Effects of Feeds on the Survival Rates and Growth of Young Mangrove Crab

(*Sesarma mederi* H. Milne Edward, 1854)

Varin Tanasomwang* Pamornpan Chutpoom and Titima Thongsriphong

Samutsakhon Coastal Fisheries Research and Development Center

Abstract

The effects of feeds on the survival rates and growth of young mangrove crab were investigated by performing 2 experiments. Completely Randomized Design was used for the experimentation. Analysis of Variance was employed in data analyses and means of the survival rates and sizes of the crab from each treatment were compared by using Duncan’s New Multiple Range Test at 95% level of confidence.

Experiment 1, crab larvae from zoea I to 10 days-old crab stages were fed *Artemia* nauplii together with Chlorella sp. and rotifers (*Brachionus plicatilis*) in day 1, 2, 3 and 4 of rearing respectively 4 treatments each with 3 replications. Average survival rate of crab larvae in each treatment was 7.87±1.35, 18.87±4.29, 16.10±2.41 and 12.23±3.61% respectively. The average survival rates of crab larvae in treatments 2 and 3 were not significantly different (p>0.05) but that in treatment 2 was significantly higher than those in treatments 1 and 4 (p<0.05). No significant differences in the average survival rates of crab larvae in treatments 3 and 4 as well as treatments 1 and 4 were observed. Growth of crab larvae had no significant difference among the treatments (p>0.05) by which the average carapace width of the crab ranged from 1.341±0.234 to 1.401±0.237 mm.

Experiment 2, young crab from 10 to 40 days-old crab stages were given adult *Artemia*, adult *Artemia* and artificial diet 3 days prior to be fed only artificial diet and adult *Artemia* and minced fish 3 days prior to be fed only minced fish respectively 3 treatments each with 3 replications. The young crab fed adult *Artemia* provided significantly higher average survival rate (52.67±10.87%) and better growth (average carapace width 0.587±0.081 cm) than those given adult *Artemia* and artificial diet 3 days prior to be fed only artificial diet (23.17±4.54% for average survival rate and 0.471±0.087 cm for average carapace width) and those fed adult *Artemia* and minced fish 3 days prior to be fed only minced fish (21.67±4.65% for average survival rate and 0.524±0.063 cm for average carapace width) (p<0.05).

**Keywords:** Young mangrove crab, Feeds, Survival rate, Growth

*Corresponding author: 127 Moo 8 Khok-Kham Sub-district, Muang District, Samutsakhon Province 74000
Tel. 0 3440 6220 e-mail: scade@ji-net.com