Brooder rearing of small-scale mud carp, *Cirrhinus microlepis* (Sauvage, 1878) with different commercial feeds

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ABSTRACT

Three commercial feeds, sinking fish feed (25% protein), marine shrimp feed (38% protein) and marine shrimp brooder feed (54% protein), were compared to determine the most suitable feed for rearing brooder of small scale mudcarp, *Cirrhinus microlepis*. The results on the percentages of mature fish were not significantly difference among the treatments. No male brooders spermiated when stripping and the percentages of mature female brooders were 24.8, 25.5 and 29.2 %, respectively.

KEYWORDS : *Cirrhinus microlepis*, brooder rearing

INTRODUCTION

Small-scale mud carp (*Cirrhinus microlepis*) is a high value indigenous Mekong fish species. The species is distributed throughout the Lower Mekong Basin i.e. Lao PDR, Thailand, Cambodia and Viet Nam. The Aquaculture of Indigenous Mekong Fish Species (AIMS) Component, Mekong River Commission, Fisheries Programme, has selected *C. microlepis* as one of several target species for aquaculture development research. Breeding of wild broodstock of *C. microlepis* has been done successfully in Lao PDR , but attempts to breed *C. microlepis* kept in captivity have not been very successful. One of the problems is unpredictable and variable reproductive performance. Improved broodstock nutrition and feeding may improve not only egg and sperm quality but also seed production. This study was conducted to determine the effect of three different diets on maturation in *C. microlepis* brooders.

MATERIALS AND METHODS

The experiment was carried out in one 3,200 m^2 earthen pond in the Udon Thani Inland Fisheries Research and Development Center from March - August 2005 for a period of 6 months. Nine pens sized 320 m^2 were made using polyethylene nets. 7-year-old brooders were stocked at the rate of 8 fishes per pen. Three different diets were utilized, sinking fish feed (25% protein), marine shrimp feed (38% protein) and marine shrimp brooder feed (54% protein). The fish were fed once a day at 1.5 % of body weight. The maturity condition was checked every two week from mid of May to end of August.

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RESULTS AND DISCUSSION

There was no significant difference *(P*>0.05) between diets and maturity condition. Males did not give any sperm after a soft stripping but, internally, the testis was normally developed. Females with big and soft belly were also examined the maturity status (24.8 - 29.2 % of maturation female in all treatments). The diameter of the eggs were 1.2 – 1.6 mm.

Table 1. *Comparison of three feeds*

	T1 (25% Protein)	T2 (38 % Protein)	T3 (54 % Protein)
Body Weight (Kg.)	1.4 – 2.6	1.4 – 2.7	1.4 – 2.5
Female Maturation (%)	24.8	25.5	29.2
Male Maturation (%)	0	0	0
Spawning Season	Mid of Jun. – Mid of Jul.	Mid of Jun.– Mid of Jul.	Mid of Jun. – Mid of Jul.

The three different diets tested here did not affect maturity of *C. microlepis* brooders. The pellet feed contains 25-30 % protein can be used for brooder rearing. The fish was able to produce eggs and sperms under pen condition but in the spawning season males would be mature later than female . The spawning period of farmed stocks starts from June to July , the same period of wild fish in the Mekong (Gorda 2001).

REFERENCES

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