

Controlled and Slow Release Fertilizers Market Forecasts to 2032 – Global Analysis By Type (Controlled Release Fertilizers (CRF), Slow Release Fertilizers (SRF), Nitrification and Urease Inhibitors and Other Types), Crop Type, Mode of Application and By Geography

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Abstracts

According to Statistics MRC, the Global Controlled and Slow Release Fertilizers Market is accounted for \$2.66 billion in 2025 and is expected to reach \$4.65 billion by 2032 growing at a CAGR of 8.3% during the forecast period. Specialised nutrient sources called controlled and slow-release fertilisers are made to release nutrients gradually over time, increasing plant absorption efficiency and reducing nutrient loss. Coatings or chemical alterations are used in controlled-release fertilisers (CRFs) to control the release of nutrients in response to moisture or temperature. Slow-release fertilisers (SRFs) provide a sustained supply of nutrients by breaking down naturally through hydrolysis or microbial action. By guaranteeing a consistent and effective delivery of nutrients to plants over an extended period of time, both varieties enhance soil health, lessen leaching, and promote sustainable agriculture.

Market Dynamics:

Driver:

Rising global population & food security concerns

Slow-release and controlled fertilisers increase the efficiency of nitrogen utilisation, increasing agricultural yields while reducing their negative effects on the environment.

Concerns about food security drive farmers to use cutting-edge fertilisers that offer a steady supply of nutrients, minimising losses and increasing output. Long-term agricultural sustainability is ensured by these fertilisers, which also aid in reducing soil degradation. In order to support the world's food production, governments and organisations are encouraging their use through laws and subsidies. In response to the growing global demand for food, the market for controlled and slow-release fertilisers is expanding steadily.

Restraint:

High cost compared to conventional fertilizers

Farmers choose less expensive options to cut production expenses, particularly in underdeveloped nations. Small and medium-sized farmers are deterred by the upfront costs associated with these cutting-edge fertilisers. Adoption rates are further decreased by a lack of knowledge regarding long-term advantages. These fertilisers are less available in price-sensitive areas due to high production and research expenditures. Consequently, regulated and slow-release fertilisers continue to have limited commercial expansion.

Opportunity:

Growth in precision farming

In order to precisely supply nutrients to crops and increase yields, farmers are using these fertilisers more and more. By enabling accurate application, cutting-edge technologies like GPS and IoT reduce their negative effects on the environment. In order to promote sustainable agriculture, controlled-release fertilisers lower greenhouse gas emissions and leaching. The growing demand for food around the world forces farmers to use cutting-edge fertilisation techniques to maximise yield. In general, the use of regulated and slow-release fertilisers for efficient and sustainable agriculture is accelerated by precision farming.

Threat:

Competition from traditional & organic fertilizers

Conventional fertilisers are frequently preferred by farmers because of their reduced initial costs and instant nutrient availability. Organic fertilisers support sustainable

farming methods and appeal to consumers who care about the environment. Slow-release fertilisers are further complicated by government incentives and regulatory support for organic farming. The market's expansion is further constrained by developing nations' low knowledge and uptake of sophisticated fertilisers. Because of this, the market for controlled and slow-release fertilisers finds it difficult to grow in comparison to these established substitutes.

Covid-19 Impact

The COVID-19 pandemic disrupted the controlled and slow-release fertilizers market due to supply chain constraints, labour shortages, and reduced agricultural activities. Lockdowns affected production and distribution, leading to delays in fertilizer availability. Farmers faced economic uncertainties, impacting purchasing decisions. However, the market rebounded as governments prioritized food security and sustainable farming. Increased demand for high-efficiency fertilizers to maximize yields amid labour shortages further drove market growth post-pandemic, with a rising focus on precision agriculture and environmentally friendly solutions.

The cereals & grains segment is expected to be the largest during the forecast period

The cereals & grains segment is expected to account for the largest market share during the forecast period by enhanced nutrient efficiency and crop yield. By lowering leaching and guaranteeing continuous plant growth, these fertilisers offer a consistent supply of nutrients. The need for sophisticated fertilisation methods is fuelled by the growing demand for staple crops like corn, rice, and wheat worldwide. In line with sustainable farming methods, controlled-release fertilisers enhance soil health and reduce environmental effect. In cereal and grain cultivation, the demand for slow-release fertilisers is further boosted by the growing use of precision farming.

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

Over the forecast period, the soil application segment is predicted to witness the highest growth rate, due to efficient nutrient delivery to plants. It enhances soil fertility, reducing nutrient leaching and minimizing environmental impact. Farmers prefer this method due to its ease of application and long-lasting effects on crop yield. The demand for sustainable and cost-effective fertilization further boosts its adoption. As precision farming gains traction, soil-applied controlled-release fertilizers continue to witness strong market growth.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to rising demand for sustainable agricultural practices. Countries like China, India, and Japan are adopting advanced fertilizers to improve soil health and minimize nutrient loss. Government initiatives promoting efficient fertilizer use and increasing investments in precision farming are fueling market expansion. The growing preference for eco-friendly fertilizers and the need for high-efficiency nutrient management in horticulture and field crops further contribute to the rising adoption of controlled and slow-release fertilizers.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to enhanced crop yield efficiency. Farmers are adopting these fertilizers to minimize nutrient loss and improve soil health. Technological advancements and precision farming are further boosting their adoption. The rising popularity of organic farming and environmentally friendly solutions also contributes to market expansion. Additionally, government initiatives promoting efficient fertilizer use and research investments in advanced formulations are supporting market growth across the region.

Key players in the market

Some of the key players profiled in the Controlled and Slow Release Fertilizers Market include Haifa Group, Yara International, Nutrien, Coromandel International, ICL Group Ltd., CF Industries Holdings Inc., The Mosaic Company, K+S AG, ScottsMiracle-Gro Company, Compo Expert GmbH, Agrium Inc., Kingenta Ecological Engineering Group Co., Ltd., Shikefeng Chemical Industry, Kugler Company, JNC Corporation, SK Specialties, Ekompany International B.V. and Andersons, Inc.

Key Developments:

In March 2024, Haifa Group signed a collaborative agreement with Deepak Fertilisers and Petrochemicals Corporation Limited (DFPCL) of India. This partnership aims to enhance innovation and sustainability in plant nutrition and agriculture in India, providing farmers with advanced solutions to improve crop yields and quality while focusing on resource preservation and environmental protection.

In December 2023, Yara International acquired Agribios Italiana, an organic fertilizer company, to strengthen its portfolio in organic-based fertilizers. This acquisition aligns with Yara's strategy to expand its sustainable agriculture solutions, enhancing its market presence in eco-friendly fertilizers while supporting global demand for sustainable and controlled-release nutrient solutions.

Types Covered:

Controlled Release Fertilizers (CRF)

Slow Release Fertilizers (SRF)

Nitrification and Urease Inhibitors

Other Types

Crop Types Covered:

Cereals & Grains

Oilseeds & Pulses

Fruits & Vegetables

Turf & Ornamentals

Other Crop Types

Mode of Applications Covered:

Foliar Application

Soil Application

Fertigation

Seed Coating & Dressing

Root Dipping

Other Mode of 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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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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