

## **Live Foods for Juveniles' Production of Blue Swimming Crab, *Portunus pelagicus* (Linnaeus, 1766)**

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### **ABSTRACT**

The study were aim to demonstrate the affects of live food type's i.e., mixed diatom, *Artemia* nauplii and rotifer on survival rate and molt time of larvae stage till 1st day juvenile crabs (C1) of *P. pelagicus*. Three types of feeding regimes given to the crab larvae through out the study trials are with and without mixed diatom, with and without *Artemia* nauplii and with and without rotifer. The study shows that zoea fed with rotifer alone was not enough to sustain survival in the next zoea stages and to promote metamorphosis up to megalopa stage. Survival of zoea fed with *Artemia* nauplii alone shows that this type of food is not suitable for the very early zoea stages. The study also shows that the adding of mixed diatom to larvae rearing system where rotifer and *Artemia* nauplii is main food items did not produced high survival rate as compared to larvae rearing fed on rotifer and *Artemia* nauplii alone. The results of the study demonstrated that the food types not only effect survival rate but also the growth of crab larvae. The study generally ended that the combination diet of rotifer and *Artemia* nauplii alone is enough to produced C1.

**Key words:** *Artemia* nauplii, blue swimming crab, juvenile crab, live foods, *Portunus pelagicus*

### **INTRODUCTION**

Blue swimming crab, *Portunus pelagicus* (Portunidae) is becoming a commercially important species, especially as a possible alternative culture species to prawns. The crab fishery and culture operations are expected to continue to grow in the future. The present investigation shows that there are no appropriate techniques established for the commercial production of juvenile crabs for *P. pelagicus*. Larvae rearing of *P. pelagicus* zoea stages till 1st day juvenile crab (C1) has been achieved but the hatchery technologies are not yet consistent enough to be adapted seriously by the commercial sector (Fielder, 2004). The recent attend to developed the commercial production technique of juvenile crabs for *P. pelagicus* was done by Soundarapandian *et al.* (2007) with survival rate of 4.3% for megalopa metamorphosed into 1st day juvenile crabs. Live food is still a major constraint to the crab hatchery practice where the live food cultures are difficult and expensive to maintain and live food is a disease vector (Allan and Fielder, 2004). Baylon and Failaman (1999) also show that inappropriate food and feeding density is one major factors