Blood Hematological and Biochemical Parameters of Osteochilus vittatus with Spirulina platensis Supplementation in Biofloc System

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Abstract	Spirulina platensis is a microalgae that contains nutrients such us iron and phycocianin higher than other microalgae. Research on suplementation of S. platensis in Osteochilus vittatus cultured in biofloc system has never been done. The aim of this study was to determine the blood hematological and biochemical parameters of O. vittatus fed with S. platensis supplementation and maintained in biofloc system. The study was conducted experimentally with Completely Randomized Design, four treatments and five replications. O. vittatus were fed with S. platensis level 0, 2, 4, and 6 g.kg-1 for 56 days. Blood hematological and biochemical parameters were measured on days 0 and 56. Values of those parameters were then analyzed using ANOVA with a confidence level of 95%. The result showed that the highest red blood cells, white blood cells, and hemoglobin counts were 1.57x106ÅfÅ,ÅÅfÅfÅ,ÅÅfÅ,ÅÅfÅ,ÅÅfÅ,ÅÅfÅ,ÅÅ cell.mm-3, 2.37x105 cell.mm-3, and 6.77 g.dl-1 respectivley, while the highest hematocrit value was 17.5 %. The highest total protein, albumin, and globulin in blood were 7.96 g.dL-1, 4.31 g.dL-1, and 3.79 g.dL-1 respectively, and the best for ratio A/G was 1.14. S. platensis suplementation level of 4g.kg-1 feed was the most optimum level (P<0.05). Cultivation of fish with S. platensis supplementation in feed can increase fish health indicated by the hematological and biochemical parameters of the blood and the fish maintenance in biofloc systems can improve water quality. The benefit of this research is to make a good condition for cultivation and efficiently used not only water but also feed.
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