

India Vertical Farming Market By Structure (Building Based Vertical Farms, Container Based Vertical Farms, and Rack Based Vertical Farms), By Growth Mechanics (Hydroponics, Aeroponics, and Aquaponics) By Application (Indoor and Outdoor), By End User (Retail, Food Service, Residential, and Institutional), By Region, Competition, Forecast and Opportunities, 2020-2030F

Market Report | 2025-03-24 | 88 pages | TechSci Research

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Report description:

India Vertical Farming Market was valued at USD 62.21 million in 2024 and is expected to reach USD 200.14 million by 2030 with a CAGR of 21.50% during the forecast period. The India vertical farming market is experiencing rapid growth, driven by the increasing demand for sustainable farming practices and the need to address challenges such as limited arable land and water scarcity. With a growing population and rising urbanization, there is a pressing need for innovative farming solutions that can meet the demands for fresh, healthy produce in urban areas. Vertical farming, which utilizes stacked layers or vertically inclined surfaces to grow crops, is emerging as an ideal solution to maximize space and optimize resource usage, including water and nutrients. The market is further supported by technological advancements, such as hydroponics, aeroponics, and automation, which improve yield, reduce waste, and ensure consistent crop production.

Additionally, the Indian government is increasingly recognizing the potential of vertical farming, offering incentives and support for the adoption of agri-tech solutions. As consumer preferences shift towards organic, locally grown produce and the need for food security intensifies, the vertical farming market in India is poised for significant expansion, with key regions like North India leading the way.

Key Market Drivers

Rising Urbanization and Limited Agricultural Land

India's rapidly growing urban population and limited availability of arable land are significant drivers of the vertical farming market. With over 1.3 billion people, India is experiencing increasing urban migration, leading to overcrowded cities with limited

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space for traditional farming. Vertical farming, which involves growing crops in stacked layers or vertically inclined surfaces, offers a sustainable solution to address this issue by utilizing minimal space to maximize crop production. Urban areas, especially large metropolitan cities like Delhi, Mumbai, and Bengaluru, are prime locations for vertical farming as they are surrounded by increasing food demand but have little room for conventional agriculture. By integrating vertical farming into urban environments, food production can be localized, reducing transportation costs and carbon emissions. This trend is particularly important as it helps India meet its growing food requirements while tackling land scarcity and urbanization challenges. According to the Ministry of Agriculture, in past years, the urbanization rate of 1.34% in 2021 has increased by 1.5% year-on-year basis. Since 2010-2021 urbanization increased by 19.6%.

Key Market Challenges

High Initial Investment and Operational Costs

One of the major challenges facing the vertical farming market in India is the high initial investment required for setting up the infrastructure, including specialized equipment, climate control systems, and LED lighting. While vertical farming offers long-term sustainability and cost savings, the upfront cost can be a significant barrier, especially for small-scale farmers or startups. The cost of technology, including automated systems for irrigation, lighting, and monitoring, adds to the financial strain. Additionally, operating and maintaining these systems can incur high ongoing costs for energy, particularly in areas where electricity is expensive or unreliable. This presents a major obstacle to the widespread adoption of vertical farming, especially in a price-sensitive market like India, where many farmers still rely on traditional farming methods due to their lower initial costs.

Key Market Trends

Shift Toward Sustainable and Organic Farming

A key trend in India's vertical farming market is the increasing shift towards sustainable and organic farming practices. With growing concerns over chemical fertilizers, pesticides, and their negative impact on both the environment and human health, consumers are becoming more interested in locally grown, chemical-free produce. Vertical farms provide an ideal environment for organic farming, as they use fewer chemicals and pesticides, offering fresher, healthier produce to consumers. Additionally, vertical farming's controlled environment enables the efficient use of resources such as water and nutrients, contributing to sustainability. As consumer demand for organic produce rises in India, particularly in urban areas where health-conscious lifestyles are more prevalent, vertical farming is becoming a popular choice among farmers looking to align with this demand. This trend toward sustainability is likely to drive the market forward in the coming years.

Key Market Players

- Sky Green Pvt. Ltd.
- Edible Routes Pvt. Ltd.
- Future Farms Pvt. Ltd.
- Letcetra Agritech Pvt. Ltd.
- Living Greens Organics

Report Scope:

In this report, the India Vertical Farming Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

-□India Vertical Farming Market, By Structure:

- o Building Based Vertical Farms
- o Container Based Vertical Farms
- o Rack Based Vertical Farms

-□India Vertical Farming Market, By Growth Mechanics:

- o Hydroponics
- o Aeroponics
- o Aquaponics

-□India Vertical Farming Market, By Application:

- o Indoor
- o Outdoor

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-□India Vertical Farming Market, By End User:

- o Retail
- o Food Service
- o Residential
- o Institutional

-□India Vertical Farming Market, By Region:

- o North India
- o South India
- o East India
- o West India

Competitive Landscape

Company Profiles: Detailed analysis of the major companies presents in the India Vertical Farming Market.

Available Customizations:

India Vertical Farming Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

-□Detailed analysis and profiling of additional market players (up to five).

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