ABSTRACT

THE UTILIZATION OF Azolla sp. ON DIFFERENT RECIRCULATION SYSTEMS IN THE CULTURE OF AFRICAN CATHFISH (Clarias gariepinus)

BY

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African catfish is one of freshwater fish that have been cultured commercially in Indonesia, but is still hampered by poor water quality. Azolla sp. and recirculation system were techniques that were tested to improve water quality. The aims of this study were to determine the effect of the Azolla sp. on different recirculation systems on water quality, SR, and the growth of African catfish. The design used the combination of treatments between Azolla sp. (with Azolla sp. and without Azolla sp.) and recirculation system (with water exchange and without water exchange). Combination of the treatments are: A. recirculation system without water exchange and with Azolla sp., B. recirculation system with water exchange and with Azolla sp., C. recirculation system without water exchange and without Azolla sp., D. recirculation system with water exchange and without Azolla sp., every treatments was replicated three times. Parameters were observed during the study included water quality (temperature, DO, pH, and NH3), SR and daily growth rate. The results showed that the use of Azolla sp. on different recirculation systems can be decreasing and neutralizing pH, increasing SR and increasing daily growth rate. Based on the observation, treatment B (recirculation system with water exchange and with Azolla sp.) was the best treatment with 97.8% of SR and a daily growth rate of 0.20 grams / day.

Keyword: African catfish, Azolla sp., recirculation system, water quality, daily growth rates