

Carbon-Neutral Fertilizer Market Forecasts to 2032 – Global Analysis By Product (Organic Fertilizers, Biofertilizers, Synthetic Fertilizers and Other Products), Source, Form, Crop Type, Distribution Channel, Application and By Geography

<https://marketpublishers.com/r/C8628E4B73A6EN.html>

Date: September 2025

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: C8628E4B73A6EN

Abstracts

According to Statistics MRC, the Global Carbon-Neutral Fertilizer Market is accounted for \$6.4 billion in 2025 and is expected to reach \$13.4 billion by 2032 growing at a CAGR of 11.1% during the forecast period. Carbon-neutral fertilizer is a revolutionary agricultural input designed to minimize environmental impact by balancing or eliminating the carbon dioxide emissions generated during its production, transportation, and application. Unlike conventional fertilizers, carbon-neutral variants incorporate sustainable practices such as using renewable energy, capturing greenhouse gases, or utilizing carbon offsets to achieve net-zero carbon emissions. This innovation aims to support global efforts against climate change by reducing the agriculture sector's carbon footprint while maintaining soil fertility and crop productivity. By honoring the timeless responsibility of stewardship toward the earth, carbon-neutral fertilizers blend tradition with forward-thinking to nurture both harvest and habitat sustainably.

According to the International Fertilizer Association (IFA), the production and application of fertilizers are responsible for a significant portion of greenhouse gas emissions. Specifically, roughly 20%–50% of emissions are attributed to the production process, while 50%–80% are generated during the application phase.

Market Dynamics:

Driver:

Rising Environmental Awareness

Rising environmental awareness is catalyzing growth in the carbon-neutral fertilizer market, as consumers and regulators increasingly demand sustainable agricultural practices. This shift is driving innovation in low-emission production methods, bio-based inputs, and circular nutrient systems. Farmers are adopting eco-friendly alternatives to reduce carbon footprints, supported by green subsidies and ESG-focused investments. As climate consciousness deepens, carbon-neutral fertilizers are emerging as a strategic solution, aligning profitability with planetary health and accelerating the transition toward regenerative, climate-resilient food systems.

Restraint:

High Production Costs

High production costs significantly hinder the growth of the carbon-neutral fertilizer market by inflating end-user prices and limiting scalability. These expenses—driven by advanced technologies, renewable inputs, and stringent certification processes—deter widespread adoption, especially in cost-sensitive agricultural sectors. Smaller farms and developing regions struggle to justify the investment, stalling market penetration. As a result, innovation slows, investor confidence wanes, and the transition to sustainable fertilization faces critical economic barriers.

Opportunity:

Increasing Global Food Demand

Growing demand for food around the world is spurring innovation in the market for carbon-neutral fertilizers and encouraging the use of sustainable agricultural inputs. Carbon-neutral fertilizers present an alluring option for farmers looking to increase yields without sacrificing environmental objectives because they lower emissions while improving soil health. This increase in demand encourages investment in green technology, speeds up regulatory approval, and develops strategic alliances between the biotech and agritech industries. In the end, the convergence of climate resilience makes carbon-neutral fertilizers a game-changer for farming that is prepared for the future.

Threat:

Supply Chain and Raw Material Challenges

Supply chain disruptions and raw material scarcity significantly hinder the carbon-neutral fertilizer market. Limited access to sustainable inputs like green ammonia and bio-based feedstocks inflates production costs and delays scalability. Logistical bottlenecks and geopolitical tensions further strain global distribution, impeding timely delivery and market penetration. These challenges undermine investor confidence, slow innovation adoption, and restrict the transition to low-emission agricultural practices, stalling progress toward climate-resilient food systems.

Covid-19 Impact

The Covid-19 pandemic disrupted global supply chains, impacting the carbon-neutral fertilizer market through logistical delays, labor shortages, and economic uncertainty. Despite these challenges, demand remained resilient due to agriculture's essential status and rising interest in sustainable farming. The crisis accelerated regulatory momentum and consumer awareness around climate-smart agriculture, prompting manufacturers to invest in low-carbon technologies and bio-based inputs. This shift positioned carbon-neutral fertilizers as a strategic solution for post-pandemic recovery.

The synthetic fertilizers segment is expected to be the largest during the forecast period

The synthetic fertilizers segment is expected to account for the largest market share during the forecast period due to its well-established production processes provide a reliable foundation for integrating carbon-neutral technologies, reducing greenhouse gas emissions without compromising crop yields. This segment's scalability and adaptability enable widespread adoption, accelerating market growth. By bridging traditional fertilizer benefits with environmental responsibility, synthetic fertilizers play a pivotal role in transforming farming practices, supporting global efforts for carbon neutrality and food security simultaneously.

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

Over the forecast period, the horticulture segment is predicted to witness the highest growth rate, due to demand for sustainable, high-efficiency inputs. With its emphasis on soil health, precision nutrition, and low-emission cultivation, horticulture aligns perfectly with eco-friendly fertilizer innovations. Urban farming, greenhouse production, and organic horticulture are accelerating adoption of bio-based and carbon-neutral solutions,

reducing agricultural carbon footprints. This segment's rapid expansion and sustainability focus make it a strategic driver for scaling green fertilizer technologies and reshaping global agri-input value chains.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share as it promotes bio-based inputs and reduces greenhouse gas emissions, resulting in sustainable food production for the region's rising population. Innovation in fertilizer technologies, such as carbon capture and manufacture powered by renewable energy, is being driven by customer demand for environmentally friendly practices and regulatory requirements. In addition to increasing crop yields, this market supports the circular economy's tenets, guaranteeing soil health and climatic resilience throughout time in a variety of agricultural environments.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to strong regulatory support and rising consumer demand for eco-friendly food production, the region is embracing bio-based and renewable energy-powered fertilizers. This shift reduces greenhouse gas emissions, enhances soil health, and supports circular farming practices. Innovations like carbon capture and green ammonia are accelerating adoption, positioning North America as a leader in climate-resilient agribusiness and fostering long-term environmental and economic benefits.

Key players in the market

Some of the key players profiled in the Carbon-Neutral Fertilizer Market include Nutrien Ltd., Haifa Chemicals Limited, Yara International ASA, Indian Farmers Fertiliser Cooperative Limited (IFFCO), CF Industries Holdings, Inc., PT Pupuk Indonesia (Persero), The Mosaic Company, Tata Chemicals Limited, Koch Fertilizer, LLC, Coromandel International Limited, EuroChem Group AG, Haifa Group, K+S Aktiengesellschaft, BASF SE, ICL Group Ltd., SQM S.A., Sinofert Holdings Limited, OCI N.V. and Agrium Inc.

Key Developments:

In July 2025, BASF and Equinor have inked a ten-year Agreement; Equinor will deliver up to 23 terawatt-hours (about 2 billion cubic meters) of low-carbon natural gas

annually. This partnership locks in energy security for BASF's European operations, supports feedstock and sustainability goals, and deepens a time-tested alliance built on competitive, market-based terms.

In June 2025, BASF Coatings and Toyota Motor Europe have forged a strategic partnership to co-develop the Toyota Body & Paint program across Europe. They'll unite the storied premium brands Glasurit® and R-M® with BASF's Body Shop BOOST consultancy and Refinity® digital platform—blending heritage craftsmanship with cutting-edge, sustainable technology to elevate repair quality, operational efficiency, and green ambitions across the Toyota and Lexus body-shop network.

In May 2025, PepsiCo and Yara announced a long-term partnership to supply crop nutrition programs in Latin America, aiming to decarbonize the food value chain. Yara will provide low-carbon fertilizers and digital farming tools to potato farmers in Mexico, Colombia, Chile, and Argentina, aligning with PepsiCo's sustainability goals.

Products Covered:

Organic Fertilizers

Biofertilizers

Synthetic Fertilizers

Other Products

Sources Covered:

Plant-Based

Chemical-Based

Animal-Based

Microbial-Based

Forms Covered:

Liquid

Powder

Granular

Crop Types Covered:

Cereals & Grains

Oilseeds & Pulses

Fruits & Vegetables

Other Crop Types

Distribution Channels Covered:

Direct Sales

Retail Stores

Online Stores

Other Distribution Channels

Applications Covered:

Crop Farming

Horticulture

Lawn & Garden

Other Applications

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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