عنوان مقاله:

Research Article: Effects of dietary protein levels on growth performance, amino and Fatty acids of juvenile sandfish, (Holothuria scabra (Jaeger, ۱۸۳۳

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خلاصه مقاله:

The experiment was carried out for ۱۲۰ days to determine the optimal dietary protein requirement for the growth of sandfish, Holothuria scabra. The experiment used ۱۲ plastic containers sized ۵۹×۴۷×۳۷ cm, and each container stocked ۳۰ individual hatchery-produced sandfish juveniles (initial weight= ۲.۷۰±۰.۰۱ g). Experimental diets with different levels of protein, i.e., ۱۰% (A), ۲۰% (B), and ۳۰% (C) as a treatment; it was as dry pellet with ۳ mm diameters. Sandfish were fed with experimental diets once in the afternoon at ۲ % biomass. Results of the experiment showed that sandfish fed a ۲۰% protein diet has the highest final weight (۵.۱۰±۰.۰۲ g), specific growth rate (SGR; ۰.۵۳±۰.۰۱ % day-۱), and feed efficieny (FE; ۶۲.۴۸±۰.۱۳) and is significantly different compared to other treatments ($p<۰.۰۵$). On the other hand, feeding with different dietary protein levels did not influence the survival rate greatly ($p>۰.۰۵$), ranging from ۸۵.۰۰-۹۵.۸۳%. The total amino acid content of sandfish juveniles in treatment B was highest (۶.۶۲%) and followed by C (۶.۲۷%) and A (۴.۷۵%). Likewise, the highest fatty acid content was also found in treatment B (۰.۴۴۰%) followed by treatments A and C of ۰.۴۱۶%; ۰.۳۳۲% respectively. Results of the present study found the best feed was treatment B at ۲۰ % protein content. Moreover, based on statistical analyses, it is suggested that dietary protein requirement for maximum growth of juvenile sandfish is ۱۶%.

کلمات کلیدی:

Amino acid, Fatty acid, Growth, Protein level, Sandfish