

# **Agri-Waste Valorization Market Forecasts to 2032 – Global Analysis By Waste Type (Crop Residues, Animal Manure & Bedding Materials, Food Processing Waste, Aquaculture Waste and Other Waste Types), Valorization Pathway, Application, End User and By Geography**

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## **Abstracts**

According to Statistics MRC, the Global Agri-Waste Valorization Market is accounted for \$20.9 billion in 2025 and is expected to reach \$38.8 billion by 2032 growing at a CAGR of 9.2% during the forecast period. Agri-waste valorization refers to the process of converting agricultural residues and by-products, such as crop stalks, husks, peels, and animal manure, into valuable products through sustainable and innovative technologies. This approach aims to reduce environmental pollution, minimize waste generation, and promote a circular bioeconomy by transforming organic waste into biofuels, bioplastics, fertilizers, animal feed, and other bio-based materials. It enhances resource efficiency, supports rural economies, and contributes to sustainable agricultural practices. Agri-waste valorization not only mitigates the adverse effects of agricultural waste disposal but also creates new revenue streams and promotes eco-friendly industrial development.

### **Market Dynamics:**

Driver:

Rising agricultural waste volumes from crops and livestock

Rising agricultural waste volumes from crops and livestock are driving adoption of waste-

to-value technologies. Increasing global food production is accelerating the generation of crop residues, husks, and manure, creating opportunities for conversion into energy, fertilizers, and bio-based materials. Circular economy initiatives are propelling investment in technologies that transform waste into high-value products. Governments and agribusinesses are fostering adoption through subsidies, waste management mandates, and renewable energy targets. Rising awareness of environmental impacts is boosting demand for waste-to-resource models.

#### Restraint:

##### High capital costs for processing infrastructure

High capital costs for processing infrastructure are hindering adoption of valorization technologies. Advanced biorefineries, anaerobic digesters, and pyrolysis units demand significant upfront investment, which hampers adoption among small and mid-sized farmers. Limited access to financing and credit facilities further degrades scalability in rural regions. Operational complexity and maintenance costs constrain long-term viability. These financial barriers limit penetration despite strong policy and sustainability drivers.

#### Opportunity:

##### Expansion into carbon credits and ESG-linked farming

Expansion into carbon credits and ESG-linked farming is boosting revenue diversification for farmers and agribusinesses. Valorization projects are increasingly integrated into carbon trading schemes, accelerating new income streams. ESG commitments by food companies and retailers are fostering partnerships with waste-to-value innovators. Certification programs and green financing are boosting investment in scalable models. Demand for traceable, low-carbon agricultural supply chains is propelling adoption of valorization technologies.

#### Threat:

##### Fragmented collection and logistics systems

Fragmented collection and logistics systems are hampering industrial-scale valorization. Agricultural waste is often dispersed across small farms, making aggregation costly and time-consuming. Lack of standardized collection networks and storage facilities

constrains supply chain reliability. Seasonal variability in waste generation further hampers consistent feedstock availability. These logistical challenges limit economies of scale and delay commercialization.

#### Covid-19 Impact:

The market experienced disruption due to Covid-19, which constrained supply chains and delayed infrastructure projects. Covid-19 disrupted waste collection and processing operations across agricultural regions. Lockdowns hindered transport and access to valorization facilities, degrading operational continuity. Farmers faced reduced access to centralized processing, leading to increased on-site disposal. However, post-pandemic recovery is accelerating investment in resilient, decentralized waste-to-value models. Rising focus on food security and sustainable farming is boosting demand for valorization technologies.

The crop residues segment is expected to be the largest during the forecast period

The crop residues segment is expected to account for the largest market share during the forecast period due to abundant availability and diverse valorization pathways. Crop residues are driving adoption of biomass energy and composting solutions. Rice husks, wheat straw, and corn stover are increasingly converted into bioenergy, compost, and biopolymers. Demand for renewable feedstock in energy and materials is accelerating adoption of crop residue valorization. Government incentives for biomass energy are propelling investment in residue-based projects. Technological advancements in pre-processing and densification are fostering scalability.

The bioplastics & biopolymers segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the bioplastics & biopolymers segment is predicted to witness the highest growth rate due to rising demand for sustainable packaging and materials. Bioplastics and biopolymers are driving growth in waste-derived material innovation. Agricultural waste-derived starches, lignin, and cellulose are increasingly used to produce biodegradable plastics. Regulatory bans on single-use plastics are accelerating adoption of bio-based alternatives. Innovations in polymer chemistry are boosting performance parity with conventional plastics.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share due to advanced infrastructure, strong policy support, and high agricultural output. North America is driving adoption of biorefineries and anaerobic digestion facilities. Federal and state-level incentives for renewable energy and waste management are accelerating adoption. Agribusinesses are investing in technologies to valorize crop and livestock waste. Demand for sustainable packaging and bioenergy is boosting market penetration.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR due to rapid agricultural expansion, rising waste volumes, and supportive government policies. Asia Pacific is driving growth in decentralized valorization models tailored to smallholder farms. Countries like India, China, and Indonesia are investing in biomass energy, composting, and bio-based materials. Local startups and global players are scaling operations to meet regional needs. Demand for affordable, scalable, and low-carbon solutions is propelling adoption. Asia Pacific's momentum is driven by demographic scale, policy support, and market dynamism.

Key players in the market

Some of the key players in Agri-Waste Valorization Market include Farmtheory, CEF Group, Ecozen Solutions, Saathi Eco Innovations, Greenjoules Pvt Ltd., CropConnect Enterprises, AgriPure India, Biomax Fuels Ltd., Sustain Impact Ventures, Aana Crop Solutions, F2DF Rural Network, Avani Eco, Mango Materials and Genecis Bioindustries Inc.

### **Key Developments:**

In August 2025, CEF Group secured €38 million in equity and debt financing from German Export Finance Bank and Indian conglomerates. This collaboration supports the construction of two flagship CBG plants in Jammu and Ahmedabad, processing 850 tonnes of municipal and agri-waste daily.

In March 2025, Farmtheory secured \$2 million in a Pre-Series A round led by Omnivore and BEENEXT. This funding reflects strategic collaboration with impact investors committed to food waste reduction and farmer prosperity.

Waste Types Covered:

Crop Residues

Animal Manure & Bedding Materials

Food Processing Waste

Aquaculture Waste

Forestry Residues

Agro-Industrial Waste

Other Waste Types

Valorization Pathways Covered:

Bioenergy

Biofertilizers & Soil Amendments

Bioplastics & Biopolymers

Animal Feed & Nutraceuticals

Construction Materials

Wastewater Treatment & Recycling

Other Valorization Pathways

Applications Covered:

Renewable Energy Generation

Soil Health & Fertility Enhancement

Industrial Feedstock

Water Retention Improvement

Green Building Development

Other Applications

End Users Covered:

Construction & Infrastructure Sector

Waste Management Firms

Government & Research Bodies

Environmental Organizations

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

#### Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

#### South America

Argentina

Brazil

Chile

Rest of South America

#### Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & 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 2024, 2025, 2026, 2028, and 2032
- 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**

### **2 PREFACE**

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
  - 2.4.1 Data Mining
  - 2.4.2 Data Analysis
  - 2.4.3 Data Validation
  - 2.4.4 Research Approach
- 2.5 Research Sources
  - 2.5.1 Primary Research Sources
  - 2.5.2 Secondary Research Sources
  - 2.5.3 Assumptions

### **3 MARKET TREND ANALYSIS**

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Application Analysis
- 3.7 End User Analysis
- 3.8 Emerging Markets
- 3.9 Impact of Covid-19

### **4 PORTERS FIVE FORCE ANALYSIS**

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

## **5 GLOBAL AGRI-WASTE VALORIZATION MARKET, BY WASTE TYPE**

- 5.1 Introduction
- 5.2 Crop Residues
- 5.3 Animal Manure & Bedding Materials
- 5.4 Food Processing Waste
- 5.5 Aquaculture Waste
- 5.6 Forestry Residues
- 5.7 Agro-Industrial Waste
- 5.8 Other Waste Types

## **6 GLOBAL AGRI-WASTE VALORIZATION MARKET, BY VALORIZATION PATHWAY**

- 6.1 Introduction
- 6.2 Bioenergy
- 6.3 Biofertilizers & Soil Amendments
- 6.4 Bioplastics & Biopolymers
- 6.5 Animal Feed & Nutraceuticals
- 6.6 Construction Materials
- 6.7 Wastewater Treatment & Recycling
- 6.8 Other Valorization Pathways

## **7 GLOBAL AGRI-WASTE VALORIZATION MARKET, BY APPLICATION**

- 7.1 Introduction
- 7.2 Renewable Energy Generation
- 7.3 Soil Health & Fertility Enhancement
- 7.4 Industrial Feedstock
- 7.5 Water Retention Improvement
- 7.6 Green Building Development
- 7.7 Other Applications

## **8 GLOBAL AGRI-WASTE VALORIZATION MARKET, BY END USER**

- 8.1 Introduction
- 8.2 Construction & Infrastructure Sector
- 8.3 Waste Management Firms
- 8.4 Government & Research Bodies

8.5 Environmental Organizations

8.6 Other End Users

## **9 GLOBAL AGRI-WASTE VALORIZATION MARKET, BY GEOGRAPHY**

9.1 Introduction

9.2 North America

9.2.1 US

9.2.2 Canada

9.2.3 Mexico

9.3 Europe

9.3.1 Germany

9.3.2 UK

9.3.3 Italy

9.3.4 France

9.3.5 Spain

9.3.6 Rest of Europe

9.4 Asia Pacific

9.4.1 Japan

9.4.2 China

9.4.3 India

9.4.4 Australia

9.4.5 New Zealand

9.4.6 South Korea

9.4.7 Rest of Asia Pacific

9.5 South America

9.5.1 Argentina

9.5.2 Brazil

9.5.3 Chile

9.5.4 Rest of South America

9.6 Middle East & Africa

9.6.1 Saudi Arabia

9.6.2 UAE

9.6.3 Qatar

9.6.4 South Africa

9.6.5 Rest of Middle East & Africa

## **10 KEY DEVELOPMENTS**

- 10.1 Agreements, Partnerships, Collaborations and Joint Ventures
- 10.2 Acquisitions & Mergers
- 10.3 New Product Launch
- 10.4 Expansions
- 10.5 Other Key Strategies

## **11 COMPANY PROFILING**

- 11.1 Farmtheory
- 11.2 CEF Group
- 11.3 Ecozen Solutions
- 11.4 Saathi Eco Innovations
- 11.5 Greenjoules Pvt Ltd.
- 11.6 CropConnect Enterprises
- 11.7 AgriPure India
- 11.8 Biomax Fuels Ltd.
- 11.9 Sustain Impact Ventures
- 11.10 Aana Crop Solutions
- 11.11 F2DF Rural Network
- 11.12 Avani Eco
- 11.13 Mango Materials
- 11.14 Genecis Bioindustries Inc.

## List Of Tables

### LIST OF TABLES

- Table 1 Global Agri-Waste Valorization Market Outlook, By Region (2024-2032) (\$MN)
- Table 2 Global Agri-Waste Valorization Market Outlook, By Waste Type (2024-2032) (\$MN)
- Table 3 Global Agri-Waste Valorization Market Outlook, By Crop Residues (2024-2032) (\$MN)
- Table 4 Global Agri-Waste Valorization Market Outlook, By Animal Manure & Bedding Materials (2024-2032) (\$MN)
- Table 5 Global Agri-Waste Valorization Market Outlook, By Food Processing Waste (2024-2032) (\$MN)
- Table 6 Global Agri-Waste Valorization Market Outlook, By Aquaculture Waste (2024-2032) (\$MN)
- Table 7 Global Agri-Waste Valorization Market Outlook, By Forestry Residues (2024-2032) (\$MN)
- Table 8 Global Agri-Waste Valorization Market Outlook, By Agro-Industrial Waste (2024-2032) (\$MN)
- Table 9 Global Agri-Waste Valorization Market Outlook, By Other Waste Types (2024-2032) (\$MN)
- Table 10 Global Agri-Waste Valorization Market Outlook, By Valorization Pathway (2024-2032) (\$MN)
- Table 11 Global Agri-Waste Valorization Market Outlook, By Bioenergy (2024-2032) (\$MN)
- Table 12 Global Agri-Waste Valorization Market Outlook, By Biofertilizers & Soil Amendments (2024-2032) (\$MN)
- Table 13 Global Agri-Waste Valorization Market Outlook, By Bioplastics & Biopolymers (2024-2032) (\$MN)
- Table 14 Global Agri-Waste Valorization Market Outlook, By Animal Feed & Nutraceuticals (2024-2032) (\$MN)
- Table 15 Global Agri-Waste Valorization Market Outlook, By Construction Materials (2024-2032) (\$MN)
- Table 16 Global Agri-Waste Valorization Market Outlook, By Wastewater Treatment & Recycling (2024-2032) (\$MN)
- Table 17 Global Agri-Waste Valorization Market Outlook, By Other Valorization Pathways (2024-2032) (\$MN)
- Table 18 Global Agri-Waste Valorization Market Outlook, By Application (2024-2032) (\$MN)

Table 19 Global Agri-Waste Valorization Market Outlook, By Renewable Energy Generation (2024-2032) (\$MN)

Table 20 Global Agri-Waste Valorization Market Outlook, By Soil Health & Fertility Enhancement (2024-2032) (\$MN)

Table 21 Global Agri-Waste Valorization Market Outlook, By Industrial Feedstock (2024-2032) (\$MN)

Table 22 Global Agri-Waste Valorization Market Outlook, By Water Retention Improvement (2024-2032) (\$MN)

Table 23 Global Agri-Waste Valorization Market Outlook, By Green Building Development (2024-2032) (\$MN)

Table 24 Global Agri-Waste Valorization Market Outlook, By Other Applications (2024-2032) (\$MN)

Table 25 Global Agri-Waste Valorization Market Outlook, By End User (2024-2032) (\$MN)

Table 26 Global Agri-Waste Valorization Market Outlook, By Construction & Infrastructure Sector (2024-2032) (\$MN)

Table 27 Global Agri-Waste Valorization Market Outlook, By Waste Management Firms (2024-2032) (\$MN)

Table 28 Global Agri-Waste Valorization Market Outlook, By Government & Research Bodies (2024-2032) (\$MN)

Table 29 Global Agri-Waste Valorization Market Outlook, By Environmental Organizations (2024-2032) (\$MN)

Table 30 Global Agri-Waste Valorization Market Outlook, By Other End Users (2024-2032) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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