

AQUACULTURE IN BELGIUM: AQUA-ERF to investigate species diversification in RAS with specific interest in the *Lota lota* (Linnaeus, 1758)

AQUA-VLAN

Aquaculture Research and Education Group

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Research conducted within the framework of:



Funded by:



The Belgian Aquaculture industry can be described as very small, nevertheless fish consumption is increasing, partially thanks to the positive image fish has as a healthy food source. To be able to respond to this demand, the European Interreg project "AQUAVLAN" has been set up in 2009 to determine which could be the possibilities for an economic viable, sustainable and diversified aquaculture in Flanders and Holland. As a partner in this project, the Flemish University College KaHo Sint-Lieven, is investigating the culture techniques of the burbot (*Lota lota*) in its new Aquaculture Education and Research Facilities (AQUA-ERF).



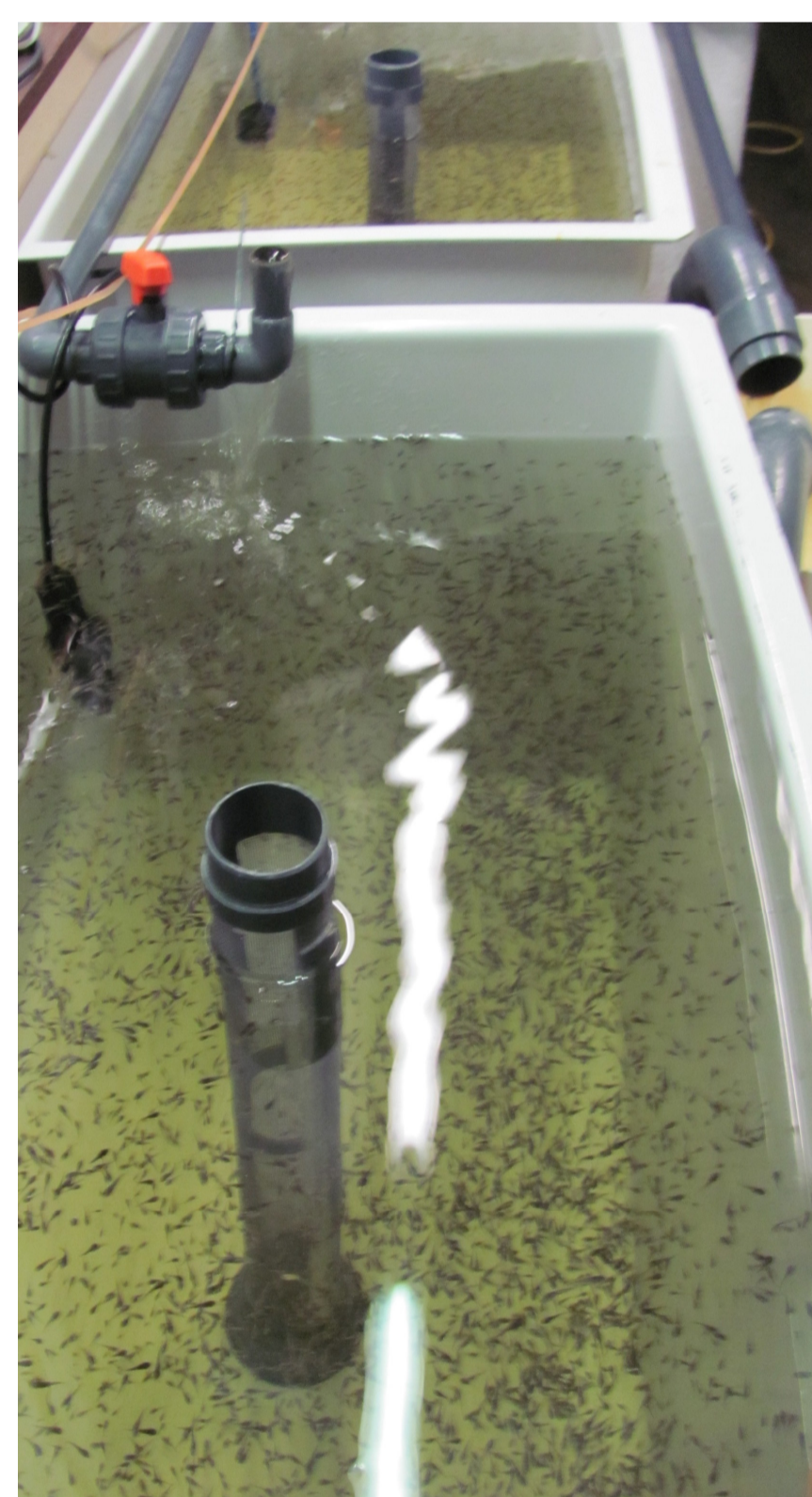
Potential fast growth rate
+ market value
+ local species



IDEAL CANDIDATE BELGIAN AQUACULTURE

The Burbot (*Lota lota*)

- Only fresh water member of the cod family
- Good reputation for tasty white fillet (Scandinavia, East-Europe,...)
- High scores in Flemish taste-panel
- Status Burbot production:
 - Limited production based on pond culture
 - weaning is bottleneck
- Flanders: disappeared from river and table, but restocking programme and aquaculture research



AQUA-ERF

GOAL:

- Education and Formation of students
- Assistance to farmers
- Research to promote Flemish Aquaculture

FACILITIES:

- 5 recirculating aquaculture systems (50m³)
- tanks from 140L to 7m³
- small larval unit



CURRENT BURBOT TRIALS

Larval Weaning trial:

- Larvae (DAF 43) of 15 mm
- Stocking density 32 ind./l
- Trays of 25l in RAS
- Treatment 1: co-feeding during 20 days with Artemia and dry feed
- Treatment 2: immediately on dry feed
- Survival after 20 days: 43% (co-fed) vs. 26%
- Trial will be repeated but with a higher density (150 larvae/l)

Fingerling Weaning trial:

- 1200 Fingerlings between 5-7g
- Stocking density 1,3 ind./l
- 6 tanks of 140l in RAS
- 3 different weaning strategies to gradually replace bloodworms by dry feed:
 - (a) by soaking pellets in bloodworm suspension
 - (b) same as (a) but given as frozen ice-cubes
 - (c) by co-feeding

Temperature/Nutrition trial:

- 600 fish between 22-30g
- 12 tanks, 3 different RAS
- 3 different temperatures (14°C - 16°C - 18°C)
- 4 different commercial feeds (≠CP/CF)

FUTURE OBJECTIVES:

- STANDARDIZATION WEANING PROTOCOL
- OPTIMALIZATION CULTURE CONDITIONS
- REENFORCING SUSTAINABLE AQUACULTURE (water discharge, feeds,...)