Global Bioplastics Market: Information by Type (Biodegradable, Non-Biodegradable), Application (Rigid Packaging, Flexible Packaging, Textile, Agriculture and Horticulture, Consumer Goods, Automotive, Electronics, Building and Construction and Others) and Region - Forecast till 2023

Global Bioplastic Market Synopsis

The growth of the bioplastics market is at a nascent stage but is expected to witness significant growth in the near future. Bioplastics may or may not be biodegradable. The global bioplastic market was valued USD 6.48 billion and expected to register a CAGR of 12.49% to reach USD 11.68 billion by 2023.

Biodegradable bioplastics are 100% made from renewable sources such as corn, sugarcane, sugar beet, vegetable oil, wheat and other cereals, grains, cassava, lignocellulosic biomass, and others. They can be broken down completely into water, carbon dioxide, and compost by microorganisms under the suitable conditions in weeks or months. Biodegradable bioplastics find usage in food packaging, disposables, shopping bags, and others. Some of the biodegradable bioplastics include polybutyrate adipate terephthalate (PBAT), polybutylene succinate (PBS), polylactic acid (PLA), polyhydroxyalkanoate (PHA), starch blends, and others. PHA offers a wide array of physical and mechanical properties depending on its chemical composition and the market for PHA is projected to quadruple in the next five years with the growing production. The production of PLA is predicted to grow by 60% by 2023 as compared to 2018. It offers excellent barrier properties and is available in high-performance PLA grades, which act as an excellent replacement for fossil fuel-based polystyrene (PS), polypropylene (PP), and acrylonitrile butadiene styrene (ABS), among others.

Non-biodegradable bioplastics are partially bio-based and can be a near-perfect substitute for fossil fuel-based plastics, where durability and robustness are vital. Some of the non-biodegradable bioplastics include polyethylene terephthalate (PET), polyamide (PA), polyethylene (PE), and others. Bio-based PET is widely used in the manufacturing of carbonated beverage bottles. On 3 June 2015, Coca Cola, a carbonated beverage manufacturer, introduced PlantBottle technology where the PET was made from bio-based monoethylene glycol (from sugarcane) and terephthalic acid (from petrochemicals). Besides, bioplastic PE is also witnessing increasing demand over fossil fuel-based PE for producing carry bags, and films & sheets, among others, to reduce the carbon footprint.

Increasing regulations on the use of conventional plastics (synthetic) due to environmental pollution are expected to create growth opportunities for the manufacturers of bioplastic. The burning of conventional plastics plastic leads to the emission of harmful gases, which damages the ozone layer and leads to the greenhouse effect. Disposal of plastics in water bodies affects the aquatic ecosystem and the quality of water. Plastic disposition under the soil restricts the penetration of water in the soil, which hampers the agricultural industry.

However, the availability of close substitutes to bioplastics in the form of conventional plastics at very low cost, and lack of awareness among the consumers regarding the use of bioplastics are expected to restrain the growth of the global market.

Market Players

- Braskem (Brazil)
- Total Corbion PLA (The Netherlands)
- NatureWorks (US)
- Bio-On (Italy)
- Novamont (Italy)
- Toray Industries (Japan)
Global Bioplastic Market, by Type 2018 (%)

Source: MRFR Analysis

Segmental Analysis

The global bioplastic market has been segmented on the basis of type, application, and region.

Based on type, the global bioplastic market has been divided into biodegradable and non-biodegradable.

On the basis of application, the global bioplastic market has been classified into rigid packaging, flexible packaging, textile, agriculture and horticulture, consumer goods, automotive, electronics, building and construction, and others.

Regional Analysis

The Global Bioplastic Market has been spanned across five regions, namely Asia-Pacific, North America, Europe, Latin America, and the Middle East & Africa.

The European market held the largest market share of 33.7% by value in 2018 due to the high production cost in the region and stringent regulatory standards on synthetic chemicals. The regional is expected to exhibit a CAGR of 10.85% to reach USD 33,389.5 million by the end of 2023.

In terms of volume, the Asia-Pacific market held the largest market share of 34.4% in 2018 due to the availability of raw materials at low cost, low production and labor cost, rapid industrialization in emerging economies, and growing awareness regarding the advantages of bio-based chemicals.

The North American market held the third-largest share of the global bioplastic market in 2018. The imposition of ban on the use of conventional plastics is expected to boost the regional market.

The Latin American and the Middle East & Africa market are expected to witness sluggish growth in the coming years due to lack of awareness among the consumers regarding the use of bioplastics.

Intended Audience

- Manufacturers and producers of bioplastic
- Traders and distributors of bioplastic
- Raw material suppliers
- Nationalized laboratories
- Research and development organizations
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