

Vertical Farming Market to grow at a CAGR of 24.7% [2023-2028]

CHICAGO, ILLINOIS, UNITED STATES, July 11, 2023 /EINPresswire.com/ -- The Vertical Farming Market by Growth Mechanism (Hydroponics, Aeroponics, Aquaponics), Structure (Building-based and Shipping container-based), Crop Type, Offering (Lighting, Sensors, Climate Control, Software, Services) & Region - Global Forecast to 2028", [240 Pages Report] The vertical farming market is estimated to be USD 5.1 billion in 2023, and it is expected to reach USD 15.3 billion by 2028, growing at a CAGR of 24.7% from 2023 to 2028. Various factors are fueling the growth of the vertical farming market. One of the key drivers is the decreasing availability of land for agriculture, which is happening due to urbanization, deforestation, and climate change. This trend poses a challenge to traditional farming methods, but vertical farming offers a solution by utilizing space more efficiently to produce food.

Market Dynamics:

Driver: Reduced environmental impact from agriculture by the adoption of vertical farming Vertical farming plays a vital role in reducing the environmental impact of



agriculture. It reduces the water required to produce the same or higher number of crops. It also

removes the chemicals and pesticides used to grow crops and diminishes the need for transportation. The entire process of vertical farming is carried out organically. It significantly eliminates the use of chemicals and provides natural solutions, such as using fish to produce nutrient-rich waste for plants in the aquaponics growth mechanism of vertical farming. Also, as vertical farming is carried out in a controlled environment, they are immune to dangerous pests, eliminating pesticide use. As methods of pest control such as burning fields, grass, or waste are omitted, vertical farming assures healthy, quality produce for its consumers. This, in turn, is expected to create growth opportunities for the players in the vertical farming market.

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Restraint: Lack of technically skilled workforce and limited crop types

Vertical farming often involves use of technical solutions, such as cameras, sensors, automated systems, artificial intelligence, hydroponic, aquaponics, and aeroponic systems. To operate these advanced systems, a knowledgeable and skillful workforce is essential. The lack of a skilled workforce has affected different sectors globally, and vertical farming is no exception. Also, most farmers venture into this market with systems that are inefficient in terms of design and are costly. To sustain and remain competitive in the market, vertical farms need to be updated on different aspects of farming. Moreover, unlike conventional farming, growers can grow a limited range of crops in vertical farming, but these crops are economically and commercially viable today. Indoor farming is the future of farming but will not account for all growing operations; for instance, leafy greens are best grown in vertical farming, but tomatoes, cucumbers, and peppers are best grown in greenhouses.

Opportunity: Potential market opportunities in Asia Pacific and the Middle East According to the Ministry of Agriculture, Forest, & Fisheries (MAFF), people in APAC consume about 75% of the vegetables produced globally. In APAC, most plant factories are in Japan, China, Hong Kong, and Singapore. Factors such as continuous growth in urban population, rising disposable income, and increasing middle-class population are expected to drive the demand for food and agricultural commodities and resources between 2023 and 2028. With the advantage of producing more in less area, vertical farming is being increasingly adopted in different countries in APAC. The Middle East is another market with high growth potential for vertical farming. The climate in Middle Eastern countries is hot for almost eight months a year, leaving a significantly less favorable period for crop production. This leads to the limited availability of local produce at high prices. However, countries such as the UAE and Israel are expected to hold high growth opportunities for the market.

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Challenge: Higher energy consumption leads to high operational costs Energy consumption and operating costs present significant restraints on the vertical farming market, impacting its scalability and economic viability. One area of concern is the energy-intensive nature of vertical farming, particularly the reliance on artificial lighting systems. Traditional lighting technologies, such as high-pressure sodium (HPS) lamps, consume substantial energy. A study by the University of California, Davis, found that HPS lighting alone accounted for 50% to 70% of the total energy consumption in a vertical farm. Furthermore, per the 2021 Global CEA Census Report, vertical farms demonstrate a considerably higher average energy consumption of 38.8 kWh per kilogram of produce. In contrast, traditional greenhouses have an average energy consumption of 5.4 kWh per kilogram.

"Browse in-depth TOC on "Vertical Farming Market Trends, Growth Drivers" 150 – Tables 70 – Figures 240 – Pages

Vertical Farming Companies -Signify (Netherlands), ams-OSRAM AG (Germany) are the Key Players

Signify Holding, a global leader in lighting, is making significant contributions to the growth of the vertical farming market. Their LED lighting solutions are designed for vertical farming, providing the precise light spectrum and intensity required for optimal plant growth and high yields. In addition to lighting, with their emphasis on innovation and expertise in lighting and horticulture, Signify is driving the expansion of the vertical farming market. They are well-positioned to continue playing a leading role by developing new products and services that cater to the evolving needs of vertical farmers. Signify's dedication to advancing technology in this field contributes to the sustainability and efficiency of vertical farming practices, ultimately benefiting the industry and its stakeholders.

ams OSRAM, a prominent provider of sensors and LED lighting solutions, is making significant contributions to the expansion of the vertical farming market. Their product offerings are well-suited for vertical farming, delivering the precise light spectrum and intensity required for healthy plant growth and high yields. ams OSRAM's key strategies for product development in the vertical farming sector encompass tailored solutions. They are dedicated to developing LED lighting solutions designed specifically for vertical farming, ensuring plants receive the optimal light spectrum and intensity. Additionally, ams OSRAM focuses on creating climate control systems capable of maintaining ideal conditions for plant growth, encompassing temperature, humidity, and CO2 levels.

Related Reports:

The Precision Farming Market by Technology (Guidance, Remote Sensing and Variable Rate Technology), Offering, Application, and Region (Americas, Europe, Asia Pacific, Rest of the World) - Global growth Driver and Industry Forecast to 2030

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