

عنوان مقاله:

Effects of aflatoxin B₁ on growth performance, health indices, phagocytic activity and histopathological alteration in *Fenneropenaeus indicus*

محل انتشار:

مجله علوم شیلات ایران، دوره 12، شماره 2 (سال: 1392)

تعداد صفحات اصل مقاله: 0

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خلاصه مقاله:

Mycotoxins contamination of feedstuff for aquatic animals is common in regions with humid tropical conditions. In this study Indian white shrimp, *Fenneropenaeus indicus*, (11.79 ± 1.76 g) were fed with diets containing 0, 20, 50, 100, 200, 400, 800 and 1600 ppb levels of aflatoxin B₁ (AFLB₁) for 8 weeks. Final weight, aflatoxin B₁ residue (2-week intervals), Total Hemocyte Count (THC), Total Plasma Protein (TPP), Phagocytic Activity (PA), Survival rate (4-week intervals) were determined. Histopathological alterations in hepatopancreas, midgut and muscle tissues were studied at the end of 4 and 8 weeks. Shrimps fed with the 1600, 800 and 400 ppb concentrations of AFLB₁ exhibited slow growth, and more reddish discoloration disseminated over the body at 4th week. Growth parameters, survival rate and health indices (THC, TPP) of *F. indicus*, are affected by the different doses of AFLB₁ in diets. At the end of 8th week, doses of AFLB₁ in the diets showed negative correlation to final weight, survival rate, THC and TPP ($r = -0.312, -0.603, -0.237$ and -0.649 at $P < 0.001$, respectively). Moreover, significant histopathological alterations in the hepatopancreas, midgut and muscle tissues of exposed shrimps to different levels of AFLB₁ were observed and these alterations are obviously (indicated by changes in the health indexes (THC and TPP

کلمات کلیدی:

Aflatoxin B₁, *Fenneropenaeus indicus*, growth performance, health indices, histopathological alteration

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