Biological studies on some aquatic crustaceans as related to culture.

A Thesis Submitted
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Abbreviations

A: Peanuts, *Arachis hypogaea* extract.

ADG: Average Daily Gain.

A.O.V: Analysis Of Variance.

B: Sesames, *Sesamum indicum* extract.

BW: Body Weight.

C: Sun flower seeds, *Helianthus annuus* extract.

CF: Crude Fiber.

CP: Crude Protein.

C.V: Coefficient of Variation.

DM: Dry Matter.

ECO: Energy Content.

EE: Ether Extract (Crude Fat).

EU: Energy Utilization.

FAO: Food and Agricultural Organization.

FDA: Food and Drug Administration.

FI: Feed Intake.

Fi W: Final Weight.

FW: Final Weight.

FWP: Fresh Water Prawn.

GC: Gas Chromatograph.

GE: Growth Energy

GLC: Gas Liquid Chromatograph.

GW: Gain Weight.

In W: Initial Weight.

Kcal: Kilo Calories

L.S.D: Least Significant Differences.

M. rosenbergii*: Macrobrachium rosenbergii*.

NA: No Activity.

NFE: Nitrogen Free Extract (Carbohydrate).

P: Prawns.

(P<0.05): Probability.

PI: Protein Intake.

PER: Protein Efficiency Ratio.

P/E: Protein/ Energy Ratio.

PL: Post Larvae.

PPV: Protein Productive Value.

RCMB: Regional Center for Mycology and Biotechnology antimicrobial unit test organisms.

RT: Red hybrid Tilapia (*Oreochromis sp*).

SD: Stocking Density.

SE: Standard Error.

SGR: Specific Growth Rate.

SR: Survival Rate.

TA: Type of Animal.

TWG: Total Weight Gain.

INTRODUCTION

The fresh water prawn, *Macrobrachium rosenbergii* (De Man 1879) recorded from tropical and sub tropical waters in most fresh water areas including rivers, lakes, swamps, irrigation ditches, canals and ponds as well as in estuarine areas (Holthis, 1980). It is considered as one of the most important crustacean species produced in inland aquaculture in many tropical and sub-tropical countries (FAO, 2000). This species also is known as the giant river prawn or the Malaysian prawn. It is (as well as other *macrobrachium* species) commercially important owing to its value as food source (Sung *et al*., 2000 and Sarathi *et al*., 2008).

Its productivity decline has been reported in some countries and was attributed to inbreeding depression in this species (Mather and de Bruyn, 2003). It was suggested that the declines in productivity in this species is concerned to the industry (Mather and de Bruyn, 2003; Thanh *et al*., 2009). Thus, growth performance experiments and selective breeding programs were initiated to evaluate the genetic potential for selection of different strains of *M. rosenbergii* (Thanh *et al*., 2010; Pillai *et al*., 2011).