METHANE EMISSION FROM VARIOUS LAND USE TYPES IN MAE CHAEM WATERSHED

CHITNUCHA BUDDHABOON

A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE (AGRICULTURE) IN AGRICULTURAL SYSTEMS

GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
SEPTEMBER 2000

METHANE EMISSION FROM VARIOUS LAND USE TYPES IN MAE CHAEM WATERSHED

CHITNUCHA BUDDHABOON

THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE (AGRICULTURE) IN AGRICULTURAL SYSTEMS

XAMINING COMMITTEE	
attacha De	CHAIRMAN
Assist. Prof. Dr. Attachai Jintrawet	
Ampan bhron	MEMBER
Assist. Prof. Dr. Ampan Bhromsiri	
CHI.	MEMBER
Dr. David E. Thomas	
Phiek Cypnantasivi.	MEMBER
Mr. Phrek Gypmantasiri	

SEPTEMBER 2000

© Copyright by the Graduate School, Chiang Mai University

ACKNOWLEDGEMENTS

I wish to acknowledge my adviser, Dr. Attachai Jintrawet, for his valuable guidance and assistance during conducting samples collection, analyzing the results, and processing the context of the manuscript. I would also like to tkank my thesis committee members, Dr. Ampan Bhromsiri, Dr. David E. Thomas and Mr. Phrek Gypmantasiri for their time and effort in reading and making suggestions for improving this thesis.

I would like to acknowledge the Multiple Cropping Center (MCC), Faculty of Agriculture, Chiang Mai University and the International Centre for Research in Agroforestry, Chiang Mai, Thailand, which provide financial supports and allow me to use facilities during two and half years of the study. I wish to thank the students and staff of MCC for their collaboration and support. I am also thankful to the Prachin Buri Rice Research Center, Rice Research Institute for granting me a leave of absence to pursue my graduate study and providing facilities for running methane gas concentration analysis. I also would like to thank Mr. Daniel Muloi for his laborious help in collecting gas samples and related auxiliary data.

Finally, I would like to give thanks to my parents, and my family, who gave me encouragement, patience, and sacrifice, which are the sources of inspiration and motivation to complete the thesis.

Chitnucha Buddhaboon