

Market Study: Bioplastics



World Report (8th edition)

This brochure provides further information on the study “Bioplastics - World (8th edition)”

The Market Study in Brief

How much biobased content do bioplastics really contain? More and more, this is becoming a mathematical question: Biomass-based polymers are increasingly being added to conventional petroleum or natural gas plastics. Legislators and certification bodies decide at which organic content and with which properties these “bioattributed” or “mass-balanced” materials may be sold as bioplastics. In any case, demand for alternative plastics is high, and “bio” versions are now available for virtually all grades and applications. Ceresana expects revenues to increase to around USD 11.4 billion by 2032.

Compostable Plastics for the Circular Economy

So far, there is no generally accepted definition and no uniform labeling for bioplastics. The European Union Commission published conditions for bioplastics in November 2022. They should have “a positive impact on the environment, rather than exacerbating plastic pollution, climate change and biodiversity loss.”

Ceresana’s study primarily examines thermoplastics made from renewable raw materials that are biodegradable, i.e. can be decomposed by microorganisms in nature or at least composted in industrial plants. PHA from sugar and TPS from starch, for example, are biobased and biodegradable. However, there are also plastics made from biogenic raw materials that are not compostable, for example PEF made from fructose or bio-polyethylene based on sugar cane. The market study also covers petrochemical biodegradable plastics.

Sustainable Packaging Made from Polylactic Acid and Starch

The most important sales market for biopolymers is the packaging industry, which cur-

rently processes almost 60% of all bioplastics. Ceresana expects the highest growth over the next few years in the bags, sacks and pouches division. Biodegradable plastics, particularly polylactic acids (PLA) and starch polymers, currently account for 68% of the total bioplastics market. For this product group, Ceresana forecasts further growth of 11.7% per year up until 2032. Biobased but non-biodegradable plastics, such as bio-PE, PET or PA, are expected to increase at lower rates of 7.8% per year.

The Current Ceresana Market Study:

Chapter 1 analyzes the global biopolymer market – including forecasts up to 2032: For each region, the development of **demand**, **revenues** and **production** is indicated. In addition, the **applications** are examined individually:

Rigid packaging, Flexible packaging (bags, sacks & pouches), Other flexible packaging, Consumer goods, Automotive & electronics, and Others.

For the regions of Europe, North America, Asia-Pacific and “Rest of the World”, the **production** is divided into **product groups**: PLA, Starch, Other biodegradable plastics, and Non-biodegradable plastics.

The **demand** per region is broken down into different **types of plastics**:

PLA, Starch, PHA, PBAT, and Other non-biodegradable plastics.

Chapter 2 examines the 11 most important **sales countries**. In each case, the following are presented: demand and revenues, demand split by application and type of product: PLA, Starch, other biodegradable plastics, and non-biodegradable biobased plastics.

Chapter 3 provides 120 **company profiles** of the most important manufacturers, e.g. BASF, Braskem, FENC, NatureWorks, Novamont, Rodenburg, Teijin, Total Corbion, and Vegeplast.

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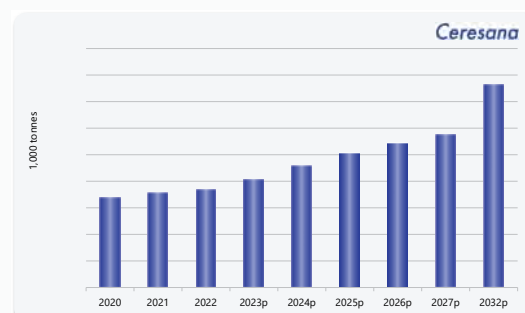
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2.1.1 France

In 2022, demand for bioplastics in France reached X tonnes. By the end of our forecasting period, market volume is expected to increase to approximately X tonnes. Revenues generated with bioplastics amounted to approximately EUR X million in 2022. Over the next ten years, we expect growth of around X% p.a. in this respect.



Graph: Demand in France from 2020 to 2032

Revenues	2020	2021	2022	2023p	2024p	2025p	2026p	2027p	2032p	2022-2032
million USD	X	X	X	X	X	X	X	X	X	X% p.a.
million EUR	X	X	X	X	X	X	X	X	X	X% p.a.

Table: Revenues in France from 2020 to 2032 in million USD and million EUR

in 1,000 tonnes	2020	2021	2022	2023p	2024p	2025p	2026p	2027p	2032p	2022-2032
Rigid packaging	X	X	X	X	X	X	X	X	X	X% p.a.
Flexible packaging - bags	X	X	X	X	X	X	X	X	X	X% p.a.
Flexible packaging - other	X	X	X	X	X	X	X	X	X	X% p.a.
Consumer goods	X	X	X	X	X	X	X	X	X	X% p.a.
Automotive and electronics	X	X	X	X	X	X	X	X	X	X% p.a.
Other applications	X	X	X	X	X	X	X	X	X	X% p.a.
Total	X	X	X	X	X	X	X	X	X	X% p.a.

Table: Demand in France from 2020 to 2032 – split by application

in 1,000 tonnes	2020	2021	2022	2023p	2024p	2025p	2026p	2027p	2032p	2022-2032
PLA	X	X	X	X	X	X	X	X	X	X% p.a.
Starch	X	X	X	X	X	X	X	X	X	X% p.a.
Other biodegradable	X	X	X	X	X	X	X	X	X	X% p.a.
Total biodegradable	X	X	X	X	X	X	X	X	X	X% p.a.
Total non-degradable	X	X	X	X	X	X	X	X	X	X% p.a.
Total	X	X	X	X	X	X	X	X	X	X% p.a.

Table: Demand in France from 2020 to 2032 – split by product

In 2022, the area of "flexible packaging – bags" constituted the largest sub-market. From 2022 to 2032, demand in the "automotive and electronics" application area is expected to increase the most in percentages.

Market Study: “Bioplastics - World (8th edition)”

11 Countries, 120 Producers, 350 Pages, 52 Graphs, 83 Tables, 05/2023

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(For each country: data on revenues as well as demand split by application and split by product)

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Finland (2)
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Spain (3)
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Saudi Arabia (1)

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General Information about the Company

Divisions, Product Range The product portfolio includes:

- Mater-Bi: biodegradable and compostable bioplastics
- Matrol-Bi: biolubricants and greases
- Celus-Bi: bio-based ingredients for the cosmetics sector

Production Sites The company's production sites are located in:

- Terni, Italy
- Adria, Italy
- Patrica, Italy
- Porto Torres, Italy

Profile Summary Novamont is an Italian industrial company founded in 1989. It is engaged in the sector of bioplastics and involved in the development of bioproducts such as biolubricants, biochemicals and cosmetic ingredients from renewable sources.

Novamont has a turnover of EUR 414 million (2021) and employs 632 people. It has a portfolio of around 1,400 patents and patent applications. The Group has its headquarters in Novara, four production sites and four research centers. It has a representative office in Brussels, sales offices in Germany, France, Spain, and the USA, and operates through own distributors in more than 40 countries.

In 2021 Novamont acquired BioBag International AS, a company in the development, production and marketing of certified biodegradable and compostable applications. The company is certified according to ISO 9001, ISO 14001 and ISO 45001.

Specific Information about Bioplastics

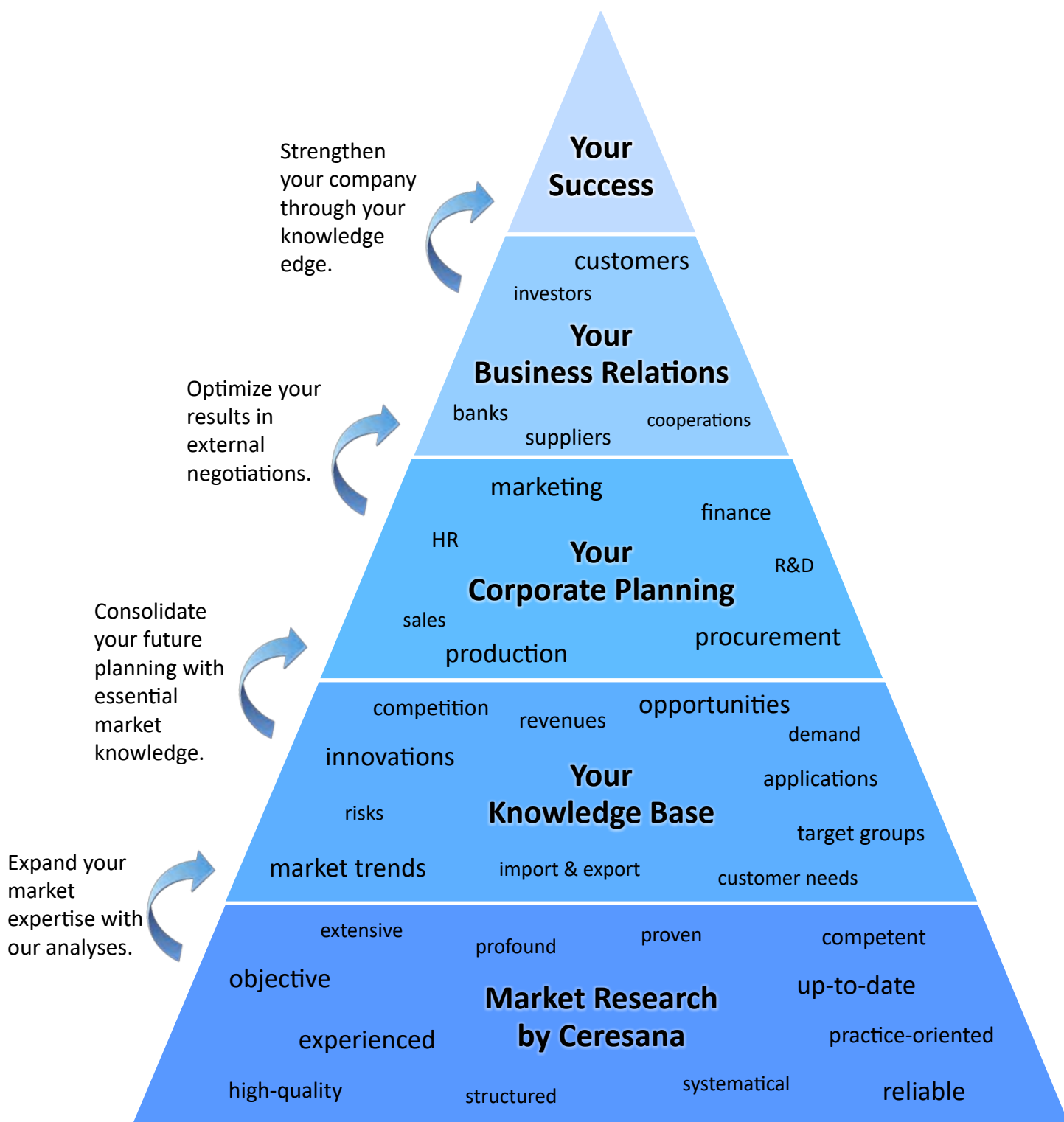
MATER-BI is the family of bioplastics from renewable resources developed by Novamont research. It is biodegradable and compostable and is based on starches, cellulose and vegetable oils. The uses include common processing technologies, like blowing, casting, extrusion, thermoforming and injection molding. Examples for suitable applications are bags for organic waste, packaging or mulching film.

*Note: The profiles are assigned to the country in which the company or holding is headquartered. Profiles also include JVs and subsidiaries.

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2. Gain a holistic insight into your industry – that way, you can plan and implement your strategies even more effectively.
3. Discover which markets hold the biggest opportunities for your company and thus gain a decisive competitive advantage.
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8. Find out which global and regional developments influence supply and demand.

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- Producers, processors, traders, suppliers, as well as engineering companies
- Associations, institutes, consultants, banks, investors, founders, freelancers, entrepreneurs, and service providers
- Executive boards, finance, business development, strategic planning, market research, marketing, sales, distribution, R&D, and procurement



**Thank you
for your trust!**



**If you have any questions, please
do not hesitate to contact us.**



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