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Performance of *Clarias gariepinus* (Burchell) fed solid state fermented groundnut (*Arachis hypogea*) shell supplemented diets

Sogbesan Olukayode Amos and Ekundayo Taiye Michael
Modibbo Adama University of Technology, Nigeria

This research study was carried out to evaluate the effect of feeding fermented groundnut shell supplementary diet on the biochemical performances of *Clarias gariepinus* fingerlings. Semi flow through consist of 15 plastic bowls were used and 10 *Clarias gariepinus* fingerlings (mean weight 3.00 ± 0.05 g) per plastic bowl, each in triplicate. Five treatment bowls were fed experimental diets containing 40.00% crude protein supplemented with fermented groundnut shells. Diet one- unfermented groundnut shell (control diet), diet two- 12 hours fermented groundnut shell without potash, diets three, four and five- fermented groundnut shells with potash at fermentation time of 12, 24, and 48 hours respectively. Data generated were subjected to ANOVA at $p < 0.05$. The results of the experiment showed that the best feed conversion ratio (FCR) was also recorded in fish fed diet five (0.43). Results showed that there were increase in the blood parameters of *Clarias gariepinus* fed fermented groundnut shell supplemented diets compared to the control diet but were statistically different ($p < 0.05$). Highest packed cell volume of 22.23%, white blood cell 15.50×10^3 , red blood cell 9.35×10^6 and haemoglobin 10.35 g/dl were recorded in fish fed diet five. All blood parameters obtained were between the ranges of recommended fish blood. It is concluded that using fermented groundnut shell as supplementary feed on *Clarias gariepinus* shows a slight increase in the hematological parameters compared with the control diet but it has no negative effect on the health status of the studied fish. However, diet five can be used as feed in aquaculture to enhance fish health, survival and growth performance.

Biography

Sogbesan Olukayode Amos has completed his PhD from University of Ibadan, Nigeria in 2007 and Post-doctoral studies from Central Institute of Freshwater Aquaculture, Bhubaneswar, India in 2012. He is a Senior Lecturer and immediate past Head of Department of Fisheries at Modibbo Adama University of Technology, Yola. He has more than 50 peer reviewed journals to his credit and he is an Editorial Board Member of reputed journals.

sokayfish@mautech.edu.ng

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