

DETERMING FEEDING REGIME AND OPTIMAL DENSITY FOR THE COMMERCIAL
CULTURE OF BURBOT (*Lota lota*, Linnaeus, 1758)

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Targeted as a promising cold water aquaculture candidate, burbot was chosen as the main focus for research at Aqua-ERF to boost Flemish inland aquaculture. The current status of European burbot culture shows a limited production based on pond culture, but as the latter is difficult to realize in Flanders, due to environmental regulations, commercial aquaculture should be performed in RAS. As little is known concerning the grow out of burbot in RAS, Aqua-ERF aims at developing a “burbot production manual” with standardized culture parameters, which will be ascertained by trials and future research.

Previous nutrition and temperature trials at Aqua-ERF have provided starting parameters concerning optimal culture temperature and best performance feed for further investigation.

Increasing stocking density lowers the production cost per fish, but can also lead to a negative impact on fish health. A trial of 15 weeks is ongoing to investigate the effect of five different stocking densities (20-40-60-80-100 fish/140l tank; average bodyweight fish: 62.91 ± 0.18 g). Growth, feed uptake and population variance are monitored and observations of physical lesions and fish behaviour will be analyzed to evaluate the influence on fish welfare.

As burbot is considered a nocturnal predator with an efficient feed digestion, four feeding regimes were tested: continuous and night feeding in combination with daily feeding or feeding every other day. Results could outline the presence of compensatory growth and if this was achieved by increased food consumption or increased digestion efficiency. Besides production parameters, liver and visceral data will be analyzed to monitor any influence of the feeding regime. (starting data: 263 fish/tank; average bodyweight fish: 49.62 ± 0.05 g).

The results of these experiments, which could contribute to further burbot domestication, will be presented and discussed at the presentation.

Keywords: burbot, fish health, nocturnal feeding, RAS