

APPENDIX

General information

The Royal Project Foundation

History

The Royal Project Foundation is a project of His Majesty the King. It was established in 1969 the objective of the project was described as **"To help hill tripe people. Moreover, the projects to help them are directly benefit to them in order to support and encourage the people to be improved their life. They are able to plant what will become their benefit and income. One objective of this project is humanitarian, which means to those who live in blockade area are able to learn and reach to prosperity. Another objective is to help in the way that it should be because it is a big problem. The problem is drug issues. If those people are able to cultivate useful plants, they will not cultivate drug plants, such as opium. The policy of anti-opium cultivation and opium trade will become active. This is one result. Another result which is very important is that hill tripe people, as we may know, are people to do farming in the way that can destroy our nation by destroy forests and do the incorrect cultivation. If we help them, it is considered as we help our country. People will be in the better live and safety in the whole country. If this project is successful, the hill tripe people will live in the exact place. They will be able to live fairly well and support the policies of forest, soil conservation to be beneficial. This kind of benefit will be very sustainable"**.

Before the project began, 40 years ago, His Majesty the King, and Her Majesty the Queen proceed to visit hill tribe village near Doi Pui. They observed that the hill tribe people grow opium, yet they were poor. Also, they destroyed forest and water resources. This led to the damage of other parts of the country. His Majesty recognized that they gained money from opium as much as from local peach, which persisted graft with the one from overseas. The result was that the peach become

bigger, most luscious, and bring high income as the opium. Therefore, His Majesty granted his permission to establish the project as his personal project. H.S.H. Prince Bhisadej Rajani responsible as the Project Director

Later, the Department of Agriculture of the United States and Taiwan gave the financial support. Moreover, other countries gave the winter grains and other supports to the project. Many volunteers from various universities and agencies helped in operations. The project becomes widespread advances at present.

His Majesty granted his permission to change the status of the project to be a Royal Project Foundation in March 1992. His Majesty donated budget for the property of the foundation for 500,000 Baht. He is Honor President of the Royal Project Foundation for the permanent status as the commonwealth organization. There was certain management system that led to the flexible and effective operations as a key to achieve better results in the future.

The objectives of the Royal Project Foundation

1. To prevent forest destruction by hill tribe people, as well as to promote reforestation.
2. To convince people not to move to find income and not to destroy forest for opium cultivation, which are considered illegal. Moreover, to acknowledge them to find certain place for living by providing tested plant seeds that can be planted in the hill climate, as well as provided high income equal to or greater than opium.
3. To operate and train hill tribe people to understand the main agricultural academic in the highland area, as well as husbandry academic.
4. To research and experiment the animal and plant genetics for people in order to increase their income by studying about transportation and marketing.
5. To promote health, education, and family planning to the people. In addition, His Majesty has given the motto of the Project that "**Help hill tribe people for humanitarian**".
6. Help Thai people by reducing the destruction of natural resources, forests and water resources.

7. Elimination of opium cultivation.

Later the Royal Project added another objective, which was

8. Cultivate plants to increase economic benefits for the country.

It also His Majesty gave the Royal implementation to achieve the following objectives.

1. Reducing the steps of process, which several approvals in not necessary. In other word, to decentralize the power.

2. Not to do good thing just for show.

3. Hurry up

4. Help them help themselves.

The goals of the Royal Project Foundation

1. For humanitarian assistance.

2. Help the country by reducing the destruction of natural resources, such as forests and water resources.

3. Elimination of opium cultivation.

4. Maintain the soil and the space correctly. Leave forest and farms separately.

Cultivate economic plants for the country.

Operation area

The Royal Project covering Chiang Mai, Mae Hong Son, Chiang Rai, Phayao, and Lamphun. There are 4 research stations, 38 Royal Project Development Centers, with 287 total numbers of villages in the Royal Project, and a target group of people including Thai and hill tribe people of 23,241 families or 128,854 people (data of 2006).

Characteristics of operations

Operations of the project meet the Royal idea that to help people to help themselves in cultivation of useful plants and improve standard of living. One factor that contributes the Royal Project Foundation to develop various types of cultivation that suit the environment of cold weather is the close collaboration between teachers, academics in various fields and staff. The experimental research focused on the needs of market. The research will be transferred to field staffs as well as farmers

immediately. Academics and field workers meet to exchange ideas and participation in planning and problem solving discussion every month.

Operations of the Royal Project Foundation

The Royal Project Foundation has projects operating under His Majesty the King Patronage that to help hill tribe people help themselves in cultivation of useful plants and improve the living standard of the people. The operation is divided into 3 tasks includes research, development, and marketing.

Research

In the first phase of the Royal Project Foundation, the comprehension of winter plants cultivation was very low. The Royal Project Foundation had operated in experimental research and supported winter plant cultivation researches by developing and promoting the results of studies and research projects to farmers in the Royal Projects for implementation. It concentrated on supporting the needs of the market, and replace opium cultivation. At present, there are 4 research stations as follows.

1. The Ang Khang Royal agricultural Station

The station is to experiment the winter plant and fruit cultivation that are will planting in the area. The experimental results are used to support the hill tribe people to cultivate instead of opium. The people have places for settlement and conserve the natural resources and forest.

Doi Ang Khang is considered as the “highland” which is one of the beginnings of the water resources of the country. Since His Majesty the King has given the idea of development to meet the concept of conservation to develop water resources on small hills to replace water use in agriculture or to recover natural forest in the area.

2. The PangDah Royal agricultural Station

In 1979 the Royal Project Foundation has selected the project area in experimental of winter rye and whole wheat cultivation responsible by the Department of Agricultural Academic at Pang Da village, Samoeng Tai sub-district, Chiang Mai province. The station is used for plant propagation. When the demand for the plant increased, the production was not enough, another station has opened in approximately 25 rais next the the Houy Pla Kang Royal Project reservoir near by the

former station. The new station completed construction in 1983. During 1985-1986 the area of 65 rai was purchased for plant cultivation with the name of “PangDah Royal Project Plant Propagation Center”. On February 12, 1987 His Majesty the King proceeds with Her Royal Highness Princess Maha Chakri Sirindhorn to visit the center as the first time. The objective of the visit was to observe the various operations of the center. On this occasion the king's grandson Bhisadej Rajani, Director of the Royal Project, asked for His permission the rename the center as “The PangDah Royal Agricultural Station”. His Majesty granted his permission and also gave the additional space of approximately 150 rai in the same year.

3. The Inthanon Royal Agricultural Station

In 1978 the Royal Project Foundation has established "The Luang Inthanon Royal Agricultural Station" on 150 rai of Khun Klang village, Bann Luang Sub-district. The operation of research is for information to support the local people, such as Karen and KMong, in order to gain more income. The station is considered as the Basic factor development, social development, and natural resources conservation center.

4. The Mae Lod Arabica Coffee research and Support Research Station

The Mae Lord Arabica Coffee research and Support Research Station is another main research station of the Royal Project Foundation. The station established 1974 on the area of 50 rai of Mae Lord village, Sob Poeng Sub-district, Mae Taeng district, Chiang Mai province. In 1974 the project covering 100 rai. Most of the areas are mountain and valleys. There are 2 villages in the station area which are North Mae Lord, where is a residence of the natives, and South Mae Lord, where belongs Karen Hill tribe people. Total population in the area is 72 families. This area is a source of local coffee, namely Mae Lord. The Mae Lord coffee had disease of rust. In addition, the people earn their living by doing agriculture, horticulture, and vegetable cultivation and so on. They are quite poor.

The Mae Lod Arabica Coffee research and Support Research Station is run by the Department of Agriculture Academic. The department adjusted lands for people to be steps shapes for agriculture and water management system. The Ministry of Agriculture of the United States of America supported the station through the Foundation by giving the Arabica coffee hybrid species in the second phase, totally 28

species, which believed that are able to resist to the rust disease to grow in the station. The academics of the Department Agriculture Academic conducted the research it find the appropriate propagation and strong enough to resist the disease, as well as studied about the insects of coffee. The coffee was expensive in that period. It was not enough propagation to meet the need of the market. Until 1980 the support of the Ministry of Agriculture of the United States has terminated. The budget of the Department of Agriculture Academic was deficiency. The Mae Lord Arabica Coffee research and Support Research Station was operated under the supervision of the Royal Project Since 1984.

Research

Research of the Royal Project Foundation has been supporting farmers including temperate fruits and vegetables, flowers, horticulture, and social, environment and public health.

Development

The Development includes: the Royal Project Development Center, Plant Protection Section, Education, Social, and Public Health Development Section.

Roles of the Royal Project Foundation Development Department

The operations of the Royal Project Foundation takes the initiate objectives of the project as His Majesty personal project to develop the sustainable agriculture in the highland area for native and hill tribe people being improved, as well as to rehabilitate and conserve water resources to be adequate. To achieve the goals, the Royal Project Foundation operates in complex system. The operation is divided into departments, includes Office Department, Accounting and Financial Department, Research Department, Development Department, Marketing Department, Research Station, and Special Affairs. The Development Department is responsible for developing the quality of life of the people as the target group. The Department includes 37 development centers in 5 Northern provinces.

1. The Royal Project Development Center responsibility

1.1 To encourage farmers in nearby villages to earn the living by cultivation, such as the winter vegetables, flowers, fruits, horticulture, as well as husbandry and fishery.

1.2 To develop the fundamental quality of life of hill tribe people with related organization to lead them to the better life.

1.3 To support research and demonstration testing of plants and animals.

1.4 To rehabilitate, conserve the natural resources and environment with agencies by setting the exact scope for the forest and cultivation area. It is also important to consider the benefits of wood. For agricultural areas, the consideration of steep area, face of soil, and irrigation is important. The center had operated in conserving land to prevent collapsing by making steps of land, horizontal water drainage, or planting vetiver grass along the step, etc.

At present, the 38 Royal Project Development Centers; 28 are in Chiang Mai province, 6 Royal Project Development Centers are in Chiang Rai province, 2 Royal Project Development Centers are in Mae Hong Son, 1 Royal Project Development Center is in Payao, 1 in Lamphun province.

Table 43 Basic Information of the Royal Project Development Center, Chiang Mai Province

Center/ Station	Sub-district	District	Population			
			Village	Family	People	Tribe
Ang Khang	Mon Pin	Fang	6	672	3,807	Black Lahu, Lesu, Hor chinese, Palong
In Thanon	BanLuang	Chomthong	15	1,029	5,521	Karen, Hmong
Pang Dah	South Samoeng	Samoeng	14	482	2,328	Karen ,Hmong, Local lanna
Mae Lod	SobPoeng	Mae Taeng	7	120	455	Local lanna
Kae Noi	Muang Na	Chiang Dao	2	650	3,760	Black Lahu, AKa, Hor Chinese
Khun Pae	Bann Pae	Chomthong	11	525	5049	Karen
Khun Wang	Maewin	Maewang	7	189	1,633	Karen, Hmong
Tin Tok	Houy Kaew	Mae-On	4	304	925	Local lanna
Thung Rao	South Samoeng	Samoeng	3	209	1,654	Local lanna
Thung Rueng	BannPong	HangDong	2	169	814	Local lanna ,Hmong
Thung Luang	Maewin	Maewang	12	671	4,027	Karen
Pang Ung	Maesuek	Maechaem	8	631	5,537	Karen, Hmong
Pa Miang	ThepSadet	Doi Saket	8	495	1,871	Local lanna, Karen
Mon Ngo	Muang Kai	Mae Taeng	7	543	1,977	Local lanna, Hmong
Mae Tho	Bo Salee	Hod	5	741	4,684	Karen, Hmong
Mae Tha Nua	North Ta	Mae-On	14	1,929	7,519	Local lanna
Mae Pae	South Samoeng	Samoeng	7	120	455	Local lanna
Mae Sapok	Mae Win	Mae Wang	2	327	1,261	Local lanna
Mae Sa Mai	Pong Yaeng	Mae Rim	4	510	3,526	Hmong
Mae Hae	Mae Win	Mae Wang	25	1,685	8,748	Karen, Hmong
Mae Poonluang	Mae Wan	Praow	8	626	3,197	Lahu, AKa, Lesu, Hor Chinese
Nong Kieo	Muang Na	Chiang Dao	5	827	4 ,347	Lahu, Aka, Lawa, Kachin
Nong Hoi	Mae Ram	Mae Rim	7	364	2,607	Hmong, Lesu
Mok Cham	Tah Ton	Mae-eye	7	982	4,850	Karen, Yao ,AKa, TaiYai
Huai Luk	Ping Kong	Chiang Dao	2	284	2,473	Local lanna , Hmong , Karen
Wat Chan	Watchan	Maecham	19	424	5,049	Karen
Huai Som Poi	Doi Kaew	Chom Thong	14	482	2,328	Karen
Huai Siao	Bann Pong	Hang Dong	4	625	2,203	Local lanna , Hmong

Table 44 Basic Information of the Royal Project Development Center, Chiang Rai Province

Center/ Station	Sub-district	District	Population			
			Village	Family	People	Tribe
Sa-Ngo	Sri Donmun	Chieang Saen	4	709	3,240	Local lanna
Huai Nam Khun	Tah Koh	Mae Saruay	17	787	7,081	Aka
Huai Nam Rin	Mae Chedi Mai	Wieng Pah Pao	6	157	1,266	Local lanna ,Black Lahu
Huai Pong	Mae Chedi Mai	Wieng Pah Pao	4	370	1,549	Local lanna, Black Lahu,Hmong
Huai Laeng	Tah Kham	Wieng Kaen	4	670	4,500	AKa,Tai Lue, Local lanna , Hmong
Pha Tung	Por	Wieng Kaen	3	53	-	Local lanna, Hmong,Hor Chinese

Source: The Royal Project Foundation, Development Department

Table 45 Basic Information of the Royal Project Development Center, Mae Hong Son Province

Center/Station	Sub-district	District	Population			
			Village	Family	People	Tribe
Mae La Noi	Hour Hom	Mae La Noi	6	600	3,501	Karen,Lua
Mae Sariang	Pah Pae	Mae Sarieng	5	632	2,775	Karen,Lua

Source: The Royal Project Foundation, Development Department

Table 46 Basic Information of the Royal Project Development Center, Pa Yao Province

Center/Station	Sub-district	District	Population			
			Village	Family	People	Tribe
Pang Kha	Pha Chang Noi	Pong	3	388	2,812	Hmong

Source: The Royal Project Foundation, Development Department

Table 47 Basic Information of the Royal Project Development Center, Lam Phun Province

Center/Station	Sub-district	District	Population			
			Village	Family	People	Tribe
Phra Bath HuaiTom	Na Sai	Lee	9	2,269	9,449	Karen, Local lanna

Source: The Royal Project Foundation, Development Department

2. Plant Caring Center

The Plant Caring Center is responsible for operation according to the Foundation's policy of promoting the agriculture that is correct and safety for environment to achieve the sustainable highland area development. The center focuses on reducing chemical use in pest prevention and removal, as well as giving advices the right way of prevention. If the problems occurred, there is a caring laboratory to monitor toxic residues in the products at the levels of farming before sending to the market. It is considered as quality assurance of products before sending to consumers.

3. The development of social and health education division

The development of social and health education division is responsible for development of life and well-being of people and communities of different hill tribes by coordinating with the government and the private sectors, as well as people themselves. The key functions include.

1. To develop the education and social. The division is responsible for the development of education and way of life of local people to be improved.
2. To support and strengthen community by supporting group activity, development participation, and participation in natural resource conservation.
3. To develop community health. The division aims to promote good public health by campaigning and acknowledging local people, as well as coordinating with various agencies in the health services regularly.
4. To prevent and resolve outbreaks of drugs, which is the major barrier of country development.

5. The development and production support division

The development and production support division plays significant role in promoting occupations for farmers related to characteristic of each works, including jobs and projects to transfer of manufacturing technology and advises of problem solving, coordinating of production planning, and marketing between centers, monitoring of production, as well as conducting research from the output to solve the problems.

Marketing Department

To collect and transport products to Chiang Mai and Bangkok, the project started the post harvest management, which was considered very important. Each product had to be studied carefully about management in order to be the least wasting during harvesting until sending to market. Moreover, there are researches of materials, and containers of each product for transportation and merchandise. There are packaging and production development of vegetable, flowers, dry products, and canned products by quality checking with international standards. The Codex standards, which are recognized worldwide is used as the model. At present, the department runs two sections, which are packaging section and post harvest section. The two sections responsible for production research for exporting. The product quality has to be at the same level of overseas. There are cars to control product quality in Chiang Mai University and Mae Hia. The brand of production is “Royal Project”.

General Information

The Tin Tok Royal Project Development Center

Huay Kaew Sub-district, Maeaon District, Chiang Mai Province

The Tin Tok Royal Project Development Center established in 1981. His Majesty the King donated Royal wealth for 300,000 baht to construct the Tin Tok Development Center. The objective of construction was to use as a development and demonstration center for promoting mushroom and coffee cultivation as the additional occupation for local people in the area. The area of the center is 34.65 Km³ (21,656 rai). The area of the center is 52.1 rai.

Most of the area is rainforest with flat area. The height is from 750 to 1,300 meters from sea level. The climate is warm to rather cold. The maximum average temperature is 27°C and the minimum average temperature is 18°C. The year-round average rain is 1,778 mm³. The center covers 5 villages, which are Ban Pok Moo 1, Ban Mae Lai Moo 2, Ban Mae Kampong Moo 3, Ban Pang Champee Moo 7, and Bann Tarn Thong Moo 8, Huay Kaew Sub-district. The supported population is 383. The performance of the center in 2008 can be summarized as follows.

1. The development and technology transfer

1) The Technology Demonstration and Testing

1.1 plant cultivation

1.1.1 Coffee: the total area of coffee cultivation is 4 rais. The center seedlings prepared to support the farmers to cultivate and repair the damaged area.

1.1.2 Vegetables test: to cultivate vegetables under the standards of EURAPGAP as food quality development for export. The vegetable are cultivated in plastic house with the Substrate system. The system is to distribute the compost with water. The system leads to the fertilizer and water usage efficiency, reducing the use of chemicals, meet the market demand. The center has cultivated 2 set of coffee, which earned 10,847 baht.

1.1.3 Fruit test: several fruits have been demonstrated in the center, such as apricot, dragon fruit, and passion fruit

1.1.4 Pot plant test: the center provides the pot plant to the Kam Tieng market, and within the center. In fiscal year 2009, and the flower section of the center

requested the budget of the flower planting house. The size of the house is 18X24 meter. The house used to produce pot plant for sale in the center, as well as local people who interested in pot plant cultivation to participate with the center under the standard housing.

1.1.5 Vanilla test: the center cultivates 250 young plant farmers. At present, the center has demonstrated vanilla cultivation of 450 pieces in the house with the size of 24X48 meters. The 2-year-old plantation started to produce some of products about 100 sheaths.

1.1.6 Mushroom test: at present the center has borrowed money from the mushroom section to purchase 3,000 mushroom cubes for using in the center, as well as demonstrating to farmers who are interested in pine mushrooms to study care and to enhance career.

1.1.7 Tourism: the center has been chosen as the first center that has to be developed because of the full of potential of environment and natural resources. The public relations of the center coordinate with the highland research institute and development center and instructors and students of King Mongkut's University Thonburi to explore the condition of the area, as well as to design buildings, housing, and shops.

Table 48 Summary of the Technology Demonstration and Testing of the center (Plant Cultivation)

Type of Plant	Number of Area / Tree Pot	Number of Housing	Total area (Rais)
1. Coffee	-	-	4
2. Pot Plant	4,000	2	-
3. Vanilla	400	4	-
4. Mushroom	6,000	2	-
5. Fruit	-	-	4
6. Vegetable	750	1	-
7. Tourism	-	6	-
Total	4,000 pot/480 tree/6,000 bags/750 tree	15	8

1.2 Husbandry

1.2.1 Rabbit: the center takes care of 70 rabbits including 4 male breeders, 35 female breeders. Some of them have already delivered to farmers.

1.2.2 Ring-necked pheasants (*Phasianus Colchicus*): the center has demonstrated how to feed 7 ring-necked pheasants to make the small pheasants, as well as encourage farmers to feed them.

Table 49 Summary of the Technology Demonstration and Testing of the center (Husbandry)

Type	Number of animal	Note
1) Rabbit	70	4 male breeders, 35 female breeders are nurtured propagate species and sent to the Doi Kam project market. In the future the rabbit husbandry will be promoted for farmers.
Total	70	-

2) Occupation support and development

2.1 Agriculture Section

The agricultural occupation support and development provided 15 types of plant for farmers, such as coffee, Japanese Cucumber, Royal Project Canga, Hong Kong canga, green stalk egg plant, black stalk egg plant, Broccoli, Sayote, persimmon, Passion fruit, avocado, pot plant, vanilla, mushroom, and 2 types of animal husbandry, included Rabbit and Ring-necked pheasants. There are 256 farmers participated in the project. Total value of product through the royal project is 4,8805,901 baht.

2.1.1 Arabica Coffee Support: the summary of the center can be described as

Fresh Coffee 7 kg.	Valued 90,292 baht	Farmers 23 persons
Parchment Coffee 51,711 kg.	Valued 4,395,435 baht	Farmers 138 persons
Total 59,388 kg.	Valued 4,485,727	Farmers 161 persons

2.1.2 Vegetable Support: to support 17 farmers in 3 villages in the area of 10 rais with 6 types of vegetable.

1. Japanese Cucumber	Product	17,685 kg.	Refund	206,628 baht
2. Royal Project Canga	Product	423 kg.	Refund	6,342 baht
3. Hong Kong canga	Product	604 kg.	Refund	19,071.50 baht
4. Sayote	Product	1,271 kg.	Refund	13,386.50 baht
5. Sayote fruit	Product	1,54.50 kg.	Refund	8,457.50 baht
6. Broccoli	Product	1,495.50 kg.	Refund	24,777 baht
Total	Product	23,024 kg.	Refund	278,642.50 baht

Vegetable Support plan in fiscal year 2009 is to support farmers to cultivate under the EURAPGAP standard system in the initial project for food quality development. At first, 2 villages are supported, which are Ban Pang Champee with 8 farmers and Ban Pok with 3 farmers, totally 11 farmers. The farmers have to cultivate the vegetable in the Substrate system plastic house. The system of fertilization is distributed with water in order to increase the efficiency and reduce chemical usage. The products will be qualified to the market need. The supported vegetables are 7 types, which are described as follows.

1. Japanese Cucumber	Production plan	200	kg./week
2. black stalk egg plant	Production plan	200	kg./week
3. green stalk egg plant	Production plan	300	kg./week
4. Royal Project Canga	Production plan	200	kg./week
5. Hong Kong canga	Production plan	100	kg./week
6. Sayote fruit	Production plan	200	kg./week
7. long cucumber	Production plan	700	kg./week

At present, there is one spot building to collect the products, and a building to restore the agricultural equipments. The restore building can be divided in to 1 chemical restoration room, 1 chemical fertilizer room, 1 equipment and instrument room, 1 bathroom, and 1 restroom for farmers. In addition, there are 2 plastic house of 18 x 24 meter.

2.1.3 Fruit Support can be divided as

1) Cold temperature fruit

- In fiscal year 2008, the center supported persimmon cultivation (P₂) for farmers. Then, the products were merchandised by the Royal Project Foundation. All products were about 56.50 kg., totally 928.50 baht. There were 400 kg. That the center sold in the area. The farmers sold the products about 1,000 kg. The total income was 8,000 baht.

2) Small fruit

- In fiscal year 2008, the center support passion fruit cultivation for 7 farmers. 10 rais. All products were about 3,000 - 4,000 Kg. Tin Tok Royal Project Development Center send all product to market section of Royal Project Foundation about 100 – 150 Kg. or 500 Kg. per

2.1.4 Mushroom Support

- The fiscal year 2008, the Tin Tok Royal Project Development Center has sent the products to the Marketing Department of the Royal Project Foundation. The Products of 6,000 infected mushroom cubes and 4,400 timbered mushroom cubed had been delivered to the Royal Project Foundation. The totally income was 12,550 baht, and the income of the farmer vending was 23,555 baht.

2.1.5 Husbandry Support

- The fiscal year 2008, the Tin Tok Royal Project Development Center supported 70 rabbits for 8 farmers. The center focused on expanding rabbit husbandry for farmers in order to sale some small rabbits, as well as to feed some of the rest. There were 4 male breeders and 35 female breeders in the center.
- The 47.30 kg. Products were sent to the market, which valued 2,838 baht.

2.2 Non-Agriculture

2.2.1 Tourism

- Mae Kampong Village provided places for tourists to visit and rest, as well as to impress the natural attractions in the form of home stay. In the past year (October 2007 – September 2008), there were 3,346 tourists which were 2,552 Thai people, 794 foreigners, came to the village. Total income from tourism was 1,554,359 baht.
- The Flight of the Gibbon Company set the new activities in the Mae KamPong Village. The activity was Sling Hanging. The activity was about hanging on the tree, like Tarzan, from one tree to another. The activity was for the tourists who prefer adventure activity.

2.2.2 Handicraft: The center has sent the tea leave pillows to markets of the Royal Project, such as

- Doi Kam Festival of the year 2007	135 pieces	Valued	8,300 baht
- Strawberry Fair	120 pieces	Valued	3,200 baht
- Doi Kam Festival in Bangkok of the year 2008	282 pieces	Valued	13,715 baht
Total	537 pieces	Valued	25,215 baht

2. Community Strengthen Support

1. Education and social development

- Organize the Anti-drugs sports games on the end of the Buddhist Lent Day with local authorities. Budget of the activity were supported by the Public Health Department of the, the Royal Project Foundation. The participants of the activity were about 100 farmers.
- Participate with the Hoi Kaew Administrative Organization in arranging “the 5th Rattan Ball Games” every year. The participants are the youths of 8 villages nearby.
- Participate in vetiver grass cultivation on the margins of 6 reservoirs with Ban Pok community. The activity held on July 11, 2008. The participants were about 50 people.

2. Public health development

- Participated with the Hoi Kaew Public Health Station to held the “Outstanding developed village” in 5 villages.
- Organize the Anti-drugs sports games every year with the supported budget from Public health development, the Royal Project Foundation.

3. Conscious mind development

- The natural resources development and support: forest cultivation, making fire walls, and weirs.
- The traditional activity conservation and support: Yipeng Festival, Religious ceremonies, as well as other traditional activities.

4. Group activity support

Group Name	Number (Group)	Number (Community/Village)	Number (member)
1. Cooperative	1	5	224
2. Youth	4	5	50
3. City Doctor	1	1	30
4. Water electrical power cooperative	1	2	135
5. Female Development	4	4	80

3. Natural resources restoration and conservation

The natural resources restoration and conservation operation were the cultivation of vetiver with farmers on the roadsides as well as on the risk area of the soil collapse, such as Ban Pok and Ban Pien and the margins of reservoirs.

1. Soil and water conservation activities

1.1 Vetiver grass cultivation

- 31,500 vetiver grass was cultivated in conservative way on the prepared area at Bang Champee village.
- Participated in vetiver grass cultivation on the margins of the reservoirs with Ban Pok community. The cultivation was to prevent soil collapse. The 50,000 vetiver grasses were cultivated along the two road sides of the village.
- 5 Farmers were given 11,000 young vetiver grasses.

- 25,000 young vetiver grasses were delivered to other agencies and organizations,

1.2 Fermented fertilizer and bio-fermented water

- The center produces 5 tons of fermented fertilizer and 600 liter of bio-fermented water per year. The fermented fertilizer and bio-fermented water were used for the center demonstration. In addition, 3 farmers had produced 3 tons of fermented fertilizer and 1,000 liter of bio-fermented water per year. The fermented fertilizer and bio-fermented water would be delivered to others in the future.

2. Farmer forest and water restoration

2.1 Farmer forest

The center encouraged farmers to cultivate the farmer forest project plant as follows.

1. 100 Lee Chu Bamboo with 5 farmers
2. 500 camphor with 5 farmers
3. 1,700 Maple with 2 farmers
4. 450 nang praya tree with 8 farmers

Activity	area (rais/m ³)	Number of tree	Number of farmer (person)
1. vetiver grass			
- generic expansion	1	31,500	
- vetiver grass cultivation	1	8,600	
2. farmer forest			
- taking young plant from the center	-	500	5
- camphor	-	1,700	2
- maple	-	4,500	8
- nang praya tree	-	100	5
- Lee Chu Bamboo			
3. Abundance restoration of soil and water			
- bio water fertilizer	1,600 Liter	-	4
- fermented fertilizer	8 ton	-	4

4. Administration system

1. Basic factors maintenance and development

1.1 Construction: the center has constructed a house for officers and staff.

Activity	Area	Size of area (Number of house)
1. Officers housing construction	The Tin Tok Development Center	52 m ³ 1 house

2. Administrator and Personnel development

Totally 17 trainings and Field trips supported 5 officials participation.

Services receivers	Type of study	duration	Number (person)	Services receivers
1. Occupation support and development				
Agricultural and non-agricultural Section				
- Short training of "Cloth Making"				
- The 1 st training of handicraft titled handicraft packaging development.	Training	1	20	3
- Rabbit husbandry	Training	1	25	3
- Out season bamboo training				
- Training of GAP & EU				
- Training of GOBALGAP	Training	1	20	1
- Training of Sub-district Soil Doctor	Training	1	20	1
- Training of organic herbal production.	Training	1	25	1
	Training	2	11	2
- Coffee training	Training	2	2	2
	Training			
		1	11	1
	Training	3	93	3
2. Education, Social, and Public Health Development				
- Anti-Drugs Sports Games	Activity	2	200	2
3. Natural resources and environment conservation				
- vetiver grass cultivation in the area of the margin of 6 reservoirs of Ban Pok.	Activity	2	50	2
Total		1	477	21

3. Training and learning section

3.1 Farmers of the center

Arranged 17 training courses and Field trips for 477 farmers participated.

3.2 General People

Arranged 137 training courses and field trips for totally 3,347 farmers, students, and general people.

Services receivers	Type of study	Number (person)	duration
1. Farmers	- Training Course	477	21
	- Field trip	220	11
2. Students	- Training Course	200	24
	- Field trip	250	9
3. General People	- Training Course	1,000	36
	- Field trip	1,200	36
Total		3,347	137

5. Summary of operation

The Tin Tok Royal Project Development Center purchased the fresh coffee and parchment coffee totally 59,388 kg. and refunded 4,485,727 baht. Moreover, the center supported 6 types of vegetable cultivation with the participation of 17 farmers, totally product was 23,024 kg., and refunded to farmers for 278,642.50 baht. For the persimmon, there were 1,056.50 kg. of products, and refunded 8928.50 baht.

Beside the agricultural works, the Tin Tok Royal Project Development Center has supported the tea leaves pillows making for groups females. Moreover, the products were sent to the Royal Project for marketing. In the year 2009, 537 tea leaves pillows were sent to the center, with the refund for farmers about 25,215 baht. For tourism, many tourists came to the Mae Kampong village which can be described as Thai people was 2,552, foreigners 794, totally 3,346, which brought 1,554,359 baht. There were 811 tourists that spent the night at the center, which brought 82,790 baht.

Interview

Name of Research Project: Farmers' Participation in Sustainable Agricultural Development in the Highland area of the Royal Project in Chiang Mai Province

No.

Date

Interviewer

Instruction

1. The interviewer mark / in the () in front of the correct statement or fill in the sentences in the blank
2. The information will keep as secret.
3. The questionnaires divided into 4 parts as
 - Part 1: Basic social and economic information of farmer
 - Part 2: Farmer comprehension of sustainable agricultural development
 - Part 3: Farmers' participation in sustainable agricultural development
In the highland area of the Royal project in Chiang Mai Province
 - Part 4: Problems and solutions of farmers' participation in sustainable agricultural development in the highland area of the Royal project in Chiang Mai Province

Part 1: General Personal Information

1. Tribe
 - () Karen
 - () Hmong
 - () Lesu
 - () AKa
 - () Lahu
 - () Local lanna

- () Other (Specify).....
2. Gender
- () Male
- () Female
3. Age Year
4. Education Level
- () Less than Prathom 4
- () Prathom 4-6
- () 3Years High school
- () 6 Years High school
- () Diploma or same level
- () Bachelor's Degree
- () Other (Specify).....
5. Number of household member including respondent.....
6. Number of school age member in the household.....
7. Number of working age member in the households.....
8. Monthly income other on family both from agriculture and other section
.....
9. Total area of holding rai
- Total agricultural arearais divided into
- Fruit arearais
 - Vegetable area.....rai
 - Horticulture area rai
 - Flower area..... rai
 - Hybrid agriculture area rai
 - Husbandry area rai
 - Fishery area rai
 - Other (Specify)..... rai

Resident area..... rai

Vacancy Area..... rai

Other (Specify)..... rai

Receiving agricultural information from radio, TV, newspaper, publications in the past year as

Topic	Sources			
	Radio	TV	Newspaper	Publication
1.....
2.....
3.....
4.....
5.....

10. Have you ever contact with the Royal Project officers or the staffs of government authority in the past month?

() Never

() Yes, fortime and the officers suggested about.....

.....

11. Have you ever participated in the cultural and traditional activities of the village in the past month?

() Never

() Yes, fortime and participated in

.....

12. Have you ever participated in agricultural and community development activities arranged by the Royal Project or government authority in the past month?

() Never

() Yes, fortime and participated in

.....
.....
.....
.....

13. Have you ever participated in agricultural training and field trip arranged by the Royal Project or government authority in the past month?

() Never

() Yes, for time and participated in

.....
.....
.....
.....
.....

14. Duration of settlement years

15. Agricultural and community development activities and projects that you have participated in the past 5 years were

.....
.....
.....
.....

16. In your opinion, what factors that make farmers uninterested in participation of agricultural and community development activities and projects arranged by the Royal Project or other development authorities.

.....

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.....

.....

.....

17. What are the benefits of agricultural development projects or activities of soil and water conservation planting under highland area.

Benefits	High	Moderate	Low
1. Resources for consumption			
2. Better transportation			
3. increase water resources foe agriculture			
4. More income from selling various agricultural products			
5. Attraction of agricultural eco-tourism			
6. Grouping of community operation, product processing			
7. Knowledge of conservative cultivation system			
8. Reducing drugs and strengthen the community			
9. Expanding agricultural market			
10. Increasing conservative agricultural system			
11. Reducing unemployment problems			
12. 12. Other (Specify).....			

Part 2: The information about farmers' participation in sustainable agricultural development on growing plants project in soil and water conservation in the highland area

Mark ✓ into the column of Correct if the answer is correct and incorrect if the answer is incorrect

Statement	Correct	Incorrect
1. Agricultural Development is to increase agricultural value to be higher for investment		
2. Acknowledging agricultural people is another agricultural development		
3. Avoid dropping chemicals, hazardous substances into water sources is a natural approach to sustainable agricultural development		
4. To reclaim forest in the prone area for economic planting is considered as a sustainable agricultural development		
5. Plants cultivated in demonstrate area are not benefit in reality		
6. The hybrid cultivate approach enables the development of sustainable agriculture		
7. The sustainable agriculture development should provide animal husbandry at the same time		
8. Soil and water conservation is the responsible of farmers and development authorities		
9. Sustainable agriculture in the highland area will not use chemical fertilizers at all		
10. On the high areas in steep vertical, vetiver should be planted to prevent soil collapse		
11. The development of sustainable agriculture or the activities of plants grown in soil and water conservation is to ensure balance of human and environment		
12. The development of sustainable agriculture in the highland area of plant grown in soil and water conservation should be planted along the staircase, as well as there should be vary planted in the same area		
13. Areas of high steep; it should be planted trees rather than crops, such as vegetables and other biennial crops		
14. Water wall should be built used to store water resources. It can be prevented the water shortage in the highland area		

Statement	Correct	Incorrect
15. Farmers were able to sustainable farming without the assistant of government or Royal Projects		
16. The group of agricultural productivity was the value adding of agricultural productivity and the sustainable activity in plants grown in soil and water conservation in the highland area		
17. The weed elimination of crops in the conversion system on soil and water conservation in the highland area by using chemical is the best way		
18. The development of sustainable agriculture projects in planting crops in soil and water conservation in the highland area will help reduce the problem of chemical contamination in agricultural products		
19. Organic farming is one way to develop sustainable agriculture		
20. The sustainable agriculture is one of the soil and water		
21. Other (Specify).....		
.....		
.....		

Part 3 Farmers' perception on Participation information in sustainable agricultural development in the highland area of soil and water conservation planting in the highland area

High participation	(More than 5 times/year)
Moderate participation	(3-4 times/year)
Low participation	(1-2 times/year)
Non-participation	(Never)

1. Farmers' participation in consultation on sustainable agricultural development projects in the plants growing on soil and water conservation of the Royal Project in the highland area

Activities	Participation Level			
	High	Moderate	Low	None
1. Consultation with the director, head of the center and promote staff of Royal Project development center to plan the cultivation of plants in soil and water conservation in the highland before operation.				
2. Suggestion in the meeting and seminar which held by the project staff. The meeting or seminar is about the grouping of crops planter in soil and water conservation in the highland area.				
3. Participation in consultations with the Royal Project staff or government official before, during, or after operation of the agricultural activities in crop cultivation projects in soil and water conservation in the highland area.				
4. Participation in agricultural project planning of the activities in crop cultivation system on soil and water conservation in the highland area which was the responsibility of the Royal Project area, as well as the nearby area.				
5. Participation in consultation with project staff and government officials in the acknowledgement of farmers and interested people about the sustainable agricultural development projects in growing crops on soil and water conservation in the highland area				

2. The participation of suggestion propose and decision making in sustainable agriculture development program in plants grown on soil and water conservation of the Royal Project in the highland area

Activities	Participation Level			
	High	Moderate	Low	None
1. Participate in propose the project of soil and water conservation of the Royal Project in the meeting with the staff and the chief officer				
2. Participate in propose the management of production factors in the project of soil and water conservation in sustainable development at the meeting of the center and other organizations				
3. Participate in planning the project of soil and water conservation in the highland area of the Royal Project				
4. Participate in setting regulations of production of vegetable, fruits, flowers, and corps of the Royal Project which meet the conditions of market and production of each types of plant				
5. Participate in propose the project of sustainable agricultural development in the highland area in soil and water conservation system of the Royal Project and other area				

3. The participation of cooperation in sustainable agriculture development program in plants grown on soil and water conservation of the Royal Project in the highland area

Activities	Participation Level			
	High	Moderate	Low	None
1. Participation in coordination between the Royal Project officers and farmers to create groups of activities on soil and water conservation both in small and large groups				
2. Participation in coordination between the Royal Project officers and other organization, local people, and private sections in activities on soil and water conservation in the highland area				
3. Participation in coordination between the Royal Project officers and other organization in promotion of the project information in activities on soil and water conservation in the highland area and acknowledge other people in the area				
4. Participation in coordination between the Royal Project officers and other organization, local people, and private sections to support and be the instructors of the project				
5. Participation in coordination between the Royal Project officers and other organization, local people, and private sections in proposing the budget and loan for activities on soil and water conservation in the highland area				

4. The Participation in the operation of sustainable agriculture development program in plants grown on soil and water conservation of the Royal Project in the highland area

Activities	Participation Level			
	High	Moderate	Low	None
1. Participation in production planning with the Royal Project officer in planting economic plant, such as preparing area of planting, caring according to the suggestion in all season				
2. Participation in operation according to regulations about marketing of the projection environment conservation and good for consumers.				
3. Participation in operation according to regulations of the Ministry of Agriculture and cooperative and the Royal Project agricultural production factors utilization, such as fertilizers, agricultural chemicals in crop planting project in the best farming areas in the highland area, emphasis on the use of organic fertilizer and reduce the use of chemical to prevent and eliminate disease and insect pests, how to drop toxic cans and material				
4. Participation in the planting activity of vetiver in of crops cultivation on soil and water conservation in the highland area and cultivation to replace the destroyed forest				
5. Participation in funding, labor and production factor support to be used in the activity of crops planted on soil and water conservation under highland area				

5. The Participation in caring of sustainable agriculture development program in plants grown on soil and water conservation of the Royal Project in the highland area

Activities	Participation Level			
	High	Moderate	Low	None
1. Participation in grouping of farmers, who join the cultivation program the Royal Project, to conserve the basis structure, packaging plant, construction, road, manufacturing factors, agricultural equipments from the Royal Project Foundation and the Department of Land Development				
2. Participation in submitting soil samples to determine soil quality, food elements in soil and water quality which used for agriculture, by submitting the sample of soils, water, and products to be tested, as well as to prevent environmental damage of the Royal Project				
3. Participation in activities to conserve soil and water in the highland areas, forest cultivation, vetiver cultivation, promote to farmers in order to recognize and maintenance the agricultural resources in the area				
4. Participation in public relations and campaign to encourage farmers in the area support the Royal Project foundation, by not to deforest to cultivate crops, especially the areas with high steep.				
5. Participation in the presentation of rules and regulations on agricultural production selling with staff of the Royal Project Development Center, including the use of space and natural resources in the highland areas which is considered as being the risk of unsustainable agriculture				

6. The Participation in benefit of sustainable agriculture development program in plants cultivation on soil and water conservation of the Royal Project in the highland area

Activities	Participation Level			
	High	Moderate	Low	None
1. Participation in the plants cultivation on soil and water conservation of the Royal Project in the highland area brings more income and improvement of economic conditions to the household.				
2. Participation in the plants cultivation on soil and water conservation of the Royal Project in the highland area provided the wider market for agricultural products				
3. The development of sustainable agriculture in the highland areas provided the natural resources and environment with no destruction to community				
4. Sustainable agriculture, especially, plants cultivation on soil and water conservation of the Royal Project in the highland area generates the farmer groups for agricultural production, bargain power in the market and risk reduction				
5. Participation in the plants cultivation on soil and water conservation of the Royal Project in the highland area acknowledged farmers about production, maintenance and harvest				

7. The Participation in project monitoring and evaluation of plants cultivation on soil and water conservation of the Royal Project in the highland area

Activities	Participation Level			
	High	Moderate	Low	None
1. Participation in the monitoring and evaluation of the plants cultivation on soil and water conservation project in the highland area, such as production problems, toxic, as well as marketing information, with the Royal Project staff, farmers, and promoting staff of the Royal Project Foundations.				
2. Participation in the monitoring the officials or farmers of the plants cultivation project, or other people, about regulations offenses under the promotion of the Royal Projects Foundation				
3. Participation in the monitoring and evaluation of training program about plants cultivation in soil and water conservation project in the highland area with the Royal Project staff and other people				
4. Participation in the monitoring and evaluation of soil and water quality, such as deliver and receive information, meeting to review the analysis in the area of promoting by Royal Project Foundation that resulted from the use of factors of production for farming on areas with high officials				
5. Participation in monitoring and evaluation of agricultural projects and natural resource conservation and environmental activities in the highland area about the success and failure of the project operation				

Part 4: Problems and suggestions regarding the with farmers' participation in sustainable agricultural development in the highland area.

1. In your opinion, what are problems of farmer's participation in sustainable agricultural development in the highland area? (More than 1 answers)
- () Farmers were not able to participate in the activities that held by the project
 - () Farmers had no time to participate due to their hard work.
 - () Farmers lacked of the knowledge of the benefit of participation. Therefore, they would not participate in such activity, as well as the public relations was not enough.
 - () There were lacked of grouping, so they lacked of bargaining power with government sections. There was top-down management in the project.
 - () Small amount of budget
 - () Farmers are not allowed to participate and arrange any agricultural projects.
 - () Farmers are refused to help in sustainable agricultural development in the highland area by government and private sections
 - () Farmers and agricultural community are refused to help in sustainable agricultural development in the highland area by government and private sections
 - () Single plant brings faster products than sustainable agriculture. Thus, farmers did not interested in participate in the project
 - () Most of the farmers lacked of comprehension about sustainable agricultural development and natural resource conservation in the highland area
 - () Other (Specify).....

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2. What are your expectations of farmers' participation in any projects that held by the development authority in the local area?

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7.....
- 8.....
- 9.....

3. What kind of assistants that you would like the government authority and the government to provide?

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7.....
- 8.....
- 9.....

Other suggestions

-
-
-
-

CURRICULUM VITAE

Name: Mr.Rungsun Kruekum

Birth of Date: 24 November 1971

Educational:

- 1990: High school diploma, Romkhao School, Sakhonnakhon
- 1994: Bachelor of Science; Maejo University
- 1996: Master of science (Agricultural); Chiang Mai University

Occupational career:

- 1996 -1997 Assist Manager of Agricultural Extension Section, Berry Yaker Company Limit (organization)
- 1997 Specialist 6 level in Development Department of Royal Project Foundation
- Researcher in Research Department of Royal Project Foundation
- 2004 :Manager of Kruasahakran Silver & Noodle

Publication and papers: 1997-2010

- Book: Kind and Fruit Variety in Royal Project
- Book: Grading and Harvesting Fruit of Royal Project
- Book; Peach Production
- Book: Persimmon Production
- Book: Mango Production
- Book: Avocado Production
- 1997-2002: Editor of Fruit Journal
- 2003-2010: Editor of Royal Project Journal

Field Trip Experience

- 1999: Training and Field Trip about Agricultural Management in China (Taiwan)
- 2001: Field Trip about Agricultural Development in Taiwan
- 2007: Field Trip about Agricultural and Natural Resource and Environmental Management in U.S.A
- Field Trip about Agricultural development and Rural Development in Thailand

Research Experience: Research Project Head

- 1996 : The Desire for Migration to Big Cities of Farmers Offspring in Kok Sri Supupan District, Saklonnakhon Province
- 2002: Income and profit Analysis of Fruit Production in Royal Project Foundation
- 2003: Study and muster information about import temperate fruit from foreign in Chiang Rai Province.
- 2004: The Wanting for Migration of Farmers Offspring in Royal Project Area
- 2005: Appropriative Environmental Management Model on Highland Community in Royal Project Foundation
- 2006: The Farmer adoption of Passion Fruit Production Technology in Royal Project Foundation Area.
- 2007: Demand of Water and Efficient and Economical Ways to Use Water Agricultural Purpose on Highland Community in Project Foundation Area.
- 2008: Impact of Free Trade Agreement and Strategies for Support Changing of Fruit Growers in Royal Project Area
- 2009: Farmers' Participation in Sustainable Agricultural Development in the Highland Area of Royal Project in Chiang Mai Province

- 2010: Factors Effect to Wanting for Grow Fruit on Good Agricultural Practice (GAP) and International Standard Food of Farmers under Highland in Royal Project Foundation Extension Area.

Assist. Researcher: 1997-2011

- The Study and Selection Kiwi Fruit Variety in Royal Project Area
- The Study about Passion Fruit Production in Royal Project Foundation Area
- The Study and Selection Avocado Hass Variety in Royal Project Area
- The Study and Selection Guava Variety in Royal Project Area
- The Study about Mango Production in Royal Project Area
- The Study and Selection Papaya Variety in Royal Project Area
- The Study and Developing Fruit Production Technology in Royal Project Area