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World Bioplastics

Industry Study with Forecasts for **2017 & 2022**

Study #3089 | November 2013 | $6300 | 367 pages

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Gains will be driven by consumer preferences for sustainable materials, the increased adoption of bioplastics by plastic processors and compounders, and by new product developments.

World demand to rise 19% annually through 2017

Global demand for biobased and biodegradable plastics will rise 19 percent per year to 960,000 metric tons in 2017. The bioplastics industry, while still in the emerging growth phase, has established itself as a fixture in a number of commercial markets and applications. Robust growth in demand is expected in virtually all geographic markets, driven by consumer preferences for sustainable materials, the increased adoption of bioplastics by plastic processors and compounders, and new product developments that expand the range of applications for bioplastics. However, despite the rapid rise in demand, bioplastics are still expected to account for less than one percent of the overall plastic resin market in 2022.

Biobased commodity resins to be fastest growing types

Starch-based resins and polylactic acid (PLA) will remain the leading bioplastic products through 2017, combining to account for over 60 percent of demand. For starch-based resins, advances will be bolstered by increased regulation of conventional plastic products, particularly plastic bags, as governments around the world continue to promote sustainability. PLA demand will benefit from the development of resins and compounds with enhanced performance attributes, suitable for more durable applications such as fibers, automotive parts, and electronic components.

The most rapid gains in demand, however, are expected for biobased commodity resins such as polyethylene and polypropylene, which are just beginning to enter the commercial market. The rapid adoption of these bioplastics will be fueled by their ability to be used as a "drop-in" for existing applications, as well as by an increased focus on biobased content rather than biodegradability as a desired attribute. By 2022, biobased polyethylene terephthalate (PET) is also expected to become available in commercial quantities and will begin to penetrate the beverage container market.

Western Europe to remain dominant regional market

Western Europe was the largest regional consumer of bioplastics in 2012, accounting for over half of global demand. The region will see strong gains through 2017 as well, bolstered by added regulations and incentives that favor bioplastics over conventional resins. North America will also register strong advances, with demand in the region expected to more than double, driven by rising consumption of PLA and biobased commodity resins. Advances in the Asia/Pacific region will be fueled by robust growth in China, which has become a major consumer of bioplastic resins used to manufacture goods for export.

World Bioplastics

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Sample Text, Table & Chart

TABLE VI-4

JAPAN: BIOPLASTICS DEMAND BY PRODUCT
(thousand metric tons)

SAMPLE TABLE

Item	2002	2007	2012	2017	2022
Plastic Resin Demand	1				
kg bioplastic/ton plastic					
Bioplastics Demand					
Polylactic Acid					
Starch-Based Resins					
Polyester Bioplastics					
Biobased Polyethylene					
Biobased Polyamide					
Other Bioplastics					

MARKETS

Japan: Products

SAMPLE TEXT

...7.3 percent p... ...sia/Pacific... ...ors, includi... ...inability is... ...systems fo... in Japan, and the increased availability and variety of bioplas... Legislative and regulatory action are also expected to play a role, as the Japanese government has set an ambitious goal of replacing 20 percent of petroleum-based plastic consumption with bio-based plastics by 2020. While this goal will almost certainly not be met due to limited product availability and the higher prices of bioplastics, government incentives promoting the development and use of bioplastics in Japan will continue to be strong.

The bioplastics market in Japan includes a diverse range of products, with PLA, starch-based resins, and biodegradable polyesters each accounting for more than one-sixth of 2012 demand. Of these, the fastest gains through 2017 are expected for PLA, which will benefit from more widespread availability as expanded Asian production begins to come online. Additionally, Japanese resin producers and compounders are making efforts to improve the performance of PLA resins in order to penetrate durable goods markets such as automotive and electronics uses. For example, NEC, Teijin, Toray, and Unitika are all working to develop PLA-based materials for durable applications, either through... ment of base resin properties, compounding with performan... or blending with other plastics. More moderate gains are fo... starch-based resins and polyesters, in part due to the limited... of biodegradable bags in Japan.

The most rapid growth among bioplastic products in Ja... ever, will be for biobased polyethylene and newly available...

184 Copyright 2013...

CHART VIII-1

WORLD BIOPLASTICS MARKET SHARE BY COMPANY, 2012
($1.5 billion)

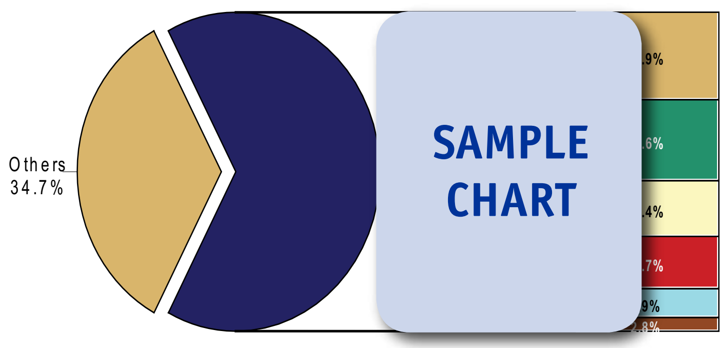

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TABLE VI-5

JAPAN: BIOPLASTICS DEMAND BY MARKET
(thousand metric tons)

Item	2002	2007	2012	2017	2022
Population (million persons)	[illegible]				[illegible]
kg bioplastic/capita					[illegible]
Bioplastics Demand					[illegible]
Packaging:					[illegible]
Containers					[illegible]
Packaging Film					[illegible]
Loose-Fill & Other Packaging					[illegible]
Nonpackaging:					[illegible]
Bags					[illegible]
Foodservice Disposables					[illegible]
Automotive & Electronics					[illegible]
Other Nonpackaging					[illegible]
% Japan					[illegible]
Asia/Pacific Bioplastics Demand	10.5	47.4	92.0	220.0	310.0

SAMPLE TABLE

COMPANY PROFILES

Synbra Holding BV
Zeedijk 25
4871 NM Etten-Leur
Netherlands
31-1-6837-33
http://www.sy

Annual Sales:
Employment:

Key Products:

SAMPLE PROFILE

Synbra Holding is a leading European supplier of expanded polystyrene packaging, construction insulation and plastics. The Company operates via several subsidiaries.

The Company competes in the world bioplastics industry through Synbra Technology BV (Netherlands), a subsidiary that produces expandable polystyrene (EPS) and related compounds. The company also performs EPS recycling. Furthermore, Synbra Technology manufactures expanded polylactic acid (PLA) foam, a bioplastic product based on a PLA polymerization technology developed by and licensed from the Sulzer Chemtech AG subsidiary (Switzerland) of Sulzer Limited (Switzerland) and the Corbion Purac subsidiary (Netherlands) of Corbion nv (Netherlands). Major products made by Synbra Technology using the licensed technology include SYNTERRA PLA, which is produced from lactides obtained from Corbion Purac. SYNTERRA PLA is utilized in the company's manufacture of BIOFOAM plastics, which are designed as environmentally friendly alternatives to EPS in various packaging applications. Synbra maintains a facility in Etten-Leur, Netherlands that makes SYNTERRA PLA and BIOFOAM bioplastics.

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"Like the range of bioplastic products in Japan, markets for bioplastics in the country show a substantial degree of diversity. Packaging containers and bags were the leading outlets for bioplastics in Japan, but packaging film, foodservice disposables, and automotive and electronics applications also composed a significant portion of demand. While nonpackaging outlets accounted for the vast majority of the market in 2012, more rapid gains going forward are forecast for the packaging segment in Japan."
--Section VI, pg. 186

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Other Studies

Plastic Foams

US demand for plastic foams is forecast to rise 4.1 percent annually to 8.6 billion pounds in 2017, valued at $24.7 billion. Packaging will remain the leading outlet while construction and household products grow the fastest. Polyurethane will remain the most commonly used plastic foam and will enjoy the best growth opportunities, led by flexible polyurethane foam. This study analyzes the 7.1 billion pound US plastic foam industry, with forecasts for 2017 and 2022 by market and resin. The study also evaluates company market share and profiles industry players.

#3114 .... December 2013 .... $5100

Fiber-Reinforced Plastic Composites

US demand for fiber-reinforced plastic (FRP) composites will climb 4.7 percent annually to 4.3 billion pounds in 2017, valued at $22.9 billion. Motor vehicles will remain the largest market while construction will grow the fastest as it rebounds from the 2007-2012 period. Both thermoset and thermoplastic FRP composites will grow in line with the average. This study analyzes the 3.5 billion pound US FRP composites industry, with forecasts for 2017 and 2022 by fiber, product and market. The study also evaluates company market share and profiles industry players.

#3092 .... October 2013 .... $5100

Natural Polymers

US demand for natural polymers is forecast to expand 6.9 percent annually to $4.6 billion in 2016. Cellulose ethers, led by methyl cellulose, will remain the largest product segment. Exudate and vegetable gums will enjoy the most rapid gains in demand. The oilfield market will grow the fastest, driven by rising demand for guar gum in hydraulic fracturing fluids. This study analyzes the $3.3 billion US natural polymer industry, with forecasts for 2016 and 2021 by market and product. The study also evaluates company market share and profiles industry players.

#2963 .... November 2012 .... $4900

Recycled Plastics

US demand for post-consumer recycled plastic will rise 6.5 percent yearly to 3.5 billion pounds in 2016. Bottles will remain the leading source while other types gain market share. LDPE/LLDPE will be the fastest growing recycled resins. Packaging will continue as the top market, driven by food and beverage bottles and thermoformed containers. This study analyzes the 2.5 billion pound US recycled plastics industry, with forecasts for 2016 and 2021 by source, resin, and market. The study also evaluates company market share and profiles industry players.

#2961 .... November 2012 .... $5100

Bioplastics

US demand for biodegradable and non-biodegradable bio-based resins is forecast to climb at a 20 percent annual pace through 2016 to 550 million pounds. Polylactic acid will remain the largest bioplastic segment, while bio-based polyethylene and degradable polyesters will grow the fastest at double-digit rates. Nonpackaging markets will outpace packaging uses. This study analyzes the 220 million pound US bioplastic industry, with forecasts for 2016 and 2021 by resin, product and market. The study also evaluates company market share and profiles industry players.

#2908 .... June 2012 .... $4900

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