

Opportunities for Algal, Fungal, Insect Proteins, Cultured Meat and Fermentation-based Proteins North America and Europe 2021 - 2026

INTRODUCTION Uni- and multi-cellular microalgae are rich in proteins (60 to 70% on dsb w/w), and are increasingly explored as an alternative source of protein in many vegetarian products. Algal sources of ingredients are typically viewed with a health halo by many consumers due to the additional nutrients that algae contain. The two main microalgae commercially available are Spirulina and Chlorella.

Mycoprotein has been present on the market as a meat alternative for several decades. However, it has typically been restricted to ready meal applications; principally as captive use by Marlow Foods under the Quorn brand.

Insect protein has been under development for several years, however, restrictions on its use in Europe, combined with questions on its consumer acceptability in markets that do not typically consumer insects has confined its market uptake.

Recent application development of alternative proteins, combined with the rise and rise of the meat-free trend, which received an additional boost from the Covid-19 pandemic, has revitalised interest in these alternative protein ingredients. The opportunities for these ingredients will be explored in depth in the present study.

Giract has been tracking the global market for protein ingredients for many years and has published numerous highly-acclaimed studies on these markets. The current study focuses specifically on algal, myco-, and insect proteins due to the renewed interest in exploring alternative sources of protein ingredients, especially in the light of COVID-19 which caused substantial disruption in the global processed food industry supply chains, and has provided a powerful boost to the meat-free trend. Giract will explore this aspect during the research into this exciting category of proteins.

OBJECTIVES To provide a complete view of supply, demand, and forecasts for algal, myco-, insect and other fermentation-based protein ingredients, and cultured meat in North America and Europe.

This is translated into the following sub-objectives:

- Estimate production of these ingredients by region and manufacturer
- Calculate availability by region: Production + import - export = availability
- Estimate current demand for these alternative proteins by region and application
- Forecast demand for these alternative proteins by region and application
- Derive drivers and challenges for use of these ingredients by region and application

PRODUCTS Microalgae - Spirulina, chlorella, others; Mycoprotein, Insect Protein, Cultured Meat (qualitative information only), Other Fermentation-based Proteins (qualitative information only)

MARKETS North America (USA/Canada), Europe (EU27+UK+NO+CH)

SECTORS Meat Analogs and Fish Analogs, Functional Nutrition (including Supplements, Bars, RTD beverages, Ready to mix powders)

TIMESCALE Current estimates for 2021, forecasts to 2026

PUBLICATION August 2022

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