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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Growth, body chemical composition and trypsin activity of South American catfish, surubim (*Pseudoplatystoma* sp.) juveniles fed different dietary protein and lipid levels

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Abstract: To evaluate protein and lipid requirement of South American catfish surubim (*Pseudoplatystoma* sp.) juveniles, nine semi-purified diets containing three levels of protein (40%, 45% and 50%) and three levels of lipid (12%, 16% and 20%) were tested. After 8-week feeding trial, body weight increase averaged 2124.3 ± 295.7%. Growth performance was significantly affected by dietary level of protein ($P < 0.05$). At the 40% protein level, increasing level of dietary lipid had a positive effect on final individual mean weight (protein sparing effect). Whole body protein and moisture contents were affected by the dietary level of lipid ($P < 0.05$). Whole body lipid content positively correlated with the level of dietary lipid ($P < 0.05$). Cannibalism related mortality was observed despite rearing fish in 24 h dark. Fatty acid composition of fish was affected by the dietary lipid level ($P < 0.05$). Polyunsaturated fatty acids increased with the increasing level of dietary lipid while

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saturated fatty acids and monounsaturated fatty acids decreased. Trypsin activity in the digestive tract of surubim was influenced by dietary levels of protein and lipid ($P < 0.05$). Our preliminary results suggest that the optimum protein/lipid ratio might be close to 45/16% for surubim juveniles.

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