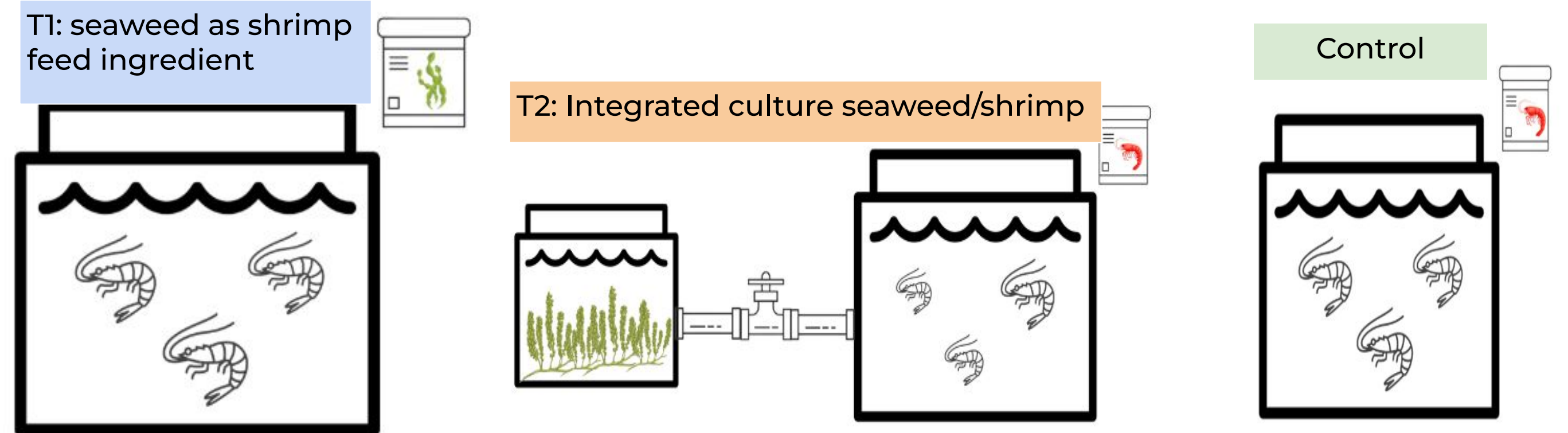


THE EFFECTS OF SEAWEED INTEGRATION INTO RECIRCULATING SHRIMP AQUACULTURE

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Introduction

- 3 recirculating aquaculture systems (RAS)
- 95% water reuse
- Daily water quality monitoring



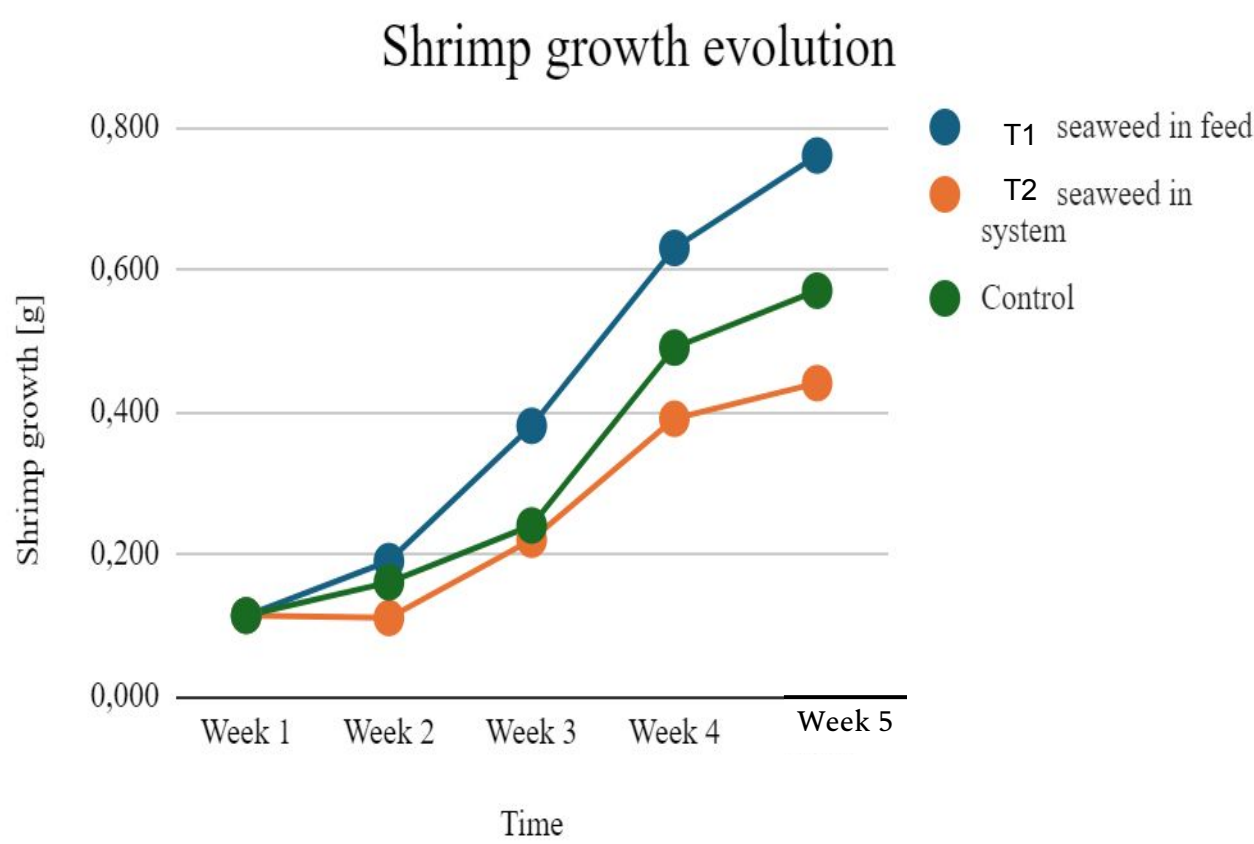
Aim

- Effect of integrated culture of *Caulerpa lentillifera* with shrimp *L. vannamei* in RAS
- Feeding trial to test the nutritional and nutraceutical properties of seaweed and their implications on the shrimp microbiome



Results

Shrimp growth



Shrimp survival @density of 1sh/3L

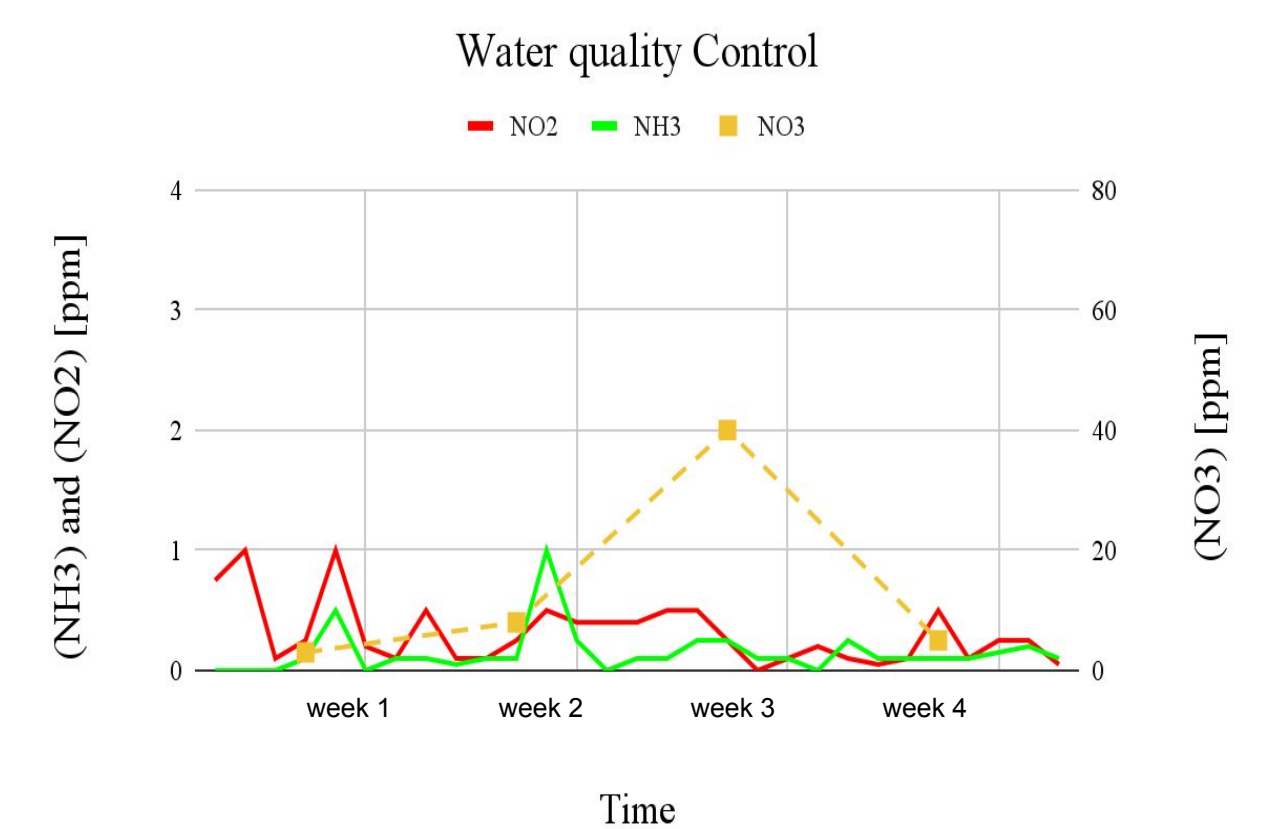
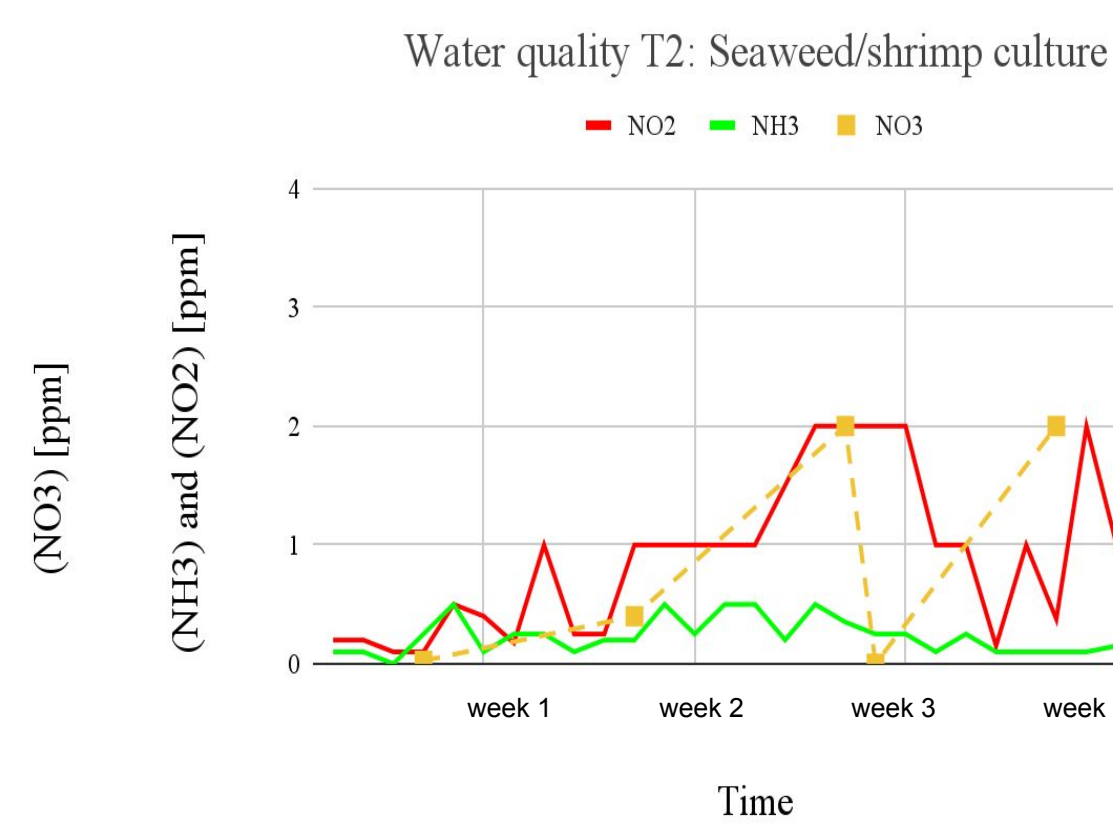
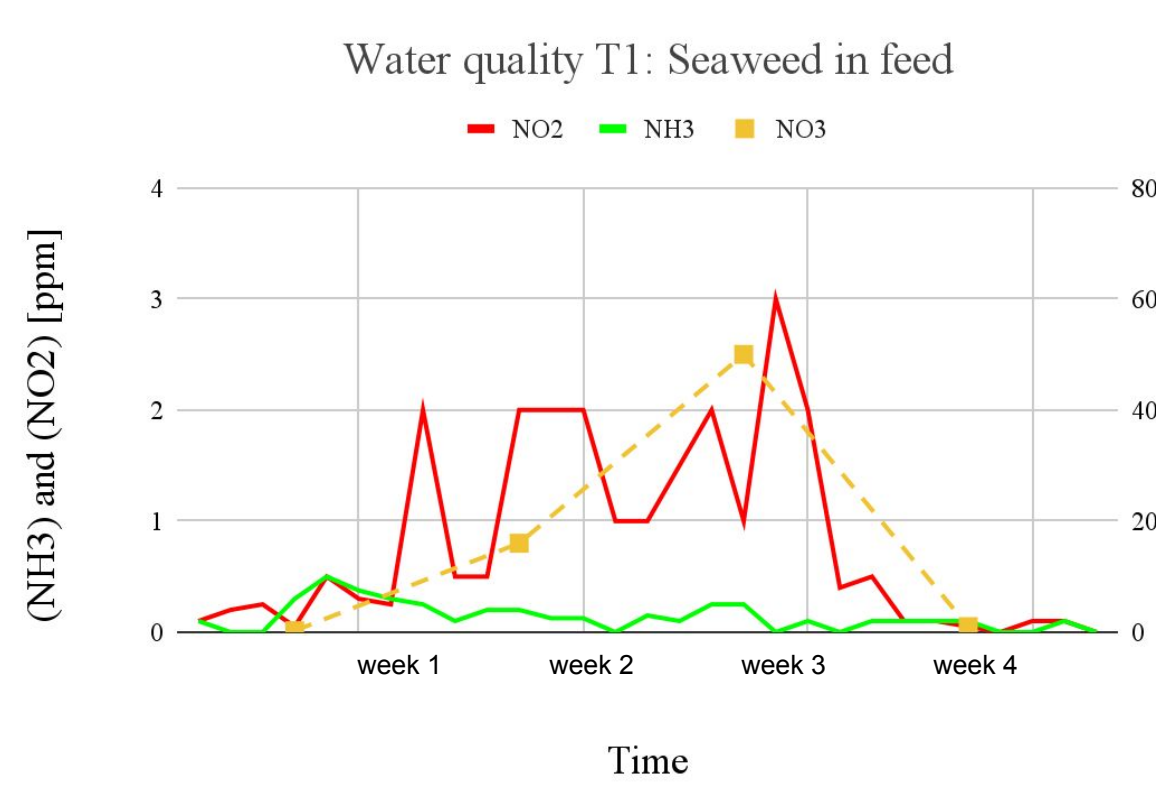
T2: seaweed/shrimp culture	100% survival	Counted end	Survival rate
IMTA Tank 1	965	939	97.31%
IMTA Tank 2	965	706	73.16%
Average			85.23%

T1: seaweed in feed	100% survival	Counted end	Survival rate
Feed Tank 1	131	51	38.93%
Feed Tank 2	131	50	37.31%
Feed Tank 3	131	107	79.85%
Feed Tank 4	131	60	45.80%
Average			50.47%

Caulerpa growth



Water quality



Following steps:

- Analysis of microbiome modulation in shrimp (hepatopancreas and gut)
- Analysis of culture water
- Metagenomics and untargeted metabolomics using the BlueRemediomics Discovery Platform (aided by EMBL) and water analysis using MS to understand the exometabolome (Partners)
- Further analysis of performance data (ZILT)

Hepatopancreas and gut dissection



Culture water sample collection

