

# Agro-Health Tourism Management Innovation Based on Local Wisdom to the Creative Economy Mae Sai District, Chiang Rai

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## Abstract

This research aims to 1) manage knowledge and wisdom about the use of herbal medicine in the Ban Muang Kham community, Mae Sai District, Chiang Rai Province, 2) develop herbal products and design health agro tourism activities by using the design thinking process, and 3) transfer knowledge of the developing herbal products and designing healthy agro tourism activities. The research was conducted in 3 phases, consisting of Phase 1 managing knowledge and wisdom about the use of herbal medicine in the Ban Muang Kham community, Phase 2 developing herbal products and designing health agro tourism activities by using the design thinking process, and Phase 3 transferring knowledge of herbal products and designing healthy agro tourism activities. The results of the study found that The Ban Muang Kham uses 24 types of local herbs and plants for treatment and health care. They have knowledge in processing 6 products for use in the household and for sale. The researcher has developed 3 prototype herbal products as follows: yellow oil with stretched grass tendon, herbal clay for knees, and foot soak herbs. This prototype product was developed based on the results of a survey of purchasing and demand of users and tourists. Then transfer knowledge on herbal product development through design 6 health agro-tourism courses to the community, contains a course on herbal processing to promote health tourism, product development course, packaging design course, Tong-sen massage course, course of eating according to life elements, and courses on calculating costs and selling prices. There were a total of 135 people participating in the knowledge transfer. The community should continuously drive community tourism development operations. Training in being a local tour guide to develop the potential of community tour leaders or tour guides to welcome tourists. Coordinate and create a network for community tourism development operations with local government organizations and local and provincial tourism partners to enhance community potential and strength. And improve the landscape to impress tourists or people who come to visit

**Keywords:** Agro-Health Tourism, Local Wisdom, Chiang Rai

## 1. INTRODUCTION

Thailand is driving the country's development towards the Thailand 4.0 era. The 12<sup>th</sup> National Economic and Social Development Plan has set strategies and guidelines for national development by laying the foundation for developing the country into a society that is happily stable, prosperous, and sustainable (Office of the National Economic and Social Development Board, 2017) in line with the 20-year national strategy, which has a policy of creating stability, prosperity, and sustainability in the economy and society. It also focuses on making the center of development to create national security through developing people to have potential and creativity in order to increase competitiveness in the production and service sectors to build strength along with conserving, preserving, restoring, and making appropriate use of resources in the area. (Office of the National Economic and Social Development Board, 2018) In order to drive the development of the grassroots economy, it is essential to build strength by creating innovation for the community that is based on driven by innovation or value-based economy Ban Muang Kham is located in Mae Sai District. Chiang Rai Province. The majority of the population is engaged in agriculture. But due to the condition of the area being a flood plain, farming cannot be done as it should. In 2018, the community began to operate tourism by establishing the Ban Muang Kham Herbal Medicine Learning Center. Using herbal medicine to develop products and services. The goal is to raise the quality of life and strengthen the economy in the community to be stable. However, due to the limitations of the community that still lacks of knowledge in creating value and adding value from wisdom, current products and services are still not in demand and receiving the attention of service users as they should. From a public hearing in collaboration with the Koh Chang Subdistrict Administrative Organization, it was found that the community wanted product development and service upgrades, including herbal therapy activities to be outstanding and interesting. This research project focuses on knowledge management and wisdom regarding the use of herbal medicine. Developing herbal products and designing healthy agro tourism activities. Including transferring knowledge on developing herbal products and designing healthy agrotourism activities to the Ban Muang Kham community, Mae Sai District, Chiang Rai Province. The products from this research will be beneficial to the academic knowledge in knowledge management and the wisdom of using herbal medicine. Herbal product development and designing health agro tourism activities to lead to the creation of commercial value and strengthen competitiveness in operating the community's health agro tourism business sustainably.

## 2. LITERATURE REVIEW

### 2.1 The concept of wisdom in using herbs

Natthawan Worapisuttiwong (2011) stated that the use of herbs in maintaining and promoting health includes the use of single herbal medicines in promoting health and treating primary diseases which includes

1. Herbs to treat diseases/illnesses in the digestive system include turmeric, bananas, cloves, garlic, senna, pomegranate, mangosteen, etc.
2. Herbs to treat respiratory illnesses include ginger, deepli, pega, makhampom, tamarind, lime, maweng kruea, maweng ton, etc.
3. Herbs to treat urinary tract ailments and symptoms such as red roselle, klu, lemongrass, pineapple, grass, red sugar cane, etc.
4. Herbs to treat skin diseases Symptoms of eczema include garlic, galangal, golden panchang, betel, aloe vera, buffalo maca, gotu kola, aloe vera, gourd, sea gourd, saled pangpon, etc.

5. Herbs to treat other diseases/illnesses include Plai used to treat sprains. Cassia treats insomnia and *rographis paniculata* and wormwood treat fever, etc.

Pennapa Sapcharoen (1992) said that using herbal medicines with different flavors will help adjust the variations in the 4 elements that exist in the body, namely:

1. Using astringent, sweet, oily, salty herbs such as mangosteen, raw guava, salt, etc. will help adjust the fluctuations of the earth element, which includes meat, muscles, and bones.
2. Using sour and bitter herbs such as kaffir lime, orange, bitter melon, neem, etc. will help adjust the fluctuations in the water element, which is the fluid in the body.
3. Using spicy herbs such as galangal, pepper, holy basil, etc. will help adjust the fluctuations of the air element, which is gas in the body.
4. Using herbs with a cool, bland flavor such as morning glory, gourd, watermelon, and gotu kola will help adjust the fluctuations in the fire element, which is the energy in the body. Office of the Primary

Health Commission (1994) presents herbal medicine preparations as follows:

- Infusion: Infusion is commonly used with dried herbs that are ground into a coarse powder that is smaller than herbs used in boiling. It is the preparation of medicine using boiling water and adding it to herbs. Herbs are generally dried and ground into a coarse powder. Using 1 part of herbs, add 10 parts of boiling water or as specified in the medicine recipe. This method can be used with many types of herbs such as ginger, bael, chum mushrooms, and herbs.
- Decoction is the preparation of medicine using dried or fresh herbs boiled together with water by placing the herbs in a pot and adding water slightly higher than the herbs. After that, bring it to a boil and boil for another 10 minutes. The next day, add water and boil in the same way. Can be used for about 3-5 days, then change to a new medicine, or it is called boiling until the medicine is bland, or you can use the 3-take-1 method of boiling, which is to add three parts of water, then boil and simmer until one part is left, then divide and eat.
- Ya Dong is a method of making medicine using an extraction method using liquor or kaffir lime juice or orange juice but the most popular one used is liquor. The process involves grinding herbs into a coarse powder and then loosely wrapping them in cheesecloth and placing them in a porcelain or glass container. Add liquor and leave for about 1 week, stirring the medicine thoroughly once a day. Caution: Pregnant women, patients with high blood pressure, patients with heart disease. You should not drink Ya Dong using liquor and you should not drink more than 2 cups of pineapple per day.
- Powder medicine can be made by grinding dry herbs into powder and then can be used immediately or may be used to prepare medicine in various forms such as bolus medicine, tablet medicine, capsule medicine, bolus medicine is a method of producing medicine by using powder medicine mixed with Honey in a ratio of 1 - 2 parts herbal powder to 1 part honey, depending on the nature of the herbal powder.

## 2.2 Health tourism concept

Health Tourism means traveling to visit beautiful tourist attractions in natural and cultural attractions. The objective is to learn about lifestyle and recreation. By allocating time from traveling to do health promotion activities and/or health rehabilitation treatments, such as receiving health advice and counseling. Exercise correctly using massage/steam/herbal compress. Meditation practice as well as physical examination Medical treatment and others, which is tourism that is conscious of promoting and preserving health and

the environment in general. Health Tourism may be divided according to the aims and objectives of the tourism activity program and the needs of tourists into 2 main types as health promotion tourism and health healing tourism (Aran and Jinna, 2003).

### 2.3 Product development concept

Product development is the all-encompassing process of bringing products to market. Product development is the use of existing market opportunities to create products to meet customer needs. The products are divided into 2 types: concrete products are products that can be physically touched, and abstract products are services, experiences, and beliefs, understanding the needs and desires of customers. Understanding of the competitive environment and the nature of the market is a prerequisite for successful product development. Cost, time, and quality are the key variables that drive customer demand. To achieve this goal, operators should continually develop strategies to better serve customer needs and to increase market share (Kenneth B. Kahn et al, 2012)

### 2.4 Packaging design concept

Packaging means objects or materials used to package goods by means of packaging or wrapping or by any other method. Makes the products inside completely concealed. The materials used to package the products must have a duty to protect the products inside to be safe, convenient to use, convenient for transporting and moving, and helping to promote the sale of products (Sunisa Makcharoen, 2010) The five packaging features that guide design include contain and protect, communication, convenience, consumer appeal, and conserve the environment. Good packaging should use the right materials. Does not cause environmental pollution and can be recycled and reused and most importantly, you should not use too many consumables.

## 3. RESEARCH METHODOLOGY

This research is a mixed methodology research. The researcher determined the operation process to be 3 steps, consisting of: 1) Process for managing knowledge and wisdom about using herbal medicine in the Ban Muang Kham community, Mae Sai District, Chiang Rai Province. 2) Steps for developing herbal products and designing healthy agro tourism activities. And 3) The process of transferring knowledge on developing herbal products and designing health agro tourism activities. Conducting 15 interviews of community philosophers, local herbs group, and people processing local herbal products in Mae Sai District to collect information on the wisdom of using herbs for health care. Survey the purchasing needs and use of health agro tourism services of 400 tourists visiting Chiang Rai province, then organize a workshop to jointly determine methods and find ways to develop herbal products and design health agro-tourism activities in order to effectively respond to the needs and tourism behavior of the current market. Create a course to transfer knowledge on herbal product development and design health agro-tourism activities and evaluate the results of the project after the training is complete.

## 4. RESULT

### Part 1: Results of knowledge management and wisdom in using herbal medicine in the Ban Muang Kham community, Mae Sai District, Chiang Rai Province.

1) Knowledge about the use of herbs. The community uses local herbs and plants for a variety of health care and treatment purposes. From the synthesis of knowledge on the use of herbs, the use of herbs for he-

alth care can be divided into groups as shown in Table 1.

**Table 1: Level of 4E's marketing**

Name of herb, how to use	How to use	Healing properties
Tacca chantrieri André, Vitex trifolia Linn, Zingiber montanum , Pandanus amaryllifolius , Croton cascarilloides Raeusch, Sesbania sesban (L.) Merr	Dried or fresh medicine	Helps relax dizziness
Curcuma longa L, Boesenbergia rotunda (L.) Mansf., Ocimum basilicum Linn, Ocimum tenuiflorum	Fresh medicine to apply to the abdomen	Bloating, flatulence
Boesenbergia rotunda (L.) Mansf.	Eat raw	Helps the digestive system
Pandanus amaryllifolius Roxb, Gymnema inodorum (Lour.) Decne., Stevia rebaudiana Bertoni	Eat raw	diabetes
Plantago major L.	Make massage medicine	body aches
Andrographis paniculata, Tinospora cordifolia, Tiliacora triandra (Colebr.) Diels., Pandanus amaryllifolius Roxb, Cinnamomum ilicioides A.Chev.	Eat raw	Fever, sore throat, aches
Gomphrena globosa L., Carica papaya L.	Bring the stem and roots to a boil and squeeze the juice	Finger break
Cleome viscosa L.	Boiled	Leg pain
Thumbergia laurifolia Lindl.	Eat raw	Drive out toxins
Litsea glutinosa (Lour.) C.B.Robinson., Pandanus amaryllifolius Roxb., Tiliacora triandra (Colebr.) Diels. , Sapindus rarak DC., Acacia concinna (Willd.) DC.	Simmer the water	Take care of hair to make it thick and beautiful.

Knowledge about herbal processing

**Table 2: Knowledge of herbal processing in Ban Muang Kham**

Processed herbal products	properties	herbal ingredients
Yellow oil	Relieves sprains, insect bites and stings	Cleome viscosa L., Zingiber montanum (J.Koenig) Link ex A.Dietr., Curcuma longa L , Cleome viscosa L., Cinnamomum camphora (L.), Mentha cordifolia Opiz ex Fresen , Sesame oil, kaffir lime skin
Dirt on knees	Relieve knee pain muscle pain	anthill soil, Cleome viscosa L., Zingiber montanum (J.Koenig) Link ex A.Dietr., Cleome viscosa L.

Processed herbal products	properties	herbal ingredients
Herbal compress	Relieves sprains	Zingiber montanum (J.Koenig) Link ex A.Dietr., Curcuma longa L, kaffir lime skin, Cleome viscosa L., Pandanus amaryllifolius Roxb., Tamarindus indica L. , Acacia concinna (Willd.) DC., Cymbopogon nardus Rendle., Croton cascarilloides Raeusch , Tacca chantrieri André , Vitex trifolia Linn, Amomum schmidtii (K.Schum.) Gagnep., Cinnamomum camphora (L.)
Herbal foot soak	Muscle relaxation, Reduce aches and pains	Zingiber montanum (J.Koenig) Link ex A.Dietr., Curcuma longa L , Basella alba Linn , Coccinia grandis (L.) Voigt. , Citrus hystrix DC., Citrus aurantifolia Swing., Pandanus amaryllifolius Roxb., Amomum schmidtii (K.Schum.) Gagnep. , Cymbopogon nardus Rendle. , Cleome viscosa L. Cleome viscosa L., Cinnamomum porrectum (Roxb.) Kosterm.
Body steaming herbs	Relax the body	Link ex A.Dietr., Curcuma longa L, Tacca chantrieri André , Cinnamomum porrectum (Roxb.) Kosterm. , Cinnamomum camphora (L.), Cymbopogon nardus Rendle.
Herbal shampoo	Nourish black hair	Clitoria ternatea L., Tiliacora triandra (Colebr.) Diels., Pandanus amaryllifolius Roxb., Litsea glutinosa (Lour.) C.B.Robinson. , Rhinacanthus nasutus (L.) Kurz. , Amomum schmidtii (K.Schum.) Gagnep., Sapindus rarak DC., Acacia concinna (Willd.) DC., Citrus hystrix DC.

**Part 2 Results of herbal product development and design of health agro tourism activities.**

**2.1. Results of a survey of the demand for purchasing and using agro tourism services and the health of tourists.**

**2.1.1 Decision-making behavior in purchasing herbal products and using health agro tourism activities.**

From a survey of 400 tourists and users of health agro tourism in Chiang Rai province, it was found that most tourists and users choose to buy herbal products and use health agro tourism activities 1 - 5 times per month. Spending for purchasing and using services per time is 301 - 500 baht, with the objective of purchasing herbal products and using health agro tourism activities, want to support local, want to try/consume and as souvenirs/souvenirs, respectively. The reasons for purchasing herbal products and using health agro tourism activities are relieves aches and pains in the body, knees, and feet, want to maintain good health, and no chemicals. The symptoms found/reasons for needing health care are: body aches, sprains, colic and the common cold, respectively.

**2.1.2 Expectations in purchasing herbal products and using health agro tourism activities.**

Tourists and health agro tourism users in Chiang Rai Province have the highest product expectations with expectations on the issue products/services are high standard quality, followed by having clear labels with details, the packaging is beautiful and convenient to use. , and be activities that promote health care, respectively. For the price, tourists and service users have high expectations. The expectation is that the

price is appropriate for the quality of the products and services received, expenses and product prices are clearly displayed, respectively. In terms of sales locations, tourists and users have moderate expectations. The expectation is there are various distribution channels, can travel easily, and the place is clean and hygienic, respectively. In terms of marketing promotion, tourists and service users have moderate expectations. The expectation is that there will be staff available to give advice on products and service use, there are products to try, and promotions are organized at different times.

## 2.2 Results of the development and design of processed herbal packaging

From a survey of the needs of tourists and service users (Demand) and problems encountered in purchasing herbal products and using the services of current health agro tourism activities. The researcher has used the results of the survey as basic information for developing herbal products and designing health agro tourism activities by applying local wisdom in using herbs for treatment and selecting local herbs that can be found locally, 3 prototype herbal products were created, including yellow grass n-yeat oil, herbal clay for knees and foot, soak herbs. Which has the property of relieving aches and pains in the body, joints, and feet, which is the main symptom that most tourists and service users decide to buy herbal products and use health agro tourism activities. In addition to the quality of the good herbal products suitable for providing services to tourists and health agro tourism users. The packaging is beautiful, convenient to use, and providing complete usage information according to product standards also plays a part in promoting product value. The researcher has studied various important factors that affects the packaging style of analyze products and original packaging formats to summarize guidelines for developing herbal product packaging formats. The result of this operation is a prototype packaging for processed herbal products, as shown in Figure 1-3.



Figure 1: Prototype of yellow herb oil



Figure 2: Prototype of the herbal clay mask

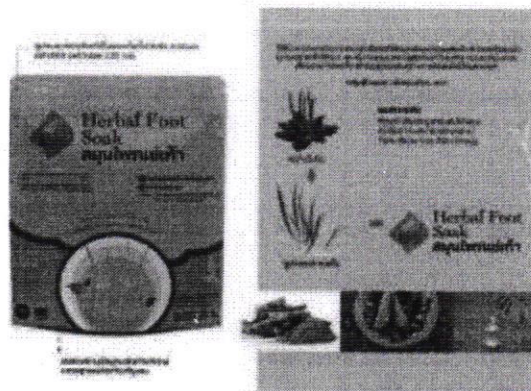


Figure 3: Prototype of herbal foot soak

2.3) Results of the development of health agro tourism activities and services Researchers together with the community have designed and developed tourism activities and health agro tourism services. Then prepared tourism programs by using the name of "Creative Tourism, Amazing anthill soil " which has activity details as shown in Table 3.

Table 3: Creative Tourism, Amazing anthill soil program

Time	Activity
9:00 a.m.	Welcoming tourists at the Ban Muang Kham Herbal Therapy Center with a long Lanna drum procession, and serve herbal water "Muang Kham"
9 : 0 0 a.m. – 12:00 p.m.	<p>Nature creates the wonders of anthill soil</p> <ul style="list-style-type: none"> <li>• Soap and scrub from anthill soil Enjoy the activity of making soap and anthill soil scrub powder</li> <li>• Salted egg with anthill soil Experiment with making salted eggs from anthill soil and rice bran, which will give aroma and contain the nutrients oresanol and omega.</li> <li>• Foot spa with anthill soil</li> <li>• Relax by doing a foot spa and knee wrap with anthill soil, the only one in Thailand, amidst a cool breeze in a natural atmosphere in the middle of a field, called "Judong Spa".</li> </ul> <p>Serve "Gold Amber" at 10:30 a.m.</p>
12:00 p.m. – 1 p.m.	Have lunch "Khantoke Mini" (local food and herbal water according to life elements)
1 : 0 0 p.m. – 4:00 p.m.	<p>Lanna charm, folk healing wisdom (not included in the program, pay according to the activity course price)</p> <ul style="list-style-type: none"> <li>• Lanna style hammer massage</li> <li>• Relaxing foot massage</li> <li>• Chicken coop spa</li> <li>• Stomping on the body in Lanna style</li> </ul> <p>"Manee Komen" are served at 2:30 p.m.</p>



Time	Activity
4:00 p.m.	Bid farewell to everyone with joy at Wat Hiranyawat or Wat Phra San Mueang Daeng Noi and pay homage to the largest bamboo-woven Buddha image in the world that was completed in just 99 days with the power of faith.

**Part 3 Results of knowledge transfer on herbal product development and design of health agro tourism activities using design thinking processes.**

After developing and designing health agro tourism activities A workshop was conducted to transfer knowledge on developing herbal products and designing healthy agro tourism activities using design thinking processes. To develop vocational skills, create jobs, increase income, and lead to a sustainable improvement of the quality of life of local people. Six training courses have been designed, consisting of:

Course 1 Herbal processing to promote health tourism

Course 2 Product development

Course 3 Packaging Design

Course 4: Tong Sen Massage

Course 5: Eating according to life elements

Course 6: Calculating costs and selling prices

As a result of transferring knowledge on developing herbal products and designing health agro-tourism activities in all 6 courses, there were a total of 135 participants, which led to the creation of commercial value and strengthening capacity. Able to compete in sustainable community health agro tourism business operations. In this regard, the research team and the community have jointly designed tourist routes and health tourism activities to participate in the 2023 Creative Health Tourism Route Competition (DOT Connect to Healthy Route 2023) under the development project of capacity to support health tourism for the year 2022 organized by the Department of Tourism. Competition results from program presentations and experts visiting the area to assess readiness to provide creative health tourism services. Ban Muang Kham community has been selected to be the representative of the northern region to receive the Best Creative Health Tourism Route Award 2022.



**Figure 3: Award for the best creative health tourism route of 2022**



**Figure 4: Participate a booth at the trade show and welcomed the study tour group**

## 5. DISCUSSION AND CONCLUSION

This research project focuses on knowledge management and wisdom regarding the use of herbal medicine. Developing herbal products and designing healthy agro tourism activities. Including transferring knowledge on developing herbal products and designing healthy agrotourism activities to the Ban Muang Kham community, Mae Sai District, Chiang Rai Province. The results of the project create tourism routes and health tourism programs that ready to welcome and serve tourists. The community can offer health agro tourism programs to tourists, travel agency, study tour group, government, and private agencies that are interested to make money. Create jobs for people in the community and leads to improving the quality of life. In addition, the use of local wisdom social and cultural capital and the resources in the community for tourism management will also create love, cherish and know the value and lead to conservation continuing good things in the community.

## 6. CONFLICT OF INTEREST

The researchers would like to pay enormous appreciation to National Research Council of Thailand for funding support of this research. There is no conflict of interest that may occur directly or indirectly in the research.

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