Key Factors Affecting the Success of Organic Agriculture in Thai Communities: Three Case Studies in Ubon Ratchathani and Srisaket Provinces.

Pasupha Chinvarasopak*

Abstract

Organic agriculture policy has been on Thailand's national agenda since 2005. Presently it is part of the second national strategic plan for organic agriculture development (2013-2016). However, since the policy was implemented, the organic agriculture situation in Thailand has been far from achieving success. The organic area has increased 0.1 percent annually and shares are 0.2 percent of the total agricultural area. As well, imported chemical fertilizers have increased from 3.8 million tons in 2008 to 5.7 million tons in 2012. This research studies the factors affecting the success and sustainability of organic agriculture in the local community. Three different case settings of organic and organic transition groups in Ubon Ratchathani and Srisaket provinces were chosen, and the case studies were conducted using qualitative methodology. The findings indicate that social capital, supporting knowledge, technology, innovation and markets help sustain organic farming at the local level. Ultimately, experience in organic practices helps farmers understand the concept of a sufficiency economy.

Keywords: Organic agriculture, local community, success factors

* Office of the Permanent Secretary. Ministry of Science and Technology.
E-mail: pasupha@gmail.com

ปัจจัยที่มีผลต่อความสำเร็จของเกษตรอินทรีย์ในระดับชุมชนของประเทศไทย: กรณีศึกษา กลุ่มเกษตรอินทรีย์ในจังหวัดอุบลราชธานีและศรีสะเกษ

พสุภา ชินวรโสภาค*

บทคัดย่อ

เกษตรอินทรีย์เป็นนโยบายตามมติคณะรัฐมนตรีตั้งแต่ พ.ศ.2548 ปัจจุบันอยู่ในแผนยุทธศาสตร์การพัฒนาเกษตรอินทรีย์แห่งชาติ ฉบับที่ 2 (2556-2559) ถึงแม้ว่า นโยบายเกษตรอินทรีย์จะมีมากว่าสิบปีแล้ว แต่พื้นที่เกษตรอินทรีย์เพิ่มขึ้นร้อยละ 0.1 ต่อปี หรือร้อยละ 0.2 ของพื้นที่เกษตรกรรมทั้งหมด นอกจากนี้ การนำเข้าปุ๋ยเคมีที่ใช้ในการเกษตรยังเพิ่มขึ้นจาก 3.8 ล้านตัน ในปี พ.ศ.2544 เป็น 5.6 ล้านตัน ในปี พ.ศ.2555 งานวิจัยนี้เป็นการศึกษาปัจจัยที่มีผลความสำเร็จของเกษตรอินทรีย์ระดับชุมชนในกลุ่มเกษตรอินทรีย์และกลุ่มที่อยู่ระหว่างปรับเปลี่ยนในจังหวัดอุบลราชธานีและศรีสะเกษ ผลการศึกษาพบว่า ทุนทางสังคม การสนับสนุนความรู้ เทคโนโลยี นวัตกรรมที่เกี่ยวข้อง และตลาด เป็นปัจจัยสำคัญที่ทำให้เกิดความสำเร็จในการทำเกษตรอินทรีย์ ทั้งนี้ แนวทางปฏิบัติเกษตรอินทรีย์ ยังทำให้เกษตรกรเข้าใจถึงหลักเศรษฐกิจพอเพียง

คำสำคัญ: เกษตรอินทรีย์ ชุมชนท้องถิ่น ปัจจัยความสำเร็จ

* สำนักงานปลัดกระทรวงวิทยาศาสตร์และเทคโนโลยี
อีเมล: pasupha@gmail.com

Introduction

Organic agriculture, an agricultural method based on natural techniques which does not use chemicals and does not contaminate through chemical residue, is one of the five types of alternative agricultures or sustainable agricultures[1] used in Thailand since early 1980s. It was initially launched by the Alternative Agriculture Network (AAN) which was formed by farmers and non-government organizations (NGOs) to foster sustainable agriculture in order to respond to the overuse of chemical fertilizers and pesticides (Green Net, n.d.). Organic agriculture was included in the Government's plan as an alternate type of agriculture to support the sustainable development of the country at the end of the seventh National Economic and Social Development Plan (1997-2001) and has been included in every plan since then.

Organic agriculture became public policy in Thailand in 2005, influenced by the trend to produce food in natural ways, to consume chemical-free agricultural produce, to compete in international markets and international trading agreements with countries that did not allow chemical contamination of food. These factors pushed organic agriculture onto the national agenda in Thailand (Mingcha & Pradtana, 2008; Klaidang, 2006). In fact, organic agricultural policy was first approved by the cabinet as part of the national agenda and was later promulgated as the first National Strategic Plan for Organic Agriculture Development (2008-2012). The second National Strategic Plan for Organic Agriculture Development (2013-2016) is pending approval by the Government.

Even with this history of governmental support, including the allocation of significant funds to implement the policy (1,262.2 million baht in 2006, 4,826.8 million baht between 2008-2012, and 4,779 million baht between 2013-2016), organic agriculture in Thailand cannot yet be considered a success on a national scale. The amount of farm land dedicated to organic agricultural has increased 0.1 percent annually since 2006 and in 2011 was 0.2 percent of the total agriculture area under cultivation (219,391.7 of 131.3 million rai)[2]. Imported agrochemicals in agriculture, as well as chemical fertilizers, herbicides, insecticides, fungicides and other

chemicals have increased from 3.9 million tons in 2008 to 5.7 million tons in 2012 with the value increasing from 94,792 to 103,304 million baht or 3,000 to 3,300 million US dollars within four years (Office of the Agricultureal Economics, 2014).

Even though organic agriculture in Thailand has been getting support from both the government and NGOs, the adoption of organic agriculture in Thailand continues to be progressing slowly. Organic agriculture is not a totally new practice; in fact, it is a revival of a style of farming that was once the standard for local farming in Thailand. While chemical agriculture is now the mainstream, the challenges are to determine how organic agriculture can re-emerge as an alternative, how to promote its adoption and how it can be sustainable. This research attempts to understand and analyze factors that affect a group of farmers to adopt and continue with organic agriculture. The results of this study will add to the body of knowledge in the policy development of organic farming at the local community level in Thailand.

Literature Review

The framework of this study is based on three concepts: policy implementation, social capital and sufficiency economy.

Policy implementation studies which emerged in the 1970s can currently be found amongst the multidisciplinary aspects of public administration, organizational theory, public management research, and political science studies (Schofield and Sausman, 2004; Winter, 2006). The first generation of policy implementation in the 1970s focused on implementation failure. Pressman and Wildavsky (1973) identified unclear goals, insufficient resources, poor cooperation, opposition, and unfavourable socioeconomic environment as factors that contributed to the failure of policy implementation. The second generation began in the early 1980s and featured both top-down and bottom-up approaches to the implementation process. The top-down approach advised that a policy should have clear and consistent goals (Van Meter & Van Horn, 1975), a small number of actors (Pressman & Wildavsky, 1973), limitation on the extent of change, and

implementation responsibility by an agency that is able to achieve policy goals (Sabatier, 1986). This approach ignored the role of the frontline implementers who executed the policy (Schofield & Sausman, 2004). The bottom-up approach focused on understanding the interaction of the key actors in a specific policy. According to Lipsky (1980), when local implementers execute policy, they deliver services or enforce regulations in relation to target groups. Local implementers should play an important role in addressing problems with the network (Hanf & Scharpf, 1978; Hjern, 1982; Hull & Hjern, 1987). The third generation revised this study into implementation models and frameworks based on the top-down and bottom-up approaches. Several models and frameworks aimed at understanding implementation such as the integrated model (Winter, 1990), the inter-governmental communication model (Goggin et al., 1990), the decentralization of power model (Cheema & Rondinelli, 2007), the management model, the organizational development model, and the bureaucratic model (Chandarasorn, 2009). The study of policy implementation has too many variables to create a general theory because it has to take into account real, different and uncontrolled circumstances to explain policy outputs and outcomes (Kevin & Christopher, 2013).

If a policy aims to be implemented at a local community, such as the organic agriculture policy in this study, social capital that has been accepted as an important tool in community development should be of concern. The idea of social capital from the West is on the basis of trust, norm and network. In Thailand, however, the concept of social capital has been in the form of local wisdom, social funds, natural resources, human resources and local values. From the context of Thai social capital, the strength of local communities lies in their strong spiritual orientation, their knowledge of local realities and networks as community resources of value.

Social capital refers to value from the networks that will give benefit back to individuals and groups. These networks can be held together by material or cultural exchanges between members of a group (Bourdieu, 1986) and such a connection will generate social capital as a product of social relationships and

social involvement (Coleman, 1988). Social capital, then, creates trust, norms, and networks that can improve the efficiency of a society by facilitating coordinated actions (Putnam, 1993). Social capital can happen in the same group such as a family, a social or ethnic group, and between different groups and networks which is essential for solving collective problems (Putnam, 2000).

As with a two-sided coin, the negative side of social capital can be exclusionary. Strong in-group bonding may not bridge to outsiders to share the social capital and may limit access to resources. Furthermore, asymmetric power sharing can surface that allows some groups to enjoy more advantage than others (Straveren & Knorringa, 2007).

In Thailand, social capital refers to the network within the family and community that plays a crucial role within the community (Seeluangsawat, 2001). Social capital is rooted in the culture and religion that creates local wisdom, activities and ways of living. It can be divided into five forms (Nakabutara, 2002):

1) Spiritual capital is related to the appreciation of the values of the locality, surroundings and country that were inherited from the ancestors.

2) Knowledge capital refers to everything in the local environment that can be reused. The social community is locally based on the traditional ways of life that are linked to religion, and custom, and reflect the local knowledge within Thai society, especially within the local communities.

3) Human resource capital creates the leaders of the local communities that form the network and develop coordination and cooperation which is an intangible community asset.

4) Natural resources support social capital.

5) Social funds to which each single local community contributes for the public good; people's access to such as saving funds, rice banks, and buffalo banks.

The philosophy of sufficiency economy is another concept which is critical to development in Thailand, including its agricultural and rural sectors. This philosophy presents a "middle path" as a principle of living for all social levels,

from individual, family, society, through to the nation itself. It is concerned with numerous aspects of life based on moderation, prudence, and social immunity, and uses knowledge and virtue as guidelines in living (Chaipattana Foundation, n.d.).

Study Area and Research Method

There are two major groups involved in organic agriculture in Thailand. The first is local organic agriculture at the community level which aims at the domestic market. The second is corporate organic agriculture that reaches out to international markets (Green Net, n.d.). This study focuses on the first group which includes local farmers, grass roots people of the country who will have a positive impact on organic agriculture in order to serve the ultimate goal of sustainable development under the philosophy of sufficiency economy. They seek to be self-reliant and have an impact on sustainable agricultural development. Organic produce in this group includes in-house certified products for sale in domestic markets. The second group is not included in this study because while its members have the capability to develop organic farms, they need support at a higher level and more professional technical assistance in terms of laws and regulations in order to export organic produce (Green Net, n.d.).

This study utilizes a qualitative method. A qualitative research method was selected to serve the objective which aims at gaining a better understanding of farmer groups in accepting organic agricultural practice over the transition from conventional agriculture to organic farming and the maintenance of organic agriculture and the influence of organic agriculture policy in their farming. The study's empirical data and information have been obtained from in-depth interviews and case studies.

There are three purposively selected case studies in this research. The criteria for their selection include:

1) All three case studies are drawn from one region in Thailand in order to maintain control over regional culture and environmental differences. The analysis

of the findings information will compare the three cases from similar settings to discern conclusions from the factors affecting organic agriculture policy implementation and the development process of organic agriculture practice, as well.

2) Duration of organic agriculture farming. As non-organic farming requires at least 1-3 years to develop into an organic method, depending on different organic standards, the selected case studies should have been engaged in organic farming operation for at least 3 years. The longer time of an organic farming operation will also include the process of development into organic farming.

3) Types of organic agriculture groups. All three case studies share the common factors of focused local farming, domestic market and self-operating organic agriculture before a group was formed in the lower North Eastern region of Thailand. In order to control the culture and environment factors, the diversity of the form and size of the groups is purposively selected to look at the effect of policy implementation.

Organic Agriculture Policy

As a national agenda item (2005-2007), organic agriculture policy consisted of four goals including to transform from conventional farming to organic farming, involving 4.25 million farmers in the organic conversion system, to decrease the use of agriculture chemicals by 50 percent within four years, to increase the organic farming area to 85 million rai, and to increase the growing organic market (Klaidang, 2006). The allocated budget for this plan was 1,262.2 million baht in the 2006 fiscal year; 47.03 percent of this was for developing farming input, such as organic fertilizer.

The cabinet approved the first national strategic plan for organic agriculture development 2008-2011 in January 22, 2008 in order to provide a framework for relevant agencies to implement an organic agriculture policy to achieve its goals of enhancing the quality of life of people, both producers or farmers and consumers, by changing to environmentally friendly farming, of achieving food safety and

food security, and increasing the number of organic farmers and an organic area with full supply chain management (National Economic and Social Development Board, 2008). The budget for this plan was 4,679.96 million baht; 51.95 percent was allocated to promoting the use of organic fertilizer instead of chemicals.

The draft of the second national strategic plan for organic agriculture development 2013-2016 states that organic agriculture development is informed by the Sufficiency Economy Philosophy (Office of Agricultural Economics, 2013). The vision of the new plan is to make Thailand a hub of ASEAN's organic agriculture. The objectives of the second national strategic plan for organic agriculture development include to increase organic farming area by 10 percent per year, increase organic production and consumption by 10 percent per year, add value to organic products by 10 percent per year, and to develop at least eight organic products which meet the standards and reduce chemicals in agriculture by 5 percent per year. The budget for this plan was 4,767.01 million baht; 65.3 percent of which was allocated to promote the use of organic fertilizer instead of chemical fertilizer.

If the organic budget is compared to the total 2013 budget of the Ministry of Agriculture and Cooperatives, the organic budget shares a small part representing around 1 percent of the total budget (Bureau of Budget, 2013).

The organic agriculture policy, at the local community level, has been implemented mainly by the Office of Provincial Agricultural Extension under the Department of Agricultural Extension to promote organic agriculture, and the Land Development Department to promote organic fertilizer.

The work of the Provincial Agricultural Extension Office is to promote and encourage the development of farmers, farmers' organizations and community farm enterprises; support and coordinate the transference of technology on crop, fisheries and livestock production and management; supervise and render support to District Agricultural Extension Offices. Organic agricultural works are embedded in the promotion and development production section whose main work is training

as well as the evaluation of rice fields so that they can be certified by the Rice Department of Thailand.

The Land Development Department (LDD) is responsible for soil surveys and classification, soil analysis, land use planning, conducting experiments and carrying out various aspects of land development, assisting farmers in soil and water conservation practices and soil improvement, seed production for cover crops and soil improvement materials, and transferring technology from its research on soil development and soil science for multiple-purpose use. The promotion of organic agriculture is one of LDD's responsibilities which is implemented by providing materials on how to produce organic fertilizer as well as training in biotechnology to develop the soil, along with the training "soil master," or "Dr. Soil," to help farmers in soil development.

The Three Case Studies

The Sam Rong Group is located in Ubon Ratchathani Province. It is a small group with 18 members and has been growing organic products for 20 years. Their organic products are sold in local markets and in the Lemon Farm shops, a chain of organic shops at the Bang Chak Gas stations. This group was formed in 1997 with Mr. Piyatus Tussaniyom as founder and leader. Mr. Piyatus took two years to transform the agriculture process from chemical to organic, beginning with organic rice, and now has added organic vegetables to his organic line.

The Kasedtip Group is located in Rasisalai District, Srisaket Province. This organic rice group was formed in 2004 by Mr. Boonmee Surakote, who began growing organic rice two years before becoming the leader of the group. The Kasedtip group began by making organic fertilizers, and after running an organic fertilizer factory, they focused on organic rice, also growing soy beans to develop the soil for growing rice. Kasedtip is a large group, with 350 members that are both organic rice farmers and those transitioning to become organic farmers. The group has received support in kind and in cash, including training, an organic fertilizer factory, a rice mill, a rice germinated processing line, and rice packing tools from the District Agriculture Office and Sub-district Administrative Organization.

The Baan Tad Group was initially formed as part of a household accounting project, teaching villagers to conduct household accounting so that they could measure more accurately their income and expenses. The accounts revealed that the major cost was chemical fertilizer. If they could reduce the cost of chemical fertilizer, the cost of growing crops would be reduced and they would get more income from their farms. The organic agriculture group was set up in 2010 with 47 members. It is located in Wang Hin District, Srisaket Province. This group is dominated by women (42 out of 47 members are female). Ms. Liam Thongdonpum is the leader, with the help of Ms. Sumarin Thongsan. Ms. Sumarin has worked with General Pichet Visaijorn, who is known as General Effective Microorganisms or General EM, promoting organic agriculture to farmers in the northeastern region.

Findings from the Three Case Studies

Reduced Costs and Increased Income, but Debts Remain

The three case studies demonstrate that organic farming can reduce the cost of growing rice because of the cheaper price of organic fertilizer - 350 baht for 50 kilograms (7 baht per kilogram) rather than chemical fertilizer at 1,000 baht for 50 kilograms (20 baht per kilogram). In addition, savings are made through avoidance of using hormones, pesticides, and herbicides. The yield of paddy varies from area to area, starting from 500-1,500 kilograms per rai. The differences in yield can be attributed to the characteristics of different farms, the different crops (first or second) and the variables of weather, water and the amount of organic fertilizer they use. Almost all organic rice farms get more organic paddy compared to the amount from conventional farms. Moreover, they all agreed that rice grown with organic fertilizer was of better quality than conventional rice, produced better seeds and had more weight. All farmers in this study were satisfied with the better quality of organic paddy.

Farmers need to sell organic paddy to the group to get a favorable price which is 18 baht per kilogram. Conventional rice is usually sold at 12 baht per kilogram. If they sell organic rice to rice-mills or middlemen, they will get the same price as conventional rice. The better price may come with a time delay until the rice can be put on the market if the group does not have enough money to buy organic paddy at that time. This means that they have to wait for 30-45 days to get paid for their crop. The average cost and income per crop in the same yield is compared in Table 1.

Table 1. Comparative Costs of Growing Organic and Conventional Rice Per One Rai Per One Crop

Items	Chemical		Organic	
	Kg	Baht	Kg	Baht
Fertilizer	50	1,000	100	700
Hormones		100	X	X
Pesticides		500	X	X
Herbicide		100	X	X
Rice Seeds		300	X	300
Cost without labor, gas and rent (a)		2,000		1,000
Yield (Paddy)	1,000		1,000	
Price of paddy per one kilogram		12		18
Income (b)		12,000		18,000
Differences (b)-(a)		10,000		17,000

The cost per crop is less if farmers make organic fertilizer by themselves or buy from the group that buys it from other producers for the group members at a lower price. If a member does not have the money to buy organic fertilizer, they can borrow from the group and return organic rice of the same value as what they had to pay for the organic fertilizer.

In the case of vegetables in the Sam Rong group, the amount of organic produce is less than the amount of vegetables from conventional farms because chemical herbicides are more effective than herbal herbicides. However, the price of organic produce is stable and higher than that for conventional vegetables which depend highly on market prices, and their organic produce supply never exceeds demand.

Reducing the cost of fertilizers and increasing income does not mean that organic farmers have no debt. Farmers in this study still have debt from non-agricultural loans. Some farmers mentioned that growing organic rice helped them repay their loans faster. Their debt is from other necessities such as their children's school tuition. The debt is also created to develop their production. Two members of Sam Rong group have invested in a new greenhouse with filter film technology to grow organic vegetables.

However, both the Sam Rong group and Kasedthip group shared data which shows that during the transition to organic farming, the yield of produce for both rice and vegetables farms was less than when turning organic. Even though the price of organic fertilizer may be less than chemical fertilizers, farmers lose income from the lesser yield during the transition period.

Other Benefits from Organic Agriculture

Besides the advantages of growing cost reduction and better rice quality, organic farming improves the environment, the health of the farmers, and also provides a sustainable source of local food. Another benefit of organic fertilizer is the enrichment of the soil and the ability to use less organic fertilizer in the next crop and still get the same amount of rice or more. As a result, there is the potential for indefinite income increase. The farmers in this study felt that organic agriculture improved the ecology. They found animals in the rice farm, such as crabs, fish and frogs that were never seen when chemical fertilizer was used. This not only indicates that the environment is good enough for animals to live in, but provides free protein food for farmers too.

Quality of life, including both physical and mental health, is also better when compared to when they were managing chemical farms. They have better health and rarely get sick –another savings from the reduced medical costs. After changing to organic agriculture farmers never need to go to the hospital because of poisoning from chemical fertilizer and pesticides and they feel safer without the presence of dangerous chemicals around them. One farmer said that her husband is a diabetic and could not walk to and from their conventional rice farm. When they changed to growing organic produce her husband could now walk around their farm. Compared to a conventional farm family that takes less care with their farming, Mr. Piyatus also said that children in organic families are better behaved as they help parents in farming and do not touch drugs or become violent. In addition, some farmers that grow organic rice for family consumption feel happier about eating their rice. Their peace of mind improves, too. Furthermore, the emotional status of the organic farmers has also changed from being moody to being calm persons who care more for others. Customers appreciate that they grow organic rice and vegetables and this public support increases the motivation of organic farmers to continue growing organic. Additionally, they received rewarding recognition in 2011 with the awards of national outstanding farmer (Mr. Boonme of Kasedtip group) and organic agriculture resource person (Mr. Piyatus of Sam Rong group).

Organic farming follows a trial and error lesson plan. The surveyed farmers reflected that they had to go to their organic farms every day and sometimes several times a day. Occasionally, they were at the farm for the whole day. Spending more time involved in organic farming means they spend less time on un-necessary things. The farmers concurred that they have to learn new lessons every time they go to their farms, especially when they are growing a new crop. They commented that they are learning all the time since the farm is a classroom for analyzing and solving problems that seem to occur differently with different crops. Because of this, they gain more knowledge to develop their farms. Furthermore, in order to improve their organic farm, they also need to learn and

practice local knowledge about such things as herbal herbicides produced from local plants, soil improvement through the addition of minerals, such as Dolomite, to balance the acidic condition of the soil and new technology to improve their farm, such as film technology to guide the growing of organic vegetables and packing technology, all of which adds value to their rice; for instance, germinated rice. They have learnt that organic farming techniques give them a sufficient life which means that they do not need to depend on outside markets for products, such as chemical fertilizers, they previously used. Additionally, their daily food needs are all met by their farms.

The Group: The Power to Grow Organic

The case studies have shown that being belonging to an organic group accrues many benefits, such as sharing knowledge and innovative practices, receiving a better price for organic produce, and support from related agencies that will profit the group rather than only an individual, as well as the creation of a more friendly working environment. The group also assures that they will not lose their way as they have friends to help guide them.

All members in the Sam Rong group have a close, even family relationship with Mr. Piyatus. Some are his sisters and brothers-in-law, some are his former co-workers, and some are familiar neighbors and people from the same community. However, the group's membership numbers are not static. Some members had to quit the group because it was learned that they did not follow organic practices. In addition, in order to maintain the group's high quality standards, several people on a waiting list to join the group, first need to demonstrate their sincerity before being allowed to join. As the group's leader, Mr. Piyatus has to be a model and consultant for his group's members. Mr. Piyatus randomly checks members' farms to ensure the organic standards of their produce is maintained and to grant domestic organic certification.

In contrast, the Kasedtip group has a more loose membership structure as anyone who can buy shares can become a member. The group provides organic fertilizers and rice seeds, making a value-added rice product, and helps in finding a market. These members commented that without the group, organic rice is not different from conventional rice in terms of price. However, group membership means it is easier to get support from provincial agricultural offices and the subdistrict administrative organization. The group will cover the costs for an international agency to certify the organic rice for its members in order to expand the organic market to an international level.

Finally, the Baan Tad group maintains a close and strong relationship as they are relatives who join together for activities other than farming. Baan Tad started organic agriculture with the production of organic fertilizer. Their group membership is mutually beneficial through the sharing of knowledge, practices and collaboration in group activities, such as the making of organic fertilizer and taking care of their sufficiency economy farm model. A unique challenge for this women-dominated group is that the production of organic fertilizer which is a labor intensive activity unless labor saving equipment and tools are available. The group leader asserted that if they had a complete equipment set for making organic fertilizer, they would be more self-reliant.

Network

One of the more important tasks of the large Kasedtip group is finding both domestic and international organic rice markets. This group has received orders from a company in China for exported organic rice, but using the company, not the Boonme, brand. For the domestic market, this group needs to find new markets for the increasing demand for organic rice. Mr. Boonme's son has assumed this responsibility, joining road shows with the commercial office in organic events throughout the country. The Kasedtip group has a network with Baan Ma Yang, another organic group located in the same district. They share organic rice when demand is greater than the amount of organic rice they have in stock.

A network of these two groups developed as they share the same organic rice practices with support from the same district agriculture officers. The two groups are well acquainted with each other as they have family members and connections in the same local b community businesses. The two groups also learn from each other about the development of their rice production.

Support

The Sam Rong and Kasedtip Groups agreed that a group leader is one who helps them to gain knowledge and solve problems in organic practices. The leader has to help the group find a market, negotiate a price, and share his/her home as a meeting place; sometimes providing food for members at the meeting, too. The Sam Rong group does not have a policy which allows members to borrow money as it is awkward to request the money's return when a farmer does not have money or does not want to return it. If they want to borrow money to invest in organic farming, Mr. Piyatus will accompany them to the Bank for Agriculture and Agricultural Co-operatives to apply for a loan according to each member's financial ability to obtain a loan. In contrast, the Kasedtip group runs as a cooperative group whose members can buy a share and receive a return from the group, depending on their affordability. Finally, at the time of this research investigation, the Baan Tad group had just begun a co-operative group.

The Sam Rong group has received support as in-kind knowledge, technical consultation and other organic farm site-visits from the Department of Thailand Rice, the Ministry of Agriculture and Cooperatives, Ubon Ratchathani University and the National Science and Technology Development Agency. In addition, they receive support from local organizations, such as the hospitals, to set up an organic market, a local supermarket and a local community (Ratchathani Asoke group) to trade their produce. According to Mr. Piyatus, the Provincial Agriculture Office, a main implementing agency, does not support any part of their organic farms practice except the organic rice and the certified vegetables, but asks them to use their organic farm as a model from which related projects might learn.

A number of farmers joined the Kasedtip group because they saw that Mr. Boonme's organic rice farm could reduce costs and produce more and better quality rice. Some farmers said that they were born into a rice farming family in which their parents had never used chemicals to grow their rice. Thus, they want to return to their parents' ways after learning that chemical fertilizer is expensive and harmful. The Kasedtip group works closely with the District Agriculture Officer who is influential and can persuade farmers to transition from conventional to organic rice through holding several training sessions and supplying seeds to support organic rice. The group has received support in kind and in cash, including training, an organic fertilizer factory, a rice mill, a rice germinated processing line, and rice packing tools, all from the District Agriculture Office and Sub-district Administrative Organization.

In the case of the Baan Tad group, after learning that the major expense of farming was chemical fertilizer, they started their own organic fertilizer plant using knowledge and technical support from Ms. Sumarin. Consequently, Ms. Sumarin organized a site visit for this group to learn how to grow organic crops and, at the beginning, helped the group by providing the raw materials to make organic fertilizer. Meanwhile, the sub-district administrative organization supported the building of smooth, flat cement surfaces on which to mix the components to make organic fertilizer.

The organic fertilizer plant of the Baan Tad group is located next to the office of the Non-Formal and Informal Education Office. The group has received training support from this office for the production of organic fertilizer and organic rice agriculture, as well as the setting up of a sufficiency economy demonstration site as a farm model. Having a leader who has a role in several government projects helps the group to obtain much related support, though not yet assistance for their own organic fertilizer plant.

Discussion

Organic agriculture is an alternative form of agriculture used by some farmers, while main stream agriculture remains conventional and in conflict with organic agriculture. As a government policy, organic agriculture receives a large budget for implementation, even though it shares only one percent of the total agriculture budget. To date, the organic budget has mostly focused on organic fertilizers and there is no direct agency in the local implementation level. Hence, almost all action plans are separated with no coordination among the implementing agencies. Under these circumstances, where groups of farmers run organic farms, strong support for organic policy implementation is lacking.

The three case studies of this investigation found that there are certain key factors motivating farmers to transition from conventional to organic agriculture and to continue growing organically. These factors are supported by local organizations and social capital. Moreover, organic farming is a learning process that conforms well to the sufficiency economy philosophy.

Social Capital

The relationship shared by the organic farmers is based on their living in the same village and the growing of rice, as their ancestors had done. This relationship provides a link creating a group and supporting the adoption of organic farming. All group members surveyed attested that without being part of a group, they could have begun, nor continued to farm organically, nor could they negotiate for a favorable market price. Forming a group and having a strong leader are the most important factors for successful organic agriculture. A new person coming into organic farming practice is motivated and taught through the example of the group members, including the sharing of ideas on how to grow organic products during the challenging time of the transformation period.

Secondly, the group leader is the most important person to link the group together. In the case of the Sam Rong group, Mr. Piyatus is the leader as well as the first person in the group to take on organic farming, serving as a role model

for others to follow. Presently, he has invested in a film technology greenhouse to grow organic vegetables and a packing storage facility, modelling the next step for other members to follow. Mr. Pitayus himself recruits new members to the group and all members say they know him well and share some level of relationship with him. In the case of the larger Kasedtip group with its full organic fertilizer factory, tools and equipment for rice processing, there is a need to mobilize the power of the group to make all activities happen. While, for the newer Baan Tad group, in the organic transition process, there is need for on-going support from related agencies.

Next, the two small groups of Sam Rong and Baan Tad have a meeting once a month and all members are expected to join the meeting. Besides the meeting, members often meet up to do activities together such as offering help to other farms, as well as fishing or entertainment. In contrast, the Kasedtip group has a substantial meeting once a year. During the year there are several training courses in organic rice farming conducted and group activities such as organic fertilizer production or the making of germinated organic rice and packaging. Spending time together in rice activities will create shared values that become a norm within a group.

The trust in an organic farming group is also important to guarantee the quality of the organic produce itself. In the Sam Rong group, the leader randomly checks the farm and expels members who do not follow organic practices. In the case of the Kasedtip group, there is a team to check each organic farm before the agency's assessment to certify organic standards. They will not include members with loose organic practices.

Social capital in terms of trust, norms and networks in a group can help form a strong group which can motivate members to grow organic products, keep the group's standards of organic practice and negotiate with a market, as in the case of the Sam Rong group. However, expansion of such a group is difficult, possibly threatening their quality standards. In this sense, social capital does not refer to positive aspects but reflects the negative consequences of growth. While

a bigger group might need to divide into sub-groups, the success of such a move depends on the potential and capacity to get group support, as in the case of Kasedtip group. Perhaps, the trust, norms and networks are not strong enough and the sub-group may need to share resource with other groups. On the two-sided coin of social capital, the negative side in this study shows that the strong and close relations in the Sam Rong group run the risk of locking-out outsiders from a share in the group's resources and benefits, and even the dismissal of "black sheep" members who cannot achieve the standards of the group.

In the Thai context, social capital in terms of local knowledge and wisdom supports the trial and error organic practices that have been adapted for the farms to operate smoothly, without chemicals. Leaders of organic groups are human capital, sharing and transferring their knowledge and local wisdom to others, and at the same time having to seek new technology to improve their own organic farms, as well.

Support from Local Organizations

Support from related agencies is also a key factor affecting organic agriculture. Organic agriculture was the traditional farm practice in ancestral times and local knowledge can still be applied to organic agricultural practice to this day. However, new technology and innovation such as film filter technology and germinated rice provide value-added content to existing knowledge. Technology to improve soil is also important to support organic farmers depending on the soil condition. Naturally, financial support is vital too for investing in a higher level of organic farming such as greenhouses and packaging in the case of organic vegetables.

Local farmers should receive basic support for organic farming from local organizations which can tailor the support to the different needs of the group. Support from other agencies, especially for technology or innovation, should be provided directly to the group without intermediary agencies that might delay or change what organic farmers want.

One factor achieving success in organic agriculture policy implementation in the local community is the important role played by the local staff. If the direct local implementers, such as the provincial, district and sub-district agriculture officers, cannot work efficiently, as organic agriculture is not their core responsibility, organic agriculture support work should go to other local and related agencies such as local academic institutes and organic agriculture persons (Ms. Sumarin) to help farmers start and continue on with organic practices.

In addition, marketing is a most important aspects of successful organic farming. Without a market for organic produce and reasonable prices, organicfarmers will not have any incentive to continue. Both the Sam Rong and Kasedtip groups have found their markets without any outside assistance. For the Sam Rong group, markets came to them as they became established in organic farming. They also received support in marketing from both local public and private agencies in placing their products within a province. As a big group, Kasedtip needs to stimulate demand to balance its supply. To date, the Baan Tad group does not face a marketing problem as their products can be sold to middlemen who buy directly from the farms. In order to support organic agriculture, public and private organizations have more potential to create and find organic markets than individual farmers do.

A Better Quality of Life and Sufficiency Economy as Life Guidance

Organic farming is a trial and error learning process for a lifetime. Organic farmers have to learn the causes of problems in order to best solve their organic farm problems - which may be similar or different to other farms. Growing a new crop becomes a new lesson for them to learn how to take care of a new crop in the different environment of each year or each time that they grow the same crop. Such lessons could be compared to vaccinations that help the farmers manage risk in both their farm and their lives. Organic fertilizers and herbicides, produced using local knowledge, make farmers understand the reasonable necessities of their farms and realize self-reliance. They do not need to buy chemical fertilizers

or pesticides as they can make organic ones or buy them in-country with cheaper prices. As organic farming requires more care than conventional farming, farmers learn moderation which is a key aspect of sufficiency economy, growing organic crops only at a level which they can manage. Moreover, they have basic food for everyday life from their farms, including rice and vegetables. Overall, farmers gain a better quality of life by growing organic products and working an organic farm; for example, better physical health without the absorption of chemicals and a deeper peace of mind would be indirect benefits.

Organic farming starts from growing organic products oneself or by joining a group of organic farmers. Once they are settled after the transition to pure organic and have a market, the farmers can expand to the higher level of adding value to their products. For instance, Mr. Piyatus of the Sam Rong group said that organic vegetables are another level of development of organic farming as organic vegetables have a short life and need more care than organic rice. Presently, the Sam Rong group has more markets and needs more technologies to develop their organic farms. Also, the Kasedtip group has a new product, organic germinated rice, and is looking for new markets. Organic farm practice has produced a group capability, and is helping organic farmers to reach the higher steps in organic practices.

Conclusion

Organic agriculture has been an alternative agricultural practice with a specific policy through a decade's long promotion and support. However, chemical agriculture is still the primary form of agriculture, as can be seen from the slowness to increase the area of organic agriculture and the increase of imported agricultural chemicals annually. Even though there is a large budget allocated to organic agriculture, it shares only one percent of the total agriculture budget, the largest share of which has been focusing on organic fertilizers.

Local agriculture groups need all available support from the government and local related agencies so that they can start changing from conventional agriculture to organic practices and persevere along each step of the process, especially at the beginning. The three groups surveyed as case studies for this research demonstrate different levels of organic practice, beginning, transition and organic; however, all concur that a networking group is an important factor in organic farming. The relationships amongst the group members, the networks and trust in the organic agriculture groups are important factors for supporting organic agriculture. Furthermore, the contribution of new factors—the power of the group and potential leaders of the group reflect its social capital –important factors affecting the success of implementation.

In Thailand, government support will compensate a group rather than an individual. Moreover, organic agricultural attention should be paid to each and every level of the farming groups, both at the transitional and continuing stages, as the problems and solutions are not the same for every group at every stage. In order to make the implementation of organic agriculture policy effective, the leaders of the various farmer groups should be invited to join the implementation process. Also, the implementation process should be changed to give important roles to the shared values among the farmer groups, establish organic agriculture work at the provincial and area-based levels, and educate the frontline implementers and group leaders, from the beginning, regarding the organic agriculture policy process.

Endnotes

[1] In Thailand, there are five different formal sustainable farming systems which are integrated farming, organic farming, natural farming, agro-forestry and "New Theory Farming" (Jitsanguan 2001).

[2] 1 Rai = 0.4 acres or 0.16 hectares

References

Bourdieu, P. (1986). The forms of capital. In Richardson, J. G. *Handbook of Theory and Research for the Sociology of Education*. New York: Greenwood.

Bureau of Budget (2013). *Organic Agriculture Budget 2005-2013*. Bangkok: Bureau of Budget.

Chaipattana Foundation. (n.d.). *The Chaipattana Foundation*. Retrieved March 10, 2015 from http://www.chaipat.or.th/chaipat_english/index.php?option=com_content&view=article&id=4103&Itemid=293.

Chandarasorn, V. (2009). *An Integrated Theory of Public Policy Implementation*. Bangkok: TURA.

Cheema, S. G., & Rondinelli, D. A. (2007). *Decentralizing Governance: Emerging Concepts and Practices*. Washington D.C.: Brookings Institution.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*(Supplement), S95-S120.

Goggin, M. L., Bowman, A., Lester, J., & O'Toole, L. (1990). *Implementation theory and Practices: Toward a Theirs Generation*. USA.: Harper Collins.

Green Net. (n.d.). *Development of Thai Organic*. Retrieved March 10, 2015 from http://www.greennet.or.th/en/article/1367.

Hanf, K., & Scharpf, F. (1978). *Interorganizational Policy Making: Limits to Co-ordination and Central Control*. London: Sage Publications.

Hjern, B. (1982). Implementation research: The link gone missing. *Public Policy, 2*(3), 301-308.

Hull, C., & Hjern, B. (1987). *Helping Small Firms Grow*. London: Croom Helm.

Kevin, S. B., & Christopher, L. W. (2013). *The Public Policy Theory Primer, 2nd edition*. Boulder, CO.: Westview Press.

Klaidang, V. (2006). *Organic Agriculture: Public Policy*. Bangkok: The Secretariat of the Senate.

Lipsky, M. (1980). *Street-Level Bureaucracy: Dilemmas of the Individual in Public Services*. New York: Sage Publications.

Mingcha, C., & Pradtana, Y. (2008). Thai organic farming: Policy context and content. *the 46th Kasetsart University Annual Conference*. Kasetsart University.

Nakabutara, A. (2002). *Social Capital and Civil Society in Thailand*. Bangkok: 21 Century Company Ltd.

National Economic and Social Development Board. (2008). *The First National Strategic Plan for Organic Agriculture Development B.E. 2551-2554 (2008-2011)*. Bangkok: Office of the National Economic and Social Development Board.

Office of Agricultural Economics. (2013). *Draft of the Second National Strategic Plan for Organic Agriculture Development B.E. 2556-2559 (2013- 2016)*. Paper prepared for the workshop. Office of Agricultural Economics. Ministry of Agriculture and Cooperat.

Office of Agricultural Economics. (2014). *Office of Agricultural Economics*. Retrieved March 10, 2015 from http://www.oae.go.th/download/FactorOfProduct/Fertilizer_value49-54.html.

Pressman, J. L., & Wildavsky, A. (1973). *Implementation*. Berkeley, CA.: University of California Press.

Putnam, R. D. (1993). *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton: Princeton University Press.

_____. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.

Sabatier, P. A. (1986). Top down and bottom up approaches to implementation research: A critical analysis and suggested synthesis. *Journal of Public Policy, 6*(1), 21-48.

Schofield, J., & Sausman, C. (2004). Symposium on implementing public policy: Learning from theory and practice. *Public Administration, 82*(2), 235-248.

Seeluangsawat, P. (2001). *A Study of Social Capital from Thai Perspective*. Bangkok: Mahidol University.

Straveren, I. V., & Knorringa, P. (2007). Social Capital and Social Economics. In Riordan, P. *Values in Public Life: Aspects of Common Goods*. Berlin: LIT Verlag Münster.

Van Meter, D. S. & Van Horn, C. E. (1975). The policy implementation process: A conceptual framework. *Administration & Society, 6*(4), 445-488.

Winter, S. C. (1990). Integrating implementation research. In Calista, D. J., & Palumbo, D. *Implementation and the Policy Process: Opening Up the Black Box*. Santa Barbara, CA: Praeger