

Effect of thyroxine hormone towards growth and survival of climbing perch (*Anabas testudineus*, Bloch) larvae

ABSTRACT

Aim: Climbing perch (*Anabas testudineus*) is a popular fish in Asian countries. However, the long culture period and slow growth of the species has made it unpopular among fish farmers. Thyroxine (T4) is a hormone that functions as a growth precursor in all mammals including teleosts. This research aimed to study the effect of T4 on growth and survival of climbing perch. **Methodology:** Larvae of climbing perch were used to perform the experiment at different frequencies of T4 treatments (Group 1: 1X0.5 ppm T4; Group 2: 2X0.5 ppm T4; Group 3: 3X0.5 ppm T4 and Group 4: control, 0 ppm T4), by using immersion technique for 30 min. Treatments were performed once a week for three continuous weeks. **Results:** The highest survival of larvae was recorded from Group 2 (66.7%) as compared to control group (52.5%). The length and weight of fish treated with T4 showed significant increment ($p < 0.05$), while the best results were recorded at week 7 from Group 2 (length: 41.75 cm, weight: 1.47 g) compared to control group (length: 33.46 \pm 0.93 cm, weight: 0.71 g), respectively. **Interpretation:** The use of T4 at a specific dosage (0.5 ppm) at two-time treatment was sufficient to increase the growth rate of climbing perch larvae, thereby reducing the cost of hatchery time to reach the market size.

Keyword: *Anabas testudineus*; Climbing perch; Hormone; Thyroxine