

Bioinsecticides Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Source (Microbials, Plants, Others), By Application (Cereals & Grains, Oilseed and Pulses, Fruits and Vegetables, Others), By Region and Competition, 2020-2030F

Market Report | 2025-08-25 | 180 pages | TechSci Research

AVAILABLE LICENSES:

- Single User License \$4500.00
- Multi-User License \$5500.00
- Custom Research License \$8000.00

Report description:

Market Overview

Global Bioinsecticides Market was valued at USD 1.66 billion in 2024 and is expected to reach USD 3.02 billion in the forecast period with a CAGR of 10.46% through 2030. Bioinsecticides harness the power of nature's own defenders microorganisms such as bacteria, viruses, and fungi to wage a targeted and effective battle against pest infestations. Unlike their chemical counterparts, which often pose risks to human health and the environment, bioinsecticides offer a greener, more tailored approach. These natural agents are carefully selected to target specific pests while leaving beneficial insects and non-target organisms unharmed. This precision marks a significant departure from the indiscriminate nature of chemical pesticides, aligning with the principles of sustainable agriculture.

The efficacy of bioinsecticides lies in their selectivity. While chemical pesticides can inadvertently harm non-target organisms, including pollinators like bees, bioinsecticides specifically target pests without affecting beneficial insects. This balanced approach protects the delicate relationships within ecosystems, ensuring the natural checks and balances that prevent pest outbreaks remain intact. By preserving biodiversity, bioinsecticides contribute to healthier agricultural landscapes and more resilient food systems.

Key Market Drivers

Rising Demand of Bioinsecticides in Cereals & Grains Crops

ising bioinsecticide demand in cereals and grains is sharply increasing, driven by mounting pest pressure and food security priorities. Pests like the brown planthopper in rice can cause yield losses up to 30%, prompting farmers to seek reliable and safe pest control alternatives. In wheat cultivation, early-season infestations with aphids and armyworms can cut yields by as much as

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

25-28%. Bioinsecticides such as *B. thuringiensis* and entomopathogenic fungi offer targeted pest suppression without damaging beneficial insects. This pest resistance is propelling adoption across cereals systems, particularly as chemical pesticides become less effective and face growing regulatory scrutiny.

Changing dietary habits and population growth are further fueling bioinsecticide adoption in staple crops. As rice, wheat, barley, and maize remain central to global nutrition, farmers are under pressure to maintain yield stability. In response, governments in key producing countries are rolling out subsidy schemes and extension programs that promote bio-based pest control agents. For example, India's agriculture ministry has reported a 40% rise in bioinsecticide registrations since 2022. These initiatives are teaching farmers about the benefits of bioinsecticides, helping integrate them into integrated pest management programs for cereals & grains.

Environmental sustainability concerns are also backing the shift toward bioinsecticides in cereal cultivation. Traditional insecticides often harm beneficial insects—such as bees and predatory beetles—or leave toxic residues. Bioinsecticides, with their selective modes of action, preserve pollinators and natural enemies, safeguarding field ecosystem balance. A 2024 survey in Southeast Asia found 65% of farmers favored bio-based pest control over synthetics after observing fewer crop side-effects. This ecological compatibility makes bioinsecticides an attractive alternative for sustainable intensification of staple crop production. Market dynamics in the cereals & grains sector further enhance bioinsecticide uptake. Processors and retailers increasingly demand residue-free produce, especially in wheat flour, oats, and corn-based products. Cereal growers using bioinsecticides can meet strict export standards to markets like the EU, Japan, and the US. Additionally, the rising cost and regulatory complexity of chemical pesticide registration encourage growers to shift to bio-based solutions. This is creating a virtuous cycle of adoption, and bioinsecticides are fast becoming the preferred tool for pest management in cereal and grain systems.

Key Market Challenges

Regulatory Hurdles and Complex Approvals and Limited Spectrum of Activity Poses a Significant Obstacle to Market Expansion
The primary challenges that the bioinsecticides market encounters is navigating the intricate web of regulations and approvals. Unlike their chemical counterparts that often have well-established regulatory frameworks, bioinsecticides, being derived from living organisms, must undergo rigorous evaluations for safety, efficacy, and environmental impact. The diversity of microorganisms and their modes of action add complexity to the regulatory process. Companies must invest significant time and resources to conduct thorough research and provide comprehensive data to meet the stringent regulatory requirements. This challenge can lead to delays in product development and market entry, which can be discouraging for both manufacturers and farmers seeking sustainable solutions, ultimately impacting market growth in the forecast period.

Moreover, bioinsecticides offer a safer alternative to conventional pesticides, they often come with a more limited spectrum of activity. Unlike chemical pesticides that can target a wide range of pests, bioinsecticides tend to be more specific in their action. This specificity can be both an advantage and a challenge. On one hand, it reduces the risk of harming beneficial insects and non-target organisms, contributing to a more balanced ecosystem. On the other hand, it can restrict the efficacy of bioinsecticides against a broader array of pests, leading to the need for integrated pest management strategies that combine various pest control methods restrain the market growth.

Key Market Trends

Rising Demand for Sustainable Pest Control Solutions

One of the key driving forces behind the growth of bioinsecticides is the increasing demand for sustainable and eco-friendly pest control solutions. Traditional chemical insecticides have been associated with various adverse effects on ecosystems, non-target organisms, and human health. As awareness about these impacts continues to grow, farmers and consumers are seeking alternatives that are effective yet safe. Bioinsecticides, derived from natural sources such as plants, bacteria, fungi, and minerals, are gaining traction due to their reduced environmental footprint and minimal impact on beneficial insects, pollinators, and the overall ecosystem. Moreover, the bioinsecticides market has been witnessing significant investments in research and development, leading to the discovery and formulation of more effective and specialized products. The scientific community's increasing understanding of pest behavior, plant-insect interactions, and the mechanisms of action of various bioinsecticides has enabled the development of targeted solutions. This trend has led to the introduction of bioinsecticides that are specific to certain pest species, minimizing harm to beneficial insects and promoting integrated pest management practices. These factors are anticipated to drive the growth of the global bioinsecticides market during the forecast period.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Key Market Players

- [] BASF SE
- [] Bayer Cropscience AG
- [] Novozymes AS
- [] Syngenta Crop Protection AG
- [] Certis LLC
- [] Corteva Agriscience
- [] Valent Biosciences Corporation
- [] Isagro Spa
- [] UPL Limited
- [] FMC Corporation

Report Scope:

In this report, the Global Bioinsecticides Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

- [] Bioinsecticides Market, By Source:

- o Microbials
- o Plants
- o Others

- [] Bioinsecticides Market, By Application:

- o Cereals & Grains
- o Oilseed and Pulses
- o Fruits and Vegetables
- o Others

- [] Bioinsecticides Market, By Region:

- o North America
 - [] United States
 - [] Canada
 - [] Mexico
- o Europe
 - [] France
 - [] Germany
 - [] United Kingdom
 - [] Italy
 - [] Spain
- o Asia-Pacific
 - [] China
 - [] India
 - [] South Korea
 - [] Japan
 - [] Australia
- o South America
 - [] Brazil
 - [] Argentina
 - [] Colombia
- o Middle East & Africa
 - [] South Africa
 - [] Saudi Arabia

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

□ UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Bioinsecticides Market.

Available Customizations:

Global Bioinsecticides Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

-□Detailed analysis and profiling of additional market players (up to five).

Table of Contents:

1. Product Overview
 - 1.1. Market Definition
 - 1.2. Scope of the Market
 - 1.2.1. Markets Covered
 - 1.2.2. Years Considered for Study
 - 1.2.3. Key Market Segmentations
2. Research Methodology
 - 2.1. Objective of the Study
 - 2.2. Baseline Methodology
 - 2.3. Key Industry Partners
 - 2.4. Major Association and Secondary Sources
 - 2.5. Forecasting Methodology
 - 2.6. Data Triangulation & Validation
 - 2.7. Assumptions and Limitations
3. Executive Summary
 - 3.1. Overview of the Market
 - 3.2. Overview of Key Market Segmentations
 - 3.3. Overview of Key Market Players
 - 3.4. Overview of Key Regions/Countries
 - 3.5. Overview of Market Drivers, Challenges, Trends
4. Voice of Customer
5. Global Bioinsecticides Market Outlook
 - 5.1. Market Size & Forecast
 - 5.1.1. By Value
 - 5.2. Market Share & Forecast
 - 5.2.1. By Source (Microbials, Plants, Others)
 - 5.2.2. By Application (Cereals & Grains, Oilseed and Pulses, Fruits and Vegetables, Others)
 - 5.2.3. By Region (North America, Europe, Asia Pacific, South America, Middle East & Africa)
 - 5.2.4. By Company (2024)
 - 5.3. Market Map
 - 5.3.1. By Source
 - 5.3.2. By Application
 - 5.3.3. By Region
6. North America Bioinsecticides Market Outlook
 - 6.1. Market Size & Forecast
 - 6.1.1. By Value
 - 6.2. Market Share & Forecast

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 6.2.1. By Source
- 6.2.2. By Application
- 6.2.3. By Country
- 6.3. North America: Country Analysis
 - 6.3.1. United States Bioinsecticides Market Outlook
 - 6.3.1.1. Market Size & Forecast
 - 6.3.1.1.1. By Value
 - 6.3.1.2. Market Share & Forecast
 - 6.3.1.2.1. By Source
 - 6.3.1.2.2. By Application
 - 6.3.2. Mexico Bioinsecticides Market Outlook
 - 6.3.2.1. Market Size & Forecast
 - 6.3.2.1.1. By Value
 - 6.3.2.2. Market Share & Forecast
 - 6.3.2.2.1. By Source
 - 6.3.2.2.2. By Application
 - 6.3.3. Canada Bioinsecticides Market Outlook
 - 6.3.3.1. Market Size & Forecast
 - 6.3.3.1.1. By Value
 - 6.3.3.2. Market Share & Forecast
 - 6.3.3.2.1. By Source
 - 6.3.3.2.2. By Application
- 7. Europe Bioinsecticides Market Outlook
 - 7.1. Market Size & Forecast
 - 7.1.1. By Value
 - 7.2. Market Share & Forecast
 - 7.2.1. By Source
 - 7.2.2. By Application
 - 7.2.3. By Country
 - 7.3. Europe: Country Analysis
 - 7.3.1. France Bioinsecticides Market Outlook
 - 7.3.1.1. Market Size & Forecast
 - 7.3.1.1.1. By Value
 - 7.3.1.2. Market Share & Forecast
 - 7.3.1.2.1. By Source
 - 7.3.1.2.2. By Application
 - 7.3.2. Germany Bioinsecticides Market Outlook
 - 7.3.2.1. Market Size & Forecast
 - 7.3.2.1.1. By Value
 - 7.3.2.2. Market Share & Forecast
 - 7.3.2.2.1. By Source
 - 7.3.2.2.2. By Application
 - 7.3.3. United Kingdom Bioinsecticides Market Outlook
 - 7.3.3.1. Market Size & Forecast
 - 7.3.3.1.1. By Value
 - 7.3.3.2. Market Share & Forecast
 - 7.3.3.2.1. By Source

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 7.3.3.2.2. By Application
- 7.3.4. Italy Bioinsecticides Market Outlook
 - 7.3.4.1. Market Size & Forecast
 - 7.3.4.1.1. By Value
 - 7.3.4.2. Market Share & Forecast
 - 7.3.4.2.1. By Source
 - 7.3.4.2.2. By Application
- 7.3.5. Spain Bioinsecticides Market Outlook
 - 7.3.5.1. Market Size & Forecast
 - 7.3.5.1.1. By Value
 - 7.3.5.2. Market Share & Forecast
 - 7.3.5.2.1. By Source
 - 7.3.5.2.2. By Application
- 8. Asia-Pacific Bioinsecticides Market Outlook
 - 8.1. Market Size & Forecast
 - 8.1.1. By Value
 - 8.2. Market Share & Forecast
 - 8.2.1. By Source
 - 8.2.2. By Application
 - 8.2.3. By Country
 - 8.3. Asia-Pacific: Country Analysis
 - 8.3.1. China Bioinsecticides Market Outlook
 - 8.3.1.1. Market Size & Forecast
 - 8.3.1.1.1. By Value
 - 8.3.1.2. Market Share & Forecast
 - 8.3.1.2.1. By Source
 - 8.3.1.2.2. By Application
 - 8.3.2. India Bioinsecticides Market Outlook
 - 8.3.2.1. Market Size & Forecast
 - 8.3.2.1.1. By Value
 - 8.3.2.2. Market Share & Forecast
 - 8.3.2.2.1. By Source
 - 8.3.2.2.2. By Application
 - 8.3.3. South Korea Bioinsecticides Market Outlook
 - 8.3.3.1. Market Size & Forecast
 - 8.3.3.1.1. By Value
 - 8.3.3.2. Market Share & Forecast
 - 8.3.3.2.1. By Source
 - 8.3.3.2.2. By Application
 - 8.3.4. Japan Bioinsecticides Market Outlook
 - 8.3.4.1. Market Size & Forecast
 - 8.3.4.1.1. By Value
 - 8.3.4.2. Market Share & Forecast
 - 8.3.4.2.1. By Source
 - 8.3.4.2.2. By Application
 - 8.3.5. Australia Bioinsecticides Market Outlook
 - 8.3.5.1. Market Size & Forecast

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 8.3.5.1.1. By Value
- 8.3.5.2. Market Share & Forecast
- 8.3.5.2.1. By Source
- 8.3.5.2.2. By Application
- 9. South America Bioinsecticides Market Outlook
- 9.1. Market Size & Forecast
- 9.1.1. By Value
- 9.2. Market Share & Forecast
- 9.2.1. By Source
- 9.2.2. By Application
- 9.2.3. By Country
- 9.3. South America: Country Analysis
- 9.3.1. Brazil Bioinsecticides Market Outlook
- 9.3.1.1. Market Size & Forecast
- 9.3.1.1.1. By Value
- 9.3.1.2. Market Share & Forecast
- 9.3.1.2.1. By Source
- 9.3.1.2.2. By Application
- 9.3.2. Argentina Bioinsecticides Market Outlook
- 9.3.2.1. Market Size & Forecast
- 9.3.2.1.1. By Value
- 9.3.2.2. Market Share & Forecast
- 9.3.2.2.1. By Source
- 9.3.2.2.2. By Application
- 9.3.3. Colombia Bioinsecticides Market Outlook
- 9.3.3.1. Market Size & Forecast
- 9.3.3.1.1. By Value
- 9.3.3.2. Market Share & Forecast
- 9.3.3.2.1. By Source
- 9.3.3.2.2. By Application
- 10. Middle East and Africa Bioinsecticides Market Outlook
- 10.1. Market Size & Forecast
- 10.1.1. By Value
- 10.2. Market Share & Forecast
- 10.2.1. By Source
- 10.2.2. By Application
- 10.2.3. By Country
- 10.3. MEA: Country Analysis
- 10.3.1. South Africa Bioinsecticides Market Outlook
- 10.3.1.1. Market Size & Forecast
- 10.3.1.1.1. By Value
- 10.3.1.2. Market Share & Forecast
- 10.3.1.2.1. By Source
- 10.3.1.2.2. By Application
- 10.3.2. Saudi Arabia Bioinsecticides Market Outlook
- 10.3.2.1. Market Size & Forecast
- 10.3.2.1.1. By Value

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 10.3.2.2. Market Share & Forecast
 - 10.3.2.2.1. By Source
 - 10.3.2.2.2. By Application
- 10.3.3. UAE Bioinsecticides Market Outlook
 - 10.3.3.1. Market Size & Forecast
 - 10.3.3.1.1. By Value
 - 10.3.3.2. Market Share & Forecast
 - 10.3.3.2.1. By Source
 - 10.3.3.2.2. By Application
- 11. Market Dynamics
 - 11.1. Drivers
 - 11.2. Challenges
- 12. Market Trends & Developments
- 13. Global Bioinsecticides Market: SWOT Analysis
- 14. Porter's Five Forces Analysis
 - 14.1. Competition in the Industry
 - 14.2. Potential of New Entrants
 - 14.3. Power of Suppliers
 - 14.4. Power of Customers
 - 14.5. Threat of Substitute Products
- 15. Competitive Landscape
 - 15.1. BASF SE
 - 15.1.1. Business Overview
 - 15.1.2. Company Snapshot
 - 15.1.3. Products & Services
 - 15.1.4. Financials (As Reported)
 - 15.1.5. Recent Developments
 - 15.1.6. Key Personnel Details
 - 15.1.7. SWOT Analysis
 - 15.2. Bayer Cropscience AG
 - 15.3. Novozymes AS
 - 15.4. Syngenta Crop Protection AG
 - 15.5. Certis LLC
 - 15.6. Corteva Agriscience
 - 15.7. Valent Biosciences Corporation
 - 15.8. Isagro Spa
 - 15.9. UPL Limited
 - 15.10. FMC Corporation
- 16. Strategic Recommendations
- 17. About Us & Disclaimer

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Bioinsecticides Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Source (Microbials, Plants, Others), By Application (Cereals & Grains, Oilseed and Pulses, Fruits and Vegetables, Others), By Region and Competition, 2020-2030F

Market Report | 2025-08-25 | 180 pages | TechSci Research

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	\$4500.00
	Multi-User License	\$5500.00
	Custom Research License	\$8000.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Date

2026-03-04

Signature

A large, empty rectangular box intended for a signature.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com