

Biological performance of Asian catfish (*Clarias batrachus*) (Teleostei, Clariidae) cultured in recirculating aquaculture system.

ABSTRACT

The study was conducted to assess the biological performance of Asian catfish in RAS by using 4 tanks (3 culture tanks and 1 sedimentation tank) measuring 2 m x 1 m x 0.60 m with a volume of 900 liters and bio-filter as water purification unit. The numbers of catfish cultured in each tank were as many as 300 fish in each tank, with a size of 5-8 cm (Tank 1), 8-12 cm (Tank 2) and 12-15 cm (Tank 3), respectively. This study was conducted for 30 days (August-September 2010) by considering the water quality during experiment, indicates that the RAS are able to provide proper conditions for growth and survival of catfish with a survival rate more than 92% on all tank experiments with specific growth rate from 0.64 to 0.89% per day and feed conversion rate of about 0.18-0.27. The existence of the impurities from the fish waste directly influences water quality, but the decline of water quality still at a decent level for the culture of catfish. The ANOVA test to the biological performance and water quality showed that the difference in the size of fish in each tank has no significant influence between each other.

Keyword: Recirculating aquaculture system (RAS); Asian catfish; Water quality; Growth parameters