Optimum Alkalinity for Growth and Survival Rate of Blue Swimming Crab

(*Portunus pelagicus* Linnaeus, 1758) Reared in Concrete Tank

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Abstract

Study on optimum alkalinity for growth performance and survival rate of blue swimming crab larvae (*Portunus pelagicus*) reared form zoea I -- young crab was conducted in concrete tank at Nakhonsithammarat Coastal Fisheries Research and Development Center during August - September 2007. A completely randomized design was used for the experimentation with 3 replications of alkalinity levels ; 100-120 mg/l (T1; using natural water as control) , 140 mg/l (T2), 160 mg/l (T3) using Na₂CO₃ for increasing alkalinity. The result showed that the average of carapace width of blue swimming crab larvae reared in T1, T2 and T3 were 0.613±0.084 cm, 0.563±0.082 cm and 0.551±0.080 cm. Simultaneously, the crab weights were 0.021±0.008 g, 0.017±0.007 g, and 0.016±0.006 g, respectively. ANOVA proved to be significant regarding the higher carapace width and crab weight in T1 (p< 0.05) but not for T2 and T3 (p> 0.05). The survival rates of crab were 18.26 %, 15.48 %, and 13.63 %, respectively. This study clearly indicated that the increasing of alkalinity with Na₂CO₃ at 160 mg/l tends to have effects on larval development, growth performance and survival rate of young blue swimming crab.

Key words : alkalinity, young blue swimming crab, survival rate, growth

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