

Thesis Title The Study on Using Green Mussel (*Perna* sp.) to
Improve Waste-water from Intensive Shrimp Pond

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Abstract

The purpose of this thesis was to study the change of water quality drained off marine shrimp culture, before and after the treatment by green mussel. This was undertaken from 3.46 ha *Peneaus monodon* intensive culture pond of Charoenpokaphar Co. Ltd., Samutsonhgkram province, at the rate of one month old shrimps, 34 pieces/ a square metre. The density rate of green mussels in 3 experimental intervals was limited into 4 rates: 1, 3, 5 and 7 kilogrammes per 1 tonne of wastewater, totally 1 control for 3 replications.

It was found that before and after the treatment by green mussels in 3 experimental intervals, the quantity of chlorophyll a, ammonium-nitrogen, orthophosphate, nitrite-nitrogen, dissolved oxygen, total suspended solid, total volatile solid was significant difference. ($P < 0.05$) Furthermore, it showed average mean of temperature, salinity, pH were 26-29°C, 31-33 ppt. and 7.970-8.73

respectively. However, the ash residue quantity was no significant difference ($P < 0.05$). It was discovered that the density rate at programme of green mussel weight was on appropriate rate for volume of wastewater treatment. Moreover, the growth rate of green mussels was significant difference. ($P = 0.001, 0.001, 0.003$). Nevertheless, the survival rate was no significant difference. ($P = 0.246, 0.132, 0.300$).