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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Digestive enzyme activities of snakehead (*Channa striata*) larvae from early hatching to 35 days with different diets.

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Abstract: The aim of this study is to describe activities of some digestive enzymes of snakehead larvae from day 1 to day 35 after hatching, feeding with two different diets. In the first treatment, larvae were fed with live feed including *Moina* sp. and marine trash fish; in the second treatment, larvae were still fed with live feed, but live feed was gradually replacement by formulated diet from day 17 onwards. Larvae were sampled at 1; 3; 5; 7; 9; 12; 15; 18; 21; 25; 30 and 35 days after hatching (DAH), before feeding in the morning. The result showed that, amylase enzymes activity fluctuated during the research period and reached 3.68 ± 0.17 mU/mg protein in live feed treatment and 5.77 ± 0.14 mU/mg protein in formulated diet treatment at 35 DAH. Proteolytic enzymes were detected at low level as early as hatching and remained constant until 12 DAH. Trypsin activity increased significantly at 21 DAH. The highest pepsin activity was 1.44 ± 0.26 mU/mg protein, recorded at 25 DAH, and the highest trypsin and chymotrypsin activities were 333 ± 19.9 mU/mg protein and $1,773 \pm 62.3$ mU/mg protein respectively, at 35 DAH. Pepsin and trypsin activities of larvae feeding with live feed were significantly higher than those fed formulated diet. However, the higher α -amylase activity was found in larvae fed formulated diet treatment.

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