

Industrial Mycology (Mycelium) Packaging Market Forecasts to 2034 – Global Analysis By Product (Molded Protective Packaging, Cushioning Packaging Inserts, Thermal Insulation Packaging, Mycelium Packaging Panels, Custom Molded Packaging Forms, Mycelium Composite Packaging Blocks, Other Products), By Substrate Source, By Manufacturing Process, By End User, By Distribution Channel and By Geography

<https://marketpublishers.com/r/ICCD7E311338EN.html>

Date: March 2026

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: ICCD7E311338EN

Abstracts

According to Statistics MRC, the Global Industrial Mycology (Mycelium) Packaging Market is accounted for \$102.4 million in 2026 and is expected to reach \$217.0 million by 2034 growing at a CAGR of 9.8% during the forecast period. Industrial Mycology (Mycelium) Packaging refers to sustainable packaging materials produced using mycelium, the root-like structure of fungi. Mycelium grows around agricultural waste such as husks or straw, forming lightweight, biodegradable materials that can replace conventional plastics and foam packaging. These materials are compostable, renewable, and require relatively low energy to produce. Industrial mycology technologies enable scalable production of packaging products such as protective cushioning and containers. This approach supports circular economy principles by transforming organic waste into eco-friendly packaging solutions that naturally decompose after use.

Market Dynamics:

Driver:

Increasing restrictions on plastic packaging

Governments and regulatory authorities are implementing stringent policies to reduce plastic waste and encourage sustainable alternatives. Mycelium-based packaging has emerged as an environmentally friendly solution due to its biodegradable and compostable properties. It is produced using agricultural waste and fungal growth, supporting circular economy principles. Companies are increasingly adopting mycelium packaging to meet sustainability targets and regulatory compliance requirements. Consequently, the growing regulatory pressure on plastic usage is expected to substantially accelerate the adoption of mycelium-based packaging solutions.

Restraint:

Limited production scalability challenges

The manufacturing process involves biological growth cycles that require controlled environmental conditions and longer production times. Compared to conventional plastic manufacturing, scaling mycelium production for mass-market demand can be technologically complex. Additionally, the need for specialized facilities and process optimization can increase operational costs. Supply chain limitations for large-scale commercialization may also pose challenges. As a result, scalability constraints may temporarily limit the widespread industrial adoption of mycelium packaging solutions.

Opportunity:

Innovations in bio-based packaging materials

Ongoing research and development initiatives are focused on improving the strength, durability, and production efficiency of mycelium-based materials. Innovations in biotechnology and material engineering are enabling the development of more scalable and cost-effective production methods. Companies are also exploring new product formats and expanding application areas across multiple industries. Such technological progress is expected to enhance the performance and commercial viability of mycelium packaging. Therefore, innovation in sustainable biomaterials is likely to play a critical role in shaping the future expansion of this market.

Threat:

Competition from other biodegradable materials

Options such as molded fiber, paper-based packaging, and plant-based bioplastics are already widely adopted across several industries. These materials often benefit from established manufacturing infrastructure and broader market familiarity. In some cases, they may also offer lower production costs and faster scalability. As a result, mycelium-based packaging must demonstrate clear functional and environmental advantages to compete effectively. Consequently, increasing competition from other sustainable packaging materials may influence the pace of market adoption.

Covid-19 Impact:

The COVID-19 pandemic had a mixed impact on the Industrial Mycology Packaging Market. Initially, supply chain disruptions and manufacturing slowdowns temporarily affected production activities and research initiatives. However, the pandemic significantly accelerated the growth of e-commerce and global packaging demand. At the same time, consumer awareness regarding environmental sustainability increased considerably. Businesses began prioritizing environmentally responsible packaging alternatives to align with changing consumer expectations. Therefore, the post-pandemic period has witnessed renewed interest and investment in biodegradable packaging technologies.

The molded protective packaging segment is expected to be the largest during the forecast period

The molded protective packaging segment is expected to account for the largest market share during the forecast period as it is widely used for cushioning and safeguarding products during transportation. Mycelium-based molded packaging provides excellent shock absorption while remaining lightweight and biodegradable. It is increasingly being adopted as a sustainable substitute for expanded polystyrene foam packaging. Industries such as electronics, furniture, and consumer goods are utilizing molded mycelium packaging to reduce environmental impact. Additionally, its customizable structure allows manufacturers to design packaging tailored to specific product shapes. Consequently, the strong functional benefits of molded mycelium packaging are expected to support its dominant position in the market.

The food & beverage industry segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the food & beverage industry segment is predicted to witness the highest growth rate due to the increasing demand for sustainable packaging solutions. Food and beverage manufacturers are actively seeking biodegradable alternatives to conventional plastic packaging. Mycelium-based packaging aligns well with industry sustainability goals and environmental regulations. Additionally, consumer preference for eco-friendly packaging is strongly influencing purchasing decisions. Many companies are adopting sustainable packaging to strengthen brand reputation and meet regulatory requirements.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share owing to the region benefits from strong environmental awareness and the presence of innovative biotechnology and sustainable packaging companies. Regulatory initiatives aimed at reducing plastic waste are further encouraging the adoption of biodegradable packaging materials. Additionally, major brands and retailers in the region are increasingly integrating sustainable packaging into their operations. The presence of advanced research institutions and strong investment in green technologies also supports market expansion. Consequently, North America is expected to maintain its leading position in the global market.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by rapid industrialization, urbanization, and expanding packaging demand are key factors driving regional growth. Governments across several countries are introducing policies to reduce plastic waste and promote sustainable materials. The growing food & beverage industry and the expansion of e-commerce are further increasing the demand for innovative packaging solutions. Rising environmental awareness among businesses and consumers is also supporting market adoption. Therefore, the Asia Pacific region is expected to emerge as the fastest-growing market for mycelium-based packaging technologies.

Key players in the market

Some of the key players in Industrial Mycology (Mycelium) Packaging Market include Ecovative Design LLC, Grown.bio, Magical Mushroom Company, Paradigm Packaging, Stora Enso Oyj, DS Smith Plc, Mondi Group, Smurfit Kappa Group, BASF SE, Dell Technologies, IKEA Group, Steelcase Inc., Biomyc BV, Fungar Ltd., Mycotech Lab,

Green Island Packaging and Sealed Air Corporation.

Key Developments:

In February 2025, Magical Mushroom Company partnered with Paris-based shoppable media platform Semaine to create bespoke Mushroom® Packaging for a special 'Mother Mycelium' T-shirt gift set celebrating mycologist Paul Stamets . The collaboration used a patented biofabrication process to grow the home-compostable packaging in just seven days at their Esher facility.

In December 2024, Grown.bio announced a collaboration with Br?tje, a German heating technology company, to replace traditional Styrofoam with mycelium-based packaging for protecting flat radiators during transit . This partnership highlights the material's durability in industrial applications where other sustainable solutions.

Products Covered:

Molded Protective Packaging

Cushioning Packaging Inserts

Thermal Insulation Packaging

Mycelium Packaging Panels

Custom Molded Packaging Forms

Mycelium Composite Packaging Blocks

Other Products

Substrate Sources Covered:

Agricultural Residues

Corn-Based Substrates

Rice Husk Feedstock

Sugarcane Bagasse

Wood Fiber Substrates

Other Substrate Sources

Manufacturing Processes Covered:

Growth-Based Molding

Controlled Mycelium Cultivation

Biocomposite Compression Forming

Automated Mycelium Growth Systems

Other Manufacturing Processes

Distribution Channels Covered:

Direct Manufacturer Supply

Packaging Distributors

E-Commerce Packaging Suppliers

Sustainable Packaging Vendors

OEM Supply Agreements

Logistics Packaging Providers

Other Distribution Channels

End Users Covered:

Electronics Industry

Furniture Manufacturing

Food & Beverage Industry

Cosmetics & Personal Care

Other End Users

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations

- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL INDUSTRIAL MYCOLOGY (MYCELIUM) PACKAGING MARKET, BY PRODUCT

- 5.1 Molded Protective Packaging
- 5.2 Cushioning Packaging Inserts
- 5.3 Thermal Insulation Packaging
- 5.4 Mycelium Packaging Panels
- 5.5 Custom Molded Packaging Forms
- 5.6 Mycelium Composite Packaging Blocks
- 5.7 Other Products

6 GLOBAL INDUSTRIAL MYCOLOGY (MYCELIUM) PACKAGING MARKET, BY SUBSTRATE SOURCE

- 6.1 Agricultural Residues
- 6.2 Corn-Based Substrates
- 6.3 Rice Husk Feedstock
- 6.4 Sugarcane Bagasse
- 6.5 Wood Fiber Substrates
- 6.6 Other Substrate Sources

7 GLOBAL INDUSTRIAL MYCOLOGY (MYCELIUM) PACKAGING MARKET, BY MANUFACTURING PROCESS

- 7.1 Growth-Based Molding
- 7.2 Controlled Mycelium Cultivation
- 7.3 Biocomposite Compression Forming
- 7.4 Automated Mycelium Growth Systems
- 7.5 Other Manufacturing Processes

8 GLOBAL INDUSTRIAL MYCOLOGY (MYCELIUM) PACKAGING MARKET, BY END USER

- 8.1 Electronics Industry
- 8.2 Furniture Manufacturing

- 8.3 Food & Beverage Industry
- 8.4 Cosmetics & Personal Care
- 8.5 Other End Users

9 GLOBAL INDUSTRIAL MYCOLOGY (MYCELIUM) PACKAGING MARKET, BY DISTRIBUTION CHANNEL

- 9.1 Direct Manufacturer Supply
- 9.2 Packaging Distributors
- 9.3 E-Commerce Packaging Suppliers
- 9.4 Sustainable Packaging Vendors
- 9.5 OEM Supply Agreements
- 9.6 Logistics Packaging Providers
- 9.7 Other Distribution Channels

10 GLOBAL INDUSTRIAL MYCOLOGY (MYCELIUM) PACKAGING MARKET, BY GEOGRAPHY

- 10.1 North America
 - 10.1.1 United States
 - 10.1.2 Canada
 - 10.1.3 Mexico
- 10.2 Europe
 - 10.2.1 United Kingdom
 - 10.2.2 Germany
 - 10.2.3 France
 - 10.2.4 Italy
 - 10.2.5 Spain
 - 10.2.6 Netherlands
 - 10.2.7 Belgium
 - 10.2.8 Sweden
 - 10.2.9 Switzerland
 - 10.2.10 Poland
 - 10.2.11 Rest of Europe
- 10.3 Asia Pacific
 - 10.3.1 China
 - 10.3.2 Japan
 - 10.3.3 India
 - 10.3.4 South Korea

- 10.3.5 Australia
- 10.3.6 Indonesia
- 10.3.7 Thailand
- 10.3.8 Malaysia
- 10.3.9 Singapore
- 10.3.10 Vietnam
- 10.3.11 Rest of Asia Pacific
- 10.4 South America
 - 10.4.1 Brazil
 - 10.4.2 Argentina
 - 10.4.3 Colombia
 - 10.4.4 Chile
 - 10.4.5 Peru
 - 10.4.6 Rest of South America
- 10.5 Rest of the World (RoW)
 - 10.5.1 Middle East
 - 10.5.1.1 Saudi Arabia
 - 10.5.1.2 United Arab Emirates
 - 10.5.1.3 Qatar
 - 10.5.1.4 Israel
 - 10.5.1.5 Rest of Middle East
 - 10.5.2 Africa
 - 10.5.2.1 South Africa
 - 10.5.2.2 Egypt
 - 10.5.2.3 Morocco
 - 10.5.2.4 Rest of Africa

11 STRATEGIC MARKET INTELLIGENCE

- 11.1 Industry Value Network and Supply Chain Assessment
- 11.2 White-Space and Opportunity Mapping
- 11.3 Product Evolution and Market Life Cycle Analysis
- 11.4 Channel, Distributor, and Go-to-Market Assessment

12 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 12.1 Mergers and Acquisitions
- 12.2 Partnerships, Alliances, and Joint Ventures
- 12.3 New Product Launches and Certifications

12.4 Capacity Expansion and Investments

12.5 Other Strategic Initiatives

13 COMPANY PROFILES

13.1 Ecovative Design LLC

13.2 Grown.bio

13.3 Magical Mushroom Company

13.4 Paradigm Packaging

13.5 Stora Enso Oyj

13.6 DS Smith Plc

13.7 Mondi Group

13.8 Smurfit Kappa Group

13.9 BASF SE

13.10 Dell Technologies

13.11 IKEA Group

13.12 Steelcase Inc.

13.13 Biomyc BV

13.14 Fungar Ltd.

13.15 Mycotech Lab

13.16 Green Island Packaging

13.17 Sealed Air Corporation

List Of Tables

LIST OF TABLES

Table 1 Global Industrial Mycology (Mycelium) Packaging Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Industrial Mycology (Mycelium) Packaging Market, By Product (2023–2034) (\$MN)

Table 3 Global Industrial Mycology (Mycelium) Packaging Market, By Molded Protective Packaging (2023–2034) (\$MN)

Table 4 Global Industrial Mycology (Mycelium) Packaging Market, By Cushioning Packaging Inserts (2023–2034) (\$MN)

Table 5 Global Industrial Mycology (Mycelium) Packaging Market, By Thermal Insulation Packaging (2023–2034) (\$MN)

Table 6 Global Industrial Mycology (Mycelium) Packaging Market, By Mycelium Packaging Panels (2023–2034) (\$MN)

Table 7 Global Industrial Mycology (Mycelium) Packaging Market, By Custom Molded Packaging Forms (2023–2034) (\$MN)

Table 8 Global Industrial Mycology (Mycelium) Packaging Market, By Mycelium Composite Packaging Blocks (2023–2034) (\$MN)

Table 9 Global Industrial Mycology (Mycelium) Packaging Market, By Other Products (2023–2034) (\$MN)

Table 10 Global Industrial Mycology (Mycelium) Packaging Market, By Substrate Source (2023–2034) (\$MN)

Table 11 Global Industrial Mycology (Mycelium) Packaging Market, By Agricultural Residues (2023–2034) (\$MN)

Table 12 Global Industrial Mycology (Mycelium) Packaging Market, By Corn-Based Substrates (2023–2034) (\$MN)

Table 13 Global Industrial Mycology (Mycelium) Packaging Market, By Rice Husk Feedstock (2023–2034) (\$MN)

Table 14 Global Industrial Mycology (Mycelium) Packaging Market, By Sugarcane Bagasse (2023–2034) (\$MN)

Table 15 Global Industrial Mycology (Mycelium) Packaging Market, By Wood Fiber Substrates (2023–2034) (\$MN)

Table 16 Global Industrial Mycology (Mycelium) Packaging Market, By Other Substrate Sources (2023–2034) (\$MN)

Table 17 Global Industrial Mycology (Mycelium) Packaging Market, By Manufacturing Process (2023–2034) (\$MN)

Table 18 Global Industrial Mycology (Mycelium) Packaging Market, By Growth-Based

Molding (2023–2034) (\$MN)

Table 19 Global Industrial Mycology (Mycelium) Packaging Market, By Controlled Mycelium Cultivation (2023–2034) (\$MN)

Table 20 Global Industrial Mycology (Mycelium) Packaging Market, By Biocomposite Compression Forming (2023–2034) (\$MN)

Table 21 Global Industrial Mycology (Mycelium) Packaging Market, By Automated Mycelium Growth Systems (2023–2034) (\$MN)

Table 22 Global Industrial Mycology (Mycelium) Packaging Market, By Other Processes (2023–2034) (\$MN)

Table 23 Global Industrial Mycology (Mycelium) Packaging Market, By End User (2023–2034) (\$MN)

Table 24 Global Industrial Mycology (Mycelium) Packaging Market, By Electronics Industry (2023–2034) (\$MN)

Table 25 Global Industrial Mycology (Mycelium) Packaging Market, By Furniture Manufacturing (2023–2034) (\$MN)

Table 26 Global Industrial Mycology (Mycelium) Packaging Market, By Food & Beverage Industry (2023–2034) (\$MN)

Table 27 Global Industrial Mycology (Mycelium) Packaging Market, By Cosmetics & Personal Care (2023–2034) (\$MN)

Table 28 Global Industrial Mycology (Mycelium) Packaging Market, By Other End Users (2023–2034) (\$MN)

Table 29 Global Industrial Mycology (Mycelium) Packaging Market, By Distribution Channel (2023–2034) (\$MN)

Table 30 Global Industrial Mycology (Mycelium) Packaging Market, By Direct Manufacturer Supply (2023–2034) (\$MN)

Table 31 Global Industrial Mycology (Mycelium) Packaging Market, By Packaging Distributors (2023–2034) (\$MN)

Table 32 Global Industrial Mycology (Mycelium) Packaging Market, By E-Commerce Packaging Suppliers (2023–2034) (\$MN)

Table 33 Global Industrial Mycology (Mycelium) Packaging Market, By Sustainable Packaging Vendors (2023–2034) (\$MN)

Table 34 Global Industrial Mycology (Mycelium) Packaging Market, By OEM Supply Agreements (2023–2034) (\$MN)

Table 35 Global Industrial Mycology (Mycelium) Packaging Market, By Logistics Packaging Providers (2023–2034) (\$MN)

Table 36 Global Industrial Mycology (Mycelium) Packaging Market, By Other Distribution Channels (2023–2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) are also represented in the same manner as above.

I would like to order

Product name: Industrial Mycology (Mycelium) Packaging Market Forecasts to 2034 – Global Analysis By Product (Molded Protective Packaging, Cushioning Packaging Inserts, Thermal Insulation Packaging, Mycelium Packaging Panels, Custom Molded Packaging Forms, Mycelium Composite Packaging Blocks, Other Products), By Substrate Source, By Manufacturing Process, By End User, By Distribution Channel and By Geography

Product link: <https://marketpublishers.com/r/ICCD7E311338EN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

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

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/ICCD7E311338EN.html>