

**Community Participation in Good Agriculture Practice in Rice to Strengthen the Food Stability and Increase Family's Income under Sufficiency Economy Philosophy: A Case Study of the Agriculturists at Khukad Subdistrict, Khong District, Nakhon Ratchasima Province**

— *Review of* —  
**Integrative  
 Business &  
 Economics**  
 — *Research* —

Netchanok Khongthon  
 Nakhon Ratchasima Rajabhat University  
 Email: [netchanok.k1711@gmail.com](mailto:netchanok.k1711@gmail.com)

Wassana Phanuruk  
 Nakhon Ratchasima Rajabhat University  
 Email: wasnt23@hotmail.com

### ABSTRACT

The research titled “Community Participation in Good Agriculture Practice in Rice to Strengthen the Food Stability and Increase Family's Income under Sufficiency Economy Philosophy: a Case Study of Agriculturists at Khukad Subdistrict , Khong District, Nakhon Ratchasima Province” was an Area Based Corporation Research which was a quantitative and qualitative research . The research objectives were 1) to educate the agriculturists about good agriculture practice rice (GAP rice) and to accumulate the good agriculture practice with their local knowledge 2) to establish the “ Learning Center of GAP Rice”.

From the study, it was found that

- 1) The agriculturists got a higher level of GAP knowledge and could adapted their knowledge to practice in cultivation (74%).
- 2) For the establishment of the “Learning Center”, it was succeeded by the participation of the concerning sectors.

**Keywords :** Community Participation, Good Agriculture Practice (GAP), Food Stability, Sufficiency Economy Philosophy.

### 1. Introduction

Nakhon Ratchasima Province covers 20,493,964 kilometre<sup>2</sup> or about 12,808,728 rais. The cultivation areas were 8.70 million rais ( 67.97 % of all areas). The province were divided in 32 districts , 287 subdistricts, 3,743 villages. The populations were 2,801,755 including 382,033 households. In 2010 , the gross state product was 163,168 million baths. The gross domestic product from the agriculture sectors was 32,172 million baths. It was 19.72% of the gross state product. The rice cultivation areas in Nakhon Ratchasima Province were 3.78 million rais or 43.45% of the cultivation areas in the province. There were 189,753 households of the agriculturists planted single-crop rice which were about 50 % of all of the rice planting households in the province. The product was average 442 kilograms/rai. The total product was 1.60 million tons. The value of the product was 9,975 million baths. (Development Plan of Nakhon Ratchasima Province in 2010-2013).

However, the way of agriculturists' living has been changed from the past. The slow life became fast. The cultivation for the household consumption became for sale. The human or animal labor in the community became relying on machine or the labor employment. The fertile soil became relying on chemistry fertilizer for adding nutrient because of the soil deterioration, the over-use of chemistry substances for overcoming weeds and agricultural pests. The household accounts could reflect the high cost of production. The practice also affected directly the health of the agriculturists using the chemistry in cultivation process, the living things and the environment in the area. Even the consumers also consumed unsafe products. The tendency of this phenomena increased rapidly as the households neither perceive the changing flow nor apply the sufficiency economy philosophy for their self-management appropriately.

Nakhon Ratchasima Rajabhat University intended to study the research project to create the village of the good agriculture practices in rice and to establish the "Learning Center of Good Agriculture Practice in Rice under Sufficiency Economy Philosophy" in the village.

## **2. Objectives**

1. To acknowledge the agriculturists' households in Khukad Subdistrict, Kong District, Nakhon Ratchasima Province, about the good agriculture practices in rice

2. To establish the " Learning Center of Good Agriculture Practice in Rice under Sufficiency Economy Philosophy".

## **3. Duration of the Research**

18 months

## **4. Methodology**

The research was an Area-Based Collaborative Research which was carried out by the combination of the quantitative with qualitative technique. The tools of the research were as the following;

1. For the first objective; to acknowledge the agriculturists' households in Khukad Subdistrict, Kong District, Nakhon Ratchasima Province, about the good agriculture practices in rice ,the tools were

1.1 The evaluation form about the knowledge and the uses of the good agriculture practices.

1.2 The structured-interview form about the rice situation in Nakhon Ratchasima Province.

1.3 The focus group to conclude and exchange the knowledge.

1.4 The GAP02 record form to practice the record of the good agriculture practices as well as other agricultural practices.

2. For the second objective, to establish the “ Learning Center of Good Agriculture Practice in Rice under Sufficiency Economy Philosophy” As it was a quantitative technique, these major sectors were as the following;

2.1 Nakhon Ratchasima Provincial Agricultural Extension Office was responsible for consulting and advices for the co-operation with the representatives of the agriculturists in each area. Moreover, Nakhon Ratchasima Provincial Agricultural Extension Office, the Production Promotion and Development Group, the Agricultural Extension Technology Development Group also monitored ,advised and evaluated the attended agriculturists. At last, the data was sent to Nakhon Ratchasima Provincial Agricultural Extension Office for the analysis.

2.2 Nakhon Ratchasima Provincial Rice Seed Center was responsible for sending officers to train the agriculturists.

2.3 Nakhon Ratchasima Provincial Land Development Station was responsible for the consulting and the lecturers of the research project. The station also donated the handbooks of the appropriated soils analysis in Khukad subdistrict.

These offices had a meeting every month, during conducting the research project, to integrate the cooperation of every sectors and to run the project reaching the goal.

## **5. Results**

According to the project of “Community Participation in Good Agriculture Practice in Rice to Strengthen the Food Stability and Increase Family’s Income under Sufficiency Economy Philosophy: A Case Study of the Agriculturists at Khukad Subdistrict, Khong District, Nakhon Ratchasima Province, it was found that

### **5.1 General Information**

The agriculturists , attending the project for the subdistrict - operation training to transfer the good agriculture practices, the soil improvement, the household account, were 29 males and 21 females, aged between 31-45, educated from the elementary school.

### **5.2 Knowledge about the Training Content**

According to the result of the research, it was found that the agriculturists knew “ The Good Agriculture Practices” well and could integrate it with their old practices. They could as well improve the rice cultivation plan and become “The Good Agriculture Practices Households”. They also had sufficient rice for household consumption (94%). For the knowledge about the training content, the agriculturists in Khukad subdistrict had higher level of the knowledge in all subjects as shown in table 1;

Table 1 : Level of Knowledge Before/After the Training

Categories of Knowledge	Level of Knowledge	
	Before Training	After Training
The Good Agriculture Practices (GAP)	3.62	4.14
Household Accounting Process	3.70	4.14
The Soil Improvement to Decrease the Cost of Product and the Soil Preparation for GAP Rice	3.58	4.30
The Regulation Agreement about GAP01 & GAP02 in the Last Production Season and in 2013/2014	3.28	4.44
Rules & Conditions of Verification and Certification Systems of (GAP): Grain Standard. The Introduction of GAP01 & GAP02 Documents.	3.16	4.16

According to Table 1 , it was shown that the agriculturists had higher level of knowledge in all categories. Aparting from this, there were a lot of agriculturists telephoned to consult with the lecturers after the training.

During conducting the research project, all agriculturists adjusted their cultivation practices (74%) such as Enzyme Ionic Plasma fermentation, the soil improvement, the soil analysis, the sampling, the decrease in chemistry usage for agriculture, etc.

Moreover, most of the agriculturists attended the “Standard of Rice Production Certification Project” such as the “ Good Agriculture Practices Project”(36%). This group changed their practices in rice cultivation to good agriculture practices in order to gain safety rice seeds and non-chemical rice. These practices could decrease the cost of production in their next crop season.

Besides, the agriculturists as well practiced recording GAP02 form for the preparation in attending the Good Agriculture Practices in rice and other crops which would increase their income and the food stability. The GAP02 forms would be the data base further stored at the Subdistrict Learning Center of Good Agriculture Practice in Rice in a near future.

Furthermore, the agriculturists found that the household accounting could show the important/unimportant goods and the economical budget. The agriculturists adjusted their behaviors according to the result of their household accounts such as the decrease in the chemical fertilizers, the increase in the organic fertilizers , the changing practices in cultivation ; from the paddy-sown field to the dry field and the rice crop plan. The result from the household accounting process could decrease the cost of production among 10 agriculturists from 50 ones (20%). The rest agriculturists were ongoing changing their behaviors.

### **5.3 The Establishment of the “ Learning Center of Good Agriculture Practices in Rice under Sufficiency Economy Philosophy”**



Figure 1: Learning Center of Good Agriculture Practices in Rice under Sufficiency Economy Philosophy in Khukad subdistrict.

The “Learning Center of Good Agriculture Practice in Rice under Sufficiency Economy Philosophy” was founded by the participation of all concerning sectors.

## 6. Discussion

At the beginning of the research project, there were some obstacles from the co-operation among the concerning sectors and the stakeholders. The project continued slowly because of the unclear roles of each sector. The Area Based Corporation concept was not well perceived. However, the concerning sectors more clearly understood the concept at the end of the project. During the establishment of the “Provincial Learning Center of Good Agriculture Practice in Rice under Sufficiency Economy Philosophy”, Khukad Subdistrict Administration Organization, Khong District, Nakhon Ratchasima Province, played an important role by supporting this following;

### 6.1 The continuity co-operation.

There was a co-operation by the agriculture officers and the budget – plan department that pushed some budgets for some activities in the project such as the GAP Training Process, The organic fertilizer production to reduce the cost of production, etc.

**6.2 The policy/plan of the agriculture development or the rice production.** Khukad Subdistrict Administration Organization had the policy and plan of the agriculture development such as the budget and plan of quality rice seeds for the distribution to the agriculturists in the area, the water management for the agriculture, the supporting of the organic fertilizer production, the group management for rice seeds production in the area. These supportings were added in the 3 year-plan.

### 6.3 The policy of the education about the agriculture for the officers and the agriculturists

The president of Khukad Subdistrict Administration Organization had a clear policy of supporting the officers to learning the agriculture practices during the research project. Khukad Subdistrict Administration Organization well collaborated with the government and private sectors. For example, Nakhon Ratchasima Provincial Rice Seed Center trained the agriculturists about the rice seeds production. The most important was that the president of Khukad Subdistrict Administration Organization was a model of

the good agriculture practices and the cost of product reduction in his own agriculture land.

6.4 The pattern of the “Provincial Learning Center of Good Agriculture Practice in Rice under Sufficiency Economy Philosophy” was included with the rice seeds nursery, the cattlepen and the paddy store house.

## 7. Suggestion

7.1 If the agriculturists wanted to use the good agriculture practices in rice, they must

7.1.1 reduce the chemical substances in the cultivation.

7.1.2 ferment the Enzyme Ionic Plasma.

7.2 There should be the collaboration among the state offices, the public sectors and the concerning sectors in solving the rice production problems in the following aspects;

7.2.1 The water shortage in the cultivation.

7.2.2 The increase of the production cost such as the fertilizer, the machines and the labor, etc.

7.2.3 The preparation for the natural disaster.

7.3 The activities improving the knowledge of the “ Good Agriculture Practices in Rice Production” should be held such as the study trip, the brain storming meeting to solve the “Good Agriculture Practices” problems in each area.

7.4 There should be a community fund for agriculture.

7.5 The knowledge about the “Good Agriculture Practices in Rice Seeds Production” should be fostered. Moreover, the agriculturists should be the rice seeds dealers to gain more income.

## 8. Acknowledgement.

Thanks for the Thailand Research Fund for granting the fund.

## 9. REFERENCES

- [1] Department of Provincial Administration. (2011). **General Registry Office Announcement on February 4<sup>th</sup> 2011**. Bangkok.
- [2] Nakhonratchsima Provincial Agricultural Extension Office. (2011). **Nakhon Ratchasima Provincial Agricultural Report in 2011**. Nakhon Ratchasima.
- [3] Nakhonratchsima Provincial Industry Office. (2011). **Nakhon Ratchsima Provincial Industry Report in 2011**. Nakhon Ratchasima.
- [4] Nakhonratchsima Provincial Irrigation Office. (2011). **Nakhon Ratchasima Irrigation Project in 2011**. Nakhon Ratchasima.

- [5] Nakhon Ratchasima Provincial Natural Resources and Environment Office. (2010).
- [6] **Nakhon Ratchasima Provincial Natural Resources and Environment Situation Report.** Nakhon Ratchasima.
- [7] Office of Agricultural Economics. Ministry of Agriculture and Cooperatives. (2010). **Nakhon Ratchasima Provincial Soil Resource Report.** Bangkok.

**Data from Agriculturists Interview Form.**

1. Rice Situation Forms for 50 Agriculturists in Khukad Sub-District Administration Organization collected during July-September 2012.
2. Knowledge Evaluation forms for 50 Agriculturists in Khukad Sub-District Administration Organization collected during October 2012- February 2013.
3. Evaluation and Monitoring forms for 50 Agriculturists in Khukad Sub-District Administration Organization, Khong District, collected during August – October 2013.