

The relationship between dietary carbohydrate level and the levels of blood glucose and amylase in lemon fin barb hybrid

ABSTRACT

A feeding trial was conducted to determine the effects of dietary carbohydrate level on the blood glucose and amylase of lemon fin barb hybrid fingerlings. Triplicate groups of fish (1.1 ± 0.5 g) were fed twice a day until apparent satiation with five isonitrogenous (30% protein) and isolipidic (4%) test diets containing increasing level of carbohydrate (20, 25, 30, 35 and 40 %). At the end of the experiment, fish survival, growth, feed efficiency, and blood glucose and amylase were measured. No mortality was observed in this study. The highest growth and blood amylase, and best feed efficiency were achieved at 35% dietary carbohydrate level while blood glucose continued to rise with the increase in the dietary carbohydrate level. This study indicated that blood amylase could be used as a tool to determine the optimal dietary carbohydrate level of a tropical carp and lemon fin barb hybrid could optimally utilize a high dietary carbohydrate level of 31.5-33.5%.

Keyword: Lemon fin barb hybrid; Carbohydrate; Growth; Amylase; Glucose