Effect of stocking density and water exchange period on growth performance, feed utilization and body chemical composition on Rabbitfish

ton) and lakes (75 ton) according to (GAFRD, 2014). In previous years, lake Qaroun was developed by rabbitfish fry and appeared the first production in 2010 and reached this production about (1 ton), a maximum rabbitfish production of lake Qaroun about 5ton obtained in 2012, (GAFRD, 2014).

Because stocking density is the most important factor affecting intensive fish

nitrites, in the water will increase. The accumulation of these metabolites has been reported to negatively affect the performance of cultured fish. Therefore, frequent total or partial water exchange and/or aeration will become necessary (El-Sayed, 2006).

In general, a little information is available on this subject. Continuous water exchange generally sustains the good quality of culture water, while low or zero water exchange may reduce the quality of the water. In addition, at a very high water flow rate, the fish spend a substantial amount of dietary energy for continuous swimming, leading to reduced growth and increased mortality (El-Sayed *et al*., 2005). At a low

The first trial: Effect of stocking density

This trial was one way began 15/8/2015 and ended 26/11/2015, (103 days). Average initial weight (W_1) of juvenile was 0.948±0.124 g, initial average length (L_1) was 3.97 cm ± 0.200and initial condition index (CI_i) 1.51 gcm^{-3}.Itwas conducted to investigate the optimum stocking rate of rabbitfish juvenile.

Experimental hapas

Effect of stocking density on growth performance *S. rivulatus* **under laboratory condition**

tested. Ebrahimi *et al.* (2010) and Hardy and Audet (1990) reported that density was not affected on growth rate in giant gourami (*Osphronemus goramy*

Effect of stocking density on growth performance *S. rivulatus*

Effect of stocking density on growth performance *S. rivulatus*

Table (7) cleared that, the third treatment T3 (water exchange every three days) was the best in all treatments in the growth performance param5ters

period of water exchange. Moisture (M), drymatter (DM), crudeprotein (CP), etherextract (EE), ashcontents and grossenergy (GE, Kcal/g) of fish who lebody significantly differed at level (0.05) between the treatments. The (T1) had the highest (CP) followed by the (T2, T3 and T4 respectively).Despite the insignificant differences between the (T3, T4 and T2) in (EE) and (GE, Kcal/g), the (T3) had the highest (EE) and (GE, Kcal/g) followed by (T4 and T2) while the (T1) had the lowest (EE) and (GE, Kcal/g). The (T1) was the highest in ash while the lowest ash was noticed in the (T3) without any significant differences in ash content between these treatments.

Table 9: Effect of water exchange period on body chemical composition and energy content (on DM basis) of whole body rabbitfish (*Siganus rivulatus*) juvenile.

Items	**Start**	**Treatments (water exchange at rate 50% of water volume)**	**SED***

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