

Bioplastics Expansion Market Forecasts to 2034 – Global Analysis By Type (Polylactic Acid (PLA), Polyhydroxyalkanoates (PHA), Starch Blends, Bio-PET, Bio-PE and Emerging Biopolymers), Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Bioplastics Expansion Market is accounted for \$21.7 billion in 2026 and is expected to reach \$79.2 billion by 2034 growing at a CAGR of 17.6% during the forecast period. The growth of bioplastics is gaining momentum as businesses pursue eco-friendly substitutes for conventional plastics derived from fossil fuels. Awareness of environmental impacts, pressures, and sustainability commitments are boosting usage in packaging, vehicles, farming, and everyday products. Advances in materials like PLA, PHA, and starch-based compounds are enhancing quality, strength, and affordability. Expanding manufacturing capacities and supply networks, along with policy support, are encouraging adoption. Yet, issues such as limited raw materials, inadequate composting systems, and higher upfront expenses persist. Even so, innovation and scale are likely to accelerate acceptance and establish bioplastics as an approach to mitigating plastic waste.

According to the European Bioplastics Association (EUBP), global bioplastics production capacity is expected to double from 2.31 million tonnes in 2025 to approximately 4.69 million tonnes by 2030, while plastics overall remain at ~431 million tonnes annually.

Market Dynamics:

Driver:

Rising environmental awareness and sustainability goals

Heightened concern over environmental degradation and climate issues is strongly propelling the growth of the bioplastics market. Individuals, organizations, and policymakers are emphasizing greener material choices to minimize ecological damage. Corporate commitments toward sustainability, such as lowering carbon footprints and reducing dependence on petroleum-based plastics, are driving adoption. Increased public awareness and advocacy efforts are shaping consumer preferences toward biodegradable and compostable products. This evolving perspective is encouraging producers to develop alternatives to conventional plastics, positioning sustainability as a key influence behind the continued expansion and evolution of the global bioplastics industry.

Restraint:

High production costs and price competitiveness

Elevated production expenses are a major barrier to the growth of the bioplastics market. Compared to conventional plastics, bioplastics rely on costly raw materials and complex manufacturing processes, often produced at smaller scales. This results in higher product prices, making adoption difficult in cost-conscious industries. Variations in feedstock pricing and the absence of large-scale efficiencies further impact affordability. As a result, many companies remain reluctant to transition from cheaper traditional plastics. These economic challenges continue to restrict broader acceptance and slow the overall expansion of bioplastics despite strong environmental and regulatory drivers.

Opportunity:

Advancements in biopolymer research and development

Continuous progress in research and innovation is opening new possibilities for the growth of the bioplastics market. Improvements in material properties such as strength, heat resistance, and protection capabilities are increasing their competitiveness with traditional plastics. New production methods are helping reduce costs and enable larger-scale manufacturing. Scientists are also exploring alternative raw materials, including waste and non-food sources, to enhance sustainability. As these developments evolve, bioplastics are finding applications in diverse sectors like automotive, electronics, and healthcare, creating significant opportunities for broader adoption and long-term market

expansion worldwide.

Threat:

Competition from conventional plastics and petrochemical industry

The dominance of traditional plastics and the strong presence of the petrochemical sector pose a serious challenge to the growth of the bioplastics market. Conventional plastics are cheaper to produce and benefit from established supply networks and large-scale manufacturing. Changes in oil prices can make these materials even more affordable, increasing their competitiveness. The widespread infrastructure supporting traditional plastics further strengthens their position. As a result, bioplastics struggle to compete, especially in industries focused on cost efficiency, which limits their ability to expand and capture a larger share of the global market.

Covid-19 Impact:

The outbreak of COVID-19 created both challenges and opportunities for the bioplastics market. Early in the pandemic, restrictions caused supply chain interruptions, workforce limitations, and reduced manufacturing activities, negatively affecting demand across several industries. The surge in demand for disposable plastics in healthcare and sanitation temporarily reduced emphasis on sustainable materials. Nevertheless, the crisis increased global awareness of environmental issues, encouraging a shift toward greener solutions over time. As economies recover, investments in bioplastics are growing, driven by stronger regulations and sustainability goals, supporting the market's gradual rebound and future expansion.

The polylactic acid (PLA) segment is expected to be the largest during the forecast period

The polylactic acid (PLA) segment is expected to account for the largest market share during the forecast period, primarily because of its affordability, accessibility, and broad usage across industries. Produced from renewable sources like corn and sugarcane, it is widely utilized in packaging, fabrics, and various consumer products. Its biodegradable nature and ease of processing with conventional equipment make it highly attractive to producers. Rising demand for eco-friendly packaging and supportive government policies have further increased its adoption. Ongoing advancements in performance characteristics, such as improved durability and thermal stability, continue to strengthen PLA's leading role in the global market.

The retail & e-commerce distributors segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the retail & e-commerce distributors segment is predicted to witness the highest growth rate, driven by the expansion of online retail and the need for environmentally friendly packaging. Businesses are increasingly using biodegradable materials to meet regulatory standards and reduce their ecological footprint. The rise in shipping volumes has boosted the demand for packaging, accelerating the adoption of sustainable options. Additionally, consumer inclination toward eco-conscious brands is encouraging retailers to shift toward bioplastics. Advancements in packaging design and materials are further supporting this trend, making this segment a major contributor to market growth.

Region with largest share:

During the forecast period, the Europe region is expected to hold the largest market share due to its stringent environmental laws, efficient waste management practices, and strong public awareness of sustainability issues. Governments across the region have introduced regulations to limit plastic usage and encourage eco-friendly alternatives. Nations like Germany, France, and Italy are at the forefront of adopting bioplastics in various industries, including packaging and automotive. Continuous investment in innovation and the presence of robust recycling and composting facilities further boost market growth. Corporate efforts toward sustainability also contribute to maintaining Europe's leadership in the global bioplastics sector.

Region with highest CAGR:

Over the forecast period, the Asia-Pacific region is anticipated to exhibit the highest CAGR, driven by increasing industrial development and urban expansion. Nations including China, India, Japan, and South Korea are focusing on sustainable solutions to manage growing plastic waste issues. Supportive government policies and bans on conventional plastics are encouraging the use of eco-friendly materials. Improved production capacity and access to raw materials are also aiding market expansion. Furthermore, growth in key industries such as packaging, transportation, and agriculture is increasing demand, making Asia-Pacific the most rapidly advancing region in the bioplastics sector.

Key players in the market

Some of the key players in Bioplastics Expansion Market include NatureWorks LLC, TotalEnergies Corbion, Novamont S.p.A., Danimer Scientific, BASF SE, Braskem S.A., Arkema S.A., Biome Bioplastics, Mitsubishi Chemical Holdings, Toray Industries, Inc., Solvay S.A., Roquette Frères, FKuR Kunststoff GmbH, Plantic Technologies, Avantium, LyondellBasell Industries Holdings B.V., PTT MCC Biochem Co., Ltd. and Biofase.

Key Developments:

In November 2025, Solvay and Sapiro have entered a 10-year agreement to collaborate on renewable hydrogen production at Solvay's Rosignano facility, part of the Hydrogen Valley Rosignano Project aimed at cutting CO2 emissions from Solvay's peroxides operations. Under the agreement, Sapiro will construct and manage a 5 MW electrolysis system, powered by a 10 MW photovoltaic installation built by Solvay.

In October 2025, Toray Industries, Inc. and Hyundai Motor Group signed a Strategic Joint Development Agreement to collaborate on advanced materials and components innovation, aiming to set new standards in future mobility. This agreement marks an important milestone in our partnership, as it represents the first tangible outcome of our strategic collaboration initiated last year.

In October 2025, BASF SE and ANDRITZ Group have signed a license agreement for the use of BASF's proprietary gas treatment technology, OASE® blue, in a carbon capture project planned to be implemented in the city of Aarhus, Denmark. The project aims to capture approximately 435,000 tons of CO2 annually from the flue gases of a waste-to-energy plant for sequestration; the city of Aarhus has set itself the goal of becoming CO2-neutral by 2030.

Types Covered:

Polylactic Acid (PLA)

Polyhydroxyalkanoates (PHA)

Starch Blends

Bio-PET

Bio-PE

Emerging Biopolymers

Applications Covered:

Packaging

Durable Consumer Goods

Agriculture

Automotive & Transportation

Medical & Healthcare

Industrial & Construction Uses

End Users Covered:

Food & Beverage Producers

Retail & E-commerce Distributors

Automotive OEMs

Agriculture Producers

Healthcare Providers

Industrial Manufacturers

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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