

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

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Abstract	<p><i>Spirulina platensis</i> is a microalgae that contains nutrients such as iron and phycocyanin higher than other microalgae. Research on supplementation of <i>S. platensis</i> in <i>Osteochilus vittatus</i> cultured in biofloc system has never been done. The aim of this study was to determine the blood hematological and biochemical parameters of <i>O. vittatus</i> fed with <i>S. platensis</i> supplementation and maintained in biofloc system. The study was conducted experimentally with Completely Randomized Design, four treatments and five replications. <i>O. vittatus</i> were fed with <i>S. platensis</i> 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 1.57x10⁶ cell.mm⁻³, 2.37x10⁵ cell.mm⁻³, and 6.77 g.dl⁻¹ respectively, 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. <i>S. platensis</i> supplementation level of 4g.kg⁻¹ feed was the most optimum level (P<0.05). Cultivation of fish with <i>S. platensis</i> 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.</p>
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