



Effect of Different Salinity Levels of Lake Qaroun Water on Growth Performance, Feed Utilization and Histological Changes on Liver and Gills of Rabbitfish Juvenile (*Siganusrivulatus*)

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Abstract : This study was carried out to determine the optimum salinity level on growth of rabbit fish juvenile (*Siganusrivulatus*) and clear the effect of pollution in Lake Qaroun water on its liver and gills. This work was begun at 15/8/2015 and ended 12/11/2015 for 90 days. The average initial weight (W_1) of investigated juvenile was 0.948 ± 0.124 g. This trial was consisted of four treatments for four of different water salinity levels from Lake Qaroun. The first treatment, juvenile was reared in Lake Qaroun water have salinity (33 part per thousand ppt), second (25 ppt), third (15 ppt) and fourth (5 ppt). The juvenile was fed twice daily on diet have 36.44% CP, the feeding rate was 5% of fish body weight, the water exchange rate was 500 liter every two days and juvenile were stocked at 40 fish/ m^3 (120 fish/ pond). The results showed that, the highest final weight (W_2), total weight gain (TG) and average daily gain (ADG) were found of juvenile that reared in Qaroun Lake water (first treatment) and these parameters did not significantly differ with the other treatments. Also, the best feed conversion ratio (FCR) and feed conversion efficiency (FCE) were found with juvenile that reared in Qaroun Lake water (first treatment), followed by the treatment with 25ppt. whereas, histological studies was evident that severe damage of hepatocytes and gills with both high and low salinity was found as result of Lake Qaroun pollution and fish resistance of osmoregulatory stress in low salinity water. But osmoregulatory stress was more negatively effect on growth rate than Lake Qaroun water condition.

Key words: Rabbitfish, Lake Qaroun, Salinity, Histological and Pollution

Mohamed Fathy Aid Abdel-Aziz / International Journal of ChemTech Research, 2017, 10(5): 479-494.
