

Improved survival and growth performances with stocking density manipulation and shelter availability in bagrid catfish *Mystus nemurus* (Cuvier & Valenciennes 1840) larvae

Abstract

Manipulation of stocking densities (10, 20, 30, 40 and 50 larvae L⁻¹), each with or without the presence of shelter was conducted to determine the effects on survival, cannibalism and growth performances of larval bagrid catfish *Mystus nemurus* (Valenciennes 1840) from 2 to 14 days after hatching. This study revealed that stocking density significantly affected survival, cannibalism, total length, feed intake, specific growth rate and final weight of bagrid catfish larvae. Significantly higher survival was observed at moderate stocking density of more than 20 but less than 50 larvae L⁻¹. Survival was significantly low beyond this threshold and was the lowest at 10 larvae L⁻¹, coincides with the highest cannibalism. Total length, feed intake, specific growth rate and final weight were significantly higher at 10 larvae L⁻¹. Shelter significantly improved total length and feed intake. No significant effects of stocking density and shelter were observed on the apparent feed conversion ratio and coefficient of variation. There was also no significant interaction between stocking density and shelter in all parameters. This study suggests that bagrid catfish larvae could be cultured at more than 20 but less than 50 larvae L⁻¹ with the availability of shelter for optimal larviculture condition.