

# Air-based Foods Market is Projected to Grow at a 12.5% CAGR by 2035

Analysis of Air-based Foods Market Covering 30+ Countries Including Analysis of US, Canada, UK, Germany, France, Nordics, GCC countries, Japan, Korea

ROCKVILLE, MD, UNITED STATES, June 12, 2025 /EINPresswire.com/ -- In 2025, the global <u>air-based foods market</u> is expected to be valued at USD 4.1 billion. By 2035, the valuation is expected to have increased to USD 13.3 billion at a compound annual growth rate (CAGR) of 12.5%. The



move toward next-generation protein and nutritional sources, increased investment in food innovation, and awareness of sustainability are all factors contributing to the expansion.

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The air-based foods market is gaining momentum due to the urgent need to address the environmental impact of conventional food production. Traditional agriculture, particularly animal husbandry, contributes significantly to greenhouse gas emissions, deforestation, and land degradation. Air-based foods offer a sustainable alternative by utilizing CO2 as a raw material, reducing carbon footprints and mitigating climate change. Fact.MR highlights that the growing negative impact of greenhouse gas emissions on human health is a key driver for the adoption of air-based foods across various regions.

The limitation of arable land for plant- and animal-based food production is another critical factor propelling market growth. With global populations rising and urban areas expanding, air-based foods provide a land-efficient solution, requiring minimal space compared to traditional farming. This makes them particularly appealing in densely populated regions and urban settings where land availability is scarce.

Consumer awareness of alternative proteins is also on the rise, driven by social campaigns and educational initiatives promoting sustainable diets. Air-based foods, which can be incorporated into a wide range of products such as meat substitutes, dairy alternatives, and nutritional supplements, are gaining traction among health-conscious and environmentally aware consumers.

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The air-based foods market is underpinned by cutting-edge biotechnological advancements. The process involves fermentation using extremophiles, which transform CO2 into protein-rich compounds through a combination of water, energy, and microbial activity. Companies like Air Liquide and Solar Foods have led the charge in scaling this technology for commercial applications. Solar Foods' flagship product, Solein, a protein-rich powder, is set to debut in 2023 and is expected to find applications in food and feed industries, from plant-based meat analogs to fortified beverages.

Recent investments underscore the market's potential. In January 2020, Air Liquide secured a US\$ 32 million investment from ADM Ventures, Barclays, and GV (formerly Google Ventures) to advance its fermentation-based meat substitute technology. This funding is enabling the expansion of production capacity and technological refinements, positioning Air Liquide as a market leader. Fact.MR's report provides detailed insights into the price points, sales growth, and production capacities of key manufacturers, highlighting their role in driving market expansion.

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Europe is poised to dominate the global air-based foods market, projected to hold a 46.7% share by 2032. The region's leadership is driven by strong regulatory support for sustainable food systems, high consumer awareness, and significant investments in biotechnology. Countries like Finland, home to Solar Foods, are at the forefront of air-based food innovation, with robust R&D ecosystems and government-backed sustainability initiatives.

The Asia-Pacific region is emerging as a high-growth market, fueled by rapid urbanization, population growth, and increasing environmental pressures. Countries like China and India, facing challenges related to food security and pollution, are exploring air-based foods as a viable solution. The region's market is expected to grow significantly, driven by rising demand for alternative proteins and supportive government policies promoting sustainable agriculture.

North America, while currently a smaller market, is witnessing growing interest due to venture capital investments and consumer demand for eco-friendly food options. The United States, in particular, is a hub for biotech startups exploring air-based food technologies, supported by a strong innovation ecosystem.

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The air-based foods market is segmented by product type, with the protein sub-segment expected to dominate by 2032. Protein-rich air-based foods, such as Solein, are highly sought after for their nutritional value and versatility in applications like meat substitutes, dairy alternatives, and nutritional powders. Other segments, including carbohydrates and lipids, are also gaining traction as manufacturers explore diverse applications to meet consumer needs.

By application, the food industry remains the largest end-use segment, driven by the incorporation of air-based proteins into plant-based products, snacks, and functional foods. The feed industry is another promising area, with air-based proteins offering a sustainable alternative to traditional animal feed, reducing the environmental impact of livestock farming.

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The air-based foods market is characterized by intense innovation and strategic investments. Key players like Air Liquide and Solar Foods are focusing on scaling production, improving product quality, and expanding market reach. These companies are leveraging partnerships with food manufacturers, retailers, and research institutions to accelerate commercialization. Fact.MR's report notes that manufacturers are also exploring speculative technological expansions, such as integrating air-based proteins into 3D-printed foods and personalized nutrition solutions.

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The air-based foods market faces challenges, including high initial production costs and the need for regulatory approvals in various regions. Consumer acceptance of novel foods produced from CO2 also remains a hurdle, requiring robust marketing and education efforts. However, these challenges are outweighed by opportunities, particularly in the long term (2028–2032), as greenhouse gas emissions continue to drive demand for sustainable food solutions.

In the short term (2024–2027), the market will benefit from early adopters and niche applications in premium food products. In the medium term (2027–2030), economies of scale and technological advancements will reduce costs, making air-based foods more accessible

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The air-based foods market is on the cusp of a transformative era, with a projected valuation of US\$ 100 million by 2032. Its ability to address pressing global challenges—carbon emissions, land scarcity, and food security—positions it as a game-changer in the food industry.

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### Food Fiber Market is growing at CAGR of 5.7% by 2034

Food Flavor Market has been forecasted to expand at a CAGR of 4.9% by 2034

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