

Delivery of Healthy and Sustainable Live Feed for Juvenile Fish

– The **DELIFEED** project

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<https://ecos.au.dk/delifeed/>



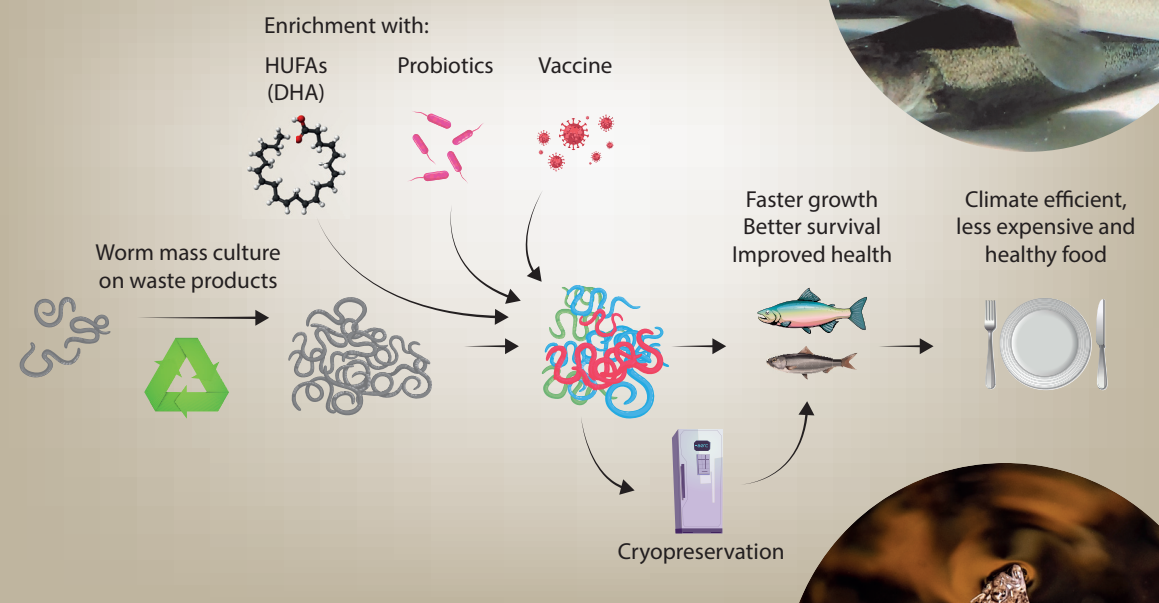
Increased consumption of fish from aquaculture is a key step for a green transition towards a more sustainable food production system. A major bottleneck in aquaculture is the successful development of juvenile fish, which often fails due to the lack of suitable live feed. **The DELIFEED project** aims to address this issue by developing methods for sustainable industrial-scale production of novel, healthy live feed for fish larvae and juveniles.

Our goals are to increase production and revenues in the aquaculture sector and improve animal welfare and environmental sustainability by providing a reliable and sustainable source of health beneficial live feed.

We will:

- use nematodes and white worms as alternatives to replace the widely used but suboptimal Artemia.
- develop cost-efficient methodologies for producing live feeds that meet the proper size and nutritional requirements like omega-3 fatty acids for juvenile fish
- develop technologies to enhance the content of essential omega-3 fatty acids in live feed
- investigate the effects of these new live feeds on the growth, health, and survival of a range of juvenile farmed fish
- explore worms as vectors for probiotic microorganisms and vaccines to improve the robustness and disease resistance of juvenile fish, reducing the need for antibiotics
- establish preservation techniques to ensure long shelf life and stable supplies of live feed

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The outcome of this project will impact society in many positive ways, including, but not limited to, reduced CO₂ emissions, reduced use of antibiotics, protection of marine ecosystems, increased accessibility of sustainable and healthy fish for consumers at reduced costs. The use and upgrading of organic waste products ensure that this new live feed production can be integrated into a circular bioeconomy, promoting a more sustainable food system.

The project consortium consists of complementary research groups (from Aarhus University, DTU Aqua and Aalborg University), the biotechnology company W42, the live feed producers FISHLAB and e-nema, and aquaculture companies Alpha Aqua, Aqua Pri, Skagen Salmon, Venøsund Fisk og Skaldyr, Nordic Halibut og Landbasert Akvakultur Norge AS. The diverse partnership represent the entire value chain and ensures that this project can be taken from research and development to exploitation and commercialization.

