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ORGANIC VEGETABLE FARMING SUPPORTED BY THE ROYAL PROJECT FOUNDATION

Thailand

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CONTENTS

Summary	i
1. Introduction	1
2. Organic farming within Royal Project Foundation activities	2
3. Focus group methodology.....	3
4. Discussion of PSA results.....	5
4.1 Organic farmers.....	5
4.2 Conventional farmers.....	8
5. Conclusion and recommendations	9
References	10

TABLE OF FIGURES

Figure 1: PSA graph for organic vegetable farmers under the Royal Project Foundation	6
Figure 2: PSA graph for conventional vegetable farmers under the Royal Project Foundation	7

SUMMARY

Given the rapid development of the organic market and consumer concern for greener and safer agricultural practices, there is a strong interest in the promotion of organic farming in developing countries. However, the relatively weak uptake by farmers suggests that the enabling environment for conversion to organic practices is not yet optimal. In Thailand, the Government has been actively promoting Good Agriculture Practices and other sustainable agriculture initiatives among farmers for efficient production of safe and high-quality food and non-food products. In particular, the Royal Project Foundation supports farmers converting from conventional to organic farming through direct assistance in training and marketing of produce. This study looks at factors that affect the decision making of farmers to convert or not to convert to organic practices. Results from focus group discussions using participatory system analysis among farmers involved with the Royal Project Foundation in Chiang Mai Province suggest profitability of organic farming, price stability and farmers' participation in collective action including training are critical factors in the decision to convert to organic farming.

1. INTRODUCTION

Thailand is predominantly an agricultural country. Forty-one percent of the land area is used for agricultural production, or 21 million hectares (Hsieh, 2001). An important feature of Thai agriculture is small-scale farming with an average land holding size of 4 hectares per family (Panyakul and Pichpongsa, 2007). It is the world's leading exporter of rice, tapioca, canned pineapples, baby corn, canned tuna and orchids. As in other developing countries, organic agriculture is only beginning to be examined more closely in Thailand. According to Panyakul (2003), although Thai organic agriculture is in its infant stage, there are signs that the production system may be in the take-off stage. An estimated 13 900 hectares are under organic management in the country, i.e. 0.07 percent of the total agricultural area (Willer and Yussefi, 2005). Organic production is dominated by primary food products such as rice and fresh vegetables.

Organic farming is not a new phenomenon in Thailand. Religious groups such as the Asoke, played a major role in promoting organic farming (Sangsehanat, 2004). Like other government projects, the Santi Asoke programme only aimed at encouraging producers to adopt some organic farming technology, and did not require full farm conversion or organic certification (Panyakul and Pichpongsa, 2007).

The focus of this research is on fresh vegetables including fresh herbs. Vegetables are key ingredients in Asian and Thai cuisine (Veeck and Veeck, 2000) and consumers are often most concerned about residues on fresh vegetables (Zhang, 2005). Vegetables are also the most widely available organic product group in Thailand. The main objective of this study is to identify factors that affect the decision of converting or not converting to organic farming. In this manner, the research will help to identify areas of support and intervention for successful adoption of organic farming by small landholders.

2. ORGANIC FARMING WITHIN ROYAL PROJECT FOUNDATION ACTIVITIES

The Royal Thai Government is encouraging organic agriculture as a strategy to mitigate pollution caused by agriculture, but also as a value-addition strategy for farmers. In particular, the Royal Project Foundation has been set up to help replace opium and poppy cultivation with more profitable cash crops, particularly vegetables and fruit trees in a project initiated by the present King Bhumibol (Hsieh, 2001).

The Royal Project Foundation provides assured market and price to the project farmers for their produce. It is impossible to talk about agriculture in Thailand and not mention the Royal Projects. The first of these were started in the early 1970s with the goal of improving the living standards of hilltribe people in the North and wean them off opium cultivation. Temperate-climate fruits and vegetables were introduced as replacement crops. These as well as later projects have proved very successful both in eliminating opium growing and promoting new farming methods in the northern provinces of Chiang Mai, Chiang Rai, Lamphun and Mae Hong Son, all of which offer abundant opportunities for agrotourism. The Royal Project Foundation has four research stations and 34 development centres, which work to support farmers in selecting crops, improving farm management, and helping to preserve the environment. The Foundation helps farmers with marketing, packaging and processing. Products are marketed under Royal Project Foundation brand name and are available at supermarkets and at some farmers' markets.

The projects also stress the importance of providing education in remote areas in order to train farmers in the principles of highland agriculture and animal husbandry, and enable them to increase their earnings and become more self-sustainable (Sananikone, 2006).

3. FOCUS GROUP METHODOLOGY

The fieldwork was done for three months from March to May 2008 in Chiang Mai Province. The fieldwork included focus group discussions with farmers to implement participatory system analyses. These focus groups for organic and conventional vegetable farmers were undertaken with the assistance of staff and students of Maejo University in Chiang Mai Province. The focus groups were conducted at two project sites of the Royal Project Foundation in Nong Hoi Village, Mae Ram Subdistrict and Thung Luang, Huay Tong Village, Maewin District.

Two homogenous groups of eight to ten farmers comprised the group exercise. The 12 elements for the participatory systems analysis arrived as a result of group discussion with the farmers. Farmers were divided into subgroups of three to four members; each discussion group was facilitated by an enumerator. Participants of each group were asked the question to know their perception about adoption and non-adoption of organic farming: "What are the reasons that have led you to join organic production under the Royal Project?" for organic farmers and "What are the reasons that have led you not to join organic production under the Royal Project?" for conventional farmers also in the Royal Project perimeters. Every answer by the participants was written on separate metacards which were later displayed on the board to facilitate grouping of similar reasons into one element, with consensus of the farmers. All reasons were grouped under 12 elements. These elements were then presented in a matrix form for scoring. The complete exercise lasted for approximately three hours.

The organic farmers supported by the Royal Project Foundation gave the following factors as reasons explaining their decision to convert to organic farming:

1. Health. Practicing organic farming leads to better health for farmers.
2. Profit. Organic farms earn significantly more revenue than conventional ones.
3. Marketing. The Royal Project Foundation provides an assured market for organic products to farmers.
4. Production costs. The Royal Project Foundation provides direct assistance in terms of production inputs like seeds.
5. Transportation. Bad road condition in the villages leads to problems in transporting produce from far off fields to the collecting station.
6. Labour. Farmers experience poor availability of farm labourers for farm operations.
7. Soil fertility. Infertile land is costly to maintain for practicing organic farm operations.
8. Royal Project support. The Royal Project Foundation provides support for projects on organic farming to farmers across Thailand.
9. Farmer need. Improved health and greater profits from organic farming motivates farmers to practice organic farming.
10. Sustainable development. Organic farming can contribute to meaningful socio-economic ecologically sustainable development in developing countries.
11. Organic production techniques. Training from Royal Project Foundation on organic farming system motivates farmers to practice it.
12. Education level. Education opportunities in organic farming and other sustainable agriculture techniques facilitate adoption of organic farming among farmers.

On the other hand, farmers also supported by the Royal Project Foundation but who had chosen not to convert to organic farming practices gave the following explanatory factors of their choice:

1. Labour. Availability of labour for farm operations is a problem for farmers.

2. Extension services. For non-organic farming systems, extensive information is also available to the farmers.
3. Human health. Health issues are not the main concern of farmers practising conventional farming.
4. Weather. There is an important relationship between weather and farming. This is important in that it can determine when crops are planted, harvested, watered, protected, fertilized and sprayed.
5. Soil fertility. To maintain yields soil fertility must be maintained.
6. Debt. In order to secure their livelihoods debt-free farmers have more opportunities to invest in farming.
7. Technical package. Technical package is required to increase production and reduce costs of production.
8. Profitability. Profitability by investing in a small farm using fertilizers and pesticides for increased agricultural production.
9. Marketing. Marketing is important for successful farm operations.
10. Land availability. Total land area available for farming and direct ownership motivates farmers to invest in production techniques.
11. Transport. Transport facilities for moving on-farm produce to collecting stations
12. Commitment. Farmer's commitment to traditional farming system and to well known practices for several generations lead to the carrying out of similar agricultural practices.

The analysis helped to understand the attitudes, concerns and priorities of the farmers. It also helped to understand the degree of interrelatedness and the passive role of various elements in agriculture production viewed from the perspective of farmers. The PSA graphs for organic farmers and conventional farmers working with the Royal Project Foundation are presented in Figures 1 and 2 respectively.

4. DISCUSSION OF PSA RESULTS

4.1 Organic farmers

The elements in the upper left corner of the graph for organic farmers (profit, production costs, marketing, farmer needs, Royal Project support) have a high degree of interrelatedness with other elements in the system. But they are considered to be passive by the organic farmers i.e. they are influenced by other elements more than they influence others. The Royal Project Foundation (RPF), a project initiated by the present King Bhumibol, acts as major support for most of the farmers as it provides them with an assured market and direct assistance in terms of production inputs like seeds. There is an assurance of market and price for the products brought to the RPF collection station. Therefore, production costs, profitability and marketing are factors about which the organic farmers do not have to worry much.

The elements in the upper right corner of the organic farmers' graph (organic production techniques, soil fertility and sustainable development) have been identified as critical elements by the organic farmers. These elements influence other elements more than they are influenced and act as accelerators or catalysts. Hence there is a need for careful development of these elements. The knowledge of techniques of organic production and soil fertility has been considered as being of paramount importance in deciding to convert or remain organic. It is not surprising that the same group of farmers has given a critical importance to sustainability issues too. At the time of conducting the PSA, the farmers mentioned that a good training package would help them to identify current market trends and develop skills that even higher education does not provide. Hence proper training and post-training guidance to farmers was considered as having a fundamental importance. Soil fertility is seen as another critical factor. Infertile or degraded soil caused by excessive use of chemicals implies high cost of conversion from conventional to organic. Hence measures to improve soil fertility have been considered critical too by organic farmers.

Motor elements are located in the bottom right corner of the graph. Education, labour and transportation have been identified as the most active elements having an influence on other elements by the organic farmers. Due to bad road conditions especially in the rainy season, the Chiang Mai farmers have faced considerable problems in transporting produce from far off fields to the collecting station. Hiring of labour is both costly and difficult for Chiang Mai farmers. Apart from field operations, labour is required for delivering the produce too.

Figure 1: PSA graph for organic vegetable farmers under the Royal Project Foundation

Coordinates of elements			
No.	Elements	Activity ratio	Degree of inter-relationship
1	Health	0.97	334
2	Profit	0.92	390
3	Marketing	0.95	327
4	Production costs	0.92	334
5	Transportation	1.25	206
6	Labour	1.07	122
7	Soil fertility	1.16	268
8	Royal Project support	0.95	346
9	Farmer need	0.8	320
10	Sustainable development	1	365
11	Organic production techniques	1.1	362
12	Education level	1.37	116

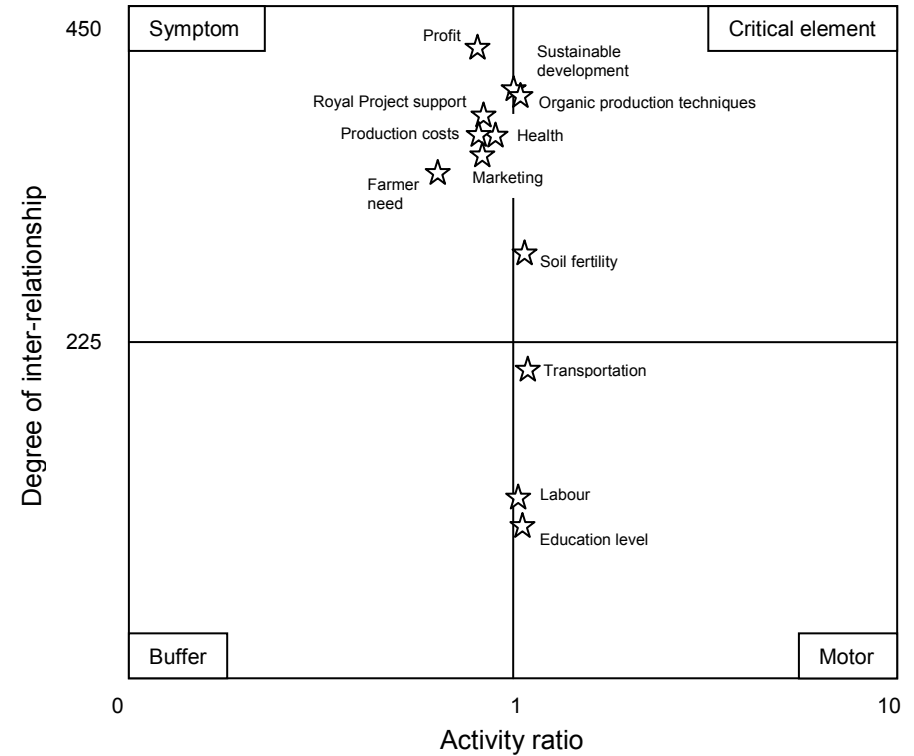
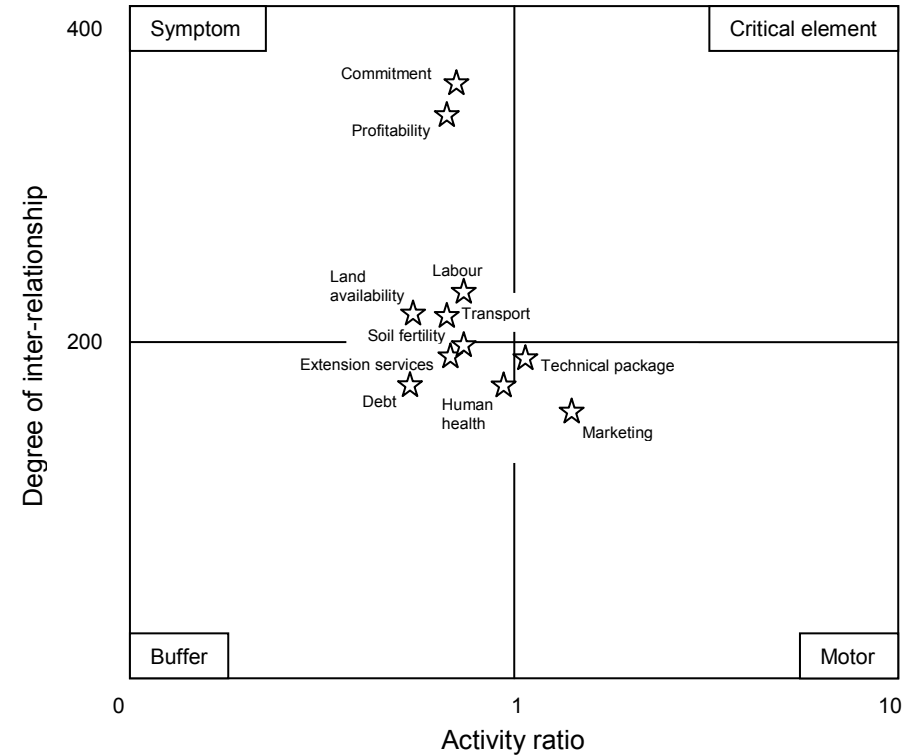


Figure 2: PSA graph for conventional vegetable farmers under the Royal Project Foundation

Coordinates of elements			
No.	Elements	Activity ratio	Degree of inter-relationship
1	Labour	0.86	219
2	Extension services	0.81	197
3	Human health	0.97	180
4	Weather	14	17
5	Soil fertility	0.86	199
6	Debt	0.75	181
7	Technical package	1.08	197
8	Profitability	0.81	338
9	Marketing	2.07	176
10	Land availability	0.76	208
11	Transport	0.85	205
12	Commitment	0.85	342



Note: Weather is not represented on the graph because it is a complete outlier. None of the other explanatory factors can impact on weather, according to the farmers in the focus group. Therefore, by construction, the activity ratio of this element is extremely high and it cannot be represented on the graph.

Management of labour on and off the field presents challenges too. It is not surprising, therefore, that labour should be considered an active element influencing others. Education and training of farmers have also been rightly considered factors having an important influence on the process.

4.2 Conventional farmers

The elements in the upper left corner of the graph (land availability, labour, transport and profitability) show a high degree of interrelatedness for the conventional farmers but a passive role in terms of their influence on other elements. This is not a surprising finding coming from farmers within the perimeter of the RPF project. Land and labour are given variables that are fairly known and predictable for conventional farming, while transport provided by the project is also considered as certain. Hence these elements show a passive role for which no development activity is considered important.

The PSA graph does not indicate the presence of critical elements in decision making among conventional farmers. The technical package is prominent and important for the farmers. In the RPF project, this package assures availability of production inputs like seeds and fertilizers to farmers, training and post-training guidance as well as an assured market up to a certain quantity of sales. Hence, while the technical package is important, it is not considered an accelerator or catalyst in the system. Perhaps, it would have been worthwhile to include organic certification and international marketing in our checklist for discussion with farmers during fieldwork. This could have figured as an accelerator or catalyst in decisions relating to conversion to organic farming.

As per the response of the conventional farmers, marketing is the most active element in the system matrix. It is the most interesting element for future activities. Any development here would have a major impact on the response of the farmers. The graph also shows that farmers are looking for a good technical package in the project. These two elements could influence all the other elements in the decision to convert to organic production.

Past debt, extension services, soil fertility and health issues have emerged in the buffer zone, at the bottom left of the PSA graph, characterized by low importance in the eyes of the conventional farmers. This is surprising as one would have expected soil fertility, health and good extension to have a high incidence on the other factors of decision making. Instead, farmers have indicated profit as a passive but highly interrelated element. They have also indicated concerns for marketing and technical package. This indicates a priority given to short-term benefits by the conventional farmers. The PSA findings point towards low motivation of conventional farmers towards long-term sustainability concerns in farming.

5. CONCLUSION AND RECOMMENDATIONS

This study shows that in Thailand, the assistance provided by a government-supported project, the Royal Project Foundation, has helped farmers to overcome the initial constraints to conversion from conventional to organic farming. It indicates that organic farmers have benefited from RPF-organized training, availability of organic inputs and marketing of the produce. However, the study points towards continued dependence of organic farmers on the RPF for access to such benefits. Farmers feel that prices are unstable. Existing farmers' organizations are not active in developing their own capacity for the input arrangements, marketing of produce or training. The findings suggest that few farmers will be able to continue organic farming in the absence of RPF support.

It is also observed that the conventional farmers within the same project area give higher priority to immediate economic returns from conventional farming. They are unwilling to take the risk of conversion given the absence of long-term security of markets or other institutional developments for shared decision making.

We learn from this study that development projects can meet their immediate objective like conversion to sustainable agricultural practices, yet they may not achieve other outcomes relating to institutional strengthening for longer sustainability. The approach adopted in the project did help the farmers in converting to organic but it also created dependence on an outside agency. For sustainability of development, it is important to have community-based management and institution building for collective decision making and action based on local cultures and traditions.

For undertaking such a role, there is a need to modify training methods and content as well as the attitudes and skills of extension staff to reflect this. Such development interventions involve deeper consultation and dialogue with farmers. It also requires transparency in the process of development and flexibility in project design and management.

For sustained conversion to organic farming, therefore, attention may be given to:

1. Strengthening of farmer's groups and cooperatives enhancing their role in all aspects of organic farming including organization of inputs, training and marketing of produce;
2. Increased awareness and training on real costs and profits of organic farming with proper documentation of benefits obtained by existing farmers;
3. Promotion of on-site experimentation and demonstration of practical techniques;
4. Increased market outlets for organic produce.

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