

Bacterial Biopesticides Market Size & Share Analysis - Growth Trends and Forecast (2026 - 2031)

> **Industry:** Biologicals, Biopesticides & Crop Protection (Agriculture & Agribusiness)
> **Source:** <https://www.mordorintelligence.com/industry-reports/bacterial-biopesticides-market>
> **Scraped Date:** 2026-09-17

Executive Market Summary

Market Metric	Details
Base Market Size	USD 3.15 billion
Projected Forecast (2031)	USD 3.15 billion
Growth Rate (CAGR)	14.70 %
Largest Market Region	N/A
Fastest-Growing Region	N/A

Market Visualizations & Infographics

! [Major players in Bacterial Biopesticides industry] (images/chart_2.png)

! [Bacterial Biopesticides Market (2025 - 2030)] (images/chart_3.png)

! [Bacterial Biopesticides Market Share by Product Type, 2025] (images/chart_4.png)

! [Bacterial Biopesticides Market Share by Crop Type, 2025] (images/chart_5.png)

! [Bacterial Biopesticides Market] (images/chart_6.png)

! [Bacterial Biopesticides Market Concentration] (images/chart_7.png)

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Comprehensive Research Analysis

Overview Points List Flex 49 Share Feature End

Market OverviewStudy Period | 2021 - 2031 |
Market Size (2026) | USD 3.15 Billion |
Market Size (2031) | USD 6.26 Billion |
Growth Rate (2026 - 2031) | 14.70 % |
Fastest Growing Market | Asia Pacific |
Largest Market | North America |
Market Concentration | Low |
Major Players*Disclaimer: Major Players sorted in no particular order

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Market Overview

Bacterial Biopesticides Market Analysis by Mordor Intelligence The Bacterial Biopesticides market size is expected to grow from USD 2.75 billion in 2025 to USD 3.15 billion in 2026 and is forecast to reach USD 6.26 billion by 2031 at 14.70% CAGR over 2026-2031. The market growth is driven by expedited regulatory approvals, increasing consumer demand for residue-free produce, expansion of organic farming, and technological advancements that enhance formulation stability and field efficacy. According to FiBL, the global organic farming area reached 98.9 million hectares in 2023, representing a 2.6% increase. *Bacillus thuringiensis* (Bt) dominates the market with a 74% revenue share, while *Bacillus subtilis* shows rapid growth due to its combined pest control and plant growth promotion capabilities. Precision seed treatment applications, liquid formulations for controlled-environment agriculture, and the consolidation of portfolios among major agrochemical companies support the market expansion. Adoption rate of the bacterial biopesticides is affected by cold-chain storage requirements and slower efficacy compared to chemical alternatives, as companies work to address these challenges in an increasingly competitive market.

Key Report Takeaways* By product type, *Bacillus thuringiensis* held 73.60% of the bacterial biopesticides market share in 2025; *Bacillus subtilis* is positioned to grow at a 16.50% CAGR through 2031.

* By mode of application, foliar sprays led with 44.30% revenue contribution in 2025; seed treatment is forecast to expand at a 16.20% CAGR between 2026 and 2031.

* By crop type, fruits and vegetables accounted for 37.40% share of the bacterial biopesticides market size in 2025, whereas cereals and grains are projected to rise at a 15.10% CAGR to 2031.

* By region, North America represented 37.50% of global sales in 2025, while Asia-Pacific is set to register the fastest 17.40% CAGR over the forecast horizon.

Key Market Trends

Market Trends and Insights Drivers Impact Analysis of Bacterial Biopesticides Market*Driver | (~) % Impact on CAGR Forecast | Geographic Relevance | Impact Timeline |

Regulatory and Policy Support | +2.8 | Global, with strongest influence in EU and North America | Medium term (~ 3-4 yrs) |

Rising Awareness of the Harms of Conventional Pesticides | +1.9 | Global, particularly pronounced in Europe and North America | Medium term (~ 3-4 yrs) |

Demand for residue-free produce driving Bt solutions | +2.4 | Global, with early adoption in developed markets | Short term (≤ 2 yrs) |

Expansion of controlled-environment agriculture boosting demand for liquid bacterial formulations | +3.1 | North America, Europe, and urban centers in Asia-Pacific | Long term (≥ 5 yrs) |

Increasing adoption of integrated pest management (IPM) strategies | +2.3 | Global, with highest impact in regions with strong agricultural extension services | Medium term (~ 3-4 yrs) |

Technological advancements in formulation and delivery systems | +2.7 | Global, with initial adoption in developed agricultural markets | Medium term (~ 3-4 yrs) |

Source: Mordor Intelligence |

Competitive Landscape

Competitive Landscape

The bacterial biopesticides market consists of established agrochemical companies and specialized firms. Corteva's 2025 acquisition of Symborg enhanced its fermentation capabilities and expanded its portfolio of patent-protected *Bacillus* metabolites, indicating that major companies consider biologics as core assets. Bayer utilizes its distribution network to combine Bt sprays with traited seeds, creating integrated solutions that secure retail presence. Certis Biologicals, Valent BioSciences, and Koppert focus on developing fast-acting strains to reduce time-to-efficacy, particularly in markets where chemical pesticides remain the standard.

The market shows significant innovation through increased patent applications for chitinase-rich *Streptomyces* combinations and nano-emulsion carriers that enhance field durability. Industry collaboration is increasing, with Evonik providing encapsulation polymers to multiple manufacturers, while companies like Pivot Bio license fermentation technology to established seed producers. The main competitive focus for the next five years centers on microencapsulation, synergistic consortia, and metabolite stabilization technologies.

Regulatory differences across regions influence market strategies. Large companies pursue simultaneous registrations in the EU and the US, while smaller firms often begin in South America, where data requirements are less stringent. Companies developing formulations that do not require cold-chain storage can access emerging markets in Sub-Saharan Africa and Southeast Asia. While market consolidation continues, the top five companies maintain less than 80% of combined revenue, creating opportunities for new entrants focusing on specific crops, delivery methods, or regional markets.

Bacterial Biopesticides Industry Leaders* Koppert Biological Systems

* BASF SE

* Syngenta AG

* Valent Biosciences LLC

* Novonosis

* *Disclaimer: Major Players sorted in no particular order

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Scope Methodology P Space

This market covers the revenues generated from formulated bacterial biopesticide products that are used to control pests and diseases in crops, where the main active ingredient is a live or spore-based bacterium and sales are captured at the manufacturer level.

Scope exclusions: We do not count biochemical biopesticides, plant-incorporated protectants, or custom application service revenues.

Segmentation Container

* By Product Type* *Bacillus thuringiensis*

* *Bacillus subtilis*

* *Pseudomonas fluorescens*

* Other Types

* By Mode of Application* Foliar Spray

* Seed Treatment

* Soil Treatment

* Post-Harvest Treatment

- * By Crop Type* Fruits and Vegetables
- * Cereals and Grains
- * Oilseeds and Pulses
- * Turf and Ornamentals
- * Plantation Crops
- * By Geography* North America* United States
- * Canada
- * Mexico
- * Rest of North America
- * South America* Brazil
- * Argentina
- * Chile
- * Rest of South America
- * Europe* Germany
- * France
- * United Kingdom
- * Spain
- * Italy
- * Rest of Europe
- * Africa* South Africa
- * Egypt
- * Rest of Africa
- * Asia-Pacific* China
- * India
- * Japan
- * South Korea
- * Australia
- * Rest of Asia-Pacific

Frequently Asked Questions

What is the projected size of the bacterial biopesticides market by 2031?

The market is forecast to hit USD 6.26 billion by 2031, growing at 14.70% annually.

Which bacterial strain currently dominates sales?

Bacillus thuringiensis leads with a 73.60% revenue share, owing to its zero-residue profile and broad regulatory acceptance.

Why is seed treatment the fastest-growing application method?

Advances in polymer coatings and spore dormancy enable bacteria to survive storage and colonize seedlings, driving a 16.20% CAGR for seed treatments.

What regions will see the quickest uptake of bacterial biopesticides?

Asia-Pacific is set to grow at an 17.40% CAGR as China, India, and urban hubs adopt biological inputs to meet sustainability goals.

How are companies addressing cold-chain challenges?

New encapsulation carriers keep microbes viable for more than 500 days at ambient temperatures, reducing the need for refrigerated transport and storage.