Effect of Melamine in Feed on Growth, Survival Rate, Feed Conversion Ratio and Pathological Changes in Black Tiger Shrimp

(Peneaus monodon Fabricius, 1798)

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Abstract

Effects of melamine added in feed on growth, survival rate, feed conversion ratio and histopathological changes in black tiger shrimp (Peneaus monodon) were studied. Four experiment diets containing melamine at 0, 5, 50 and 500 mg/kg diet were fed three times daily to the shrimp with initial average body weight of 3.62 – 3.65 g in three replication in 500 liters concrete tanks for 11 weeks. At termination, results showed that the percentage weight gain of the shrimps in treatment 1, 2, 3 and 4 were 168.43 ± 9.67, 168.12 ± 4.92, 163.44 ± 5.91 and 157.45 ± 9.89 %, respectively, and were not statistically differences (P>0.05). The average survival rate of the shrimp in treatment 4 that was 85.00 ± 5.19 % was not significantly different (P>0.05) from that (94.00 ± 5.19 %) of the shrimp in treatment 3, but significantly different (P<0.05) from those (100.00 and 97.00 ± 5.19 %) of the shrimp in treatment 1 and 2, respectively. While the average feed conversion ratios of the shrimp in treatment 3 and 4 those were 3.83 ± 0.82 and 4.16 ± 0.86, respectively, were not significantly different (P>0.05) from that (3.25 ± 0.22 ) of the shrimp in treatment 2, but higher than that (1.88 ± 0.16) of the shrimp in treatment 1 significantly (P<0.05). However, no histopathological changes were found in the antennal gland, muscle and hepatopancreatic tissue of the shrimps in all 4 treatments.

Keywords : melamine, black tiger shrimp, survival rate, feed conversion ratio, pathology

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