



Effect of Dietary Supplementation of *Spirulina platensis* on the Growth and Haematology of the Catfish *Clarias gariepinus*

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Abstract:

The effect of feeding *Spirulina platensis* on the growth and haematological parameters of the Nile catfish; *Clarias gariepinus* exposed to food shortage stress were investigated. *S. platensis* was added to the basal diet at 0.0, 1.25, 2.5 and 5.0 g *Spirulina* /kg diet and fed for two months to the Nile catfish. Our results showed that the final fish weight, weight gain and specific growth rate of *C. gariepinus* fed on the experimental diets were not significantly different ($p > 0.05$). The fish fed on *Spirulina* diets exhibited higher RBCs counts, WBCs counts, haemoglobin and haematocrit levels as compared with stressed fish and control. The feeding dietary *Spirulina* resulted in significant decreases in mean cell volume, mean cell haemoglobin and neutrophils, while, the mean cell haemoglobin concentration was not affected. The platelets and monocytes were increased with *Spirulina* levels increase. A significant decrease in eosinophils and small lymphocytes were observed in the fish treated with *Spirulina*, however, the large lymphocytes were increased. The percentage of altered erythrocytes of fish treated with *Spirulina* was significantly decreased in comparison to stressed fish and control. We can conclude that *Spirulina* supplementation is promising for improving the haematological parameters in *Clarias gariepinus*, as immun-inducer and growth factor in food ingredients for fish feeding

Keywords:

Spirulina platensis; *Clarias gariepinus*; growth performance; haematology.

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