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研究简报

微生态制剂改善对虾养殖池塘底质的效果

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摘要 研究了在117 d的养殖周期中微生态制剂对南美白对虾池塘底质的改良效果.结果表明，与对照组相比，施用微生态制剂可使底质中总氮、总磷和硫化物的含量显著下降；总菌数量无显著变化，而芽孢杆菌、氨化细菌以及硫氧化细菌、硫还原细菌、弧菌数量差异显著，其中弧菌数量在施用微生态制剂处理和对照条件下分别为3.65×10^3 cfu·g^{-1}和1.16×10^5 cfu·g^{-1}.表明施用微生态制剂可以减少氮、磷、硫等营养物质的积累，改善池塘底质的菌相，为南美白对虾的健康养殖提供良好的池塘底质环境.

关键词 微生态制剂 南美白对虾 底质 细菌

分类号

Effects of probiotics on Penaeus vannamei pond sediments

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Abstract

This paper studied the effects of probiotics on the sediment of *Penaeus annamei* pond during 117 days of culture period. The results showed that probiotics application significantly decreased the concentrations of total nitrogen, total phosphorous, and sulfide in sediment, but no significant difference was observed in total plate count (TPC) of microbes between treated and control ponds. The final average presumptive vibrio count (PVC) of treated pond sediment (3.65×10^3 cfu·g^{-1}) was significantly lower than that of the control (1.16×10^5 cfu·g^{-1}), while the average number of BS (*Bacillus*), AB (ammonifying bacteria), PSOB (presumptive sulphur oxidizing bacteria) and SRB (sulphur reducing bacteria) in treated pond sediment was higher than that of the control. These data showed that probiotics could decrease the nutrients (nitrogen, phosphate and sulfur) accumulation and improve the composition of bacterial populations in pond sediment, and thus, supply a good sediment environment for the healthily culture of the shrimp.

Key words Probiotics *Penaeus vannamei* Sediment Bacteria

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