

Food Upcycling & Waste-to-Value Market Forecasts to 2034 - Global Analysis By Waste Source (Household Food Waste, Retail & Foodservice Waste, Agricultural & Farm By-Products, Food Processing By-Products and Expired Packaged Foods), Conversion Approach, Service Model, End Product and By Geography

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Abstracts

According to Statistics MRC, the Global Food Upcycling & Waste-to-Value Market is accounted for \$68.2 billion in 2026 and is expected to reach \$138.9 billion by 2034 growing at a CAGR of 9.3% during the forecast period. Food Upcycling & Waste-to-Value involves transforming excess food, by-products, and waste into valuable products for human use or industrial applications. It helps tackle food waste issues while enhancing sustainability and efficient resource utilization. Businesses are converting unused ingredients into edible products, livestock feed, eco-friendly materials, and renewable energy. This practice prolongs the usability of food resources, minimizes environmental harm, and reduces carbon emissions, aligning with circular economy goals. Increasing consumer awareness and supportive regulations are encouraging its growth, positioning food upcycling as a key solution for building sustainable food systems and promoting responsible production across global markets.

According to the FAO (Food and Agriculture Organization), nearly one-third of all food produced globally for human consumption, about 1.3 billion tonnes, is lost or wasted every year, highlighting a massive resource inefficiency that creates strong potential for food upcycling and waste-to-value solutions.

Market Dynamics:

Driver:

Rising global food waste and sustainability concerns

Growing concerns over the rising levels of food waste worldwide are significantly driving the Food Upcycling & Waste-to-Value market. Massive amounts of food are lost or discarded throughout production and consumption stages, leading to environmental and financial issues. This has increased demand for sustainable methods to extract value from waste materials. Authorities, businesses, and consumers are focusing more on environmental responsibility, supporting circular economy initiatives. Upcycling food waste reduces landfill burden, cuts emissions, and enhances resource efficiency, positioning it as an essential solution for achieving sustainability targets and improving the effectiveness of global food supply systems.

Restraint:

Lack of standardization and regulatory challenges

Regulatory complexity and the lack of standardized guidelines are significant barriers to the Food Upcycling & Waste-to-Value market. Food safety laws, labeling requirements, and by-product usage rules differ across regions, causing uncertainty for producers. Businesses often struggle to secure approvals for upcycled materials, leading to delays and higher expenses. Moreover, inconsistent definitions of upcycled food contribute to confusion within the industry. These challenges restrict large-scale adoption and hinder international trade, making it difficult for companies to grow and maximize opportunities in food waste conversion and value recovery markets worldwide.

Opportunity:

Expansion of circular economy initiatives

The growing focus on circular economy practices offers a major opportunity for the Food Upcycling & Waste-to-Value market. Public and private sectors are actively supporting initiatives that emphasize efficient resource use and waste minimization. This trend drives the development of technologies that transform food waste into valuable outputs like ingredients, energy, and sustainable materials. Supportive regulations, financial incentives, and environmental goals are boosting investments in this field. By adopting circular models, companies can generate additional income, minimize waste, and strengthen their sustainability image, thereby expanding growth opportunities for food

upcycling solutions worldwide.

Threat:

Supply chain complexity and inconsistent raw material availability

Irregular supply chains and inconsistent access to raw materials pose a major threat to the Food Upcycling & Waste-to-Value market. Sources of food waste are often scattered, seasonal, and unevenly distributed, making it difficult to maintain a stable supply for processing. Differences in quality, quantity, and composition further disrupt production consistency and planning. Businesses are required to invest heavily in logistics and infrastructure to manage these issues, raising costs. Such uncertainties can affect efficiency, limit scalability, and create production risks, ultimately slowing down the market's long-term growth and expansion potential.

Covid-19 Impact:

The Food Upcycling & Waste-to-Value market experienced both challenges and opportunities during the COVID-19 pandemic. Early disruptions in supply chains, workforce limitations, and processing restrictions affected the collection and utilization of food waste. At the same time, the pandemic increased global awareness of food security and sustainability issues. Businesses and consumers placed greater emphasis on minimizing waste and improving resource efficiency. This led to increased innovation in upcycled products and related technologies. The growing need for resilient and sustainable food systems further supported market expansion, as stakeholders focused on reducing waste and strengthening supply chain efficiency in the long term.

The food processing by-products segment is expected to be the largest during the forecast period

The food processing by-products segment is expected to account for the largest market share during the forecast period because of their steady supply, scalability, and efficient collection processes. These materials are produced in significant quantities during food manufacturing, including leftovers from grains, fruits, vegetables, and dairy processing. Their consistent quality and centralized origin make them ideal for creating high-value outputs like nutritional ingredients, animal feed, and eco-friendly materials. Existing industrial infrastructure further simplifies their utilization. Businesses favour these by-products as they help lower waste management expenses while promoting sustainability and advancing circular economy practices across the food industry.

The biological conversion segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the biological conversion segment is predicted to witness the highest growth rate because it efficiently converts organic waste into valuable outputs through natural methods. Processes like fermentation, enzyme-based treatments, and microbial technologies help produce sustainable ingredients, alternative proteins, and bioenergy. Rising interest in environmentally friendly solutions is boosting investment in this area. These methods can process a wide range of waste materials while increasing efficiency in resource use. With industries aiming to minimise environmental effects and maximise value extraction, biological conversion is rapidly emerging as a key growth segment in the market.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share because of its high sustainability awareness, developed food industry infrastructure, and favourable regulations. The region benefits from a strong network of companies, innovators, and startups focused on converting food waste into valuable products. Consumer preference for eco-friendly and health-oriented foods supports market growth. Collaboration between governments and businesses encourages technological advancements and circular economy adoption. Together, these elements make North America a dominant region in promoting and expanding food upcycling and waste-to-value initiatives.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR because of rapid urban growth, a large population base, and rising awareness about managing food waste. The need to optimise limited food resources is pushing governments and businesses to implement sustainable and circular approaches. Development in food processing sectors and advancements in waste management systems are also contributing to market expansion. Moreover, demand for cost-effective and eco-friendly food options is encouraging innovation. Together, these drivers make Asia Pacific a key region for rapid growth in food upcycling and waste-to-value solutions.

Key players in the market

Some of the key players in Food Upcycling & Waste-to-Value Market include Symbio Bioculinary, Hyf?, Tertiary Extracts Otautahi (TEO), WasteLink, Green Spot Technologies, Mottainai, RE:harvest, Sea6 Energy, Krimanshi, AGSO Agrosoldier, Time-Travelling Milkman, Epos, Grassa, Fiber Foods, Greencovery, Cibus Nexum, GreenFood50 and NoPalm Ingredients.

Key Developments:

In July 2025, Tertiary Extracts Otautahi Ltd (TEO) is excited to announce its partnership with MarketWell Nutrition Inc. to represent and distribute Ovitage®, the world's most complete collagen, in the United States and global markets. Ovitage® is a premium New Zealand sheep collagen produced through TEO's patented extraction process, delivering exceptional bioavailability and efficacy.

In June 2023, Hyf? announced an oversubscribed \$9 million seed investment led by Synthesis Capital. Additional participating investors include The Engine, Refactor Capital, Supply Change Capital, Overwater Ventures, X Factor Ventures and Alumni Ventures. Hyf? will use the new capital to advance select commercial partnerships, double its employee headcount, and progress towards pilot scale technology demonstration.

Waste Sources Covered:

- Household Food Waste
- Retail & Foodservice Waste
- Agricultural & Farm By-Products
- Food Processing By-Products
- Expired Packaged Foods

Conversion Approaches Covered:

- Mechanical Upcycling

Biological Conversion

Chemical Conversion

Energy Recovery Processes

Service Models Covered:

Collection & Sorting Services

Processing & Transformation Services

Product Development & Co-Manufacturing Services

Consulting & Advisory Services

End Products Covered:

Upcycled Food & Beverages

Nutraceuticals & Functional Ingredients

Animal Feed & Pet Food

Bio-Materials & Packaging Solutions

Energy & Biofuels

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 FOOD UPCYCLING & WASTE-TO-VALUE MARKET, BY WASTE SOURCE

- 5.1 Household Food Waste
- 5.2 Retail & Foodservice Waste
- 5.3 Agricultural & Farm By-Products
- 5.4 Food Processing By-Products
- 5.5 Expired Packaged Foods

6 GLOBAL FOOD UPCYCLING & WASTE-TO-VALUE MARKET, BY CONVERSION APPROACH

- 6.1 Mechanical Upcycling
- 6.2 Biological Conversion
- 6.3 Chemical Conversion
- 6.4 Energy Recovery Processes

7 GLOBAL FOOD UPCYCLING & WASTE-TO-VALUE MARKET, BY SERVICE MODEL

- 7.1 Collection & Sorting Services
- 7.2 Processing & Transformation Services
- 7.3 Product Development & Co-Manufacturing Services
- 7.4 Consulting & Advisory Services

8 GLOBAL FOOD UPCYCLING & WASTE-TO-VALUE MARKET, BY END PRODUCT

- 8.1 Upcycled Food & Beverages
- 8.2 Nutraceuticals & Functional Ingredients
- 8.3 Animal Feed & Pet Food
- 8.4 Bio-Materials & Packaging Solutions
- 8.5 Energy & Biofuels

9 GLOBAL FOOD UPCYCLING & WASTE-TO-VALUE MARKET, BY GEOGRAPHY

9.1 North America

9.1.1 United States

9.1.2 Canada

9.1.3 Mexico

9.2 Europe

9.2.1 United Kingdom

9.2.2 Germany

9.2.3 France

9.2.4 Italy

9.2.5 Spain

9.2.6 Netherlands

9.2.7 Belgium

9.2.8 Sweden

9.2.9 Switzerland

9.2.10 Poland

9.2.11 Rest of Europe

9.3 Asia Pacific

9.3.1 China

9.3.2 Japan

9.3.3 India

9.3.4 South Korea

9.3.5 Australia

9.3.6 Indonesia

9.3.7 Thailand

9.3.8 Malaysia

9.3.9 Singapore

9.3.10 Vietnam

9.3.11 Rest of Asia Pacific

9.4 South America

9.4.1 Brazil

9.4.2 Argentina

9.4.3 Colombia

9.4.4 Chile

9.4.5 Peru

9.4.6 Rest of South America

9.5 Rest of the World (RoW)

9.5.1 Middle East

9.5.1.1 Saudi Arabia

9.5.1.2 United Arab Emirates

- 9.5.1.3 Qatar
- 9.5.1.4 Israel
- 9.5.1.5 Rest of Middle East
- 9.5.2 Africa
 - 9.5.2.1 South Africa
 - 9.5.2.2 Egypt
 - 9.5.2.3 Morocco
 - 9.5.2.4 Rest of Africa

10 STRATEGIC MARKET INTELLIGENCE

- 10.1 Industry Value Network and Supply Chain Assessment
- 10.2 White-Space and Opportunity Mapping
- 10.3 Product Evolution and Market Life Cycle Analysis
- 10.4 Channel, Distributor, and Go-to-Market Assessment

11 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 11.1 Mergers and Acquisitions
- 11.2 Partnerships, Alliances, and Joint Ventures
- 11.3 New Product Launches and Certifications
- 11.4 Capacity Expansion and Investments
- 11.5 Other Strategic Initiatives

12 COMPANY PROFILES

- 12.1 Symbio Bioculinary
- 12.2 Hyf?
- 12.3 Tertiary Extracts Otautahi (TEO)
- 12.4 WasteLink
- 12.5 Green Spot Technologies
- 12.6 Mottainai
- 12.7 RE:harvest
- 12.8 Sea6 Energy
- 12.9 Krimanshi
- 12.10 AGSO Agrosoldier
- 12.11 Time-Travelling Milkman
- 12.12 Epos
- 12.13 Grassa

- 12.14 Fiber Foods
- 12.15 Greencovery
- 12.16 Cibus Nexum
- 12.17 GreenFood50
- 12.18 NoPalm Ingredients

List Of Tables

LIST OF TABLES

Table 1 Global Food Upcycling & Waste-to-Value Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Food Upcycling & Waste-to-Value Market Outlook, By Waste Source (2023-2034) (\$MN)

Table 3 Global Food Upcycling & Waste-to-Value Market Outlook, By Household Food Waste (2023-2034) (\$MN)

Table 4 Global Food Upcycling & Waste-to-Value Market Outlook, By Retail & Foodservice Waste (2023-2034) (\$MN)

Table 5 Global Food Upcycling & Waste-to-Value Market Outlook, By Agricultural & Farm By-Products (2023-2034) (\$MN)

Table 6 Global Food Upcycling & Waste-to-Value Market Outlook, By Food Processing By-Products (2023-2034) (\$MN)

Table 7 Global Food Upcycling & Waste-to-Value Market Outlook, By Expired Packaged Foods (2023-2034) (\$MN)

Table 8 Global Food Upcycling & Waste-to-Value Market Outlook, By Conversion Approach (2023-2034) (\$MN)

Table 9 Global Food Upcycling & Waste-to-Value Market Outlook, By Mechanical Upcycling (2023-2034) (\$MN)

Table 10 Global Food Upcycling & Waste-to-Value Market Outlook, By Biological Conversion (2023-2034) (\$MN)

Table 11 Global Food Upcycling & Waste-to-Value Market Outlook, By Chemical Conversion (2023-2034) (\$MN)

Table 12 Global Food Upcycling & Waste-to-Value Market Outlook, By Energy Recovery Processes (2023-2034) (\$MN)

Table 13 Global Food Upcycling & Waste-to-Value Market Outlook, By Service Model (2023-2034) (\$MN)

Table 14 Global Food Upcycling & Waste-to-Value Market Outlook, By Collection & Sorting Services (2023-2034) (\$MN)

Table 15 Global Food Upcycling & Waste-to-Value Market Outlook, By Processing & Transformation Services (2023-2034) (\$MN)

Table 16 Global Food Upcycling & Waste-to-Value Market Outlook, By Product Development & Co-Manufacturing Services (2023-2034) (\$MN)

Table 17 Global Food Upcycling & Waste-to-Value Market Outlook, By Consulting & Advisory Services (2023-2034) (\$MN)

Table 18 Global Food Upcycling & Waste-to-Value Market Outlook, By End Product

(2023-2034) (\$MN)

Table 19 Global Food Upcycling & Waste-to-Value Market Outlook, By Upcycled Food & Beverages (2023-2034) (\$MN)

Table 20 Global Food Upcycling & Waste-to-Value Market Outlook, By Nutraceuticals & Functional Ingredients (2023-2034) (\$MN)

Table 21 Global Food Upcycling & Waste-to-Value Market Outlook, By Animal Feed & Pet Food (2023-2034) (\$MN)

Table 22 Global Food Upcycling & Waste-to-Value Market Outlook, By Bio-Materials & Packaging Solutions (2023-2034) (\$MN)

Table 23 Global Food Upcycling & Waste-to-Value Market Outlook, By Energy & Biofuels (2023-2034) (\$MN)

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

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