

Effects of dietary carbohydrate source and level on growth, feed utilization, and body composition of the humpback grouper, *Cromileptes altivelis* (Valenciennes)

Abstract

Six diets were formulated to contain corn starch, tapioca starch, or dextrin at 10% and 20% inclusion levels and fed to humpback grouper fingerlings to apparent satiation for 10 weeks. Growth and feed utilization efficiency of humpback grouper were not affected by dietary carbohydrate source and level. Only slightly higher growth was observed in fish fed 20% dietary carbohydrate compared to the fish fed 10% carbohydrate irrespective of carbohydrate source. Body indices and whole body proximate composition of fish in the present study were generally independent of diet, except that muscle lipid of fish fed diets with 7.6% lipid and 20% carbohydrate was significantly lower than the other groups. In view of the lower price and local availability of tapioca starch compared to corn starch and dextrin, tapioca starch is the preferred source of starch in practical diets for humpback grouper.