

# The Global Market for Biobased and Sustainable Plastics 2020-2030

<https://marketpublishers.com/r/GECAB1DD3BF1EN.html>

Date: January 2021

Pages: 265

Price: US\$ 1,700.00 (Single User License)

ID: GECAB1DD3BF1EN

## Abstracts

The biobased and sustainable plastics sector aims to create green products from biological based inputs, residue and wastes. This will play an important role in global efforts to achieve a green circular economy. Compared to the conventional plastics sector the industry is small, but undergoing rapid developments due to new technological innovations and increased consumer and industry demand. A market boom is expected over the next few years, with production capacities to increase by >30% by 2025.

Report contents include:

Analysis of non-biodegradable bio-based plastics and biodegradable plastics.

Global production capacities for biobased and sustainable plastics, market demand and trends 2019-2030.

Analysis of biobased polymers 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 biodegradable polymers including Polyhydroxyalkanoates (PHA), Polysaccharides, Microfibrillated cellulose (MFC), Cellulose nanocrystals, Cellulose nanofibers, Protein-based bioplastics, Algal and fungal.

Market segmentation analysis for biobased and sustainable plastics including

packaging, consumer products, automotive, building & construction, textiles, electronics and agriculture markets.

More than 217 companies profiled including biobased and sustainable plastics products and production capacities. Companies profiled include major producers such as NatureWorks, Total Corbion, Danimer Scientific, Novamont, Mitsubishi Chemicals, Indorama, Braskem, Avantium, Borealis, Cathay, Dupont, BASF, Arkema, DuPont, BASF and many more. Profiles include biobased and sustainable plastics products and production capacities.

Profiles of start-up producers and product developers including AMSilk GmbH, Notpla, CARAPAC Company, Loliware, Bolt Threads, Ecovative, CH-Bioforce Oy, Xampla, Spero Renewables, Checkerspot, Kraig Biocraft Laboratories, Spiber and many more.

## Contents

### **1 EXECUTIVE SUMMARY**

- 1.1 Market trends
- 1.2 Global production to 2030
- 1.3 Main producers and global production capacities
  - 1.3.1 Producers
  - 1.3.2 By biobased and sustainable plastic type
  - 1.3.3 By region
- 1.4 Global demand for biobased and sustainable plastics 2020, by market
- 1.5 Impact of COVID-19 pandemic on the bioplastics market and future demand
- 1.6 Challenges for the biobased and sustainable plastics market

### **2 RESEARCH METHODOLOGY**

### **3 THE GLOBAL PLASTICS MARKET**

- 3.1 Global production
- 3.2 The importance of plastic
- 3.3 Issues with plastics use

### **4 BIO-BASED AND SUSTAINABLE PLASTICS**

- 4.1 Drop-in bio-based plastics
- 4.2 Novel bio-based plastics

### **5 BIODEGRADABLE AND COMPOSTABLE PLASTICS**

- 5.1 Biodegradability
- 5.2 Compostability

### **6 ADVANTAGES AND DISADVANTAGES COMPARED TO CONVENTIONAL PLASTICS**

### **7 TYPES OF BIOBASED AND/OR BIODEGRADABLE PLASTICS**

### **8 MARKET LEADERS BY BIOBASED AND/OR BIODEGRADABLE PLASTIC TYPES**

## **9 SYNTHETIC BIO-BASED POLYMERS**

### 9.1 Polylactic acid (Bio-PLA)

#### 9.1.1 Market analysis

#### 9.1.2 Producers

### 9.2 Polyethylene terephthalate (Bio-PET)

#### 9.2.1 Market analysis

#### 9.2.2 Producers

### 9.3 Polytrimethylene terephthalate (Bio-PTT)

#### 9.3.1 Market analysis

#### 9.3.2 Producers

### 9.4 Polyethylene furanoate (Bio-PEF)

#### 9.4.1 Market analysis

#### 9.4.2 Comparative properties to PET

#### 9.4.3 Producers

### 9.5 Polyamides (Bio-PA)

#### 9.5.1 Market analysis

#### 9.5.2 Producers

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

#### 9.6.1 Market analysis

#### 9.6.2 Producers

### 9.7 Polybutylene succinate (PBS) and copolymers

#### 9.7.1 Market analysis

#### 9.7.2 Producers

### 9.8 Polyethylene (Bio-PE)

#### 9.8.1 Market analysis

#### 9.8.2 Producers

### 9.9 Polypropylene (Bio-PP)

#### 9.9.1 Market analysis

#### 9.9.2 Producers

## **10 NATURAL BIO-BASED POLYMERS**

### 10.1 Polyhydroxyalkanoates (PHA)

#### 10.1.1 Market analysis

#### 10.1.2 Commercially available PHAs

#### 10.1.3 Producers

### 10.2 Polysaccharides

#### 10.2.1 Microfibrillated cellulose (MFC)

- 10.2.1.1 Market analysis
- 10.2.1.2 Producers
- 10.2.2 Cellulose nanocrystals
  - 10.2.2.1 Market analysis
  - 10.2.2.2 Producers
- 10.2.3 Cellulose nanofibers
  - 10.2.3.1 Market analysis
  - 10.2.3.2 Producers
- 10.3 Protein-based bioplastics
  - 10.3.1 Types, applications and producers
- 10.4 Algal and fungal
  - 10.4.1 Algal
    - 10.4.1.1 Advantages
    - 10.4.1.2 Production
    - 10.4.1.3 Commercialization
  - 10.4.2 Mycelium
    - 10.4.2.1 Properties
    - 10.4.2.2 Applications
    - 10.4.2.3 Commercialization
- 10.5 Chitosan

## **11 PRODUCTION OF BIOBASED AND SUSTAINABLE PLASTICS BY REGION**

- 11.1 North America
- 11.2 Europe
- 11.3 Asia-Pacific
  - 11.3.1 China
  - 11.3.2 Japan
  - 11.3.3 Thailand
  - 11.3.4 Indonesia
- 11.4 Latin America

## **12 MARKET SEGMENTATION OF BIOBASED AND SUSTAINABLE PLASTICS**

- 12.1 Packaging
- 12.2 Consumer products
- 12.3 Automotive
- 12.4 Building & construction
- 12.5 Textiles

12.6 Electronics

12.7 Agriculture and horticulture

**13 COMPANY PROFILES 91 (217 COMPANY PROFILES)**

**14 REFERENCES**

## Tables

### TABLES

Table 1. Market drivers and trends in biobased and sustainable plastics.

Table 2. Global production capacities of biobased and sustainable plastics 2018-2030, in 1,000 tons.

Table 3. Global production capacities, by producers.

Table 4. Global production capacities of biobased and sustainable plastics 2019-2030, by type, in 1,000 tons.

Table 5. Global production capacities of biobased and sustainable plastics 2019-2025, by region, tons.

Table 6. Issues related to the use of plastics.

Table 7. Type of biodegradation.

Table 8. Advantages and disadvantages of biobased plastics compared to conventional plastics.

Table 9. Types of Bio-based and/or Biodegradable Plastics, applications.

Table 10. Market leader by Bio-based and/or Biodegradable Plastic types.

Table 11. Polylactic acid (PLA) market analysis.

Table 12. Lactic acid producers and production capacities.

Table 13. PLA producers and production capacities.

Table 14. Bio-based Polyethylene terephthalate (Bio-PET) market analysis.

Table 15. Bio-based Polyethylene terephthalate (PET) producers.

Table 16. Polytrimethylene terephthalate (PTT) market analysis.

Table 17. Production capacities of Polytrimethylene terephthalate (PTT), by leading producers.

Table 18. Polyethylene furanoate (PEF) market analysis.

Table 19. PEF vs. PET.

Table 20. FDCA and PEF producers.

Table 21. Bio-based polyamides (Bio-PA) market analysis.

Table 22. Leading Bio-PA producers production capacities.

Table 23. Poly(butylene adipate-co-terephthalate) (PBAT) market analysis.

Table 24. Leading PBAT producers, production capacities and brands.

Table 25. Bio-PBS market analysis.

Table 26. Leading PBS producers and production capacities.

Table 27. Bio-based Polyethylene (Bio-PE) market analysis.

Table 28. Leading Bio-PE producers.

Table 29. Bio-PP market analysis.

Table 30. Leading Bio-PP producers and capacities.

- Table 31. Polyhydroxyalkanoates (PHA) market analysis.
- Table 32. Commercially available PHAs.
- Table 33. Polyhydroxyalkanoates (PHA) producers.
- Table 34. Microfibrillated cellulose (MFC) market analysis.
- Table 35. Leading MFC producers and capacities.
- Table 36. Cellulose nanocrystals analysis.
- Table 37: Cellulose nanocrystal production capacities and production process, by producer.
- Table 38. Cellulose nanofibers market analysis.
- Table 39. CNF production capacities and production process, by producer.
- Table 40. Types of protein based-bioplastics, applications and companies.
- Table 41. Types of algal and fungal based-bioplastics, applications and companies.
- Table 42. Companies developing algal-based bioplastics.
- Table 43. Overview of mycelium fibers-description, properties, drawbacks and applications.
- Table 42. Companies developing mycelium-based bioplastics.
- Table 44. Overview of chitosan-description, properties, drawbacks and applications.
- Table 42. Global production capacities of biobased and sustainable plastics in 2019-2025, by region, tons.
- Table 43. Biobased and sustainable plastics producers in North America.
- Table 44. Biobased and sustainable plastics producers in Europe.
- Table 45. Biobased and sustainable plastics producers in Asia-Pacific.
- Table 46. Biobased and sustainable plastics producers in Latin America.
- Table 50. Granbio Nanocellulose Processes.
- Table 51. Lactips plastic pellets.
- Table 52. Oji Holdings CNF products.



## Figures

### FIGURES

Figure 1. Total global production capacities for biobased and sustainable plastics, all types, 000 tons.

Figure 2. Global production capacities of bioplastics 2018-2030, in 1,000 tons by biodegradable/non-biodegradable types.

Figure 3. Global production capacities of biobased and sustainable plastics in 2019-2030, by type, in 1,000 tons.

Figure 4. Global production capacities of bioplastics in 2019-2025, by type.

Figure 5. Global production capacities of bioplastics in 2030, by type.

Figure 6. Global production capacities of biobased and sustainable plastics 2019.

Figure 7. Global production capacities of biobased and sustainable plastics 2025.

Figure 8. Current and future applications of biobased and sustainable plastics.

Figure 9. Global demand for biobased and sustainable plastics by end user market, 2020.

Figure 10. Global production capacities for biobased and sustainable plastics by end user market 2019-2030, tons.

Figure 11. Challenges for the biobased and sustainable plastics market.

Figure 12. Global plastics production 1950-2018, millions of tons.

Figure 13. Coca-Cola PlantBottle®.

Figure 14. Interrelationship between conventional, bio-based and biodegradable plastics.

Figure 15. Production capacities of Polyethylene furanoate (PEF) to 2025.

Figure 16. Typical structure of mycelium-based foam.

Figure 17. Commercial mycelium composite construction materials.

Figure 16. Global production capacities of biobased and sustainable plastics 2019.

Figure 17. Global production capacities of biobased and sustainable plastics 2025.

Figure 18. Global production capacities for biobased and sustainable plastics by end user market 2019, 1,000 tons.

Figure 19. Global production capacities for biobased and sustainable plastics by end user market 2020, 1,000 tons.

Figure 20. Global production capacities for biobased and sustainable plastics by end user market 2030

Figure 21. PHA bioplastics products.

Figure 22. Global production capacities for biobased and sustainable plastics in packaging 2019-2030, in 1,000 tons.

Figure 23. Global production capacities for biobased and sustainable plastics in

consumer products 2019-2030, in 1,000 tons.

Figure 24. Global production capacities for biobased and sustainable plastics in automotive 2019-2030, in 1,000 tons.

Figure 25. Global production capacities for biobased and sustainable plastics in building and construction 2019-2030, in 1,000 tons.

Figure 26. Global production capacities for biobased and sustainable plastics in textiles 2019-2030, in 1,000 tons.

Figure 27. Global production capacities for biobased and sustainable plastics in electronics 2019-2030, in 1,000 tons.

Figure 28. Biodegradable mulch films.

Figure 29. Global production capacities for biobased and sustainable plastics in agriculture 2019-2030, in 1,000 tons.

Figure 32. Algiknit yarn.

Figure 33. Bio-PA rear bumper stay.

Figure 34. nanoforest-S.

Figure 35. nanoforest-PDP.

Figure 36. nanoforest-MB.

Figure 37. CuanSave film.

Figure 38. ELLEX products.

Figure 39. CNF-reinforced PP compounds.

Figure 40. Kirekira! toilet wipes.

Figure 41. Mushroom leather.

Figure 42. Cellulose Nanofiber (CNF) composite with polyethylene (PE).

Figure 43. PHA production process.

Figure 44. Cutlery samples (spoon, knife, fork) made of nano cellulose and biodegradable plastic composite materials.

Figure 45. Non-aqueous CNF dispersion 'Senaf' (Photo shows 5% of plasticizer).

Figure 46. CNF gel.

Figure 47. Block nanocellulose material.

Figure 48. CNF products developed by Hokuetsu.

Figure 49. IPA synthesis method.

Figure 50. Nippon Paper Industries' adult diapers.

Figure 51. Compostable water pod.

Figure 52. CNF clear sheets.

Figure 53. Oji Holdings CNF polycarbonate product.

Figure 54. Manufacturing process for STARCEL.

Figure 55. Lyocell process.

Figure 56. Spider silk production.

Figure 57. Sulapac cosmetics containers.

Figure 58. Sulzer equipment for PLA polymerization processing.

Figure 59. Teijin bioplastic film for door handles.

Figure 60. Corbion FDCA production process.

## I would like to order

Product name: The Global Market for Biobased and Sustainable Plastics 2020-2030

Product link: <https://marketpublishers.com/r/GECAB1DD3BF1EN.html>

Price: US\$ 1,700.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/GECAB1DD3BF1EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970