

Effects of feeding frequency of extruded and moist pellets on growth and body composition of juvenile flounder, *Paralichthys olivaceus* in suboptimal water temperatures

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This study was carried out to investigate the effect of feeding frequency of extruded and moist pellets on growth and body composition of juvenile flounder (initial mean weight 6.2 g) in suboptimal water temperatures. A factorial experimental design of two diets (commercial extruded and moist pellets) × two feeding frequencies (two meals a day and three meal a day) × two water temperatures (12 and 17°C) factorial design with three replications was used. A feeding trial was performed for 8 weeks. Weight gain was significantly higher for fish reared at 17°C than at 12°C, and weight gain of fish fed the extruded pellet (EP) was significantly higher than that of fish fed the moist pellet (MP) at same water temperature. Feed efficiency and protein efficiency ratio of fish fed the EP was significantly higher than that of fish fed the MP regardless of water temperature. When fish fed EP, feed efficiency of fish fed EP was significantly higher reared at 12°C than at 17°C, but feed efficiency of fish fed MP was significantly higher at 17°C than at 12°C. Daily feed intake of fish fed MP was significantly higher than that of fish fed EP, and daily feed intake increased with increase in water temperature from 12 to 17°C. However, weight gain, feed efficiency, daily feed intake and protein efficiency ratio were not significantly affected by feeding frequency. The contents of moisture and ash of whole body was significantly affected by diets kinds. The results of this study indicate that the optimum feeding frequency for the growth of juvenile flounder is two meals a day when reared in suboptimal water temperature, and increase of water temperature from 12 to 17°C improved growth of juvenile flounder.

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