

# EFFECT OF DIETARIES ON GROWTH AND SURVIVAL OF ORNATE ROCK LOBSTERS (*Panulirus ornatus*) CULTURED IN LAND BASED RECYCLING WATER TANKS

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## Summary

Recirculating aquaculture system is a novel model which is expected to maintain sustainable lobster culture in Vietnam. This paper presents results on culture of ornate rock lobster (*Panulirus ornatus*) using pellet feeds in recycling water tanks. Lobsters of  $10.49 \pm 0.48$  g/piece and  $10.76 \pm 0.68$  g/piece were stocked at 6 ind./m<sup>2</sup> in seven tanks of from 20 m<sup>3</sup> to 25 m<sup>3</sup> volume. The water outlet from the culture tanks was treated by biological filtered system and supplied back to culture tanks at a water daily exchange rate of 330%. Two dietaries were applied consisting of pellets (protein: 52%, lipid: 6%) and a mixture of pellets and fresh fish. In a situation of T°C=25-32.4°C, S‰=24.4-37‰, pH=7.6-8.4, DO=4.8-5.2 mg/L, NO<sub>2</sub>-N =0.04-0.07 mg/L, NH<sub>3</sub>- N≤0.5 mg/L, NO<sub>3</sub>-N ≤50 mg/L after 17 months the lobsters which fed mixture diet had weight of  $915.81 \pm 32.15$  g/piece, survival of  $75.11 \pm 3.96\%$  and SGR of  $0.872 \pm 0.017\%$ . The lobsters which fed the pellets had lower values which are  $816.04 \pm 11.02$  g/piece,  $63.20 \pm 6.91\%$  and  $0.854 \pm 0.008\%$  respectively. The difference was statistically significant ( $p < 0.05$ ). The temperature of 31.5-32.4°C in 46 days and salinity lowering to 24.4‰ in 24 days affected growth and survival of lobster. The results indicate a possibility to use pellett as food to replace trash fish in lobster culture. However, further study to improve pellet quality is necessary.

**Keywords:** *Growth, lobsters, Panulirus, pellets, survival.*