別紙４

学 位 論 文 の 要 旨

論文題目　**Development of Good Agricultural Practices (GAP) in Thailand: A case study of Thai National GAP selected products**

(タイにおける Good Agricultural Practices (GAP) の発展
―GAP 対象品目に関する事例研究―)

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Purpose and Objectives

Good Agricultural Practices or GAP is a global appropriate cultivation method for the farmers to conduct food safety. It is an appropriate on-farm into farm gate cultivation management included, farm inputs selection, farm management, until post-harvest management. GAP aims to encourage the farmers to produce the safety agricultural products for the consumers. After FAO introduced GAP for a period of time, it become one of the minimum requirements for the agricultural trades in global market to secure the food safety and sustainable issues at the farm-level production. Many countries adopted the FAO GAP guidelines and established food security framework, including Thailand. Although there was the clear framework for the MOAC to implement GAP into farmers, halves of them stopped to maintain their certificates with in last 3 years. The reducing in the numbers of GAP certified farmers in Thailand shown the changing in direction of GAP development in the future. The evaluation of success of GAP development in Thailand still is on the discussing. This dissertation focused to identify the current situation of GAP development in Thailand.

This dissertation has four specific objectives: 1) To examine the factors affecting the farmers' practical perception on their GAP understanding; 2) To assess the situation of private standard dual-GAP development in Thailand, and to determine the opportunities of the practical collaboration between private and government sectors on the GAP development; 3) To expose the GAP realistic economic incentives from farmers' GAP experiences in the important export commodity; and 4) To define the current situation of GAP-based marketing and to identify the buyers' attitudes towards GAP-based product.

Farmers GAP understanding and factors influenced will show in Chapter 4. While the dual-GAP private standard development were investigated to indicate the roles of private standard

development in Chapter 5. GAP current market were evaluated and showed in Chapter 6. The process of GAP implementation could indicate by GAP incentive for the farmers in Chapter 7. According to the contents of evaluation, we could estimate how the direction of GAP development in Thailand in each different commodity which are the main purpose of this study which were discussed in Chapter 8.

Chapter 1 Introduction

This chapter describes the current GAP development in Thailand. MOAC is responsible for establishing Thai national food safety framework. GAP framework in Thailand has been continuously developed since 2003. The farmers receive the GAP standard information from DOAE, and adopt GAP with their conventional farming methods. After that, they are certified as GAP-certified farmers by DOA. GAP development in Thailand has ACFS to accredit the GAP development with the other acceptable GAP such as ASEANGAP and GlobalGAP. This chapter also explains the trend of certified farmers under GAP system. Although MOAC prepared an appropriate structure of food safety framework, the number of certified farmers during the last 3 years dramatically reduced. It possibly shows a change of GAP development direction in a near future. The reduction of number of GAP-certified farmers can be influenced by two main current situations which are the farmers' incentive from conducting GAP-based product, and GAP supported market's conditions. Finally, this chapter conveys the statement of problems, research questions, general objective, specific objectives, and summary of dissertation.

Chapter 2 Theoretical reviews

This chapter concerns a theoretical review to lead the study to the challenge and success. The developing of "*The current situation of standard implementation analysis (CSI'a)"* to apply for the research framework of this study is a focal point in this chapter. The development of GAP and its definitions, the farmers' farm structure changed by GAP are discussed. Many GAP development cases which were influenced by the farmers' incentive, and market access are explored. The farmers' understanding on GAP is a connection between GAP extension procedures and their practical implementation. This connection can be supported by the farmers' market access. The direct market for GAP product has not yet developed in Thailand. Therefore, the development of GAP in Thailand is unique. Finally, research framework are provided by using the CSI'a to explain the mechanisms of contents in this study.

Chapter 3 Methodology

This chapter conveys the detail information of research site on geographical, and socio economic aspects. The justifications for selected products were explained. Survey, sampling, focus group discussion, were used to collect primary data. This research adopted the following analysis tools: (1) descriptive statistics analysis, and (2) inferential statistics analysis. The most important is inferential statistics analysis.

Chapter 4 Factors Affecting the Implementation of Good Agricultural Practices (GAP) among Coffee Farmers in Chumphon province, Thailand

This chapter analyzes the factors affecting the implementation of GAP among coffee farmers. In

the beginning of this chapter, Thai National GAP Scenario was described. Market condition is an important factor that influenced farmers' GAP perception. However, GAP could not provide a direct market for GAP product itself, this is the weakness of public agricultural standard development. The details of internal and external factor influenced the farmers' GAP perception are explained in this chapter.

Chapter 5 Coffee farmers' attitudes toward the 4C process in Chumphon province, southern Thailand

This chapter investigates the development of dual-GAP standard among coffee farmers. Common Code for Coffee Community (4C) was selected as a case study of dual-GAP standard. 4C standard rapidly developed in Thai coffee community. The main reasons for the success of 4C are a specific market is provided for high quality coffee, and useful services are also delivered for the farmers. 4C provides a *win-win situation* for a private company and coffee farmers. In addition, it also encouraged the farmers to participate in the GAP standard. The opportunities of 4C standards development in the coffee community are discussed in this chapter.

Chapter 6 Cost efficiency of Thai National GAP (QGAP) and mangosteen farmers' understanding in Chanthaburi province

This chapter observes how farmers got practical incentive by adopting GAP. In general, economic incentive was the first farmers' expectation to adopt any standards on farm. The incentive can be classified into two categories which are costs reduction and premium prices. The production costs of mangosteen farmers and cost efficiency will be described in this chapter. The farmers increased their costs and income by adopting GAP standards on their farms. The farmers' economic incentives were classified into direct and indirect incentives which will be also explain in the late of this chapter.

Chapter 7 Marketing of Thai National GAP (QGAP) mangosteen in Chanthaburi province, eastern Thailand

This chapter evaluates the current market situations for GAP mangosteen product. The previous study evaluated the market for any product by using the once time analysis. This study separated the market into two periods (early and late part market of harvesting season). This study found that the farmers took the benefits from GAP adopting in the market in term of knowledge and premium price for the HQ production. Finally, the market for GAP products in Thailand classified into 4 stages according to the production volume and exported volume. The characteristics of these 4 stages are discussed in the late of this chapter.

Chapter 8 Conclusion and recommendation

This chapter provides a summary conclusions, and recommendations for improve the effectiveness of MOAC's GAP promoting and implementation. According to two case studies of coffee and mangosteen, this study can approach to the actual situation of GAP development in Thailand. The "*Model of Dual-GAP standard development for low competitive commodity"* are explained how the private section can assist the development of GAP in practice by using the relationship between demand and supply in the market, which is shown in this chapter.