COMA

The Scientific Outlook from the Innovations fund Denmark project Copepod egg Mass production in Aquaculture (2013-2017)

Project partners

AKVA GROUP

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With

The Danish National
Advanced Technology Foundation

Why Marine Aquaculture should be On the Rise

- World's freshwater resources are stressed
- Marine species are more valuable than freshwater species for human consumption

Why is Marine Aquaculture then stagnent?

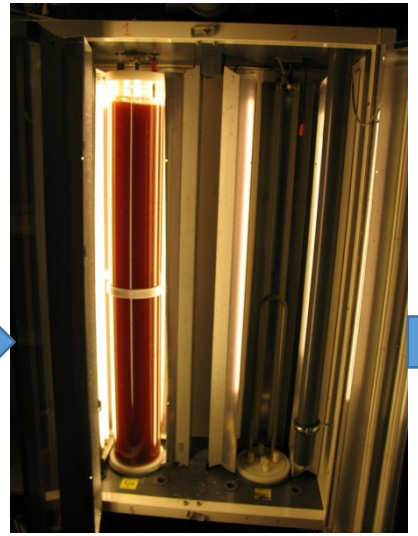
- Bottleneck in supply of fish larvae/fry production
- Live feed (copepods) - 'mothers milk' for marine fish fry

From the concept to the concept

10L alga & 1mill. Copepod eggs per day

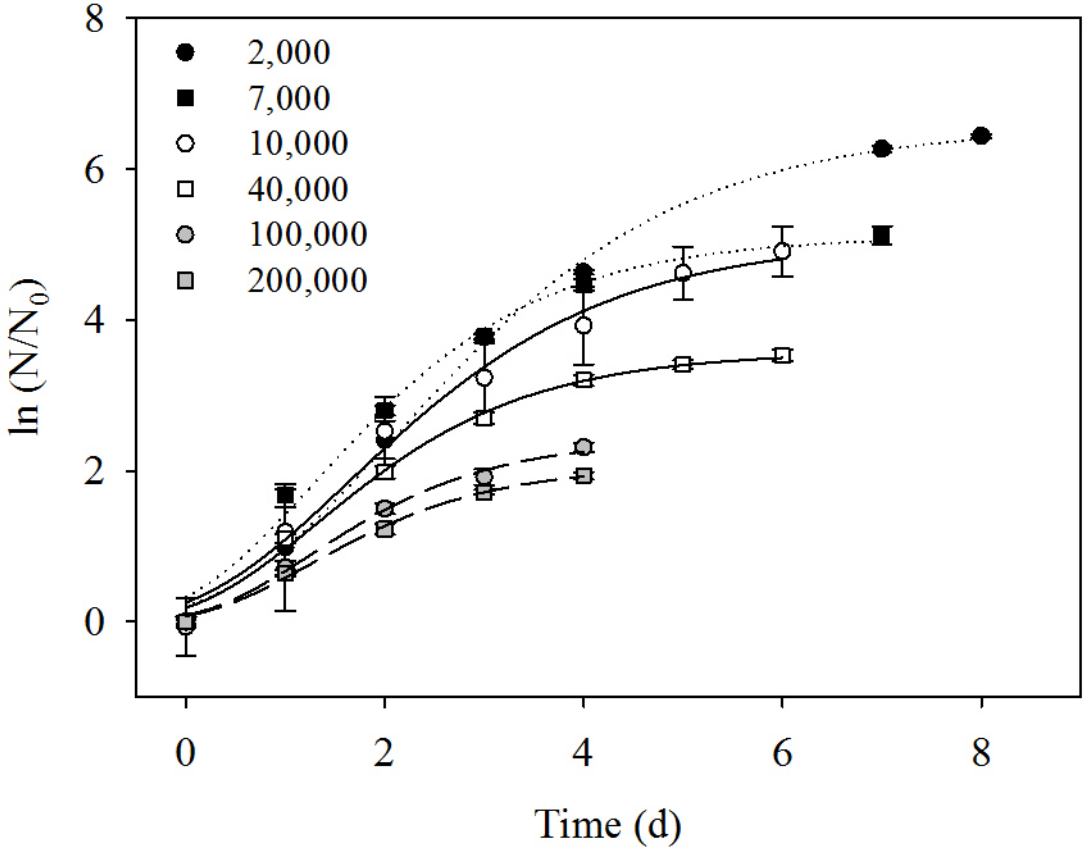
Goal 100million eggs per day!

Alga production - Challenges, from basic physiology to up-scaling:

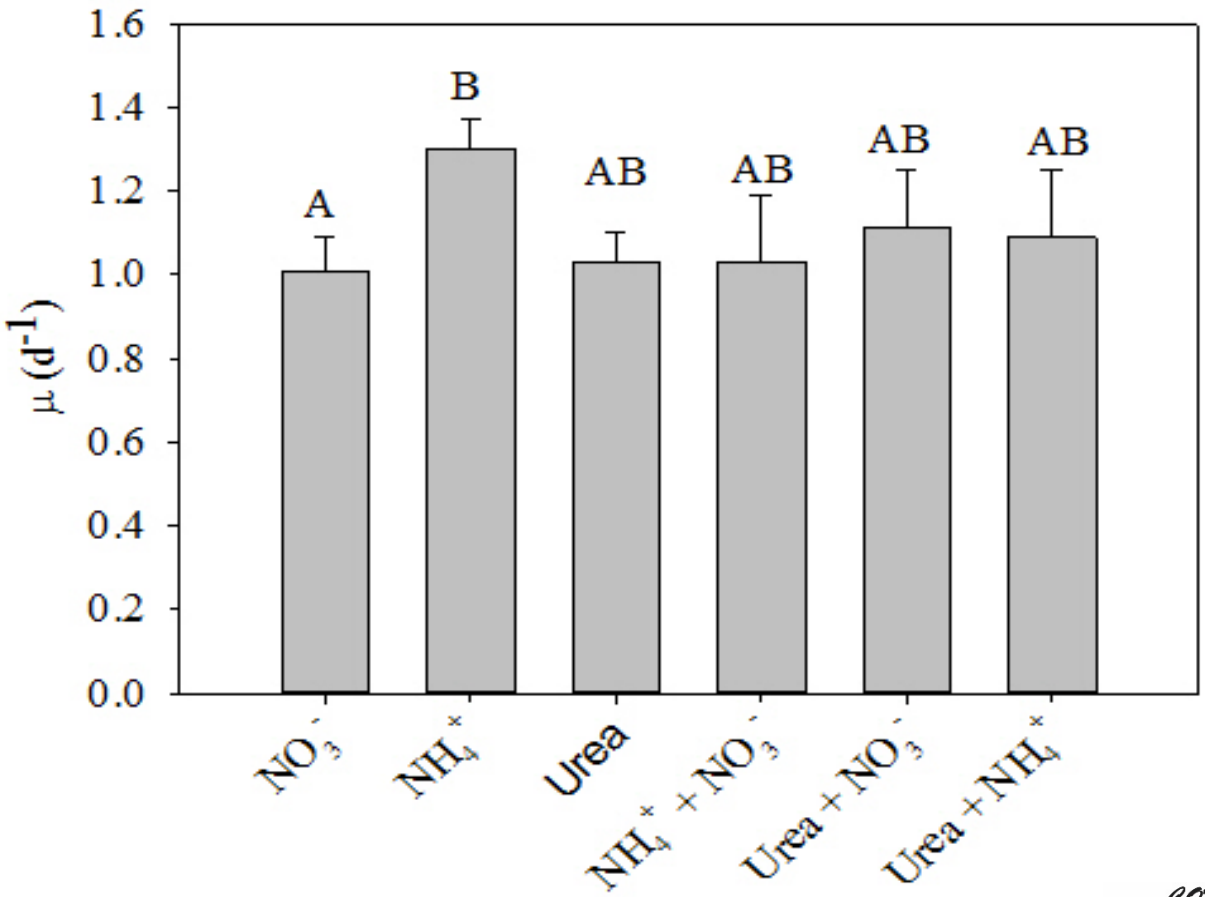


- Microalgae cultivation in large scale - production from 10L to ?L
- How to save time and money – by creating the optimal setup!

Scientific challenges and achievements – Microalgae I

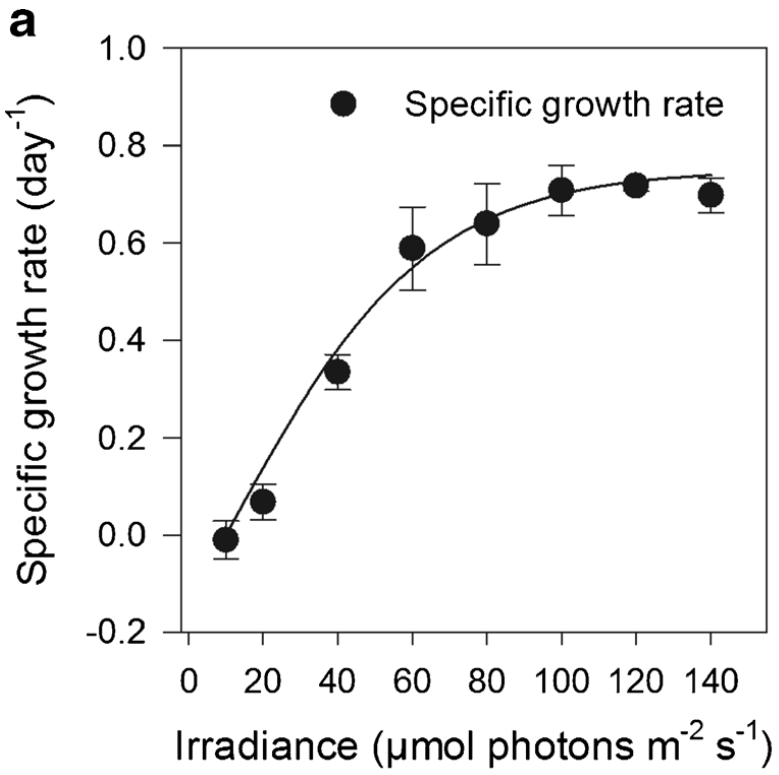


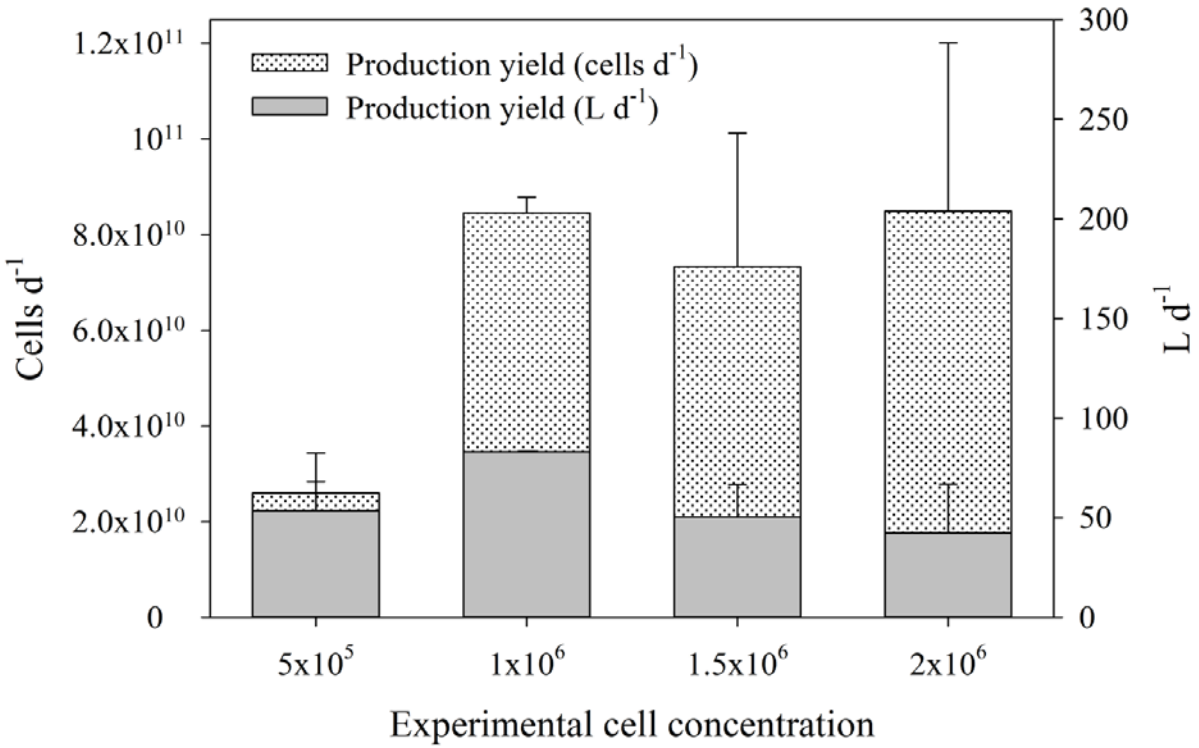
- Inoculum cell density



- Fertilizer

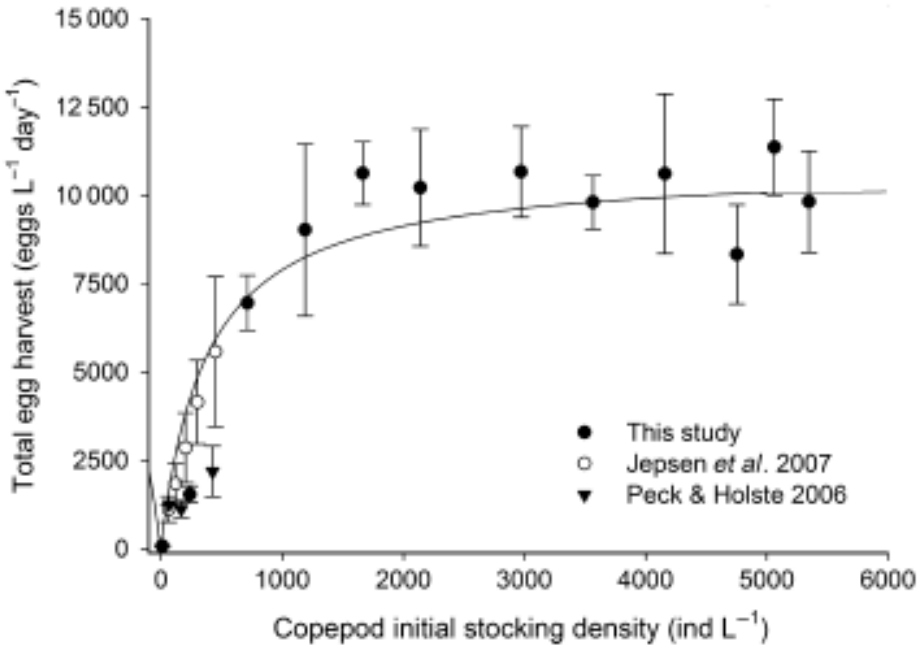
Scientific challenges and achievements – Microalgae II



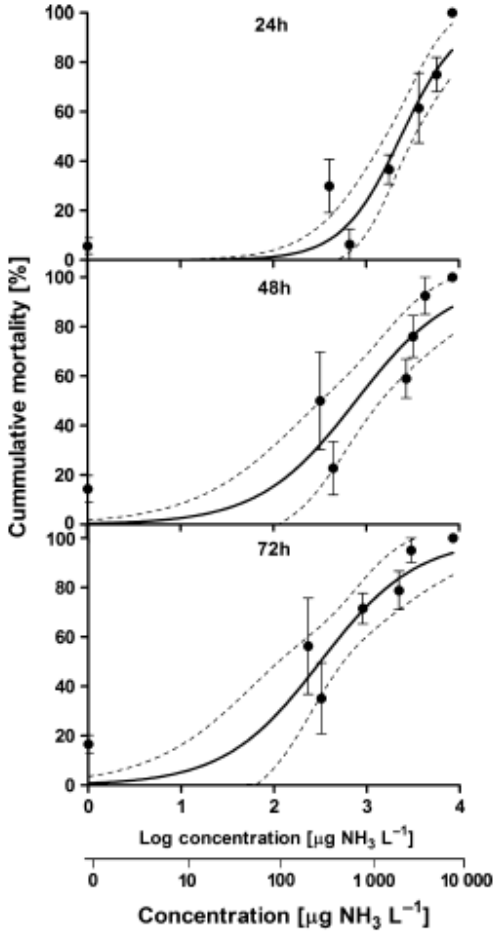


- Optimal Light Intensity
- Optimal cell density

Scientific challenges and achievements – Copepod I

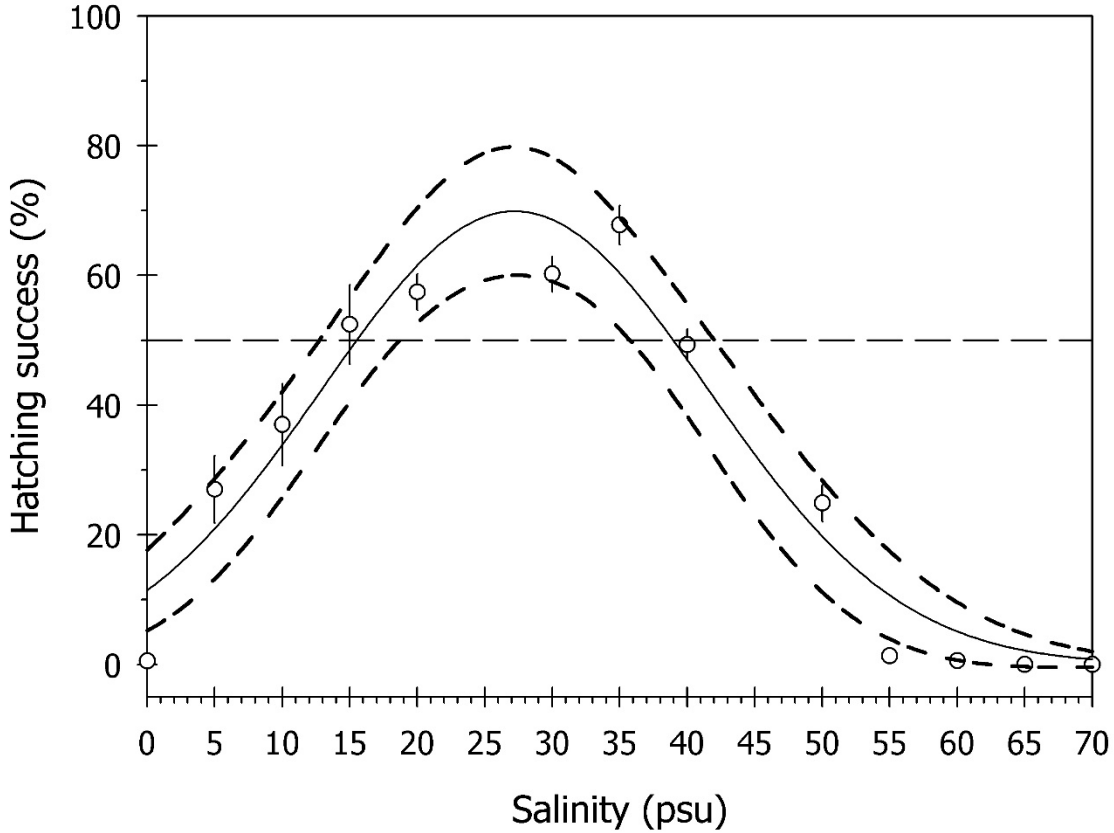


- Optimal Copepod density

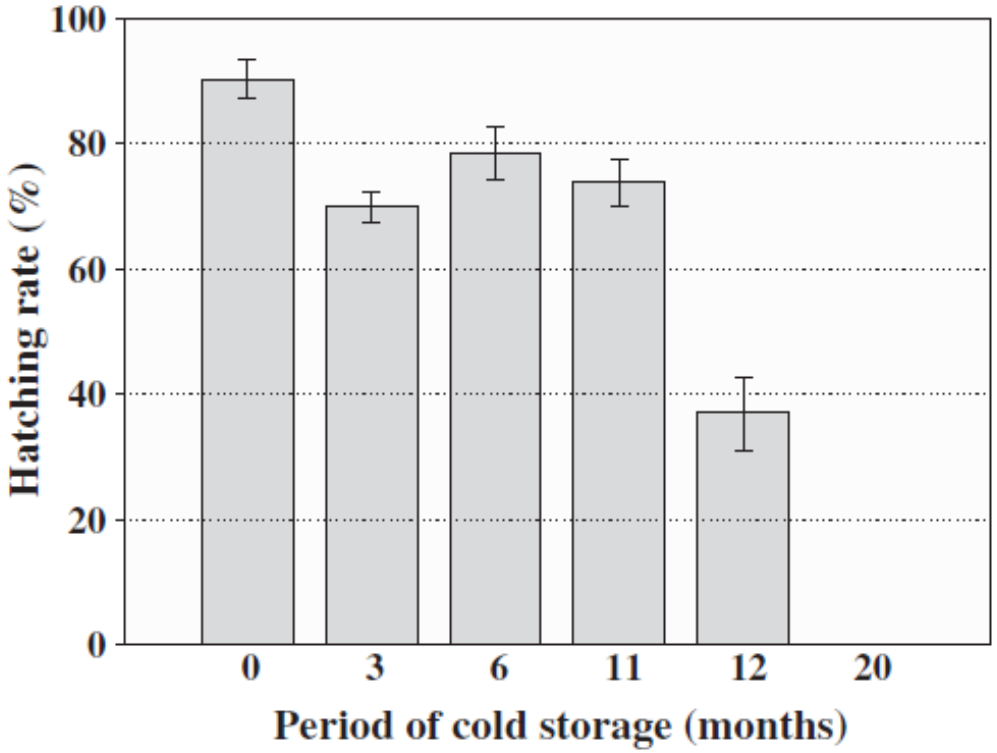


- NH_3 toxicity

Scientific challenges and achievements – Copepod II



- Optimal salinity



- Egg storage period

Summary

- Status on large scale copepod production:
- We manage to cultivate one target species – is it important to include more species?
- We have developed an egg-storage method. However, it can be optimized – we are working on it.
- Development of ’designer feed’ by use of classical breeding principles – we are working on it.
- Fish trials – some done others very welcome