Evaluation of an Animal Protein Mixture as a Replacement for Fishmeal in Practical Diets for Fingerlings of Clarias Gariepinus (Burchell, 1822)

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Abstract

An alternative animal protein mixture was evaluated as a replacement for fishmeal in diets for fingerlings of the catfish, Clarias gariepinus. The mixture comprised hydrolyzed feather meal, chicken offal meal, and maggot meal at a ratio of 4:3:2. Five diets (36% crude protein), containing the mixture at replacement levels of 0% (control), 25%, 50%, 75%, or 100%, were fed to triplicate groups of ten C. gariepinus fingerlings (3.0±0.05 g) at 3% body weight per day for 56 days in 50-l plastic tanks. The weight gain, specific growth rate, feed conversion ratio, and protein efficiency ratio of fish fed the 25-50% diets did not significantly differ (p>0.05) from those fed the control diet. However, in fish fed the 75-100% diets, these indicators were significantly lower. Carcass protein decreased as the level of the mixture increased. Carcass lipid of fish fed the 75-100% diets was lower than in fish fed the 0-50% diets. Results indicate that our animal protein mixture can replace up to 50% of the fishmeal component in diets for C. gariepinus fingerlings without causing adverse effects on growth.

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