

Upcycled Protein Ingredients Market Forecasts to 2034 – Global Analysis By Source Material (Oilseed Residues, Cereal Residues, Pulse Residues, Fruit Residues, Vegetable Residues and Other Source Materials), Processing Method, Ingredient Form, Property, End User, and Geography

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Abstracts

According to Statistics MRC, the Global Upcycled Protein Ingredients Market is accounted for \$0.7 billion in 2026 and is expected to reach \$2.6 billion by 2034 growing at a CAGR of 17.8% during the forecast period. Upcycled protein ingredients are protein-rich food ingredients recovered from agricultural, food-processing, or manufacturing by-products that would otherwise be discarded or used in lower-value applications. These ingredients can be derived from materials such as oilseed press cakes, spent grains, fruit and vegetable residues, or other nutrient-rich processing streams. Advanced separation, drying, fermentation, and extraction technologies transform these materials into usable protein ingredients for food and beverage formulations. Upcycled protein ingredients reduce food waste while improving resource utilization and ingredient efficiency. Growing interest in circular food systems and sustainable protein sources is driving market development.

Market Dynamics

Driver:

Growing focus on food waste reduction and circular economy

Increasing consumer and corporate focus on food waste reduction and circular economy principles is driving demand for upcycled protein ingredients across food and

beverage manufacturing. Companies are seeking to reduce waste and maximize resource utilization through upcycling of processing byproducts. Consumer interest in sustainable, waste-reducing products supports market growth and brand differentiation. Regulatory pressure on food waste reduction is accelerating adoption of upcycled ingredients. Circular economy principles are becoming mainstream in food manufacturing.

Restraint:

Supply chain fragmentation and quality variability

Supply chain fragmentation for processing byproducts and quality variability of raw materials present significant challenges for upcycled protein ingredient production. Collection and processing of diverse byproduct streams requires specialized logistics and processing capabilities. Limited standardization of upcycled ingredients creates challenges for food manufacturers seeking consistent product quality. Supply volumes and seasonality affect availability for commercial production. Quality consistency remains a challenge for upcycled ingredients.

Opportunity:

Development of upcycled ingredient platforms

Development of upcycled ingredient platforms and processing technologies is expanding production capabilities and product consistency for food manufacturers seeking sustainable protein solutions. Innovation in processing methods is improving ingredient functionality and application versatility across food categories. Growing investment in upcycling infrastructure and technology is accelerating market development. Partnerships between food processors and ingredient companies are creating new upcycled supply chains. Technology advances are expanding upcycling possibilities.

Threat:

Competition from conventional protein ingredients

Competition from conventional protein ingredients at established price points and consistent quality may limit upcycled ingredient adoption across food manufacturing. Consumer perceptions of upcycled ingredients may be affected by concerns about safety or quality. Regulatory requirements for byproduct utilization may affect market development. Economic pressures may lead food manufacturers to prioritize cost over

sustainability. Market development is still early stage.

Covid-19 Impact:

The COVID-19 pandemic increased awareness of food system sustainability and waste reduction, accelerating interest in upcycled ingredients across food manufacturing. Supply chain disruptions highlighted opportunities for value recovery from processing byproducts. The post-pandemic period has witnessed sustained investment in upcycling infrastructure and technology. Growing corporate sustainability commitments continue driving upcycled ingredient adoption. Circular economy approaches have gained traction across the food industry.

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

The oilseed residues segment is expected to account for the largest market share during the forecast period as oilseed processing generates substantial protein-rich byproducts including soybean meal and canola meal with established markets and processing infrastructure for protein recovery. Oilseed residues are widely available and provide consistent protein quality for ingredient applications. Established processing infrastructure supports continued segment leadership. Oilseed residues offer the most developed upcycled protein supply chains. Large processing volumes ensure consistent ingredient availability.

The dry fractionation segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the dry fractionation segment is predicted to witness the highest growth rate driven by increasing adoption of dry processing methods offering cost-effective, sustainable protein recovery from byproduct streams without chemical extraction and wastewater generation. Dry fractionation delivers functional protein ingredients with minimal environmental impact compared to wet processes. Growing focus on sustainable processing is accelerating adoption of dry fractionation technology. Dry fractionation is increasingly preferred for environmental reasons. Technology advances are improving dry fractionation yields and quality.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest

market share owing to established food processing infrastructure, strong corporate sustainability commitments, and early adoption of upcycled ingredient solutions. The United States hosts major food processors and ingredient companies with upcycling programs and technology development capabilities. Strong sustainability culture and circular economy focus reinforce regional market leadership. Growing consumer interest in sustainable ingredients drives upcycled product development across the region.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by growing food processing activity, increasing sustainability awareness, and expanding upcycling opportunities across major economies. China, India, and Australia are developing upcycled ingredient production capabilities and supply chains. Growing population and food demand create opportunities for byproduct utilization. Government support for circular economy is accelerating market growth across the region.

Key players in the market

Some of the key players in the Upcycled Protein Ingredients Market include Planet Protein, PepsiCo, Inc., Unilever PLC, AB InBev, Ingredion Incorporated, ADM, Cargill, Incorporated, Kerry Group plc, Roquette Frères, Puris Proteins LLC, Equinom Ltd., Mori, ReGrained, Shiru Inc., and Upcycled Foods, Inc.

Key Developments:

In May 2025, ADM launched a new upcycled protein ingredient platform utilizing processing byproducts from oilseed and grain processing for food and supplement applications. The platform responds to growing demand for sustainable, circular protein solutions.

In April 2025, Ingredion Incorporated announced significant expansion of its upcycled ingredient capabilities with new processing technologies and product development resources for food manufacturer partnerships.

Source Materials Covered:

Oilseed Residues

Cereal Residues

Pulse Residues

Fruit Residues

Vegetable Residues

Other Source Materials

Processing Methods Covered:

Dry Fractionation

Wet Extraction

Fermentation

Enzymatic Processing

Mechanical Processing

Other Processing Methods

Ingredient Forms Covered:

Protein Flour

Protein Concentrate

Protein Isolate

Protein Hydrolysate

Protein Fiber

Other Ingredient Forms

Properties Covered:

Emulsification

Water Binding

Gelation

Foaming

Texture Enhancement

Other Properties

End Users Covered:

Food Manufacturers

Beverage Manufacturers

Supplement Companies

Sports Nutrition Companies

Foodservice Providers

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)

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

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