

Blockchain in Agriculture Market Forecasts to 2034 – Global Analysis By Offering (Platform and Services), Organization Size, Crop Type, Deployment, Provider, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Blockchain in Agriculture Market is accounted for \$5.6 billion in 2026 and is expected to reach \$12.8 billion by 2034 growing at a CAGR of 10.8% during the forecast period. Blockchain in agriculture refers to distributed ledger technology platforms and associated professional and managed services that enable immutable traceability, transparent supply chain documentation, smart contract-driven trade settlement, and verified sustainability certification across agricultural food value chains from farm to consumer, serving large enterprises, small and medium enterprises, and farmer producer organizations with food safety compliance, commodity trade finance, carbon credit verification, and provenance authentication applications.

Market Dynamics:

Driver:

Food Safety Traceability Regulatory Mandates

Expanding mandatory food traceability regulatory requirements under FSMA 204, EU food safety amendments, and global retailer supplier traceability qualification standards are compelling food supply chain participants to adopt blockchain platforms providing immutable audit-ready traceability records that conventional database systems cannot match for tamper-evidence and multi-stakeholder accessibility. Each documented food safety recall event reducing the traceability gap validation period from weeks to seconds through blockchain platform deployment generates powerful commercial return-on-

investment evidence sustaining agricultural blockchain adoption.

Restraint:**Smallholder Farmer Digital Onboarding Barriers**

Agricultural blockchain traceability network value realization requiring participation from upstream smallholder farmer and small processor supply chain nodes whose limited digital literacy, mobile connectivity, and financial resources for platform adoption create network completeness gaps limiting blockchain traceability program integrity, requiring substantial farmer digital inclusion investment from supply chain program sponsors that increases total platform implementation cost beyond pure technology procurement price.

Opportunity:**Agricultural Carbon Credit Verification**

Voluntary carbon market demand for verified agricultural carbon sequestration credit issuance requiring immutable soil practice documentation that blockchain platforms uniquely provide creates a rapidly growing premium application driving agricultural blockchain adoption beyond food safety traceability into carbon market monetization programs. Blockchain-verified carbon credit issuance enabling farmer carbon revenue premium valuation at \$50 to \$200 per verified tonne creates compelling blockchain investment incentive for progressive farming operations.

Threat:**Centralized Database Alternative Competition**

Cloud-based centralized database food traceability solutions from established supply chain software vendors offering lower implementation complexity and adequate regulatory compliance at substantially lower cost create competitive alternatives for organizations questioning whether blockchain immutability justifies additional investment versus conventional traceability database architectures that meet current regulatory minimum requirements.

Covid-19 Impact:

COVID-19 food supply chain disruption visibility challenges exposing conventional traceability system inadequacies for rapid incident response accelerated food industry blockchain traceability investment. Post-pandemic food safety regulatory tightening and consumer supply chain transparency demand continue driving agricultural blockchain platform adoption globally.

The services segment is expected to be the largest during the forecast period

The services segment is expected to account for the largest market share during the forecast period, due to the dominant commercial model of blockchain agricultural platform delivered through implementation consulting, systems integration, farmer onboarding program management, and ongoing managed service contracts that agricultural supply chain operators require from specialized providers combining blockchain technology expertise with agricultural domain knowledge for effective program deployment.

The large enterprises segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the large enterprises segment is predicted to witness the highest growth rate, driven by major food retailers, global commodity traders, and multinational food manufacturers committing to comprehensive blockchain traceability programs across their full supplier networks at investment scales that demonstrate category-defining commercial traction, combined with institutional ESG reporting requirements for supply chain sustainability documentation that blockchain platforms efficiently satisfy.

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 implementing FSMA 204 mandatory traceability requirements creating large-scale compliance-driven blockchain adoption, leading platform vendors including IBM Food Trust, Oracle, and SAP generating substantial North American revenue, and strong retailer blockchain traceability program investment across major grocery chains.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest

CAGR, due to China implementing national mandatory food traceability digital requirements, India launching national agricultural blockchain pilot programs, and rapidly growing middle-class consumer demand for verified food safety documentation driving institutional investment across Asia Pacific food supply chains.

Key players in the market

Some of the key players in Blockchain in Agriculture Market include IBM Corporation, Microsoft Corporation, SAP SE, Oracle Corporation, Accenture plc, Amazon Web Services Inc., Ripple Labs Inc., Chainlink Labs, TE-FOOD International GmbH, AgriDigital, Ripe.io, VeChain Foundation, BlockApps Inc., Provenance Ltd., GrainChain, and Dimitra Incorporated.

Key Developments:

In April 2026, IBM Corporation expanded its Food Trust blockchain network to cover 500 additional global food supplier onboarding through an automated digital credentialing system reducing farmer blockchain entry time from weeks to under 48 hours.

In March 2026, VeChain Foundation launched a new agricultural carbon credit verification module enabling farmers to generate blockchain-verified carbon sequestration documentation supporting premium voluntary carbon market credit issuance across Asian agricultural commodity supply chains.

In February 2026, AgriDigital secured a major Australian grain trading cooperative blockchain traceability contract covering 8 million metric tons of annual grain throughput with integrated carbon practice verification for regenerative agriculture program documentation.

Offerings Covered:

Platform

Services

Organization Sizes Covered:

Large Enterprises

SMEs

Farmer Producer Organizations

Crop Types Covered:

Grains & Cereals

Fruits & Vegetables

Oilseeds

Coffee & Cocoa

Deployments Covered:

Public Blockchain

Private Blockchain

Hybrid Blockchain

Providers Covered:

Application Providers

Middleware Providers

Infrastructure Providers

Applications Covered:

Supply Chain Traceability

Smart Contracts

Payment & Settlement

Compliance Management

Insurance & Risk Management

End Users Covered:

Growers

Food Manufacturers

Retailers

Logistics Providers

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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