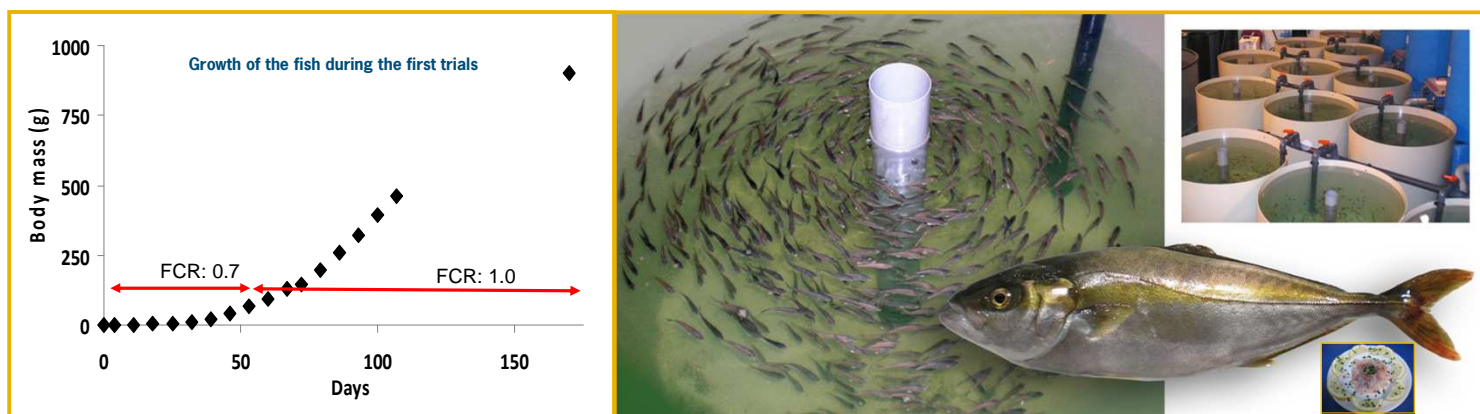


Culture of yellowtail kingfish (*Seriola lalandi*) in RAS

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Conclusions

- First trials show high potential for farming of yellowtail kingfish (*Seriola lalandi*) in RAS for (Dutch) aquaculture.
- Husbandry conditions for temperature, water pH and oxygen concentration were established.
- Commercial grow-out to 3 - 4 kg was successful and product quality was high (taste panel).



Introduction

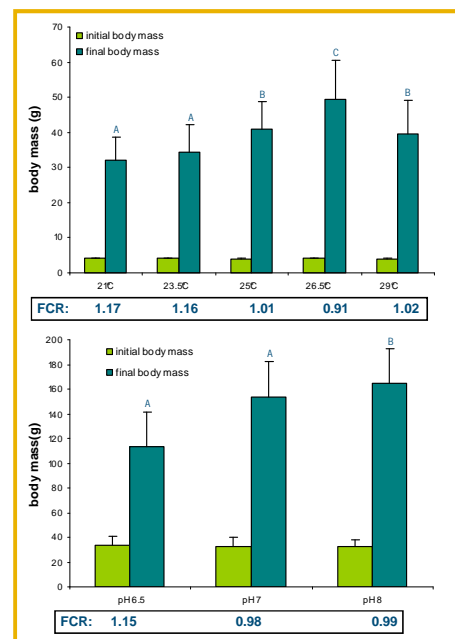
- An inventory was done on culture and reproduction potential and market perspectives for new species for Dutch recirculation aquaculture systems (RAS).
- Yellowtail kingfish was identified as prime species.
- Objective: to optimise on-growing conditions for this species in RAS.

Material and methods

- In RAS, a range of five water temperatures (21 – 29°C) and 3 pH values (6.5 – 7 – 8) were investigated for a period of four weeks.
- Three 800 l tanks were used per experimental group.
- Performance (body mass, FCR, SGR) and physiological parameters (glucose, lactate, osmolality, plasma pH) were analysed.
- In addition, trials in a commercial setting (~60 Kg/m³) were performed.

Results and perspectives

- Physiological data indicate that the fish are not stressed and have a high energy metabolism.
- Trials in a commercial setting revealed adequate performance during on-growing.
- Study with specific diets (different fish meal contents) planned.



Growth of the fish at different temperatures and pH values

Group:	21°C	23.5°C	25°C	26.5°C	29°C	pH 6.5	pH 7	pH 8
Glucose	6.2±0.7 ^b	7.2±1.1 ^a	7.6±0.7 ^{bc}	8.1±0.3 ^a	8.1±0.5 ^a	8.5±0.5 ^b	7.8±1.0 ^{ab}	7.3±1.4 ^a
Lactate	6.9±1.5 ^{bc}	7.9±1.0 ^{bc}	8.5±1.4 ^a	8.7±1.5 ^a	7.7±1.4 ^{bc}	8.4±2.5 ^a	10.8±1.4 ^a	9.8±1.2 ^{ab}
Osmolality	385±11 ^b	390±8 ^{ab}	394±11 ^a	398±6 ^a	392±10 ^{ab}	409±10 ^b	402±4 ^a	397±9 ^a
pH	7.56±0.03	7.58±0.05	7.61±0.07	7.61±0.07	7.58±0.07	7.40±0.09 ^b	7.48±0.04 ^a	7.48±0.04 ^a

Physiological parameters at different temperatures and pH values
Osmolality is expressed in mOsmol/kg, glucose and lactate in mmol/l