

DIGESTIBILITY OF INGREDIENTS IN TWO PELLETED
DIETS BY Macrobrachium rosenbergii (de Man)

KENNETH CHIN SUI SIAN



MASTER OF SCIENCE
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Digestibility of ingredients in two pelleted diets by
macrobrachium rosenbergii (de man) / Kenneth Chin Sui Sian.



PERPUSTAKAAN SULTANAH NUR ZAHIRAH
UNIVERSITI MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU

1100064441		

Lihat sebelah

PERPUSTAKAAN SULTANAH NUR ZAHIRAH UMT

Dear Dr. Law,

Thanks for everything.

With compliments,

Lawrence Ch.

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**DIGESTIBILITY OF INGREDIENTS IN TWO PELLETTED
DIETS BY Macrobrachium rosenbergii (de Man)**

[Signature]
FRANKS A. YONG, Ph.D.
Professor, Dept. of Graduate Studies
Universiti Pertanian Malaysia
(Internal Examiner)

[Signature]
DR. C. YONG, Ph.D.
Department of Botanical Science
University of Guelph
Guelph, Ontario, CANADA
(External Examiner)

by

Kenneth Chin Sui Sian

[Signature]
DR. SALLEH LAMARUDIN, M.S.
Department of Fisheries Biology and Aquaculture
Universiti Pertanian Malaysia
(Internal Examiner)

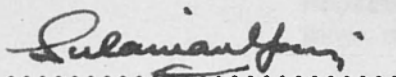
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Universiti Pertanian Malaysia**

Department of Fishing Technology and
Marine Science
Universiti Pertanian Malaysia
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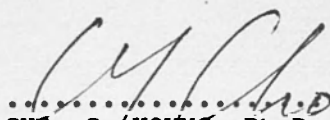
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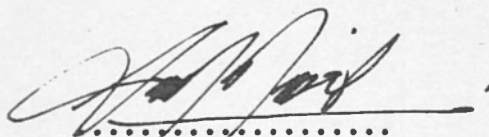
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.....
SULAIMAN M. YASSIN, Ph.D.
Professor/Dean of Graduate Studies
Universiti Pertanian Malaysia
(Chairman Board of Examiners)



.....
CHO, C./YOUNG, Ph.D.
Department of Nutritional Science
University of Guelph
Guelph, Ontario, CANADA
(External Examiner)



.....
MOHD. SALLEH KAMARUDIN, M.S.
Department of Fisheries Biology and Aquaculture
Universiti Pertanian Malaysia
(Internal Examiner)



.....
LAW AH THEEM, Ph.D.
Associate Professor
Department of Fishing Technology and
Marine Science
Universiti Pertanian Malaysia
(Internal Examiner/Supervisor)

This thesis was submitted to the Senate of Universiti
Pertanian Malaysia and was accepted as partial fulfilment of the
requirements for the Degree of Master of Science.

Date:

.....
SULAIMAN M. YASSIN, Ph.D.
Professor and
Dean of Graduate Studies

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DEDICATION

To my wife Theresa and our families through whom God has blessed me.

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ABSTRACT

An abstract of the thesis submitted to the Senate of Universiti Pertanian Malaysia as partial fulfilment of the requirements for the degree of Master of Science.

DIGESTIBILITY OF INGREDIENTS IN TWO PELLETED DIETS BY Macrobrachium rosenbergii (de Man)

by

Kenneth Chin Sui Sian

1988

Chief Supervisor : Law Ah Theem, Ph.D.
Co-Supervisors : Ang Kok Jee, Ph. D.
Mohd Salleh Kamaruddin, M.S.
Faculty : Fisheries And Marine Science

The digestion coefficients of nutrients in two diets containing 30% and 40% protein were evaluated in the Malaysian giant freshwater prawn Macrobrachium rosenbergii. Chromic oxide was used as an internal marker for the evaluation of digestibility. Evaluations were carried out with juvenile and adult prawns including female prawns undergoing three different stages of gonad maturation.

The results indicate that the adult prawns were able to digest the nutrients of the ingredients better than the juveniles. In the two diets tested copra cake, wheat flour and soyabean meal were better digested than fish meal and shrimp meal for both juvenile and adult prawns. Copra cake was found to be a good source of lipids (71-100%), carbohydrate (85-96%) and dry matter (72-92%) as well as a good attractant. Carbohydrate, gross energy and dry matter were very well digested in wheat flour with values of 93-100%, 86-95% and 85-97% respectively. Soyabean meal gave good digestion coefficients for protein (84-99%), lipid (90-97%) and carbohydrate (80-100%). The results indicated that copra cake, wheat flour and soyabean meal are good sources of nutrients for M. rosenbergii. No differences in digestibility was observed for the female prawns with green, yellow and orange gonads. This showed that the stage of gonad maturation has no significant effect on digestibility.

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