

Biofertilizers Market Forecasts to 2034 – Global Analysis By Product Type (Nitrogen-fixing Biofertilizers, Phosphate-solubilizing Biofertilizers, Potassium-mobilizing Biofertilizers, Micronutrient Biofertilizers and Composite & Multi-strain Biofertilizers), Crop Type, Microorganism, Formulation, Application Method and By Geography

<https://marketpublishers.com/r/BEEEEFCD3CE3EN.html>

Date: July 2026

Pages: 0

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

ID: BEEEEFCD3CE3EN

Abstracts

According to Statistics MRC, the Global Biofertilizers Market is accounted for \$3.1 billion in 2026 and is expected to reach \$5.9 billion by 2034 growing at a CAGR of 8.6% during the forecast period. Biofertilizers are biological preparations that contain beneficial microorganisms which boost soil fertility by fixing nitrogen from the atmosphere, breaking down phosphorus compounds, and promoting overall plant growth. They serve as an environmentally safe substitute for chemical fertilizers and help reduce soil and water pollution. Key microbes such as Rhizobium, Azotobacter, Azospirillum, and mycorrhiza support plants through symbiotic interactions that enhance root strength and nutrient uptake. Additionally, biofertilizers improve soil health, increase microbial diversity, and support higher agricultural productivity. Their use in sustainable farming lowers cultivation costs while ensuring long-term soil enrichment and improved crop performance across various agricultural systems.

According to ICAR (Indian Council of Agricultural Research), India's biofertilizer production capacity has surpassed 100,000 metric tons annually, supporting national programs like Paramparagat Krishi Vikas Yojana (PKVY) to promote organic farming.

Market Dynamics:

Driver:

Rising demand for organic and sustainable agriculture

The expanding preference for organic and sustainable farming is significantly driving the biofertilizers industry. Farmers and consumers are becoming more conscious of the negative impacts of synthetic fertilizers, leading to increased adoption of environmentally friendly inputs. Biofertilizers naturally enhance soil nutrients, improve productivity, and minimize ecological damage. Rising demand for organic food in both local and international markets further accelerates usage. Moreover, soil degradation caused by long-term chemical fertilizer application pushes growers toward biological alternatives. Support from government extension services and private agricultural organizations also encourages sustainable cultivation methods across both emerging and developed agricultural economies worldwide adoption growth trends.

Restraint:

Limited shelf life and storage sensitivity

The biofertilizers market is constrained by their short shelf life and sensitivity to storage conditions. As these products contain live microorganisms, they need carefully controlled environments to remain effective. High temperatures, humidity, or direct sunlight can quickly reduce microbial activity, lowering their efficiency. This makes logistics, storage, and distribution more complex, particularly in areas lacking proper cold-chain or storage facilities. Farmers may also face inconsistent agricultural outcomes due to reduced product potency over time. Unlike chemical fertilizers, biofertilizers are less stable and harder to manage, which limits their widespread acceptance among users seeking dependable and long-lasting crop nutrition solutions globally.

Opportunity:

Advancements in microbial and biotechnology research

Progress in microbial science and biotechnology creates significant opportunities for the biofertilizers industry. Ongoing developments in microbial strain improvement, genetic modification, and advanced fermentation processes are enhancing product performance and stability. These innovations improve nutrient availability, plant resilience, and overall crop yields. Additionally, improved manufacturing technologies are helping extend

product shelf life and reduce production costs, increasing affordability. Rising investments in agricultural biotechnology are further driving innovation, enabling broader adoption of biofertilizers in sustainable and precision farming practices across global agricultural sectors.

Threat:

Strong competition from chemical fertilizers

The biofertilizers market faces significant pressure from the widespread use of chemical fertilizers. Farmers often favor chemical inputs because they provide quick and visible improvements in crop productivity, whereas biofertilizers require more time to show results. The well-developed supply chains and decades of established usage further reinforce the dominance of chemical fertilizers in agriculture. In many regions, government subsidies and strong marketing strategies for synthetic fertilizers make competition even tougher. As a result, biofertilizers struggle to gain higher market share, particularly in developing economies where farmers prioritize immediate yield benefits and cost efficiency over long-term soil health improvements.

Covid-19 Impact:

The COVID-19 outbreak created both challenges and opportunities for the biofertilizers market. At the beginning, lockdowns, transport restrictions, and workforce shortages disrupted manufacturing and supply chains, making it difficult for farmers to access biofertilizers. This led to temporary slowdowns in agricultural input usage. However, the pandemic also highlighted the importance of sustainable agriculture and food security, increasing interest in eco-friendly farming solutions. As restrictions eased, demand recovered and gradually increased. Government initiatives supporting agriculture and growing emphasis on soil health further strengthened the market.

The nitrogen-fixing biofertilizers segment is expected to be the largest during the forecast period

The nitrogen-fixing biofertilizers segment is expected to account for the largest market share during the forecast period owing to its widespread agricultural applications. These products contain microorganisms such as *Rhizobium*, *Azotobacter*, and *Azospirillum* that help convert atmospheric nitrogen into forms that plants can absorb. They are commonly applied to crops including legumes, cereals, and oilseeds to improve soil fertility and boost productivity. Farmers rely heavily on them because nitrogen is

essential for plant development and required in large amounts. Their ability to reduce dependence on synthetic nitrogen fertilizers increases their popularity. Growing emphasis on sustainable agriculture further supports strong global demand for nitrogen-fixing biofertilizers in modern farming practices.

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

Over the forecast period, the mycorrhiza segment is predicted to witness the highest growth rate owing to its exceptional benefits in nutrient absorption and soil improvement. These beneficial fungi establish a symbiotic relationship with plant roots, enhancing the uptake of phosphorus, water, and essential minerals while increasing plant tolerance to environmental stresses. They are extensively used in horticulture, forestry, and high-value crop cultivation where soil quality is crucial. Rising focus on sustainable agriculture and soil restoration is accelerating their demand. Their ability to strengthen root systems and improve plant resilience positions mycorrhiza as a fast-expanding segment in global agricultural practices.

Region with largest share:

During the forecast period, the Asia-Pacific region is expected to hold the largest market share owing to its large agricultural sector and significant reliance on farming activities. Major countries like India, China, and Indonesia engage in extensive cultivation of staple and commercial crops, creating strong demand for biofertilizers. Government support for organic farming and sustainable agricultural practices further accelerates market growth. Increasing farmer awareness about soil degradation and environmental protection is also encouraging adoption. Moreover, the availability of affordable farming inputs and a substantial rural workforce involved in agriculture strengthen the region's leadership.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, driven by the growing shift toward sustainable and organic farming methods. Rising consumer preference for chemical-free and healthy food products is motivating farmers to adopt bio-based inputs. Advanced agricultural technologies and strong research and development activities are fostering innovation in microbial fertilizers. Government support for environmental protection and soil health enhancement further boosts market growth. The presence of leading agritech firms and increasing

investments in biological agricultural solutions also strengthen expansion. Growing awareness of soil regeneration and sustainable farming practices is accelerating biofertilizers adoption across North American agriculture.

Key players in the market

Some of the key players in Biofertilizers Market include Novonesis, UPL Limited, Syngenta AG, Lallemand Inc., Gujarat State Fertilizers & Chemicals, Rizobacter Argentina S.A., Koppert Biological Systems, IPL Biologicals, National Fertilizers Limited, T. Stanes & Company, Madras Fertilizers Limited, AgriLife, American Vanguard Corporation, Corteva Agriscience, CBF China Bio-Fertilizer AG, ICL Group Ltd., Kiwa Bio-Tech and Bayer CropScience.

Key Developments:

In October 2025, Syngenta Crop Protection, LLC and Taranis announced they are formalizing their successful collaboration into a strategic partnership across the Midwest. The partnership will equip agricultural retailers with AI-powered crop management solutions, delivering innovative digital technologies that create significant value for both retailers and their grower customers.

In September 2025, UPL has launched Brucia®, a new post-emergent herbicide developed specifically for maize farming. This latest solution brings a highly targeted approach to managing broadleaf and grassy weeds, addressing a growing challenge for maize growers across the country. Brucia® is based on advanced chemistry and includes a novel active ingredient introduced through UPL's collaboration with Ishihara Sangyo Kaisha, Ltd. (ISK) of Japan, a company known for its development of innovative agrochemicals used globally.

In August 2024, ICL has entered into a strategic partnership with AMP Holdings Group Co. Ltd., a leading Chinese agricultural distributor. The five-year agreement, valued at approximately \$170 million, will bolster ICL's Growing Solutions business and drive expansion in key end markets. This collaboration aligns with ICL's strategic goals and reinforces its position as a key player in the agricultural sector.

Product Types Covered:

Nitrogen-fixing Biofertilizers

Phosphate-solubilizing Biofertilizers

Potassium-mobilizing Biofertilizers

Micronutrient Biofertilizers

Composite & Multi-strain Biofertilizers

Crop Types Covered:

Cereals & Grains

Pulses & Oilseeds

Fruits & Vegetables

Plantation Crops

Other Crop Types

Microorganisms Covered:

Rhizobium

Azotobacter

Azospirillum

Cyanobacteria

Mycorrhiza

Formulations Covered:

Liquid Biofertilizers

Carrier-based Biofertilizers

Application Methods Covered:

Seed Treatment

Soil Treatment

Foliar Spray

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)

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