

Automated Farming Market Forecasts to 2032 – Global Analysis By Offering (Hardware, Software, and Services), Product Type (Driverless Tractors/Autonomous Tractors, Unmanned Aerial Vehicles (UAVs)/Drones, Automated Harvesting Systems, Milking and Feeding Robots, Material Management Robots, and Other Specialized Robots), Farm Produce, Application, and By Geography

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Abstracts

According to Statistics MRC, the Global Automated Farming Market is accounted for \$13.4 billion in 2025 and is expected to reach \$35.2 billion by 2032, growing at a CAGR of 14.8% during the forecast period. Automated farming includes machinery, robots, drones, sensors, and software that automate tasks such as planting, spraying, weeding, harvesting, and livestock monitoring. It spans precision agriculture platforms, autonomous tractors, and decision-support tools driven by data and AI. Benefits include reduced labor dependency, optimized input use, higher and more consistent yields, improved animal welfare, and better resilience to climate and market volatility through data-driven farm management.

Market Dynamics:

Driver:

Labor Shortages and Rising Labor Costs

A critical and persistent shortage of skilled agricultural labor, coupled with steadily

increasing wage pressures, is a primary force propelling the automated farming market. This deficit makes it increasingly difficult and expensive for growers to manage crucial tasks like harvesting and weeding. Consequently, farmers are actively turning to automation as a reliable and cost-effective alternative to human workers. This shift is fundamentally accelerating the adoption of technologies like autonomous tractors and robotic harvesters to ensure operational continuity and maintain profitability.

Restraint:

High Initial Investment Costs

The substantial upfront capital required for acquiring and implementing automated farming systems presents a major barrier to widespread adoption, particularly for small and medium-sized farms. This cost includes not only the high-priced machinery itself but also the expense of integrating it with existing infrastructure and the necessary software platforms. For many operations, the return on investment period can be lengthy, making the financial commitment prohibitive and slowing down market penetration, especially in cost-sensitive and developing agricultural regions.

Opportunity:

Specialized Robotics Development

There is a significant and growing market opportunity in developing specialized robotics tailored for high-value, delicate crops like fruits and vegetables. These crops often rely heavily on manual labor for tasks such as selective harvesting and precise pruning, which are difficult to automate with standard machinery. Companies that successfully engineer agile robots with advanced computer vision for these specific, labor-intensive applications can tap into a lucrative niche, addressing a critical pain point for producers and driving a new wave of market growth.

Threat:

Competition from Traditional Equipment Manufacturers

There is a significant and growing market opportunity in developing specialized robotics tailored for high-value, delicate crops like fruits and vegetables. These crops often rely heavily on manual labor for tasks such as selective harvesting and precise pruning, which are difficult to automate with standard machinery. Companies that successfully

engineer agile robots with advanced computer vision for these specific, labor-intensive applications can tap into a lucrative niche, addressing a critical pain point for producers and driving a new wave of market growth.

Covid-19 Impact:

The pandemic severely disrupted the global agricultural supply chain, exposing acute vulnerabilities tied to human labor dependency. Border closures and illness led to crippling shortages of migrant seasonal workers, stalling farm operations. This crisis acted as a potent catalyst, forcefully accelerating the adoption of automated solutions as farmers urgently sought to de-risk their labor supply. Consequently, the pandemic shifted automation from a strategic consideration to an immediate operational necessity, driving a surge in demand and long-term market growth for contactless farming technologies.

The hardware segment is expected to be the largest during the forecast period

The hardware segment is expected to account for the largest market share during the forecast period. This dominance is a direct reflection of automation's physical requirements; it encompasses the essential and tangible components like autonomous tractors, drones, sensors, and harvesting robots that form the backbone of any smart farming operation. These high-value physical assets represent the most significant capital expenditure for farmers transitioning to automated practices. Furthermore, as the foundational layer upon which software and data analytics operate, robust hardware is the non-negotiable first step for implementation, securing its leading market share.

The fruits and vegetables segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the fruits and vegetables segment is predicted to witness the highest growth rate due to the exceptionally high labor dependency and sensitivity of these crops. Manual tasks like picking, pruning, and packing are perfect targets for automation, especially amid rising labor costs. Also, the high economic value of these crops makes it worth it to invest in precision robotics that can handle fragile produce without damaging it. This combination of pressing labor challenges and strong ROI potential makes this segment a key growth frontier for automated solutions.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, anchored by the presence of large-scale farm enterprises in the U.S. and Canada that possess the necessary capital for significant technological investment. The region benefits from robust technological infrastructure, strong government support for agricultural innovation, and a high level of awareness among farmers about the benefits of precision agriculture, creating a mature and receptive market for automated farming systems.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, fueled by the pressing need to enhance food security for massive populations, particularly in countries like China and India. Additionally, governments in the region are actively promoting modern agricultural techniques to boost yields and address the challenges of shrinking arable land and labor migration from rural areas, creating a highly conducive environment for the rapid adoption of automated farming technologies.

Key players in the market

Some of the key players in Automated Farming Market include Deere & Company, AGCO Corporation, CNH Industrial N.V., Kubota Corporation, Trimble Inc., Topcon Corporation, Yara International ASA, Bayer AG, SZ DJI Technology Co., Ltd., Lely Group, Valmont Industries, Inc., Lindsay Corporation, Netafim Ltd., PrecisionHawk Inc., Autonomous Solutions, Inc., and Farmers Edge Inc.

Key Developments:

In May 2025, SZ DJI Technology Co., Ltd. released its DJI Agriculture Annual Report at Agrishow 2025, showing how Agras spray drones and the SmartFarm app are driving a drone-powered farming revolution through highly automated crop spraying and monitoring.

In January 2025, Deere & Company revealed new autonomous machines and a second-generation autonomy kit at CES 2025 to extend fully automated operations for its agricultural customers.

In November 2024, Nexans S.A. announced a significant contract in November 2024 worth €1 billion for supplying underground HVDC cables along with Prysmian Group and NKT A/S. They also acquired Reka Cables in April 2023 to strengthen their high-

voltage cable portfolio.

Offerings Covered:

Hardware

Software

Services

Product Types Covered:

Driverless Tractors/Autonomous Tractors

Unmanned Aerial Vehicles (UAVs)/Drones

Automated Harvesting Systems

Milking and Feeding Robots

Material Management Robots

Other Specialized Robots

Farm Produces Covered:

Field Crops

Fruits and Vegetables

Dairy and Livestock

Floriculture

Other Farm Produce

Applications Covered:

Field & Crop Management

Livestock and Dairy Management

Soil and Irrigation Management

Harvest Management

Inventory and Supply Chain Management

Smart Greenhouse/Controlled Environment Agriculture (CEA)

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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