· UPLAND RICE CULTIVATION PRACTICES

FOR SUSTAINABLE PRODUCTION

ON THE STEEP LAND

SANAN PEUKRAI

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

MASTER OF SCIENCE (AGRICULTURE)

IN AGRICULTURAL SYSTEMS

GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
CHIANG MAI, THAILAND

DECEMBER 1990

UPLAND RICE CULTIVATION PRACTICES

FOR SUSTAINABLE PRODUCTION

ON THE STEEP LAND

SANAN PEUKRAI

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

MASTER OF SCIENCE (AGRICULTURE)
IN AGRICULTURAL SYSTEMS

EXAMINING COMMITTEE

M. Ehringh.

CHAIRMAN

Lecturer Dr. Methi Ekasingh

MEMBER

Assist. Prof. Dr. Aree Wiboonpongse

Savable Boschec

MEMBER

Mr. Sawatdee Boonchee

Assist. Prof. Chavalit Chalothorn

DECEMBER 1990

Copyright of the Graduate School, Chiang Mai University

ACKNOWLEDGEMENT

The author would like to express his most profound and sincere gratitude to his supervisor, Dr. Methi Ekasingh, for his valuable assistance during the complex and tedious task of conducting the experiment and processing of manuscript.

It is also a pleasure to acknowledge the help of his committee members, Assist. Prof. Dr. Aree Wiboonpongse, Mr. Sawatdee Boonchee and Assist. Prof. Chavalit Chalothorn whose valuable advice and constructive criticisms had made his research output more readable and sensible.

Deepest appreciation, gratitude and respect are also due to Mr. Rewat Chirasathaworn, Don Romulo C. Del Castillo, Ellen R. Pantollana for their perspicacuous interest and trustworthy suggestions which were constant sources of encouragement of the author.

Thanks are also extended to Mr. Praveit Yophanutsak, Mr. Pheeranit Kaewtamajai, for their help in the field work and data management.

Members of his examining committee provided more help than what he had expected.

Good research ideas for this topic cannot be conducted without monetary expense. So, his special gratitudes are also given to the donors, Ford Foundation and the Southeast Asian Universities Agroecosystem Network (SUAN).

His special thank goes to his wife, Pranorm. Her forbearance, her help both in the field and in preparing the report, her encouragement and advice, and her endurance were invaluable to him and to the study.

All rights rann Peukrai

December 1990