

# **Carbon Farming & Agricultural Carbon Credits Market Forecasts to 2032 - Global Analysis By Type (Soil Carbon Sequestration, Biochar Application, Agroforestry & Silvopasture, Cover Cropping, Conservation Tillage & No-Till, Crop Rotation Practices, Methane & Nitrous Oxide Emission Reductions, and Other Types), Carbon Credit Type, Mechanism, Deployment Mode, End User and By Geography**

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## **Abstracts**

According to Statistics MRC, the Global Carbon Farming & Agricultural Carbon Credits Market is accounted for \$616.35 million in 2025 and is expected to reach \$1731.47 million by 2032 growing at a CAGR of 15.9% during the forecast period. Carbon farming and agricultural carbon credits involve adopting climate-smart agricultural practices that store atmospheric carbon in soils and plant biomass and lower farm-based emissions. Methods such as conservation tillage, crop rotation, regenerative grazing, and tree integration help lock carbon into the land. The sequestered carbon is quantified and certified as carbon credits, which farmers can sell in regulated or voluntary markets. This approach promotes environmental sustainability, enhances soil fertility, and provides farmers with new revenue streams while contributing to global climate goals.

## **Market Dynamics:**

Driver:

Advancements in Ag-Tech

Precision agriculture tools such as remote sensing, IoT-enabled soil sensors, and satellite imagery are improving the measurement and monitoring of soil carbon levels. Digital farm management platforms enable farmers to track regenerative practices like cover cropping and reduced tillage with greater accuracy. Automation and data analytics are helping optimize input usage while enhancing carbon sequestration outcomes. Improved traceability systems are increasing confidence among buyers of agricultural carbon credits. These technologies reduce uncertainty and enhance transparency across carbon credit value chains. As ag-tech solutions become more affordable, adoption is expanding across both developed and emerging agricultural markets.

Restraint:

#### Complex verification (MRV)

Soil carbon levels vary widely across regions, crop types, and climatic conditions, making standardized measurement difficult. MRV protocols often require long-term data collection, laboratory testing, and third-party audits. These processes increase costs and administrative burden, particularly for small and medium-sized farmers. The lack of globally harmonized standards further complicates credit comparability and acceptance. Digital MRV tools are emerging but are not yet universally trusted by regulators and buyers. As a result, complex verification requirements slow project scalability and market participation.

Opportunity:

#### Stacking ecosystem services

Beyond carbon sequestration, regenerative agriculture delivers benefits such as improved biodiversity, water retention, and soil health. Farmers can potentially generate additional revenue streams by monetizing these co-benefits alongside carbon credits. Corporate buyers are increasingly seeking holistic sustainability outcomes rather than carbon offsets alone. Policy frameworks in several regions are beginning to recognize and reward multifunctional land-use practices. Advances in environmental monitoring are making it easier to quantify these additional services. This trend is enhancing project profitability and attracting diversified investor interest.

Threat:

## Land grabbing & social equity

Large investors may acquire farmland primarily for carbon credit generation, displacing local farmers and communities. Weak land tenure systems in developing regions heighten the risk of land grabbing. Smallholder farmers often lack the legal or financial capacity to compete with institutional buyers. This can lead to unequal benefit distribution across the carbon farming value chain. Social backlash and reputational risks may deter corporate participation in poorly governed projects.

### **Covid-19 Impact:**

The COVID-19 pandemic disrupted agricultural operations and delayed the implementation of several carbon farming projects. Restrictions on mobility limited field assessments, soil sampling, and third-party verification activities. Supply chain interruptions affected access to seeds, inputs, and monitoring equipment needed for regenerative practices. However, the crisis accelerated the adoption of digital tools for remote monitoring and data collection. Governments and climate-focused institutions increased attention on nature-based solutions during post-pandemic recovery planning. Investment interest in sustainable agriculture and climate resilience strengthened during this period. As a result, carbon farming gained renewed momentum as part of green recovery strategies.

The soil carbon sequestration segment is expected to be the largest during the forecast period

The soil carbon sequestration segment is expected to account for the largest market share during the forecast period, due to its broad applicability across agricultural systems. Practices such as no-till farming, crop rotation, and cover cropping are widely adopted and well understood. These methods enhance soil organic carbon while improving productivity and resilience. Soil-based projects offer relatively lower implementation costs compared to forestry-based alternatives. They are compatible with both smallholder and large-scale commercial farming operations. Growing scientific validation is strengthening buyer confidence in soil carbon credits.

The financial institutions & carbon funds segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the financial institutions & carbon funds segment is predicted

to witness the highest growth rate, due to increasing capital inflows are supporting large-scale carbon farming and regenerative agriculture projects. Banks and climate-focused funds are developing tailored financing instruments linked to carbon outcomes. Risk-sharing mechanisms and blended finance models are lowering entry barriers for farmers. Institutional investors are viewing agricultural carbon credits as long-term climate assets. Enhanced transparency and digital MRV systems are improving investment confidence.

Region with largest share:

During the forecast period, the Europe region is expected to hold the largest market share, due to strong climate policies and regulatory frameworks. The European Union's Common Agricultural Policy increasingly integrates carbon and sustainability incentives. High awareness among farmers and agribusinesses supports market maturity. Well-established carbon registries and certification bodies enhance market trust. Public-private partnerships are accelerating pilot projects across member states.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR. Rapid agricultural expansion and large arable land availability create significant carbon sequestration potential. Governments are introducing climate-smart agriculture initiatives to address food security and emissions reduction. Rising participation from multinational corporations is boosting regional carbon credit demand. Improvements in digital agriculture are enhancing monitoring and verification capabilities. Smallholder aggregation models are enabling broader farmer participation.

Key players in the market

Some of the key players in Carbon Farming & Agricultural Carbon Credits Market include Indigo Ag, Carbon Crop, Nori, Boomitra, Soil Capital, Regrow Ag, Agreeana, Terra Global, Agoro Carbon, South Pole, Bayer AG, Cargill, Inc., CIBO Technologies, Ecosystem Services Market Consortium (ESMC), and Rabobank.

### **Key Developments:**

In October 2025, Mars and Cargill, announced they are spurring the development of more than 224MWac\* of new renewable energy capacity through five virtual power purchase agreements (PPAs) in Poland. The PPAs were signed with GoldenPeaks

Capital, one of Europe's fastest-growing independent producers of renewable energy.

In September 2025, CIBO Technologies announced its partnership with Sand County Foundation, a national nonprofit recognized for equipping landowners with practical conservation tools, to power a multi-year Regional Conservation Partnership Program (RCPP) initiative, funded by the USDA NRCS.

#### Types Covered:

Soil Carbon Sequestration

Biochar Application

Agroforestry & Silvopasture

Cover Cropping

Conservation Tillage & No-Till

Crop Rotation Practices

Methane & Nitrous Oxide Emission Reductions

Other Types

#### Carbon Credit Types Covered:

Compliance Carbon Credits

Voluntary Carbon Credits

#### Mechanisms Covered:

Activity-Based Measurement

Model-Based Measurement

Remote Sensing / Satellite-Based Verification

Soil Sampling & Lab Testing

Deployment Modes Covered:

Direct Farmer Implementation

Third-Party Project Aggregators

Government & Cooperative Programs

End Users Covered:

Agriculture Producers & Farmers

Food & Beverage Companies

Bioenergy & Biomaterials Industries

Carbon Market Intermediaries

Financial Institutions & Carbon Funds

Government & Policy Entities

NGOs & Sustainability 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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