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Feeding efficiency on whiteleg shrimp (*Litopenaeus vannamei*) with marine microalga, (*Arthrospira platensis*) as a feed additives

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The effect of powder mixed feed adding marine microalga, Arthrospria platensis was conducted to investigate the survival, growth and physiological response of whiteleg shrimp, *Litopenaeus vannamei*. The purpose of this study is to develop a natural source of food replacing antibiotics in feed. The addition amount of spirulina was set at treatment groups (low: 0.1%, high: 1.0%) and control (0.0%) in this experiment. After feeding during six weeks, the effect of spirulina as a feed additives was analyzed as growth, survival, feed efficiency, nonspecific immunity and resistant disease on whiteleg shrimp. There were significantly showed the difference between treatment groups (low and high) and control on growth, survival and feed efficiency. The results of blood analysis indicated the glucose contents higher in low treatment (0.1%) than in other groups. In addition, the content of triglyceride was showed more in treatment groups (low and high) than in control group. As a result of nonspecific immunological index analysis, antiprotease inhibition was also significantly higher in the spirulina supplemented groups than in the control group. However, the results on lysozyme, PO, SOD and resistant disease did not reveal a trend or significant difference between all treatment and control groups. The results of this study suggest that spirulina as a feed additives may increase the growth, feed efficiency and the nonspecific immunity when added to the whiteleg Litopenaeus vannamei mixed diet. And the optimal amount of spirulina was estimated to be around 0.1%.

Biography

Tae Seob Choi has completed his PhD from Chonnam National University in Gwangju, Korea and Postdoctoral studies from Department of Environmental Science, University of Technology, Sydney, Australia. He is the Director of Environmental Business in NeoEnBiz Co., Ltd. He has published more than 20 papers in reputed journals and numerous presentations at relevant conferences. He also has been serving as a Board Member of relevant National R&D Committee.

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