

عنوان مقاله:

Research Article: Effects of bacterial probiotics interventions on acute hepatopancreatic necrosis disease (AHPND) in shrimp: A meta-analysis

محل انتشار:

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خلاصه مقاله:

Acute hepatopancreatic necrosis disease (AHPND), caused by *Vibrio* spp., is a new farmed penaeid shrimp bacterial disease. Several strains of *Vibrio* parahaemolyticus were identified as the etiological agent of AHPND. Probiotics are low-cost, non-pathogenic, and largely non-toxic source that have antibacterial functions and applications. According to the outbreak of AHPND in the south of Iran, it is necessary to conduct a meta-analysis to determine the effect of the bacterial strains in different studies on AHPND. The present meta-analysis was conducted to summarize the current evidence on the effects of probiotics on AHPND under laboratory conditions. The objectives of this meta-analysis were to quantitatively review the responses of shrimp to probiotic interventions to determine the effect of different treatment on reducing mortality during the outbreak of AHPND and evaluating the specific growth rate (SGR) and feed conversion ratio (FCR). According to the results, probiotic administration via water & feed and, via water more than spray on, or mix to feed, have been affected on survival rate (SR) to prevention of AHPND, and mono-strain probiotics were better than multi-strain probiotic in order to decrease mortality. To study design to evaluate the effects of probiotic on SR, SGR and FCR, longer experiments (60 days) are better, for evaluating the effect of the probiotics, and mono-strain probiotics increased SR more than multi-strain probiotics, after challenge with *V. parahaemolyticus*. gram positive and spore-forming bacteria showed greater improvement in SGR and FCR, but greater improvement in SR were observed in gram positive and non-spore forming bacteria.

کلمات کلیدی:

Shrimp, Probiotic, Acute Hepatopancreatic Necrosis Disease, Early mortality syndrome, Meta-analysis

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