

Global Cannabis Vertical Farming Market Size Study, by Growth Mechanism (Hydroponics, Aeroponics, Aquaponics), Structure (Building-based, Shipping container-based), Crop Type, Offering (Hardware, Software, Services), and Regional Forecasts 2022-2032

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Abstracts

The global Cannabis Vertical Farming Market is valued at approximately USD 4.68 billion in 2023 and is poised for remarkable growth at a compound annual growth rate (CAGR) of 19.7% during the forecast period from 2024 to 2032. Vertical farming for cannabis cultivation is revolutionizing the agricultural sector, blending cutting-edge technologies with innovative farming practices to optimize yield and ensure sustainability. This approach leverages advanced methods like hydroponics, aeroponics, and aquaponics, enabling cultivators to grow cannabis in controlled environments while minimizing resource utilization.

The rising global demand for medicinal and recreational cannabis, paired with the increasing adoption of sustainable farming practices, has catalyzed the growth of vertical farming techniques. With features such as year-round cultivation, higher productivity per square meter, and reduced water usage, cannabis vertical farming is becoming a preferred solution. Furthermore, technological advancements in lighting systems, climate control, and AI-based monitoring are empowering cultivators to optimize crop quality and profitability. Market players are innovating to offer integrated solutions that cater to diverse consumer preferences and regulatory compliance.

However, the market faces challenges such as high initial setup costs and the need for skilled labor. Additionally, navigating complex regulatory landscapes across different

regions can impede growth. Despite these hurdles, increasing legalization of cannabis globally and the expanding application of cannabis-derived products present significant growth opportunities. The integration of IoT, AI, and blockchain in vertical farming systems is further expected to redefine the industry's trajectory.

Geographically, North America dominates the Cannabis Vertical Farming Market, supported by favorable regulatory frameworks, high consumer demand, and robust investments in cannabis technology. Europe follows closely, driven by the legalization of medicinal cannabis and government-backed research initiatives. Meanwhile, the Asia Pacific region is anticipated to exhibit the fastest growth due to increasing adoption of advanced farming techniques and evolving cannabis regulations in countries like China, India, and Australia.

Major market players included in this report are:

- AeroFarms
- Freight Farms
- Green Sense Farms Holdings, Inc.
- Plenty Unlimited Inc.
- Agrify Corporation
- Urban Crop Solutions
- Sky Greens
- Signify Holding
- Everlight Electronics Co., Ltd.
- Valoya
- Heliospectra AB
- American Hydroponics

- BrightFarms Inc.
- Illumitex Inc.
- Vertical Harvest

The detailed segments and sub-segment of the market are explained below:

By Growth Mechanism

- Hydroponics
- Aeroponics
- Aquaponics

By Structure

- Building-based
- Shipping container-based

By Crop Type

- Medical
- Recreational
- Industrial Hemp

By Offering

- Hardware
- Software
- Services

By Region

North America

- U.S.
- Canada

Europe

- UK
- Germany
- France
- Spain
- Italy
- Rest of Europe

Asia Pacific

- China
- India
- Japan
- Australia
- South Korea
- Rest of Asia Pacific

Latin America

- Brazil

- Mexico
- Rest of Latin America

Middle East & Africa

- Saudi Arabia
- South Africa
- Rest of Middle East & Africa

Key Takeaways:

- Market forecasts and revenue analysis for 2022-2032 across all regions and segments.
- Insights into technological advancements and trends shaping the cannabis vertical farming sector.
- Strategic recommendations for navigating market challenges and capturing growth opportunities.
- Comprehensive competitive landscape profiling 15 leading players driving innovation and market growth.

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