

SIZE EFFICIENCY IN RICE BASED MULTIPLE CROPPING SYSTEMS  
IN THE CHIANG MAI VALLEY

ศาสตราจารย์ ร่มเย็นดี ปณฺหุฑิตา  
ZHANG RENTIAN

THESIS SUBMITTED TO THE GRADUATE SCHOOL IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF

MASTER OF SCIENCE  
(AGRICULTURE)

CHIANG MAI UNIVERSITY 1964  
IN AGRICULTURAL SYSTEMS

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

Copyright © by Chiang Mai University  
All rights reserved

GRADUATE SCHOOL  
CHIANG MAI UNIVERSITY  
CHIANG MAI, THAILAND

JUNE 1991

SIZE EFFICIENCY IN RICE BASED MULTIPLE CROPPING SYSTEMS  
IN THE CHIANG MAI VALLEY

ZHANG RENTIAN

THIS THESIS HAS BEEN APPROVED TO BE PARTIAL  
FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF

MASTER OF SCIENCE (AGRICULTURE)

IN AGRICULTURAL SYSTEMS


EXAMINING COMMITTEE

  
\_\_\_\_\_  
(Dr. Songsak Sriboonchitta)

CHAIRMAN

  
\_\_\_\_\_  
(Dr. Aree Wiboonpongse)

MEMBER

  
\_\_\_\_\_  
(Dr. Methi Ekasingh)

MEMBER

  
\_\_\_\_\_  
(Mr. Phrek Gypmantasiri)

MEMBER

ลิขสิทธิ์โดย Chiang Mai University  
Copyright © by Chiang Mai University  
All rights reserved

JUNE 1991

Copyright of the Graduate School, Chiang Mai University

## ACKNOWLEDGEMENT

I am indebted to the many who contributed in various ways from my application for admission to Chiang Mai University through thesis formulation.

First, I wish to express my sincere appreciation to the Chairman of the Advisory Committee, Dr. Songsak Sriboonchitta, for his encouragement, valuable comments and supervision during data collection, thesis writing and editing. Sincere appreciation is also extended to Dr. Aree Wiboonpongse, Dr. Methi Ekasingh and Adjan Phrek Gypmantasiri, for their valuable suggestion and timely correction of my manuscripts.

I also wish to express my sincere thanks to Dean Nakorn Na Lampang, all the MCC lecturers and staff, and Prof. Jeff Romm of the University of California, Berkeley, for their patience, encouragement, and impressive teaching, which enabled me to gain both knowledge and experience.

My colleague students in the Agricultural Systems Programme have shown their genuine kindness and friendship to me. They have helped in discussion, translation and various other activities, and extension of thanks therefore goes to all of them. Those especially worth mention are Miss Wawta, Miss Suporn and Mr. Thongna.

Grateful acknowledgement also extends to the Rockefeller Brothers Fund for awarding the scholarship (through the Agricultural Systems Program) and my home institute for granting me the study leave and helping to establish passport and visa issues.

Finally, I wish to express my sincere thanks to my parents and my wife, who, although I am not able to be with them, still give me great encouragement and love.

Zhang Rentian  
June 1991