Severity of Hepatopancreatic Parvovirus (HPV) Infection in Black Tiger Shrimp (*Penaeus monodon* Fabricius, 1798) Postlarvae with Different Sizes

Kanchit Kheawleng* and Napasin Rattanasomboon
Narathiwat Coastal Fisheries Research and Development Center

Abstract

This study was conducted to determine whether various sizes in black tiger shrimp were related to the presence of hepatopancreatic parvovirus (HPV). Postlarvae 15 were reared until postlarvae 30 and were arbitrarily defined as normal at > 2.5 cm length and small at < 2.5 cm then were stocked in 8 grow-out tanks (5 m³/tank); 4 with small and 4 left with normal and fed 3 time/day with commercial pellet feed. Shrimps were harvested after 40 days.

To determine whether various sizes in shrimp were related to the presence of hepatopancreatic parvovirus (HPV), 80 normal, 80 small postlarvae 30 and 160 shrimps at harvest were collected. These samples were histologically examined for HPV infection. Mean HPV severity index in the normal and the small postlarvae 30 treatment (2.39 ± 0.48 and 2.61±0.28, respectively) were not significantly different (P>0.05). The result for the harvest shrimp (at 40 days), the mean HPV severity index in the normal shrimp treatment was significantly lower than in the small shrimp treatment (2.59 ± 0.32 and 3.67 ± 0.56, respectively; P<0.05). Pearson product moment correlation tests on a subgroup of 160 pooled samples showed a negative correlation (-0.11) between severity of HPV infection and weight of the shrimp examined (P>0.05). However normal postlarvae treatment grew significantly faster than small postlarvae treatment (P<0.05), but survival rate did not differ between the treatments (P>0.05). The findings suggested that HPV infection was a contributing factor but not the overriding factor responsible for stunting in cultured black tiger shrimp. There may be another factor, unknown pathogen or non-pathogenic factor.

Key words: HPV Black Tiger Shrimp

*Corresponding author: M. 1 Salamai, Takbai District, Narathiwat Province 96110. Tel. 073 -538454 e-mail: narathiwat@dof.thaigov.net