

Agricultural Supply Chain Traceability Market Forecasts to 2034 – Global Analysis By Traceability Stage (Farm Production, Harvesting, Processing and Packaging, Storage and Warehousing, Transportation and Logistics and Retail Distribution), Commodity Type, Enterprise Size, Technology, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Agricultural Supply Chain Traceability Market is accounted for \$4.5 billion in 2026 and is expected to reach \$11.8 billion by 2034 growing at a CAGR of 12.8% during the forecast period. Agricultural supply chain traceability refers to the use of technologies and systems to track the movement of food products from the farm to the consumer, documenting every step of the journey. These systems leverage tools like blockchain, IoT sensors, and QR codes to capture and share data on product origin, processing, and distribution. The primary goal is to ensure food safety, enable rapid recalls, and provide consumers with transparent information about the provenance of their food.

Market Dynamics:

Driver:

Increasing Food Safety Regulations

Stricter government regulations and food safety standards across major markets are compelling food companies and producers to implement robust traceability systems to ensure compliance and avoid costly penalties. The ability to quickly and accurately trace

a contaminated product back to its source is becoming a fundamental requirement for operating in the global food market. This regulatory pressure is a primary driver for the adoption of advanced traceability solutions, as companies seek to minimize their liability and protect their brand reputation.

Restraint:

High Cost of Implementation and Fragmentation

The significant cost of implementing end-to-end traceability systems, including hardware, software, and training, is a major barrier, particularly for small-scale farmers and producers with limited margins. The agricultural supply chain is notoriously fragmented, with many small players, making it difficult to achieve the seamless data sharing required for full traceability. The lack of standardized data formats and communication protocols across different stakeholders creates interoperability challenges and adds to the complexity of implementation.

Opportunity:

Consumer Demand for Transparency

Growing consumer demand for transparency and information about the origin, sustainability, and ethical production of their food is a major market opportunity. Traceability systems provide a way for brands to build trust and differentiate their products by offering verifiable proof of claims like 'farm-to-table' or 'sustainably sourced.' The rise of direct-to-consumer brands and the integration of traceability data with mobile shopping apps are creating new avenues for companies to engage with consumers and drive market growth.

Threat:

Cybersecurity and Data Privacy Risks

The centralization of vast amounts of supply chain data on digital platforms makes the entire system a target for cyberattacks and data breaches, which could disrupt operations and compromise confidential business information. Data privacy concerns among farmers and suppliers about sharing detailed operational data with large corporations or government agencies can also hinder adoption. A major security failure could severely erode trust in traceability systems and threaten the entire market's

viability.

Covid-19 Impact:

The pandemic exposed critical vulnerabilities in global food supply chains, highlighting the urgent need for better visibility and tracking. The initial phase saw disruptions in data collection due to lockdowns. Mid-pandemic, the heightened focus on food safety and business continuity drove significant investment in digital traceability platforms. Post-pandemic, the market is characterized by accelerated adoption of blockchain and IoT solutions to build resilient, transparent supply chains.

The transportation and logistics segment is expected to be the largest during the forecast period

The transportation and logistics segment is expected to account for the largest market share during the forecast period, due to being the most critical point in the supply chain where visibility is often lost, making it a primary focus for traceability. This stage handles the physical movement of goods, requiring robust systems to track temperature, location, and handling conditions. The high value of goods in transit and the need to prevent loss and spoilage drives significant investment in monitoring and tracing technologies, thereby ensuring this segment's dominance.

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, driven by their perishable nature and the high consumer demand for freshness and safety, making traceability a critical component of their supply chain. This segment benefits from the implementation of advanced IoT sensors for temperature monitoring and blockchain for provenance verification. The rise of health-conscious consumers and the high incidence of food recalls in this category are accelerating the adoption of traceability solutions, which in turn is fueling market growth.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, due to the United States having some of the strictest food safety regulations and a high concentration of major food processing companies. The presence of leading technology providers and a strong focus on supply chain

transparency among consumers and retailers further reinforce the region's dominance.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, due to the rapid modernization of its food supply chains and the increasing focus on food safety following a series of high-profile contamination incidents. Government mandates for traceability and the expansion of the middle class demanding higher quality food are key growth drivers across the region.

Key players in the market

Some of the key players in Agricultural Supply Chain Traceability Market include IBM Corporation, Oracle Corporation, SAP SE, Microsoft Corporation, Amazon Web Services, Inc., Accenture plc, Wipro Limited, Tata Consultancy Services Limited, Infosys Limited, NTT DATA Group Corporation, Hexagon AB, Trimble Inc., Zebra Technologies Corporation, Honeywell International Inc., Avery Dennison Corporation, Siemens AG and Schneider Electric SE.

Key Developments:

In July 2026, IBM Corporation launched a new blockchain-based platform for agricultural supply chains, offering enhanced interoperability and real-time visibility for food safety compliance.

In June 2026, Trimble Inc. announced a partnership with a major global shipping line to integrate real-time tracking data into its supply chain visibility platform for agricultural commodities.

In May 2026, SAP SE introduced a new solution for traceability in the fresh produce sector, leveraging IoT sensors and AI to monitor and predict shelf-life along the supply chain.

Traceability Stages Covered:

Farm Production

Harvesting

Processing and Packaging

Storage and Warehousing

Transportation and Logistics

Retail Distribution

Commodity Types Covered:

Fruits and Vegetables

Cereals and Grains

Dairy Products

Meat and Poultry

Seafood

Cash Crops

Enterprise Sizes Covered:

Large Enterprises

Small and Medium Enterprises

Agricultural Cooperatives

Producer Organizations

Exporters

Importers

Technologies Covered:

Blockchain

Internet of Things (IoT)

Artificial Intelligence

Cloud Computing

Big Data Analytics

QR Code and RFID

Applications Covered:

Product Traceability

Food Safety and Quality Monitoring

Supply Chain Visibility

Inventory Management

Compliance Management

Recall Management

End Users Covered:

Farmers and Growers

Food Processing Companies

Distributors and Logistics Providers

Retailers and Supermarkets

Government Regulatory Authorities

Food Certification Organizations

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 AGRICULTURAL SUPPLY CHAIN TRACEABILITY MARKET, BY TRACEABILITY STAGE

- 5.1 Farm Production
- 5.2 Harvesting
- 5.3 Processing and Packaging
- 5.4 Storage and Warehousing
- 5.5 Transportation and Logistics
- 5.6 Retail Distribution

6 GLOBAL AGRICULTURAL SUPPLY CHAIN TRACEABILITY MARKET, BY COMMODITY TYPE

- 6.1 Fruits and Vegetables
- 6.2 Cereals and Grains
- 6.3 Dairy Products
- 6.4 Meat and Poultry
- 6.5 Seafood
- 6.6 Cash Crops

7 GLOBAL AGRICULTURAL SUPPLY CHAIN TRACEABILITY MARKET, BY ENTERPRISE SIZE

- 7.1 Large Enterprises
- 7.2 Small and Medium Enterprises
- 7.3 Agricultural Cooperatives
- 7.4 Producer Organizations
- 7.5 Exporters
- 7.6 Importers

8 GLOBAL AGRICULTURAL SUPPLY CHAIN TRACEABILITY MARKET, BY TECHNOLOGY

- 8.1 Blockchain
- 8.2 Internet of Things (IoT)

8.3 Artificial Intelligence

8.4 Cloud Computing

8.5 Big Data Analytics

8.6 QR Code and RFID

9 GLOBAL AGRICULTURAL SUPPLY CHAIN TRACEABILITY MARKET, BY APPLICATION

9.1 Product Traceability

9.2 Food Safety and Quality Monitoring

9.3 Supply Chain Visibility

9.4 Inventory Management

9.5 Compliance Management

9.6 Recall Management

10 GLOBAL AGRICULTURAL SUPPLY CHAIN TRACEABILITY MARKET, BY END USER

10.1 Farmers and Growers

10.2 Food Processing Companies

10.3 Distributors and Logistics Providers

10.4 Retailers and Supermarkets

10.5 Government Regulatory Authorities

10.6 Food Certification Organizations

11 GLOBAL AGRICULTURAL SUPPLY CHAIN TRACEABILITY MARKET, BY GEOGRAPHY

11.1 North America

11.1.1 United States

11.1.2 Canada

11.1.3 Mexico

11.2 Europe

11.2.1 United Kingdom

11.2.2 Germany

11.2.3 France

11.2.4 Italy

11.2.5 Spain

11.2.6 Netherlands

- 11.2.7 Belgium
- 11.2.8 Sweden
- 11.2.9 Switzerland
- 11.2.10 Poland
- 11.2.11 Rest of Europe
- 11.3 Asia Pacific
 - 11.3.1 China
 - 11.3.2 Japan
 - 11.3.3 India
 - 11.3.4 South Korea
 - 11.3.5 Australia
 - 11.3.6 Indonesia
 - 11.3.7 Thailand
 - 11.3.8 Malaysia
 - 11.3.9 Singapore
 - 11.3.10 Vietnam
 - 11.3.11 Rest of Asia Pacific
- 11.4 South America
 - 11.4.1 Brazil
 - 11.4.2 Argentina
 - 11.4.3 Colombia
 - 11.4.4 Chile
 - 11.4.5 Peru
 - 11.4.6 Rest of South America
- 11.5 Rest of the World (RoW)
 - 11.5.1 Middle East
 - 11.5.1.1 Saudi Arabia
 - 11.5.1.2 United Arab Emirates
 - 11.5.1.3 Qatar
 - 11.5.1.4 Israel
 - 11.5.1.5 Rest of Middle East
 - 11.5.2 Africa
 - 11.5.2.1 South Africa
 - 11.5.2.2 Egypt
 - 11.5.2.3 Morocco
 - 11.5.2.4 Rest of Africa

12 STRATEGIC MARKET INTELLIGENCE

- 12.1 Industry Value Network and Supply Chain Assessment
- 12.2 White-Space and Opportunity Mapping
- 12.3 Product Evolution and Market Life Cycle Analysis
- 12.4 Channel, Distributor, and Go-to-Market Assessment

13 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 13.1 Mergers and Acquisitions
- 13.2 Partnerships, Alliances, and Joint Ventures
- 13.3 New Product Launches and Certifications
- 13.4 Capacity Expansion and Investments
- 13.5 Other Strategic Initiatives

14 COMPANY PROFILES

- 14.1 IBM Corporation
- 14.2 Oracle Corporation
- 14.3 SAP SE
- 14.4 Microsoft Corporation
- 14.5 Amazon Web Services, Inc.
- 14.6 Accenture plc
- 14.7 Wipro Limited
- 14.8 Tata Consultancy Services Limited
- 14.9 Infosys Limited
- 14.10 NTT DATA Group Corporation
- 14.11 Hexagon AB
- 14.12 Trimble Inc.
- 14.13 Zebra Technologies Corporation
- 14.14 Honeywell International Inc.
- 14.15 Avery Dennison Corporation
- 14.16 Siemens AG
- 14.17 Schneider Electric SE

List Of Tables

LIST OF TABLES

Table 1 Global Agricultural Supply Chain Traceability Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Agricultural Supply Chain Traceability Market Outlook, By Traceability Stage (2023-2034) (\$MN)

Table 3 Global Agricultural Supply Chain Traceability Market Outlook, By Farm Production (2023-2034) (\$MN)

Table 4 Global Agricultural Supply Chain Traceability Market Outlook, By Harvesting (2023-2034) (\$MN)

Table 5 Global Agricultural Supply Chain Traceability Market Outlook, By Processing and Packaging (2023-2034) (\$MN)

Table 6 Global Agricultural Supply Chain Traceability Market Outlook, By Storage and Warehousing (2023-2034) (\$MN)

Table 7 Global Agricultural Supply Chain Traceability Market Outlook, By Transportation and Logistics (2023-2034) (\$MN)

Table 8 Global Agricultural Supply Chain Traceability Market Outlook, By Retail Distribution (2023-2034) (\$MN)

Table 9 Global Agricultural Supply Chain Traceability Market Outlook, By Commodity Type (2023-2034) (\$MN)

Table 10 Global Agricultural Supply Chain Traceability Market Outlook, By Fruits and Vegetables (2023-2034) (\$MN)

Table 11 Global Agricultural Supply Chain Traceability Market Outlook, By Cereals and Grains (2023-2034) (\$MN)

Table 12 Global Agricultural Supply Chain Traceability Market Outlook, By Dairy Products (2023-2034) (\$MN)

Table 13 Global Agricultural Supply Chain Traceability Market Outlook, By Meat and Poultry (2023-2034) (\$MN)

Table 14 Global Agricultural Supply Chain Traceability Market Outlook, By Seafood (2023-2034) (\$MN)

Table 15 Global Agricultural Supply Chain Traceability Market Outlook, By Cash Crops (2023-2034) (\$MN)

Table 16 Global Agricultural Supply Chain Traceability Market Outlook, By Enterprise Size (2023-2034) (\$MN)

Table 17 Global Agricultural Supply Chain Traceability Market Outlook, By Large Enterprises (2023-2034) (\$MN)

Table 18 Global Agricultural Supply Chain Traceability Market Outlook, By Small and

Medium Enterprises (2023-2034) (\$MN)

Table 19 Global Agricultural Supply Chain Traceability Market Outlook, By Agricultural Cooperatives (2023-2034) (\$MN)

Table 20 Global Agricultural Supply Chain Traceability Market Outlook, By Producer Organizations (2023-2034) (\$MN)

Table 21 Global Agricultural Supply Chain Traceability Market Outlook, By Exporters (2023-2034) (\$MN)

Table 22 Global Agricultural Supply Chain Traceability Market Outlook, By Importers (2023-2034) (\$MN)

Table 23 Global Agricultural Supply Chain Traceability Market Outlook, By Technology (2023-2034) (\$MN)

Table 24 Global Agricultural Supply Chain Traceability Market Outlook, By Blockchain (2023-2034) (\$MN)

Table 25 Global Agricultural Supply Chain Traceability Market Outlook, By Internet of Things (IoT) (2023-2034) (\$MN)

Table 26 Global Agricultural Supply Chain Traceability Market Outlook, By Artificial Intelligence (2023-2034) (\$MN)

Table 27 Global Agricultural Supply Chain Traceability Market Outlook, By Cloud Computing (2023-2034) (\$MN)

Table 28 Global Agricultural Supply Chain Traceability Market Outlook, By Big Data Analytics (2023-2034) (\$MN)

Table 29 Global Agricultural Supply Chain Traceability Market Outlook, By QR Code and RFID (2023-2034) (\$MN)

Table 30 Global Agricultural Supply Chain Traceability Market Outlook, By Application (2023-2034) (\$MN)

Table 31 Global Agricultural Supply Chain Traceability Market Outlook, By Product Traceability (2023-2034) (\$MN)

Table 32 Global Agricultural Supply Chain Traceability Market Outlook, By Food Safety and Quality Monitoring (2023-2034) (\$MN)

Table 33 Global Agricultural Supply Chain Traceability Market Outlook, By Supply Chain Visibility (2023-2034) (\$MN)

Table 34 Global Agricultural Supply Chain Traceability Market Outlook, By Inventory Management (2023-2034) (\$MN)

Table 35 Global Agricultural Supply Chain Traceability Market Outlook, By Compliance Management (2023-2034) (\$MN)

Table 36 Global Agricultural Supply Chain Traceability Market Outlook, By Recall Management (2023-2034) (\$MN)

Table 37 Global Agricultural Supply Chain Traceability Market Outlook, By End User (2023-2034) (\$MN)

Table 38 Global Agricultural Supply Chain Traceability Market Outlook, By Farmers and Growers (2023-2034) (\$MN)

Table 39 Global Agricultural Supply Chain Traceability Market Outlook, By Food Processing Companies (2023-2034) (\$MN)

Table 40 Global Agricultural Supply Chain Traceability Market Outlook, By Distributors and Logistics Providers (2023-2034) (\$MN)

Table 41 Global Agricultural Supply Chain Traceability Market Outlook, By Retailers and Supermarkets (2023-2034) (\$MN)

Table 42 Global Agricultural Supply Chain Traceability Market Outlook, By Government Regulatory Authorities (2023-2034) (\$MN)

Table 43 Global Agricultural Supply Chain Traceability Market Outlook, By Food Certification Organizations (2023-2034) (\$MN)

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

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