In India, rainfall is the primary source of water, three-fifths of land under cultivation is watered only by rainfall.

Presently accounts for ~15% of the country's GDP. 58% of rural households rely on agriculture as their principal means of livelihood.

India has also experienced delayed monsoon and severe drought like conditions in several regions of the country for the past two years which has resulted in low agricultural output in those regions.

Since 1940, the number of pests has increased from 2 to 19 and Potential crop production is lost due to pests, weeds and diseases.

As per World Bank statistics for FY14, per hectare yield in India is amongst the lowest in the world. Yields in India stand at 3 tons/ha compared to the global average of 4 tons/ha.

The 2011 Census of India indicates that 85% of farms are less than two hectares in size.

**GDP (Sector-wise)**

- Agriculture: 12
- Mining: 17
- Manufacturing: 15
- Electricity, Gas, Water: 2
Bio Agriculture has the potential to scale to US$34 billion–US$37 billion by 2025

<table>
<thead>
<tr>
<th>Current</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio Pesticides</td>
<td>USD 3.36 Bn</td>
</tr>
<tr>
<td>Bio Fertilizers</td>
<td>USD 946.6 Mn</td>
</tr>
<tr>
<td>Bio Fungicides</td>
<td>USD 14.49 Bn</td>
</tr>
</tbody>
</table>
1. Biofertilizers demand will observe over 13.5% CAGR up to 2022.
2. The India market for Bio-pesticides is anticipated to expand growth in terms of both volume and value at a CAGR of 25.4% during the forecast period of 2016-2023. Bio-pesticides represent only 4.2% of the overall pesticide market.
3. In India, paddy accounts for the maximum share of pesticide consumption, around 29%, followed by cotton 19%.
4. Highest demand for bio pesticides was observed from west India - Maharashtra followed by south India.
5. Hugely driven by microbial pesticides sale of Trichoderma Viride, pseudomonas fluorescens and bacillus thuringensis.
6. Bio-pesticide market is expected to reach USD 724.03 MN.
7. Bio-insecticide market is expected to reach USD 230 MN.
8. Bio-fungicide market is expected to reach USD 195 MN.

By 2020

- Other Crops: 19%
- Paddy: 52%
- Cotton: 29%

- Pesticides: 95.8%
- Bio Pesticides: 4.2%

- Insecticides: 65%
- Hericides: 16%
- Fungicides: 15%
- Other: 4%
1. **Robust Demand**
   - India’s billion-plus population base offers a huge market for bio-agri products
   - Increasing economic prosperity and health consciousness would continue to fuel demand for bio-agri inputs
   - Better accessibility to bio-agri inputs further accelerates the demand

2. **Innovation Opportunities**
   - Public funding is being offered for product innovation and research in the biotech sector
   - The private sector has been aggressively pursuing focused R&D
   - Public – Private partnerships will improve the market with innovative research and Development

3. **Increasing Investments**
   - FDI Investment up to 100 per cent is permitted via the automatic route
   - A low cost and skilled labor force is attracting outsourced research activity
   - Launch of Biotechnology industry Partnership programme (BIPP) is boosting industry participation
### Industry Trends & Opportunities

**Population Statistics**

<table>
<thead>
<tr>
<th>Region</th>
<th>2014</th>
<th>2050E</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>5.7</td>
<td>9.6</td>
</tr>
<tr>
<td>India</td>
<td>0.9</td>
<td>1.7</td>
</tr>
</tbody>
</table>

**Global Middle Class by 2050E**

- **Current**: 50%
- **70%**

**Global Agricultural Total Factor Productivity (TFP) Growth Rate by 2050**

- **Required growth**: 1.75%
- **Current Growth**: 1.69%

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**Increasing Food Demand**

- **Current**
  - 50%
  - 70%

**Agriculture Ecological Footprint**

- **Greenhouse Gas Emissions** (100% = 49 GT CO2)
  - 24%

- **Earth's Landmass Usage** (100% = 13.3 Bn ha)
  - 37%

- **Water Withdrawal** (100% = 3862 km3 H2O)
  - 70%

- **Agriculture sector itself contributes majorly to environmental degradation mainly on account of unhealthy Agriculture practices**
- **Long-term sustainability demands a large scale shift to biocides based healthy Agriculture**

**Reducing Arable Land**

- **Reducing arable land due to rapid industrialization**
- **Worldwide, over 0.5 mn tons of banned and unhealthy pesticides are threatening the arable land**
- **South Asia is currently using 94% of its potential arable land**

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MICROBIAL MOVEMENT FOR AGRICULTURE IMPROVEMENT
ABOUT MIKLENS BIO & LINES OF BUSINESS

Started in August 2016 and headquartered in Mumbai, Miklens Bio Pvt. Ltd. is all set to become an eminent name in the field of agricultural innovation and a pioneer in sustainable cultivation.

At Miklens Bio, we develop products that boost agricultural yield, while keeping human health and environmental sustainability in mind. Our USP is the Agri-Microbial Technology (AMT) which is the core of our R&D.
USP: IN - HOUSE R&D CAPABILITIES

Library Of Microbial Database
Miklens Bio has developed an in-house Technology Platform by exploring a vast library of microbial database.

Fermentation Process
Our Products are developed from secondary metabolites using the fermentation process of multiplication and extraction.

International Standards
Miklens products are manufactured at a state of the art facility which follows international standards of quality control.
JOURNEY SO FAR

- Company incorporated on 22nd August, 2016
- Distribution tie-ups already done across in India excluding Gujarat, Rajasthan & Madhya Pradesh.
- 12 new products already launched in the market after extensive trials under lab and open field conditions.
- APEDA certified "Control Union" Organic Certification obtained.
- First export order of 7 MT of MICROBIAL NPK for Canada shipped to Vancouver.
- 6 months of extensive trials and regulatory process approvals obtained for our marquee "MICROBIAL NPK".
- Entire management team now in place with 11 scientists & 6 marketing/administration staff.
- Manufacturing being outsourced to a facility based out of Hyderabad on a job work arrangement.
- Export order of 9 MT of MICROBIAL NPK shipped to Canada.
- New Kharif season sales to start in June to see better traction on volumes and market penetration.
- Recognised as one of the top 30 Tech companies in India at TechSparks 2017 event.
For Farmers:
- Better Yields
- Increased profitability
- Improved standard of living
- Enhanced soil quality
- Chemical Free Produce

For End Consumers:
- Safe and Healthy Food availability
- Reduction in health hazards

Overall:
- With development in the agriculture sector, nation's economy becomes more stable.
1. **Focus on R&D:** Focusing R&D efforts on developing compelling technologies to deliver an innovative pipeline of new products

2. **Optimization of Operational Costs:** Continuous focus on optimizing operational costs and further streamlining processes to achieve excellence

3. **Maximizing ROI:** Optimize utilization of manufacturing platform to enhance capital efficiency and maximize returns

4. **Distributional Channels:** Successfully opening up of distribution channels supported by deeper market penetration

5. **Continuous Innovation:** Develop and patent innovative products

6. **Validating Product Excellence:** Conduct extensive trials across various agricultural universities for validating the product efficacy performance
MIKLENS BIO - MARKET SCENARIO

Network of ~50 key distributors across India

Q1 closed at ~ 1.4 Crores. Look forward to close Q2 at around 3 Crores.

~16MT MikNaturals exported to USA and Canada.

In talks with associates in Israel, Ghana, Mauritius and Mozambique

Working with state governments of Arunachal Pradesh and Orissa.

Sikkim, Meghalaya, Mizoram and Manipur to be followed.
• Recognised as one of the top 30 companies in the technology arena by YourStory during their TechSparks Tech30 event held in September 2017.

• Received Certification from Control Union for our products as “Approved Input for Organic Agriculture”.

• Received certification from Department of Industrial Policy and Promotion, GoI, recognising Miklens Bio as a start-up in September 2017.
MANAGEMENT TEAM

Mr. Santosh Nair
Founder & Managing Director

- Mr. Santosh Nair brings in 20+ years of Exp. in strategic business planning, operations, business strategy, people management and revenue growth.
- He earned a Bachelor degree in Science from Mumbai University & Masters in Financial Management from NMIMS. He has also done an Executive Management Program in Finance from IIM, Ahmedabad.
- In his previous stints, he has worked with HDFC Bank, heading the Retail Business followed by Merrill Lynch as the Market Director. He became CEO at Camson Biotechnologies Limited.
- At Miklens Bio, he is leveraging cross functional role. He is responsible for the overall growth and development of the company.

Mr. Chandrashekhar
Director

- Mr. Chandrashekhar has vast experience in the field of Agriculture especially in the product development arena.
- He also has handled the Sales and Business Development aspect in his career path.
- Mr. Chandrashekhar embarked on his Agriculture journey after completing his Master’s degree in Science, Botany/Plant Biology from University of Mysore in 1983.
- At Miklens Bio, he is entrusted with the responsibility of handling the business development aspect.

Dr. Nisha M M
Director – Research

- Dr. Nisha has over 16 years of experience in leading R&D with extensive knowledge in Agriculture, Microbiology & Biotechnology techniques.
- She has successfully rolled out over 27 products addressing various issues related to agriculture. Identified more than 20 microbial strains and has 8 patents in her name.
- Has international research publications to her credit and has presented papers internationally on important pests for agriculture.
- At Miklens Bio, she is responsible for the overall research and development activities and for product development.
- She is a Master of Science in Agricultural Entomology and Ph.D in Entomology from Kuvempu University, Karnataka. Has been awarded with the prestigious “Pioneer Researcher” under AICRP Completed research in Plant Biotechnology and Molecular Biotechnology.