NOTICE OF PUBLICATION

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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: **Replacement of fish meal protein by soybean meal protein with or without phytase supplemetion in snakehead *(Channa striata)* diets**

THAY THẾ PROTEIN BỘT CÁ BẰNG PROTEIN BỘT ĐẬU NÀNH LÀM THỨC ĂN CHO CÁ LÓC (*Channa striata*) CÓ BỔ SUNG PHYTASE

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Abstract: The study was conducted with snakehead *Channa striata* fingerlings (4-5g per fish) to determine the appropriate replacing levels of fish meal (FM) protein by soybean meal (SBM) protein with or without phytase supplementation. Nine isonitrogenous (45%) and isocaloric (4.7 Kcal g^{-1}) diets were formulated to replace FM protein by SBM protein. The control diet was prepared with FM protein. The other groups, FM protein was replaced by SBM protein in the diets at replacing levels of 20%, 30%, 40%, and 50% with or without phytase. The experiment results showed there were no significant differences in survival rate among the treatments (P>0.05), ranging between 54.4% and 63.3%. Fish growth had a downward trend (from 0.28 to 0.14 $g.day^{-1}$), the opposite was true for feed conversion efficiency (from 1.07 to 1.78) when SBM protein was increased in formulated feed. In addition, phytase did not affect body composition and there were not significant differences in hepatic somatic index among the treatments (P>0.05). In terms of economic profits, compared to control diet, replacement of FM protein by SBM protein with phytase supplement at 40% in *Channa striata* diets decreased slightly by 0.89%. To sum up, FM protein in *Channa striata* fingerlings diets can be replaced by SBM protein at 30% and 40%, without or with phytase supplements, respectively in which growth performances, feed utilizations are not affected.

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