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The Factors Production Use Efficiency in the Integrated Farming
in Suratthani Province, Southern Thailand

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Abstract

This research aims to measure the factors of productions use efficiency in the integrated farming, study the eco-society background of farmers in the integrated farming and examine the government policy towards the farmers in the integrated farming in Suratthani province, Southern Thailand. The results showed that the factors production use efficiency is at the medium level for the whole. For each item, it can be concluded that the entrepreneurial use is at the high level. In contrast, capital, land and labour use are at the medium level of the factors use efficiency in the integrated farming. This study was beneficial to government implementation. These suggest to the local government office in Suratthani planning to enhance their roles for more efficient using.

Keywords: The Factors Production; The Factors Production Use; Efficiency; The Integrated Farming; Southern Thailand

1. Introduction

Agriculture is an important sector in Southern Thailand including Suratthani provinces. The share value of agriculture products is the highest. In 2011, shares amounted to 48,885 Million baht and were 35 percent of the Gross Provincial Product (GPP). However, one of the major problems is the unstable price of production farms due to the single farming. For example, natural rubber, palm oil and some perennials. The single farming often
encounters risk since the farm incomes are fluctuation and vary farm production that is related to the weather. In 1972, the Ministry of Agriculture and Co-operation, Thailand initiates the integrated farming project and the Thai farmers began to join this project in 1976.

The integrated farming is one of the agriculture systems, which combines at least 2 activities in the same plantation. The important condition of the integrated farming is the farms’ activities have to support or benefit for each others. Since then the integrated farming will be reach the sustainable agriculture. This is because of the beneficial of the system, which are (i) to reduce the risk of climate changing. (ii) to decrease the risk unstable products pricing. (iii) to decline the damage from insects or pests. (iv) to increase income as well as distributed income for whole year. (v) to employ more labours in the farms. (vi) to switch the farm activities and (vii) to provide sufficient foods. However, farmers in the integrated farming do not complete success because the integrated farm management needs a good planning. Furthermore, factor production use should be optimum and suitable for the plantation. One of the main factors to success is the efficiency of marketing channel. [Office of research and agriculture development Area 3. 2011: online]

The government policy to promote the integrated farming is not appreciated since few farmers participant in the integrated farming project. The reason may be due to the limited of a suitable systematic [Chalin Prapregtrang. 2004: 2]. The forms of technology use are more difficult to understand for farmers. In addition, the lack of encouragement to carry out the integrated farming or the unfamiliar of factors production use possibly cause small numbers of program participants. Therefore, to study the factors production use efficiency is imperative. The results of the research are very useful for the planning future production employment. It is important for the Agriculture Office to set a suitable employment patterns. If everything is applied, this can be grounds for the farmers to get used to themselves in the integrated farming.

The objectives of this research are to measure the factors of productions use efficiency in the integrated farming study the eco-society background of the farmers in the integrated farming and examine the government policy towards the farmers in integrated farming in Suratthani province.

The results of the study can be contributed to (i) The results of the research will be useful for the planning future factors production employment. (ii) It is important for the agriculture office to create a suitable employment plan. (iii) The findings can be grounds for farmers to adapt themselves in the integrated farming system.

2. Data and Methodology

Primary data is collected through the method of stratified sampling from the samples farms for crop year 2011/2012. The samples comprise 408 farmers from 19 districts of Suratthani province. (see Table 1)
Table 1. The sample size used in the study

| Item | District                  | Sample (Person) |
|------|---------------------------|-----------------|
| 1    | Chi – Buri                | 15              |
| 2    | Kereratnikom              | 15              |
| 3    | Muang Suratthani          | 26              |
| 4    | Chai – ya                 | 32              |
| 5    | Wipavadee                 | 15              |
| 6    | Ta – Chang                | 18              |
| 7    | Phun – Phin               | 36              |
| 8    | Banna – Doem              | 25              |
| 9    | Ta – Chana                | 15              |
| 10   | Pamom                     | 19              |
| 11   | Waing – Sa                | 15              |
| 12   | Koh Samui                 | 15              |
| 13   | Koh Pa – ngun             | 15              |
| 14   | Karnchanadit              | 23              |
| 15   | Kiensa                    | 33              |
| 16   | Ban – Nasan               | 19              |
| 17   | Don Sak                   | 24              |
| 18   | Ban Takhun                | 15              |
| 19   | Praseang                  | 33              |

To analyze the primary data, we used mean and standard deviation to measure the factors production use efficiency. The frequency and percentage are employed for farmers’ eco-society analysis. The binary logistic regression is used to examine the government policy towards the factor production use efficiency in the integrated farming.
3. Results

The findings of the study will be presented as follows: The factors production use efficiency is at the medium level for the whole. For each item, it can be concluded that the entrepreneurial is at the high level. In contrast, capital, land and labour use are at the medium level of the factors use efficiency in the integrated farming.

The advantages of the integrated farming which speaks out by the famers were that land reformed was conforming to the integrated farming system and they could use more benefit from land in the farming system. For labour use efficiency, farmers employ more competency of their own labour in their families. Capital use efficiency was agreed, and they earn high income before harvesting of major crops. Furthermore, the integrated farming could initiate the entrepreneur skill of the farmers for the attractive, pay more attention to fulfill their responds and ethics and enhance to work hard in the integrated farming system.

The eco-society background of the farmers in the integrated farming showed that the majority of respondents were male, with over 36 years old. They were married and accounted for 3-4 persons in their households. Their qualifications were only primary or secondary school. They were farmer earlier and currently they do their farms in the form of integrated farming. Most of them integrated plants and plantations. The major crops were natural rubber, palm oil, coconut, durian and farm yard plant. On the other hand, the unattractive plantations were banana, mango teen, rambutan, long gong, corn, mary, sator, jack – fruit, pomelo and chili. Furthermore, they grew some short cycle plant they can do a daily sell, such as pak- hrang, pak wan and tomato. In the other form of plants and livestock which were cow, hen, fishes and pigs in nature rubber culture. They also furnish flogs and walking catfishes. The respondents earned annually around 50,000 Baht. Their lands are accounted for 10 rais planted areas. Their experienced in the integrated farming were 5-10 years. Fifty percent of farmers sell their product by themselves. However, some farms sell their product at the farm gate. Most of the farmers made their own decision to do in the integrated system. However, the neighbor and relatives including the government officers have an important role to enhance the integrated farming. Although only sixty percent of the respondents used to take course for agriculture improvement once a year, their income and level of living were better than in former times.

The government policies toward the farmers in the integrated farming were at the low level. The binary logistic regression showed that some measurements have more impacted to the factors use efficiency in the integrated farming. The results were as follows:

To record the farming account has an impacted to land use and labour use efficiency at 39 percent and 42 percent, respectively. The officer’s consultant made more improvement to labour use and entrepreneurial efficiency at 73 percent and 51 percent, respectively. Water supply management can rise the efficient of land,
labour and capital at 61 percent, 42 percent and 41 percent, in that order. Finally, place encouragement also made more efficient of land use and entrepreneurial at 20 and 62 percent, correspondingly.

4. Discussion

4.1 The results indicate that the factors production use efficiency is at the medium level for the whole, due to farmers lack of skill in responsibility their farms in the form of integrated farming. The entrepreneurial factor is at the high level conforming to Chalin Prapreakthong [2004] reported that the skill of marketing is required for farmers in the integrated farming.

4.2 The majority of the farmers in the integrated farming graduated only primary of secondary school. The result conforms many previous studies such as Prasit Srakrang [2006], Niwat Chansatien [2005], Kanawut Butdeekant [2005], Sakom Sukbat [2004], Srinya Kongthon [2004], Prapawin Singdech [2004], and Chalipon Muakuntod [2007]. Those studies have shown that mostly farmers graduated from primary school. The qualification is the one of the impact factor to the decision making of the farmers in their farms. Anurat Intutsing [2007] reported that the education differential has effected to the production planning. In addition, Kanawut Butdeekant [2005] concluded that mostly farmers have not done their farm accounting because of the lack of their understanding and illiteracy. Furthermore, Prapawin Singdech. [2005] showed that the farmers who improved their skill by associated in self - sufficient network can record their farm accounting. Chalin Prapreakthong [2004] also concluded that the limited of the integrated farming promotion is due to the lack of knowledge and understanding of the farmers.

4.3 Most of farmers in the integrated farming hold their planted area, which are more than 10 rais. This is conforming to Prasit Srakrang [2006], Niwat Chansatien [2005], Kanawut Butdeekant [2005], Srinya Kongthon [2004], Prapawin Singdech [2004] and Chalipon Muakuntod [2007]. These researchers reported that be in the integrated farming system, the farmers have to hold own land more than 10 rais. If farmers have own land, this factor will enhance their farms management skill because they might not be risked in their investments.

4.4 The forms of the integrated farming in Suratthani province are trees plant and tress-live stocks. It would be caused by the attitude of the farmers and the suitable of geographic including the weather in the South. Farmers have traded their farm products by themselves since some kind of production have to daily sale. The other reason may be due to the small amount of farm products. And as a result of there are some green markets for farm products.

4.5 The integrated farming system helps the farmers to get better level of living. The finding is conforming to Pacharapan Yano [2009], Kanawut Butdee Kant [2005], Sarinya Kongthon [2004], and Supinya Chayaputi [2001]. The former studies found that the eco-society of the farmers in the integrated farming was
improved and well-being. For example, they earned around 2,140 Baht per rai per month from the integrated farming. On the contrary, the income of those who are not in this system only 252 Baht per rai per month.

4.6 The government policies toward the farmers in the integrated farming were at the low level. It can be explained that may be due to the limited of local government office. The number of the officer, budget and so on may be insufficiency compare with the amount of farmers. Chalin Prapreakthong [2004] stated that the communication failure is one obstacle for government policies implication.

5. Summary

The research attempted to measure the factors of productions use efficiency in the integrated farming in Suratthani, Southern Thailand. The primary data are collected through the method of stratified sampling from the samples farms for crop year 2010/2011 and the statistic analyses were frequency, percentage, mean and standard deviation. The binary logistic regression method is used for analyzing the impact of the government policy to the factors use efficiency.

The results of the study base on the primary data showed that the factors production use efficiency is at the medium level for the whole. For each item, it can be concluded that the entrepreneurial use is at the high level. In contrast, capital, land and labour use are at the medium level of the factors use efficiency in the integrated farming. The government policies toward to the farmers in the integrated farming were at the low level.

The benefit of the integrated farming which opined by the farmers were that land reformed was conform to the integrated farming system and they could use more benefit from land in the farming system. For labour use efficiency, the farmers could employ more competency of their own labour in their families. Capital use efficiency that the farmers agreed that they could earn more income before the major crops is harvested. Furthermore, the integrated farming could initiate the entrepreneur skill of the farmers for the attractive, pay more attention to fulfill their responds and ethics and enhance to work hard in the integrated farming system. Moreover, the binary logistic regression showed that some measurements that are farming account, officer’s consultant and water supply management have more impacted to the factors use efficiency in the integrated farming.

6. Suggestions

The research results are useful for the integrated farming management and also for the factors productions use efficiency. The following suggestions are as follows:

6.1 Research results show that the majority of famers graduated only primary or secondary school.
Further, it accounted 40 percent of the farmers who have never trained the agriculture course. The Office of Agriculture, the Office of Agricultural and Co-operative of Suratthani should systematize provide knowledge and skill for farm management. It will help more factors production use efficiency in the integrated farming. Apart from farm management, marketing system also should be advice to the farmers. It is because the farmers in the integrated farming do many kinds of agriculture products. This cause them have to daily sale some their products. The channel of distribution is importance for their decision. If the skill of marketing is improved, the famer, income will be increased. Generally of farmers do their farm in the form of integrated by themselves, the officer, therefore, should be seriously promoted the integrated farming system. To organize the learning centre, to hold the seminar or extension will help the efficient of factors usage. This can help to increase their income as well.

6.2 The efficiency of capital, land and labour use in the integrated farming are at the medium level. The local officer should be supported this farming system as follows:

6.2.1 The Office of Co-operative Audit, Suratthani should consult and advice the farmers to record the farms’ accounting. To check and evaluate the farms’ accounting, will help improve the factors use efficiency.

6.2.2 The Office of Agriculture, Suratthani especially the agriculture officer has to visit farmers in order to conclude the problems or obstacles in farm. The officer should concern the farmers’ desire. This will help to organize the suitable technology and knowledge to farmers. It is an important impacted to labour and entrepreneurial use efficiency in the integrated farming.

6.2.3 Irrigations Scheme, Suratthani should develop source of water including rainfall. This can be performed by the rural committee participation. To manage water source fit to the integrated farming will help to increase the efficient of land, labour and capital use in the integrated farming.

6.2.4 Suratthani Co-operative Office should look forward into opening market channels. This will help the farmers reduce cost of products distribution. It is can help them to use land more efficiency and raise their entrepreneurial skill.

6.2.5 The Office of Commerce, Suratthani and Suratthani Co-operative Office should handle the reasonable price of agriculture products. They also should be provided the farm activities, which can be increased farms’ income.

6.2.6 Bank of Agriculture and Agricultural Co-operative should provide sources of funds with a suitable rate of interest and the duration of payments. This can help the farmers to manage their finance. It also helps to reduce the liability and then the farmers can be self sufficiency.

6.2.7 The Office of Agriculture and the Office of Land Reform, Suratthani should initiate the process of value added in agricultural products. To be the member of agriculture association will help to increase their power of bargaining.
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