THE EFFECT OF SPLIT RATIONS ON NURSERY PRODUCTION OF *Macrobrachium rosenbergii* (de Man) UNDER TANK CONDITONS

YONG AI HUA

FACULTY OF FISHERIES AND MARINE SCIENCE
UNIVERSITI PERTANIAN MALAYSIA
APRIL, 1986

The effect of split rations on nursery production of Macrobrachium rosenbergii (de Man) under tank conditions / Yong Ai Hua.

Lihat sebelah

THE EFFECT OF SPLIT RATIONS ON NURSERY PRODUCTION OF *Macrobrachium rosenbergii* (de Man) UNDER TANK CONDITIONS

by

YONG AI HUA

This project paper is submitted to the Faculty of Fisheries and Marine Science, Universiti Pertanian Malaysia, in partial fulfillment of the requirement for the degree of Bachelor of Sciences (Fisheries)

Faculty of Fisheries and Marine Science
Universiti Pertanian Malaysia
April 1986

Dedication .....

To my beloved Pa, Mum, sisters
and brothers, without their love
and financial support, the author
would not have completed this programme.

ACKNOWLEDGEMENT

My most sincere appreciation and gratefulness to my supervisor, Associate Professor Dr. Ang Kok Jee for his guidance, encouragement and financial support throughout the running of this project and also his critical comments and corrections on this manuscript. This project is partially supported by Research Project No. E.E.C. TSD. A. 287 MAL (H) and UPM Research Project No. 1813-1-065.

Thanks to En. Mohd. Razali Nasir for his assistance in preparing the experimental tanks; En. Ahmad Fauzi Mohd. Wazir for raising the postlarvae of Macrobrachium rosenbergii used in the project and other staff of the Faculty of Fisheries and Marine Science who had in one way or another assisted me in this project.

My sincere thanks to my friends, Miss Au Wai Fong and Mr. Ho Yin Nyuk, who had sacrificed so much of their times in assisting me during sampling of the prawns and their constant suggestions, discussions and encouragement.

To my roommate, Miss Chai Chin Pheng, special thanks for her ever willingness to lend me her motorcycle whenever I was in need of it, and all my other friends who had given me moral support and encouragement.

ABSTRACT

Macrobrachium rosenbergii juveniles measuring 1.6 ± 0.20cm in total length and 0.04 ± 0.01g in weight were reared in rectangular tanks at a stocking rate of 80 prawns/m2 to determine the effect of split rations on the growth and survival rate of this prawn. Split rations in this experiment means feeding frequency per day based on a daily food ration.

At the end of this study period of 8 weeks, the final mean body weight for treatments feeding once in the morning, once in the evening, twice daily and three times daily were 0.67 ± 0.27g, 0.40 ± 0.18g, 0.59 ± 0.29g and 0.65 ± 0.18g, while the final mean total length were 4.42 ± 0.72cm, 3.82 ± 0.85cm, 4.30 ± 0.61cm and 4.43 ± 0.43cm respectively. The results were highly significant at 1% level ($P < 0.01$). Further statistical test showed that treatments feeding once in the morning, twice daily and three times daily were insignificantly different while treatment feeding once in the evening was significantly different from the other three at 5% level ($P > 0.05$).

Survival rates for the four treatments were 88.7%, 71.6%, 70% and 63.7% for treatments feeding three times daily, once in the evening, twice daily and once in the morning respectively. No significant difference was detected at 5% level ($P > 0.05$) among these four treatments.

ABSTRAK

Anak udang Macrobrachium rosenbergii bersaiz 1.60 ± 0.20cm panjang badan dan 0.04 ± 0.01g berat badan telah diternak dalam tangki berempatsegi dengan kadar penebaran 80 ekor/m2 untuk menentukan kesan pembahagian makanan terhadap tumbesaran dan kadar kemandirian. Pembahagian makanan disini bermaksud frekuensi pemberian makanan sehari berdasarkan jumlah makanan yang diberi dalam satu hari.

Pada akhir kajian ini didapati keputusan akhir berat purata bagi pemberian makanan sekali sehari sebelah pagi, sekali sehari sebelah petang, dua kali sehari dan tiga kali sehari adalah 0.67 ± 0.27g, 0.40 ± 0.18g, 0.59 ± 0.29g dan 0.65 ± 0.18g, makakala keputusan akhir panjang badan purata adalah 4.42 ± 0.72cm, 3.82 ± 0.85cm, 4.30 ± 0.61cm dan 4.43 ± 0.43cm berturut-turut. Keempat-empat rawatan ini menunjukkan perbezaan pada paras paras keyakinan 1% ($P < 0.01$). Ujian statistik seterusnya menunjukkan bahawa pemberian makanan sekali sehari sebelah pagi, dua kali sehari dan tiga kali sehari tidak ada perbezaan manakala yang sekali sehari sebelah petang mempunyai perbezaan daripada ketiga-tiga rawat tersebut pada paras keyakinan 5% ($P > 0.05$).

Kadar kemandirian untuk rawatan-rawatan berikut adalah 88.7% (pemberian makanan tiga kalisehari), 71.6%

(sekali sehari pada petang), 70% (dua kali sehari) dan 63.7% (sekali sehari pada pagi). Tiada perbezaan ditunjukkan pada paras keyakinan 5% ($P > 0.05$) untuk kadar kemandirian.