



Microalgae have the potential to be a sustainable food and feed solution



Microalgae: Potential as a future source of food and feed

The global population is expected to increase by more than 30% over the next 30 years. This leads to an urgent need for increased production of food and feed.

Furthermore, there is a great unmet need to rethink how we allocate our resources in a more sustainable way. Since the last part of the 19th century, the increasing demand for food has been met by intensifying and optimizing agricultural production, using fertilizers and expanding the agricultural area. Currently, the European protein demand is comprised by 65% import and associated with a high environmental footprint including land use and emission of greenhouse gasses.

Microalgae has the potential to become a key part of the solution. Being rich in protein, healthy omega-3 fatty acids (PUFA) and vitamins, algae provide nutritionally complete biomass with a productivity 10-15 times higher than conventional protein crops.

Many microalgae can be produced photosynthetically like plants, utilizing sunlight to fix CO₂, as well

as heterotrophically by uptake of organic carbon. Each approach holds a great potential for future food supply just like both types of cultivation have certain caveats that require more research to solve.

In the project "Microalgae for food production" funded by Danish Food Innovation, a consortium of Danish partners has joint forces to bring the field of sustainable algae production and biomass processing to the next level. Some of the main obstacles limiting the prevalence of microalgae in the food and feed market are addressed, including:

- Optimized protein bioavailability
- Improved sustainability
- Energy efficient harvest
- Strain breeding for improved color and taste

This one-day conference, will provide an overview of the ongoing research and development activities within the fields of algae production and downstream biomass processing on a national as well as international level.



10.00

Welcome to DTI, Introduction to the meeting
Anne Maria Hansen, Innovation Director, Danish Technological Institute

10.10

The current large-scale microalgae business for food and feed
Vitor Verdelho Vieira, Portugal, General Manager at EABA - European Algae Biomass Association

11.00

Microalgae for food
Poul Erik Jensen, Professor, KU-Food

11.30

Microalgae as a new source of omega-3 PUFA, vitamin D and other bioactive compounds
Charlotte Jacobsen, Professor, DTU-Food

12.00

Lunch

13.00

Presentation of the DFI - and IF -Project ReMAPP
Malene Lihme Olsen, Senior Specialist, Danish Technological Institute

13.20

Microalgae ingredients for food application
Christian Kjølby, Co-founder & CSO, NatuRem Bioscience ApS

13.35

Synergetic utilization of fungi and microalgae
Steen A. Brock, CEO, MicoBiota Food

13.50

Microalgae: a future source of animal feed?
Jonatan Dickow, Plant Manager, HAMLET PROTEIN

14.10

Coffee break

14.40

Generic biorefinery
Anne Christine Hastrup, Director, Danish Technological Institute

15.00

Visit to the pilotplant for Microalgae production & the Pilotplant for Biorefining of biomass at Danish Technological Institute including presentation of Vibro™ filtration technology
Henrik Hjelmshark CEO and founder of SANI membranes

15.45

Summing up
Poul Erik Jensen, Professor, KU-Food

Date

November 25th 2020

Place

Teknologisk Institut, konferencesalen
Gregersensvej 1, 2630 Taastrup

Registration

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