

EFFECT OF EARLY WEANING AND CO-FEEDING IN BURBOT LARVICULTURE

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Introduction: Burbot (*Lota lota*) is a cold water fish species that has already shown its potential for aquaculture. However the long Artemia feeding-period during larval stage is an impediment for further development of burbot aquaculture as it makes the activity laborious and more expensive. A new commercial feed was given within an adapted feeding technique to assure feed availability in the water column.

Aims: This study wants to investigate the possibility of earlier weaning in burbot and the difference between co-feeding and direct weaning during larval production.

Materials and Methods: Burbot larvae of 50 days after hatching (DAH50) were stocked at random at a density of 37.5 larvae per liter over twelve experimental eight liter zugler-bottles connected to a recirculating aquaculture system. Four weaning protocols were applied in triplicate. At the start of the trial all larvae were fed with enriched Artemia instar II. For three treatments (DW55, DW63, DW70) Artemia feeding was stopped immediately on respectively DAH55, DAH63 and DAH70 and larvae were given artificial larval feed (Otohime, 250-360µm). For treatment CF63 Artemia gift was reduced to the half while the other half of the daily feed ratio consisted out of artificial dry feed and this from DAH63 on till DAH70 when full feed ratio only consisted out of artificial dry feed. Water temperature was maintained around 16°C during experimental rearing and this under constant light conditions. Fifteen larvae per bottle were collected on four specific dates during the trial to measure length, wet and dry weight. Mortality was recorded every day.

Results: Longer Artemia feeding period resulted in larger larvae. Survival rate was above 70% for CF63, DW63 and DW70, while this was much lower for DW55 (52%).

Conclusion: The small differences found between treatments with and without co-feeding shows that earlier weaning without co-feeding could be possible and may be economically interesting. This study also indicates that working with feed that is made available in the water column and not only on the surface improves production parameters in burbot larviculture.

Keywords: *Burbot, larvae, Lota lota, weaning*