

Duckweed Protein Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

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Abstracts

The Global Duckweed Protein Market generated USD 72.7 million in 2024 and is expected to grow at a CAGR of 7.9% between 2025 and 2034. This rapid growth is fueled by the rising demand for sustainable, nutrient-rich, and plant-based protein sources. Duckweed, a highly versatile aquatic plant, has gained significant attention due to its rich profile of essential amino acids, making it an excellent alternative to traditional protein sources. As health-conscious consumers increasingly shift toward plant-based diets, the popularity of duckweed as a sustainable protein source has surged. Growing concerns about environmental sustainability and the need for ethical food choices are driving market momentum.

Moreover, advancements in cultivation, harvesting, and extraction technologies have streamlined the production of high-quality duckweed protein, enhancing its scalability and making it more accessible for commercial applications. The market is also witnessing an influx of investment from food technology companies and agribusinesses aiming to capitalize on the rising demand for alternative protein solutions. As the global population continues to grow, the need for innovative, eco-friendly protein sources is expected to propel the expansion of the duckweed protein market further.

The market is segmented by species, with Lemna minor, commonly known as common duckweed, being the most prominent. In 2024, Lemna Minor generated USD 24.4 million and continues to dominate the market due to its rapid growth rate, high protein yield, and adaptability to diverse water and environmental conditions. This species is renowned for its ability to double its biomass within a few days, making it an attractive choice for food and feed industries seeking high-yield, sustainable protein sources. Its efficiency in biomass production supports sustainable farming practices, positioning it as a key contributor to the expanding market for plant-based proteins.

In terms of form, the duckweed protein market is categorized into powder, liquid, and



paste. The powdered form led the market with a 66.3% share in 2024, driven by growing demand for protein alternatives in the food and beverage sector. Duckweed protein powder is widely used to fortify functional foods such as shakes, energy bars, and dietary supplements. Its ease of transportation and storage addresses logistical challenges, while its versatility makes it an ideal choice for a wide range of applications. The powder's ability to integrate seamlessly into various formulations enhances its appeal among manufacturers seeking efficient protein fortification solutions. The U.S. duckweed protein market was valued at USD 18.1 million in 2024 and is witnessing substantial growth, fueled by increased consumer awareness of plant-based protein options. As the population of vegans and flexitarians expands, the demand for non-animal protein sources continues to rise. North America, particularly the U.S. and Canada, is seeing accelerated adoption of duckweed protein due to government initiatives promoting clean-label foods and sustainable farming practices. As health and environmental concerns remain at the forefront of consumer choices, food producers and agricultural firms are investing heavily in duckweed production to meet the rising demand for alternative protein solutions.



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