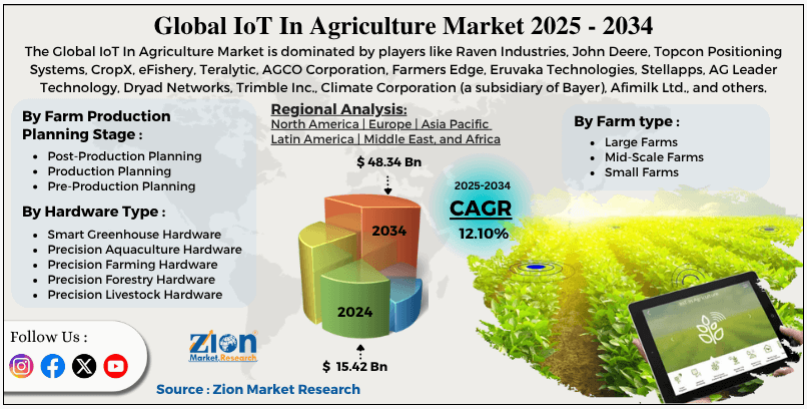
IoT In Agriculture Market Size to Reach USD 48.34 Billion by 2034, Growing at a CAGR of 12.10%

The global IoT in agriculture market size was worth around USD 15.42 billion in 2024 and is predicted to grow to around USD 48.34 billion by 2034



IoT In Agriculture Market

PUNE, MAHARASHTRA, INDIA, September 3, 2025 /EINPresswire.com/ -- The global IoT in agriculture market Size was valued at USD 15.42 billion in 2024 and is expected to reach nearly USD 48.34 billion by 2034, growing at a compound annual growth rate (CAGR) of 12.10% from 2025 to 2034. The market is witnessing significant momentum due to increasing demand for precision farming, resource optimization, and smart farming solutions that enhance crop productivity while addressing global food security challenges.

> The global IoT in agriculture market size was worth around USD 15.42 billion in 2024 and is predicted to grow to around USD 48.34 billion by 2034, (CAGR) of roughly 12.10% between 2025 and 2034."
>
> *Deepak Rupnar*

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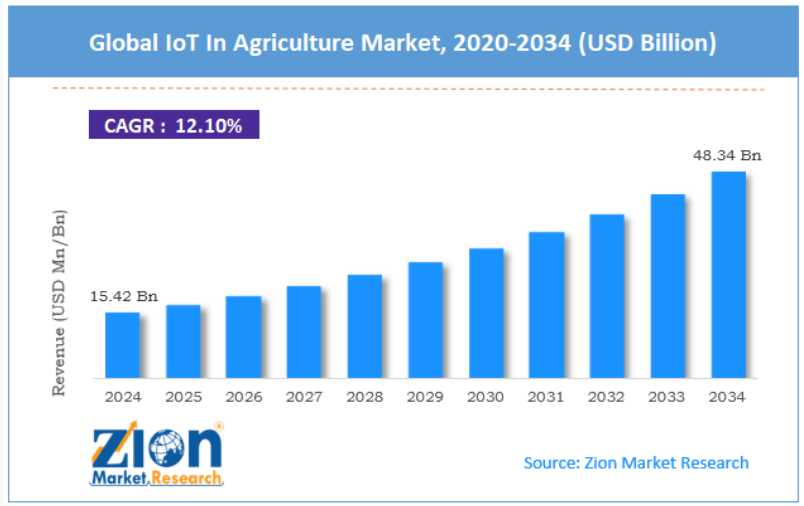
Market Overview

The integration of Internet of Things (IoT) technologies into agriculture has revolutionized farming operations. IoT-enabled devices, such as sensors, drones, automated irrigation systems, and connected tractors, allow farmers to monitor soil health, crop growth, water usage, livestock, and weather conditions in real-time.

With the global population projected to reach nearly 10 billion by 2050, food demand is expected to increase substantially. IoT in agriculture provides solutions for yield maximization, efficient resource utilization, and sustainability—making it a cornerstone of modern farming. Governments, agribusinesses, and technology companies are heavily investing in IoT

applications to support both smallholder farmers and large-scale enterprises.



IoT In Agriculture Market Size

Key Insights:
As per the analysis shared by our research analyst, the global IoT in agriculture market is estimated to grow annually at a CAGR of around 12.10% over the forecast period (2025-2034)
In terms of revenue, the global IoT in agriculture market size was valued at around USD 15.42 billion in 2024 and is projected to reach USD 48.34 billion by 2034.
The IoT in agriculture market is projected to grow at a significant rate due to the growing impact of changing environmental and climate conditions.
Based on the hardware type, the precision farming hardware segment is growing at a high rate and will continue to dominate the global market as per industry projections.
Based on the farm production planning stage, the production planning segment is anticipated to command the largest market share.
Based on region, Europe is projected to dominate the global market during the forecast period.

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Market Segmentation
By Component
Hardware: Sensors, drones, RFID tags, smart irrigation systems, and connected farm equipment. This segment leads the market as devices form the backbone of IoT in agriculture.
Software: Data analytics platforms, farm management systems, and mobile applications for real-time decision-making. AI and machine learning integration are driving innovation.
Services: Installation, consulting, maintenance, and cloud-based IoT platforms. Increasing demand for managed services is fueling growth.

By Application
Precision Crop Farming: IoT solutions for soil monitoring, pest control, yield mapping, and crop forecasting.
Livestock Monitoring: Wearable sensors, RFID tags, and automated feeding systems for herd management.
Smart Greenhouses: Automated irrigation, climate control, and sensor-based monitoring to maximize year-round crop production.
Aquaculture: IoT-based water quality monitoring and automated feeding systems.

Others: Post-harvest management, supply chain traceability, and predictive analytics.

By Farm Size
Large-Scale Farms: Early adopters of IoT solutions due to high capital investment capacity.
Medium and Small Farms: Rapid adoption through government subsidies, affordable IoT kits, and mobile-based solutions tailored for developing regions.

Regional Insights
North America
North America is a leading region, supported by advanced technological infrastructure and early adoption of precision agriculture. The U.S. and Canada are investing heavily in smart tractors, drones, and AI-based farm platforms. Labor shortages and sustainability regulations are accelerating IoT deployment.

Europe
Europe demonstrates strong adoption, particularly in countries like the Netherlands, Germany, France, and Spain, where precision agriculture is critical for horticulture, greenhouse farming, and organic farming. The EU's Common Agricultural Policy (CAP) supports digital farming initiatives.

Asia Pacific
Asia Pacific is expected to record the fastest growth. China and India are major contributors, with government-led initiatives promoting smart farming. Japan and South Korea are pioneers in robotics and IoT-driven vertical farming. Rapid urbanization, rising food demand, and water scarcity issues are boosting adoption.

Latin America
Latin America, led by Brazil, Mexico, and Argentina, is expanding IoT adoption in large-scale soybean, corn, and coffee plantations. Livestock monitoring solutions are also growing rapidly in this region. Investments from global agri-tech firms are helping the market expand.

Middle East & Africa
The Middle East is adopting IoT technologies for greenhouse farming and desert agriculture due to water scarcity. Israel is a global leader in smart irrigation and drip technologies. In Africa, IoT adoption is at an early stage but growing, particularly in Kenya, South Africa, and Nigeria, where mobile-based farm solutions are emerging to support smallholder farmers.

Market Drivers
Growing need for food security: Rising population and limited arable land drive demand for IoT-based productivity solutions.
Water scarcity and sustainability concerns: IoT enables precision irrigation and efficient resource management.
Advances in sensor and connectivity technologies: Low-cost IoT devices and 5G connectivity

enhance adoption.
Government subsidies and smart farming programs: Support for precision agriculture accelerates penetration in developing markets.
Demand for predictive analytics: Real-time data helps optimize yields and reduce crop failure risks.
Rising investments from agri-tech companies: Partnerships between IoT firms and agriculture companies are creating integrated platforms.

Market Challenges
High implementation costs: Advanced IoT systems remain expensive for small-scale farmers.
Lack of digital literacy among farmers: Adoption barriers persist in rural and underdeveloped regions.
Connectivity issues in remote areas: Limited internet access restricts IoT use in rural farmlands.
Data privacy and security concerns: Increasing risks of cyberattacks on connected farm infrastructure.
Maintenance and interoperability issues: Integration challenges between different IoT platforms and devices.

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Competitive Landscape

The IoT in agriculture market is highly competitive, with major players focusing on AI integration, cloud-based farm management, and connected devices. Partnerships between technology providers and agricultural companies are common strategies.

Key players include:
John Deere & Company
Trimble Inc.
DeLaval Inc.
AG Leader Technology
Topcon Positioning Systems
AGCO Corporation
Robert Bosch GmbH
Hexagon Agriculture
Kubota Corporation
Huawei Technologies Co., Ltd.
Accenture plc
Microsoft Corporation
IBM Corporation
These companies compete through innovation in smart machinery, analytics platforms, precision irrigation, and livestock monitoring solutions.

Future Outlook

The future of IoT in agriculture is data-driven, connected, and sustainable. By 2034, IoT will be a central enabler of smart farming ecosystems, combining AI, robotics, drones, blockchain, and 5G connectivity to transform food production. Smallholder farmers will increasingly benefit from low-cost, mobile-based IoT kits, while large commercial farms will continue adopting AI-powered automation for maximum efficiency.
IoT will play a critical role in addressing global food demand, climate change adaptation, and sustainable farming, positioning the sector as one of the fastest-growing areas within agritech.

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