

Bioplastics & Biopolymers Market Forecasts to 2032 – Global Analysis By Polymer Type (Polylactic Acid (PLA), Polyhydroxyalkanoates (PHA), Starch Blends, PBS & PBAT, Bio-PE and Other Polymer Types), Feedstock Source, Processing Technology, End User and By Geography

<https://marketpublishers.com/r/BC02A22387DBEN.html>

Date: October 2025

Pages: 200

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

ID: BC02A22387DBEN

Abstracts

According to Statistics MRC, the Global Bioplastics & Biopolymers Market is accounted for \$19.7 billion in 2025 and is expected to reach \$96.6 billion by 2032 growing at a CAGR of 25.5% during the forecast period. Bioplastics and biopolymers are environmentally friendly materials derived from renewable biological sources such as corn starch, sugarcane, cellulose, or vegetable oils, rather than fossil fuels. They are designed to reduce carbon emissions and dependence on non-renewable resources. Bioplastics can be biodegradable or non-biodegradable, offering sustainable alternatives for packaging, agriculture, automotive, and consumer goods industries. Biopolymers, including polylactic acid (PLA) and polyhydroxyalkanoates (PHA), mimic the properties of conventional plastics while promoting circular economy practices through compostability and lower environmental impact during production and disposal.

Market Dynamics:

Driver:

Rising environmental awareness & consumer demand

Brands are responding to pressure for eco-friendly alternatives by replacing petroleum-based plastics with biodegradable options. Retailers are launching product lines that

highlight compostability and carbon footprint reduction. Governments are supporting adoption through bans on single-use plastics and incentives for bio-based production. Certifications and labeling schemes are improving transparency and consumer trust. These dynamics are propelling market expansion across industries.

Restraint:

Limited availability and variability of raw materials

Feedstocks such as corn, sugarcane, and cellulose are subject to seasonal fluctuations and regional supply gaps. Manufacturers face challenges in securing stable input volumes for large-scale operations. Quality variations can affect processing efficiency and product performance. Competition with food and agriculture sectors adds pressure to sourcing strategies. These limitations continue to hinder reliable supply chain development.

Opportunity:

Volatility in fossil fuel prices

Producers are exploring renewable inputs to reduce exposure to crude oil fluctuations and geopolitical risks. Bioplastics offer predictable pricing models and lower lifecycle emissions. Energy-intensive industries are evaluating bio-based polymers for strategic diversification. Investment in local feedstock cultivation is improving cost control and regional resilience. These trends are fostering economic viability for sustainable materials.

Threat:

End-of-life infrastructure gaps

Many regions lack composting and recycling systems that can process biodegradable materials effectively. Mislabeling and contamination reduce recovery rates and increase landfill disposal. Consumers often struggle to differentiate between compostable and recyclable packaging. Municipal waste systems are not equipped to handle diverse biopolymer formats. These challenges continue to degrade circularity and lifecycle performance.

Covid-19 Impact:

The pandemic disrupted supply chains and shifted priorities across the packaging and materials sectors. Demand for hygiene products and medical supplies increased reliance on conventional plastics. Bioplastic projects faced delays due to raw material shortages and reduced capital flow. Recovery efforts are now emphasizing sustainability and resilience in material sourcing. Public awareness of environmental impact has grown following global lockdowns. These shifts are accelerating interest in bio-based alternatives.

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 due to its versatility, compostability, and compatibility with existing processing infrastructure. PLA is widely used in packaging, agriculture, and consumer goods. Manufacturers are scaling production through fermentation-based technologies and regional feedstock sourcing. Regulatory support for compostable materials is reinforcing adoption across retail and food service. PLA blends are improving mechanical properties and expanding application scope. These developments are boosting segment dominance across bio-based polymers.

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

Over the forecast period, the extrusion segment is predicted to witness the highest growth rate as demand rises for films, sheets, and molded components across packaging and industrial applications. Biopolymer grades are being optimized for thermal stability and processability. Equipment manufacturers are adapting lines to handle bio-based inputs with minimal retrofitting. Growth in flexible packaging and agricultural films is driving extrusion volume. Partnerships between resin producers and converters are accelerating innovation. These dynamics are accelerating adoption across extrusion-based formats.

Region with largest share:

During the forecast period, the Europe region is expected to hold the largest market share due to its strong regulatory framework, consumer awareness, and industrial collaboration. The EU is enforcing bans on single-use plastics and promoting circular economy principles. Investment in composting infrastructure and bio-refineries is scaling

regional capacity. Presence of leading biopolymer producers and research institutions is reinforcing market strength. Public procurement policies are favouring sustainable materials across sectors. These factors are boosting Europe's leadership in Bioplastics innovation.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR as manufacturing expansion, feedstock availability, and policy support converge. Countries like China, India, and Thailand are scaling bio plastic production across packaging and agriculture. Local firms are launching region-specific solutions tailored to climate and crop conditions. Government-backed programs are supporting infrastructure and export development. Demand for sustainable materials is rising across consumer and industrial segments. These dynamics are accelerating regional growth across bio-based polymers.

Key players in the market

Some of the key players in Bioplastics & Biopolymers Market include NatureWorks LLC, Novamont S.p.A., TotalEnergies Corbion, Biome Bioplastics Ltd., BASF SE, Braskem S.A., Danimer Scientific, Inc., FKuR Kunststoff GmbH, Mitsubishi Chemical Group Corporation, Toray Industries, Inc., Plantic Technologies Limited, Green Dot Bioplastics, Inc., TIPA Corp Ltd., Biotec GmbH & Co. KG and Solvay S.A.

Key Developments:

In July 2025, Novamont introduced advanced biodegradable films under the Mater-Bi® brand, targeting food packaging and retail sectors. These films offer enhanced mechanical performance and compostability, meeting EU sustainability standards while replacing fossil-based plastics in high-volume applications.

In March 2025, NatureWorks introduced Ingeo™ Extend, a new platform of PLA polymers designed for biaxially oriented polylactic acid (BOPLA) films. This innovation offers unprecedented manufacturing efficiency and faster biodegradability, enabling film manufacturers to produce BOPLA with up to 7x transverse direction stretch and reduced production costs.

Polymer Types Covered:

Polylactic Acid (PLA)

Polyhydroxyalkanoates (PHA)

Starch Blends

PBS & PBAT

Bio-PE

Bio-PET

Bio-PA

Other Polymer Types

Feedstock Sources Covered:

Corn

Sugarcane

Cassava

Potato

Algae

Other Feedstock Sources

Processing Technologies Covered:

Injection Molding

Blow Molding

Thermoforming

Extrusion

Film Casting

Other Processing Technologies

End Users Covered:

FMCG & Retail Brands

Automotive OEMs

Agriculture & Horticulture Firms

Healthcare & Medical Device Manufacturers

Industrial & Commercial Packaging Providers

Government & Municipal Agencies

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & 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 2024, 2025, 2026, 2028, and 2032
- 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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