



# **RICE MEGA FARM REPORT**

**CASE OF LAM MAE LA ORGANIC RICE CENTER AND  
THA-NGAM FARMERS GROUP**

**MIF 19, FACULTY OF COMMERCE AND ACCOUNTING  
THAMMASAT UNIVERSITY**

# Secretary

Tanitnan Vimuktayon

Yina Qiu

Warin Chivakanit

# Supervisor

Professor Dr. Arnat Leemakdej

# Introduction

As MIF program spirit which stresses on the association of theories and practice, the faculties from MIF conducted a study trip to commit yearly Social Corporate Responsibility with the sponsor from the Bank of Agriculture and Cooperative, to push the business progress of Thailand's agriculture.

This report based on the trip to Lam Mae La Organic Rice Center and Tha-Ngam Farmers Group aims to understand Mega Farm Projects which was just released by Thai Government, to know agricultural management under Mega Farm and the risk involved, and to find corresponding solutions for the risks. The students from MIF Batch 18 and 19 have summarized their contributions of this case into this report which can be found in risk profile, risk evaluation and risk treatments.

It's appreciated that Professor Dr. Arnat Leemakdej 's great patience and generous instructions which give this report crucial help. Thanks to his devotion in field trip to Lam Mae La Organic Rice Center and Tha-Ngam Farmers Group, the students from MIF 18 & 19 collected detailed information needed to present this report. We are also grateful for the help from Mr. Prachin Chantaraphanich, Director of BAAC Sing Buri provincial office and BAAC officer who offered MIF students this excellent chance to visit farmers in Sing Buri and to have a close talk with Mega Farm members responsible commitments and careful help offered in this field trip are in much gratitudes.

# Disclaimer

The information provided in this report aims to provide helpful information on the subject of Mega Farm project in Thailand. This report is not meant to be used, nor should it be used, to be applied in practice. For actual actions, consult the related Department of Agricultural Ministry. The authors are not responsible for any loss or capital investments that occur from any appliance of the treatments provided in this report, to any person reading or following the information in this report. The ideas presented in this report only express writers' opinions. Faculty of Commerce and Accounting, Thammasat University does not provide any warranty or not limited to any warranty that the contents of the report will be error-free. The information and references appeared in this report does not bear any endorsement for any websites or agencies. The link for references may change.

## I. Background

“Mega Farm” is a project under the Agriculture and Cooperatives Ministry which the government is committed to provide soft loan, machinery and agriculture equipment for farmers in order to reduce production cost and raise productivity. The Rice Mega Farm scheme has been operated since 2017 and will cover 1.05 million rai (1,680 million sq. m.) of related farmland.

Rice Mega Farm scheme entails participating farmers pooling their rice farmland together into one large plot. The initiated idea is to act as a group so it will improve economy of scale, from planning to farming and from marketing to distribution. The integration of knowledge and resources under Mega Farm aims to solve problem and to improve better strategic plan, to increase the bargaining power and develop farming efficiency. But Thai government does have requirements for establishment of Mega Farm. First, the minimum members are 50. Second, the total amount of rice farm should integrate at the same area and minimum area is 1000 rai. The members of Mega Farm can borrow up to 10 million baht at 0.01% interest rate for 5 years from the Bank of Agriculture and Agricultural Cooperatives (BAAC). However, The Commerce Ministry, another department, takes responsibility for marketing and sales of rice.

According to The Ministry, this project aims to expand on three farming models:

- 2.0 Model: traditional farming, but with better marketing and farm management methods
- 3.0 Model: farming that uses basic technology and mainly grows premium rice as raw materials offered to various industries to make into added-value products
- 4.0 Model: farming that applies advanced technology such as GPS satellite, soil improvement and agriculture drones to spray fertilizer and pesticides, to reduce production costs and produce innovative products.

## II. Benefits of Mega Farm

### 1. Combining lands as enterprise

As the participating farmers are required to work as a group enterprise and pooling their farmland together into one big farm plot. Land integration is expected to reduce the cost of production. With the support from government, Mega Farm will enhance their opportunities to do machinery and agriculture equipment sharing including knowledge integration to raise productivity and quality improvement. The participating group will set objectives and plan strategies together, such as technology adaptation, problem solving and market understanding, and the implementation, as a result, will go on in the same direction which will give higher benefit to the group.

### 2. Increasing bargaining power

Mega Farm enterprise is required number of area and participating farmers and also the opportunity providing for borrowing money, thus working as group will increase resources and power of negotiation with other parties in supply chain to the team. For supplier side such as fertilizers and equipment, with high volume demanding, enterprise can directly contact with their supplies and be able to pay in cash, cut down the middle man and the price will be lower. Thus, the production cost can be reduced and each group will have higher competitive advantage. Additionally, for rice mill side which has always been an issue to an individual farmer as rice mill has much higher power, an increasing in numbers of farmers will help increase bargaining power to negotiate the price with the rice mill.

## III. Risks

Risks can be classified into 4 types: Strategic risk, Operating risk, Financial risk and Compliance risk.

### A. Strategic risk

#### SR1. Unutilized opportunity

Participating groups do not utilize opportunities from government support, especially financing support. As each team is able to borrow money up to 10 million baht for an investment with as low as 0.01 % rate of interest, but from our survey, the enterprise borrows small amount of money, only million Baht. The borrowing is mainly used for making capital. The utmost concern of the ability to pay back the principal and lack of joint responsibility might explain the group's' decisions. The opportunity is not fully utilized as the objective of project.

#### SR2. Unable to capture economy of scale

Mega Farm project requires 50 members and area of 1,000 rai. The diversity of members may lead to different growing direction and complexity for integration. The following problem is no unity in the group and no economy of scale which will make the enterprise loss the negotiation power and other benefits.

#### SR3. Complexity for management - High flexibility of members

The existing risk that found in our observation is each participating member has relatively high flexibility, thus they are be able to join and resign the group at any time which will lead to following problem of complexity of management for group management team as no certainty in numbers of group participants will affect their strategy and future plan formulation.

### B. Operating Risk

#### OR1. Output problem

Rice productivity and quality are directly influenced by operation process of rice planting. Since Thailand is in the tropical area and has monsoon climate, rice produce is usually

affected by natural weather. Extreme climate results in droughts, flood and other natural disasters which are the main reasons for output fluctuation.

Nowadays, to earn more money, farmers eye on the quantity rather than the quality of rice. The reason behind that is government increased the minimum rice price and farmers aims to produce more in exchange for more household money. The low-quality rice, however, cannot meet normal consuming standards and even influence the proportion of exporting rice. The stagnation of low-quality rice would indirectly increase the rice supply for next year which would influence the market rice price and other governmental policies.

#### OR2. Participation of Farm

For Mega Farm project, farmers who are not key members can participate in this program at any time and have the rights to drop off whenever the unbearable are sensed. Therefore, this could result in two main problems. The first one is the instability of rice output for Mega Farm which has promised contracted amount of rice supply for merchandised business, but Mega Farm can't meet the quantity as the contract due to farmers' redemption. The second problem would increase the risk of Mega Farm operating. The remained members have to bear the overloaded risks, who feel burdened and exhausted. Furthermore, no clear obligation for each member could also confuse participants and adversely affect the growing of Mega Farm.

#### OR3. Agency problem

The management of Mega Farm at a certain degree leads to the operational inefficiency. Responsibility is only taken by some of participants. This uneven dispensation pressures the main risk-takers and leave the others no sense of participating, increasing the possibility of undoing, low efficiency and members' dropping.

The unwillingness of the leaders in Mega Farm to take big loans limits the investment in capital budgets, such as purchasing machines, rice mills, research about rice add-value, etc. Government initiated the 0.01% loan policies which aim to help farmers to better off their farming but the big loans numbers, which could be offset by future potential revenues, keeps them from the favorable loan aid.

## **C. Financial Risk**

### **FR1. Debt Repayment**

Debt Repayment risk is the possibility that leaders of the community will lose money and cannot pay principal as promised time. If the loan is used for working capital, the chance that borrowers will fail to repay debt is relatively low. The risk may rise from the borrowers that invest in rice mill or buying new lands. These borrowers tend to have default risk more than those who use loan for working capital. In addition, farmers may face natural disaster such as drought and flood, resulted in poor conditions for the crops to grow and inability to generate revenue to pay off debt.

### **FR2. Low asset Turnover**

In case that community invests in rice mill, they may face the low asset turnover problem which means that they cannot utilize rice mill efficiently. Large amount of paddy should be processed if people choose to utilize rice mill. However, the rice output in the community is too less to meet the producing goal throughout the year. Consequently, it's hard to compete with large rice mills which have better technology and higher efficiency.

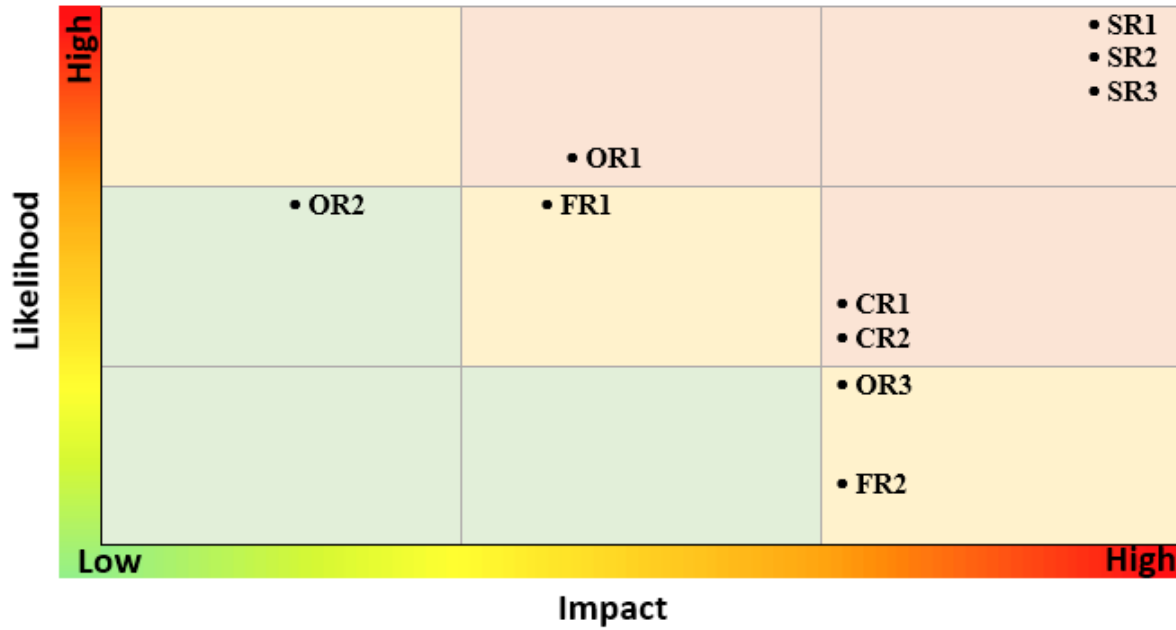
## **D. Compliance Risk**

### **CR1. Qualification of the group**

To take part in Mega Farm project and apply for the loan, the community's qualification must meet the requirements of the agriculture and cooperatives ministry. The number of members must be more than 50 people with area, not less than 1,000 rai. However, the members who are not key members can join or quit the community freely which causes compliance problem.

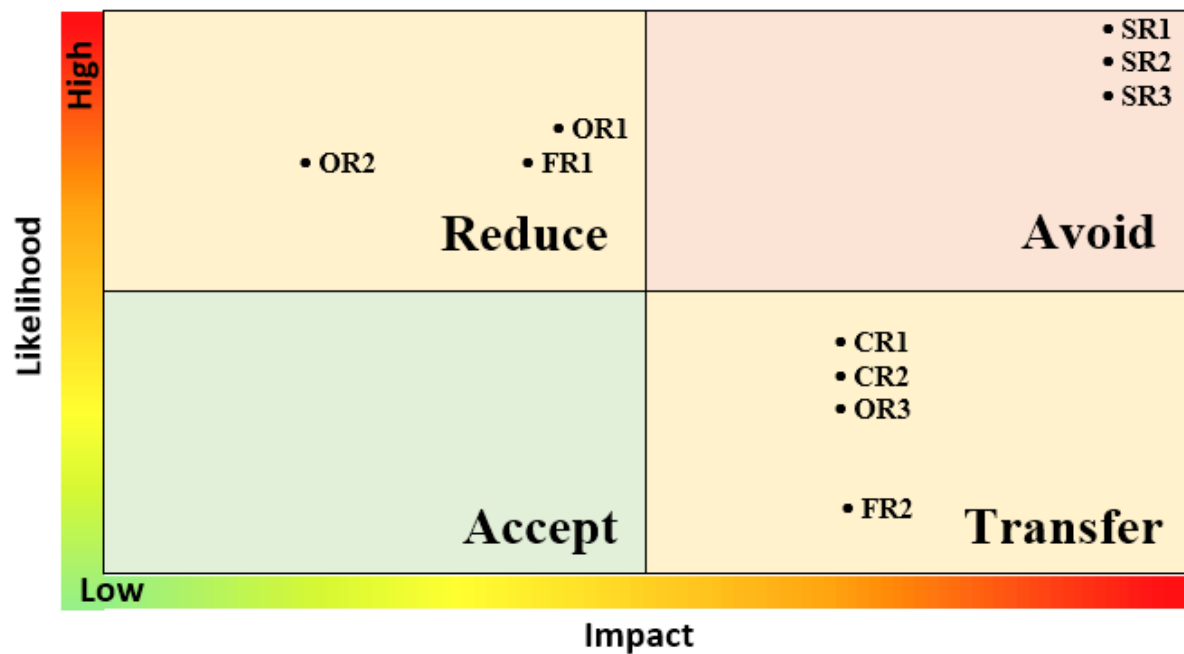
### **CR2. Group Structure Change**

Group structure change is the leadership transition due to loss of key members and unexpected circumstance that forces the key member to leave the community. The risk is higher if the community relies on 1-2 people.



(Figure 1: Risk profile)

## IV. Treatment of Risks



(Figure 2: Risk treatment)



Mega Farm scheme has its advantages but also faces risks stated as the above, such as the unachieved number of participants, not-fully-utilized capital loans and opportunities offered by government and BAAC, management immature in organization and untimely financial repayment, etc. Therefore, those risks presented in this report are putted into Likelihood-Impact treatment graph to clear the direction of solutions.

According to Figure 2, risk treatments can be separated into 4 groups

## **1. Avoidance**

### **a. SR1 and SR2 - Unutilized opportunity and Unable to capture economy of scale**

The recommendations is that after the government understand the low participation problem and unutilized capital, it also need to elaborate and explain to the groups as well. In other word, it is needed to give more support for investment idea initiation, planning and implementation proposing to motivate participating enterprises to make use of their residual opportunities. It also should negotiate with enterprises and encourage them to set up into community enterprise to achieve more ability to borrow for investment in land owned by enterprise and used as collateral. Furthermore, the project manager must make sure that existing and also new participating farmers understand the objectives of project and following benefits given by giving them information support, pain-point understanding and solving support.

### **b. SR3 - Complexity for management - High flexibility of members**

This risk is considered as very high impact and likelihood, thus, it should be avoid the chance of emerging the risk. To reduce this risk, sense of ownership must be given to participants. Moreover, the regulations and penalty for enterprise must be formulated such as responsibility and reward for member or penalty for farmers leaving a group.

## **2. Transfer**

### **a. OR3-Agency problem**

Organize more young graduates to join agriculture business and advocate them to join the management of Mega Farm, injecting new fresh brave ideas and making this organization have better budgeting and operating plans, to have Farm stay tight with the ages and change the stereotypes in traditional farmers. Having a clear management structure also helps to increase the involvement of each farmer. Add voting rights to each member to make them involve in the operation of Mega Farm.

b. FR2 - Low asset turnover

Low asset turnover risk is considered as low probability. Because currently main purpose of borrowing is for working capital not investing in fixed asset. However, if farmers invest in rice mill construction, as a result, the risk has high impact to community. To construct rice mill, the leaders should gather the members with large amount of area as much as possible. If the yield is still low, the community should seek other ways to reduce cost rather than construct their own rice mill.

c. CR1 - Qualification of the group

Currently, both two communities still face uncertainty of amount of farmers, participating in community. Some members change from rice to different type of crops or quite the community during the year, resulting in qualification which may not meet the requirement of BAAC. The likelihood is moderate and the impact is relatively high. To prevent such risk, majority of area should belong to key members and leaders should keep in touch with other members to maintain relationship and seek for new members to replace the members who quit and maintain qualification.

d. CR2 - Group Structure Change

Both community enterprises, presently count on leaders who are dedicated and possess skills which are essential for the communities. Thus, if there is an unexpected event occurs such as loss of leader, the impact is relatively high. To handle this risk, key members should address the decisions about who should lead a company after them, how to manage duty transition and share knowledge with other members. In addition, key person insurance should be considered to relieve the financial loss of the community.

### **3. Accept**

Risks with low impact and likelihood are considered as very low risks. It occurs when the cost of transferring risks is higher than managing them. However, for this project, these kind of risks do not exist.

### **4. Reduce**

a. OR1-Output problem

To solve the problem, crop insurance is suggested to look for to avoid the risk in rice operating. Seeking insurance companies to share part of the risk and reduce farmers' loss which usually suffered from the unexpected natural disasters and unstable rice price, to stable farmer's

income level and avoid unnecessary economical sufferings. Meanwhile, the loss covered from insurance also can indirectly increase the possibility of rice quality rather than only looking for quantity to increase income for farmers.

b. OR2-Participation of Farm

Change in Mega Farm running scheme from Open-End to other forms which can limit the freedom of sudden dropping. Set minimum fixed period of joining to make sure the stability of rice supply for market and increase farmers' sense of involvement. Each farmer who participates in the project also needs to take corresponding responsibilities while they share the benefits from Mega Farm.

c. FR1-Debt Repayment

If the community invests in many fixed assets, endowment fund can be adopted in order to reduce such risk. The community should set aside money to the fund every year, to make sure there is sufficient money for debt payment. The fund can be managed by outsiders who are experts in finance and BAAC can work as a middleman to help manage the fund.

As the loan will last for five years, the community should set up an action plan and simple financial plan, consisting of loan purpose, the goals of the project, steps that must be taken in order to achieve a goal, timeline for specific tasks and financial projection in the next five years. BAAC can help community with the plan. It should be shared with other members to create a clear understanding and members can focus on the same goal.

## **Name list of BAAC Officer**

1. Mr. Prachin Chantaraphanich  
Director of BAAC Singburi Provincial Office
2. Mr. Artit Sinso  
Customer Development Officer 9
3. Mr.Jakkrit Meesri  
Chief of Inburi Field Unit
4. Mr.Somkiat Jomkhanngoen  
Team Leader
5. Miss Nitiya Ninlaphai  
Risk Management Officer 8

## **Name list of the Contributors**

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|-----------------------------------|------------------------------------|
| 1. Mr. Tanatat Supawathanangkul   | 14. Mr. Patarapol Taechachokevivat |
| 2. Miss Pathama Niyomsen          | 15. Miss Phatsarida Nualsrithong   |
| 3. Miss Buppachart Sriwaro        | 16. Mr.Pitch Suebtavilkul          |
| 4. Mr. Nattapat Luerchathorn      | 17. Mr. Pongpat Khamchoo           |
| 5. Mr. Apiwat Chaninwongsiri      | 18. Mr. Pongtas Tasanapreechachai  |
| 6. Miss Katpetch Thitiwitayaporn  | 19. Mr. Poramej Torntham           |
| 7. Miss Krittika Thamphongsri     | 20. Mr. Ruksit Poomdeeying         |
| 8. Miss Lalitrudee Onkaew         | 21. Miss Sarinpas Thanaphansiri    |
| 9. Miss Maneewan Arunteerawut     | 22. Miss Sisaya Wongvanichaphan    |
| 10. Miss Nattaya Boonkliang       | 23. Miss Tanitnan Vimuktayon       |
| 11. Mr. Nutnarong Chinkulkijniwat | 24. Miss Veeravan Reongvan         |
| 12. Mr. Parkpoom Leksuntarakorn   | 25. Miss Warin Chivakanit          |
| 13. Miss Parsiri Suthiyuth        | 26. Miss Yina Qiu                  |