

# Feeding the Future: Sustainable Live Feeds for Aquaculture

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## THE CHALLENGE

Modern aquaculture is the fastest-growing animal food sector – but success in rearing **juvenile fish** is still limited by the **lack of suitable live feed**. Current options are nutritionally suboptimal, expensive to enrich, and poorly digested by young fish. As a **consequence**, the fish productions experience high mortality, poor growth, deformities and early ineffective transition to dry feed.

Sustainable, high-quality, and immune-boosting live feed is a critical missing link in building a robust, antibiotic-free, and environmentally friendly aquaculture industry.



## THE SOLUTION: WORMS THAT WORK

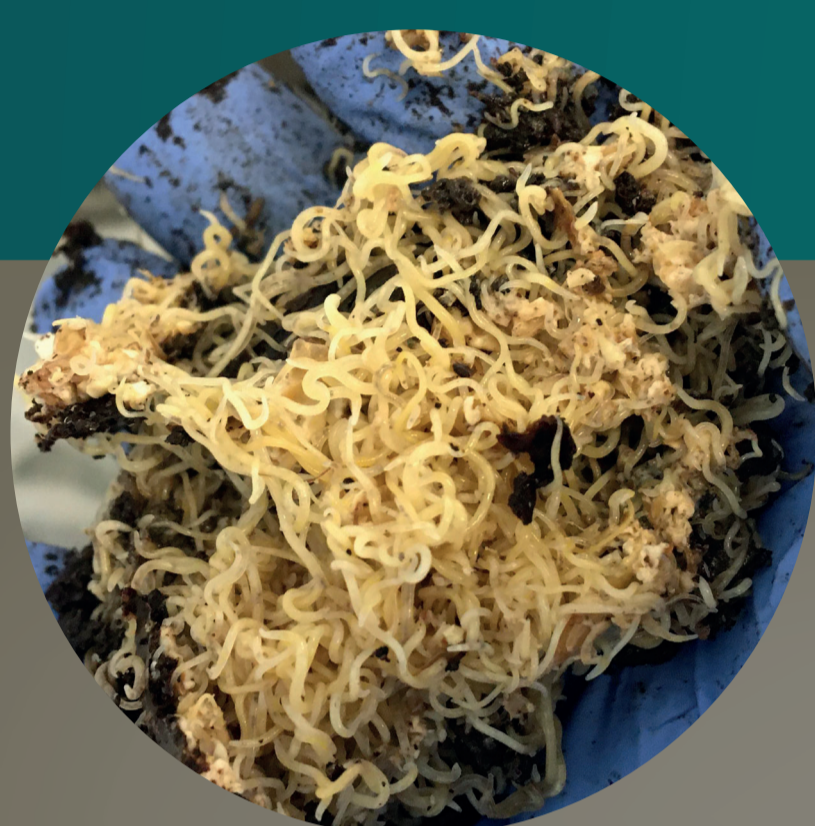
We are developing **next-generation live feeds** using Enchytraeids and nematodes. Their attributes make them great alternatives to current live feeds, offering:

**High nutritional value:** naturally rich in essential fatty acids, no enrichment needed

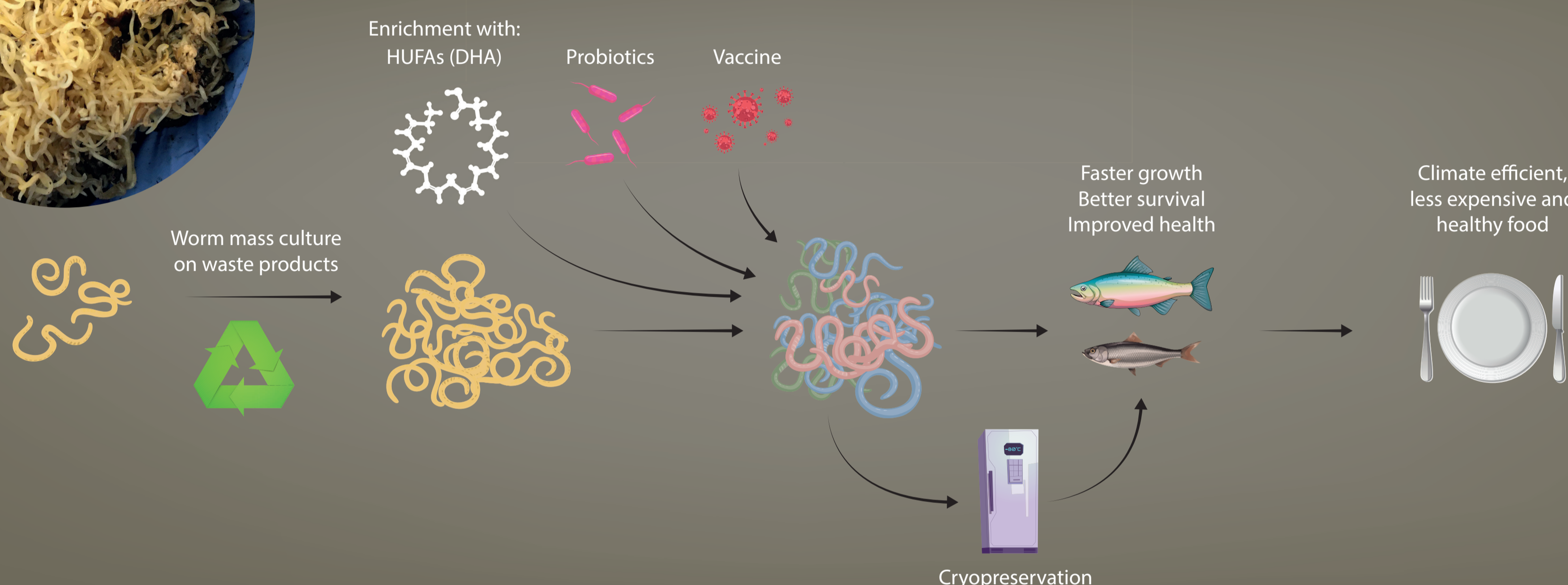
**Enhanced growth:** up to 200% better growth and lower mortality in juvenile fish

**Immune support:** potential vectors for probiotics and oral vaccines

**Stable supply:** cryopreservation and anhydrobiosis enable long-term storage.



### Delivery of Healthy and Sustainable Live Feed for Juvenile Fish



## THE PROJECTS DRIVING CHANGE

### DELIFEED

The core project – *Delivery of Healthy and Sustainable Live Feed for Juvenile Fish* – unites research institutions, biotech innovators, feed producers, and aquaculture companies in Denmark, Norway, and Germany. Together, we aim to:

- Enhance **essential fatty acid** content of Enchytraeids and nematodes
- Enable **long-term storage and global distribution** of ready-to-use live feed by developing industrial cryopreservation
- Evaluate the **suitability of the live feeds** for juvenile Atlantic salmon, Atlantic halibut, ballan wrasse, Pike Perch, Turbot, and European flounder.
- Explore **worms as vectors** for **probiotic** microorganisms and **vaccines**
- Promote **biocircular production** and job creation in the feed sector

### LiveFishHealth

Tackles a specific bottleneck: **Rainbow Trout Fry Syndrome (RTFS)**. In the absence of effective vaccines for early fry stages, we are developing a new disease prevention strategy:

- Enchytraeids as **start feed for organic trout** production
- Early **oral vaccination** against RTFS using white worms as a vector
- Natural immune stimulation, **reducing** disease-related losses and antibiotic treatments.

## WHY IT MATTERS

Our integrated approach will:

- Increase fish survival, growth, and welfare
- Support antibiotic-free, organic, and sustainable aquaculture
- Promote circular economy by reusing organic waste
- Enable farming of new species and higher yields

DELIFEED



LiveFishHealth



Funded by:



Innovation Fund Denmark