# RESIDUE OF PACLOBUTRAZOL IN SOIL AND MANGO FRUIT PRODUCED OFF-SEASON

**ANUWAT JARADRATTANAPAIBOON**

**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN HORTICULTURE**

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**THE GRADUATE SCHOOL**
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THIS THESIS HAS BEEN APPROVED
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IN HORTICULTURE

EXAMINING COMMITTEE

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Lect. Dr. Weenun Bundithya

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The SFB 564 “Research for Sustainable Land Use and Rural Development in Mountainous Regions of Southeast Asia” known as “The Uplands Program” in the partner countries, is a long-term collaborative research program. In the Uplands Program nine universities and research institutes from Thailand, Vietnam and Germany are working together with partners in northern Thailand and northern Vietnam. The Uplands Program combines 17 subprojects with 12 disciplines involved ranging from soil, plant and animal sciences to economics and sociology. The project funded by the Deutsche Forschungsgemeinschaft, Germany (DFG) and co-funded by the National Research council of Thailand (NRCT) and Ministry of Science, Technology and Environment (MOST), Vietnam.

Overall goal of The Uplands Program is to make a scientific contribution of the preservation of natural resources and the improvement of living conditions of rural populations in the mountainous regions of Southeast Asia. Scientific work in this context urgently needs to address the two closely related fields of sustainable land use and sustainable rural development. A scientific base needs to be created for the following objectives:

A. Development and testing of sustainable production and land use systems with increased productivity in ecologically fragile and economically disadvantaged mountainous regions in Southeast Asia

B. Development of concepts for rural institutions that can contribute to a sustainable reduction of rural poverty, food insecurity and to an improvement for livelihoods in mountainous regions in Southeast Asia

C. Advancing methods for analyzing complex ecosystems and their interactions with the socio-cultural, economic and institutional environment

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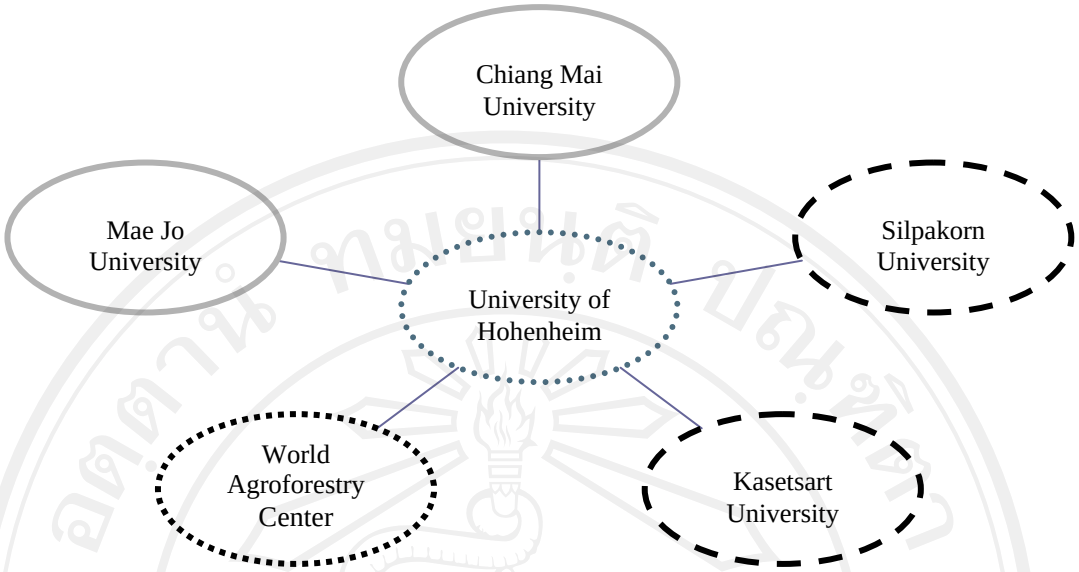


**Partner Organizations in Thailand**

For subproject E2.2 is one of them which as the extension of the harvesting periods of mangoes, litchis and longans based on innovative off-season techniques in crop management could be of great economic benefit for highland farmers and local fruit processing industries, the whole food chain from fruit production through processing to marketing has been studied in an interdisciplinary approach aimed at off-season fruit production and adjusted utilization strategies for these fruits. In the light of sustainable food production, the present objectives are to ensure ecologically compatible fruit production and closed loop management of the raw material in fruit processing. Focus is on quality and food safety of off-season fruits for domestic and international markets. On the basis of the previous characterization of local cultivars and technological developments in processing fruits into products of high nutritive value, research is directed towards the reduction of biological waste volumes by processing raw material into high-quality main and by-products, especially pectin as gelling and stabilizing agents or bioactive fiber.

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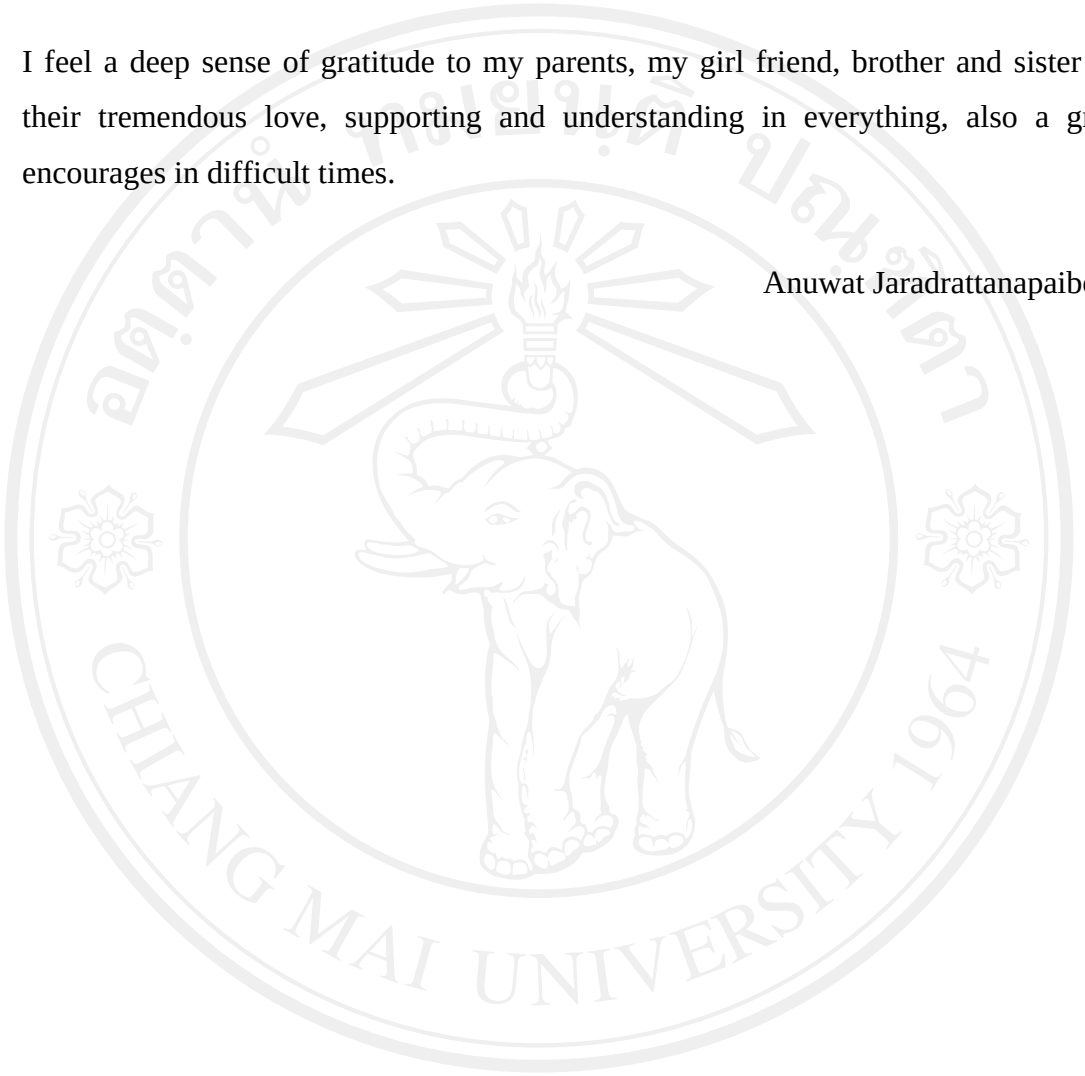

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