

عنوان مقاله:

Estimation of ammonia excretion rates during a period of red tilapia, *Oreochromis sp.* Culture, considering biomass increase in a water recirculating system

محل انتشار:

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تعداد صفحات اصل مقاله: 13

نویسندگان:

G.R. Rafiei

C.R. Saad

M.S. Kamarudi

M.R. Ismail

S.M.H. Alavi

خلاصه مقاله:

A completely randomized experimental design was conducted to estimate ammonia excretion rate by red tilapia (*Oreochromis sp.*) during different stages of its growth in recirculating water system units typically designed to meet the experiment purposes. Eight weight groups each containing 75 individuals of 20, 30, 40, 60, 80, 120, 180 and 200g average weight were considered as treatments in duplicates. The rate of ammonia excretion by each fish group was measured during a 24-hr period. The data was extended to estimate total ammonia excreted by a group of red tilapia during a 115-day culture period (20-200g). The mean daily ammonia excretion rate was significantly different between treatments ($p < 0.05$). These rates were 34.06 ± 1.23 , 32.56 ± 3.28 , 27.06 ± 0.87 , 17.46 ± 2.19 , 12.54 ± 1.30 , 12.48 ± 1.41 , 7.87 ± 1.82 and 5.83 ± 0.19 mg kg fish⁻¹ h⁻¹ for 20, 30, 40, 60, 80, 120, 180 and 200 g fed fish, respectively. It was estimated that on average 39.4% of input feed nitrogen excreted as ammonia-N during the culture period. Results of this study well addressed the regime of ammonia production in different stage of red tilapia growth in a recirculating water system

کلمات کلیدی:

Body weight, Ammonia excretion, Red tilapia, Recirculating water system

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