

## **Application of Concept and Methods of “1 Rai Farming for 100,000 Baht”**

### **Income of Intellectuals in Isaan Region, Thailand**

**Chariyaporn Pitathasang**

Lecturer of Department of Social Development,  
Faculty of Humanities and Social Sciences,  
Buriram Rajabhat University

#### **Abstract**

This paper aimed to present development of agricultural concept of farming that 1 Rai earns 100,000 baht income and farming methods of local intellectuals in Isaan region. The data were collected from intellectuals living in Isaan region and 3 intellectual centers in Nakhon Ratchasima, Buriram and Khon Kaen Province located in the northeast region of Thailand. Research instruments of this qualitative research were semi-structure interview, focus group guide and participant observation.

The agricultural concept of 1 Rai farming that earns 100,000 baht income is an integrated farming resulting from that members of intellectual community cooperated with multilateral parties in Isaan region to help for solving economic, social, and environmental problems in communities and reduce limitations of farmers who own small land so that they are able to do their farming in only 1 Rai, but gain over 100,000 baht income of product value per year. The farming method is an integrated production of over 20 kinds of plants and animals; the ponds were built to store water and raise fish, trees were grown to make long-term use of its wood, including plant production for sale. The key of the successful farming was to apply the new theory concept and principles of sufficiency economy to farming and daily life.

**Keyword:** 1 Rai Farming for 100,000 Baht Income, integrated farming, sufficiency economy,  
local wisdom

## **1. Introduction**

Development of Thailand in over 50 years ago greatly caused changes regarding farming of Thai people. In the past, communities in Thailand were based on subsistence farming. The farming was for household consumption and was a production using family labour. A variety of animals and plants were grown for family consumption. The technology for production relied on traditional knowledge focusing on production for household consumption. Exchanging products was created within the communities or neighboring communities when products were excessive.

After Thailand developed a modern agriculture system known as "Green Revolution" in the first edition of the National Economic Development Plan (1961-1966) onwards, agricultural production model of subsistence farming changed to be the farming for business oriented to produce products to sell and to meet the needs of the market. These causes resulted in mono culture and caused a great impact on biodiversity. Farmers expanded the area to do farming. They used synthetic chemical fertilizers, pesticides, machines using fuel (Witoon Lianjumroon et al, 2005) which caused an impact on environment, soil, water, and forest.

The modern agriculture system has considerably affected both economy and stability of farmers as the farmers attempt to increase products. This causes high investment in price of crops, chemicals, and pesticides. Apart from this, the excessive products result in a price decline. The uncertainty of the market and the variability of the weather are uncontrollable for farmers. As a result, most farmers are poor and have higher debt. According to the report from the Office of Agricultural Economics, it showed that the size of the household debt increased constantly. In 1996, the debt was 24,672 baht per household. It increased to 76,697 baht per household in 2012 which was 6.15 percent per year (Office of Agricultural Economics, 2014). The debt directly affected the land tenure and the change of career from farmers to non-agricultural occupations causing the migration of labour in order to work in big cities to earn more money to support families. These affect the structure of rural society; generation gap, living alone of elderly and children in the community, problems concerning family, health, education, getting together, and a lack of consolidation of local wisdom and culture.

In the Northeast region of Thailand, there are intellectual communities and multilateral parties which form a group of people with wisdom, knowledge and ability, and have been

recognized to provide leadership and knowledge to solve various lifestyle problems. In 2007, 5 Isaan intellectuals comprising of Phor Pai Soisaglang, Phor Khamdueng Phasi, Phor Chaiyarat Chuensri, Phor Jantee Pratumpa, and Phor Phong Gatewiboon conveyed the concept of 1 Rai integrated farming to the practice guaranteeing the products called “1 Rai farming for 100,000 baht income.” The concept was about a land management of 1 Rai to maximize benefits, to reduce land limitation of farmers who own small land to be able to make the most possible use of the land, to target possible income in order to encourage interested farmers. This concept was a guideline for interested farmers, scholars, businessmen, including a model for other regional sectors in other regions with different names such as “1 Rai of Rice Field Earns 100,000 baht Income”, “1 Rai Farming Earns 100,000 baht Income”, “1 Rai of Integrated Farming Earns 100,000 baht Income”, and “Genius Farmers with 1 Rai and 100,000 baht Income”

From the above issues, the researcher was interested in studying the development and the methods of 1 Rai farming that earns 100,000 baht income of local intellectuals in Isaan region. This is to collect agricultural knowledge into a systematic way and to be useful for dissemination, further studies, and to apply the concept to other areas.

## **2. Objectives**

2.1 To study the development of agricultural concept of 1 Rai farming that earns 100,000 baht income.

2.2 To study farming methods of local intellectuals in Isaan region.

## **3. Research Methodology**

This is a qualitative research. The methodology was as follows;

### **3.1 Research area and informant**

There are 5 intellectual centers in the southern part of the Northeast region which own 1 Rai of land and earn 100,000 baht income. Those centers consist of the center of Phor Jantee Pratumpa in Nakhon Ratchasima Province, the center of Phor Phong Gatewiboon in Khon Kaen Province, the center of Phor Pai Soisaglang in Buriram Province, the center of Phor Khamdueng Phasi in Buriram Province, and the center of Phor Chaiyarat Chuensi in Buriram Province.

The researcher conducted the research with 3 intellectuals and 3 intellectual centers from 3 provinces which were 1) the center of Phor Jantee Pratumpa in Nakhon Ratchasima Province, 2) the center of Phor Phong Gatewiboon in Khon Kaen Province, and 3) the center of Phor Chaiyarat Chuensi in Buriram Province.

### **3.2 Research Instruments**

1) Interview Guide (Semi-Structured Interview Guideline) used for In-depth Interview with local intellectuals.

2) Observation Guide for recording data concerning local intellectuals' farming methods of in each area, using Supang Janthawanit's Participant Observation (2014) to collect data.

3) Focus group Guide used for Focus Group Discussion with local intellectuals.

4) Other devices such as field books, flipchart, camera, recorder.

## **4. Results**

### **4.1 Development of the concept**

The farming concept is an integrated farming method which have been practiced and developed for long time by local intellectuals as a model to demonstrate to the farmers and interested people. The concept was divided into 3 phases as follows;

#### **1) The initial phase: incorporation, learning, and network development**

In 1994-1995, the 3 Isaan intellectuals living in Buriram, Phor Pai Soisaglang, Phor Khamdueng Phasi, and Kruba Suttinun Pratchayapruek, established a community school in Buriram with the support of Professor Sa-Ne Jamrik. A lot of participants attended this school, and the school became an intellectual community and Isaan multilateral parties consisting of 20 people. This resulted in the training of self-reliance and interdependence on the people themselves (NDC (People)). In 1999, with the support of the Foundation for Sustainable Community Development for better quality of life (MD.Aphisit – MD.Thanhip Thamrongwarangkoon, Ubonrat Hospital), these intellectuals and multilateral parties shared knowledge on integrated agriculture and the land development as a learning source for interested people, and continuously developed the concept of knowledge and exchanged knowledge.

## **2) The phase of concept development and exchange knowledge**

During 2002-2005, members of local intellectual community in Isaan region created lessons from experience for interested people. It was found that farmers who participated in the training had several conditions that could not apply the concept to the practice. These conditions were no capital, small land, spoiled soil, and lack of labour. Phor Khamdueng Phasi offered an idea of 1 Rai integrated farming as a solution to land limitation. He proposed that the farming for household consumption, not for sale, would produce enough products throughout the year. During that time, other 18 intellectuals developed their centers as a place for the farming and collected data from each center. This resulted in the knowledge of agricultural research and development projects of 1 Rai farming in 2005.

## **3) The phase of concept extension**

In 2008 the intellectual community created lessons regarding the concept, practice, and development guideline of the farming. They concluded that due to the current economic and social situations, the locals and farmers in Isaan region encountered poverty and debt. Currency greatly influenced their daily life. The former farming for household consumption, not for sale, did not respond to the basic needs of the locals. The intellectuals applied the economic dimension to be used as a motivation to increase doing farming, to change from 1 Rai farming to 1 Rai farming that earns 100,000 baht income. This was to clearly provide value target to the farmers, convince them to put effort into practice by starting from volunteer intellectuals.

The principles of the integrated farming are to make the maximize use of 1 Rai land in order to earn at least 100,000 baht per year in their first farming, non-chemical farming, and a focus on growing plants and trees which provide short and long-term production. Kinds of plants and animals depend on capacity and utilization. It must have at least one 400 m<sup>2</sup> pond dug to the depth of 3 meters for the storage of water for use throughout the year, at least 20 kinds of plants and trees, and Yang Na trees to reduce global warming and produce oil on the ground for the future. The rest of the land can be used for growing plants and animals.

## **4.2 Farming methods of intellectuals in Isaan region**

### **4.2.1 Jantee Pratumpa, Nakhon Ratchasima Province**

Phor Jantee Pratumpa started his farming in 2009 by dividing his land into 4 portions; 1) a 200 m<sup>2</sup> nursery pond for fish, and a 400 m<sup>2</sup> pond with the depth of 3 m. for local fish, 2) different kinds of plants, 600 m<sup>2</sup> area for trees and fruit trees, 3) 200 m<sup>2</sup> vegetable plots, and 4) herbs. It can be concluded that his 1 Rai farming consists of fish and 66 kinds of plants and trees. When analyze product value in 2014, the total product value was 138,800 baht. Expenses of labour, fertilizer, electricity, plant seeds, plants, and animals were 24,053 baht.

Jantee is an intellectual who specializes in growing Pak Wan Pa, so Pak Wan Pa is his main vegetable as it is family's income. Apart from this, a number of herbs become the main feature of his farming. This can be said that Pak Wan Pa and herbs are his wisdom applied to the farming.

#### **4.2.2 Pairat Chuensri, Buriram Province**

Pairat Chuensri began his farming in 2010 with the support of intellectual community and multilateral parties in Isaan region on 1 Rai land (1,600 m<sup>2</sup>). He divided the land into 4 portions; 1) a 400 m<sup>2</sup> fish pond with the depth of 3 m, 2) a 800 m<sup>2</sup> piece of land for various kinds of trees and fruit trees, 3) 200 m<sup>2</sup> vegetable plots growing 3 generations of vegetables in a year, 4) a 200 m<sup>2</sup> plant nursery. There are 35 kinds of fish and plants and trees in his farming. Having analyzed product value in 2014, the total product value was 170,430 baht. Expenses of labour, fertilizer, electricity, plant seeds, plants, and animals were 58,733 baht.

Pairat is an intellectual who specializes in plant layering, so he makes sapling plots as a part of his farming. The plant layering that provides high income is for Choke A-Nan mango trees and lime trees. Another main feature of the farming is soil improvement by growing Vetiver Grass around the pond and growing earthworms to increase friability to soil. Therefore, plant layering and growing earthworms are his wisdom applied to his farming.

#### **4.2.3 Phong Gatewiboon, Khon Kaen Province**

He started his farming on 1 Rai land (1,600 m<sup>2</sup>) in the mid of 2008 with the support of of intellectual community and multilateral parties in Isaan region and Thai Health Promotion Foundation (ThaiHealth). The land was divided into 4 portions; 1) a 400 m<sup>2</sup> pond for local fish, 2) a 600 m<sup>2</sup> piece of land for various kinds of trees and fruit trees, 3) 300 m<sup>2</sup> vegetable plots, 4) a 300 m<sup>2</sup> plant nursery. His farming consists of fish and 45 plants and trees. When

analyze product value in 2014, the total product value was 102,920 baht. Expenses of labour, fertilizer, electricity, plant seeds, plants, and animals were 32,889 baht.

The main feature of his farming is having various kinds of fruits. Phor Phong is talented and loves growing fruit trees. Other way providing high income is the plant grafting. Therefore, it can be concluded that the wisdom he applied to his farming is growing fruit trees and plant nursery.

The farming methods of the Isaan intellectuals are concluded in table 1.

Table 1: The farming methods of the Isaan intellectuals

<b>Activity</b>	<b>Jantee Pratumpa</b>	<b>Pairat Chuensri</b>	<b>Phong Gatewiboon</b>
<b>1. Soil improvement</b>	1. grow Vertiver Grass 2. cover the hole bottom with leaves, rice straw, rice husks, manure	1. grow Vertiver Grass 2.grow earthworms	1. grow Vertiver Grass 2. plough up and over, add manure, leaves
<b>2. Land management</b>	4 portions 1. dig a pond 2. trees and fruit trees 3.vegetables 4. herbs	4 portions 1. dig a pond 2. trees and fruit trees 3.vegetables 4. plant nursery	4 portions 1. dig a pond 2. trees and fruit trees 3.vegetables 4. plant nursery
<b>3. Kinds of plants/animals</b>	66kinds	35 kinds	45 kinds
<b>4. Year</b>	2009	2010	2008
<b>5. Current income</b>	138,800baht	170,430 baht	102,920 baht
<b>6. Expense</b>	24,053baht	58,733baht	32,889baht
<b>7. Wisdom</b>	1. New theory 2.Sufficiency economy 3. Development of Pak Wan 4. Growing herbs	1. New theory 2.Sufficiency economy 3. Layering of Mango tree 4. Growing earthworms	1. New theory 2.Sufficiency economy 3. Plant nursery 4. Growing fruits

## 5. Discussion

The results demonstrated that the innovative theory Sufficiency Economy by His Majesty the King was applied as the land management to farming area which was suitable for habitat in each area. In addition, all 3 intellectuals adopted the concept of sufficiency economy to 1 Rai farming that earns 100,000 baht income. The concept was to constantly make use of knowledge accumulated and additional study, live life consciously, be honest, work hard, be patient, be self-reliant, and be generous to others. It can be said that the new theory and philosophy of sufficiency economy is the key of the farming. This issue appears in Phor Pai Soisaglang's project (n.d.) suggesting that the farming required much attention, recording, making use of old knowledge and developing new knowledge, and operating activities in consistent with their status. Uthai Unpim's work (2011) was another research suggesting that the farming was significantly based on sufficiency economy. Thanwa Jitsanguan (2011) also suggested that the work of the intellectuals adopted the concept of sufficiency economy.

It was also found that the farming resulted in benefits in terms of economy, society, and environment. 1) In terms of economy, the farming provided higher return than mainstream agriculture as it was the production that based on extended household labour, selected variety of plants and animals, including managed the land properly and produced sufficient products for household consumption and for sharing and sale. When comparing income with agricultural expense of all 3 plots, it was found that the net income were 70,031 baht, 111,697 baht, and 114,747 baht. According to the Office of Agricultural Economics (2014) which compared income with expense of the Thai farmers, it was found that in 2013 the average income of the farmers was 148,240baht. The expense was 99,770baht. So, the net income was 48,470 baht which was the lower average income than 1 Rai farming earning 100,000 baht. 2) In terms of society, production methods helps the farmers have more time to spend with their family, do activities with family and community which is good for community development, including consolidating agricultural wisdom for community which is called "Saving Wisdom". 3) In terms of environment, it was found that production methods help improve soil quality which is called "Saving Soil". This results in the development of water resource in the fields called "Saving Water", and help draw more farmers' attention to the importance of forests and growing trees



called “Saving Trees”. The above issues appeared in Bantoon Setthasiroj’s work (2003) explaining that the integrated farming helped the farmers increase more income as it reduced external inputs, production cost. Household consumption also greatly reduced expense, and helped enhance biodiversity.

## **6. Conclusion**

1 Rai: 100,000 baht means an integrated farming using the 1 Rai land management to maximize the benefits with a return of 100,000 baht in a year

The concept of the farming was developed from integrated farming. The word “1 Rai: 100,000 baht” first appeared in 2008. The concept was developed by local intellectuals and multilateral parties in Isaan region, and aimed to convey the idea to the farmers and interested people, especially those with limitation such as no capital, small land, spoiled soil, and lack of labour. The intellectuals applied the economic dimension to be used as a motivation to increase doing farming, to change 1 Rai farming to 1 Rai farming that earns 100,000 baht income. This was to clearly provide value target to the farmers or interested people, convince them to put effort into practice.

The farming is a non-chemical farming focusing on growing various kinds of plants and trees which provides short and long-term production. Types of plants and trees and animals depend on capacity and utilization. The land is divided into 4 portions; 1) a pond with the size of at least 400 m<sup>2</sup> dug to the depth of 3 meters for the storage of water for use throughout the year, 2) vegetables for household consumption, sharing, and sale, 3) trees and fruit tree especially Yang Na trees to reduce global warming and produce oil on the ground for the future, and 4) the rest of the land can be used for growing plants or animals.

## **7. Recommendations**

The farming products under geography, natural resource, and context of Isaan region provide over 100,000 baht income per year. Thus, in current situation, the concept of the farming should be extended to the farmers throughout Isaan region in order that they can apply this idea to their living, and also develop the idea to earn some income to the family. In addition, this

concept should be carried forward to the policy of the agency partners or other organizations in order to drive it to other communities more properly.

Local intellectual community and multilateral parties in Isaan region are the center of people with wisdom and knowledge concerning new and old knowledge which can be applied to the farming and daily life. Therefore, there should be further studies concerning the concept and knowledge of farming of Isaan intellectuals in order to gather and disseminate the knowledge to public.

## **References**

- Jitsanguan, T. (2011). "Philosophy of Sufficiency Economy and Agriculture" in Sufficiency Economy in Thailand. Bangkok: National Institute of Development Administration.
- Setthasiroj, B. (2003). Sustainable Agriculture: Healthy Public Policy for the Thai Society. Documents of National Health Assembly 2003.
- Tubtiang, P. (2015). Rice Field University: Intelligent Farmers 1 Rai: 100,000 baht Income. Bangkok: Post Books.
- Soisaglang, P., et al. (n.d.). Research and Development Project on 1 Rai Farming. Bangkok: The Thailand Research Fund.
- Lianjumroon, W., et al. (2005). From Green Revolution to Genetic Engineering : Benefits and Impacts to Thai Agricultural Sector. Bangkok: The Thailand Research Fund.
- Buayam, S. (2014). 1 Rai Farming: 100,000 baht. Bangkok: Thantawan.
- Office of Agricultural Economics. (2014). Agricultural statistics of Thailand in 2014. Bangkok: Office of Agricultural Economics, Thailand Ministry of Agriculture and Cooperatives.
- National Statistical Office. (2014). Agricultural Census 2013. Bangkok: Bangkok Blog.
- Janthawanit, S. (2014). Methods of Qualitative Research. (22<sup>nd</sup> ed.). Bangkok: Chulalongkorn University Press.
- Srisa-aad, A., & Noibuapim, S. (2013). Model and Concept: Integrated Farming, 1 Rai: 100,000 baht. Bangkok: Naka Intermedia.
- Unpim, U. (2011). Knowledge Management for Sufficiency Economy Farming. (Doctoral Dissertation). Ubon University, Ubonratchathani.