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## The Agricultural Resource Management Problems for Tourism of Farmers in Phuket Island, Thailand

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This study was conducted to investigate: 1) investigate problems in agricultural resource management for tourism of 44 farmers growing plants and 38 farmers rearing animals and 2) compare problems in agricultural resource management for tourism of the farmers in Phuket province. The sample group in this study consisted of 82 farmers obtained by purposive sampling. A set of questionnaires was used for data collection and analyzed by using descriptive statistic i.e. frequency percentage, standard deviation, and t-test (Independent Sample). Results of the study were as follows: 1) Both groups of the respondents had a high level of understanding about agro-tourism principles (81.7%) and they were investigated in the establishment of their own farms as a tourist spot (81.7%). Besides, they wanted to attend training on methods of making a farm to be a tourist spot (85.4%). Regarding the readiness in turning a farm to be an agro-tourism place, it was found not to be ready because it still had problems (74.4%). For making a farm to be a tourist spot, most of the respondents (76.8%) strongly agreed and more than one-half of them (52.4%) had debts for farm operation. 2) Both groups of the respondents shared similar problems and the following were found at a high level: 1) utilization of farm resources and production activities as a tourist spot; 2) production quality; 3) yield values-added construction for selling; 4) readiness of production factors for investment; and 5) developing connection of farmers activities as a tourist spot e.g. production activities and farm beauty. and 3) According to the hypothesis testing, there was no difference in general conditions and economy of the respondents. However, there was a difference at .01 in terms of production technology and utilization of agricultural resources for tourism. This might be because both groups of the respondents had different agricultural resource management based on production traits.

**Keywords:** agricultural resources, resources management, agro-tourism, plant growing, animal rearing

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## Introduction

Agricultural resource management on the farm of farmers so as to be agro-tourism attractions is a new form of farm management. Many farmers are interested in it because agro-tourism shows and offers many agricultural activities to tourists to enjoy visiting, learning and understanding agricultural careers. Agro-tourism involves agricultural garden, herbal garden, vegetable gardens, orchard, livestock ranch, etc. (Thanasopon, *et al.*, 2012). Therefore, the form of agro-tourism is different from other types of tourism. Tourists visiting the farmer's farm will gain knowledge and new local wisdoms which can be a guideline for their daily life activities. As a matter of fact, agro-tourism is the harmonious integration of knowledge, wisdoms, and interest (Khibthong *et al.*, 2013). Besides, tourists can join farm activities provided for them.

Problems encountered in farm management so as to be an agro-tourist attraction include readiness preparation of the farmer in terms of farm activities to attract tourists and values added (Roongrotwanit *et al.*, 2013). However, an importance problem which the researchers are interested is that farmers have no capability to manage their farms or agricultural resources so as to be an agro-tourist attraction. This is due to many aspects: 1) basic problems of the farmers; 2) problems in land preparation to be an agro-tourism attraction; 3) problems in the facilitation of farm activities and tourism recreation; 4) problem in marketing; and 5) problem in basic infrastructure to support a sustainable agro-tourist attraction.

In the case that farmers can develop their farms to be sustainable agro-tourist attractions, it will have an expansion of economy, employment, and security of the farmer and the agricultural community. However, tourism also causes a negative effect on natural environment such as deterioration of tourist attractions and lack of awareness of the environmental value (Khibthong, *et.al.*, 2016 and pornpipat, 2002). In addition, the potential to cope with garbage and various infrastructures in the tourist attractions is the destruction of scenery, environment, and natural resources (Yaiying and Thirawong, 2010).

Phuket province is a big island having a high opportunity and potential in tourism. There are hi-end tourists visiting Phuket throughout the year and many tourist attractions there begin to be crowded making various aspects of social problems (Thalang District Agriculture Office, 2013). Therefore developing farmers' farms there to be agro-tourists attraction can help distribute tourists. Importantly, it helps promote agricultural careers for increased incomes there (Koson and Sutthawes, 2014). Hence, tourists can touch lifestyles of farmers and learn careers of local people. At present, however, farmers in Phuket still do not develop potential of their farms due to some factors as mentioned. Thus, the researchers are interested in the investigation of problems in the

management of agricultural resources so as to be an agro tourist attraction. Results of the study will be basic data for concerned personnel to promote farmers and it can be a guideline for farm development and income distribution in the future.

### **Objectives of the Study**

Specifically, this study aimed to:

1. investigate problems in the management of agricultural resources so as to be agro-tourist attractions and
2. compare problems in the management of agricultural resources so as to be agro-tourist attractions.

### **Conceptual Framework**

The researchers classified informants into 2 groups: crop growing and livestock rearing based on farmer group setting of the Ministry of Tourism and Sports (2014). Then problems in the management of agricultural resources so as to be an agro-tourist attraction in Phuket were investigated. The problems were of 3 aspects as follows: 1) basic conditions of farmers; 2) economic aspect of farmers; 3) agricultural production technology; and 4) resource and environmental exploitation.

### **Hypothesis of the Study**

Farmers in Phuket having the difference in farming have no difference in problems in the management of agricultural resources for tourism.

### **Methodology**

This study employed social science research (quantitative)

**1. Population and Sample Group** Farmers in Phuket were population in this study and the sample group was obtained by Non-probability and purposive sampling. Time span of data collection was 3 months (1 June - 31 August, 2016).

**2. Research Instrument** A set of questionnaires was used for data collection. It consisted of 2 parts: Part 1. General data of the famers growing crops and the farmers rearing livestock and Part 2. Problems in the management of agricultural resources and farm development so as to be an agro-tourist attraction. The preparation of the questionnaire was based on documentary

study, concepts, theories, related research, empirical facts, and objectives of the study. There specialists inspected quality of the questionnaire in terms of objectivity and validity by using Index of Item-objective (IOC). Any item having IOC value for more than 0.50 was improved on the basis of suggestions of the specialists whereas less than 0.50 would be deleted.

**3. Data Collection** The researchers collected data by themselves and together with 5 assistants. Time span of data collection was from 1 June 2016 to 31 August 2016. (82 respondents).

**4. Data Analyses** Descriptive statistics was employed i.e. frequency, percentage, mean, and standard deviation. The criteria setting for data interpretation (Problems in the management of agricultural resources for tourism) were as follows: (Leekitwattana, 2012)

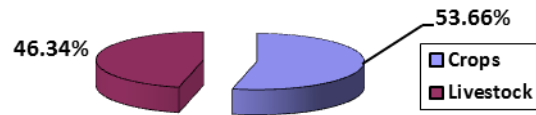
Score	Mean space		Level of problem
5	4.50 – 5.00	=	Highest
4	3.50 – 4.49	=	High
3	2.50 – 3.49	=	Moderate
2	1.50 – 2.49	=	Low
1	1.00 – 1.49	=	Lowest

Mean, standard deviation and problem level were used for the comparison of problems in the management of agricultural resources for tourism of farmers in Phuket having the difference in farming.

## Results

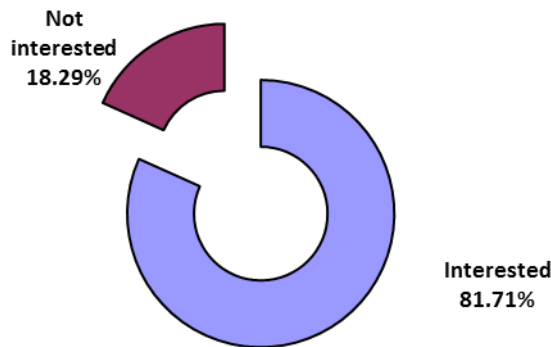
### 1. General data (socio-economic attributes) of the respondents

Results of the study revealed that most of the respondents were male (64.63%). The respondents were secondary school graduates most (47.37%), followed by elementary school graduates (37.80%) and bachelor's degree graduates and above (12.20%). Most of the respondents were mainly engaged in agriculture (61.98%) and the rest (39.02%) considered their agriculture as a minor career. More than one-half of the respondents (53.66%) grow crops as their main career and the rest (46.36%) reared livestock as their main career. Most of the respondents (65.85%) spent their own money for farming and the rest (34.15%) got a loan for the financial institutes. Most of the respondents (82.93%) had debts due to their agricultural careers.



**Fig. 1.** Types of agricultural careers of the respondents

Most of the respondents (81.71%) perceived and knew about the principles of agro tourism and were interested in making their farms to be an agro-tourist attraction (81.71%). Most of the respondents (76.83%) agreed to an idea making a farm to be an agro-tourist attraction but only one-fourth of the respondents (25.61%) were ready to make their farms to be an agro-tourists attraction.



**Fig. 2.** Interested in making the respondents' farms to be an eco-tourists attraction

## **2. Problems in the management of agricultural resources for tourism of the respondents**

As a whole, the respondents had a moderate level of problems in the management of agricultural resources. Based on its details, all aspects of the problem were found at a moderate level (basic conditions of the respondents; economy; agricultural production technology; and resource/environmental exploitation (Table 1).

**Table 1.** A level of problems in the management of agricultural resources for tourism of the respondents

Item	Mean (n=82)	S.D.	Description
<u>Basic condition of the respondents</u>			
1. Vision of agricultural careers	2.72	0.37	Moderate
1.1 Initiatives such as diversity of farm activities	2.01	1.04	Moderate
1.2 Seeking for knowledge, skills, and knowledge able persons	2.73	1.58	Moderate
1.3 Skillfulness of the respondents to make their farms to be a tourist attraction	2.75	.96	Moderate
1.4 Ability to solve problems occurring	2.80	.69	Moderate
1.5 Application of values things or farm activities as a tourist attraction	3.21	.87	Moderate
2. Production activities			
2.1 Planning on agricultural production on the farm	2.21	.86	Moderate
2.2 Production which is responsive to tourists and consumers	2.67	.81	Moderate
2.3 Having diverse farm yields for tourism services	2.68	1.26	Moderate
2.4 Having SWOT analysis before making the farm to be a tourist attraction	2.87	1.28	Moderate
2.5 Quality of production system on the farm for tourists	3.04	.96	Moderate
3. Marketing Strategies			
3.1 There are tourists and tourism market	2.91	.56	Moderate
3.2 Method of value construction of yields on the farm for selling on the farm	3.01	1.05	Moderate
3.3 Construction of satisfy standards on farm tourism	2.58	1.16	Moderate
3.4 Developing the farm to meet standards in accordance with tourism criteria	2.74	1.16	Moderate
3.5 Provision of data and public related to consumers	2.86	.73	Moderate
<u>Economic aspects</u>			
1. Economic aspect of the respondents			
1.1 Readiness of production factors on the farm	2.95	.92	Moderate
1.2 Capital and various assets for the investment	2.98	.92	Moderate
1.3 Capital sources to support farming	2.76	.99	Moderate
1.4 Other debt burdens	2.41	.99	Moderate
1.5 Readiness for the farm investment	3.09	1.12	Moderate
2. Readiness of Agricultural resources on the farm			
2.1 A number of workforce on the farm	2.41	1.01	Moderate
2.2 Soil and water source conditions for farming	2.60	1.18	Moderate
2.3 Production technology on the farm such as farm machine and tools	2.35	.99	Moderate
2.4 Atmosphere and identity of the tourism spot	2.57	.84	Moderate
2.5 Provision of services and convenience facilities such as restroom and parking lot	2.74	1.05	Moderate
3. Plant varieties and livestock breeds for tourism			
3.1 An amount of domesticated livestock and crop	2.31	1.20	Moderate

Item	Mean (n=82)	S.D.	Description
cultivation for tourism			
3.2 Developing appropriate varieties on plant varieties and animal breed showing	2.65	.93	Moderate
3.3 Interest in current plant varieties and animal breeds	2.58	1.16	Moderate
3.4 Forms of the activities on plant varieties and animal breed showing	2.74	1.16	Moderate
3.5 Presentation of a relationship between a way of live and values	2.86	.73	Moderate
<u>Agricultural production and technology</u>	2.78	0.58	Moderate
1. Modernness as adequacy of production factors			
1.1 Modernness and adequacy of production factors	3.02	.84	Moderate
1.2 Interested in production technology serving to services	3.10	1.32	Moderate
1.3 Skillfulness in livestock rearing	2.98	.77	Moderate
1.4 Beauty on the farm	2.90	1.33	Moderate
1.5 Novelty and technological identity	2.89	.80	Moderate
2. Using production technology			
2.1 Developing local wisdoms to be modern technology and can be used on the farm	2.51	.99	Moderate
2.2 Adaptation of technology to be appropriate with the production	2.53	.95	Moderate
2.3 Knowledge about new farm technology using	2.46	.93	Moderate
2.4 Construction of impression to tourists about technology using as necessity	2.80	1.08	Moderate
2.5 Readiness in modern production technology using as tourist attraction on the farm	3.06	1.23	Moderate
3. Application of agricultural resources on the farm			
3.1 Skillfulness in farm land scape management and design	2.65	1.05	Moderate
3.2 Construction of service station to attract tourists	2.53	.84	Moderate
3.3 Production planning as a tourist spot throughout the year	2.64	1.11	Moderate
3.4 Basic infrastructure supporting tourists spots	2.95	1.43	Moderate
3.5 Developing connection on the farm such as production and recreation activities for tourists	2.84	1.08	Moderate
<u>Resources and environmental exploitation</u>	2.59	0.45	Moderate
1. Agricultural topographic conditions			
1.1 Convenience in farm entry/exit	2.74	1.28	Moderate
1.2 Visiting/strolling areas and activities court	2.56	.94	Moderate
1.3 Convenience in travelling	2.68	.94	Moderate
1.4 Farm identity and prominent feature	2.80	.90	Moderate
1.5 Information board	3.21	1.06	Moderate
2. Farm environmental conditions			
2.1 Clear and appropriate farm	2.70	1.0	Moderate
2.2 Beautiful atmosphere which can impress tourists	2.85	.78	Moderate
2.3 Nature being of the farm e.g. livestock habitat and crop plots	2.37	1.10	Low
2.4 Safety for tourists visiting the farm	2.59	1.14	Moderate

Item	Mean (n=82)	S.D.	Description
2.5 Farm structures motivate tourists to visit	2.64	.96	Moderate
3. Tourist attraction management			
3.1 Improvement of land scope	2.48	1.10	Moderate
3.2 Tourism networking	2.29	.93	Low
3.3 Service process such as public relations/tourists reception and care-taking	2.51	1.06	Moderate
3.4 Value added and product development	2.31	1.19	Low
3.5 Knowledge service to tourists	2.39	1.02	Low
3.6 Problem in lack of tour guides on agriculture	2.40	1.16	Low
Total	2.60	0.47	Moderate

### 3. A comparison of problems in the management of agricultural resources for tourism of farmers in Phuket classified based on type of farming

Findings showed that, as a whole, the 2 groups of respondents (crop growing and livestock rearing) had problems in the management of agricultural resources for tourism at a moderate level and it had no difference. Based on the consideration of 4 aspects, it was found that both groups of the respondents had problems in the management of agricultural resources of all of the 4 aspects. Thus, the hypothesis of this study was accepted (Table 2).

**Table 2.** A comparisons of problems in the management of agricultural resources for tourism of the two groups of respondents

Item	Crop growing farmers			Livestock rearing farmers		
	$\bar{X}$	S.D.	Description	$\bar{X}$	S.D.	Description
1. Basic conditions the respondents	2.74	0.37	Moderate	2.70	0.36	Moderate
2. Economic aspects of the respondents	2.68	0.50	Moderate	2.65	0.40	Moderate
3. Agricultural production technology	2.96	0.47	Moderate	2.59	0.68	Moderate
4. Resource and environmental exploitation	2.72	0.47	Moderate	2.45	0.46	Moderate
Total	2.78	0.27	Moderate	2.60	0.33	Moderate

### Conclusion

Results of the study revealed that most of the respondents (61.98%) were male and more than on-half respondents (53.66%) grew crops. Most of the respondents (65.85%) spent their own money for farming and 81.71 percent perceived the principles of agro-tourism. Most of the respondents (81.91%)



agreed to an idea of making the farm to be an agro-tourist attraction but 74.39 percent were not ready.

As a whole, the respondents had a moderate level of problems in the management of agricultural resources for the tourism in terms of four aspects: 1) basic conditions of the respondents; 2) economic aspects of the respondents; 3) agricultural production technology; and 4) resource and environmental exploitation. Regarding a comparison of problems in the management of agricultural resources for tourism in Phuket, it was found that there was no difference between the crop growing group and livestock rearing group (a moderate level).

## **Discussions**

Although there were farmers in Phuket who were interested in making their farms to be an agro-tourist spot and agreed to this idea, but not of them (74.39%) were not ready to do it. However, most of them (85.37%) needed for training or learning methods of making their farms to be an agro-tourist attraction. This might be because results of the study revealed that the farmers were not skillful enough to make their farms to be an agro-tourists attraction. Hence, they needed for knowledge seeking and exchange with knowledgeable people.

An interesting strong point of the farmers in Phuket is that they have abundant agricultural resources which can be developed to be agro-tourists attractions. This is because they have basic resources in their farm land. However, there are problems in a limitation of basic operational conditions supporting the farmers such as farmer participation in tourism planning which conforms to a study of Pongwirithorn and Pakwipat (2016). Besides, the farmers must develop their farms to be interesting.

This can be done providing various farm activities to tourists i.e. yield harvesting, demonstration, yield tasting and selling, etc. This also conforms to Kaewsa-nga and Chamnongsri (2012) who claimed that the construction of body of knowledge for farmers will help the management of a new form of tourism be systematic, clear, and sustainable.

## **Suggestions**

1. According to results of the study, it was found that the two groups of farmers needed for training and learning of methods of making their farms to be an agro-tourist attraction (85.37%). Therefore, concerned agencies such as Tourism Authority of Thailand and Phuket Rajabhat University should make a survey and hold trainings for the farmers continually.

2. Problems found in this study such as application of various things or farm production activities, information board, and readiness on the investment should be improved by concerned agencies in the form of integrated problem-solving. This can help the farmers be able to develop the effective management of farm resources so as to be an agro-tourist attraction.

3. It should have an in-depth study on problems encountered about agricultural production technology and resource/environmental exploitation. This can be a guideline for developing the management of agricultural resources to be an agro-tourist attraction.

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