APPROACH OF SUSTAINABLE DEVELOPMENT FOR QUALITY OF LIFE FOLLOW BY THE PHILOSOPHY OF SUFFICIENCY ECONOMY A CASE IN ORGANIC AGRICULTURISTS IN CHIANG MAI, THAILAND

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Abstract— This research "Approach of Sustainable Development for Quality of Life follow by The Philosophy of Sufficiency Economy - a case in Organic Agriculturists in Chiang Mai, Thailand " aims to compare quality of life between chemical agriculturists and organic agriculturists in Chiang Mai province, to search for sustainable development through organic agriculture in accordance with sustainable development of agriculturist' s quality of life follow by the philosophy of sufficiency economy. Mixed Research method was adopted in the research including both quantitative and qualitative techniques. Data was collected from related documents and in-depth interviews from important interviewees who were organic scholars, organic agriculturists, and organic agriculturist groups, communication, including collection of data from questionnaires answered by both chemical agriculturists and organic agriculturists. The questionnaire, contains information that is a key component of the four research areas. Part 1 is personal Information. Part ***2*** is information on quality of life.. Part 3 is information on attitudes toward chemical agriculture. Part 2 and 3 apply the llikert scale rating scale from 1 to 10. Section 4 Information on Comments and Suggestions. The question is open end. The results of the research showed that every aspect of quality of life of organic agriculturists is better than chemical agriculturists, including economy, hygiene, education, society, and environment. This is consistent with quantitative analysis.The approaches of sustainable development for quality of life by organic agriculture include 3 main approaches: **(1)** approach of sustainable development for quality of life follow by the philosophy of sufficiency economy by organic agriculture in the level of self-sustainability; **(2)** in the level of grouping; **(3)** in the level of net-working. These approaches are in accordance with the philosophy of sufficiency economy and sustainable development.

Index Terms— Quality of Life, Sustainable Development, Organic Agriculture, The Philosophy of Sufficiency Economy

I. INTRODUCTION

Agriculture sector plays an important role for Thailand economy system. From the data of the Office of the National Economic and Social Development Board (2017), it showed that, Thailand Gross Domestic Production (GDP) was increased by 3.3% in the first quarter of 2017, among which agriculture section was increased the highest at 7.7%. Even though the rate did not reach 10%, it still influences the expansion of Thailand economy, as the reason that Thailand is the country rooted from agriculture and agriculture is the culture of Thai society. In addition, Jack Ma (2017) stated that, Thailand is the important strategic point of Asia. Agricultural products are the strengths of Thailand and are able to be exported to the emerging market such as China, Europe, and worldwide. However, Thai agriculturists, on the contrary, are facing poverty caused by unfairness in economy, society, and politics. If the development trend goes in the current forms and there are no serious solutions to the problems of agriculturists, it is predicted that, in the next 30 years, the quantity of Thai agriculturists would be remaining less than 10%, similar to European countries, Japan, and United States, which is opposite to promote strengths of Thailand (Sustainable Agriculture Foundation (Thailand) 2013).

Thus, this is for the purpose to elevate organic agriculturists' quality of life to be more prominent and to become more concrete model (FAO, 2013), same as the philosophy of sufficiency economy which was accepted by the United Nation to be an important alternative to develop the country with sustainability, which matches context of Thailand, Asian region, and developing countries (United Nations Development Programme (UNDP), 2007). This is to foresee the importance to develop people's quality of life particularly the quality of life of agriculturists who are the majority population. This is to get the picture of development trend of quality of life which will reach sustainability as there should be the method and concordance with sufficiency economy, which proceed life in the neutral way as in the Buddhism philosophy and the royal initiative of His Majesty the King Bhumibol Adulyadej. As the reason that, sufficiency economy can be integrated to be way of living the life and way of country development and organization management (Sumet Tantivejkul, 2007)

II. OBJECTIVES

(1) To compare the quality of life between chemical agriculturists and organic agriculturists in Chiang Mai province.

(2) To study the development trend of agriculturists' quality of life to be sustainable through organic agriculture

(3) To study the consistency of the guidelines for improving the quality of agriculturists' life in order to

achieve sustainability through organic agriculture and the philosophy of sufficiency economy.

III. CONCEPTS AND THEORIES

(1) The Office of Agricultural Economics has set the indicators. Agriculturists' well-being should be measured by five perspectives, including: economic, sanitation, education, social and environmental perspectives by applying 16 indicators. (Office of Agricultural Economics of Thailand, 2017)

(2) Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (International Institute for Sustainable Development (IISD), 2018)

(3) The Philosophy of Sufficiency Economy is a philosophy conceived and developed by His Majesty King Bhumibol Adulyadej of Thailand over 60 years of tireless development work to improve the lives of the Thai people and bring them a genuine and lasting happiness.

The goal of implementing the Sufficiency Economy Philosophy is to create a balanced and stable development, at all levels, from the individual, family and community to society at large by developing the ability to cope appropriately with the critical challenges arising from extensive and rapid changes in the material, social, environmental, and cultural conditions of the world.

The principle of Sufficiency Economy stresses the importance of following/adopting the middle path for appropriate conduct by the population at all levels of society (individual, family, community and nation) in terms of development and administration in order to modernize in line with the forces of globalization. In other words, we should try to avoid extreme thoughts, behaviors and actions.

Sufficiency has three components: moderation, reasonableness, and self-immunity, with two accompanying conditions: appropriate knowledge and ethics & virtues. (Royal Thai Consulate-General, Chennai, India, 2014)

IV. HYPOTHESIS

To complete the research based on the research objectives, the researcher has set the hypothesis that 'Organic agriculturists can improve their quality of life better to be sustainable in line with the philosophy of sufficiency economy than chemical agriculturists'. The research result will improve the agriculturists' quality of life in Chiang Mai province to reach the sustainability of the philosophy of sufficiency economy with organic agriculture, which can be actually applied to agriculturist in the appropriate area.

V. POPULATION

The study population of this research was 134,625 agriculture land title deed holders in Chiang Mai. (National Statistical Office, 2013)

VI. SAMPLING

(1) The qualitative research key informants are divided into the three following groups.

(1.1) Five organic agriculture academicians were selected from the sample group, who are reliable persons and knowledgeable in organic agriculture.

(1.2) Organic agriculture groups in Chiang Mai province, include 15 agriculturists from organic agriculturist groups in San Sai district Chiang Mai, organic agriculturists from Mae Hao Watershed Organic Agriculture Network in Mae Teng district Chiang Mai, organic agriculture group in Doi Saket district Chiang Mai, considering by the strength and capacity of their organic farming for 5 years or above, as the reason that organic farming will see the tangible results in approximately 5 years (Somboon Rakom, 2017), as well as cooperation in providing information for research.

(1.3) Two groups of organic agriculturists from Mae Hao Watershed Organic Agriculture Network in Mae Teng district Chiang Mai were trained in Sufficiency Economy philosophy.

(2) In this study, the researcher determined the sample size of 400 chemical agriculturists and organic organic agriculturists, living in Chiang Mai. The sample size was based on the Taro Yamane method at 95% confidence level and 0.05 acceptable tolerance.

$$n = \frac{N}{1+Ne^2}$$

n = Sampling
N = Population
e = acceptable tolerance

Replace in Equation $n = \frac{134,625}{1+134,625\ (0.05)^2}$

$= 398.82$

Therefore, there is an estimate of the loss of the questionnaire. The sample size used in this study was 400.

VII. RESEARCH TOOLS

Documentary Research. This research has studied and reviewed data from relevant documents such as books, academic articles, electronic documents, related research and date from Agricultural Census 2013 of the National Statistical Office to be the guideline to establish questionnaire and surveys.

Qualitative research is based on in-depth interviews. interviews and group discussions (Focus Group) as research tool. The researcher has a comprehensive guideline to research issues. Open-ended questions are designed based on theoretical information, to get related information on farming patterns problems and obstacles of agriculturists' professions and attitude towards issues affecting quality of life in five perspectives, including: economic, sanitation, education, social and environmental dimensions, as well as the guideline to develop quality of life of agriculturists to reach the sustainability in accordance with the philosophy of sufficiency economy with organic agriculture.

Comparative analysis of quality of life between chemical agriculturists and organic agriculturists in Chiang Mai.

From the main data from documentary research, the main accepted international organic standard is International Organic Agriculture Movements-IFOAM which consists of four key principles (Earth Net Foundation , 2012) including: (1) Health Dimension (2) Ecological Dimension (3) Dimension of Justice (4) Dimension of Care.

Quantitative research to use the questionnaire, It contains information that is a key component of the four research areas.

Part 1: Personal Information

Part 2: Information on quality of life Measured from the well-being of farmers, they should be measured in five dimensions: economic, social, environmental, educational, social and environmental. [Office of Agricultural Economics, 2556]. The Likert scale scores from 1 to 10 are used to measure attitudes towards quality of life from the lowest to the highest levels, respectively.

Part 3: Information on attitudes toward chemical agriculture Using the Likert Scale, the scale of the scale is from 1 to 10 to measure attitudes toward agro-chemistry to the highest level, respectively.

Part 4: Information on Comments and Suggestions The question is open end.

VIII. DATA ANALYSIS

To study the agriculturists' quality of life in this research, the researcher studied from the well-being of agriculturists from five perspectives: economic, sanitation, education, social and environmental dimension.

(1) Quality of Life: Economic perspective

Most organic agriculturists start with organic farming for household consumption. If there are remaining from consumption, they will distribute in various channels in Chiang Mai. Particularly they mostly grow different plants and also raise animals all the way till processing produces and able to increase saving, unlike the quality of life of chemical agriculturists who have high production cost but low income and not enough to sustain living.

(2) Quality of Life: Sanitation perspective

The sanitation of organic agriculturists become better, analyzed from the awareness of penalty of chemical residue in the human body from chemical farming and chemical produces consumption. Therefore, they turned to organic farming to care health, consuming safe vegetables from toxic substances. It is obvious that their body health is stronger and mind is clearer, which is different from chemical agriculturist' quality of life.

(3) Quality of Life: Educational perspective

Organic agriculturist will study and find knowledge by themselves and receive academic knowledge promotions from various institutions. Besides, international organization also emphasizes safe food production. They were supported by budget through various projects and have forum to exchange ideas at global level, different from chemical agriculturists who usually study by themselves by talking.

(4) Quality of Life: Social perspective

Organic agriculturists' family have warmer atmosphere as they are not depressed by various expenses and not face family debts. Children and grand-children also help in farming. Organic farming enables farmers grouping to share food and knowledge living in a benevolent society by the philosophy of sufficiency economy, which differs from chemical agriculturists.

(5) Quality of Life: Environmental perspective

Organic farming is the preservation of the environment, such as soil, water, forests and ecosystems, for the diversity of abundant natural plants, which differs from the chemical agriculture.

Analysis results of guideline for developing quality of life to achieve sustainability in accordance with the philosophy of sufficiency economy with organic agriculture.

From the research, the differences of life quality were found between chemical agriculturists and organic agriculturists that organic agriculturists have better life quality in every perspective, including economic,

sanitation, education, social, and environmental perspective, respectively. Personal Information Analysis found most male respondents, most marital status is between 51-60 years, most primary education, and the average annual income is less than 120,000 baht. Quantitative analysis is consistent with the Qualitative analysis found. Organic agriculturists are higher quality of life than chemical agriculturists in all aspects. As a result of the analysis of the attitude towards agro-chemical, Organic agriculturists are more likely to see the consequences of chemical agriculture than chemical agriculturists in all fields.

Therefore, it can be presented the guideline to improve life quality of agriculturists to achieve sustainability in accordance with the philosophy of sufficiency economy with organic agriculture as the following.

(1) Guideline for improving the life quality of agriculturists for sustainability under the philosophy of sufficiency economy with organic agriculture is at the level of self-reliant.

(2) Guideline for improving the life quality of agriculturists for sustainability under the philosophy of sufficiency economy with organic agriculture is at the level of group integration.

(3) Guideline for improving the life quality of agriculturists for sustainability under the philosophy of sufficiency economy with organic agriculture is at the level of networking.

The guideline for improving the life quality of agriculturists in order to achieve sustainability in accordance with the philosophy of sufficiency economy with organic agriculture at the level of self-reliance needs to have the following processes.

(1) Mental Development Process. Agriculturists must have passionate spirit and pride in farmer profession, then be able to tolerant long to farming, because organic agriculture production requires continuous period of agriculture production to achieve tangle results.

(2) Knowledge Development Process. Agriculturists need to develop knowledge in organic agriculture to produce organic products to meet production standards.

(3) Family Support Process. Agriculturists need to support in organic agriculture from the family to reduce dependence on labor.

IX. CONCLUSION

The guidelines for improving the life quality of agriculturists in order to achieve sustainability in accordance with the philosophy of sufficiency economy with organic agriculture. At the level of group integration have the following guidelines.

(1) Group development process for knowledge management in organic agriculture for the knowledge exchange and knowledge transfer on organic agriculture.

(2) The process of group development for the exchange of factors in the production of organic products.

(3) The process of group development to create bargaining power in organic marketing.

The guidelines for improving life quality of agriculturists in order to achieve sustainability in accordance with the philosophy of sufficiency economy with organic agriculture at the networking level have the following approaches.

(1) The process of developing a network of educational institutions.

(2) The process of developing a network of government sectors.

(3) The process of developing a network of private sectors

The results analyzed the consistency of the life quality development guidelines to achieve sustainability under the philosophy of sufficiency economy with organic agriculture that three principles are modesty, rationality, good immunity. Two conditions are knowledge and moral. Organic agriculture would achieve sustainability in the perspectives of economy, society, and environment, which are (1) Economy perspective, Organic agriculturists will have stable income and reduce expenses with savings and be self-reliant; (2) Society, Organic agriculturists have group integration to exchange knowledge and to assist and share; (3) Environment, Organic agriculturists do farming not hurting the environment and ecology system, and able to meet changes in every perspective.

It is consistent with the internationally accepted organic principles, the principles set forth by the International Organic Federation International Organic Agriculture Movements [IFOAM] in the dimensions of equity, health, and ecology.

According to the Office of the National Economic and Social Development Board, knowledge is the most important factor in improving the well-being of Thai people.

In accordance with the Office of the National Economic and Social Development Board, families are socially important institutions that are vital to people's livelihood. Family relationships are important issues that affect the well-being.

In accordance with Chulaphorn Thavorn's research (2007) on sustainable farming practices of agriculturist in Suphanburi province, it was found that social support for sustainable agriculture by the agriculture leaders was important for both the social

support from the close family and be the encouragement of the work.

It is consistent with Chayawan Wattanasiri et al. [2009] who studied the development of organic agriculture in Thailand and found that the success of organic agriculturist must be a guideline for all concerned groups to take part seriously and continuous correspondence with Chanitapan Mani (2011) who studies the system.

The guideline for improving the life quality of agriculturists in order to achieve sustainability in accordance with the philosophy of sufficiency economy with organic agriculturist is consistent with the philosophy of sufficiency economy to apply to the basic level of sufficiency economy which is the ability to self-reliance and progressive sufficiency economy of group integration and cooperation.

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