

South Korea Vertical Farming Market Size, Share, Trends and Forecast by Component, Structure, Growth Mechanism, Application, and Region, 2026-2034

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Abstracts

The South Korea vertical farming market size reached USD 156.2 Million in 2025. The market is projected to reach USD 774.6 Million by 2034, exhibiting a growth rate (CAGR) of 18.89% during 2026-2034. The market is advancing as the nation explores sustainable solutions to meet rising food demand and urban space constraints. This method of cultivation is being adopted across diverse applications, supported by modern growth mechanisms and controlled environment systems. Developments in infrastructure, technology, and integration with smart farming tools are enhancing operational efficiency. As both public and private sectors invest in innovative agricultural models, these efforts are set to drive growth in the South Korea vertical farming market share.

SOUTH KOREA VERTICAL FARMING MARKET TRENDS:

Innovation in Urban Crop Production

On 5 April 2025, a Seoul-based agri-tech company introduced a new vertical farming system that can produce leafy greens in a compact space using stacked trays under LED lighting. This innovation marks a turning point in how cities can grow food by reducing reliance on traditional farmland and enabling production within dense urban settings. The system utilizes precise control of temperature, humidity, and nutrients to accelerate crop growth cycles. With its modular design, it can be scaled to fit vacant urban buildings, rooftops, or underutilized commercial spaces. As a result, harvests are fresher, supply chains shorter, and post-harvest losses minimized. This also supports

climate resilience by reducing exposure to outdoor weather conditions. Urban farmers and planners are closely monitoring, exploring how this technology could help meet local demand for fresh, locally grown produce. Community kitchens, educational institutions, and retailers are expressing interest too, since the model supports traceability from planting to plate. It also underscores how urban-friendly solutions are becoming central to South Korea vertical farming market growth, as adoption scales rapidly.

Technological Innovation Driving Yield Efficiency

On 10 June 2024, the Government of South Korea announced new public funding to support vertical farming projects that employ smart automation, including sensor-driven irrigation and lighting systems. These smart tools constantly monitor conditions like airflow, humidity, and nutrient delivery while automatically adjusting for optimal plant growth. The result is improved yield consistency and less manual intervention, enabling operators to focus on planning and quality control instead of routine maintenance. Real-time feedback loops enabled by sensor arrays allow farms to detect stress signs early, reducing crop loss and boosting production predictability. At the same time, data dashboards offer transparency into resource use allowing stakeholders track water and energy consumption more intelligently. This isn't just about higher outputs; it's a move toward sustainable efficiency where every plant is grown under carefully tailored conditions. As more vertical farms adopt these integrated systems, operations become leaner and better suited for urban environments without sacrificing quality or sustainability. By combining advanced agritech with automated processes, South Korea is positioning vertical farms to scale in both density and impact, reflecting emerging South Korea vertical farming market trends.

Institutional Support Enhancing Global Ambitions

On 15 February 2025, South Korea's agriculture ministry announced a national plan to support vertical farms in expanding their presence overseas, including grant funding for export-related activities. This government-led initiative reflects the country's broader interest in positioning vertical farming as both a local food solution and a global business model. Support measures include assistance with market research, trade documentation, and international certification all designed to help farming operations adapt to different regulatory environments and consumer demands abroad. Domestically, vertical farming hubs are being used to test crop varieties tailored for overseas preferences and climate compatibility. These sites also act as training centers, offering practical guidance on controlled-environment agriculture techniques. By

building up knowledge infrastructure at home while facilitating expansion overseas, South Korea is creating a feedback loop that fosters innovation, talent development, and economic scale. This approach doesn't just boost the visibility of vertical farming it strengthens the entire ecosystem supporting it. The long-term outcome is a more resilient and connected industry capable of adapting to future demand both locally and internationally.

SOUTH KOREA VERTICAL FARMING MARKET SEGMENTATION:

IMARC Group provides an analysis of the key trends in each segment of the market, along with forecasts at the country and regional levels for 2026-2034. Our report has categorized the market based on component, structure, growth mechanism, and application.

Component Insights:

- Irrigation Component

- Lighting

- Sensor

- Climate Control

- Building Material

- Glass Greenhouse

- Plastic Greenhouse

- Others

The report has provided a detailed breakup and analysis of the market based on the component. This includes irrigation component, lighting, sensor, climate control, building material (glass greenhouse and plastic greenhouse), others.

Structure Insights:

Building-based Vertical Farms

Container-based Vertical Farms

A detailed breakup and analysis of the market based on the structure have also been provided in the report. This includes building-based vertical farms and container-based vertical farms.

Growth Mechanism Insights:

Hydroponics

Aeroponics

Aquaponics

The report has provided a detailed breakup and analysis of the market based on the growth mechanism. This includes hydroponics, aeroponics, and aquaponics.

Application Insights:

Indoor

Outdoor

The report has provided a detailed breakup and analysis of the market based on the application. This includes indoor and outdoor.

Regional Insights:

Seoul Capital Area

Yeongnam (Southeastern Region)

Honam (Southwestern Region)

Hoseo (Central Region)

Others

The report has also provided a comprehensive analysis of all the major regional markets, which include the Seoul Capital Area, Yeongnam (Southeastern Region), Honam (Southwestern Region), Hoseo (Central Region), and others.

COMPETITIVE LANDSCAPE:

The market research report has also provided a comprehensive analysis of the competitive landscape. Competitive analysis such as market structure, key player positioning, top winning strategies, competitive dashboard, and company evaluation quadrant has been covered in the report. Also, detailed profiles of all major companies have been provided.

KEY QUESTIONS ANSWERED IN THIS REPORT

How has the South Korea vertical farming market performed so far and how will it perform in the coming years?

What is the breakup of the South Korea vertical farming market on the basis of component?

What is the breakup of the South Korea vertical farming market on the basis of structure?

What is the breakup of the South Korea vertical farming market on the basis of growth mechanism?

What is the breakup of the South Korea vertical farming market on the basis of application?

What is the breakup of the South Korea vertical farming market on the basis of region?

What are the various stages in the value chain of the South Korea vertical farming market?

What are the key driving factors and challenges in the South Korea vertical farming market?

What is the structure of the South Korea vertical farming market and who are the key players?

What is the degree of competition in the South Korea vertical farming market?

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