Effects of Supplemental Lysine and Methionine on Growth Performance and Survival Rates of Persian Sturgeon (Acipenser persicus) Fingerlings

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Abstract

The current study was conducted to evaluate the effects of dietary supplementation of lysine and/or methionine on growth performance and survival rates in Persian sturgeon (Acipenser persicus) fingerlings reared under culture conditions in Iran for fifty days from 15 June 2011 to 6 August 2011. Experimental fish were fed five practical diets supplemented with 0 (as a control diet), 1 and 3% of lysine and methionine in a 2×2 factorial design experiment. The experimental groups were fed in triplicate. A total of 360 A. persicus fingerlings with an average weight of 1.8 ± 0.3 g (mean±SD) and an average total length of 7.1 ± 2 (mean±SD) cm were randomly allocated to eighteen 50-L aerated tanks (20 fish in each tank) with flow rate of about 0.2 l/min. The results indicated that there were significant differences in growth performance among treatment. Maximum weight gain (10.1± 2.5 g), body weight increase (461.9±138.6 %) and special growth rate (10.7± 0.7%) occurred at 3% dietary methionine and lysine. But the survival rates were not significantly affected by dietary lysine and methionine levels.

Keywords: Acipenser persicus, Methionine, Lysine, Nutrition, Growth, Feed Conversion Ratio.