. It is further expected to reduce to 0.07 ha by 2030.

Per capita arable land in India (ha)

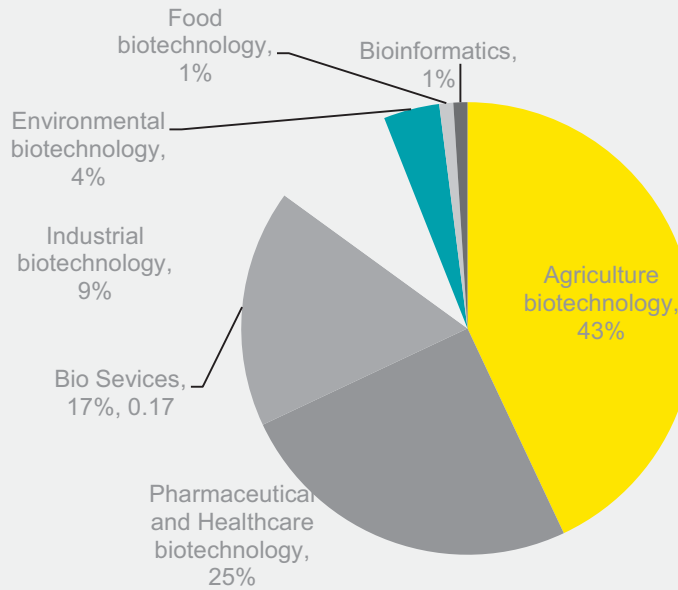


### Low food grain yield

Per hectare yield in India is 3 tons/ha, lower than the global average of 4 tons/ha. For China and Indonesia, it is 6.5 tons/ha and 5 tons/ha respectively. Major reasons are low usage of pesticides (only 35% area is covered, (25%), excessive use of conventional fertilizers (N, P, K) (120 kg/ha in India vs. global average of 33 Kg/ha) leading to soil degradation.

## Agriculture biotechnology industry in Gujarat

### Split of ~151 biotech companies and allied areas



Source: Biospectrum India

- ▶ Agriculture biotechnology, with 64 companies in Gujarat, is the leading sub-sector of biotechnology industry in Gujarat.
- ▶ Some of the prominent bio-agri companies in the state include GSFC, KRIBHCO, Zytex industries, Monsanto- Mahyco, Excel Crop Care.
- ▶ Gujarat has three major biofertilizers units – KRIBHCO (Hazira), GSFC (Vadodara), Gujarat State Cooperative Marketing Federation Ltd. (Kankaria).

## Strong local demand

01

- ▶ Gujarat has an agricultural economy; the total crop area amounts to more than one-half of the total land area.
- ▶ Gujarat being India's major producer of tobacco, cotton, groundnuts and other crops which are relatively more prone to the attack of pests leading to greater consumption of pesticides in the state

02

- ▶ Gujarat ranks 2<sup>nd</sup> in the production of liquid biofertilizers with a capacity of 7,075 KL per annum (2014-15), 12<sup>th</sup> in the production of solid biofertilizers with a capacity of 4,670 tons per annum (tpa).
- ▶ Gujarat is one of the leading states in the consumption of pesticides with 7% share in 2014.

03

- ▶ Gujarat has set up eight biofertilizer production units under National Project on Organic Farming (NPOF) with a cumulative capacity of 1,850 tpa during October 2014 and March 2015.

# Gujarat - Competitive Advantage



## Strong push by the Government of Gujarat (GoG) in the bio-agriculture sector

- ▶ GoG through its nodal agency Gujarat State Biotechnology Mission (GSBTM) & Gujarat Industrial Development Corporation (GIDC) is setting up a biotechnology park at Savli Industrial Estate at Vadodara.
- ▶ The proposed Park would be developed as a Public-Private Venture in an area of about 700 acres in three phases and would address the biotech industry's need for specialized infrastructure and thereby encourage new biotech enterprises, accelerate commercialization of new technologies, enable biotech organisations to forge alliances and enhance competitiveness of biotech companies located in the state.



Proposed investments by Gol of **~US\$6 million** each for **biofertilizers and bioinsecticides manufacturing plants** in the biotech park at Savli, Vadodara

## Other GoG initiatives



### Subsidies for 'Horticulture' – extensive user of biofertilizers and biopesticides

- ▶ GoG through National Horticulture Board (NHB) provides back-end subsidies for the development of commercial horticulture which involve bio-technology tissue culture, organic foods and bio-pesticides. The subsidy varies from 20% of the project cost with a maximum of INR2.5 million.



### Promoting the use of biofertilizers and bio-pesticides

- ▶ GoG and Navsari Agricultural University (NAU) has completed soil testing in 18,618 villages of Gujarat and issued soil health cards to over one million farmers. Based on soil testing report, cropping system, quantity and type of fertilizer will be decided to optimize productivity in future in South Gujarat.



# Gujarat - Competitive Advantage



## Thrust on bioagriculture

### Infrastructure

- ▶ BT Parks
- ▶ BT zones
- ▶ SEZs

### Bio-agriculture research

### Entrepreneurial support



### Business facilitation and networking

### Education

- ▶ PG courses
- ▶ Specialized courses
- ▶ Value added courses

## Other advantages



### Ease of doing business

- ▶ Only state which comply 100% with the environmental procedures. Gujarat fares highly when it comes to setting up a business, allotment of land and obtaining a construction permit.



### Flourishing economy

- ▶ Gujarat contributes 7.2% of the Nation's GDP and shows leadership in many areas of manufacturing and infrastructure sectors. Gujarat's SDP (State Domestic Product) at current price registered a growth of 11% during the year 2014-15.



### Strategic location and excellent infrastructure

- ▶ Located on the west coast of India, Gujarat is well connected to the major cities of the world by air and sea routes. The state has 45 ports, 12 domestic airports and 1 international airport in addition to an extensive rail and road network.



### Easy availability of raw materials

- ▶ Many key industrial clusters such as foundry & forgings, steel pipes and tubes, steel re-rolled products and fabricated metal products are located in close vicinity of industrial hubs such as Sanand industrial estate.



### Favourable labour policy

- ▶ The Gujarat government has recently passed the Labour Laws Bill (December 2015), to give an impetus to industrialization. The key reform includes a provision for out-of-court settlement to speed up the process labour related dispute resolutions.



### Better social infrastructure

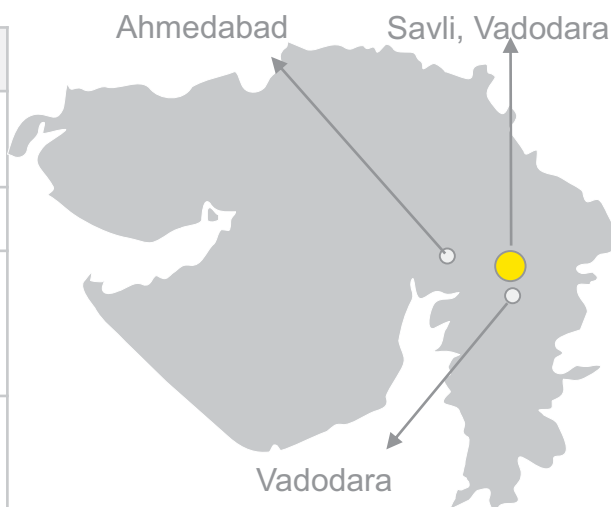
- ▶ Gujarat has one of the lowest cost of living amongst the Indian states and is relatively less congested and less polluted, offering better standards of living to the inhabitants and providing a better environment to work.

# Project Information

## Project location

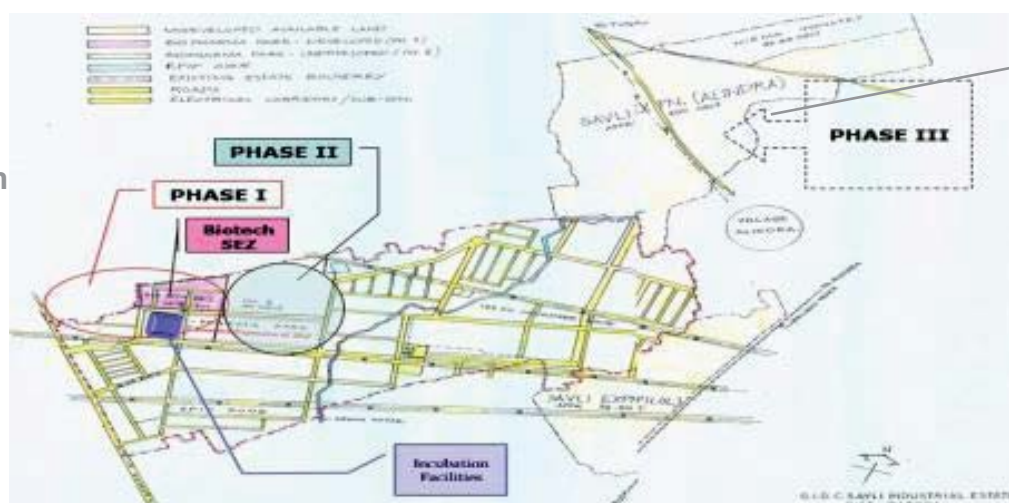
- ▶ Savli Biotech park, GIDC in Vadodara district will be an ideal location to establish a biofertilizer and biopesticide manufacturing plant. It will be developed in three phases.
- ▶ The site is owned and managed by Gujarat Industrial Development Corporation (GIDC) and has gained traction from large fertilizer and pesticide companies including GSFC and Bayer.

Savli Biotech park: Key highlights	
Area	~100 acres (Phase I), ~123 acre (Phase II) and ~494 acre (Phase III)
Land price	INR1,800 per sq. mtr. (April'16)
Focus sectors	<ul style="list-style-type: none"> <li>▶ Chemicals &amp; Petrochemicals,</li> <li>▶ Bio-technology</li> <li>▶ Pharmaceuticals</li> </ul>
Other major sectors	Engineering, Food & Agro, Tourism and Textiles & Apparels



## Why Savli?

- ▶ A manufacturing facility at Savli is likely to be complemented by the biofertilizer and biopesticide value chain in the region (several biofertilizer and biopesticide manufacturers including GSFC, Zytex Biotech Pvt. Ltd., Sphere bio-arc Pvt. Ltd., Agriland have manufacturing footprints in Vadodara region).
- ▶ Existing strong biofertilizer manufacturing base implies robust supply chain.
- ▶ Savli location advantage and infrastructure availability (refer to next page for details).



Savli biotech SEZ▲

Savli biotech park - developed area▶

Undeveloped available land

## Infrastructure availability

### Logistics & Connectivity



#### Rail

- ▶ Savli has access to broad gauge railway network from the following railway stations:
  - ▶ Vadodara railway station: 17 Km
  - ▶ Ahmedabad railway station: 110 Km



#### Road

- ▶ Connected to National Highway 8 (NH 8) and National Expressway 1 (NE 1) through 4 lane State Highway No 87
- ▶ SH 158 connects Savli to Vadodara.



#### Air

- ▶ Ahmedabad international airport: 110 Km.
- ▶ Vadodara domestic airport: ~14 Km.



#### Port

- ▶ Savli (Vadodara) is connected to the following ports:
  - ▶ Dahej – 150 Km
  - ▶ Kandla – 400 Km
  - ▶ Mumbai – 450 Km

### Utilities



#### Water

- ▶ Gujarat Industrial Development Corporation (GIDC) will provide water to the proposed facility.
- ▶ Mahi river is the source, proposed plan to supply 18 MLD of portable water, current demand is 2 MLD



#### Power

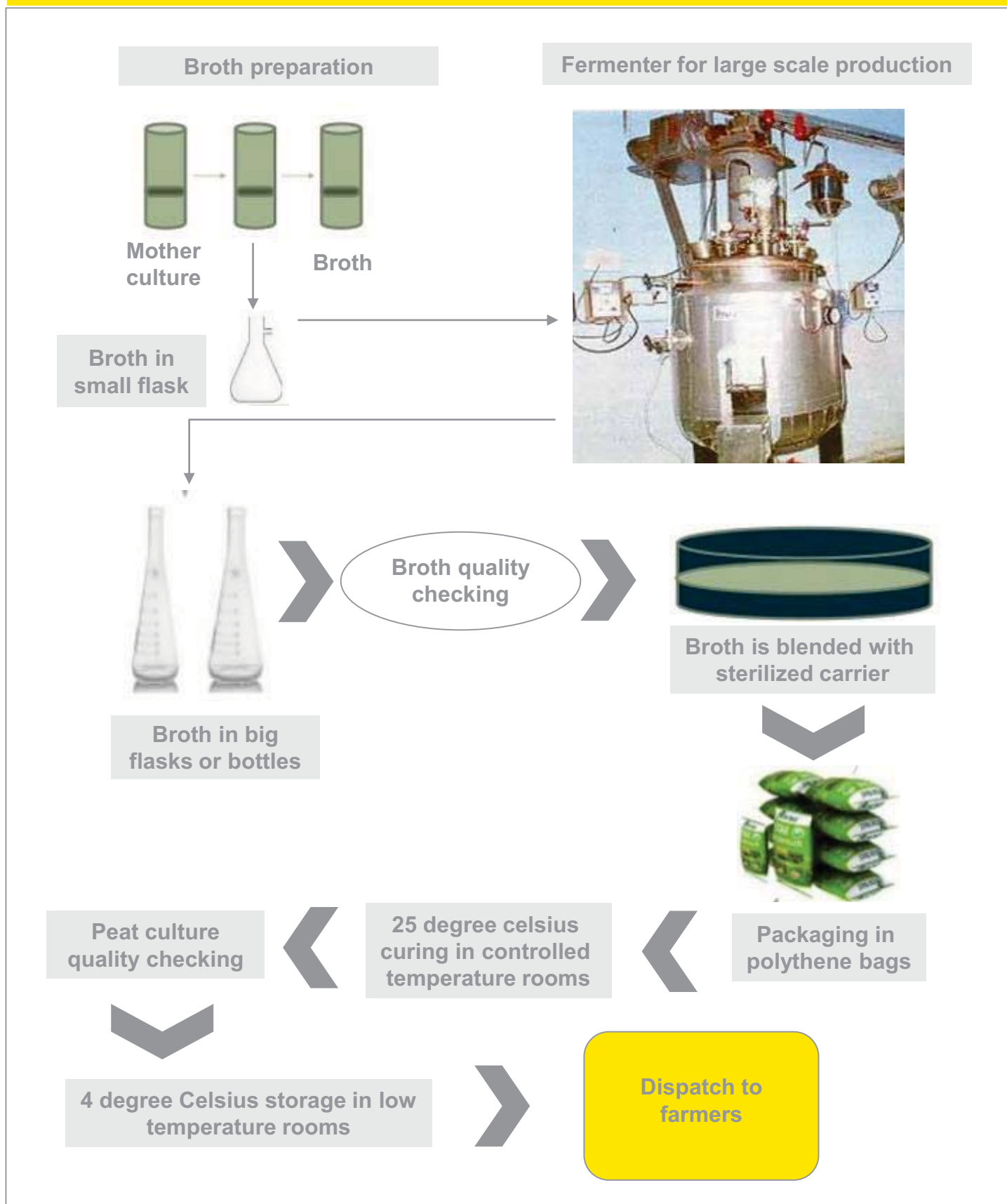
- ▶ Electricity is supplied from an existing 132 KVA sub-station operated by Gujarat Energy Transmission Corporation (GETCO) located in the premises.



#### Gas

- ▶ Gujarat State Petroleum Corporation (GSPC) will supply gas to the site through a well established pipeline.
- ▶ The company needs to directly apply for gas to GSPC.

## Manufacturing process of biofertilizers/ biopesticides



## Technology - Biopesticides

Model	Bio-agent	Production Process in brief	Remarks
1	i. Trichogramma spp. (egg parasite)	Mass multiplied by using stored grain pest as a host. The production involves the multiplication of host insect on sorghum grains, allowed to be parasitized by trichogramma. Then egg are clued in cards as "tricho cards"	Used for control of sugarcane early shoot borer, bollworms of cotton, sorghum stem borer.
	ii. Crysoperla carnea (Chrysopid predator)	Mass multiplied in laboratory on the eggs of stored grain pest.	Controls larval pests in pulses, vegetables /fruits
	iii. Cryptolaemus montrouzieri (Ladybird beetle)	Mass multiplied on already mass multiplied mealy bugs with the help of pumpkin as under laboratory conditions.	to control mealy bugs especially on fruits.
2	i. NPV of Helicoverpa armigera & Spodoptera litura	The production starts with raising of pod borer and tobacco caterpillar larvae (host culture) on semi-synthetic diet. NP Virus is smeared on cultured larvae. Then the diseased larvae are collected to obtain virus suspension after blending, filtration, centrifugation.	Used against boll worms in cotton and pod borers.
	ii. Trichoderma Fungal spp	Multiplied in laboratory and formulated in powder form with the help of carrier material (talc powder).	To control root rot and wilt diseases especially on pulses.
	iii. Pheromone lures for Helicoverpa armigera & Spodoptera litura	Sex pheromones are filled into plastic lures at required concentration with the help of micro pippets and placed into rubber septa. The septa is fixed to the trap.	To trap reproductive males of gram pod borer and tobacco caterpillar.

## Patents and technologies

SN	Name	IPC code
1	A process for preparing a novel biofertiliser strains of nitrogen fixer and phosphate solubiliser to promote soil health, in particular for growth of tea plants	C12N-15/74
2	A process for preparing a novel biofertiliser strains of nitrogen fixer and phosphate solubiliser to promote soil health, in particular for growth of tea plants	C12N-15/74
3	Mixtures comprising a superabsorbent polymer (sap) and a biopesticide	A01N- 25/10, A01N- 63/00, A01N-63/02
4	A process for essential oil based biopesticidal compound from artemisia nilagirica (clarke) against four stored food product insect pests corcyra cephalonica, sitiphilus granarius, tribolium confusum and trogoderma granesia	a01n-65/00
5	Synergistic compositions comprising a bacillus subtilis strain and a biopesticide	A01N-63/00
6	Biopesticide from watermelon seed extract against stored food grain insects	A01P-13/00
7	Lyophilized biopesticide effervescent granule and production method thereof	A01N-63/00, A01N-25/14
8	Consortium of bio-pesticides and bioformulation comprising same	A01N-63/00
9	A process for producing a bio-pesticide composition containing trichoderma harzianum AND pseudomonas fluorescens	A01N-65/00
10	Novel biopesticide compositions and method for isolation and characterization of same	A01N-63/00, A01N-63/04
11	Method of production of biofertiliser	C05F 11/08, C05F 3/00
12	Operation of a cricket mass-rearing farm for the production of meals and a biofertiliser for market gardening	A23K 1/10
13	Use of compounds comprising a polysaccharide structure as biofertiliser and phytosanitary products	A01N 43/02
14	Pesticidal mixture comprising a carboxamide compound and a biopesticide	A01N 37/46
15	Compositions and methods for treating pests	A01N 25/02

*The list is non-exhaustive. For more details please refer to provided source.*

Source: [www.patentscope.wipo.int/search/en/result.jsf](http://www.patentscope.wipo.int/search/en/result.jsf)  
[www.ipindiaservices.gov.in/publicsearch/](http://www.ipindiaservices.gov.in/publicsearch/)

## Equipment and machinery requirement

Essential equipments, for strain maintenance and quality control glassware, plastic ware etc.	
2 Vertical Autoclave 600x350 mm	1 pH Meter(Micro Processor based)
1 Hot air Oven 24x24x24"	2 Small oil free air compressor
2 Refrigerator 300 lit	4 Airconditioners 1.5 ton split type
1 Binocular research microscope with phase contrast attachment having turret condenser and matching phase objectives of 10x, 40x and 100x magnification, 10x wide field eye pieces and telescopic centring eyepiece.	Miscellaneous equipments and tools such as colony counter, balances, microliter pipettes etc.
2 Laminar air flow work station, working table size 3' x 2'	Glassware and plastic ware aids
2 Rotary shaker (capable of holding 25no., flasks of 100-500 ml capacity)	1 Deep Freeze – 300 lit capacity (For culture storage or culture Bank)
2 BOD Incubator 290 lit	1 Centrifuge

Fermentation and biomass up-scaling equipments and machines	Product handling, machines, packaging and storage equipments
30 Mother culture glass vessels/ fermenters 1-2 lit cap.	1 Autoclave Horizontal 2x2x4 ft. chamber size
4 Stainless steel seed fermenters 50 lit cap., aerated, stirred type with auto pH, aeration and temperature control	1 Automatic bottle filling machine with necessary conveyor system and laminar air-flow provision at filling chamber
3 Stainless steel fermenters, aerated, stirred type, with auto pH, aeration and temperature control. Total vessel cap 750 lit and working cap. 500 lit.	1 Capping and labelling machines and miscellaneous Items
2 Air compressor oil free type, 2,000 lit air/min cap with moisture cum oil trap and filters	Miscellaneous fittings, electrical installation, other tools and equipments
2 Chiller 1 ton cap	4 Air conditioners for storage
1 Automatic steam generator 100 kg cap.	1 Peddal Mixer or Ribbon Blender
Fittings, pipe lines, filters, miscellaneous items	1 Generator (DG Set of 65 KVA)

## Leading suppliers of plant equipment and machinery

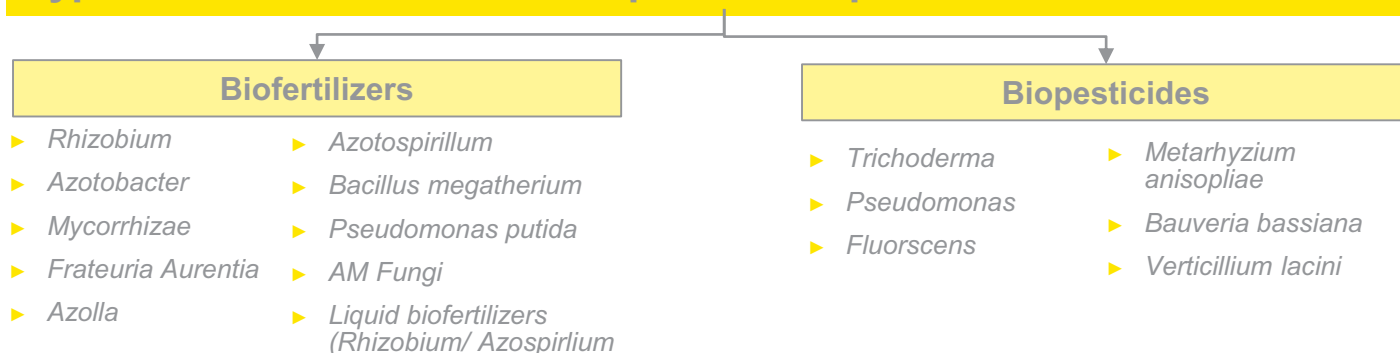
Shree Biocare Solution Pvt. Ltd., Ahmedabad

NAPRO Scientific, Pune

Murhopye Scientific Company, Mysore

Industrial & Commercial Services, Hyderabad

## Types of biofertilizers and biopesticides produced in these units



## Sourcing of raw materials

### Major raw materials used:

- ▶ Mother cultures
- ▶ Ingredients for growth medium for the production of broth include Manital, sucrose and chemical nutrients
- ▶ Carrier material - lignite or bentonite or peat of desired quality in powder form
- ▶ Packing materials like polythene packets, HDPE bags, cardboard cartons
- ▶ Corrugated boxes

Industry/ Research centre	Location
Mother cultures	Agricultural Universities and Regional Biofertiliser Development centres <ul style="list-style-type: none"> <li>▶ Anand Agricultural University (AAU), Anand, Gujarat</li> <li>▶ GSBTM Gandhinagar, Gujarat - Repository of around 500 cultures</li> <li>▶ Indian Agricultural Research Institute (IARI) Regional Station, Indore (MP)</li> </ul>
Plastic and polymers	<ul style="list-style-type: none"> <li>▶ Vadodara</li> <li>▶ Sanand</li> </ul>
Glass	<ul style="list-style-type: none"> <li>▶ Vadodara</li> </ul>

## Manpower requirement (approx. 15-20)

Designation	Number of employee
Chief Executive Officer	1
Chief Biologist / Micro Biologist	1
Sales Officer	1
Accountant and clerical Assistant	1
Drivers	1-2
Floor Supervisor/ Factory Manager	1
Technical Staff (boiler operation, mechanical maintenance, packing machine operations, electrical maintenance)	12
Skilled labourers	2-3
Semi- skilled, depending upon the volume of production	3-5
Unskilled	3



## Leading agri-biotech players in Gujarat

SN	Company	Focus area
1.	Bayer CropScience Ltd.	Biopesticides
2.	Excel Cropcare Ltd.	Biopesticides
3.	Gujarat Life Sciences Pvt. Ltd.(GLS)	Biopesticides, Biofertilizers
4.	Gujarat Narmada Valley Fertilizer Company Ltd.(GNFC)	Biofertilizers
5.	Gujarat State Fertilizers and Chemicals Ltd.(GSFC)	Seeds, Biofertilizers
6.	Krishak Bharati Cooperative Ltd. (KRIBHCO)	Solid and Liquid Biofertilizers
7.	Jai Research Foundation (Contract Research Organization)	Preclinical studies for testing Biofertilizers, Biopesticides and GM Crops
8.	Pruthvi Fertilizers Pvt. Ltd.	Liquid Biofertilizers & Biopesticides

### Leading players

Coromandel International Ltd	Fertilisers and Chemicals Travancore Ltd
Rashtriya Chemicals and Fertilisers Ltd	National Fertilizers Ltd
Chambal Fertilisers and Chemicals Ltd	Deepak Fertilizers and Petrochemicals Corp Ltd

## Key considerations

- ▶ Low energy Costs in order to remain competitive
- ▶ Reduction in Start-up and Operating Wastages
- ▶ Technology transfer agreements with leading Agricultural Universities is one of the key factors that has driven the growth of the industry
- ▶ Uninterrupted Power supply
- ▶ Investing in marketing/ branding activities along with increasing farmer awareness about the proper usage of bio-agri products
- ▶ A higher degree of technical skill for selection of process conditions and adhesive/resins

## Project structure

Project is likely to be a private investment by:

- ▶ new entrants / entrepreneurs in the agri-biotech industry
- ▶ an existing fertilizer / pesticide manufacturer
- ▶ foreign investors looking to enter into Indian agri-biotech industry

Cost of setting-up a biofertilizer / biopesticide manufacturing plant with capacity of 600 tons per annum (tpa) is likely to be ~INR 2.9 crore\*

## Project cost

Project components & specifications	Cost (INR lakhs)
Land (Area: approximately 2,000 sq. mtr.) Rate: (INR 1800 per sq. mtr.)	36.0
Land Levelling, fencing & compound wall and gates etc.	9.2
Buildings (civil structure, fencing & compound wall and gates etc.) Built-up area: 600 sq. mtrs. Average rate: INR 7,700 per sq. mtr.	46.2
Process plant and machinery, Working capital and miscellaneous expenses	194.0*
<b>Total investment in land, machinery and working capital</b>	<b>285.4</b>
Contingency (@2% of machinery, land and building)	5.7
<b>Total investment required: ~INR 2.9 crore*</b>	

## Means of finance\*\*

Owners' contribution	INR1.05 crore (36.2%)
Bank loan	INR1.45 crore (50%)
Govt. subsidy	INR0.40 crore (13.8%)

Final investment to be made by the investor after removing the subsidy of INR40 lakhs:

**INR2.5 crore**

\*Figures mentioned are indicative to provide a tentative framework for the investor. The numbers are based on the figures given by the operational guidelines under NPOF to setup the biofertilizer / biopesticide plant and adjusted for inflation

## Recently commissioned projects in the region

Company	Project	Location	Investment	Capacity
GSFC	Biofertilizer complex	Vadodara, Gujarat	INR50 crore	20,000 tpa of each of water soluble fertilizer and plant growth promoter 'Amin' and 1000 Kilolitres of liquid bio fertilizer per annum.
Agriland Biotech	Glomus Fasciculatum (Biofertilizer)	Savli Biotech park	INR2 crore	NA

# Project Financials



Payback period				
Capacity (tpa)				600
Average capacity utilization in industry (%)				82%
Production (tpa)				492
Average revenue per ton (AR) (INR / ton)				117,040
Industrial average EBITDA margin				10%
Forecasting revenues at expected industrial growth rate				20%
Time (years)	1	2	3	4
Revenue (INR lakh)	576	691	829	995
EBITDA (@10%** of rev.)*	58	69	83	100
Undiscounted cumulative cash flows	58	127	210	309
Investment (INR lakh)		250		
<b>Estimated payback period: 3.4 years</b>				

\*EBITDA is assumed as proxy for cash flows

Minimum viable size (figures in INR lakhs)	
EBIT margin (Industry average)	7%
Total operating costs (as% of revenues)	93%
Total costs (93% @ 576) (INR lakh)	535.7
Depreciation cost (9%** of 116.4 lakhs)***	10.5
Employee costs (40% of Total manpower cost)	17.1
Finance cost (16%** of INR145 lakh)	23
Total fixed cost (FC)	50.6
Variable cost (VC= TC-FC)	485
Variable cost/ton	0.98
Average revenue/ton	1.17
Minimum viable size (FC/(AR-VC))	266.3
<b>Estimated minimum viable size: ~53 tpa</b>	

\*\*Industrial average

\*\*\*Asset base is assumed to be 60% of total investment in PPE and working capital (INR 116.4 lakhs)

## Clearances/ approval required

Approvals/clearance required	Department to be approached and consulted
Incorporation of company	Registrar of companies
Registration/Industrial license	<ul style="list-style-type: none"> <li>▶ For biofertilizers (Covered under Fertilizer Control Order, 1985 (Essential commodities Act., 1955)) - Agriculture and Cooperation Department, Gujarat</li> <li>▶ For Biopesticides (Covered under Central Insecticides Act., 1968) - Central Insecticides Board, Govt of India, Faridabad</li> </ul>
Allotment of land	State industrial development corporation
Environmental clearance and No objection certificate (NOC) under air and water pollution control acts	Savli Biotech park has already obtained Environment Clearance from Ministry of Environment & Forests MoEF, GoI as well as No objection certificate/consent to establish (CTE) from the Gujarat Pollution Control Board (GPCB)
Approval of construction and country planning	<ul style="list-style-type: none"> <li>▶ Town and country planning, Municipal and local authorities</li> <li>▶ Chief inspector of factories</li> <li>▶ Pollution control board</li> <li>▶ Electricity board</li> </ul>
Finance	<ul style="list-style-type: none"> <li>▶ Eligible financing institutions under the NPOF scheme are i) Commercial Banks, Regional Rural Banks (RRBs), State Cooperative Banks (SCBs), State Co-operative Agricultural and Rural Development Bank (SCARDBs), Scheduled Primary Urban Cooperative Banks (PUCBs), Agricultural Development Finance Companies (ADFCs), North Eastern Development Finance Corporation (NEDFI), and such other institutions which will be eligible for refinance from NABARD. ii) Cooperatives where they seek loan from National Cooperative Development Cooperation (NCDC)</li> <li>▶ Refinance assistance @ 90% of the term loan (95% in case of SCARDBs and in the North Eastern Region) would be provided to the financing banks.</li> </ul>
Registration under state sales tax act and Central and State excise act	<ul style="list-style-type: none"> <li>▶ Sales tax department</li> <li>▶ Central and state excise department</li> </ul>
Exiting business	Ministry of corporate affairs
Registration of fertilizers and pesticides	Central Insecticide Board & Registration Committee ( <a href="http://www.cibrc.nic.in/guidelines.htm">http://www.cibrc.nic.in/guidelines.htm</a> )

GoG has introduced single window facilitation portal for investors providing following benefits:

- ▶ Centralized system to monitor applications
- ▶ User friendly and simplified application process for investors
- ▶ System for authorities and investors to check the status of applications
- ▶ Increased departmental ownership

## Incentives from GoI

- ▶ In view of the increasing and indiscriminate use of synthetic fertilizers and pesticides, deteriorating soil health and productivity, the concept of organic farming is gaining importance globally as well as in India. GoI has introduced a Capital Investment Subsidy Scheme (CISS) under National Project on Organic Farming for commercial production units for organic/biological inputs.
- ▶ The scheme is being implemented by the Department of Agriculture & Cooperation through National Centre of Organic Farming (NCOF) in collaboration with NABARD or NCDC.

### Capital Investment Subsidy Scheme (CISS) for biofertilizer / biopesticide production units

#### Subsidy

- ▶ 25% of total financial outlay subject to the maximum of INR40 lakh per unit, whichever is less
- ▶ Subsidy will be released in two instalments

#### Procedure for sanction and release of Subsidy

NABARD releases subsidy to the units financed by:

- ▶ Commercial Banks,
- ▶ Regional Rural Banks (RRBs)
- ▶ State Cooperative Banks (SCBs),
- ▶ State Cooperative Agricultural and Rural Development Banks (SCARDBs)
- ▶ Scheduled Primary Urban Cooperative Banks (PUCBs), and such other institutions which will be eligible for refinance from NABARD.
- ▶ NCDC may release subsidy to projects financed by it in the cooperative sector

### Main objectives of the scheme

- ▶ To promote organic farming in the country by making available the organic inputs such as biofertilizers, biopesticides and fruit & vegetable market waste compost and thereby better return for the produce.
- ▶ To prevent pollution and environment degradation by proper conversion and utilization of organic waste.

## Incentives from GoG

### Gujarat Comprehensive Agro Business Policy – 2016 - 2021

- ▶ Capital Subsidy on investment to agro and food processing industries
- ▶ Assistance of Back Ended Interest Subsidy on the Term Loan for Agro and Food Processing Units
- ▶ Freight Subsidy will be available to Micro, Small and Medium Enterprises (MSME)
- ▶ Assistance for 'Quality Certification Mark'
- ▶ Financial Assistance for Skill Enhancement
- ▶ Reimbursement of VAT and Sales Tax
- ▶ Encouragement in Electricity Rate and Duty
- ▶ Refund on Registration Fee and Stamp Duty

## Draft Biotech Policy – Government of Gujarat

### Incentives for Biotechnology Parks

- ▶ Capital Subsidy
  - ▶ Horizontal BT Park @ 25% of gross fixed capital investment (GFCI) in buildings and infrastructure facilities, excluding the cost of land, subject to a ceiling of Rs. 25 crores
  - ▶ Vertical Biotech Park @ 300 per sqft for built up area subject to a ceiling of INR 25 crore
- ▶ Registration/ stamp duty concession – 100% for developer of biotech park
- ▶ Incentive on power tariff and electricity duty

### Incentives for Biotechnology Units

- ▶ Capital Subsidy
  - ▶ 10% of the Gross Fixed Capital Investment (GFCI) upto ceiling of INR 5 crore for units with GFCI up to INR 50 crore
  - ▶ Units with GFCI above INR 50 crore shall be eligible for a capital subsidy of INR 5 crore per unit and additional 5% of the incremental GFCI over and above INR 50 crore subject to an overall ceiling of INR 50 crore.
- ▶ Interest subsidy, Lease rental subsidy, VAT/CST/GST Incentive
- ▶ Incentive on power tariff and electricity duty
- ▶ Employment generation incentive through EPF contribution
- ▶ Patent assistance

## Draft Biotech Policy – Government of Gujarat

### Incentives for Biotechnology Incubators

- ▶ Capital assistance (50% of GFCI with ceiling of 1 crore), mentoring assistance (INR 5 lakh annually, operating assistance (25% of funds mobilized with ceiling of INR 1 crore) , software procurement (50% of cost subject to ceiling of INR 1 crore)
- ▶ Stamp duty & registration exemption
- ▶ Incentive on power tariff and electricity duty

### Incentives for Biotechnology Startups

- ▶ Stamp duty & registration exemption @100% reimbursement
- ▶ Marketing & Product Development Assistance @1 lakh for product development and 1 lakh for marketing
- ▶ Matching Equity Support
- ▶ Lease Rental Subsidy
- ▶ Capital Assistance
- ▶ Interest Subsidy
- ▶ Patent Assistance

### Special provision for Mega Projects or Centre of Excellence by Global Players

In addition an empowered single window mechanism is being set for biotech investor facilitation in Gujarat.

**National Centre of Organic Farming**

[ncof.dacnet.nic.in/](http://ncof.dacnet.nic.in/)

**Central Insecticide Board & Registration Committee**

<http://www.cibrc.nic.in/>

**Department of Fertilizers, Ministry of Chemicals & Fertilizers, GoI**

[www.fert.nic.in](http://www.fert.nic.in)

**Department of Biotechnology, Government of India**

[www.dbtindia.nic.in](http://www.dbtindia.nic.in)

**Department of Science and Technology, Government of Gujarat**

[www.dst.gov.in](http://www.dst.gov.in)

**Gujarat Industrial Development Corporation**

[www.gidc.gov.in/](http://www.gidc.gov.in/)

**Industries Commissionerate**

[www.ic.gujarat.gov.in](http://www.ic.gujarat.gov.in)

**Gujarat State Biotechnology Mission**

[www.btm.gujarat.gov.in](http://www.btm.gujarat.gov.in)

*This project profile is based on preliminary study to facilitate prospective entrepreneurs to assess a prima facie scope. It is, however, advisable to get a detailed feasibility study prepared before taking a final investment decision.*

For further details:

**INDEXTb**  
INDUSTRIAL EXTENSION BUREAU  
(A GOVT. OF GUJARAT ORGANISATION)  
ISO 9001 : 2015 Certified

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