

Blockchain in Agri Supply Chains Market Forecasts to 2032 – Global Analysis By Component (Platform and Services), Supply Chain Stage, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Blockchain in Agri Supply Chains Market is accounted for \$2.7 billion in 2025 and is expected to reach \$8.5 billion by 2032 growing at a CAGR of 17.9% during the forecast period. Blockchain in agri supply chains refers to the use of distributed ledger technology to record, verify, and share data across all stakeholders involved in the agricultural value chain. It enables transparent, secure, and tamper-proof tracking of products from farm to fork. Each transaction—such as harvesting, processing, storage, transport, and retail—is time-stamped and verified, ensuring authenticity and reducing fraud. By providing real-time visibility and trust among farmers, processors, distributors, and consumers, blockchain enhances food safety, improves traceability, minimizes inefficiencies, and supports fair trade practices, ultimately promoting sustainability and accountability in agricultural supply chains.

Market Dynamics:

Driver:

Rising demand for food safety and provenance verification

Food safety and provenance verification is driving blockchain integration across farming and distribution networks. Consumers and regulators are increasingly demanding transparency in sourcing, handling, and certification of agricultural products. Blockchain enables immutable records that foster trust and accountability across the supply chain. Retailers and exporters are accelerating adoption to meet compliance and consumer

expectations. This driver continues to anchor growth by aligning blockchain with food security and quality assurance.

Restraint:

High implementation costs and infrastructure gaps

Implementation costs and infrastructure gaps are limiting scalability for smallholder farmers and cooperatives. Blockchain deployment requires investment in digital infrastructure, training, and integration with legacy systems. Rural regions with limited connectivity face challenges in adopting decentralized technologies. These barriers reduce accessibility despite strong demand for transparency. The restraint continues to slow down widespread commercialization of blockchain solutions in agriculture.

Opportunity:

Integration with IoT sensors, AI, and satellite monitoring

IoT sensors AI and satellite monitoring are enhancing blockchain-enabled visibility across farming operations. Real-time data on soil health, weather, and logistics is increasingly linked to blockchain records. Predictive analytics powered by AI are accelerating decision-making and resource optimization. Satellite monitoring is fostering traceability in global trade and certification processes. This opportunity is unlocking new value streams and strengthening blockchain's role in digital agriculture.

Threat:

Data privacy and scalability concerns

Data privacy and scalability concerns are constraining institutional trust in blockchain platforms. Farmers and cooperatives face risks related to unauthorized data access and compliance with evolving regulations. Scalability challenges in handling large transaction volumes degrade efficiency in global supply chains. These issues limit confidence among stakeholders despite blockchain's transparency benefits. Addressing this threat is critical for achieving secure and scalable blockchain adoption in agriculture.

Covid-19 Impact:

Covid-19 disrupted agricultural supply chains and accelerated demand for blockchain-enabled transparency. Covid-19 accelerated blockchain adoption in agriculture to ensure food safety and supply chain resilience. Lockdowns and logistical bottlenecks highlighted vulnerabilities in traditional tracking systems. Blockchain platforms provided real-time visibility into sourcing, distribution, and certification. Post-pandemic recovery is fostering investment in resilient, decentralized supply chain models. This impact continues to reshape strategies for food security and digital transformation in agriculture.

The traceability & provenance segment is expected to be the largest during the forecast period

The traceability & provenance segment is expected to account for the largest market share during the forecast period due to rising demand for transparency and compliance. Traceability and provenance is driving blockchain adoption across exporters retailers and regulators. Blockchain ensures immutable records that verify authenticity and reduce fraud in agricultural trade. Demand for certified organic and fair-trade products is accelerating adoption of provenance solutions. Integration with IoT and certification bodies is boosting scalability.

The farmers & cooperatives segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the farmers & cooperatives segment is predicted to witness the highest growth rate owing to rising demand for decentralized and inclusive solutions. Farmers and cooperatives are driving blockchain adoption to improve market access and bargaining power. Blockchain platforms enable direct connections with buyers and reduce reliance on intermediaries. Transparent pricing and digital contracts are accelerating adoption among smallholder farmers. Training programs and government support are fostering blockchain integration in rural communities. This segment is expected to outpace others due to its inclusivity and scalability potential.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share due to advanced infrastructure and strong regulatory frameworks. North America is driving blockchain adoption through agribusiness investments and government-led food safety initiatives. Retailers and exporters are integrating blockchain to meet compliance and consumer expectations. Venture capital funding and

partnerships with tech providers are accelerating innovation. Demand for traceability and provenance verification is boosting adoption across the region. North America continues to dominate in both volume and technological maturity.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR due to rapid agricultural expansion and digitization. Asia Pacific is driving blockchain adoption through government-led smart farming and food safety programs. Countries like China, India, and Indonesia are investing in blockchain-enabled traceability for exports and domestic markets. Local startups and global players are scaling solutions tailored to smallholder farmers. Rising demand for food security and sustainable practices is propelling adoption. Asia Pacific's momentum is driven by demographic scale policy support and digital innovation.

Key players in the market

Some of the key players in Blockchain in Agri Supply Chains Market include IBM Food Trust, AgriDigital, Provenance Ltd., Ripe.io, TE-FOOD International GmbH, Farmonaut, OriginTrail, Bext360, GrainChain Inc., AgriLedger Ltd., Ambrosus, VeChain Foundation, BlockApps, Chainvine Ltd. and Arc-Net.

Key Developments:

In October 2025, IBM Food Trust partnered with iFoodDS to strengthen compliance with the FDA Food Traceability Rule (FSMA 204). This collaboration integrates blockchain with food safety software, enabling retailers and suppliers to track produce in real time.

In September 2024, TE-FOOD partnered with regional agribusiness cooperatives in Germany and Hungary to deploy its blockchain-based traceability platform across livestock and fresh produce supply chains. This collaboration enhances compliance with EU food safety regulations and enables farmers and distributors to provide consumers with verified product origins, sustainability claims, and recall management.

Components Covered:

Platform

Services

Supply Chain Stages Covered:

Production

Processing

Packaging

Distribution

Retail

Other Supply Chain Stages

Applications Covered:

Traceability & Provenance

Smart Payments & Financing

Inventory & Logistics Management

Certification & Compliance

Carbon Credit & Sustainability Tracking

Other Applications

End Users Covered:

Farmers & Cooperatives

Agribusinesses

Food & Beverage Companies

Retailers & Distributors

Government & Regulatory Bodies

Other End Users

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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