

# **Analysis of Aptitudes, Aspirations, Capacities, and Resources for a Community-based Agritourism Establishment**

Rungnapha Khamung

*Ph. D. Program, Architecture Heritage Management and Tourism  
Faculty of Architecture, Silpakorn University, Bangkok, Thailand  
Corresponding Author: rungnapha27@yahoo.com*

## **Abstract**

Agricultural landscape, rural vernacular landscape, and cultural heritage can be presented as an open air museum displaying culture on the land by local people. Conservation of rural vernacular landscape, cultural landscape, and agriculture tradition has become the theme of community-based agritourism (CBAT); however the rural farmers' aptitudes, aspirations and the rural communities' capacities and resources are a much-under researched topic. This study investigates the aptitudes, aspirations, expectations, capacities, and skills of rural farmers and the infrastructure needs of three rural villages in the Chiangkhan District of Thailand as a prelude to the establishment of a community-based agritourism. The survey data will explore the farmers' understanding of agritourism, their capacities to contribute, and their infrastructure interests which would essentially underwrite the setup of a CBAT. There are good elements of natural resources, unique farm village heritage, self-sufficiency farming, traditional life, diversified farm products, well-integrated farm practices, and farmers' knowledge and skills. These essential components serve as good foundations of starting a CBAT. A further discussion of agritourism elements, which may be applied in the locality, is found to have a holistic and sustainable development of CBAT programs in these three rural villages.

**Keywords:** Agritourism, Tourism Planning, Community-based Tourism, Sustainability

## Introduction

This study is focused on three small rural communities with strong cultural heritage and agricultural resources in the Chiangkhan district of Northeastern Thailand for agritourism development. Rural villages of Umung, Phabaen and Buhom are simple agricultural communities with local tradition, a farming livelihood, and a distinguished cultural and natural heritage. These farmers are accustomed to community participation especially village festivals and agricultural practice networks. The three studied villages share linkages in transportation access, traditional agricultural practices, natural resources, economic activities, rural livelihood, traditional social structures, extensive farming experience, and unique geographic sites and they are within easy reach of the cities of Chiangkhan and Loei. The farmers are burdened with low income from the mainly agricultural production even though they work hard on their farms. On the positive end these farmers have their own working farms with vernacular landscape, various sustainable farm practices, agricultural tradition and culture heritage in a tight knit community. These farm villages have excellent potential to develop a community-based agritourism program (CBAT). Rural farmers have the natural ability for learning agricultural practices and are content with country style living, these aptitudes make them the best candidates for agritourism. The farmers' capability assets are shaped into characteristics of self-evident identity as leaders in managing and sustaining resources and organizations of sustainable development (Nelson, 2011: 17). Rural farmers with their lifestyle, self-esteem, and resource management skills through sustainable agriculture practices and conservation would provide sufficiency economy and build a self-reliant community (The King, H. M., 2007: 1). Therefore this study is interested in investigating the aptitudes and aspirations of the villagers, and the agricultural capacities and resources available for establishment of a CBAT.

When the citizens of a country become affluent, they start to look for something more authentic. Thai citizens are following a trend of travelling to places they have never been especially those places where

they could recall their good-old-day memories of how their life was before. According to the latest annual research from WTTC and its research partner Oxford Economics, “Thailand’s domestic travel spending generated 32.0% of direct Travel & Tourism GDP in 2012 compared with 68.0% for visitor exports.” (Scowsill, 2013: i, 6) Such a growing tourist market should push the tourism industry to open the new frontier; the home or the homeland where old traditions, old life styles, old farming villages, and local festivals are becoming the place reminiscent for well-off or even culturally curious people to look for. At the moment, the number of visitors/tourists from both domestic and international travel are gradually increasing every year since Chiangkhan was promoted by Tourism Authority of Thailand in 2009 as one of the community-based ecotourism destinations (Tourism Authority of Thailand (TAT), 2013). This study conducted a survey to explore farmers’ understanding of agritourism, farmers’ aptitudes and aspirations of agritourism development, their capacities to contribute, and their infrastructure interests which would essentially contribute to set up the CBAT. Additionally, survey results are examined to find positive factors in the CBAT establishment, the impacts, and the approaches to have a holistic sustainable agritourism in these rural villages.

### **Research questions**

The positive aptitudes, aspirations and adequate capacities with the great resources of farm community are necessary for the CBAT establishment. Therefore several research questions are raised:

- Do local farmers in these villages have positive aptitudes, aspirations and adequate capacities with great resources for agritourism?
- Are farmers familiar with sustainable agriculture and conservation practices?
- What are the desires and preferences of the farmers in order to establish the CBAT?
- How can the characteristics of agricultural practices, natural resources and the villagers’ aptitudes and aspirations influence the establishment of the CBAT?

## Literature Reviews

### *Aptitudes and aspirations*

The villagers' aptitudes and aspirations are fundamental tools to develop tourism on their working farms and contribute their available resources and skills as agritourism activities. Walker (2009: 1-3) pointed out the need to study and analyze the feasibility of a farm's characters, values, and goals to start a tourism development and its implementation in a community. The United States government conducted a study on attitudes, aptitudes, and aspirations of American youth to provide information about the demographic characteristics of the youth, to recommend recruiting and advertising strategies and to increase the propensity of enlistment (National Research Council, 2003: 2). Various other researches have confirmed that attitudes, aptitudes, and aspirations are important human factors to the success of the project development in a community. The attitudes and aptitudes can be studied through people's characteristics. (Slater, 1988: 113-115). The aptitudes and interests are consistently correlated towards one's job performance (Brayfield and Marsh, 1957: 98-103). In a marine conservation study, understanding native people's attitudes towards conservation is important in the transition between past and present management. (Ayers et al., 2012: 270) One study found that youths in a low-income rural area hold more aspirations than higher-income urban area even though capability level may be parallel or less. (Bender et al, 1967: 278, 289). Aptitudes and aspirations are the main ingredient of farmers' interests to pursue a stable farm livelihood. A motivation to aspire farmers in small rural farms for better quality of life can be achieved from simple goals to higher goals. This was suggested by Kusterer (1989: 13-14) that there are five levels of aspiration: getting away from a low position to a higher one; building a diverse family economy; securing a lifetime household economy; saving money for a later generation; and making sure of a sustainable livelihood for the next generation. The description of Roberts and Hall (2001: 161) that "relationships with the land and the skills associated with agricultural work" shape local lifestyles and

community identity. There are similar reasons for farmers to develop goals of financial resources with their agricultural skills and resources. Together with aspiration and motivation they seek for on-farm diversification, farm-based activities, and farm production. During the farm-off season, the farmers seek farm recreational operations and employment outside of the farm (Schilling et al., 2014: 70-71). Farmers and ordinary people all need self-esteem to achieve a meaningful positive life by using and expressing the aptitudes and talents in their own cultural context (Nelson, 2011: 16). Therefore aptitudes and aspirations of small rural farmers are key ingredients to develop agritourism for a better quality of life for their present and future generation.

### ***Sustainable agriculture***

Agriculture in this region is not very well-managed and sustainably developed because of geographical and environmental constraint, farmers' skills and knowledge deficiencies, and market resources limitation in the region. There are problems caused by incorrect farm practices of farmers and results in degradation and pollution of soil, forest, water, and causes salinity (Suksri et al., 2008: 3, 5). Thus valid suitable paradigms and methods of traditional local wisdom and practices should be considered and taken into account for sustainable agriculture. One of the most important notions is that Thai agricultural resources have diversified varieties and are inherent with rich rural heritage; those agriculture practices support and promote the heritage through sustainable agriculture and adjustment to be suitable in various contexts (Jitsanguan, 2001: 3-4). Conservation success is predicated by local communities' perception on environmental impacts; it requires improvement to governance and increased attention of local development to achieve conservation potential (Bennett and Dearden, 2014: 107, 115). Sustainability is the leading factor that could enrich long-term crop productivity, environment protection, and adaptive capacity of the agricultural, environmental, economic climate and social change

(Lichtfouse et al., 2009: 3). A new concept of eco-museum which views the landscape as an open air museum displaying culture on the land has been coined by Davis and Corsane (2014). Agricultural landscape, vernacular landscape, and cultural heritage can be presented as an open air museum displaying culture on the land by local people. This phenomenon can be viewed in the rural farm villages where agricultural land, daily farm practices, cultural heritage and culturally constructed landscape are fundamental components for a living eco-museum for people to visit and experience and for local farmers to appreciate and have stewardship of their own heritage for sustainable conservation (Davis and Corsane, 2014: 119).

### ***Heritage conservation***

Agricultural practices have been embedded in Thai society for a long time and can still be seen now in many parts of rural regions especially in the Northeast region of Thailand. Many kinds of agriculture patterns and practices along with natural farm resources have been managed by local farmers. Hill orchards, multi-cover plant crops, strip and wetland farming, valley rice paddies, stream-side vegetables, and livestock in organic and self-sufficient farms. This attractive integration of cultural and natural resources make these rural farm villages a great place to develop and promote a cultural and natural tourism destination. It is important that local villagers, their cultural heritage, agriculture and nature resources are recognized and are presented to visitors with sustainable conservation tourism in mind. To everyone, this will also encourage and enhance a great awareness of nature, local culture, and a farmer's livelihood for CBAT. One of the goals of CBAT is to generate economic benefits while creating a self-reliant and an equitable society. Within this framework, a community should look within its own culture and way of life for answers. Thailand has very interesting approaches rooted in the Buddhist religion and the King's sufficiency philosophy. During the Asian financial crisis, His Majesty bestowed the philosophy of the

“Sufficiency Economy” to the nation on December 4, 1997 (The King H. M., 2007: 1). The King’s New Theory in agriculture has engrained in rural farmers sustainable agriculture practices in water resource conservation, soil conservation, sustainable agriculture, and self-reliant community development. The application of Sufficiency Economy Philosophy that “values the importance of traditions, culture, the Thai way of life, and local heritage” (Suwanraks, 2000: 13) to the CBAT development can lead to a harmonious society.

In community-based tourism (CBT), culture plays an important role and is essential for conserving and maintaining the local traditions and way of life of the host communities themselves and to those interested tourists (Boonratana, 2010: 284). A community’s heritage and assets are represented and used as products and services for visitors; thus offer visitors an opportunity to appreciate natural uniqueness and cultural authenticity while visiting the local community. “The impact of tourism on the environment includes depletion of natural resources, pollution, soil erosion, natural habitat loss, and loss in the authenticity of cultural heritage.” (Khanal and Babar, 2007: 5, 7) The community should set the threshold for the level of visitation to avoid negative impacts of over tourism. Agritourism in local communities with a variety of resources and environment conditions could apply social adaptive capacity to determine resources access and usage. This would be based on farm site characteristics, agricultural environment, local resources, local people desire to participate and tourists’ experience levels for sustainable conservation and for the community to build stewardship of maintaining and conserving the local resources and improving community resilience (Dearden and Manoawitr, 2011: 153, 155).

### ***Agritourism and CBAT***

There are many definitions of Agritourism, most definitions of agritourism involve the combined themes of agriculture and tourism. Agritourism is “...any practice developed on a working farm

with the purpose of attracting visitors” (Barbieri and Mshenga, 2008: 168); agritourism is “a specific type of rural tourism in which the hosting house must be integrated into an agricultural estate, inhabited by the proprietor, allowing visitors to take part in agricultural or complementary activities on the property”(Marques, 2006: 151). Agritourism is “tourist activities of small-scale, family or co-operative in origin, being developed in rural areas by people employed in agriculture” (Kizos and Iosifides, 2007: 63). Agritourism is happening in rural areas and involved with rural local people within all activities in festival, craft, museum, cultural event and farm event and its products (Roberts and Hall, 2001: 16). According to the Utah Farm Bureau, agritourism is “any activity that allows members of the general public, for recreational, entertainment, or educational purposes, to view or enjoy agricultural related activities.” (Burr and Petrtyl, 2011: 1) These activities are directly connected to the local culture and local resource such as farm products, local handmade, farm tour and farm stay and educational rural area visit, (Roberts and Hall, 2001: 16) and with notions and interrelationships in rural tourism between “farm-base tourism, culture and attraction” (Sharpley and Sharpley, 1997: 9). Similarly, based on the results of Center for Profitable Agriculture study, agritourism is farming-related activities offered on a working farm or other agricultural setting for enter-tainment or educational purposes (Bruch, 2013: 1), this concurs with Ohe’s and Ciani’s (2014: 2) view that agritourism activities are provided by initially farmers and a group of local farm producers in a rural area.

### ***Sustainability***

For past few decades, the sustainable agriculture trend has been focused in many countries as the gateway out of the environmental and social problems caused by conventional agricultural systems and practices. Sustainable agriculture is the whole corroborated biodiversity and environment system on farming practices. It contributes to long term viable opportunities for all stakeholders economically



and socially (Colliver et al., 2010: 3). Sustainable agriculture development for sustainability is not only for the individual approach of development but also for the holistic integration approach of agriculture practice, socio-cultural, ecological resources, and economy of the local people in the rural community (Roberts and Hall, 2001: 54-55). Since agritourism employs components of touring a natural, ecological, or sustainable agriculture destination, there is a potential for the empowerment of the community in a participatory decision making process with economic incentive for the community itself. In 1991, the Ecotourism Society developed the following definition of ecotourism: “responsible travel to natural areas that conserves the environment and sustains the wellbeing of local people” (Lash, 1997: 1). In agritourism local farmers and visitors can share, exchange and learn from each other’s cultures by doing, joining and helping in everyday farm life activities with the host community. Everyone respects one another while honoring the cross-culture respect and human dignity when different cultures come together (Suansri, 2013: 12). This again points to the important roles of farmers’ aptitudes and social skills involved in agritourism.

Agritourism in rural villages of Chiangkhan with sustainable conservation is the main theme of this research. It is therefore looking into farmers’ aptitudes and aspirations of what they can and want to do, what the villages can offer, and investigating the available capacities and resources to support agritourism development in a local community which enriches the life quality of local people without the degradation of natural resources and cultural heritage is critically important. Successful tourism activities in the rural community greatly involve local community, utilize the local assets and resources, and improve the local economy with profit sharing while allowing visitors to experience a unique tourism destination and conserving the tourism resources at the same time.

### **Methodology and the Site Information**

This research employs a case study approach and qualitative

and quantitative research tools including primary and secondary data collection.

### ***The methods***

The core part of this study is to collect the primary data that would expose the characteristics of agricultural practices, natural resources, villagers' aptitudes and their aspirations to confirm the suitability of sustainable agritourism. These inherent assets in the studied villages are used to prove a research hypothesis, to find the positive aptitude and aspiration of the farmers and to investigate adequate capacity and resources of the farm community. These are necessary supporting components for a community-based agritourism establishment. This study employs a field survey, an in-depth interview with farmers and a field observation to the target local farmers; the qualitative and quantitative attributes that were then analyzed by researcher to assess data on farm information, aptitudes, expectations, and aspirations of joining agritourism. The capacities, skills, resources, and familiarity with sustainable agriculture and conservation practices of the farmers will be used to meet the main theme of this research.

### ***Population, the sample group and related information***

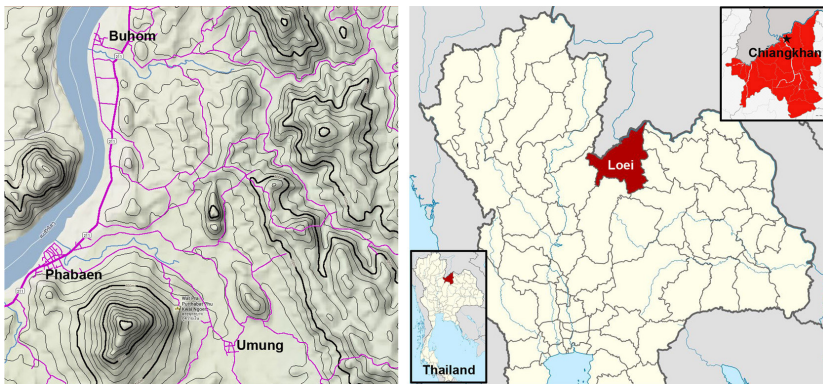
This study is focused on the phenomenon of agritourism, so the unit of farms or the households who operate the farming practices must be the target choice. The total target population of households count is 1238. A simplified formula is used to calculate the sample sizes as shown below. A 90% confidence level is assumed for the equation. 
$$n = \frac{N}{1 + N(e)^2}$$
 given n = number of samples; N= number of total households; e = error, designated at 0.096 significant level. After the formula is applied, the number of sampled sizes is 100. An error at 9.60% significance level or 90.40% confidence would still acquire sufficient meaningful results (Yamane, 1967: 886).

### ***The studied area and the site information***

The studied area consists of three rural farm villages: Ban

Umung, Ban Phabaen and Ban Buhom in the Chiangkhan district of Loei province, Northeastern Thailand. A combination of natural landscape, farming practices and culture heritage presents unique identities and great local resources for the visitors. These three villages studied share linkage in transportation access, traditional agricultural practices, rural livelihood, extensive farming communities, and unique geographic sites; they are within easy reach of the cities of Chiangkhan and Loei. The studied area is wrapped by the Mekong River and several mountain ranges. The mountain streams from the upland feed into the fertile alluvial lowland creating a thriving agriculture for the studied area. The jagged mountain ranges with its abundant forest and agricultural resources coupled with local cultural heritage make this studied area even more attractive for agritourism. (Figure 1)

**Figure 1:** Topographic map and locator of the studied area



Source: (Google\_Maps, 2013; Wikipedia, 2013)

These three villages share in similarity of characteristics in income, land holdings, farmland types, and agriculture types. In a broader sense, the farmers in the studied area mainly rely on the income from mixed-crops and multi-agriculture farm products during the growing seasons; their incomes from agricultural products are relatively low and usually under 20,000 Thai baht monthly. Farmers in general own small land holdings of less than 50 rai and

usually in multiple locations. The farm land types reflect the topographic characteristics of the study area with a mixture of low lying flatland and sloping upland. The dry summer season which is harsh for agriculture becomes the farm off season and is replaced by other activities and off-farm opportunities. There are approximately 23% of farmers who have experienced agritourism and hosted domestic and foreign tourists before. Foreign tourists mainly came from connections of non-profit organizations that are linked with Japan. The villagers rely on the younger educated children to communicate in English or Japanese. (Table 1)

**Table 1:** Farm Information (Umung, Phabaen and Buhom combined, survey no. = 100)

	Income from Agriculture Products				
Baht/Month	<10,000	10-20,000	20-50,000	>50,000	
	65%	23%	12%	0%	
	How much land do you have				
Rai	<10 rai	10-20 rai	20-30 rai	30-50 rai	>50 rai
	12%	23%	23%	17%	25%
	How many farm locations?				
Location	<3	3-5	6-10	>10	
	53%	44%	3%	0%	
	Type of farmland				
Type	Upland	Lowland	Flatland	Combination	
	56%	9%	20%	35%	
	Farm Off Season				
Season	Summer	Rainy	Winter	Other	
	65%	17%	22%	12%	
	Type of Agriculture				
Type	Mixed-crops	Animal grazing	Multi-Ag Farms		
	25%	3%	72%		
	Experienced Agritourism				
Experience	No Experience	Host family	Farm operation		
	77%	9%	14%		

## **Results and Analyses**

This paper conducted a series of survey and interviews to query the villagers' aptitudes, aspirations and to investigate the capacities, skills and resources of the studied communities. The farmers were asked with simple yes/no or multiple choices questions and the survey data were summarized in Excel, statistically analyzed, and tabled for easy reading and understanding of what the villagers are in favor of and what types of tourism endeavors they are interested in.

### **Aptitudes, expectations, and aspirations of villagers**

The results in Table 2 demonstrate that villagers are confident and have very positive aptitudes and aspirations towards agritourism development in their local villages. Farmers in three villages were willing to contribute their farm activities to be part of a CBAT network with pledge rate of 86% to develop working farm tours. This is obviously a critical positive factor to consider in the CBAT development stage. A significant portion of the farmers are not familiar with agritourism/ecotourism and lack internet access and that presents challenges. Many villagers are interested in doing various tourism activities based on their capabilities and interests in the local community. Farm crops grown and harvest, temple worship and local festival events, and river-wildlife-nature watching are major activities that can be presented by locals to the outsiders. Farmers are also interested in promoting their farm activities such as picking fresh farm crops, farm sightseeing, farmer markets, trail biking/hiking, home/farm guest stays, organic fertilizer methods demonstration, and making local handicrafts. These aptitudes of various tourism activities by local people represent a strong commitment in the promotion of CBAT.

Farmers have different expectations when participating in community-based agritourism depending on their farm characteristics or household constituency. Exchange with visitors, a source of additional income, farm education and having connections outside are important expectation for farmers. Rural farm villages have sustainable farm practices and a lifestyle that could connect themselves

with the outside world through farm activities. These local farmers’ expectations and their purposes in participation can be used as guidelines for the development of community-based agritourism where community participation and farmers points of views are holistically involved. The studied villages have abundant natural and cultural activities that villagers and visitors can join and appreciate local heritage and attractions such as farm crops, Buddhism ceremonies, farm visits, village scene observations, cave explorations, waterfalls, Mekong River floats, and forest-mountain trails; these activities are to be very outdoor nature oriented that can be found in all three villages. Some of the things that are common in these villages are: daily life exchange with their neighbors, producing handmade products, harvesting of in-season crops, boating and fishing, fund raising for merit, and individual hobbies. All of the aforementioned activities can be shared with visitors as the study points out. Putting the activities into some scale of importance the study shows that agricultural trail trekking and hands-on farm activities are the most popular for the guests. The other activities such as: village temple sightseeing, village festival participation, staying in a farmer’s home, attending a farmer’s market, and farm field education are events that will also be enjoyed by visitors. These bountiful yearly farms’ produce, villages’ traditions, nature and culture heritage, and daily activities are a great opportunity to exchange and promote. (Table 2)

**Table 2:** Aptitudes, expectations, and aspirations of joining agritourism (survey no. = 100)

Types of aptitudes and aspirations	Rating	Types of aptitudes and aspirations	Rating
<i>Aptitudes and aspirations</i>	<i>In favor</i>	<i>Promotion of products and activities</i>	<i>In favor</i>
Familiar with agritourism/eco-tourism	53%	Farm produces	61%
Develop working farm for tour	86%	Handmade products	22%
Farm has internet/Wi-Fi connection	10%	Buddhism ceremony and festival	56%

Contribute farm activities to a CBT	89%	Season crops and harvest	49%
<hr/> <i>Tourism activities interested</i>		<i>In favor</i>	
Farm crops grown and harvest	58%	Daily life exchange	23%
Fresh farm pick	39%	Cave exploration	35%
Farm sightseeing	39%	Water fall	33%
River-wildlife-nature watching	47%	Mekong river	52%
Local handicraft making	12%	Boating and fishing	10%
Home/farm stay	17%	Forest-mountain trail	43%
Trail biking/hiking	28%	Mountain farm visit	47%
Temple worship and local festival	53%	Village scene observation	48%
		Other (Fund raising and Merit)	3%
Farm equipment demonstration	15%	<hr/> <i>Daily life experience shared</i>	
Organic fertilizer demonstration	17%	<i>In favor</i>	
Farmer market sale	31%	Farm activities hands-on	47%
		Village/Temple sightseeing	52%
<hr/> <i>Expectation of joining agritourism</i>		<i>In favor</i>	
Additional income	53%	Home stay	23%
Exchange with visitors	71%	Agriculture trail trekking	57%
Have connections outside	30%	Farmer's market	21%
Doing as family fun	25%	Village festival participation	40%
Farm education	43%	Farm field education	12%

### Capacities, skills and resources

Every farm is unique so it is desirable to share and demonstrate specific skills it has. Therefore the resource capacities and skills of farmers were deeply explored for the potential contribution of agritourism development. Farm site visit is the most popular (44%) because of the variety of farm patterns and landscape to appreciate. Farm product shop, cooking demonstration, farm demonstration, local guided tour and farm/home stay are the next several ideal capacities and skills for agritourism. The survey results firmly indicate that locals have great capacities, skills and resources to contribute and engage in agritourism development and most of the farmers want to use their own agriculture resources which have strong identities and personal traits to share with visitors.

There are fundamental components to support community-based agritourism. The survey asked farmers what are the

necessities to promote their farms? The farmers answered that farm education, having an information center based on agriculture and culture; are the most important desires (55%). The next few desires that came up on the list were resources pooling and team work, Internet/Web site for promotion, and an organic farm product community shop. Several approaches such as farm volunteer participation, farm equipment-costume museum, and local farm cooking are on the wanted list. This is where the local heritage comes in so that the farmers can present and share about their way of life with visitors. The villagers have a great desire to have community based facilities to promote tourism. With strong team work and the assistance from the local government, there is an exceptional opportunity to establish supportive facilities.

The survey also checked on the accommodation, transportation skills, and resources of the farmers. Farm trucks are the well-used and commonly seen in the villages. Villager’s homes in old fashioned Isaan houses made of wood and stood on stilts are the best accommodation. On the transportation side, the motorbike, bicycle, and the farm tractor are all positive resources to accommodate both the farmer and guests. These local accommodation and transportation are the representative resources that show the way of farm life so as to support and promote the local tourism. (Table 3)

**Table 3:** Capacities, skills, and resources (Umung, Phabaen and Buhom combined, survey n = 100)

Types of capacities, skills, and resources		Types of capacities, skills, and resources	
<i>Capacities and skills</i>	<i>In favor</i>	<i>Accommodation and transportation</i>	<i>In favor</i>
Farm product shop	41%	Farm hut	40%
Handicraft demonstration	15%	Farm house	27%
Local tour guide	28%	Villager’s home	73%
Farm site visit	44%	Farm camping	39%
Farm/home stay	20%	Other facility	3%
Local healthy kitchen	18%	Farm tractor	28%
Demonstrate cooking	29%	Farm truck	75%
Demonstrate farming	26%	Ox/buffalo	2%



<i>Community Tourism Facilities to Promote</i>	<i>In favor</i>		
Resource pooling and team work	41%	Bicycle	35%
Organic farm product community shop	27%	Motorbike	63%
Local farm cooking and learning center	12%	Other transport	1%
Internet/Web site for promotion	36%		
Farm volunteer organization	23%		
Farm equipment-costume museum	17%		
Farm education and information center	55%		
Agriculture and culture learning center	51%		

### **Familiarity with sustainable agriculture and conservation practices**

The survey results in Table 4 show that these three villages respectively recycle farm agricultural material, know the organic and mixed-grown farm practices and are fairly familiar with sustainable agriculture practices. The survey picked those most common conservation methods available in the local villages such as rain harvesting, use of local material, the King's efficiency theories, use of organic fertilizer, and care of loamy soil. Rain harvesting and use of local material are also well-practiced in these three villages. Similarly, applying the King's efficiency theory and care of loamy soil are usual practices followed by use of organic fertilizer. There were positively shown results that over 80% of the farmers in these villages understand sustainable agriculture with an optimistic representation of conservation sensitivities. Local farmers use many practices in the context of self-sufficiency farming such as using organic fertilizer, utilizing waste plants, recycling the waste plants, and using fruit as a fertilizer. These practices exhibit a positive potential of organic farming. Use of the animal dropping as fish food is a norm. Farmers also are familiar with using leaves and old stems to generate organic compost while utilizing earth worms and compost to create healthy soil. A few farmers are quite advanced in applying organic fruit fertilizer while some farmers never use chemicals in their sustainable practices. The survey also checked on whether the local farmers engage and

practice in farm practices which support sustainable agriculture and conservation. The results show the local farmers do organic farming, construct herb and vegetable gardens, raise self-sufficient farms and do this as common practices. It ranges from 22%-32%. Farm made, fresh produce, home healthy cooking, and other-fruit fertilizer use are somewhat practiced in the villages. Although three villages' farmers are engaging in certain sustainable agriculture practices or self-sufficiency farm methods, there still needs to be an effort made in education and information sharing because they are necessary in the CBAT setup. (Table 4)

**Table 4:** Familiarity with sustainable agriculture and conservation practices (survey n = 100)

Familiarity with practices	Village			
	Umung	Phabaen	Buhom	Average
<i>Notion of sustainable agriculture</i>				
Familiar with sustainable agriculture	73%	52%	73%	66%
Organic/mixed-grown farm practices	70%	74%	66%	70%
Recycle farm agricultural material	78%	82%	79%	79%
<i>Conservation sensitivity</i>				
Rain Harvest	98%	96%	94%	96%
Use local material	93%	89%	94%	92%
King's Efficiency	85%	85%	82%	84%
Organic Fertilizer	59%	65%	60%	61%
Loamy Soil	79%	89%	88%	86%
<i>The self-sufficiency farming practices</i>				
Use the animal dropping for the fish food	8%	5%	14%	9%
Use animal dung waste as organic fertilizer	39%	53%	32%	42%
Utilize waste plants as fertilizer and feeding	32%	16%	25%	24%
Leaves and old stem composting	11%	23%	8%	14%
Avoid-chemical kills good insects and weeds	3%	0%	14%	5%
Use earth worms on soil and compost	5%	2%	6%	5%

Other-fruit fertilizer and never do chemical	3%	0%	2%	1%
<i>Sustainable agriculture practices</i>				
Organic farm	34%	31%	31%	32%
Self-sufficient farm	19%	31%	16%	22%
Herb/vegetable garden	23%	19%	27%	23%
Home healthy cooking	9%	7%	14%	10%
Farm made and fresh produces	11%	11%	13%	12%
Other-fruit fertilizer	3%	0%	0%	1%

### **The desires and preferences of the farmers**

A successful CBAT in the villages can be developed not only because of great resource capacities, skills, and villagers' positive expectations but also villagers' desires and preferences in what they want to achieve. Table 5 represents these farming villagers' ideas of their approaches to promote CBAT. Nevertheless, there are some other essential elements that have to meet in order to support this development such as infrastructure and facilities in local communities.

#### ***Farmers' desire to establish CBAT***

On a scale of 1 to 10 farmers were asked what the strongest desire is or need they wish to have? Whether it is internet Wi-Fi, to develop a working farm for visitors, or to contribute farm activities to a CBAT?

The results of the statistical analysis of the mean (MEAN) and the standard deviation (STDEV) are surprisingly well presented. The village of Umung has the high attentiveness of desire to have the Internet Wi-Fi in order to establish a CBAT with a MEAN of 8.66 and a STDEV of 1.82 which signify the lopsided inclination of the villager's desire. The village of Phabaen has the highest of MEAN of 8.18 in developing working farms for visitors in order to establish a CBAT and a STDEV of 1.37; This strongly suggests that it has a good representation in the class of very high interest, Phabaen farmers know the working farm stuff very well and their data attributes are all tightly clustered near the MEAN. In the category of contributing farm activities to a CBAT, Phabaen again shows the highest MEAN of 7.96 with the lowest STDEV of 1.43; this is an example of how well they are focused

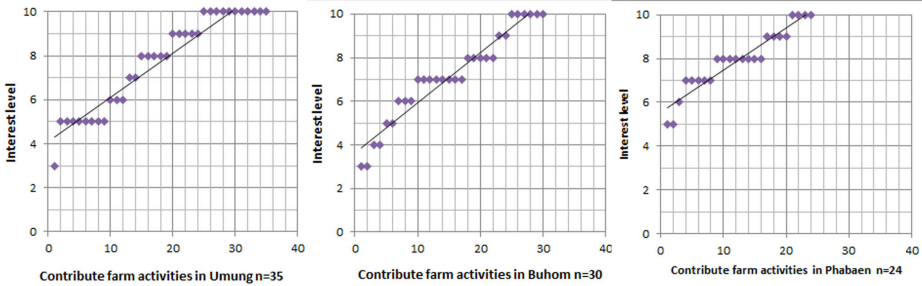
on the farm work and activities. When all three villages were combined in the analysis, the MEANs came out from 7.61, 7.67 to 7.88 in all categories of desires and a true representation of their wishes to develop agritourism in the community. With the high value of MEANs for all three villages, the STDEVs fall around 1.96, 2.11 to 2.29 which fairly show that data attributes are well clustered on the positive end. This is also confirmed within the MEAN and STDEV of each village, each has high value of MEAN and relatively low STDEV to exhibit each village’s desire in each category. (Table 5)

**Table 5:** The statistical analysis of MEAN and STDEV for various desires. (Survey n = 100)

		EACH VILLAGE		ALL 3	VILLAGES
		MEAN	STDEV	MEAN	STDEV
<i>Desire to have the internet Wi-Fi</i>	Umung	8.66	1.82		
	Phabaen	7.00	1.98	7.88	2.29
	Buhom	7.54	2.78		
<i>Develop working farm for visitors</i>	Umung	7.73	2.18		
	Phabaen	8.18	1.37	7.67	2.11
	Buhom	7.18	2.44		
<i>Contribute farm activities to a CBT</i>	Umung	7.71	2.15		
	Phabaen	7.96	1.43	7.61	1.96
	Buhom	7.20	2.09		

This research also looked at interest level phenomenon of the villages of Umung, Buhom, and Phabaen. The linear distributions of farmers’ interest to contribute farm activities where each dot represents a farm household’s interest level are expressed in two charts. They exhibit the similar high interest levels where Umung, Buhom, and Phabaen villagers have the clusters of data attributes at the upper end. This is another positive ingredient in the development of community-based agritourism for the farm activities they are so enthusiastic to share. (Figure 2)

**Figure 2:** The linear distribution of farmers' interest to contribute farm activities to CBAT; where each dot represents a farm household's interest level.



The survey results from the farmers' desires and preferences in community tourism development and facilities setup are core ingredients to have a successful CBAT in these three villages which are respectively found. The needs to have agritourism facilities in local community, the willingness of personal farm activities contribution and importantly, community facilities to promote provide these villagers with a clear picture of what to do and how to promote and support a CBAT.

### ***Community readiness and leadership***

Local farmers are accustomed to community participation especially village festivals and agricultural practice networks. The survey demonstrates that local people are willing to devote themselves to traditional practice while promoting their own proud heritage for tourism activities such as traditional crafts demonstrations, traditional cuisine, working farm living, home stay activities, local festival events, cultural activities, and landscape trails exploration. Based on the study result, around 30% of villager's are involved with local farm groups and clubs for farm beneficial activities such as a green farm club, using organic fertilizer, and farm volunteer group, etc. Umung the mountain village has 33% of experience in agritourism either in farm operation or in host family participation. Local stakeholders are crucial as a driven force to build a successful agritourism. Local people

needs to have a full role of participation in their resources management and interpretation in decision-making, organizing groups, and operating and planning throughout the whole development process (Pablo, 2013).

## **Findings and Discussions**

The villagers' aptitudes, aspirations, and expectations, and the communities' capacities and resources to develop working farms and contribute farm activities for a CBAT present a very positive note and farmers are seemingly interested in many kinds of agriculture and culture activities with expectations to reap in revenues resulting from community agritourism. These local villages have the potential attractions and resources to accommodate and support agritourism. The villagers have great desires to have community based facilities to promote tourism. The followings are additional findings and discussions.

### ***Sensitive to conservation of natural and cultural heritage***

Villagers and farmers have a lifestyle of practicing sustainable agriculture through many different local methods and self-sufficient farms to retain the natural and cultural heritage. It is important to use participatory methods to involve "farmers as the stakeholder of sustainability" and to "stimulate markets for ecologically produced products." (Roling and Jiggins, 1996: 244-245) Development of a CBAT should assist farmers to conserve and embellish these positive traits.

### ***Locally owned and operated***

Local villagers own individual small working farms where they practice agriculture and generate income from the farm products. A CBAT would coordinate agritourism touring with locally owned farms and operate guest visits and activities by farm owners who already have working farm experience. Lewis (2001: 185, 187, 191) points out a method of sustainable tourism development which is locally-owned, developed, and operated in all tourism resources and activities

both individual ownership and community organization can maintain and preserve resource capacity and lead to successful sustainable tourism through economic, social and resource development.

***Promote sustainable agricultural practices***

Local agriculture practices and methods that farmers routinely practice are sustainable and mainly use the local wisdom mixed with new technology and theory. However, farmers need to input appropriate technology to optimize their production, need to learn the skills of how to efficiently use the land to be sustainable (Moncharoen et al., 2001: 182). This can be shared and exchanged with visitors through the working farm tours where local knowledge and intelligent agriculture practices are demonstrated. This will also entice the local farmers to be proud of what they do and invest themselves to learn more in the sustainable agriculture practices for the demonstration.

***Develop small scale home stays or farm stays***

Home guest stay and farm guest stay is the best way to peek into farmers' private life at home and their authentic working life on the farm. A good home stay or farm stay allows visitors to acquire the real experience of staying in a home or hut while exchanging culture and social etiquettes with each other. Small sized groups and independent travelers blend with the farmer's family and working life easily and require very little staged operation, life can carry on as usual just like having a friend visits the family. This is evidenced by a case study that illustrates a small farm and resources used mainly for a social way of farming is the important foundation for tourism development in the countryside (Ohe, 2006: 255). A real authentic experience could be achieved if this is done with mutual respect and with true intent of exchange.

***Bring economic benefits to supplement the agricultural income***

Since the CBAT is locally owned and operated, with the development of community-based agriculture activities, this can bring community farmers a viable supplementary income especially during the farm off season. Farm activities and added-value farm products not only provide venues for visitors to enjoy, taste, and learn these

local attractions but also spawn the rural economy in the countryside to spread benefits and income to the community as a whole (Sharpley and Sharpley, 1997: 19).

***Develop infrastructure, participatory network, facility, and marketing strategies***

There are needs in an appropriate level for the rural villages and communities to improve and develop infrastructures and facilities such as roads, water distribution, visitor/farm education centers, and internet access. It is also important to educate and train farmers through a participatory network group on how to run the tour and how to market them. The support of government agencies and institutions are important to enhance, sustain and inspire the interest of local farming practices in the area by supporting and providing sufficient infrastructures and vocation training (Okon and Nwosu, 2012: 663-664). The communities can enlist government help such as Tourism Authority of Thailand (TAT) to assist in setting up the infrastructures, training the tour operations and developing of marketing strategies.

***Plan for sustainable growth of the tourism and direct revenues to conservation***

Good planning of long term sustainable strategies, revenue sharing, continuing education and conservation efforts are needed to support farmers and their community for healthy growth and it should be in the blueprint. Local agriculture practices and farm management by local people is one of the important pluses to sustainable growth. A similar case study in sustainable agriculture discusses the fact that “agro-ecological strategy” links development and management of sustainable agricultural systems to promote local biodiversity in agro system through local farming practice: multi-cropping, rotation and agroforestry (Lichtfouse, et al., 2009: 5). Villagers have to plan cooperatively how to share revenues based on their capacities, resources and skills. They must allocate funds to contribute to long term conservation of a natural and cultural heritage. There are special elements of natural resources, unique farm village heritage, self-



sufficiency farming, traditional life, diversified farm products, well-integrated farm practices and farmers' knowledge and skills. These are all necessary foundations to start a CBAT in these villages (Colliver et al., 2010; Jitsanguan, 2001; Hirokawa, 2010).

## **Conclusions**

This study finds that farmers' aptitudes, aspirations, and the communities' agricultural resource capacities in the rural Chiangkhan studied area for a CBAT at working farms and farm activities are positive and adequate. The CBAT presents itself with pros and cons. With careful planning and development, it can help farmers generate revenues and sustain their livelihood and agricultural practices. Communities are part of tourism ecosystem while farmers ought to have voice in the development and the conservation of their natural resources (Lash, 1997: 9-10).

To successfully develop a sustainable agritourism in these three villages, a holistic view of the entire community including its human, society, culture, environment, and economy is necessary. Farmers in the villages need to be proud of what they do and need to be aware that earth resources are their own home which can be easily damaged if they do not think in a sustainable conservation way. Therefore the capacity building, self-reliance with regard to sufficient basic needs, dignity and capability of decision-making are key to a healthy CBAT (Attanandana et al., 2005: 1-2; Roberts and Hall, 2001: 57). Farmers' networks, support facilities, and learning resources should also be in place to help and enrich farmers' understanding of the conservation principles, the limitation of their resources, and wellbeing of their own communities.

This study is focused on the aptitudes, aspirations, capacities, and resources for the CBAT development and does have some limitation of research in other areas such as CBAT development strategies, tourism design or exhibitions, focused tourist groups, tourism carrying capacities and several other issues. To promote and

develop agritourism for these rural villages, strategies for conservation of cultural heritage and agricultural tradition would need to be proposed focusing on three main themes: “firstly training of local people and raising awareness; secondly, infrastructure and equipment; and thirdly, promotion.” (Guzmán et al., 2011: 71) Satarat (2010: 314) describes a community-based tourism (CBT) model which integrates five elements of sufficiency economy and Buddhist economics: knowledge, virtues, moderation, reasonableness, and self-immunity in the input and process of the developmental stages of a CBT following His Majesty’s philosophy of “Sufficiency Economy”. This is a fusion of Thai philosophy with a CBT to make it more sustainable and appropriate in the Thai context. Another strategic development of agritourism is using eco-museum as an open-air working farm with components found in villages such as the natural resources, the local cultural heritage, vernacular landscape, and the local sustainable agricultural practices. This strategy enables these rural farm villages a place to holistically integrate the agricultural practices, socio-culture, ecological resources and economy of the local communities for a sustainable agritourism destinations (Roberts and Hall, 2001: 54-55).

Rural tourism can be sustainable through planning, managing, and applying local capacities and marketing concepts from both public and government (Sharpley and Sharpley, 1997: 91-92). Tourism Authority of Thailand (TAT) is a long established government agency in Thailand, and since 1959 they have helped to develop tourism policies and implement infrastructures and marketing plans for various communities and correspondents. (TAT, 2012: 53; Wirudchawong, 2012: 14-18) This research provides a method to investigate the fundamental ingredients for tourism, the villagers’ aptitudes, aspirations, and the expectations of tourism approach, the resources, capacities, and skills farmers can contribute, and infrastructure needs of a rural community in developing agritourism. With careful analysis and planning, a holistic and sustainable development of a CBAT in these three rural villages is possible.

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