

Ruud Peerbooms Corbion Algae Ingredients President

NASF, Aquaculture Feed Summit – June 22, 2022



We unleash the power of Algae fermentation to preserve the planet's limited resources







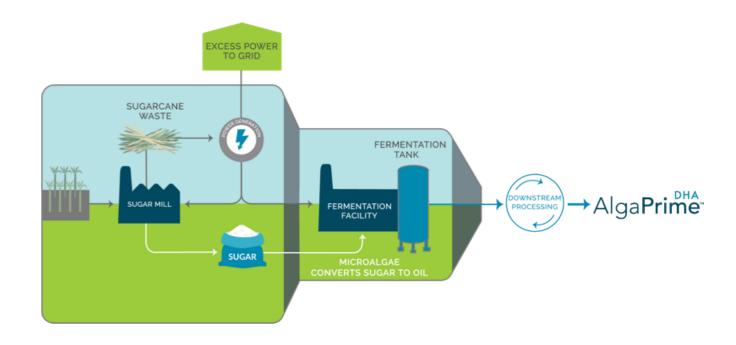


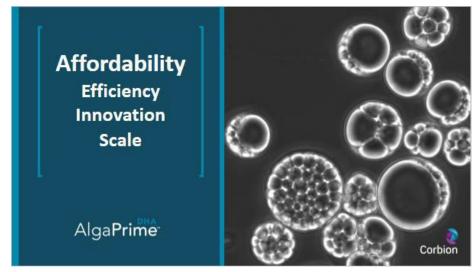


AlgaPrime™ DHA a sustainable & mainstream solution for Aquaculture



## AlgaPrime™ DHA, the sustainable alternative to fish oil, affordable and at scale





NASF, Aquaculture Feed Summit
June 2021



# AlgaPrime™ DHA life cycle analysis peer reviewed and accepted for scientific publication in Algal Research in September 2021

AlgaPrime™ DHA LS carbon footprint per kg of Omega-3s is 31% lower than fish oil

#### ISO 14040/44-compliant



#### Strong collaboration all along the value chain to make AlgaPrime™ DHA an efficient solution



























New product development

Integrated Fermentation process

Regulatory

Sustainability

Partnerships

Nutrition

Application



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## Different AlgaPrime™ DHA products in liquid and powder forms to address diverse market needs

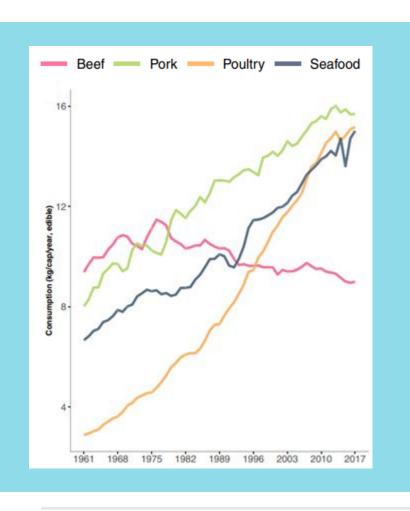






#### **Aquaculture Growth**

Demand for "blue food" is expected to roughly double by 2050





Blue food demand across geographical and temporal scales September 15<sup>th</sup>, 2021

"Numerous studies have focused on the need to expand production of 'blue foods', defined as aquatic foods captured or cultivated in marine and freshwater systems, to meet rising population- and income-driven demand.

We project a near doubling of global fish demand by mid-century assuming continued growth in aquaculture production and constant real prices for fish."

<u>Source: Blue food demand across geographic and temporal scales (nature.com)</u>



#### **Market dynamic**

Although the harvest of Atlantic Salmon grew substantially over the last decade, experts predict a potential slowdown in the coming years

Security of supply and price volatility of feed raw materials

Fish welfare and robustness

Sustainability

Scaling of novel ingredients



#### **Security of Supply**

An Omega-3s solution at scale and affordable allows feed producers to mitigate raw material risks

The war is battering a global food system weakened by covid-19, climate change and an energy shock.

The Economist

Source: The coming food catastrophe | The Economist





#### Fish Welfare & Robustness

Ensuring a healthy diet for the Salmon to boost growth and disease prevention

More salmon than ever before died prematurely in Norwegian aquaculture in 2021.

Norwegian Veterinary Institute, 2021 Fish Health Report

Source: Fish Health Report 2021 (vetinst.no)





#### **Sustainability**

AlgaPrime™ DHA LS carbon footprint per kg of Omega-3s is 31% lower than fish oil

Our climate is our future.
Our future is in our hand.

**IPPC** 

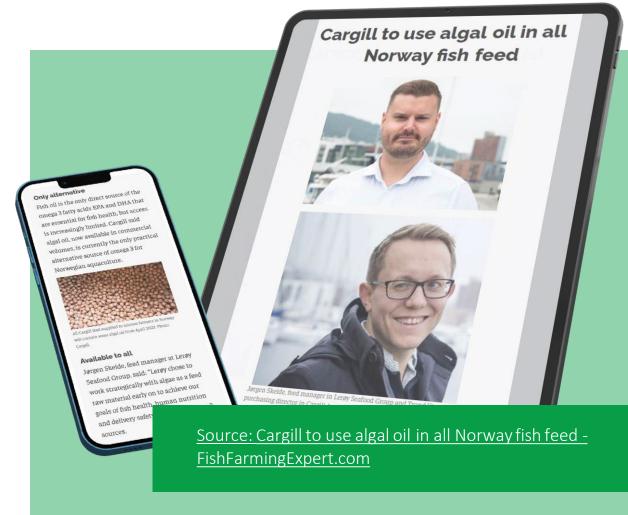
Source: Synthesis Report — IPCC





#### Scaling of Novel Ingredients: Omega-3 as a great alternative to fish oil









#### **Grow through innovation and collaboration**

The most sustainable salmon of the future combining AlgaPrime™ DHA LS and Innovafeed insect-based protein



### In July 2021, Corbion joined leading organizations with the goal of creating the most sustainable salmon of the future

**Research Institute** 





**Funding Industrial Partners** 













MQWI

**Funding Public Body** 





## Grow through innovation and collaboration AlgaPrime™ DHA LS is highly digestible and could be used prior or after extrusion

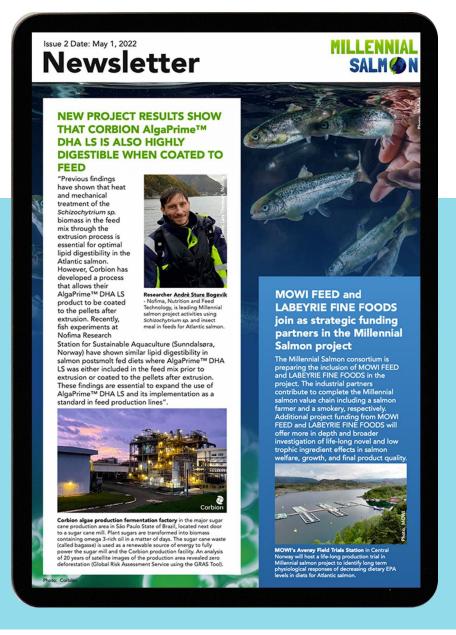
AlgaPrime DHA is highly digestible whether it is included in the feed mix prior to extrusion or coated to the pellets after extrusion.

These findings are essential to expand the use of AlgaPrime<sup>TM</sup> DHA LS and its implementation as a standard in feed production lines.

Nofima



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#### **Grow through innovation and collaboration**

Robust and sustainable salmon based on Alltech organic minerals and AlgaPrime™ DHA



#### Project guidance

Nutritional Innovations – The key to the great welfare changes (Ernæringsmessige Innovasjoner -Nøkkelen til de store VelferdsUtfordringene) - EINVU

14.04.2021









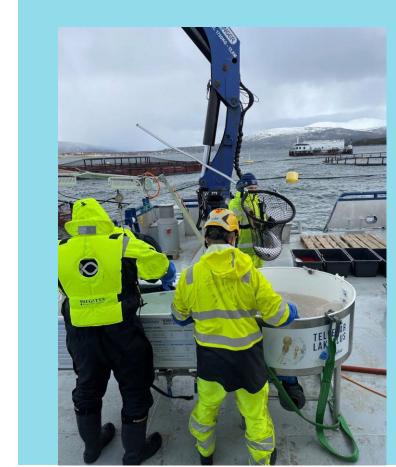
BLON

Salm@Nor

**BioMar** 

X

Salten Aqua





#### **Grow through innovation sustainably**

Leverage Corbion expertise, capabilities and experience

New lactic acid plant and process in Thailand







#### Preserve what matters™

Measure what matters and share the results with customers to help them achieve their own sustainability goals







