

The Global Market for Biobased and Biodegradable Plastics (Bioplastics) to 2033

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Abstracts

At present, the majority of plastics are derived from petrochemicals. Most plastic packaging is used only once (single use items) and 95% of the value of the material is thus lost, with a global economic cost of US\$80-\$120 billion annually. The market for bioplastics will grow significantly in coming years, with production capacities exceeding 6 million tonnes by 2027.

Bioplastics are biobased products that allow for greater product sustainability due to their biodegradability and renewability. Their use is attractive as bioplastics that biodegrade to CO₂ and H₂O mitigate the negative effects of standard plastic (litter and damage to aqua environments). Renewable feedstocks such as corn, sugarcane, and algae can be utilized instead of petroleum, thereby reducing global dependence on crude oil and lessening the impact on climate.

Despite growing global environmental awareness, bioplastics currently account for a very small percent of the >360 million tons of plastics produced annually, but with annual growth of 20-30%. Due to the development of advanced biopolymers and materials, reduced costs, regulations and increased consumer awareness demand is rising.

The sky rocketing price of petroleum coupled with government regulations and consumer global environmental concerns, and continued population growth is pushing the plastic industries towards sustainability. Growing government regulatory restrictions, consumers' desire and energy conservation are some of the key factors that drive research and product development towards renewable resource-based polymeric biomaterials. The performance of bioplastics is also improving and range of applications expanding.

This report covers:

Analysis of Biobased and Biodegradable Plastics (Bioplastics) market.

Global production capacities, market demand and trends 2019-2033 for Biobased and Biodegradable Plastics (Bioplastics).

Analysis of biobased chemicals including:

Bio-based adipic acid

11-Aminoundecanoic acid (11-AA)

1,4-Butanediol (1,4-BDO)

Dodecanedioic acid (DDDA)

Epichlorohydrin (ECH)

Ethylene

Furfural

5-Chloromethylfurfural (5-CMF)

5-Hydroxymethylfurfural (HMF)

2,5-Furandicarboxylic acid (2,5-FDCA)

Furandicarboxylic methyl ester (FDME)

Isosorbide

Itaconic acid

3-Hydroxypropionic acid (3-HP)

5 Hydroxymethyl furfural (HMF)

Lactic acid (D-LA)

Lactic acid – L-lactic acid (L-LA)

Lactide

Levoglucosenone

Levulinic acid

Monoethylene glycol (MEG)

Monopropylene glycol (MPG)

Muconic acid

Naphtha

Pentamethylene diisocyanate

1,3-Propanediol (1,3-PDO)

Sebacic acid

Succinic acid (SA)

Analysis of synthetic Bioplastics market including:

Polylactic acid (Bio-PLA)

Polyethylene terephthalate (Bio-PET)

Polytrimethylene terephthalate (Bio-PTT)

Polyethylene furanoate (Bio-PEF)

Polyamides (Bio-PA)

Poly(butylene adipate-co-terephthalate) (Bio-PBAT)

Polybutylene succinate (PBS) and copolymers, Polyethylene (Bio-PE), Polypropylene (Bio-PP)

Analysis of naturally produced bio-based polymers including Polyhydroxyalkanoates (PHA)

Polysaccharides

Microfibrillated cellulose (MFC)

Cellulose nanocrystals

Cellulose nanofibers,

Protein-based bioplastics

Algal and fungal based bioplastics and biopolymers.

Market segmentation analysis for bioplastics. Markets analysed include rigid & flexible packaging, consumer goods, automotive, building & construction, textiles, electronics, agriculture & horticulture.

Emerging technologies in synthetic and natural produced bioplastics and biopolymers.

340 company profiled including products and production capacities. Companies profiled include NatureWorks, Total Corbion, Danimer Scientific, Novamont, Mitsubishi Chemicals, Indorama, Braskem, Avantium, Borealis, Cathay, Dupont, BASF, Arkema, DuPont, BASF, AMSilk GmbH, Notpla, Loliware, Bolt Threads, Ecovative, Bioform Technologies, Algal Bio, Kraig Biocraft Laboratories, Biotic Circular Technologies Ltd., Full Cycle Bioplastics, Stora Enso Oyj, Spiber, Traceless Materials GmbH, CJ Biomaterials, Natrify, Plastus, Humble Bee Bio and many more.

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