Rural Socio-Economic Development: A Comparative study of Thai and Japanese Experiences on Organic Farming

Saifon Suindramedhi, Hiromi Tokuda and Hiroshi Ehara

Abstract*— *Among big problems in rural areas in Thailand and Japan, community agricultural problem is the major threat to rural communities. Both governments implement various policies and laws to revitalize socio-economic development in the rural areas, focusing on sustainable agriculture. This study has been carried out using qualitative research methodology; employing documentary analysis, in-depth interviews, and participatory observation in the field. Organic farming is one of the survivals for rural communities both in developing and developed countries. Organic farming method ensures not only safety, good taste, and low cost, but also a sustainable way of farming. Organic farming could mean safety and good taste for the individuals, but it means sustainability and security for farmers and the environment.

***Keywords*— Rural Socio-Economic Development, Sustainable Agriculture, agricultural farming, organic farming.**

1. INTRODUCTION

In general, rural socio-ecomonic development is determinded in national plan. In the first phase, it focused on only economic development, but later it viewed the importance of society development. However, development policies almost emerged in urban areas before rural areas so the economic growth has been started in urban areas. While, in rural areas faced on various problem such as migration, abandoned field, natural resources management, aging, per capita income and agricultural production. This crisis emerged in both developing countries and developed coountries.

Moreover, many countries all over the world are aware of food security and efforted to establish various the action plan into government policy and rural areas became the first priority which is determined being a base of production especially agriculture. The world food situation and trends in agriculture, there are many concerns over global food supply and demand in order to grain stocks have dropped almost to the lower limit of safety stock. On the demand side, an increase in demand for foodstuffs and agricultural products due to population increases, particularly in developing countries, economic growth in China and India, and an increase in biofuels; On the supply side, a small increase in harvested areas and unit crop yields, and the impact of global climate change on production[1].

The world food situation and agricultural trends in Japan, MAFF reported is the largest net import country of agricultural products in the world. Its import of agricultural products, mainly processed foodstuffs, is constantly increasing, reflecting the appreciation of the yen and trade deregulation throughout the world, as well as the more diversified diet of the Japanese. Imports from the United States, EU, China, Australia and Canada, the top five countries, account for 70% of the total import volume, showing that Japan's imports largely depend on imports from these specific countries[1]. Besides, Japanese government need to be pursued from the farm to the dining table to improve the safety of food products. Recently Japanese people especially parents with children are very sensitive with food safety. However, those food are expensive so that low income family can not afford to get them. Moreover, problem in the rural communities of Japan is that the population is both declining and aging. Particularly, municipalities in hilly and mountainous regions will see a sharp population drop.

In Thailand, After government announed the 1st National Economic & Social Development Plan(1961-1966), monoculture expand. Government had been promoted agriculture industries. There are to using the chemical fertilizer and agricultural chemical to herbicides intensively, to reclaiming the forestry and to using natural resources for electricity power supply. Until the 7th National Economic & Social Development Plan(1992-1996) founded various social and environment impact such as migration into the urban, natural resources management, pollution, healthy problem and inequality between the urban areas and the rural areas. From the 2013 Agricultural Census, agricultural holdings in Thailand were totally 5.9 million and the households of agricultural holdings were accounted for 25.9 percent of total households in the country. The majority of agricultural activity was crops (96.4%). Most of agricultural holdings, of about 77.2 percent, were found in non-municipal area. In addition, Northeast was the region having nearly half of all agricultural holdings (46.5%), followed by North (22.0%), South (17.2%) and Central (14.3%). Area of agricultural holding throughout the country was totally

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114.6 million rais which was accounted for 35.7 percent of total area of the country 1/. The most of the agricultural holding area located in non-municipal area about 79.5 percent. During the past 10 years, from 2003 to 2013, agricultural holdings increased from 5.8 to 5.9 million (1.7%) and area of agricultural holding increased from 112.7 to 114.6 million rais (1.7%). However, an average area of holding remained the same at 19.4 rais per holding. From the agricultural holdings of 5.9 million in Thailand, it was found that they engaged in various kind of agricultural activity, i.e. the single activity and the multiple activities, such as involving in both crops and livestock or involving in both crops and freshwater aquaculture or involving in both sea salt farm and livestock. For the single activity, which was accounted for 80.0 percent of the total holdings, it was discovered that agricultural holdings engaged mainly in crops was the highest in number of around 4.5 million (76.5%) among others.

Among the biggest problems on above in the rural areas of Japan and Thailand, its now play various roles aside from agricultural production in these areas due to the emergence of various movements.

In Japan, For the sustainable development of agriculture, Japan is facing the urgent need for a recovery of sustainable agriculture. In response, Japanese government focuses on "domestic production," "farm management, human resources and farmland to support production," "efforts to increase agricultural income," "activities of women and elderly people," "efforts in agriculture that are in harmony with environmental conservation and biodiversity" and "efforts in research and technology development." In order to spur rural area revitalization, the Ministry Agriculture, Forestry and Fisheries has instituted projects to support community-based organic farming cooperatives such as supporting agribusiness and encouraging the younger generations to entry farming. Farming grants are provided to people aged between 18 and 40 years as a new farmer. Japan government support promoting the "sixth industry" increases farmers' income from agriculture production-related businesses along with adding to their existing agricultural income. Farmers can cooperate with commercial and industrial sector players in making efforts such as the processing of farm products and restaurant operations. These will represent important challenges in the future of organic agricultural farming in Japan's rural areas. Agricultural cooperatives' efforts to increase farming income through sixth industry promotion are represented by such farms as the Matsusaka Agricultural Park Bell Farm in Mie prefecture, Moku Moku Farm and Inuunig Organic Farm, as successful agricultural farm. These farm are the current model which represents a best-case scenario to utilize local resources in an effort to revitalize rural areas.

In Thailand, during the past decades, the Government of Thailand has successfully been implementing several socioeconomic policies through its regular National Economic and Social Development Plans (NESDP) to boost the agricultural sector. With the improved sustainable growth in the past decade, more employment was generated and the food production considerably increased. Food production has outpaced domestic consumption resulting to an increase in its food exports. Thailand has become one of the world's largest and most advanced producers and exporters of processed food products and is one of the top five net food exporters in the world. Export food industries and agriculture industry sectors currently employ 870,000 workers. Such as, the Thai government announced self-sufficient community economic projects in all Thailand's provinces. Later, the 9th National Economic & Social Development Plan (2002-2006) adopted the "Sufficiency Economy" philosophy of His Majesty King Bhumipol as a policy guideline. The plan was to develop good governance, strengthen the grass roots organization of society, and promote sustainable development in rural and urban communities. The plan was attempting to eradicate poverty and unequal income distribution through the development of social capital.

Furthermore, Thailand follows Japanese OVOP community enterprises, with the understanding that adopted the OVOP concept for use in its own community economic development, the OTOP project has been launched in Thailand in 2001 as a government policy. These days, many local products in various countries can successfully generate income for their communities and cities, especially in tourist areas. It is not clear whether the OTOP movement in Thailand can solve the rural and urban community poverty and unequal income distribution, but it seems likely to be able to increase local social capital. Successful OTOP entrepreneurs whose businesses progress sustainably will inevitably develop social capital. They can develop human resources and knowledge management, which are the most important factors in strengthening communities to be self-reliant and sustainable. In addition, the government's interest in organic agriculture started later than that of NGOs and its role in organic agriculture is still although increasing. They have tried to campaign on organic food consumption, but still has interested just a little from consumer. Organic products still are considered a product for the upper classes and for foreigners. Even if, the Ministry of Commerce reported, Thailand government gives precedence to export market more than domestic consumption in organic agriculture, still organic farming is the destination of a development community in rural areas at the present.

In generally, economic development policy has an impact on another development especially encouragement and revitalizing community.

2. OBJECTIVITIES AND METHODOLOGY

This paper focuses on rural socio-economic development policy in Japan and Thailand in the past five decade, defined organic farming as sustainable agriculture and examines utilizing local resources regarding how to revitalize rural areas and what factors to be important.

This study has been carried out using qualitative research methodology; employing documentary analysis, in-depth interviews with the owner of organic farm and the experts, and participatory observation in the field in

Thailand such as Lampang and Chiang Mai Province and Japan such as Mie Prefecture, Nagoya Prefecture. The case study of this research in Japan is the Inuunig Village organic farm establised in Nagoya Prefecture and in Thailand are the Kanlayanamithra Group established in Mea Tha sub-district, Mea-Orn district, Chiang Mai province and the organic farmer in Ban Wor Keaw, WorKeaw sub-district, Hangchat District, Lampang. The period of this study time was on January to October, 2015.

3. ORGANIC FARMING IN JAPAN

Organic farming is crucial for food security and environment sustainability movement. The developed countries are aware to consume clean food after consumers fearing for the pesticides' harmful effects. In developed countries, it has been found that the average yield of organic farming is 92.2 % of conventional farming[2]. Especially, the middle class or the high-income group in urban area is the groups that increased their awareness of healthy problem effect from food consumption. Various research results have shown some food with chemicals that contain carcinogenicity. The environment can also be affected from using chemical fertilizers and pesticides. Later on, these have led to organic farming movement and safety agriculture farming.

When Japanese were affected from radioactivity after the Second World War and modern technology, the citizens moved for food safety. According to the Agricultural Basic Act which was enacted in 1961, the policy on selective cultivate of crop based on consumers' needs started. Organic farming was re-evaluated when health problems caused by chemicals became known in the 1970's[2] . For the last 30 years, organic farming has been influenced in its development by three major factors: environmental concerns with the pollution and unsustainability of modern high input farming; human health concerns over agro-chemicals; and social concerns over the destruction of rural farming communities[3].

Organic farming is a kind of alternative agriculture which has been moved around Japan. However, before organic farming movement in Japan, there are various alternative agricultures such as Fukuoka nature farming (started 1938 by Masanobu Fukuoka), Mokichi Okada nature farming (started 1936) and Kyusei nature farming (Kyusei Kyo'organization was established by Okada in the 1930s). These nature farmings can't response to the demand of the increasing population, but they has been used to drive self-sufficient economic. Thus, nature farming is not success in market economic. However, all of these were adopted into agricultural sector in Thailand.

Conclusively, both Internal and External factors, which drive organic farming movement continuously in Japan such as emerging pollution of 1960s, has caused an emerge of a new paradigm of a green revolution, the impact from nuclear weapon post the world war II, development policies in rural areas, JAS Law, and so on.

Nowadays, agricultural sector in Japan is focusing on organic farming that related to human health, the environment, a community support start-up that can lead to a stronger community atmosphere (income for senior citizen and low rate on labor migration), and an increased income for farmers. This research on movement and adaptation of organic farming sector, especially the market, can lead us to apply learning knowledge and experience to organic farming sector in Thailand which is still at the stage of a beginner.

(1) Community Supported Agriculture and Business Model for Organic Farming Movement

In 1971, the Japan Organic Agriculture Association (JOAA) was founded in search of sustainable agriculture and desirable relationship between farmers and consumers. As the model of "community supported agriculture" spread in America, the concept was re-introduced to Japan through an environmental White Paper publised in 1990, from which the local government in Japan began to consider this idea for the first time. [4]

Later, "Teikei" system was emerged and became the direct sharing of harvest and risk between organic farmers and contracted consumers[2]. Teikei is the community supporting agriculture which farmers relate closely with consumers, as the organic certification is based on system trust. Consumer can order a number of products needs per day, per week and per month while farmers can recommend any products for consumers. Teikei group, as an idea to create an alternative distribution system, is not depending on the conventional market.

Since 1990s, Teikei System has been declined in Japan due to the social problem and the way of life that has been changed. Japanese housewives who were the main supporters in Teikei system has declined, mainly due to the increasing number of working woman. With the decreasing number of housewives, who used to stay at home and exclusively do every household and community shores, time consuming Teikei activities has lost the needed to support and more convenient channels were chosen by the majority[2]. When the rate of home cooking is declined and that of dining-out and taking-out is increasing, it seems likely that consumers would welcome the participation of the distribution industry and food service industry into the organic market. This phenomenon occur in many countries around the world, including Thailand. Hatano[4] indicated that a number of participants in each Teikei group has declined between 1996 to 2007. In contrast, when Teikei group registered as NPO in 2001, a number of Teikei group increased. The remain of all organic famer was only 10 percent.

Furthermore, the primary reasons for the decline in Teikei participation entail various internal and external factors, such as changes in Teikei's participants, changes of the larger organic market, and changes in the society as a whole. These factors have led to a reduction in the number of Teikei participants – even as channels for distribution of organics have increased[4]. Notwithstanding, the number of organic food consumers has not declined in Japan. Nowadays, the food-service industry need can create successful organic business.

(2) The Certification and Labeling Systems of Organic Agricultural Products

How stringent are domestic organic products in order to get certified and labeled under standard in Japan? At the present, some farmers have not received certification on safety food or organic farming standard from Japan Agriculture Standards (JAS) or International Federation of Organic Agriculture Movement (IFOAM). Because there are many conditions to change such as high technology that having a high cost for farmers. In cases of small farms or farmers who are under the Teikei system, consumers are dealing directly with farmers to control any standard.

The certification system for organic products was made compulsory from 2001, as a result of the revised JAS Law. Fujimoto mentioned the number of certified organic business entities, including producers, distributors, and importers, has gradually increased from 3,639 (2002) to 5,842(2010). However, certified organic producers accounted for only 3,815 persons in 2010, and the extent of their certified fields remained small in area at 8,506 ha, accounting for a mere 0.18% of total arable land in the country[5].

Koichi Ikegami [6] from Kinki University said that in the beginning period, JOAA, the major organization of organic agriculture in Japan, insisted that certification and labeling systems did not fit organic agriculture and denied any kind of involvement with such system. Later, MAFF had introduced the guideline on organic agriculture products in 1992, being followed by the revision of Japan Agriculture Standards (JAS) in 1999 for the purpose of harmonization to the so-called CODEX standards for organically produced foods.

(3) Organic JAS Certification

Japan Organic and Natural Foods Association (JONA) has been conducting third-party, organic certifications since 1993. Its certification currently covers mainly, for the domestic market, organic JAS certification and JONA Original certification and, as international organic certifications, overseas regulatory certifications including those for the U.S.A., EU, and Canada, and JONA IFOAM certification[7].

Organic JAS certification is mandatory for an operator, including producer and processor, to obtain organic JAS certification from a registered certification body by having their operation inspected in order for their product to claim “Yuuki” or “Organic” on crops or processed foods in Japan (organic JAS certification is voluntary if JAS marks are not intended to be attached on organic livestock, organic feed, and organic food processed mainly from non-crop ingredients). It is not allowed to put organic JAS marks on the products and/or claim organic if the operator is not certified to JAS. An operator that illegally labels products is subjected to penalties in line with JAS law. National organic standards are set as “Japanese Agricultural Standards (JAS) of Organic plants”, “JAS of Organic Processed Foods”, “JAS of Organic Feeds”, and “JAS of Organic Livestock” (hereafter called JAS standards). JAS standards lay down production/processing methods of organic food. A producer, a manufacturer (processor), a re-packer and an importer have to have an inspection from a registered certification body to evaluate their competence, system, and equipment to produce/process organic food[7].

However, JONA has JONA Original Certification program for operators producing, processing, and handling products not covered by organic JAS standards, such as aquaculture products, alcohol beverage, and honey. JONA has certification programs to certify products claiming “made with organic (ingredients)” (higher than 70% of organic ingredients) as well as organic crop, organic processed food, organic livestock, organic feed, organic bee products, and organic aquaculture products. Organic aquaculture products are certified to JONA private standards that take international standards into account. In case of alcohol beverages, JONA certifies operators to organic labeling guidelines of National Tax Agency.

Table 1. The operators subject to organic JAS certification

Operation category		Products as example
PPMD (Crop producer)	A single farmer, a farmer association, and so forth (including overseas operators) to produce organic crop and organic feed.	Organic rice, organic potato, organic cabbage, organic apple, organic shiitake mushroom, organic rice straw, etc.
PPMD (Processor)	A plant (including overseas operators) to process organic processed food and organic processed feed.	Organic soy sauce, organic dry noodle, organic konnyaku, organic green tea, organic azuki bean jelly, organic milk, etc.
PPMD (Livestock producer)	A producer (including overseas operators) to raise livestock at a certified house as organic feed is fed.	Organic egg, organic chicken, organic pork, organic beef
Repacker (Subdivider, repacker)	A plant and a retail store (including overseas operators) to repack organic crop and organic processed food.	Organic food in general with organic JAS mark attached
Importer (Note: Only in Japan)	An importer that imports organic products from the countries, such as EU, Australia, and the U.S., that are recognized as having organic regulations equivalent to JAS.	Organic pasta, organic olive oil, organic soy beans, etc.

Sourse: JONA, retrieved on June 15, 2015

(4) Distribution of Organic Products

In the beginning there were “Teikei” system supported

organic products. Teikei is an idea to create an alternative distribution system, not depending on the conventional market. In the second half of the 1970s organically-grown products began to be dealt by some wholesalers and greengrocers and some time later at natural food stores, department stores and supermarkets. After the Cherynoby crisis, people concerned about the safety food as a result there was a flood of flags. Labels such as "organic", "no chemical", "less chemical", "natural farming", "micro organic farming", were found at many grocery stores[7].

The distribution channels for food in Japan have been opened for organic food. The most important one is the conventional retail trade with a market share of more than 60% which shows a difference to other countries (e.g. US or UK) with a significant higher percentage and much lower market fragment. Usually Japanese retailers are categorized as follows: General Merchandise Stores (one-stop shopping for food and non-food products), Supermarkets (special food and household products), convenience stores (more than 10,000 shops all over Japan offering lunch boxes), department stores (high price food and non food products), and local or specialty stores (important sales channel in the past) [8]. In this conclusion, Organic food distributes both wholesale and retail/service in the Japanese market.

A quantity of domestic organic production in Japan is less than import organic production. As presented in Table 1, domestic organic products from 33,734 tons in 2001 increased to 56,415 tons in 2010. And the imported organic product has continued to grow, from 94,186 tons in 2001 to 859,943 tons in 2010. For the period from 2005 to 2008, more than one million tons were imported, due to the heavy purchase of organic sugarcane. Thus, the relatively small number of certified organic producers and quantity of domestic organic production does not necessarily mean a small demand for organic products in Japan.

Table 2. Changes in the number of JAS certified organic entities, domestic organic products and imported organic products in Japan, 2001-2010

Year	Certified business entities	Domestic production (tons)	Import (tons)
2001		33,734	94,186
2002	3,639	43,789	89,019
2003	4,273	46,192	297,923
2004	4,453	47,428	449,649
2005	4,884	48,172	1,440,178
2006	4,611	48,596	1,296,256
2007	5,104	53,446	1,902,279
2008	5,651	56,164	1,981,262
2009	5,514	57,342	704,204
2010	5,842	56,415	859,943

Sources: Fujimoto,2012

From "Organic Market Research Project (OMRP)" survey conducted by a team led by IFOAM Japan, the Japanese organic food market is estimated at around $ 1.3 to $1.4 billion as of 2010. According to MAFF, the organic share in domestically grown agricultural food products in Japan was only 0.24% in 2011, still 0.14 percentage points up from a decade ago. The Japanese organic market is still in its nascent state. This is partly due to limited domestic organic food supplies, undeveloped distribution channels and continuing strict import regulations, hindering the availability of organic products in Japanese market. Considering that Japan imports about 60% of its food supply on a calorie basis from other countries, the stringent regulation on organic food imports is also a major impediment to the expansion of the organic market in Japan.

(5) The Case study in Japan

MAFF has established the basic principles for promoting organic farming on the fundamental issues for central and local government to implement policy measures for promoting organic farming from the viewpoint of production, distribution, and consumption by setting up promoted target groups (the target groups would be national and local governments, farmers, and consumers), supporting the distribution and sales of organic farm products, promoting technological development, promoting consumer's understanding and interest in organic farming, promoting understanding between organic farmers and consumers, supporting the research sector, supporting organic farming activities in private sectors, supporting local governments via the central government (encouraging prefectural governments to engage with organic promotion programs, providing guidance, giving advice and training to local government, which create and implement policy measures on farming), and making a cooperation system in the national and prefectural governments[9].

One of the best practices as a business model for revitalization of hill farming through organic agriculture in Japan is the collaboration between universities and the private sector. In 2005, Tokyo University of Agriculture signed a cooperation agreement with the city of Joetsu in Niigata Prefecture. From the second year of the activity, TUA decided to set up a public company. A corporation named the Joetsu Tokyo Nodai, Inc. was officially founded on the 1st of April, 2008 by TUA graduates, together with concerned parties who wished to support this challenge of the university, to initially clear abandoned fields. Its business objectives included not only farm and ranch management but also training and research businesses in bio-production, processing, and marketing.

The case study of this research is the Inuunig Village organic farm in Nagoya prefecture. The owner is studying for a doctoral degree at Mie University. He is 40 years old. He is interested in organic farming because his parents are organic farmers and they have a large-sized organic farm and organic shop in Nagoya. He established his own organic farm in 2012. He operates the farm as using organic farming methods. There are plot areas that customers can rent and grow vegetables by themselves for their own use or for sale. The farm rents each plot of land for only 30,000 yen for one year, a very affordable price in Japan, considering the average Japanese spends 5,000 yen per month for vegetables bought in the supermarket.

The owner of the Inuunig Village farm explained that his organic farming method ensures not only safety, good taste, and low cost, but also a sustainable way of farming. Organic means safety and good taste for individuals and sustainability and security for farmers and the environment. He said, "When I teach customers how to farm organically, I will tell them not to try to grow too much. We should grow only 10-15% on our own for cooking, while 80-85% of vegetables should come from farmers in order to keep organic farms in business. In one year I will teach how to grow about 30 kinds of vegetables. If they are grown on an organic farm, they will be safer and taste better than if they are grown non-organically. These farmers have the practice and experience. They can do it by themselves." The owner of the Inuunig Village farm called this case Community Supported Agriculture(CSA).

Nowadays, the young generation has entered the organic farming movement in significant numbers. The researcher interviewed individuals of the younger generation who are learning at the Inuunig Village organic farm in Nagoya. They said, "*organic farming is the new alternative business for the younger generation, especially small organic farms in a community. We use land of an area of only 1 Rai for operation. This organic farm not only cultivates some vegetables for consumers, but also we can provide various activities for members, such as learning cultivation, the processing of food, and selling the products on the weekend. We can develop relationships among family members and between families. Finally, we can own the business by ourselves and we can be in our hometown.*"

4. ORGANIC FARMING IN THAILAND

(1) Background

In Thailand, awareness for health food has increased during the recent years due to health problems and causes. In other word, NGOs are important players to develop organic agriculture. They have tried to promote the campaigns on organic food consumption, but still receive small interest from consumers. Organic products are still considered as a product for the upper class and foreigners.

Although the government's interest in organic agriculture started later than that of NGOs, its role in organic agriculture is still increasing. Since Thailand economic in 1997, the King of Thailand has been supporting the idea of Sufficiency Economy. The composition of the 8th National Economic & Social Development Plan for the five-year-period (1997-2001) was mentioned in sustainable agriculture, which included organic farming. In the 9th National Plan, the King's principle of "Sufficiency Economy" has been adopted to develop economic and society. After that, government organizations are involved in organic farming through policy, certificate, accreditation, support, extension, research and development the responsibility as the policy.

Organic agriculture in Thailand is often confused with sustainable agriculture or alternative agriculture. Various thoughts and practices on alternative agriculture have emerged in Thailand such as Mokichi Okada Association style, Santi Asoke farming, the Integrated Agriculture and Aquaculture, Permaculture, the new theory agriculture and organic agriculture. Among all these, organic agriculture farmers in Thailand.

Mokichi Okada Association [10] adopted nature farming techniques from Japan to Thailand in 1989. Farmers in Chantaburi, Chonburi and Lopburi provinces have fully adopted MOA nature farming.

Santi Asoke Nature Farming was developed under a combination of farming systems based around organic farming and Fukuoka nature farming. The main motivation in the adaptation of this system is based on a spiritual belief. Farmers who practice Santi Asoke farming do so in order to fulfill their Buddhist beliefs. Products from each center allow Santi Asoke to be completely self-sufficient in vegetables and rice; the surplus product is sold in Santi Asoke's own natural food shops and vegetarian restaurants. The profits from the latter enterprises are used to fund Santi Asoke's activities around Thailand. Nowadays, the Buddhist thought and practice of Santi Asoke has been spread around Thailand. As Santi Asoke is successful in helping farmers to reduce their debts by following a certain Buddhist lifestyle and by implementing natural farming, the Bank of Agriculture and Agricultural Co-operatives (BAAC) co-operates with Santi Asoke on "Toxic" free agriculture.

The Integrated Agriculture and Aquaculture is an alternative agriculture that plays various roles in Thailand. The Integrated Agriculture and Aquaculture brings the awareness and exploit of this symbiosis and is designed for small-scale farms. It takes the advantage of the mutually reinforcing linkages between crops, fish and livestock. This system has a high degree of market orientation. The objective is to achieve an on-farm ecological balance where a sufficient variety of crops, livestock and fish are produced to meet the farm family's food and cash income needs. The majority of farmers have adopted this system because of the increased productivity, reduced input costs, increased profits and long run sustainability that can be gained. It is especially attractive because this system is providing more profit than conventional farming, and certainly more sustainable.

Permaculture is not a farm production system but rather a land use planning philosophy. However, farms run according to permaculture philosophy are encouraged to practice a number of common activities; organic farming techniques, agro forestry, aquaponics, the adoption of appropriate technologies compatible with the local environment and cultural traditions.. Permaculture has had very little impact in Thailand as it has only been partly explained by agro-forestry.

The "New Theory" Agriculture, an approach to rural development, was adopted from the role of the King of Thailand. The "New Theory" divides land into four parts: to preserve the water, to dedicate to the rice production, to cultivate garden crops and trees, and to occupy as residence. The farmers who interest in this approach will concentrate on producing enough to became self-sufficient. The approach also encourages them to join groups, co-operatives, and cooperate with

financial and energy sources. These thoughts should improve the quality of life of population in the rural. After the 1997 economic crisis, His Majesty King Bhumipol announced the Theory of Economic Self-Sufficiency to focus on greater resiliency and sustainability, and the Thai Government announced self-sufficient community economic projects in all Thailand's provinces. Later, the 9th National Economic & Social Development Plan (2002-2006) adopted the "Sufficiency Economy" philosophy of His Majesty King Bhumipol as a policy guideline. The plan was to develop good governance, strengthen the grass roots organization of society, and promote sustainable development in rural and urban communities. The plan was attempting to eradicate poverty and unequal income distribution through the development of social capital.

Organic agriculture, still at its beginning, has received attention from Thai farmers and is growing in Thailand. The attention has been stimulated by a pioneer organic rice project, which began in 1990 in Kadcham district, Surin province. Here a cooperative of 600 farmers, together with outside financing from Bangkok business people, bought a rice mill to process pesticide free rice and to provide an alternative from the local rice millers who frequently cheated the farmers. One third of the rice produced free rice and chemically produced rice to be processed in the same mill. In 1997 a similar scheme started in Roi Et province in Northeast Thailand.

The first time the government mentioned organic farming-together with other alternative farming methods, was in the 8th Economic & Social Development Plan (1997-2001). It set the goal to convert 20% of the arable land to sustainable agriculture, including organic farming. However, this goal has not yet been reached. In 1990, the Department of Export Promotion initiated a "Pilot Project on the Export of Organic Farm Products". In 2001, the official "Standards for Organic Crop Production in Thailand" (SOCPT) came into effect. A certification system and logo for organically grown products were also developed. In 2002, the National Office of Agricultural Product and Food Standards developed a national organic agriculture criterion. The standards therefore are chemicals free for at least three years before the first organic harvest[11]. The promoting activities of government in the field of organic farming were announced in 1990 but there are fewer subsidies from government and lack of steady supports.

According to a study by Green Net(2015), the organic farming land which are certified by ACT (Organic Agriculture Certification Thailand) has increased to the highest of 219,521.16 rai in 2011. However, the largest production category is organic rice, especially in 2010-2011. (Table 3) In 2005-2006, there was Insurance price of rice paddy policy by Taksin Government, a number of certified organic farming increased the same as in 2009-2012, depended on Yingluck's rice pledge policy. As farmers extended to grow out-of-season rice 2 times per year, this resulted in a shrinkage of organic farmland and organic rice fields. The certified organic farmland was reduced 7,499 farmlands in 2011 to 7,189 farmlands in 2012 and the highest has been increased to 9,281 farmlands in 2012.

Green Net information founded that farmers and organic farmlands in the Northeast of Thailand has the most farmland proportion while in the South has the least proportion. The average of farmlands hold in the Central is 88.1 rai per farmer, followed by 64.3 rai per farmer in the South. Even if Thai organic agriculture market was slightly reduced in 2012 due to the impact of internal economic and politic problems, organic agriculture market has been improved in 2013 regarding the extended market factors, especially EU, USA and China[13].

Panyakul [13] said that "organic agriculture promoting of Thai government, after the Strategy of Organic Agriculture Development National Plan 2008-2011 and the Organic Agriculture Development National Action Plan 2008-2011 finished, has transferred the responding organization from the Office of the National Economic and Social Development Board (NESDB) to the Office of Agricultural Economics, Ministry of Agriculture and Cooperatives. According to the lack of political stability also makes the Office of Agricultural Economics can not to successfully pushed new strategy and to continually arranged National Organic Agriculture Committee Meeting". Moreover, one obstacle to the growth of organic farming in Thailand is the lack of a recognized national certification scheme.

Fig. 3. This is the IFOAM organic logo, which can also be found on some produce in Thailand. The International Federation of Organic Agriculture Movements (IFOAM) is the worldwide umbrella organization of the organic agriculture movement, with about 750 member organizations and institutions in about 100 countries all over the world. It was founded in 1972.

Table 3. The organic farming land are certified by ACT (rai) in Thailand 1998-2013

Year	Rice	Field crops	Vegetables	Fruits	Tea/ Coffee	Vegetables/Fruits Mixed	Aqua culture	others	Total
1998	6,281.41		-					-	6,281.41
1999	5,510.13		-					-	5,510.13
2000	7,005.26		3,518.75					-	10,524.01
2001	9,900.50		3,518.75					-	13,419.25
2002	32,841.27		22,382.30					768.75	55,992.32
2003	46,179.33		22,260.64					768.75	69,208.72
2004	52.182.75	7,859.79	13,283.60	12,777.00				768.75	34,689.14
2005	108,302.02	6,731.20	14,844.76	4,995.35				761.00	135,634.33
2006	113,213.04	6,546.65	15,121.21	4,981.83				1,077.25	140,939.98
2007	77,005.03	10,103.64	16,503.19	15,907.20				203.75	119,722.81
2008	70,485.67	11,791.13	13,820.39	8,369.92				1,500.00	105,967.11
2009	112,152.27	45,920.63	18,066.51	7,342.20				8,738.43	192,220.04
2010	138,328.03	46,682.07	7,047.70	6,751.33	5,286.00	7,832.88		1,067.34	212,995.35
2011	140,711.61	46,682.07	7,132.83	9,485.50	5,605.00	7,935.13	1,838.52	130.50	219,521.16
2012	124,964.39	46,691.44	4,443.45	7,440.04	6,689.25	12,106.50	1,779.92	1,270.83	205,385.82
2013	125,730.71	42,865.57	4,433.33	7,951.09	7,372.41	9,145.09	1,685.92	13,999.56	213,183.67

(2) Certification

Certification is necessary to make sure that organic criteria are being followed correctly, so that the customer can trust in the quality of the products and that organic brands can be created so that product is distinguishable from products from other sustainable or conventional farming systems. This is of special important in Thailand, where awareness of organic products is still weak (Panyakul,2003). Certified bodies in Thailand can be classified into 3 categories: Thai government bodies, Thai private entities, and foreign entities, with 50% of organic farmlands certified by foreign companies and 50% of organic farmlands were certified by Department of Agriculture under Thai government bodies [14]. Organic Agriculture Certification Thailand (ACT) is the only organic certified body which is accredited by ACFS and IFOAM. ACFS or The National Bureau of Agricultural Commodity and Food Standards was established within the Ministry of Agriculture and Cooperatives in October 2002.

Established in 1995, Organic Agriculture Certification Thailand (ACT) is an independent private certification body. It was the first Thai certification body offering internationally recognized organic products in 2000. In 2002, the Institute of Organic Crops was established as a national certification body and as a research and development center. Also in 2002, the "Organic Thailand" brand was established. The Ministry of Agriculture and Cooperatives attempted to adopt the DOA procedure for organic fisheries and organic livestock. Unlike the integrated certification of ACT, in these cases of crops, fish, livestock and fertilizers etc., they must be certified at four different departments of the Ministry, which is difficult as farmers with integrated farm systems then require up to four separate certifications. Foreign certification bodies acting in Thailand comprise certification bodies from Italy (Bioagricet), from Germany (BSC), from Australia (Australian Certified Organic), from Sweden (Krav-Economisk Foriegning) and from Britain (Soil Association)(IOAS 2006) [11].

At present, ACT established new organic standards in 2014, existing operator already certified by ACT may choose to implement and be complied with these new standards now or by 1st September 2014 at the latest. New operator applying for ACT certification or extending scope have to implement the new standards immediately. This standard which is an additional revision and approved by ACT Standard Committee on 10th March 2015.

(3) The Organic Production

Organic farm in Thailand, according to the background

and methods, can be divided into 2 types as (Chinsathit,2011) "self sufficiency oriented" and "organic standard oriented". Self-sufficiency oriented farms are mostly belonging to small farmers who grow crops for consumption in the family and the products is residues for local market. Organic standard oriented farms received more certification for domestic markets and international markets.

As Labmann classified organic farmers in Thailand into 3 types: (1) farmer groups and co-operatives (2) commercial family farms and (3) agribusinesses. Each type is different in market orientations, products, technologies and geographical locations.

Most of organic products in Thailand, for both domestic market and international market, are rice (Hom-mali), fruits and vegetables.

The Ministry of Commerce reported, since 2008, organic products has become one of Thailand agendas when the government appointed national-level committee comprising concerned agencies namely the National Economic and Social and Development Board (NESDB), the Ministry of Commerce (MOC), the Ministry of Agriculture and Cooperatives, and the Ministry of Sciences and Technology. This high-level committee set targets on developing organic knowledge and innovation as well as promoting commercially viable organic products. The Ministry of Commerce's role is to market organic Thai products in both domestic and international markets with the following strategic points; capacity building on organic producers and entrepreneurs, organic value creation in accordance with the market demand, trade facilitation and market expansion for both international and domestic.

Later, in 2010, the Ministry of Commerce has supported 3 organic product types; food, non-food and organic services. In 2011-2012, the Ministry continues to support such product range with an emphasis on organic services. The plan includes the organic island initiative by transforming Pa-Ngan Island, in the South of Thailand, conventionally known as full moon party into an organic island with coconut-processed products as well as environmental friendly hotels and spa.[12]

Also, for the medium-term plan (2012-2015), the Ministry of Commerce has a vision to drive Thailand to be the organic hub of ASEAN, thanks to the relatively advanced innovation, the existence of IFOAM accredited certified body, the close collaboration between the public and private sectors.

Organic Thai products status, approximately 34,780 ha (0.21% of total agricultural land) got certified agricultural land, consumption ratio is between 50% export and 50% domestic.

(4) International Market

Organic agriculture market in Thailand was still being a market of producers. Organic agriculture products production can produce less than general agriculture products, followed by its expensive price of more than 20-50%.

The data of Thai organic agriculture market is still estimated data due to 2 decades of non-productive survey and study on organic agriculture market. During the middle to the end of 2014, the Ministry of Commerce tried to conduct a survey and an analysis on the agriculture products market, expected to start in 2015 [13].

Refer to the report of The Ministry of Commerce, in 2012, the organic Thai products exported to EU is 70% in organic rice and processed rice, 15% in organic vegetable (sweet corn, asparagus, lemon grass, Thai green okra, soy bean), 10% in fruit (mango, banana, pineapple, and mangosteen) and other products such as processed vegetables, herbal teas, food ingredients (coconut milk, sugar, tapioca flour), wild honey, processed foods, tiger prawn and coconut oil.

The facts and figures of the Ministry of Commerce reported that the key factors are Thai exporters, both private sector companies and cooperatives. Private sector companies are Top Organic and Supplies Products, Merit Food Products, River Kwai International Food Industry, Thai Organic Food, Rangsit Farm, Sampran Food, Southeast Asia Organic, Swift and Urmatt, ltd. Cooperatives are Earth Net Foundation, Green Net Cooperatives, Bak Ruea Farmer Group, Rak Thammachart Club, Surin Farmer Support and Lemon Farm. Export value of Organic Thai products export to Europe is accounted for 50% of total exports with the value of $60 mil. USD. In 2012, Organic rice exports equal to about $7.0 mil. USD (30% growth). However, based on TOTA members' 2011 revenue, the growth rates are between 9-100%. (Information as of February 12, 2013)

The Ministry of Commerce reported above, Organic agriculture in Thailand give precedence to export market more than domestic consumption. Export markets of Organic Thai products are EU, Japan, USA and Singapore. Rice is the most important export crop, especially Hom-mali jasmine rice which has been certified to export from Organic Agriculture Standard as Biogcert KRAV, BSC and Ecocert. The following priorities to export are vegetables, fruits, corns, herbs and spices[15].

(5) Domestic Market

Organic products in Thai focused to distribute into 4 channels: (1) membership system is similar to Teikei system in Japan or community support agriculture and Box in EU and USA (2) market fair, held in specific place and date, only determined by the community (3) organic market that follows government policies or organic enterprises policies (4) conventional market such as modern trade, supermarket, and department stores [15]. In most supermarkets, organic, health, and chemical-free produces are placed on the same shelf as the conventional products. occasionally, if there is a promotion program for health and organic produces, then, the products will be separately placed onto a special shelf[14].

Table 3. Shows on organic movement in Thailand

Year	Development of organic agriculture in Thailand
1995	Agriculture Certification Thailand (ACT) was legally established as non-governmental organizations
1999	The Department of Export Promotion initiated a "Pilot Project on the Export of Organic Farm Products" aimed to promote the production and export of organic rice, banana, asparagus and baby corn.
2001	ACT established ACT control.
2002	The Department of Agriculture (DOA) established the Institute of Organic Crops as a national certification body.
	DOA established the "Organic Thailand" brand as a national logo and established 5 pilot projects producing 15 organic crops, managed in collaboration with farmer individual exports, the private sector, and consumer groups.
	The National Bureau of Agricultural Commodity and Food Standards (ACFS) was established within the Ministry of Agriculture and Cooperatives.
2008	The Organic Agriculture Development Committee made the Organic agriculture development national action plan 2008-2011.
2009	Established the "Organic Agriculture Development Thailand center" (OAD) at Sukothai Thammatirat University.
2011	The Ministry of Commerce has supported 3 organic produce types: food, non-food and organic service.
2013	IFOAM and FAO organized the ASIA-Pacific seminar on "Entrepreneurship and Innovation in Organic Farming" in Thailand.
2014	ACT established new organic standards.
2015	ACT Standard Committee approved new organic standards.

The study on organic farming situation in Thailand founds that the numbers of organic farm be certified standard is only 353 cases all country. There are both personality, coorperative, enterprise and association owner. (Table 3)

Table 4. Shows the number of organic farming enterprise in Thailand

Regional	Number
Northern	53
Central	55
Bangkok and Perimeter	154
Northest	86
Southern	5
Total	353

(6) The Case Study in Thailand

This paper studied two cases in Thailand as Kalayanamithra Group in Mea Tha sub-district, Mea-Orn district, Chiang Mai province and the farmer in Ban Wor Keaw, Wor Keaw sub-district, Hangchat district, Lampang province.

The case study in Chiang Mai province, the Northern, they operated organic farming continued from thier parents. Thier parents cultivated in traditional agriculture as peasant but they change be in organic farming way. One of group members, his name is Yuthasak Yuennoi, 34 years old, who is new generation. He initiated CSA marketing in Mea Tha, as a kind of direct sale of organic products. He and friends established Kalayanamitra Group for developing direct organic market system. He told *"organic farming as sustainable agriculture, we don't exploit natural environment, the most of customers are foreigner, they ordered various our products, can increase income per family and have good quality of life."*

He has only the reason to do farm as he want to go up agriculture of his parent which he can used knowledge to operated difference from them for sustainability. He used internet to design the webpage and sell production by this channel. He design box for products set to follow customer order. The most of customer is in the urban of Chiang Mai province. He can got money more than 30,000 bath per month. He satified for this income and the best benefit from operated organic farming for him is that he can be in his hometown after he finished in bacherlor's degree in architecture.

For another one case in Lampang province, the farmers just change from chemical agriculture to be organic farming. His name is Sumrauy. He started to grow riceberry as organic rice.

Now, he can cultivate riceberry rice and sent to the big company for distributing in domestic market. His product can get the organic certificate as Organic Thailand.

He told that he can sell rice more that 30,000 bath per rai. He explained *"it is difficult to change behavior cultivate in Thailand to become organic farming in order to the most of all farmers are still familiar with chemical agriculture. But we can view in the future because trends of consume healthy food is increasing."*

Fig. 4. Organic Rice of Ban Wor Keaw

5. A COMPARATIVE STUDY OF THAI AND JAPANESE EXPERINCES ON ORGANIC FARMING

The researcher viewed this farm as suitable in semi-urban and rural areas and among middle-class individuals who are looking for a new way of life.

Trends among these newer farmers will be increasingly higher education, because they can use their knowledge along with advances in information technology to lead their farming operations. Social media is the important factor to distribute products and share information. Thus, organic farming is likely to spread all over the country, leading the younger generation along the way. At present, organic farming in Japan is of interest to the younger generation as a means to start their business and with support from the central government and implementation by the local government. This phenomena will reduce migration into urban areas.

The important factors, which support organic farming succession, are the changing trends of consumption, increasing the number of citizens who prioritize food safety (healthy food and clean food), the progress of information technology, and logistic systems in Japan. Even though rural areas may lack a large labor force, farmers can develop products and spread them all over the country. If younger generation farmers can support themselves, they can be strong agriculture descendants. Thus, the development of organic farming has become the new trend for community development to increase the per capita income and to revitalize societies in the rural community. All citizens can be proud and satisfied with their lifestyles in each of their respective communities. It is an ongoing challenge in Japan and Thailand to find alternative ways to revitalize a society in the rural community.

A comparative study of Thai and Japanese experiences on the development, policy, government subsidization, and ability to encourage rural communities finds a variety of factors, found as follows:

5.1 The Organic farming Initiation

Thailand's organic sector is driven mainly by private companies, government projects, grower cooperatives, grassroots support groups and NGOs, but initiated by NGOs. Organic agriculture in Thailand give precedence to export market more than domestic consumption. While Japan government is the major host to movement on organic movement.

5.2 Government Policy and Subsidy

Japan government policy focused for domestic market but Thailand government policy is directly to international market. Japan has various organic policy for revitalizing socio-economic rural communities and supporting fund for young generation into new farmers while government Thailand has not clearly organic farming policy. Even though, Thailand goverment have any plan to movement organic farming, but have not clear for impliment strategy.

5.3 Customer

Japanese consume organic products more than Thai. Ingeneral people in Japan aware security food and healthy food increasing while Thai expand only people who live in urban and middle class. The important factor that customers in Thailand are a few is organic products are very expensive.

5.4 Ability to encourage rural community

In order to Japan government has various policies for organic farming movement, including concerns on socio-economic problem in rural areas. Thus, determinded policy which response this problem such as supporting the young generation to be new farmer. Nowadays, agricultural sector in Japan is focusing on organic farming that related to human health, the environment, a community support start-up that can lead to a stronger community atmosphere (income for senior citizen and low rate on labor migration), and an increased income for farmers. While, Thai government is not aware of problem that rural community is facing so that utilizing rural resources to revitalizing rural community is not mainly organic farming movement. However, Both of Thai and Japanese farmers have goals to operate organic farm for them are that can be in Hometown.

6. CONCLUSION

Organic farming is the new alternative business for the younger generation, especially small organic farms in a community. This organic farm not only cultivates some vegetables for consumers, but also we can provide various activities for members, such as learning cultivation, the processing of food, and selling the products in various markets. The researcher call this farm "Indy farming", the new style of organic farming which is suitable for gen me who love to consume signified products and service. Trends among these newer farmers will be increasingly higher education, because they can use their knowledge along with advances in information technology to lead their farming operations. Social media is the important factor to distribute products and share information. Even though rural areas may lack a large labor force, farmers can develop products and spread them all over the country. If younger generation farmers can support themselves, they can be strong agriculture descendants.

These farms successfully applied community-based solutions to create business activities using local resources - human resources, natural resources, and socio-cultural resources in their efforts to establish community-based businesses.

Thus, the development of organic farming has become the new trend for community development to increase the per capita income and to revitalize societies in the rural community.

Organic farming way is not only one alternative for rural socio-economic development, but also can revitalize rural community especially able to bring young generation back to hometown, increase per capita farmers imcome, decrease field abandoned and so on. Moreover, organic farming way can develop relationships among family members and between families and can protect environment. Finally, all citizens can be proud and satisfied with their lifestyles in each of their respective communities. It is an ongoing challenge in Japan and Thailand to find alternative ways to revitalize a society in the rural areas.

REFERENCES

[1] MAFF(2010). Basic principles for promoting organic farming in Japan (Summary), MAFF UPDATE, A weekly update of news from the Japanese. Number 672, July 6, 2009

[2] Keiko Yoshino (2010). Historical Development, Present Situation and Prospects of Organic Farming: Examples from Japan and Bangladesh. Retrieved on June 3,2015, from http://arsa1996.org/pictures/pdf/ARSA_IV_PRCDGS_VOL2/ALTERNATIVE%20LAND%20USE%20MANAGEMENT%20AND%20FARMING%20SYSTEMS/3.%20KEIKO_YOSHINO_263-276.pdf

[3] Alternative agriculture in Thailand and Japan, Retrieved on June 8,2015, from http://www.solutions-site.org/node/47

[4] Takeshi Hatano (2008) . The Organic Agriculture Movement (Teikei) and Factors Leading to its Decline in Japan. Retrieved on June 3,2015, from http://www.bio.mie-u.ac.jp/junkan/shakai/lab2/hatano2008.pdf

[5] Akimi Fujimoto (2012) . Revitalization of hill farming throudh organic agriculture in Japan: the Joetsu Tokyo Nodai as a business model. *J. ISSAAS Vol.18, No.2: 9-21(2012).*

[6] Koichi Ikegami. Implication of Organic Agriculture Movement for Fair Trade Movement in Japan. Kinki University, Japan. Retrieved on June 8, 2015 from http://fr.pekea-fr.org/Rennes/T-Ikegami.doc

[7] Japan Organic and Natural Foods Association. Organic certification by JONA. Retrieved on June 15, 2015 from http://jona-japan.org/english/.

[8] Organic Services GmbH (2012). Organic Food Market in Japan, Retrieved on June 10, 2015 from http://www.organicnetwork.de/pdf/20120805-084121.pdf

[9] MAFF(2007). Basic principles for promoting organic farming in Japan (Summary), MAFF UPDATE, A weekly update of news from the Japanese. Number 672, July 6, 2007

[10] Sununtar Setboonsarng and Jonathan Gilman(2011). Alternative agriculture in Thailand and Japan. Published on Horizon Solutions Site. Retrieved on June 8, 2015 from http://www.solutions-site.org/print/47

[11] Marina Stracke-labmann (2007). Strategies of Organic Producers in Thailand. Thesis of Universität für Bodenkultur Wien, Austria . Retrived on June 11, 2015 from http://www.wiso.boku.ac.at/fileadmin/data/H03000/H73000/H73300/pub/DA_Diss/2007_Lassmann_DA.pdf

[12] Organic Thai Product Facts and Figure, Retrieved on June 16, 2015, from https://www.google.co.th/?gws_rd=cr,ssl&ei=gTowV5uZFZWouQTV5r2oBw#q=organic+Thai+product+facts+and+figures

[13] Vitoon Panyakul. Thailand Orgaic farming 2552-2553. Retrieved on June 3,2015, from http;//www.greennet.or.th

[14] Sali Chinsathit(2011). Organic Agriculture in Thaialnd. Paper Workshop on Asian network for sustainable organic farming technology (ANSOFT), 26-28 September 2011, Suwon, the Republic of Korea. Retrieved on June 16, 2015, from http://www.afaci.org/file/anboard2/Thailand(word).pdf

[15] Reuthaichanok Jingjit(2555), The future if Thai organic agriculture: To rise or to fall, special report, Trade Policy and Strategy office (TPSO), Retrived on June 16, 2015 from http://tpso.moc.go.th/img/news/1017-img.pdf