Dietary Protein Requirements of Juvenile Barbless Carp, *Cyprinus pellegrini*

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Abstract

The dietary protein requirements of juvenile barbless carp, *Cyprinus pellegrini*, were determined. Five isoenergetic diets containing graded levels of protein (29%, 34%, 39%, 44%, 49%) were fed to triplicate groups of fish (12.4 g) for 10 weeks in a recirculating rearing system maintained at 18-22°C. Weight gain significantly increased as the dietary protein level increased to 44%, then slightly declined. Specific growth rate (SGR) significantly increased as the dietary protein level increased to 39%, then reached a plateau. In contrast, the feed conversion ratio decreased as the dietary protein level increased to 39%. The highest feed intake and protein efficiency ratio were obtained in fish fed the 34% diet. Broken-line regression analysis shows that the optimum dietary protein level for the maximum SGR is 39.3±1.7%, while second-order polynomial regression analysis shows that the maximum SGR occurs at 43.6% and that the minimum protein requirement is 34.7-37.3%. Together, these results indicate that the optimum range of protein for juvenile *C. pellegrini* is 37.3-43.6%.

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