

Agricultural IoT Market Forecasts to 2034 – Global Analysis By Solution Type (Smart Irrigation Systems, Livestock Monitoring Solutions, Precision Farming Solutions, Greenhouse Automation Solutions and Other Solution Types), Device Type, Connectivity Technology, Application, End User, and Geography

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Abstracts

According to Statistics MRC, the Global Agricultural IoT Market is accounted for \$35.0 billion in 2026 and is expected to reach \$88.5 billion by 2034 growing at a CAGR of 12.3% during the forecast period. Agricultural IoT refers to the application of Internet of Things technologies in farming operations through connected sensors, devices, and monitoring systems. These technologies collect real-time data related to soil moisture, weather conditions, crop health, livestock activity, and equipment performance. The gathered data is analyzed to improve precision farming, resource efficiency, and operational decision-making. Agricultural IoT enables automated irrigation, remote monitoring, predictive maintenance, and optimized input usage. Increasing demand for smart farming, sustainable agriculture, and productivity enhancement is accelerating the adoption of IoT-enabled agricultural solutions across global farming industries.

Market Dynamics:

Driver:

Increasing smart farming adoption

Farmers are increasingly using connected devices to improve productivity and operational efficiency. IoT technologies help monitor soil conditions, crop health,

irrigation, and livestock activities in real time. Growing demand for precision agriculture solutions is further supporting market expansion. Agricultural enterprises are investing in automated monitoring and data-driven farming systems. Advancements in sensor technologies and wireless connectivity are accelerating adoption. These factors are driving strong market growth.

Restraint:

High IoT deployment expenses

Installation of connected sensors, communication networks, and monitoring platforms requires significant capital investment. Small and medium-scale farmers often face affordability challenges in adopting advanced IoT technologies. Maintenance and infrastructure upgrade costs further increase operational burdens. Limited digital infrastructure in rural farming areas also affects implementation efficiency. Technical complexity in integrating multiple devices remains an additional challenge. These factors collectively restrict market expansion.

Opportunity:

Growth in predictive farm analytics

Predictive analytics technologies help farmers forecast crop performance, irrigation needs, and disease risks accurately. This is driving growth in predictive farm analytics as agricultural technology companies increasingly integrate AI-based algorithms, sensor-driven monitoring platforms, and cloud-connected data systems to improve farm decision-making and optimize agricultural productivity across commercial farming operations worldwide. Demand for intelligent agricultural automation is increasing steadily. Investments in digital farming infrastructure are expanding rapidly. These trends are strengthening market potential.

Threat:

Data interoperability standard challenges

Different IoT platforms and devices often operate using incompatible communication standards and software systems. This creates difficulties in seamless data integration across farming operations. Farmers may face operational inefficiencies due to fragmented digital ecosystems. Lack of universal connectivity standards further limits

large-scale technology adoption. Managing multiple disconnected systems also increases implementation complexity. These factors act as significant market threats.

Covid-19 Impact:

The COVID-19 pandemic accelerated digital transformation across the agricultural sector globally. Farmers increasingly adopted remote monitoring and automated farming solutions during labor shortages and movement restrictions. Demand for IoT-enabled farm management systems increased steadily throughout the pandemic period. Agricultural enterprises focused more on operational efficiency and resource optimization. Supply chain disruptions highlighted the importance of real-time agricultural monitoring technologies.

The cellular IoT segment is expected to be the largest during the forecast period

The cellular IoT segment is expected to account for the largest market share during the forecast period as it provides reliable long-range connectivity and efficient monitoring capabilities across large agricultural farming operations globally. Farmers increasingly prefer cellular IoT systems for remote monitoring and automated farm management applications. These technologies support accurate data collection and operational efficiency improvements. Expansion of wireless communication infrastructure is further strengthening segment growth. Increasing adoption of connected agricultural equipment also supports market demand.

The greenhouse operators segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the greenhouse operators segment is predicted to witness the highest growth rate due to precision climate management technologies within controlled-environment agricultural facilities worldwide. Greenhouse operators are increasingly using IoT systems to optimize temperature, humidity, irrigation, and lighting conditions efficiently. This is driving greenhouse operators segment growth as agricultural enterprises increasingly invest in connected sensor networks, AI-based monitoring platforms, and automated greenhouse management systems to improve crop productivity and operational sustainability across commercial greenhouse farming operations. Demand for high-efficiency indoor farming solutions is also increasing steadily.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share owing to strong adoption of precision agriculture technologies across countries such as the United States and Canada. The region benefits from widespread use of connected farming equipment and digital agricultural platforms. Farmers are increasingly investing in automated monitoring and analytics systems. Government support for agricultural modernization further strengthens market growth. Presence of leading agri-tech companies also supports continuous innovation.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by increasing investments in digital agriculture infrastructure across countries such as China, India, Japan, Australia, and South Korea. Rapid agricultural modernization is accelerating demand for connected farming solutions. Governments are actively promoting smart agriculture initiatives and rural digitalization programs. Farmers are increasingly focusing on improving productivity and resource efficiency. Expansion of wireless communication networks is further supporting market development.

Key players in the market

Some of the key players in Agricultural IoT Market include IBM Corporation, Cisco Systems, Inc., Trimble Inc., Deere & Company, AGCO Corporation, Topcon Positioning Systems, Inc., Huawei Technologies Co., Ltd., Intel Corporation, SAP SE, Oracle Corporation, Telit Cinterion, PTC Inc., Qualcomm Incorporated, Bosch Global Software Technologies and Hexagon AB.

Key Developments:

In November 2025, Cisco Systems, Inc. launched an expansive rural-connectivity capacity expansion by deploying its specialized Ultra-Reliable Wireless Backhaul networks across South American farming operations. The heavy-duty infrastructure links remote, edge-connected water sensors and field gateways to ensure zero data dropped during dense seasonal harvesting operations.

In July 2025, IBM Corporation finalized a scalable food-logistics partnership to deploy its enterprise food-tracking ledger frameworks across global consumer brands like The J.M. Smucker Company. The infrastructure automates batch-level supply chain

mapping, allowing retail consumers to verify bean origins instantly using decentralized, immutable transparency protocols.

Solution Types Covered:

Smart Irrigation Systems

Livestock Monitoring Solutions

Precision Farming Solutions

Greenhouse Automation Solutions

Other Solution Types

Device Types Covered:

Sensors

GPS Devices

RFID Tags

Drones & UAVs

Other Device Types

Connectivity Technologies Covered:

Bluetooth

Wi-Fi

LoRaWAN

Cellular IoT

Other Connectivity Technologies

Applications Covered:

Crop Monitoring

Precision Irrigation

Livestock Tracking

Climate Monitoring

Other Applications

End Users Covered:

Commercial Farms

Greenhouse Operators

Livestock Farms

Agricultural Enterprises

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

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