# EFFECTS OF DIFFERENT DIETS ON THE GROWTH AND SURVIVAL RATE OF RIVER CATFISH, (*MYSTUS NEMURUS*, LARVAE)

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## Introduction

River catfish, *Mystus nemurus* is a species distributing mainly in freshwater rivers and reservoirs of Malaysia, Singapore, Thailand, Indonesia, Vietnam and Cambodia. *Mystus nemurus* becomes an important species for fisheries and aquaculture for years in some countries such as Malaysia (Ismail, 1994; Ang, 1996) Indonesia and Thailand. Some aspects on growth-out of catfish were studied by Khan et al. (1990; 1996). Artificial reproduction of this species was also reported in Thailand and Malaysia (Thalathiah et al. 1989). Although reproduction of this species was commercially practised somewhere in these countries, literature on larval rearing of *Mystus nemurus* was limited. This present study was conducted in order to evaluate the effects of different diets on the growth and survival of *Mystus nemurus* larvae in rearing.

## Materials and Methods

Catfish, *Mystus nemurus* cultured in ponds were used as the broodstocks for artificial spawning induction using OVAPRIM at a dose of 0.25 ml/fish for the first injection and 0.15 ml/fish for the second injection at 7 hours after the first. Two experiments on larval rearing of this fish by weight and their survival. with different diets were conducted with 3 replications for each. Experiment I: Larvae from 0 to 14 days old were fed with Artemia nauplii, custard plus moina, custard along and artificial feed powder for comparison of their growth in total length and body weight and their survival. Larvae were fed twice a day. Larvae were stocked in 18-m3 fibreglass tanks at a density of 300ind./tank Experiment II: larvae from 14 to 42 days old were fed with artificial feed powder, cow liver, fish and dried tubifex worms. Rearing tanks were the same with that of the first experiment, and stocking density was 70 ind./tank. Larvae were sampled weekly with 5 ind./tank. Duration for the experiment was 4 weeks.

## Results and Discussion

Experiment I: The results showed that *Artemia nauplii* gave the best results of larvae with total length of 22.52 ± 0.22 mm, body weight of 0.119 ± 0.010 g and survival rate of 96.89 ± 1.34%; followed by custard plus moina with total length of 19.97 ± 1.02 mm, body weight of 0.088 ± 0.020 g and survival rate of 76.22 ± 7.53 %, after two weeks of culture. Experiment II. After 4 weeks of culture, artificial feed gave the bests results of larvae with total length of 49.47 ± 2.10 mm, body weight of 1.254 ± 0.231 g and survival rate of 90.95 ± 4.36%. Fish gave better results in survival rate of larvae with 90.48 ± 0.83% than cow liver with 71.43 ± 10.00%. However, larvae fed with fish grew slower than one fed with cow liver. Dried tubifex worms gave the lowest results in the growth and survival rates of larvae.

## Conclusions

*Artemia nauplii* was found as the best feed for larvae of catfish from 0 to 14 days old in term of their growth and survival. Artificial feed gave the best results in the growth and survival of larvae from 14 to 42 days old.

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