

Aquaculture Feed Extrusion Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

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Abstracts

The Global Aquaculture Feed Extrusion Market was valued at USD 45.3 billion in 2024 and is estimated to grow at a CAGR of 7.7% to reach USD 94.4 billion by 2034. Over the last decade, this market has witnessed steady expansion, largely fueled by the rising demand for high-protein seafood and the global shift toward intensive aquaculture practices. Traditional feeding methods have given way to more advanced extrusion techniques that provide nutrient-dense, water-stable feed options. These innovations have not only improved feed efficiency and animal health but have also minimized the environmental impact of aquaculture systems. Feed extrusion, which allows for precise formulation and targeted nutrition, has become critical to meeting the dietary needs of diverse aquatic species. Extruded feeds offer advantages in terms of digestibility, stability, and conversion rates, making them the preferred choice across commercial operations. Enhanced equipment technology has further supported this transition by giving both global and regional feed producers the ability to create tailored feed solutions at scale.

Species-specific feed demand continues to shape market dynamics. In 2024, carp held the largest market share by species at 34.3%, driven by the cost-effectiveness of feed production and ease of application. Each aquatic species poses different nutritional and growth challenges, contributing to the complexity of feed formulation and extrusion requirements. While carnivorous species benefit from protein-rich extruded formulations, manufacturers are also being pushed to maintain affordability—particularly in cost-sensitive regions. The shift toward nutritionally superior, water-stable feeds is central to improving fish health and minimizing nutrient leaching, which remains a key concern in aquatic environments. At the same time, farmers seek feeds that are easy to monitor during consumption and contribute to reducing overall wastage, especially in



high-volume farming setups.

Tilapia feed production, for instance, has seen a transition toward plant-based proteins to reduce reliance on fishmeal, supporting the move toward more sustainable feed ingredients. Catfish feeds, typically lower in protein and presented in sinking pellet forms, are being re-evaluated to meet the rising need for highly digestible feed in intensive farming operations. As feed conversion ratios come under greater scrutiny, producers are working to strike a balance between quality and cost, aiming to maintain efficiency without driving up expenses.

When categorized by feed type, pellets led the aquaculture feed extrusion market in 2024 with a 49.5% share. Pellets are expected to continue expanding at a CAGR of 7.3%, driven by demand from large-scale aquaculture facilities seeking consistency and performance in feed delivery. Their buoyancy, water stability, and ability to carry high nutrient loads make them ideal for a broad range of aquatic species. Ongoing advances in extrusion allow for the development of specialized floating and slow-sinking pellet types that meet specific feeding behaviors and environmental conditions. However, premium pellet feeds come with high production costs, which can be a hurdle for small-scale producers with limited budgets.

Granules remain widely used for juvenile aquatic species due to their small size and ease of intake. Although they are convenient, they often lack sufficient water stability, leading to higher waste and requiring careful management in high-density systems. Powdered feed, generally used in hatcheries for early-stage fish and shrimp, delivers essential nutrients but demands precise application to avoid overfeeding and deterioration in water quality.

The market's distribution channels are divided into online and offline modes. In 2024, offline sales dominated the market, accounting for 74% of total revenue. This channel is expected to grow at a robust CAGR of 8.9% due to its strong presence in key aquaculture regions. Offline channels are popular due to the personalized support they provide, including flexible payment terms, customized nutritional planning, and ready inventory supply. These factors are especially important in regions with well-established aquaculture infrastructure.

Regionally, Asia Pacific led the global market with a 39.3% revenue share in 2024. The region benefits from high aquaculture output and favorable government initiatives aimed at feed modernization and sustainability. Markets such as China, India, and Southeast Asia continue to drive regional dominance, with increasing seafood consumption and



efforts to enhance feed efficiency. In contrast, regions like North America show moderate but steady growth, driven by growing awareness of sustainable aquaculture practices and a focus on locally sourced seafood.

Leading market players include ADM, Cargill, Biomar, Purina Animal Nutrition LLC, Skretting, DSM, and Aller Aqua Group. These companies shape the market landscape through innovation, diversification of protein sources, and development of environmentally conscious feed products. Their efforts support both global scale operations and localized feed customization, strengthening the overall aquaculture feed extrusion ecosystem.



Contents

CHAPTER 1 METHODOLOGY & SCOPE

- 1.1 Market scope & definition
- 1.2 Base estimates & calculations
- 1.3 Forecast calculation
- 1.4 Data sources
- 1.4.1 Primary
- 1.4.2 Secondary
- 1.4.2.1 Paid sources
- 1.4.2.2 Public sources
- 1.5 Primary research and validation
 - 1.5.1 Primary sources
 - 1.5.2 Data mining sources

CHAPTER 2 EXECUTIVE SUMMARY

2.1 Industry synopsis, 2021-2034

CHAPTER 3 INDUSTRY INSIGHTS

- 3.1 Industry ecosystem analysis
 - 3.1.1 Factor affecting the value chain
 - 3.1.2 Profit margin analysis
 - 3.1.3 Disruptions
 - 3.1.4 Future outlook
 - 3.1.5 Manufacturers
 - 3.1.6 Distributors
 - 3.1.7 Impact on trade
 - 3.1.8 Trade volume disruptions
- 3.2 Retaliatory measures
- 3.3 Trade statistics (HS Code)
- 3.3.1 Major exporting countries, 2021-2024 (Kilo Tons)
- 3.3.2 Major importing countries, 2021-2024 (Kilo Tons)
- 3.4 Impact on the industry
 - 3.4.1 Supply-Side impact (raw materials)
 - 3.4.1.1 Price volatility in key materials
 - 3.4.1.2 Supply chain restructuring



- 3.4.1.3 Production cost implications
- 3.5 Demand-side impact (selling price)
- 3.5.1 Price transmission to end markets
- 3.5.2 Market share dynamics
- 3.5.3 Consumer response patterns
- 3.6 Key companies impacted
- 3.7 Strategic industry responses
- 3.7.1 Supply chain reconfiguration
- 3.7.2 Pricing and product strategies
- 3.7.3 Policy engagement
- 3.8 Outlook and Future considerations
- 3.9 Supplier landscape
- 3.10 Profit margin analysis
- 3.11 Key news & initiatives
- 3.12 Regulatory landscape
- 3.13 Impact forces
- 3.13.1 Growth drivers
 - 3.13.1.1 Shift toward sustainable and alternative ingredients
 - 3.13.1.2 Technological advancements in feed extrusion
 - 3.13.1.3 Rising demand for high-performance functional feeds
- 3.13.2 Industry pitfalls & challenges
 - 3.13.2.1 Volatile pricing
 - 3.13.2.2 Limited availability of raw materials
- 3.14 Growth potential analysis
- 3.15 Porter's analysis
- 3.16 PESTEL analysis

CHAPTER 4 COMPETITIVE LANDSCAPE, 2024

- 4.1 Introduction
- 4.2 Company market share analysis
- 4.3 Competitive positioning matrix
- 4.4 Strategic outlook matrix

CHAPTER 5 MARKET ESTIMATES AND FORECAST, BY SPECIES, 2021 – 2034 (USD BILLION) (KILO TONS)

5.1 Key trends

5.2 Carp



- 5.3 Marine shrimps
- 5.4 Tilapias
- 5.5 Catfishes
- 5.6 Marine fishes

CHAPTER 6 MARKET ESTIMATES AND FORECAST, BY FEED TYPE, 2021 – 2034 (USD BILLION) (KILO TONS)

- 6.1 Key trends
- 6.2 Pellets
- 6.3 Granules
- 6.4 Powder
- 6.5 Others

CHAPTER 7 MARKET ESTIMATES AND FORECAST, BY DISTRIBUTION CHANNEL, 2021 – 2034 (USD BILLION) (KILO TONS)

- 7.1 Key trends
- 7.2 Online
- 7.3 Offline

CHAPTER 8 MARKET ESTIMATES AND FORECAST, BY REGION, 2021 – 2034 (USD BILLION) (KILO TONS)

- 8.1 Key trends
- 8.2 North America
 - 8.2.1 U.S.
- 8.2.2 Canada
- 8.3 Europe
 - 8.3.1 Germany
 - 8.3.2 UK
 - 8.3.3 France
 - 8.3.4 Spain
 - 8.3.5 Italy
 - 8.3.6 Netherlands
- 8.4 Asia Pacific
 - 8.4.1 China
 - 8.4.2 India
 - 8.4.3 Japan



8.4.4 Australia
8.4.5 South Korea
8.5 Latin America
8.5.1 Brazil
8.5.2 Mexico
8.5.3 Argentina
8.6 Middle East and Africa
8.6.1 Saudi Arabia
8.6.2 South Africa
8.6.3 UAE

CHAPTER 9 COMPANY PROFILES

- 9.1 Cargill
- 9.2 ADM
- 9.3 Biomar
- 9.4 Skretting
- 9.5 Purina Animal Nutrition IIc.
- 9.6 Marubeni Nisshin Feed co., ltd.
- 9.7 Fish Feed Extruder
- 9.8 DSM
- 9.9 Aller Aqua Group
- 9.10 Heritage Nutrient Limited



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