

Forestry Biocontrols Market Forecasts to 2034 – Global Analysis By Control Agent Type (Microbial Biocontrols, Botanical Extracts, Semiochemicals and Predatory & Parasitic Organisms), Target Pest, Forest Type, Application Method, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Forestry Biocontrols Market is accounted for \$4.0 billion in 2026 and is expected to reach \$8.0 billion by 2034 growing at a CAGR of 9.0% during the forecast period. Forestry biocontrols involve utilizing living organisms like predators, pathogens, and microbes to control pests and diseases in forest environments. This approach serves as a sustainable substitute for chemical treatments, supporting ecological stability and conserving biodiversity. Biocontrol agents act selectively on harmful species, thereby protecting trees without adversely affecting beneficial organisms. Rising issues such as forest degradation, invasive pests, and climate-related stresses have increased the demand for these biological solutions. Many authorities and conservation groups encourage integrated pest management systems, where biocontrol techniques are essential components, contributing to healthier forests and improved resilience, while promoting environmentally responsible and long-lasting forest management practices.

According to FAO, wood charcoal production is dominated by Brazil (12%), Ethiopia (9%), and Nigeria (8%), showing reliance on sustainable forestry interventions.

Market Dynamics:

Driver:

Rising demand for sustainable pest management

The increasing focus on eco-friendly pest control methods is significantly driving the forestry biocontrols market. Concerns regarding the negative impacts of chemical pesticides on environmental balance, human well-being, and biodiversity have accelerated the transition to safer alternatives. Forest managers are adopting solutions that reduce ecological harm while maintaining effective pest suppression. Furthermore, international sustainability standards and forest certification programs are encouraging greener management practices. This transformation is boosting the use of biological control solutions, ensuring healthier forest ecosystems and supporting environmentally responsible approaches to pest and disease management globally.

Restraint:

Limited awareness and adoption

A major challenge for the forestry biocontrols market is the low level of awareness and slow adoption among users. Many forestry professionals lack sufficient knowledge about the efficiency and ecological advantages of biological pest management approaches. Chemical pesticides continue to dominate due to familiarity, quick action, and easy procurement. Moreover, insufficient training and expertise in handling and applying biocontrol agents create additional barriers. In several developing areas, poor access to advisory services and educational resources limits understanding of these methods. This gap in knowledge and acceptance delays the shift toward eco-friendly pest control practices, restricting the overall expansion of forestry biocontrol solutions.

Opportunity:

Expansion of sustainable forestry practices

The growing adoption of sustainable forest management approaches offers strong potential for the forestry biocontrols market. Worldwide focus on eco-conscious practices is driving the shift toward safer pest control solutions. Forest certification systems and environmental standards are encouraging reduced reliance on chemical pesticides and increased use of biological methods. Biocontrol solutions support these goals by protecting ecosystems and maintaining biodiversity. Furthermore, consumer preference for sustainably produced timber is shaping industry trends. As forestry stakeholders work to comply with environmental regulations and sustainability targets,

the demand for biological control solutions is expected to rise, opening new avenues for market growth globally.

Threat:

Competition from chemical pesticides

The strong presence of chemical pesticides in forestry management represents a major threat to the biocontrols market. These products are favored for their rapid effectiveness, widespread availability, and long-standing usage practices. Forest operators often choose chemical treatments for quick results, particularly in emergency pest outbreaks. Biological control solutions, which take longer to act, may be overlooked in such situations. Furthermore, competitive pricing and extensive promotion of chemical products reinforce their market dominance. This continued dependence on traditional pest control methods restricts the adoption of eco-friendly alternatives, posing challenges to the expansion and acceptance of forestry biocontrol technologies worldwide.

Covid-19 Impact:

The COVID-19 outbreak influenced the forestry biocontrols market in both negative and positive ways. Supply chain interruptions hindered manufacturing and distribution processes, leading to reduced product availability. Limitations on workforce mobility and fieldwork slowed the adoption of pest control activities in forest areas. On the other hand, the pandemic heightened focus on sustainability and encouraged the use of environmentally friendly alternatives over chemical pesticides. Recovery strategies by governments and institutions promoted green practices. As forestry operations gradually returned to normal, the need for sustainable pest management solutions increased, contributing to the steady recovery and future expansion of the biocontrols market.

The microbial biocontrols segment is expected to be the largest during the forecast period

The microbial biocontrols segment is expected to account for the largest market share during the forecast period because of their efficiency, adaptability, and large-scale usability. These products rely on microorganisms like fungi, bacteria, and viruses to control pests and diseases in forest ecosystems. Their capacity to multiply and remain active in natural environments enables sustained pest control over time. Moreover, they can be produced and distributed more easily than other biological solutions, enhancing

their commercial appeal. Increasing preference for environmentally sustainable pest management and their suitability for integrated pest management systems contribute significantly to their leading position in forestry biocontrol applications.

The private forestry companies segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the private forestry companies segment is predicted to witness the highest growth rate, driven by their emphasis on efficient and sustainable forest management. These organizations are increasingly implementing biological pest control methods to minimize chemical use and meet environmental standards. Rising consumer preference for responsibly sourced wood products is further motivating adoption of eco-friendly practices. Moreover, private companies often have the resources to invest in new technologies and improved pest management strategies. Their strong commitment to sustainability, innovation, and operational efficiency is accelerating the uptake of biocontrol solutions, contributing to their high growth trajectory in the market.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share due to its sophisticated forest management systems and supportive environmental regulations. The region benefits from strong capabilities in research, innovation, and large-scale deployment of biological pest control solutions. Increased awareness about ecological preservation and strict limitations on chemical pesticide use encourage the adoption of sustainable alternatives. Moreover, government support for integrated pest management and environmentally responsible forestry practices strengthens market growth, ensuring North America maintains its leading position in the global forestry biocontrols industry.

Region with highest CAGR:

Over the forecast period, the Asia-Pacific region is anticipated to exhibit the highest CAGR, driven by increasing forestry expansion and heightened environmental awareness. Economic growth and rising consumption of wood products are creating a strong demand for efficient pest control approaches. Regional governments are actively encouraging sustainable forest management and limiting chemical pesticide usage. Awareness regarding ecosystem protection and biodiversity is also boosting the use of biological control solutions. Furthermore, advancements in research and growing investments in green technologies are enhancing adoption.

Key players in the market

Some of the key players in Forestry Biocontrols Market include Bayer, BASF, Syngenta (Valagro), Novozymes, Koppert, BioForest, Nufarm, Envu, Valent BioSciences, Bionema Group, Corteva Agriscience, FMC Corporation, Marrone Bio Innovations, CERTIS USA, BioWorks, Andermatt Biocontrol, Biobest Group and Gowan Company.

Key Developments:

In April 2026, BASF and Nutrien Ltd.® announced today a strategic collaboration designed to help farmers gain more value from sustainable farming practices already in use. Under this collaboration, Nutrien agronomists will work directly with growers to optimize yield potential using practical, on-farm sustainability practices. BASF digital tools – xarvio® FIELD MANAGER and xarvio BIOENERGY – will help connect growers with biorefineries and document the carbon intensity (CI) of their crops.

In January 2026, Syngenta and SAP are joining forces with the aim of driving the adoption of Artificial Intelligence to transform the agricultural sector. To this end, the agricultural chemicals firm, which is headquartered in Basel, and the software developer from Walldorf in the German state of Hesse have agreed a multiyear partnership.

In July 2025, Bayer signed a development and distribution agreement with French pheromones expert company M2i Group for the exclusive distribution of pheromone gels for the Asia-Pacific as well as the Latin America region and the United States building on its successful collaboration and related product launches in Europe and Africa.

Control Agent Types Covered:

Microbial Biocontrols

Botanical Extracts

Semiochemicals

Predatory & Parasitic Organisms

Target Pests Covered:

Insect Pests

Fungal Pathogens

Bacterial Pathogens

Nematodes

Forest Types Covered:

Natural Forests

Plantation Forests

Urban Forestry

Agroforestry Systems

Application Methods Covered:

Foliar Spray

Soil Treatment

Trunk Injection

Seed Treatment

End Users Covered:

Government Forestry Departments

Private Forestry Companies

Community Forest Managers

Research & Conservation Organizations

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)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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