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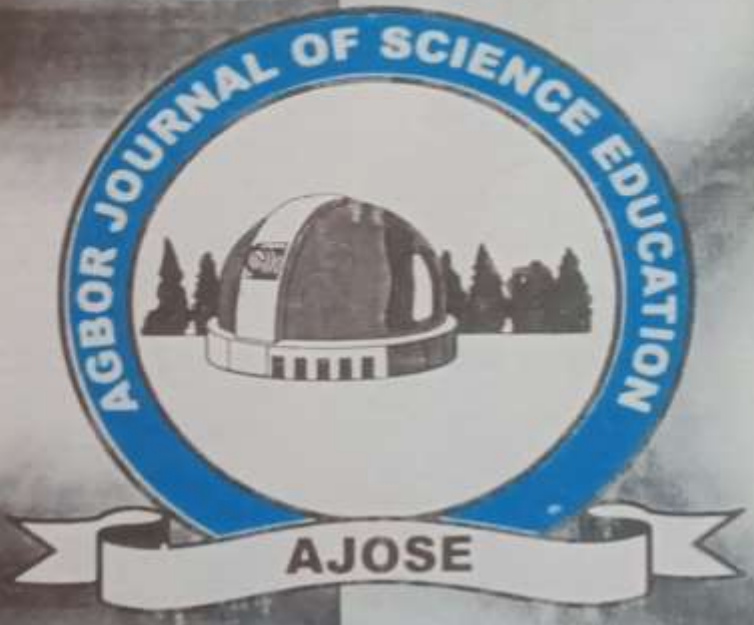

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EFFECT OF REPLACEMENT OF FISH MEAL WITH WATER HYACINTH (EICHHORNIA CRASSIPES) MEAL IN THE DIET OF CLARIAS GARIEPINUS (BURCHELL, 1822) FINGERLINGS

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ABSTRACT

Clarias gariepinus fingerlings (1.25g±0.05) were fed with eleven isonitrogenous diets with varying levels of Eichhornia crassipes (water Hyacinth) inclusion (0% congtol diet), 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90% and 100%) to assess the effect of replacing fishmeal with water hyacinth in fish s diet. The fingerling were fed twice daily at 5% body weight for ten weeks and growth performance and nutrient utilization were determined.

The study revealed that growth rate i.e .weight gain (WG) and specific growth rate (SGR) decreases with increase in the water hyacinth inclusion level. The highest weight gain (3.76g/fish) and SGR (O.84%) were recorded for Diet A control while Diet K (100%water hyacinth) had the weight gain (1.98g /fish) and SGR (0.31%). There was no significant difference in weight gain between the control diet (0%) and those fed with 10%, 20%, 30%, 40% and 50%, water hyacinth inclusion diets. There was a non-significant p>0.05) but positive correlation (t = 0.3) between weight gain and food intake in all diets. The highest FCR of 4.37 was recorded for fingerlings fed 70% inclusion diet while the lowest of 3.30 was recorded for 20% water hyacinth inclusion diet. The FCR values showed a non-significant correlation with the levels of inclusion of water hyacinth (r = 0.117, p>0.050.

Therefore, it can be concluded that the feed of C. gariepinus fingerlings be replaced with 10% - 50% water hyacinth inclusion levels for adequate growth performance and nutrient utilization.

Keywords; Growth rate, nutrient utilization, water hyacinth, fish meal, dry feed.

INTRODUCTION

The undersupply and high cost of conventional pelleted fish feed has severely constrained the development of low-cost aquaculture system suitable for small-scale farmers in the developing world (Kusemiju and Akingboju, 1988; Fagbenro and Arowosoge, 1991) hence the need to assess the potential of non-conventional fish feed