

The Worthwhileness Analysis of Big Banana Plantation in Upper South of Thailand

Arus Kongrungchok^{1,a} Chanporn Chuangchot^{1,b} Atcharawan Rattanaphan^{2,c} and Aurai Somkliang^{3,d}

¹International School of Tourism, Suratthani Rajabhat University, Thailand

²Faculty of Management Science, Suratthani Rajabhat University, Thailand

³Division of Planning and Policy, Suratthani Rajabhat University, Thailand

^a<arus.kon@sru.ac.th>, ^b<bowing1980_3@hotmail.com>

^c<t.atcharawan@hotmail.com>, ^d<aurai669@gmail.com>

Abstract

The primary objective of this study was to analyse the worthwhileness of big banana plantation in Upper South of Thailand through the procedure of qualitative research. As 96 volunteered Agricultural households in Thai Upper South were interviewed through using semi-structured interviewing questions for collecting data while interviewed transcripts were analysed through content analysis technique using a phenomenological research approach in order to obtain the crucial theme and the number of cost and return for expounding the result of this research. As a result of this study discovered that the secret technique knowledge of planting the fruitful big banana has been transmitted from their ancestor toward oneself agriculturists, this knowledge transmission has explicitly impacted and caused various differences of big banana plantation in each agricultural household whether quality, flavor, and product quantity while unique competency and expertise in each agriculturist has also concerned with the efficient productivity and net profit from their performance. Another result revealed that their return on investments (ROI) for planting the big banana have currently been equal to 77.30% per rai per year as those products should must be sold through the agricultural cooperative because of the best big banana selling price. This research result can be used for developing the new plant species of big banana and helping their decision-making for investing on big banana plantations as well.

Keywords: *Worthwhileness, Cost, Return, Big Banana, Thai Upper South*

1.Introduction

There has been a challenge for Thai Southern agriculturists, who have been still cultivating the rubber trees (as formal plant name called *Hevea Brasiliensis*) and oil palms, to decide planting the “Big Banana” due to the price of rubber trees and oil palms has been continually declined following the global market mechanism [7,20], hence those agriculturists have

carefully considered and decided to cultivate the big banana fruit for enhancing their income [2,3,7,9,16,19]. At the same time, the quantity of big banana fruit has been continually and much needed for people around the World [7,16] as this fruit has been often used for the breakfast and snack foods [5,7,17,19], this situation has surely been impacting for making their decisions with changing for the extension of planting the big banana due to their enhancing income is currently becoming their primary income and also constantly increasing while this fruit has been extensively cultivated around Thailand as well [10,11,18], this incident has ultimately been leading to their attention and consideration in terms of the worthwhileness or rate of return on investment for planting big banana [1,4,12,14] especially Thai Upper Southern agriculturists for surviving and having the well-being of their agricultural households. Likewise, the big banana fruit has generally been a type of Thai crucial economic fruit [7,19,20] which has been sold both domestic and foreign markets whether a pattern of fresh fruits and leafs as those must be cared about fragile big banana surface and bruised ease [10,13,16]. Similarly, this big banana has been much exported to several countries such as China, Japan, Switzerland, European Union, so on [7,10,13,16,19,20] and also used for increasing the gross domestic product (GDP) of Thailand amount much hundred million baht [16,15,20]. As the big banana fruit has been cultivated in many countries especially in ASEAN countries because of an appropriate weather atmosphere in terms of the warm and humid climate [6,8,13]. While the agricultural science for cultivation has exactly been crucial and linked with agricultural geography including weather atmosphere which has unavoidably impacted the quality of cultivated vegetable and fruits in terms of a flavor and a soil fertility [6,10,18]. At the same time, agriculturist's well attention for their plantation either putting organic fertilizers on soil, agricultural pests prevention through a natural organic method, and watering the plants has explicitly impacted the tasteful quality of cultivated vegetable and fruits as well [8,11,13], the result of their attention aforementioned will influence having plentifully plant nutritive values in terms of mineral and vitamin [6,8,11,18] and then has certainly generated the unavoidable costs of their plantation so that how to appropriately control those costs and maintain in the tasteful quality of cultivated vegetable and fruits especially the big banana plantation in order to obtain the maximum benefits of Agricultural households as being found by this study. Therefore, many Thai agriculturists, specifically Thai Upper Southern agriculturists, have been currently coming back and considering to organically cultivate a number of big banana to enhance their income [8,10,13,18], whereas their agricultural investment will be worthy and gain the maximum returns when measured per rai per year or not as this answer has been being found in this study as well.

2.Theories and Literature Reviews

This study was concerning with the worthwhileness analysis of big banana plantation in Upper South of Thailand in terms of the costs and returns as well as the result of this study for finding the worthwhileness should be demonstrated in terms of the return on investments ratio (ROI) per rai per year for planting the big banana. Likewise, the discovered well

techniques for cultivating the big banana should be also disclosed in this study. Reviewing the literatures of this study comprises: the context of big banana plantation in Thai Upper Southern agricultural households and theory of related worthwhileness as the details shown in below.

2.1 The Context of Big Banana Plantation in Thai Upper Southern Agricultural Households

Normally, the banana fruit was a plant type and could be growing up in the warm and humid climate specifically the big banana fruit as at the temperature level is more than 14 degree Celsius while soil should be the silty clay loam including having the well-soil drainage and ventilation [6,8,13,18]. These environments were mostly appropriate to cultivate the big banana fruit when compare with Thai Upper Southern geography and weather atmosphere where consists of seven provinces: Chumphon, Krabi, Nakhon Si Thammarat, Phang Nga, Phuket, Ranong, and Surat Thani [10,11]. Furthermore, agriculturist's big banana plantation generally needed to prepare the planting areas per rai as that size about two meters multiplying two meters and also the big banana bulbs per rai about 350-400 bulbs as the estimated price per bulb about 8-10 baht, which must completely have a year up of the bulb life, while the bulbs of big banana plantation were maintained by giving water through using the watercourses and irrigated dropping systems for controlling a number of water and the humid weather atmosphere including organic fertilizer must be given about 100-150 grams per tree when big banana trees were growing up during a month and then 200-300 grams per tree when those big banana trees were growing up during three-four months as well as 200-300 grams per tree when those big banana trees were growing up during five months [7,8,11,16,19,20]. Similarly, when those big banana trees have continually grown up until four months completely, there would be the germination of big banana bulbs which must be decorated by separating them out and cutting banana leaf off until remaining ten leaves in order to fully maintain those main big banana trees, during six months that those big banana trees, which were continually growing, will produce banana flowers and eventually become the complete big banana fruits as a time period of fruitful big banana should be about 60-70 days, approximately, after that those complete big banana fruits will mostly be sold toward those related community cooperatives where were established to help those community members for enhancing their incomes [6,7,8,11,16,19,20]. From reviewing the guideline of big banana plantation as aforementioned, this study was looking for the exact answer concerning with how were the possibly appropriate techniques of Thai Upper Southern agricultural households used for cultivating the big banana?

2.2 Theory of Related Worthwhileness

According to two elements consisting of costs and returns will be certainly used for expounding the worthwhileness of investment so that theory and concept of manufacturing costs and returns must be explained through the details shown in below.

A cost was an expense that generated a product demonstrated in a pattern of goods and/or service with using various manufacturing processes leading to an occurrence of manufacturing costs that came from operating expenses on manufacturing activities for obtaining quality products and being able to respond those customer needs [1,3,5,9,14,16,19] while those costs were basically crucial factors for determining a selling price of products or services, hence a reliable calculation of manufacturing costs will be depending on a process of data collection which concerned with three crucial basic components are: material, labour, and factory overhead [2,15,17] as the details shown in below, these components must be managed in order to control and reduce all of the costs so that this situation will be able to increase the organizational benefits and the efficiency of marketing competition in terms of market share [1,4,7,12,14,16,20]. As material cost was a crucial component that comprised two types: direct and indirect materials, these materials used will mostly depend on the manufacturing quantity and were also a variable cost that influenced the calculation of prime and manufacturing costs as well [4,7,12,20], likewise labour cost was also an important component which consisted of two types: direct and indirect labours, these labours will mostly concern with transforming those materials and controlling an efficiency of those manufacturing processes as a number of products and/or services needed and were also a variable cost that impacted the calculation of manufacturing costs including prime and conversion costs as well [2,12,17,20], meanwhile factory overhead cost was a manufacturing expense and also an indirect cost that continually supported the manufacturing processes until becoming the complete finished goods and/or services, these overhead costs could be classified in terms of fixed, variable, and mixed costs as depending on the cost and activity behaviours, at the same time the activity based costing (ABC) system should be applied in order to correctly indicate the cost of factory overhead in each activity of cultivating processes especially big banana plantation which was the primary objective of this study [4,7,15,17]. Furthermore, the costs of marketing, administration and general, and finance were also a component that impacted an increase or a decrease of operating costs and business's net income so that these costs should be appropriately controlled in order to have a proportion of business's net income increasingly leading to the highest rate of return on investments or assets [7,9,12,14,17]. At the same time, a return was, a crucial part of worthwhileness analysis, the amount of money and/or cash inflow that was obtained from selling services provided and/or goods produced from the investments in the first time [1,5,9,16]. The return might generally be measured on several approaches either payback period (PBP), net present

value (NPV), internal rate of return (IRR), economic value added (EVA), profitability Index (IP), net profit margin rate (NPM), return on equity (ROE), and so on [3,5,14,19], especially this study will be using the return on investment (ROI), which could be calculated through the formula about net income dividing all investments and then multiplying one hundred (as net income / all investments * 100), to measure the benefits obtained [1,3,5,9,14,16,19] from agriculture's investment for big banana plantation in the Thai Upper South, this approach will be basically used for making decision with their big banana plantation. From reviewing the literatures as aforementioned in order to collect and summarize those data concerning with the big banana plantation, this process will result in terms of the costs and returns for expounding the worthwhileness of cultivating big banana in Thai Upper Southern region through in-depth interviewing those agricultural households volunteered by a researcher of this study.

3.The Objective of This Study

The main objectives of this research will be comprising (1) to study the techniques of agricultural household's big banana plantation in Thai Upper Southern region and also (2) to analyze the worthwhileness of agricultural household's big banana plantation in Thai Upper Southern region, these objectives were being ascertained through the method of qualitative research in this study.

4.Research Method

This study was relating to an anonymous interview with agricultural households who have been cultivating big banana in Thai Upper Southern region while two general questions were being used for in-depth interview comprising: the first question relating to general agricultural households and the second question concerning with the revenues obtained and costs paid of big banana plantation. 96 volunteered agricultural households in Thai Upper South were independently interviewed through one of the researchers with using semi-structured interviewing questions for collecting data while interviewed data were managed through using NVIVO program while transcripts were thematically analyzed through using content analysis techniques and a phenomenological research approach to explain a situation as perceived by the individuals in that situation, this approach abstracts out the themes and key issues. In order to obtain the crucial themes and the number of costs and returns for possibly and suitably expounding the worthwhileness and techniques of big banana plantation, this result could be guided to make agricultural household's decision for possibly planting big banana as well.

5. Research Results

The result of this research is being firstly expounded through interview findings as 96 volunteered agricultural households in Thai Upper South were interviewed through semi-structured interviews with using two questions were: (1) how do you perform your big banana plantation? And (2) how much do you invest for cultivating big banana per rai and regain? In each question was collected and summarized to demonstrate the crucial results in terms of the themes and key issues. For the first question: how do you perform your big banana plantation? This question could be abstracted out two themes and/or key issues comprising general status of agricultural households and technique of agricultural household's big banana plantation as the details being expounded in blow.

5.1 General Status of Agricultural Households

From interviewing 96 volunteered agricultural households in Thai Upper Southern region were telling a lot of information to one researcher and some of them discussed that ...

“...my name is “S...” and 43 years old ... I own this cultivated area ... before I will be back to work on the organic agriculture, I have ever worked in Bangkok even though I only graduated in secondary education ... I need to take time for learning with cultivating but I am ready to confront with working at the agricultural site ... It's now the price of rubber trees and oil palms is continually decline ... I finally decide to cultivate big banana in order to enhance my income ... I am now cultivating big banana on my cultivated areas about 15 rai as I do not want to borrow whoever or financial institutes because of not too much for my payment ...” [IV002; IV0010; IV0036; IV0061; IV0085; IV0094].

The results, from qualitative data, can be summarized that 96 volunteered agricultural households were mostly 72 males (75%), as men who have mostly been the farmers for cultivating big banana, and also during 40-49 years old (85.42%) then a span of life (age) that can accumulate their experiences and has their sufficient power to work on the site of agriculture as well as those volunteered agricultural households mostly graduated in during primary to secondary education (88.54%). Furthermore, volunteered agricultural household's principal occupation before turning to cultivating the big banana fruit has always been the plantation of rubber trees and oil palms on their cultivated areas (100%) while a partial of cultivated areas has been allocated for cultivating the big banana fruit during 8-15 rai for having their enhancing incomes as this cultivation has been performed through using their private capital (100%) due to less investment.

5.2 Technique of Agricultural Household's Big Banana Plantation

Meanwhile, some participants gave more information about ...

“... Although I graduated my education not to high ... but I have always learnt from my parents especially the cultivation relating to rubber trees, oil palms and including big banana trees ... I attempt to absorb knowledge and experiences from my father and mother ... including I attempt to observe and ask them and others through their story telling either weather, water or soil ... I also need to try it out until I certainly ensure that those cultivated methods will achieve for actually having the good productivity ... making me to get a lot of money from hard working for my cultivation ... It is actually ... in each farming is different one because the ancestor of each agricultural household will also give the different technique of cultivation ... I have well known that agricultural products of my cultivated area will be different when compare with others ... either quantity, quality, taste or there are least defective products ...” [IV001; IV006; IV0018; IV0036; IV0072; IV0083; IV0095].

Examples given by some interviewees strongly confirmed that the different techniques, including skills, knowledge, and experiences, of cultivation in each agricultural household will be transmitted from their ancestors to the next generations leading to the unique and different competency and expertise in each agriculturist has also impacted their efficient productivity, whether quality, flavor, and product quantity, and net profit from their performance, this situation has certainly impacted and concerned with the big banana plantation as well.

Furthermore, some agricultural households said the affectation of productivity that linked with those cultivations as the detail about ...

“... It is actually I think that the cultivation must generally confront with climate change, hence productivity will be always affected from changing in geography as well ... the quality of cultivated vegetable and fruits will be always liked with weather atmosphere leading to the change of flavor, product quantity and quality ... specifically big banana plantation should be cared for various issues either soil fertility, agricultural pests prevention, or watering for the plants will impact much productivity including the plentiful nutrient embedded within cultivated vegetable and fruits such as mineral, vitamin and so on ... all the things are charged to the costs of cultivation ... then impacting selling price and the whole benefits of those agricultural households ...” [IV004; IV014; IV0029; IV0054; IV0063; IV0075; IV0082; IV0096].

From qualitative data as aforementioned can be abstracted out that the cultivation will has exactly needed to consider the issue of changing weather atmosphere, putting organic fertilizers on soil, preventing agricultural pests, and watering the plants, these factors has unavoidably impacted the quality of cultivated vegetable and fruits whether soil fertility, the tasteful quality of cultivated vegetable and fruits, plentifully plant nutritive values in terms of mineral and vitamin in particular big banana cultivation, therefore agriculturist's well attention for their plantation aforementioned has been much crucial and if agricultural households can appropriately control and reduce those related costs from those agricultural activities, all of them will certainly obtain the maximum benefits especially the big banana plantation.

Moreover, all factors as aforementioned will be concerned with the calculation of worthwhileness for cultivating big banana trees so that the costs and returns will be further expounded as follows.

As the second question: how much do you invest for cultivating big banana per rai and regain? This question could be abstracted out two themes and/or key issues comprising the components of basic resources for agricultural household's big banana plantation and the worthwhileness analysis of big banana plantation as the details being expounded in blow.

5.3 The Components of Basic Resources for Agricultural Household's Big Banana Plantation

As normal agricultural households must prepare the basic resources for cultivating their big banana tree so that fundamental components needed of cultivating resources, since the first step until the last step to obtain the big banana fruits for sales, must have been managed through the appropriate procurement of those agricultural households and then paid for obtaining the complete resources as the costs of big banana plantation as well, this cultivating resources preparation was given the information through interviewing 96 agricultural households as the details of some interviewees given strongly expounded the components of basic resources for their big banana plantation as details shown in below ...

“... I have continually cultivated the big banana since 2017 until now ... I also trial and error for planting it ... Today ... I have explicitly well known how is the big banana cultivated to get the good products and productivity, hence all the things must be prepared and paid before starting to plant those big banana ... Beginning with preparing the planting areas and also the big banana bulbs ... Then the growth of big banana trees is through giving water by using both the watercourses and irrigated dropping systems to control the humid weather atmosphere ... during the growth, organic fertilizer must be continually given following in each duration of fertilizing schedules set up and also putting natural

pesticides for those trees as appropriate proportion ... Meanwhile, my employees and I must forever decorate and take care of big banana trees whether the separation of big banana bulbs and the excision of banana leaf until those big banana trees produce banana flowers and become the big banana fruits that are ready for sale, ultimately ... I cannot cultivate and take care my orchard by only one so that I employ about two casual agriculturists for helping me ... Before sending those big banana products for sales to those related community cooperatives, we will check the perfection and quality of those big banana products which will be performed in our farm places in terms of cleaning, wrapping, and packing ... after that those products will be sent to those community cooperatives ... Selling price of big banana fruits will be guaranteed by those related community cooperatives for helping us ..." [IV005; IV017; IV0032; IV0052; IV0068; IV0077; IV0087; IV0090].

From qualitative data as aforementioned, most agricultural households must pay their money for preparing the fundamental resources for big banana plantation that have always comprised the preparation of cultivated area, the appropriate big banana bulbs, the watercourses and irrigated dropping systems for giving and controlling the humid weather atmosphere, organic fertilizer and natural pesticides, the preparation of farm places for supporting big banana products excised, casual agricultural employees for preparing cultivated area, cultivating big banana bulbs, fertilizing on schedules set up, putting natural pesticides, decorating and caring of big banana trees, separating big banana bulbs, cutting banana leaf, collecting big banana products, checking the quality and perfection of big banana products including cleaning, wrapping, packing, and delivering big banana products, this basic resources preparation will explicitly impact the big banana products and productivities when all of those components have been cared for procuring and well preparing all steps of cultivation as well, at the same time this product for sales will be sold on selling price guaranteed by those related community cooperatives, appropriately.

5.4The Worthwhileness Analysis of Big Banana Plantation

As an individual would like to make a business in order to obtain maximum net profits, at the same time agricultural households have also had their expectation to receive maximum returns from their cultivation in particular the big banana plantation so that worthwhileness analysis needed to be used for being an instrument to analyze the costs and returns. Cost Analysis of big banana plantation will be concerning with capital budget which was used for procuring the crucial fundamental components to perform the cultivation of big banana. From interviewing 96 agricultural households in Thai Upper Southern region, who have continually cultivated the big banana trees, can summarize information that concerned with the worthwhileness analysis of big banana plantation following the details shown in Table1.

Table1
The Worthwhileness Analysis between Minimum and Maximum Incomes
of Big Banana Plantation in Thai Upper Southern Region

Transaction Concerning with Big Banana Plantation Per Rai Per Year	Minimum Income	Maximum Income
Revenues Obtained Per Rai Per Year (Cash Inflow)		
From Selling Big Banana Fruit Products ¹	60,000.00 Baht	66,000.00 Baht
From Selling Big Banana Bulbs ²	4,800.00 Baht	6,400.00 Baht
From Selling Big Banana Leafs ³	1,000.00 Baht	1,000.00 Baht
Sub-Total (1)	65,800.00 Baht	73,400.00 Baht
Investment Paid Per Rai Per Year(Cash Outflow)		
Appropriate Big Banana Bulb Costs ⁴	4,000.00 Baht	4,000.00 Baht
Watercourses and Irrigated Dropping Systems Costs ⁷	5,000.00 Baht	5,000.00 Baht
Organic Fertilizer and Natural Pesticides Costs ⁷	15,000.00 Baht	15,000.00 Baht
Depreciation-Equipment and Farm Place ⁷	3,000.00 Baht	3,000.00 Baht
Casual Agricultural Employees ^{5,6}	14,400.00 Baht	14,400.00 Baht
Sub-Total (2)	41,400.00 Baht	41,400.00 Baht
Net Income (Not Relating to Tax Rate) (1) - (2)	24,400.00 Baht	32,000.00 Baht
Rate of Return on Investment Per Rai Per Year	58.94%	77.30%

¹Minimum income = 400 Trees X 10 Kilograms X 15 Baht = 60,000.00 Baht

Maximum income = 400 Trees X 11 Kilograms X 15 Baht = 66,000.00 Baht

²Minimum income = 400 Trees X 2 Bulbs X 6 Baht = 4,800.00 Baht

Maximum income = 400 Trees X 2 Bulbs X 8 Baht = 6,400.00 Baht

³Minimum and Maximum incomes were not different from selling big banana leaves

⁴A Cost per Bulb = 10 Baht X 400 Bulbs per Rai

⁵Casual agricultural employees hired will help agricultural households for preparing cultivated area, cultivating big banana bulbs, fertilizing on schedules set up, putting

natural pesticides, decorating and caring of big banana trees, separating big banana bulbs, cutting banana leafs, collecting big banana products, checking the quality and perfection of big banana products including cleaning, wrapping, packing, and delivering big banana products.

⁶Minimum and Maximum incomes were not different from paying wages of casual agricultural employees as minimum wages = 4 days X 12 months X 300 Baht = 14,400.00 Baht

⁷As reasonably estimated from actual payments of agricultural household.

From table1, the result of worthwhileness analysis of big banana plantation in Thai Upper Southern region by comparing between minimum and maximum Incomes obtained demonstrated that the most of cash inflow coming from the main revenue was the total sales of big banana products per rai per year, at the same time the other revenues came from by product composing of selling big banana bulbs and big Banana Leafs. Similary, the costs that came from their investments paid per rai per year comprising appropriate big banana bulb costs, organic fertilizer and natural pesticides costs, watercourses and irrigated dropping systems costs, depreciation-equipment and farm place, and casual agricultural employees. Furthermore, this study can mostly classify agricultural households by using their income received which can be divided into two groups are minimum and maximum income obtained while this study discovered that net income as not concerning with tax rate of the group of minimum income obtained was 24,400.00 baht per rai per year and then can be measured in a pattern of rate of return on investment (ROI) was 58.94 percentage per rai per year as well, likewise net income as not concerning with tax rate of the group of maximum income obtained was 32,000.00 baht per rai per year and then can also be measured in a pattern of rate of return on investment (ROI) was 77.30 percentage per rai per year. Therefore, this study clearly demonstrated that agricultural household's big banana plantation in Thai Upper Southern region would approximately obtained the rate of return on investment per rai per year between 58.94 percentage to 77.30 percentage if other agricultural households will be making decision for cultivating the big banana in the future.

6.Discussions

As the results of this study discovered that agricultural households were mostly males and have normally had their less education which conformed to real situation as the most of agriculturists would not accept to learn in formal schools but be ready to learn in the real practices [7,16,19,20], while agricultural households in Thai Upper South have cultivated big banana fruit during 8-15 rai for having their enhancing incomes and spent their private capital as less investment as accord with other agricultural households in other regions because of still on trial and error situation [6,13,18] including the different techniques of cultivation in each agricultural household were quite different as those techniques have always been transmitted from their ancestors to the next generations, this situation would lead to the unique

and different competency of each agriculturist and has also impacted their efficient productivity whether quality, flavor, and product quantity, and net profit from their performance [6,8,10,11]. Moreover, those agricultural households must appropriately prepare the components of basic resources for big banana plantation as there has been the much impact of cultivated processes, big banana products and productivities if all of those components have been cared for procuring and well preparing all steps of cultivation [6,8,10,11,13] whether the preparation of cultivated area, the appropriate big banana bulbs, the suitable preparation of watercourses and irrigated dropping systems for giving and controlling the humid weather atmosphere, organic fertilizer and natural pesticides, the preparation of farm places for supporting big banana products excised, casual agricultural employees for preparing cultivated area, cultivating big banana bulbs, fertilizing on schedules set up, putting natural pesticides, decorating and caring of big banana trees, separating big banana bulbs, cutting banana leaf, collecting big banana products, checking the quality and perfection of big banana products including cleaning, wrapping, packing, and delivering big banana products [6,10,18], at the same time this product for sales will suitably be sold on selling price guaranteed by those related community cooperatives [10,11]. On aspect of money value, the result of worthwhileness analysis of big banana plantation in Thai Upper Southern region discovered that the rate of return on investment per rai per year on maximum income obtained was approximately 77.30 percentage which other agricultural households can employ to make their decision for cultivating the big banana in the future that conformed to the return rate of other researches in the same direction [3,5,9,15,17].

7. Conclusion

This research was to analyze the worthwhileness of big banana plantation in Thai Upper South through the procedure of qualitative research and 96 volunteered agricultural households were interviewed through using semi-structured interviewing questions for collecting data while interviewed transcripts were analyzed through content analysis technique using a phenomenological research approach. The results discovered that agricultural households were mostly males and during 40-49 years old including farmers for cultivating big banana and mostly graduated in during primary to secondary education. Furthermore, agricultural households have cultivated big banana fruit during 8-15 rai for having their enhancing incomes and spent their private capital, meanwhile the different techniques of cultivation in each agricultural household will be transmitted from their ancestors to the next generations leading to the unique and different competency and expertise in each agriculturist has also impacted their efficient productivity whether quality, flavor, and product quantity, and net profit from their performance. Moreover, those agricultural households must pay their money for preparing the basic resources for big banana plantation consisting of the preparation of cultivated area, the appropriate big banana bulbs, the watercourses and irrigated dropping systems for giving and controlling the humid weather atmosphere, organic fertilizer and natural pesticides, the preparation of farm places for supporting big banana products excised, casual agricultural employees for preparing cultivated area, cultivating big banana bulbs,

fertilizing on schedules set up, putting natural pesticides, decorating and caring of big banana trees, separating big banana bulbs, cutting banana leaf, collecting big banana products, checking the quality and perfection of big banana products including cleaning, wrapping, packing, and delivering big banana products, this basic resources preparation will explicitly impact the big banana products and productivities when all of those components have been cared for procuring and well preparing all steps of cultivation as well, at the same time this product for sales will be sold on selling price guaranteed by those related community cooperatives, appropriately, at the same time the result of worthwhileness analysis of big banana plantation in Thai Upper Southern region discovered that gricultural household's big banana plantation in Thai Upper Southern region would approximately obtained the rate of return on investment per rai per year between 58.94 percentage to 77.30 percentage if other agricultural households will be making decision for cultivating the big banana in the future.

Acknowledgement (if any)

This research is supported for my presentation by International School of Tourism (IST), Suratthani Rajabhat University (SRU), Thailand.

References

- [1] Adhisiddhi Nujnetra and Supaporn Pheratkul. (2013). Kloyhomthongbanlad: Production Cost and Return on Investment. **Journal of Southern Technology**. Vol. 6 (2): 1-8.
- [2] Aweekorn Phok-Phong and Sanit Kaow-Eian. (2014). The Comparison between Costs and Returns on the Production of Rice Breeder Seeds and Paddies in Amphoe Lat Bua Luang, Phra Nakhon Si Ayutthaya. **King Mongkut's Agricultural Journal**. Vol. 33 (3): 1-8.
- [3] Autchara Klinchan. (2014). **The Study Cost and Returns of Organic Rice Cultivation in Phetchabun**. Research Regulated by Business administration Faculty. Phetchabun Rajabhat University.
- [4] Burussakorn Torat. (2017). **The Study for Comparing Economic Costs and Benefits and Guidline of Operating Financial Policy for Organic Vegetarian Production and Distribution**. Research Regulated by Food and Nutrition Policy Research Plan.
- [5] Chalisa Suwannakit and Kanoknate Prempre. (2016). The Comparison of Costs and Returns between Organic Rice Farming and Chemical Rice Farming. **Veridian E-Journal, Silpakorn University**. Vol. 9 (2): 519-526.

- [6] Chindawat Chumnumpornchai. (2016). **Backing for Big Banana Plantation**. Banlat Industrial and Community Education College: Agriculture Festival on 19 November 2016.
- [7] Jenjira Wongwan, Nathinee Anuprasert, Wilairat Phuengpaingam, and Siriporn Phuekphong. (2017). Marketing Strategies for the Development of Gros Michel Banana Export, Community Goods of Tha Yang Agricultural Cooperative Limited Amphoe Tha Yang, Phetchaburi Province. **Research Thailand Era 4.0**. 27 January 2017. At Auditorium of Chiang Rai Rajabhat University: 302-310.
- [8] Kulwadee Thakarne and Nopporn Siripanich. (2015). **Testing on Production Technologies of Banana [Musa (AAA group) “Kluai Hom Thong] for Export in Pathum Thani Province**. Research Regulated by Agricultural Research and Development Centre of Pathum Thani.
- [9] Nicknipar Boonchouy. (2017). The Study Cost and Returns of planting Cultivated Banana in Tha Yang District, Phetchaburi Province. **Veridian E-Journal, Silpakorn University**. Vol. 10 (1): 1884-1894.
- [10] Orapim Suriya, Chalermpon Jatuporn, Patana Sukprasert, and Suwisa Pattanakiat. (2017). Factors Affecting Cavendish Banana Production of Farmers in Nong Suea District, Pathum Thani Province. **Panyapiwat Journal**. Vol. 9 (2): 208-218.
- [11] Penchan Suthanukool. (2015). **Research and Development of Banana Production for Improvement of Quality Production and High Value-Added Products**. Research Regulated by Department of Agriculture.
- [12] Piyarach Tachasub. (2014). **Cost and Return of Organic Chinese Chives Project Investment in Lampang Province**. Master of Business Administration Degree. Graduate School. Nation University.
- [13] Rangsim Ampawan, Thipsuda Pukmanee, Pinthara Saransakul, Duensawang Duangbal, and Saibua Techa. (2017). **Industrial Production Big Banana Sprout**. Agricultural Academic Research and Support Office, Maejo University: 1-12.
- [14] Siriporn Somkhumpa, Anantitra Donbanthao, Anuthida Phetphimoon, Kununya Benjawan, and Eakwinit Promruca. (2018). Cost and Return of Planting Bananas: A Case Study in Sakaeo Sub-district, Muang District, Kamphaeng Phet Province. **The 3rd Kru National Academic Conference**. 7 September 2018. At Academic Service and Graduate Building, Kanchanaburi Rajabhat University: 234-243.
- [15] Suchitra Panyarpisit. (2018). **Cost and Return Study of Hom Thong Banana Farming : A Case Study of Kloy Hom Thong Pathumrat Small And Micro**

Community Enterprise in Pathum Thani Province. Master of Science Degree (Agribusiness). Graduate School. Kasetsart University.

- [16] Sudjai Chongworakijwattana. (2011). The Study on Economics Production Marketing of Organic Vegetarian. **Agricultural Economic News**, Vol. 552 (2): 1-38.
- [17] Supansa Waiatiwat. (2017). **The Comparison of Costs and Returns between Organic Rice Farming and Chemical Rice Farming.** Master of Business Administration Degree. The Faculty of Business Administration. Rajamangala University of Technology Thanyaburi.
- [18] Supatinee Sukkasam. (2016). **Developing Guidelines for Sustainable Agriculture for a Farmer's Association in a Green Agriculture City Basing, Ratchaburi Province.** Independent Study. Master Degree of Arts in Business Economics Program. Thammasat University.
- [19] Vichian Tentammaroj. (2014). **Japan-Thailand Economic Partnership Agreement (JTEPA) with Big Banana Export of Thai Agriculture Cooperative.** Diplomacy Administrator Program of the Foreign Affairs Ministry.
- [20] Warin Ngamkaroon. (2015). **Business Plan: Thailand's Banana for Export to Japan.** Independent Study. Master of Business Administration. Thammasat University.