

Farm Automation Market Forecasts to 2034 – Global Analysis By Automation Type (Automated Irrigation Systems, Autonomous Tractors, Automated Harvesting Systems, Automated Feeding Systems and Other Automation Types), Farm Type, Technology, Application, End User and Geography

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Abstracts

According to Statistics MRC, the Global Farm Automation Market is accounted for \$10.5 billion in 2026 and is expected to reach \$36.8 billion by 2034 growing at a CAGR of 17% during the forecast period. Farm automation refers to the use of machinery, robotics, sensors, and intelligent systems to automate agricultural tasks with minimal human intervention. Automated technologies are applied in activities such as planting, irrigation, fertilization, harvesting, livestock management, and crop monitoring. These systems improve operational efficiency, reduce labor dependency, and enhance productivity through precision-based farming practices. Farm automation also supports resource optimization and sustainable agricultural production. Increasing labor shortages, rising operational costs, and advancements in robotics and artificial intelligence are driving adoption of automation technologies across modern farming operations worldwide.

Market Dynamics:

Driver:

Rising agricultural labor shortages

Producers are increasingly turning to automated systems to maintain productivity

despite workforce gaps. Governments are encouraging mechanization to stabilize food supply chains. Technology providers are introducing solutions that reduce reliance on manual labor. Awareness of efficiency gains is spreading among commercial farms. Investment in automation is accelerating as labor costs rise. This growing reliance on mechanization is driving the market forward.

Restraint:

Limited skilled workforce availability

A significant restraint is the limited availability of skilled workers to operate and maintain advanced automation systems. Many rural regions lack trained technicians to support complex machinery. Smaller farms often struggle to recruit or retain skilled staff. Training programs are not yet widespread, slowing adoption. High technical requirements discourage some producers from investing. Infrastructure gaps further complicate deployment.

Opportunity:

Autonomous machinery technology advancements

Advancements in autonomous machinery present a major opportunity for farm automation. Self-driving tractors, robotic harvesters, and AI-enabled equipment are transforming field operations. These technologies reduce labor dependency while improving precision. Innovation in cost-effective autonomous systems is making them accessible to mid-sized farms. Governments are supporting pilot projects to accelerate adoption. Collaborations between equipment manufacturers and agritech firms are expanding reach.

Threat:

Resistance to technology adoption

Resistance among farmers to adopting new technologies remains a notable threat. Many producers prefer traditional methods due to familiarity and lower upfront costs. Concerns about reliability and return on investment slow modernization. Cultural and generational factors also influence reluctance. Smaller farms often hesitate to experiment with advanced systems. Negative experiences with early deployments can discourage adoption.

Covid-19 Impact:

Covid-19 reshaped the farm automation market in multiple ways. Labor shortages during lockdowns accelerated interest in automated solutions. Remote monitoring and robotics became essential for continuity of operations. However, supply chain disruptions delayed equipment deliveries. Economic uncertainty made farmers cautious about high-cost investments. At the same time, food security concerns encouraged modernization.

The automated irrigation systems segment is expected to be the largest during the forecast period

The automated irrigation systems segment is expected to account for the largest market share during the forecast period as water management has become a critical priority in modern agriculture. Rising concerns over resource efficiency are pushing farms to adopt smart irrigation solutions. These systems reduce wastage, improve crop yields, and support sustainability goals. Manufacturers are introducing sensor-based platforms that adjust water delivery in real time. Adoption is particularly strong in commercial farms and regions facing water scarcity. Government programs promoting water-efficient farming are further strengthening demand.

The artificial intelligence segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the artificial intelligence segment is predicted to witness the highest growth rate due to its ability to transform decision-making in agriculture through predictive analytics and automation. AI platforms analyze soil, weather, and crop data to provide actionable insights. Farmers benefit from improved efficiency, reduced costs, and higher profitability. Startups are rapidly introducing AI-driven solutions tailored to diverse farming needs. Awareness campaigns emphasize the role of AI in precision agriculture. Supportive government initiatives are accelerating integration across farms of all sizes.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share owing to early adoption of automation technologies. The US and Canada host leading equipment manufacturers and agritech innovators. Policy frameworks

encourage sustainable and technology-driven farming practices. Commercial farms are increasingly deploying premium automation systems. Retail penetration of automated solutions is widespread across the region. North America continues to consolidate its position as the global leader in farm automation.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by supportive government subsidies. Countries such as China, India, and Japan are investing heavily in smart farming initiatives. Affordable automation solutions are gaining traction among mid-sized farms. Rural digitization programs are expanding access to advanced technologies. E-commerce platforms are helping distribute automation tools to remote areas. Asia Pacific is emerging as the fastest-growing hub for farm automation worldwide.

Key players in the market

Some of the key players in Farm Automation Market include Deere & Company, AGCO Corporation, CNH Industrial N.V., Kubota Corporation, Trimble Inc., Topcon Positioning Systems, Inc., Lely Holding S.a r.l., DeLaval Holding AB, Naio Technologies, Ecorobotix SA, Yanmar Holdings Co., Ltd., Raven Industries, Inc., Ag Leader Technology, FarmWise Labs, Inc. and Blue River Technology.

Key Developments:

In August 2025, AGCO Corporation introduced the Massey Ferguson 5M Series Utility Tractors to the North American market, offering horsepower options from 85 to 120 HP. This mid-range product launch features advanced hydraulics and smart implement control options, expanding the brand's footprint in precision utility operations for livestock and hay farming.

In May 2025, Deere & Company officially acquired Sentera, a leading provider of remote imagery solutions for agriculture. This strategic acquisition advances John Deere's precision agriculture technology by seamlessly integrating Sentera's high-resolution drone-based imagery and predictive data software directly into the John Deere Operations Center.

Automation Types Covered:

Automated Irrigation Systems

Autonomous Tractors

Automated Harvesting Systems

Automated Feeding Systems

Other Automation Types

Farm Types Covered:

Field Crop Farms

Dairy Farms

Greenhouse Farms

Indoor Farms

Other Farm Types

Technologies Covered:

Artificial Intelligence

Robotics & Automation

IoT & Smart Sensors

GPS & Navigation Systems

Other Technologies

Applications Covered:

Planting & Seeding

Harvesting

Irrigation Management

Livestock Management

Other Applications

End Users Covered:

Commercial Farms

Greenhouse Operators

Dairy Farms

Agricultural Cooperatives

Other End Users

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of 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 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- 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

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL FARM AUTOMATION MARKET, BY AUTOMATION TYPE

- 5.1 Automated Irrigation Systems
- 5.2 Autonomous Tractors
- 5.3 Automated Harvesting Systems
- 5.4 Automated Feeding Systems
- 5.5 Other Automation Types

6 GLOBAL FARM AUTOMATION MARKET, BY FARM TYPE

- 6.1 Field Crop Farms
- 6.2 Dairy Farms
- 6.3 Greenhouse Farms
- 6.4 Indoor Farms
- 6.5 Other Farm Types

7 GLOBAL FARM AUTOMATION MARKET, BY TECHNOLOGY

- 7.1 Artificial Intelligence
- 7.2 Robotics & Automation
- 7.3 IoT & Smart Sensors
- 7.4 GPS & Navigation Systems
- 7.5 Other Technologies

8 GLOBAL FARM AUTOMATION MARKET, BY APPLICATION

- 8.1 Planting & Seeding
- 8.2 Harvesting
- 8.3 Irrigation Management
- 8.4 Livestock Management
- 8.5 Other Applications

9 GLOBAL FARM AUTOMATION MARKET, BY END USER

- 9.1 Commercial Farms

- 9.2 Greenhouse Operators
- 9.3 Dairy Farms
- 9.4 Agricultural Cooperatives
- 9.5 Other End Users

10 GLOBAL FARM AUTOMATION MARKET, BY GEOGRAPHY

- 10.1 North America
 - 10.1.1 United States
 - 10.1.2 Canada
 - 10.1.3 Mexico
- 10.2 Europe
 - 10.2.1 United Kingdom
 - 10.2.2 Germany
 - 10.2.3 France
 - 10.2.4 Italy
 - 10.2.5 Spain
 - 10.2.6 Netherlands
 - 10.2.7 Belgium
 - 10.2.8 Sweden
 - 10.2.9 Switzerland
 - 10.2.10 Poland
 - 10.2.11 Rest of Europe
- 10.3 Asia Pacific
 - 10.3.1 China
 - 10.3.2 Japan
 - 10.3.3 India
 - 10.3.4 South Korea
 - 10.3.5 Australia
 - 10.3.6 Indonesia
 - 10.3.7 Thailand
 - 10.3.8 Malaysia
 - 10.3.9 Singapore
 - 10.3.10 Vietnam
 - 10.3.11 Rest of Asia Pacific
- 10.4 South America
 - 10.4.1 Brazil
 - 10.4.2 Argentina
 - 10.4.3 Colombia

- 10.4.4 Chile
- 10.4.5 Peru
- 10.4.6 Rest of South America
- 10.5 Rest of the World (RoW)
 - 10.5.1 Middle East
 - 10.5.1.1 Saudi Arabia
 - 10.5.1.2 United Arab Emirates
 - 10.5.1.3 Qatar
 - 10.5.1.4 Israel
 - 10.5.1.5 Rest of Middle East
 - 10.5.2 Africa
 - 10.5.2.1 South Africa
 - 10.5.2.2 Egypt
 - 10.5.2.3 Morocco
 - 10.5.2.4 Rest of Africa

11 STRATEGIC MARKET INTELLIGENCE

- 11.1 Industry Value Network and Supply Chain Assessment
- 11.2 White-Space and Opportunity Mapping
- 11.3 Product Evolution and Market Life Cycle Analysis
- 11.4 Channel, Distributor, and Go-to-Market Assessment

12 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 12.1 Mergers and Acquisitions
- 12.2 Partnerships, Alliances, and Joint Ventures
- 12.3 New Product Launches and Certifications
- 12.4 Capacity Expansion and Investments
- 12.5 Other Strategic Initiatives

13 COMPANY PROFILES

- 13.1 Deere & Company
- 13.2 AGCO Corporation
- 13.3 CNH Industrial N.V.
- 13.4 Kubota Corporation
- 13.5 Trimble Inc.
- 13.6 Topcon Positioning Systems, Inc.

- 13.7 Lely Holding S.a r.l.
- 13.8 DeLaval Holding AB
- 13.9 Naio Technologies
- 13.10 Ecorobotix SA
- 13.11 Yanmar Holdings Co., Ltd.
- 13.12 Raven Industries, Inc.
- 13.13 Ag Leader Technology
- 13.14 FarmWise Labs, Inc.
- 13.15 Blue River Technology

List Of Tables

LIST OF TABLES

Table 1 Global Farm Automation Market Outlook, By Region (2023-2034) (\$MN)
Table 2 Global Farm Automation Market, By Automation Type (2023–2034) (\$MN)
Table 3 Global Farm Automation Market, By Automated Irrigation Systems (2023–2034) (\$MN)
Table 4 Global Farm Automation Market, By Autonomous Tractors (2023–2034) (\$MN)
Table 5 Global Farm Automation Market, By Automated Harvesting Systems (2023–2034) (\$MN)
Table 6 Global Farm Automation Market, By Automated Feeding Systems (2023–2034) (\$MN)
Table 7 Global Farm Automation Market, By Other Automation Types (2023–2034) (\$MN)
Table 8 Global Farm Automation Market, By Farm Type (2023–2034) (\$MN)
Table 9 Global Farm Automation Market, By Field Crop Farms (2023–2034) (\$MN)
Table 10 Global Farm Automation Market, By Dairy Farms (2023–2034) (\$MN)
Table 11 Global Farm Automation Market, By Greenhouse Farms (2023–2034) (\$MN)
Table 12 Global Farm Automation Market, By Indoor Farms (2023–2034) (\$MN)
Table 13 Global Farm Automation Market, By Other Farm Types (2023–2034) (\$MN)
Table 14 Global Farm Automation Market, By Technology (2023–2034) (\$MN)
Table 15 Global Farm Automation Market, By Artificial Intelligence (2023–2034) (\$MN)
Table 16 Global Farm Automation Market, By Robotics & Automation (2023–2034) (\$MN)
Table 17 Global Farm Automation Market, By IoT & Smart Sensors (2023–2034) (\$MN)
Table 18 Global Farm Automation Market, By GPS & Navigation Systems (2023–2034) (\$MN)
Table 19 Global Farm Automation Market, By Other Technologies (2023–2034) (\$MN)
Table 20 Global Farm Automation Market, By Application (2023–2034) (\$MN)
Table 21 Global Farm Automation Market, By Planting & Seeding (2023–2034) (\$MN)
Table 22 Global Farm Automation Market, By Harvesting (2023–2034) (\$MN)
Table 23 Global Farm Automation Market, By Irrigation Management (2023–2034) (\$MN)
Table 24 Global Farm Automation Market, By Livestock Management (2023–2034) (\$MN)
Table 25 Global Farm Automation Market, By Other Applications (2023–2034) (\$MN)
Table 26 Global Farm Automation Market, By End User (2023–2034) (\$MN)
Table 27 Global Farm Automation Market, By Commercial Farms (2023–2034) (\$MN)

Table 28 Global Farm Automation Market, By Greenhouse Operators (2023–2034)
(\$MN)

Table 29 Global Farm Automation Market, By Dairy Farms (2023–2034) (\$MN)

Table 30 Global Farm Automation Market, By Agricultural Cooperatives (2023–2034)
(\$MN)

Table 31 Global Farm Automation Market, By Other End Users (2023–2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) are also represented in the same manner as above.

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