Probiotic administration of Litopenaeus vannamei: is there any negative effect on the fatty acid profile of the meat?

ABSTRACT

It has been found that appropriate probiotic applications increased growth performance and disease resistance in shrimp. Bacillus subtilis has been suggested as a potent probiotic in improving growth performance and enhancing immune response in white shrimp, Litopenaeus vannamei. The aim of this work was to evaluate the possible effect of B. subtilis administration on the meat fatty acid profile of white shrimp, L. vannamei. Two groups of shrimps received B. subtilis strains L10 and G1 from the B. subtilis-supplemented feed (10^5 and 10^8 CFU g^-1) while two other groups received it from the rearing water (10^5 and 10^8 CFU ml^-1). One group received no B. subtilis and served as control. According to the results, there was no significant difference between the muscle fatty acid profiles of shrimps administrated by probiotic and control group. This study showed that B. subtilis administration, in either diets or water, did not have any negative effect on fatty acid profiles of L. vannamei meat.

Keyword: Probiotic; Fatty acid; Litopenaeus vannamei; Nutrition